

ORIGINAL ARTICLE

Assessing the efficacy of a workplace violence educational model for nursing professionals: A prototype model

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Abstract. *Background and aim of the work:* Violence directed towards nurses resembles the iceberg phenomenon, wherein numerous incidents remain unreported. A predominant factor contributing to this underreporting is that the victims are required to report such incidents and often lack familiarity with their organization's internal reporting protocols. The study aims to assess the efficacy of the STOP Workplace Violence Educational Model during the preliminary testing and implementation stages among nurses working in healthcare facilities within Aceh Province in Indonesia. *Materials and methods:* The researcher used a research-and-development design to create the STOP Workplace Violence Educational Model for nurses in Aceh Province. Its efficacy was assessed via a questionnaire evaluating content, media eligibility, ease of use, and user expectations. In the preliminary testing phase, 11 evaluators participated. During implementation, small-scale socialization (n=90) and nurse evaluations occurred. Data analysis focused on central tendency measures: mean, standard deviation, and min-max values. *Results:* The STOP Workplace Violence Educational Model underwent rigorous evaluation, yielding highly favorable outcomes across key dimensions. Preliminary testing by the evaluator team achieved "Excellent" ratings (Min-Max: 3-4; M=3.84±0.21), while assessments of user expectations and implementation also received "Excellent" scores (Min-Max: 3-4; M=3.67±0.34). Content/Material was rated highly (M=3.69±0.40) for relevance and comprehensiveness, Media Eligibility scored well for technical quality and accessibility (M=3.60±0.38), and Ease of Use excelled (M=3.72±0.35) due to intuitive design. User expectations (M=3.74±0.32) further affirmed the model's effectiveness in addressing workplace violence in healthcare settings. *Conclusions:* The web-based STOP Workplace Violence Educational Model application successfully provided valuable information to nurses, enhancing their understanding of workplace violence incidents in hospital settings. This application demonstrated its potential to positively influence nurses' self-efficacy, improving their competencies, including knowledge, psychomotor skills, and attitudes. (www.actabiomedica.it)

Key words: educational, hospitals, models, reporting system, self-efficacy, surveys and questionnaires, workplace violence

Introduction

Violence encompasses acts of aggression such as assaults, beatings, and murders. In general, it is defined

as a form of verbal harassment, threats, sexual harassment, physical violence, and murder (1). The International Labour Organization (ILO) defines Workplace Violence (WPV) as any action, incident, or behavior

that deviates from normal conduct (2), where a person is attacked, threatened, or injured in the course of work or as a direct result of their actions (3). Recent research has highlighted that verbal violence is the most prevalent form of non-physical violence experienced by nurses (4). This type of violence often occurs due to the wide range of responsibilities nurses have in hospitals, spanning from patient admission to discharge (5). Examples of such violence include verbal harassment, intimidation, sexual harassment, as well as harassment based on ethnicity, race, or religion, and threats against individuals or groups. Such behavior can lead to physical, mental, spiritual, moral, and social harm (6). Violence against nurses is akin to an iceberg phenomenon, as many incidents go unreported (7). A significant reason for underreporting is that victims must report the incidents and are often unfamiliar with their organization's internal reporting procedures (8). Family members of patients are commonly the perpetrators of violence, and unfortunately, a majority of nurses (55.6%) do not report the violence they endure (9). Moreover, certain studies have revealed that incidents of WPV experienced by nurses are rarely reported (10,11). This situation is often raised because nurses become desensitized to violence and assume it is part of their job. There might also be peer pressure not to report such incidents, or they may be deliberately kept under wraps (9,12). Additionally, nurses often express frustration after reporting these incidents, perceiving no action has been taken (13). The main reasons for not reporting such incidents of violence include the lack of clear policies in hospitals (14), the perception that violence is part of their job, the belief that reporting is not beneficial for health workers, and the fear that it might indicate their poor performance (9). Several educational models, including NOVA, AWAKE, and Prevention and Management of Violence in Healthcare (15–17), have been developed to address WPV. However, specific information about the WPV Educational Model in Indonesia is currently unavailable. The Ministry of Manpower of the Republic of Indonesia has issued only one law, Law Number 12 of 2022, concerning the Crime of sexual violence (18). To effectively address and reduce incidents of WPV in healthcare, it is imperative to implement comprehensive program plans. These plans should

include increasing management commitment and staff participation, conducting thorough workplace analysis and hazard identification, providing Occupational Safety and Health Administration (OSHA) training, and ensuring continuous program recording and evaluation (19,15). Despite the availability of various WPV mitigation models, the limitations of existing frameworks highlight a significant gap in their applicability to specific healthcare contexts, particularly in regions like Aceh Province, Indonesia, where cultural, organizational, and systemic factors may differ substantially from those in other settings. This study presents the STOP Workplace Violence Educational Model, designed specifically for healthcare facilities in this region. Unlike existing models, it integrates localized data and context-specific strategies to improve reporting, prevention, and management of WPV. The model supports incident reporting and develops evidence-based interventions tailored to the unique challenges of Aceh Province. The STOP Model aligns global WPV frameworks with local needs by addressing cultural and institutional barriers. The study aims to assess the efficacy of the STOP Workplace Violence Educational Model during its preliminary testing and implementation stages among nurses in healthcare facilities in Aceh.

Materials and Methods

Study design

This study utilized a Research and Development (R&D) framework, adopting a systematic and scientific approach integrating research, design, production, and product validation (20). The methodology adhered to a streamlined four-stage R&D framework, as proposed by Susanto (21), rather than the ten-stage model by Borg and Gall (22). The rationale for selecting the four-stage framework lies in its simplicity and focus, which enhances efficiency in product development by concentrating on the following critical phases (21):

- Needs Assessment: Identifying and analyzing end-user requirements, including WPV challenges in healthcare environments.

- Product Design: Developing the educational model by integrating content, media, and usability features that align with the identified needs.
- Preliminary Testing: Conducting expert evaluations to assess the model's validity, feasibility, and usability.
- Implementation: Introducing the model to potential users, followed by feedback collection to ensure its effectiveness and practical applicability.

This streamlined approach allows for targeted development and refinement, avoiding the complexity of more extensive frameworks while maintaining rigor and focus. Moreover, the preliminary testing phase involved a team of 11 evaluators with expertise in various domains, including nursing academia, media professionals specializing in IT, and nurse managers. These evaluators were carefully selected based on their professional qualifications and experience in WPV management and educational application development. Each evaluator contributed critical feedback regarding the model's content, language clarity, application menu structure, and overall ease of use. This diverse pool of expertise ensured a comprehensive evaluation, strengthening the model's validity and feasibility. Then, the implementation phase aimed to introduce the application to its intended users while assessing its usability and effectiveness. The following key steps were undertaken:

- Socialization: Potential users, including hospital nurses, were introduced to the application's features, purpose, and intended benefits (23). This step was designed to familiarize users with the model and ensure a clear understanding of its functionality and relevance.
- User Evaluation: Feedback was collected from the users regarding various parameters such as the quality of content, language clarity, application design, ease of use, and their overall expectations. This feedback was pivotal in refining the application and ensuring its alignment with user needs (21,22). This systematic evaluation and implementation process ensured

the model's practical relevance and increased its acceptance among healthcare professionals. Moreover, the inclusion of user feedback in refining the model reflects a commitment to iterative improvement, ensuring its sustained applicability in managing WPV.

Population and sample

In the preliminary testing phase, the researcher assembled a team of 11 evaluators with diverse expertise to collaborate on developing the STOP Workplace Violence Educational Model (21). The team consisted of material experts from nursing academia, media professionals specializing in IT, nurse managers representing health service and nursing education institutions, and delegates from nursing professional organizations. Then, the STOP Workplace Violence Educational Model was piloted with 90 participants during the implementation phase. These participants were not randomly selected but identified through a purposive sampling strategy to ensure their relevance to the study's objectives. The selection process involved collaboration with professional nursing organizations and hospital administrations in Aceh Province. A public call was issued through the Regency/City PPNI DPD (Persatuan Perawat Nasional Indonesia), disseminated via official emails, the person in charge in selected hospitals, and direct outreach to key contact persons within healthcare institutions. This approach allowed for the recruitment of participants who were actively engaged in hospital settings and familiar with WPV challenges, ensuring their suitability for evaluating the educational model. The selection of 90 participants was deliberate and based on the following considerations:

- Geographic and institutional representation: Participants were recruited from three regions in Aceh Province—Eastern, Central, and West-South—to represent varied work environments comprehensively. These regions include hospitals of different sizes and accreditation statuses, facilitating feedback that reflects diverse healthcare contexts. This diversity enhances the external validity of the findings by addressing

the challenges nurses face across different hospital areas (24,25).

- Purposeful inclusion of accredited hospitals: This study targeted hospitals meeting national accreditation standards to ensure that findings apply to regulated healthcare institutions. By selecting only accredited hospitals, the research aligned the STOP WPV model evaluation with contexts likely to implement similar educational interventions (24,25).
- Alignment with Pilot Study Standards: A sample size of 90 aligns with established guidelines recommending 30 to 100 participants for pilot studies in intervention research (26). This range is deemed adequate for identifying usability trends, potential challenges, and the intervention's initial effects while conforming to the logistical constraints inherent in pilot testing. This number allows for substantial data collection without exceeding operational capacity or compromising data analysis integrity (27). The recruitment process prioritized participants with direct experience managing WPV in healthcare settings. Emphasizing nurses with clinical, management, or educational backgrounds, their insights were essential for feedback on the proposed model's content and relevance. Participants were well-informed about the study's objectives before involvement, ensuring informed and voluntary participation (28). This selection process provides a representative sample of the intended user population. By including participants from various geographic regions and accredited healthcare facilities, the study aims to capture the complexities of WPV in diverse contexts, enhancing the findings' applicability to similar healthcare environments (29).

Instrument

The STOP Workplace Violence Educational Model is a comprehensive framework for addressing WPV within healthcare environments, mainly

focusing on nursing professionals. This model incorporates essential components, including educational resources about WPV awareness, strategies for effective prevention, mechanisms for reporting incidents, and measures to support affected personnel. Additionally, it is designed as a web-based application that integrates user-friendly interfaces, interactive learning modules, and robust data management systems. These features collectively facilitate the effective dissemination and utilization of pertinent information across various hospital agencies (For a detailed model development process, see Supplement 1). The model's development and evaluation were conducted using a systematic framework derived from Susanto's methodology for web-based application development (refer to Supplement 1) (21). The framework guarantees the model's functionality, accessibility, and alignment with user requirements. The evaluation process was categorized into a preliminary test and an implementation phase. A structured questionnaire was employed throughout these stages to evaluate the model across four critical dimensions: Content/Material, Use of Language/Sentences, Presentation of Application Menus, and Ease of Use. The assessment employed a four-point Likert scale, categorizing scores as follows: Very Good (4), Good (3), Poor (2), and Very Bad (1). This scoring system enabled a detailed evaluation of the model's effectiveness and user experience, providing critical insights for iterative improvements. Moreover, during this stage, descriptive statistics are utilized to comprehensively understand the evaluator team's perspective for each indicator representing each variable. The evaluation results are then categorized into low, good, and excellent, with a detailed formula used to determine the scale of each category as follows:

$$\text{Scale range} = \frac{\text{highest value} - \text{Lowest value}}{\text{number of category}} = \frac{4 - 1}{3} = 1$$

Category	Scale Range
1.00 - 2.00	Low
2.01 - 3.00	Good
3.01 - 4.00	Excellent

Data analysis

The researcher examined the data in this study using descriptive statistical analysis techniques. The analysis primarily focused on measures of central tendency, including mean, standard deviation, minimum, and maximum values (20). Using descriptive statistics, the pilot study identified usability challenges, trends, and patterns. With only 90 participants, it was not suitable for robust inferential analysis. Instead, descriptive statistics effectively evaluate user feedback, essential for early-stage intervention development (22,23). This approach aligns with Susanto's methodological framework, emphasizing the importance of systematic feedback collection and analysis to establish the product's viability in developing web-based educational applications (21). Descriptive statistics also allowed for nuanced feedback through a four-point Likert scale, revealing specific areas needing improvement and highlighting model strengths. Additionally, a calculated scale range formula ensured consistency in interpreting scores, providing a structured means to analyze the findings (21).

Ethics committee

The Ethical Fullboard at the Faculty of Nursing, USK, approved the research, noted by approval number 113004100423.

Results

Demography participant

As shown in detail in Table 1, the majority of participants in this study were male (63.6%), with the most prevalent educational qualification being a Magister degree (54.5%), followed by doctoral-level qualifications (27.3%). A significant proportion of participants were classified as Late Adults, aged between 36 and 48 years, comprising 63.6% of the sample, with a mean age of 41.90 ± 4.43 years. Furthermore, an overwhelming 90.9% of the participants possessed senior-level work experience (≥ 15 years), with an average tenure of

Table 1. Demography Evaluator Team (Preliminary testing Stages)

Characteristic	Frequency	Percentage
Gender		
Male	7	63.6
Female	4	36.4
Educational Level		
Bachelor	2	18.2
Magister	6	54.5
Doctor	3	27.3
Age (Min-Max: 35-48; M=41.90±4.43)		
Early Adult	1	9.1
Late Adult	7	63.6
Early Elder	3	27.3
Work Experience (Min-Max: 10-23; M=16.73±4.29)		
Medior	1	9.1
Senior	10	90.9

16.73 ± 4.29 years, indicative of a highly experienced and educated demographic.

Most participants in the study were male, comprising 53.3% of the sample population. A significant proportion held a Bachelor of Nursing degree, accounting for 68.9%. The predominant age group was identified as Early Adults (26–35 years), representing 68.9% of participants, with a calculated average age of 32.32 ± 5.39 years. Nearly half of the participants reported having junior-level work experience (less than 6 years, 47.8%), while 30.0% were categorized as having medior-level experience (6–10 years). Most participants were employed as civil servants, constituting 48.9% of the workforce, and the majority were married, at 66.7%. The most significant subset of respondents was employed in inpatient wards (41.1%) and emergency departments (38.9%). Regarding WPV, 80.0% of participants indicated a lack of formal reporting mechanisms, and 42.2% expressed significant concern about WPV. Furthermore, satisfaction levels with existing WPV handling procedures were notably low, with 46.7% of participants indicating dissatisfaction, categorized as either “not satisfied” or “not satisfied at all.” (Details refer to Table 2).

Table 2. Demography Participant (Implementation Stages) (N=90)

Characteristics	Frequency	Percentage
Gender		
Male	42	53.3
Female	48	46.7
Educational Level		
Diploma	25	27.8
Bachelor Nurse	62	68.9
Magister Nurse	3	3.3
Age (Years) (2) (Min-Max= 24-45; M= 32.32±5.39)		
17-25 (Late Teenage)	6	6.7
26-35 (Early Adult)	62	68.9
36-45 (Late Adult)	22	24.4
Work Experience (Years) (2) (Min-Max= 2-25; M=7.60±5.50)		
< 6 (Junior)	43	47.8
6-10 (Medior)	27	30.0
> 10 (Senior)	20	22.2
Employment		
Civil Employee	44	48.9
Government Officials with Employ Agreements (PPPK)	17	18.9
Contract	29	32.2
Marital status		
Single	60	66.7
Married	30	33.3
Hospital Type		
Government Hospital	82	91.1
Private Hospital	8	8.9
Working Area		
Emergency Department	35	38.9
Intensive Care	15	16.7
Policlinic	3	3.3
Inpatient Ward	37	41.1
Mechanism/procedure for reporting WPV actions		
There is	18	20.0
No	72	80.0
Concern about WPV Actions (Min-Max=1-5; M=3.97±1.12)		
1= Not worried at all	3	3.3
2= Less worried	8	8.9
3= Somewhat worried	16	17.8
4= Worried	25	27.8
5= Very worried	38	42.2
Satisfaction with the WPV Handling Procedure (Min-Max=1-5; M=2.67±1.13)		
1= Not satisfied at all	18	15.6
2= Not satisfied	28	31.1
3= Somewhat satisfied	29	32.2
4= Satisfied	12	13.3
5= Very satisfied	7	7.8

Preliminary testing stages

The preliminary testing stage is conducted after the product is made, involving a team of experts as evaluators. This team includes material experts (nursing academics), media experts (IT professionals), nurse managers from health service and nursing education institutions (hospitals and universities), and representatives of nursing professional organizations (DPW and DPD PPNI Aceh) (21). The evaluators rigorously assess the material across various dimensions, including content and material quality, language and sentence structure, the presentation of the application menu, and the degree of user-friendliness. Subsequently, Table 3 shows the evaluation outcomes regarding the material aspects and sub-aspects.

Implementation stages

The implementation stages involved conducting an online seminar introducing the STOP Workplace Violence Educational Model application to 90 nurse participants from three regions in Aceh Province. The seminar began with a presentation about WPV in healthcare settings, particularly hospitals. The researcher gradually introduced and demonstrated the application to ensure that all participants understood and could access the shared link. Subsequently, participants explored all available pages, including the

incident reporting link, using the provided username and password for 45-60 minutes. Upon exploring the STOP workplace violence application, all participants will be requested to complete an assessment using a Google form. This assessment will evaluate three aspects: material, media eligibility, and ease of use (21). Additionally, participants will be asked to provide input regarding their expectations for the application that has been developed. The results of the material evaluation and expectations of prospective users will be presented in Table 4.

The results of the Spearman rank test (Table 5) indicate an absence of significant correlations between the evaluation of material and participants' expectations concerning their demographic and professional characteristics, as evidenced by all p-values surpassing the conventional threshold of 0.05. Specifically, the correlations observed were as follows: gender ($r = 0.099$, $p = 0.352$), educational level ($r = -0.059$, $p = 0.579$), employment status ($r = -0.033$, $p = 0.758$), age ($r = 0.040$, $p = 0.707$), marital status ($r = 0.150$, $p = 0.158$), work experience ($r = -0.051$, $p = 0.634$), hospital type ($r = 0.033$, $p = 0.757$), and working area ($r = 0.120$, $p = 0.258$). These values reflect weak and non-significant correlations with the evaluation results. The findings of this study indicate that participants' perceptions of the educational material were consistent across various demographic and professional backgrounds. This observation is congruent with prior research suggesting that

Table 3. Preliminary Testing Evaluation Results (N=11)

No	Aspects	Score	Category
1	Material	Min-Max: 3-4; M=3.86±0.32	Excellent
	Content	Min-Max: 3-4; M=3.91±0.30	Excellent
	Language/sentence	Min-Max: 3-4; M=3.82±0.40	Excellent
2	Media Eligibility	Min-Max: 3-4; M=3.78±0.26	Excellent
	Serving Quality	Min-Max: 3-4; M=3.82±0.40	Excellent
	Design	Min-Max: 3-4; M=3.73±0.46	Excellent
	App Appearance	Min-Max: 3-4; M=3.82±0.40	Excellent
3	Ease of Use	Min-Max: 3-4; M=3.87±0.16	Excellent
	Ease of Use of the App	Min-Max: 3-4; M=3.91±0.30	Excellent
	Benefits of Information	Min-Max: 3-4; M=3.91±0.30	Excellent
	Ease of reading data	Min-Max: 3-4; M=3.91±0.30	Excellent
	Preliminary Testing Evaluation	Min-Max: 3-4; M=3.84±0.21	Excellent

Table 4. Results Evaluation of Material and Expectations of Potential Users (N=90)

No	Aspects	Score	Category
1	Material	Min-Max: 3-4; M=3.69±0.40	Excellent
	Content	Min-Max: 3-4; M=3.68±0.47	Excellent
	Language/sentence	Min-Max: 3-4; M=3.71±0.45	Excellent
2	Media Eligibility	Min-Max: 3-4; M=3.60±0.38	Excellent
	Serving Quality	Min-Max: 3-4; M=3.68±0.47	Excellent
	Design	Min-Max: 3-4; M=3.50±0.50	Excellent
	App Appearance	Min-Max: 3-4; M=3.64±0.48	Excellent
3	Ease of Use	Min-Max: 3-4; M=3.72±0.35	Excellent
	Ease of Use of the App	Min-Max: 3-4; M=3.74±0.43	Excellent
	Benefits of Information	Min-Max: 3-4; M=3.79±0.41	Excellent
	Ease of reading data	Min-Max: 3-4; M=3.66±0.47	Excellent
4	User Expectations	Min-Max: 3-4; M=3.74±0.32	Excellent
	Utilized by the institution where I work as a tool for education and reporting of WPV incidents	Min-Max: 3-4; M=3.71±0.45	Excellent
	Developed according to institutional conditions	Min-Max: 3-4; M=3.77±0.42	Excellent
	Further developed by the government/health service agencies at large	Min-Max: 3-4; M=3.77±0.42	Excellent
Evaluation of Material and Expectations		Min-Max: 3-4; M=3.69±0.29	Excellent

educational interventions possess the potential for universal effectiveness, independent of individual differences (30). For example, a previously published study reported a lack of significant correlation between demographic factors and students' perceptions of assessment tools, implying that well-constructed educational materials can effectively transcend demographic variables (31). Similarly, research published in *Progress in Nutrition* found no significant associations between demographic characteristics and nutritional knowledge scores among adolescents, thus reinforcing the idea that educational content can be equally impactful across diverse groups. Nonetheless, it is crucial to recognize that these conclusions are drawn from specific contexts, and further investigations may be necessary to substantiate these findings across more significant and diverse populations (32).

Discussion

The STOP Workplace Violence Educational Model underwent a thorough evaluation by a specialized

team to assess its practical applicability, yielding promising outcomes. The assessment was conducted across three primary dimensions: Content/Material, Media Eligibility, and Ease of Use. Each dimension received high ratings within the "Excellent" category (refer to Tables 3 and 4), emphasizing the model's adequate capacity to meet its educational objectives. Nonetheless, it is critical to acknowledge possible biases inherent in the evaluation, predominantly due to the reliance on preliminary testing and the subjective perspectives of the evaluators. Future iterations should incorporate a broader range of diverse user feedback to alleviate these biases. Evaluating the model's content highlighted its relevance, comprehensiveness, and adherence to established educational standards. The material addresses WPV scenarios, prevention strategies, and response mechanisms pertinent to healthcare settings. Ratings within this category (Min-Max: 3-4; M=3.69 ± 0.40) indicate strong performance, corroborated by existing literature that underscores the significance of targeted educational interventions in enhancing knowledge and skill retention among healthcare professionals (33). In

Table 5. Spearman Rank Test for Demographic of Respondent with the Evaluation Material and Expectations (N=90)

		Evaluation of Material and Expectations
Gender	Correlation Coefficient	.099
	Sig. (2-tailed)	.352
	N	90
Educational Level	Correlation Coefficient	-.059
	Sig. (2-tailed)	.579
	N	90
Employment	Correlation Coefficient	-.033
	Sig. (2-tailed)	.758
	N	90
Age	Correlation Coefficient	.040
	Sig. (2-tailed)	.707
	N	90
Marital Status	Correlation Coefficient	.150
	Sig. (2-tailed)	.158
	N	90
Work Experience	Correlation Coefficient	-.051
	Sig. (2-tailed)	.634
	N	90
Hospital Type	Correlation Coefficient	.033
	Sig. (2-tailed)	.757
	N	90
Working Area	Correlation Coefficient	.120
	Sig. (2-tailed)	.258
	N	90

alignment with guidelines for competency-based application development (21), the model's content resonates with the needs of nursing professionals who frequently encounter WPV incidents. The media eligibility dimension evaluated technical quality, design, and accessibility. High ratings (Min-Max: 3-4; $M=3.60 \pm 0.38$) reflect the application's technical rigor, aesthetic quality, and user-friendly interface—attributes essential for promoting engagement and facilitating effective learning (34). Notable features include responsiveness across devices and clarity in visual presentations, following evidence indicating that user-centric design substantially enhances learning outcomes on digital platforms (35). Ease of use, assessed through navigability and intuitive design measures, also received high

ratings (Min-Max: 3-4; $M=3.72 \pm 0.35$). This dimension is particularly pertinent in healthcare settings where time constraints frequently limit user engagement. Attributes such as a straightforward interface and clear instructions contribute to a streamlined learning experience, consistent with research identifying ease of use as a fundamental determinant of successful technology adoption in healthcare (21,22). The model's ability to meet user expectations (Min-Max: 3-4; $M=3.74 \pm 0.32$) underscores its relevance to nurses' practical needs in WPV scenarios. Aligning technological design with user requirements is crucial for fostering acceptance and ensuring sustained utilization, as evidenced by prior studies on healthcare technology adoption (36). However, it is imperative to

recognize that user expectations may differ across various healthcare contexts, necessitating iterative updates to the model based on real-time feedback. Furthermore, the Spearman rank test indicated no significant correlations between the evaluation of the material and the demographic or professional characteristics of the participants, including variables such as gender, educational attainment, employment status, age, marital status, work experience, hospital type, and work area, with all p-values exceeding 0.05. These findings imply that participants' perceptions of the model remained consistent across various demographic and professional backgrounds. This result aligns with previous studies, which suggest that well-crafted educational materials can achieve universal effectiveness, irrespective of individual differences (32). For example, existing research has noted a lack of significant associations between demographic variables and participants' perceptions of assessment tools, emphasizing well-designed interventions' robustness and inclusivity (29,31). Such findings underscore the equitable applicability of the model in varied healthcare contexts, thereby asserting its potential to comprehensively address WPV across different demographic groups (32). To optimize the model's applicability, a pilot project will be implemented across hospitals in Aceh Province to evaluate its functionality in real-world contexts. Pilot projects are valuable methodologies for refining interventions before broader dissemination (37). This phase will involve user assistance and coaching programs to enhance nurses' skills in managing WPV. Preliminary findings drawn from pilot implementations will inform necessary adjustments to improve the model's educational and reporting components, ensuring alignment with best practices in iterative software development (38,39). While the model provides significant insights into WPV from an individual educational perspective, it must comprehensively address organizational-level interventions, such as policy reforms and systemic strategies. Research indicates that effective WPV mitigation necessitates an integrated approach that involves organizational commitment and structural support (40). Accordingly, future endeavors should focus on incorporating these dimensions to enhance the overall effectiveness of the model in fostering safer healthcare environments (41). This study acknowledges certain limitations; although

the model offers valuable insights into WPV from an organizational perspective, it predominantly emphasizes individual nurses' educational and reporting responsibilities. However, it is imperative to recognize that organizational-level interventions—such as policy reforms, enhanced management support, and comprehensive systemic strategies—are equally essential for mitigating WPV. Without targeted initiatives at the organizational level, the model's efficacy in promoting safer work environments may be significantly constrained.

Conclusion

The STOP Workplace Violence Educational Model signifies substantial potential as a novel tool for equipping nursing professionals with the requisite knowledge and skills to manage WPV. By addressing individual educational needs while integrating user feedback and iterative refinements, the model seeks to contribute to the establishment of a safer workplace culture in healthcare, thereby benefiting both staff and patients. However, sustained effectiveness will necessitate a holistic approach encompassing individual and organizational interventions.

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be tested. Specifically, AP and HK interpret the study results and determine the implications of the research findings. SRJ revises draft articles based on feedback from other co-authors and reviewers and ensures that final editing aligns with the journal's guidelines. AA, the head of the nurse representative, offers particular expertise and perspective and is involved in data collection.

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