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Workplace Violence (WPV) Prevention Training Program for a Healthcare Organization

Hsing-Wen (Jill) Wang, BSN, RN

Seattle Pacific University, School of Health and Science

A DNP Scholarly Project submitted in partial fulfillment of

the requirements for the degree of Doctor of Nursing Practice

2021

Executive Summary

Background and Significance

Compared to all other industries in the United States, healthcare professionals are at the greatest risk for experiencing work-related violence (Cafaro et al., 2020; U.S. Bureau of Labor Statistics, 2020). Moreover, patient-to-staff violence, also known as Type Two Workplace Violence (Type 2 WPV), has the highest prevalence to healthcare employees in the past decades (Nowrouzi-Kia et al., 2019). Increasing incidence of Type 2 WPV impacts the health status of medical workers mentally and physically and generates substantial costs to organizations and the society (ILO/ICN/WHO/PSI Joint Program on WPV in the Health Sector, 2002). Thus, there is a need to offer initial training to all healthcare workers to strengthen the management skills in response to the increased prevalence of Type 2 WPV (Adams et al., 2017; Occupational Safety and Health Administration [OSHA], 2015).

Problem and Purpose Statement

Patient-to-staff violence has a large-scale impact on employees' safety, physical and psychological well-being (OSHA, 2015). To minimize the prevalence of Type 2 WPV in the healthcare industry, constructive educational interventions are needed to enhance healthcare workers' knowledge, skills, and competence when managing aggressive behaviors displayed by patients (Michelle A, 2018; Washington State Department of Labor & Industries, 2015). Introducing a Type 2 WPV prevention training program would improve employees' attitudes and confidence levels when facing aggressive behaviors displayed by patients. The purpose of the DNP project was to initiate a Type 2 WPV prevention training program designed to enhance healthcare workers' ability to recognize and manage patient aggression by introducing two validated violence risk identification tools. By initiating an educational intervention, employees would be able to identify violent behaviors and avoid hazardous situations. Therefore, decreasing the long-term incidence of Type 2 WPV.

Methods

The prevention intervention included a trial educational session and a single group pre/posttest design that measured changes in participant' attitude towards patient aggression. All surveys were conducted by electronic format (Google Form) and participants were prohibited from accessing the PowerPoint educational session until completion of the pre-educational survey. The PowerPoint presentation explained the two validated risk identification tools for common characteristics of violent behaviors: (1) the Aggressive Behavior Risk Assessment Tool (ABRAT), and (2) the Staring, Tone, Anxiety, Mumbling, and Pacing (STAMP). The pre/posttest utilized an evidence-based method to assess participants' attitude change before and after the educational session, the Management of Aggression and Violence Attitude Scale [MAVAS] (Duxbury et al., 2008). Additionally, a self-rating confidence measure (0-10 scale) questionnaire was added to evaluate self-efficacy improvement post-intervention. The data analysis was performed using the Statistical Package for Social Sciences (SPSS) software, adopting a significance level of $p < .05$. Paired t-tests were used to evaluate the impact of the educational intervention based on data from the two surveys.

Results/Outcomes

The project was successfully implemented in a community hospital and provided valuable direction in the development of a comprehensive Type 2 WPV prevention training program. Results were measured by a single group pre-and post-intervention surveys, data analyses, and respondents' self-rating confidence level towards violence management. The total number of analyzed samples were 28 (N=28). The outcomes measured displayed an

improvement in staff attitudes toward the management of patient aggression after the educational intervention. A statistical significance changed: $t(27) = 3.625$ ($p<0.001$), indicated that there was a significant increase from the pre-intervention survey ($M= .30$, $SD= .13$, $N=28$) to the post-intervention survey ($M= .36$, $SD= .11$, $N=28$). In the post-intervention survey, a result showed that participants' confidence level raised by 10% towards patient aggression.

Sustainability

The educational material will be maintained through the Employee Continual Learning system for newly hired orientation as directed by the administration of the hospitals' safety committee. Additional recommendations included initiate simulation-based training, piloting the risk identification tools, ABRAT into the admission process for aggression perdition, and encouraging Type 2 WPV reporting protocols.

An additional oral report and recommendations were presented to the hospital's safety committee. The next step will include sharing project outcomes with Washington State Hospital Association (WSHA) and discussion for dissemination plan of the program to other hospitals members of WSHA. The current COVID-19 pandemic could hinder the execution and should be considered as the barrier for timely implementation in the sustainability plan.

Implications for Practice

Healthcare workers are at high risk and have a greater chance of being victims of violence in the US. Currently, WPV related training programs include all types of WPV in one package. The findings suggest that a specific educational program focused on Type 2 WPV prevention and management is needed in every organization, which is also recommended by OSHA. The training equips healthcare workers with the knowledge of recognizing violent behavior and initiating proper interferences to perpetrators in time to de-escalate violent situations. A violence prevention program would prepare healthcare workers with the necessary knowledge and confidence to support a safe working environment, increase job satisfaction for all front-line healthcare workers, and provide a quality patient worry-free.

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Workplace Violence (WPV) Prevention Training Program for a Healthcare Organization

Compared to all other industries in the United States, healthcare professionals are at the greatest risk for experiencing work-related violence (Cafaro et al., 2020; Michelle A, 2018; U.S. Bureau of Labor Statistics, 2020). Most work-related violence toward healthcare employees is committed by patients or visitors, this is known as Type Two Workplace Violence (Type 2 WPV)(NIOSH, 1996). Healthcare employees have suffered negative mental and physical consequences due to the high incidence of Type 2 WPV resulting in increased work stress, high job turnover rates, and decreased quality of patient care (Cafaro et al., 2020; Washington State Department of Labor & Industries, 2015). An educational intervention focused on strengthening healthcare employees' ability to identify patients at risk of committing violent behaviors may result in a timelier implementation of de-escalation strategies to ensure the safety of both patients and staff. This project aims to conduct educational content for a violence prevention training program consistent with Occupational Safety and Health Administration (OSHA)' recommendations in a healthcare organization located in rural Washington State. The long-term goal of this project is to reduce the incidence of patient-to-staff violence (Type 2 WPV) in health care organizations.

Background and Significance

In 2018, 73% of nonfatal occupational injuries occurred in the healthcare and social assistance industries (U.S. Bureau of Labor Statistics, 2020). Nearly 900,000 hospital workers suffer from WPV every year (U.S. Bureau of Labor Statistics, 2020). Additionally, the average number of workplace homicides in healthcare organizations sharply increased from 2011 to 2018, which caught the public's attention nationwide (U.S. Bureau of Labor Statistics, 2020). Unfortunately, under-reporting WPV incidents are common in all nations (Liu et al., 2019).

Reasons for under-reporting WPV injuries include time-consuming incident reporting procedures, inadequate supervisory support, and fear of being blamed for causing the incidents (Liu et al., 2019). In Washington State, the non-fatal occupational injury data reported in the Department of Labor & Industries only reflects the Type 2 WPV incidents that have claimed compensation for lost time from work (Washington State Department of Labor & Industries, 2020). In other words, less severe incidents are not counted in the current database. Suppose the number of less severe incidents were added to the number of unreported incidents. In that case, it could mean the actual prevalence of Type 2 WPV is likely much higher than currently reported in Washington State.

Type 2 WPV is the most prevalent type of WPV in the healthcare industry (NIOSH, 1996; Nowrouzi-Kia et al., 2019). There is a relationship between substantial costs to individuals, organizations, and costs to society from Type 2 WPV, including monetary costs (e.g., health and medical costs), non-monetary costs (productivity-related losses), and intangible costs (decreased quality of life) (Hassard, 2018). However, no estimates of actual monetary cost have been calculated because less attention has been paid to the financial burden of Type 2 WPV. Moreover, the estimated cost calculation would be challenging due to different cost components examined by each study (e.g., healthcare cost, productivity and performance losses, sick leave, and replacement costs) (Hassard, 2018, Hoel et al., 2001). Type 2 WPV result in negative impacts to medical workers, healthcare organizations, and society that are beyond estimation (ILO/ICN/WHO/PSI Joint Program on WPV in the Health Sector, 2002; Ramacciati et al., 2018).

In Washington State, statistics show that Type 2 WPV has twice the prevalence in healthcare than in other industries (Susan et al., 2018; Washington State Department of Labor &

Industries, 2015). In response to an increased prevalence of violent events in the healthcare industry, the Revised Code of Washington (RCW), 49.19.20, now mandates new laws that require employers to prepare healthcare employees to prevent and wisely deal with violent events. The new legislation on work-related violence prevention required that all healthcare employers create a safety committee to develop, implement, and monitor progress on the WPV prevention training plan by July 1, 2021. ([RCW], 49.19.20, 1999/2019). The new labor regulations protect a broad spectrum of healthcare workers, including social workers, the security sectors, and volunteers. The new law's strategic approach to WPV must include but is not limited to employee education, training guidelines, and implementation strategies (Revised Code of Washington [RCW] 49.19.20, 1999/2019).

Traditionally, patient safety has been the priority in the healthcare industry, which resulted in inadequate protection of employees from violent behaviors displayed by patients and visitors (Lipscomb & Ghaziri, 2013). Currently, no federal-level mandatory standards address WPV in the United States. Although employers in the U.S. must provide a hazard-free working environment, there are limited standard regulations established in prevention methods, simulation training, and practical application (Occupational Safety and Health Administration [OSHA], 2015). OSHA published WPV guidelines for healthcare organizations and social workers back in 2010 that many states have utilized; however, these guidelines have not been updated in a decade. In addressing the grave problem of Type 2 WPV, employee safety should be considered as important as patient safety by healthcare employers and government regulators.

Lastly, providing violence prevention training programs to healthcare employees is crucial in decreasing Type 2 WPV by transferring knowledge into practice in healthcare environments (Adams et al., 2017; Gillespie et al., 2014; Martinez, 2016). Educational

intervention is crucial to increasing employee awareness, preventative attitude, risk identification, and coping skills for violence prevention, which is an ongoing process (Martinez, 2016; RCW 49.19.20). All healthcare employees should be offered an initial training program to strengthen violence behavior management skills in response to the increased prevalence of Type 2 WPV (Adams et al., 2017; Gillespie et al., 2014).

Problem Statement

Patient-to-staff violence has a large-scale impact on employees' safety, physical and psychological well-being and creates a substantial cost to society (OSHA, 2015; Pihl-Thingvad et al., 2019). Constructive educational interventions are needed to enhance healthcare workers' knowledge, skills, and competence when managing aggressive behaviors displayed by patients to minimize the prevalence of Type 2 WPV in the healthcare industry (Michelle A, 2018; OSHA, 2004; Washington State Department of Labor & Industries, 2015). Such interventions will also boost employees' confidence when dealing with aggressive behaviors displayed by patients or their families in the workplace. There are validated and reliable tools for aggressive risk identification that could be introduced to at-risk healthcare staff. By introducing Type 2 WVP related risk identification knowledge, employees would be able to identify patients at risk and initiate proper interferences that would respond to patients or visitors in time to avoid escalating violent situations. Appropriate Type 2 WPV training program are recommended as effective method to prevent the violent situation de-escalation (Taylor & Rew, 2011; Jansen et al. 2005; Pai & Lee 2011).

Clinical question: Would a Type 2 WPV prevention training program for healthcare workers /employees increase the employee's attitude and confidence towards patient aggression management?

Review of Literature

Search Strategy

For a literature search, three primary databases were used (PubMed/Medline, Cumulative Index to Nursing and Allied Health Literature [CINAHL], and organizational websites (CDC, OSHA, WHO, WSHA, U.S. Bureau of Labor Statistics, Washington State Department of Labor & Industries). Reference lists of the articles from PubMed and CINAHL were also manually searched. All sites were last searched on September 1, 2020. Keywords included: *workplace violence, healthcare workers, knowledge assessment, workplace violence simulation, educational intervention, violence prevention intervention, violent behavior assessment tool, aggression risk assessment tool, aggression behavior management*. Inclusion criteria were full-text research studies that (a) address WPV, (b) published in an electronic format, (c) written in English, and (d) published between 2000 and 2020. Nine articles met the inclusion criteria and were chosen for review: five systematic reviews, two qualitative research articles, and two descriptive studies. Thus, a total of fourteen articles were reviewed and critically appraised to evaluate the proposed intervention for this study.

Review Findings

Compared to European countries, the prevalence of Type 2 WPV is higher in North America, Australasia, and Asia, which could be caused by social and individual factors and contextual factors (e.g., cultural attitudes to healthcare workers, work setting, work environment, and healthcare system). Evidence on the prevalence and predictors of Type 2 WPV include gender, practice setting, work schedule, and professions (e.g., physicians, nurses, and other healthcare staff) (Liu et al., 2019). Nevertheless, more detailed analyses on this difference are needed.

Characteristics of Victims

Professional occupation, gender, work tenure, and education level are highlighted as individual vulnerabilities towards Type 2 WPV (Boafo & Hancock, 2017; Niu et al., 2019; OSHA, 2015, Taylor & Rew, 2011). Nurses had the highest incidence of Type 2 WPV victims compared to other healthcare occupations, which may be due to their considerable direct contact time with patients and visitors (Niu et al., 2019; OSHA, 2015, Taylor & Rew, 2011). In addition, more victims were female; perhaps this is due to the higher ratio of female-to-male gender in nursing demographics (Boafo & Hancock, 2017; Kalbali et al., 2018; Nowrouzi-Kia et al., 2019; Niu et al., 2019). Additionally, women were more likely to encounter sexual harassment than were men (Niu et al., 2019).

Novice healthcare providers experience a higher incidence of Type 2 WPV than their senior counterparts (Boafo & Hancock, 2017; Kowalenko et al., 2005). Longer work experience and advanced educational levels heighten practical skills for handling aggressive patient behaviors (Boafo & Hancock, 2017; Niu et al, 2019). Nurses who have work experience of more than ten years and/or educational level above a bachelor's degree face lower incidents than the nurses who have less than ten years of experience and/or education level below a bachelor's degree (Kitaneh & Hamdan, 2012). Therefore, skillful staff who possess relevant knowledge and develop coping skills will proactively facilitate violence prevention (Kitaneh & Hamdan, 2012).

Characteristics of Perpetrators

Gender, previous violent history, and conditional emotion could escalate violent situations and are considered predictors of Type 2 WPV. Although much research emphasizes mid-age males as the more prevalent in committing violent behavior, the mean age of perpetrators varies across nations. Most perpetrators involved in Type 2 WPV were male, similar to WPV in the

general population (AbuAlRub & Al-Asmar, 2011; Adams et al., 2017; Cafaro et al., 2020; OSHA, 2015; Washington State Department of Labor & Industries, 2015). Non-physical violence was more common among female perpetrators (63.6%), whereas physical violence was more common with male perpetrators (76%)(Kitaneh & Hamdan, 2012). The patients who committed violent events in the past were prone to repeat violent behavior in the future (Adams et al., 2017; Pompeii et al., 2015). Although 40% of Type 2 WPV cases, the patients were offenders, the mean age for perpetrators varied from nation to nation. The causes of violent behavior can be attributed to a patient's treatment-related factors, interactional factors, and emotions related to hospitalization in addition to environmental factors (Taylor & Rew, 2011; Jansen et al. 2005; Pai & Lee 2011). The characteristics of perpetrators are varied, depending on the location of the research area, depending on the hospital unit (etc., ER, mental health unit, and outpatient clinic), and the situational emotion they have experienced (Taylor & Rew, 2011; Jansen et al. 2005; Pai & Lee 2011).

Environmental Factors

Healthcare practice settings, work environment, and work schedule are associated with a higher prevalence of Type 2 WPV and are believed to be the important predictors for violent events. Healthcare professionals who worked in Emergency Department, mental health, and primary care settings reported higher levels of non-physical and physical violence exposure, respectively (Liu et al., 2019; Jatic et al., 2019). Furthermore, full-time workers had a higher incidence than part-time workers due to prolonged exposure to patients and visitors (Boafo & Hancock, 2017; Kalbali et al., 2018; Nowrouzi-Kia et al., 2019; Niu et al., 2019). Evening shift healthcare workers were at a higher risk of WPV compared to those on the day workers (2018;

Nowrouzi-Kia et al., 2019; Niu et al., 2019), as well as a higher incident across workgroups with mixed shifts compared with fixed shifts groups (Liu et al., 2019).

Antiviolence policy and WPV Training

Antiviolence policy and related WPV training were essential predictors of WPV for mental health department nurses (Al-Azzam et al., 2018; Liu et al., 2019). Clear written policies in the employee handbook or manual of standard operating procedures will be recommended to address WPV (ILO/ICN/WHO/PSI Joint Programme on Workplace Violence in the Health Sector, 2002; OSHA, 2004; U.S. Bureau of Labor Statistics, 2020; Washington State Department of Labor & Industries, 2015). Currently, OSHA guidelines recommend that precaution actions for Type 2 WPV should include the hospital's WPV employee training programs to minimize working hazards (OSHA, 2004). However, the lack of federal-level mandatory standards in addressing the Type 2 WPV makes progress slow-moving. Fortunately, Washington State is now the second state that has implemented WPV policy by the state government. Thus, it is anticipated that the legislation enforcement can benefit medical workers knowledge development and to react to a potential hazer adequately.

Many researchers have proven the efficacy of educational interventions in various healthcare settings (Anderson et al., 2010; Sadeghi et al., 2018). While many healthcare workers perceive the threats from Type 2 WPV, knowledge reinforcement is necessary to shape relevant attitudes and health beliefs and possibly intensify WPV preventative action (Orleans & Cassidy, 2008). However, there is a lack of research applying educational interventions to study Type 2 WPV prevention, and this remains a considerable gap waiting for further investigation (Taylor & Rew, 2011). A few available articles examine educational interventions that have demonstrated benefits for preventative attitude development by WPV-related knowledge enhancement in

experimental and clinical settings (Pawlin, 2008; Taylor & Rew, 2011). So far, the educational interventions have produced desirable outcomes; this suggests the need for comprehensive education for Type 2 WPV (Dahlby & Herrick, 2014; Mahramus et al., 2014; Martinez, 2019). Evaluating the benefits of educational interventions relies on self-reported knowledge in pre-education, post-education, and/or follow-up assessments.

Organization Assessment

Astria Health is a non-profit healthcare system based in Eastern Washington under the umbrella of the Washington State Hospital Association (WSHA). WSHA acts as an advocator and leader in the health care industry in Washington State by providing directions and references for hospitals to improve their performance, such as working on deliverable models for quality improvement and facilitating healthcare policy formulation. Currently, WSHA has set up the goal to minimize the incidence of WPV through solid leadership commitment, collaboration, best practices development, and established research methods utilization from academic fields to treat the universal WPV issue for the healthcare industry in Washington State (WSHA, n.d.).

WSHA is a non-profit member-led organization representing community hospitals, health systems (WSHA, n.d.). Because of the significance of the issue with Type 2 WPV, the WSHA seeks to establish a WPV Toolkit driving continuous quality improvement. One of the well-known WPV Toolkit released by the Oregon Association of Hospitals and Health Systems (OAHHS) has been adopted by the WSHA. The OAHHS WPV tool kit earned a desirable reputation in minimizing WPV prevalence (OAHHS, n.d); however, it cannot be conclusively adopted and utilized in Washington State due to the variation in its compositions and aspects. Thus, WSHA supported the DNP scholarly project to conduct a quality improvement analysis on WPV issues that minimize the adverse incidents for member hospitals. For this reason, the

member hospitals with WSHA across the state, including the Astria Health System, voluntarily agreed to participate in the WPV model development team that WSHA built up.

Astria Health System is a 63-bed community hospital that provides health service covers both inpatient and outpatient care. It is a Level IV Trauma care center with 24-hour ED and Intensive Care Unit. As the member hospitals of WSHA, Astria Health System has been utilizing the quality indicators and measures of quality implementation scope suggested WSHA. The quality improvement indicator, measurements have been installed in their online database as public database. However, there are limited resources or quality improvement projects currently incorporated in Astria Health System. For example, the patient satisfaction surveys have been conducted in various units with several measures for quality improvement; but the measures aim to monitor employee satisfaction with continual education efficacy has not been revealing on the quality improvement project list in their database. Thus, Astria Health System agreed to participate in the DNP scholarly project to initial quality improvement projects focusing on WPV. The DNP project measured employees' continued education efficacy of the Type 2 WPV prevention training program. Astria Health System had not yet consolidated any project that focuses on Type 2 WPV or related topics. There is one risk manager to command all risks assessment, implementation, and evaluation as a community hospital. The Astria Toppenish Hospital identified a committee to oversee the Type 2 WPV training plan implementation in May 2021.

Organizational Context.

Multiple analysis tools were used for organization assessment: (a) Strengths, Weakness, Opportunities, Threats [SWOT] was the first tool used to assess the organizational and microsystem strengths and weaknesses, opportunities of growth, and any threats towards the

DNP project (Marketline, 2016); (b) The Driver Diagram was used to provide the range of stakeholders to communicate what the project is testing and working, (*Quality Improvement Essentials Toolkit | IHI - Institute for Healthcare Improvement*, n.d.); and (c) the Force Field analysis was used for stakeholder's identification.

Several informal virtual meetings were conducted with the System Risk Manager, Education Coordinator, Chief Nursing Officer, and Department Lead in the ED, Behavioral Department, and Long-term Care unit. An evaluation was conveyed during the meetings to align with the current WPV education program. Recently, there was one educational lecture used for WPV education, which was required for all new hires. The course included a brief view of all types of WPV and the instruction for the WPV event reporting system. However, the educational training program did not cover any components for risk identification nor management in aggressive behaviors. The lack of clarity on patient-to-staff violence (Type 2 WPV) and constructive educational materials was a gap that must be addressed.

The SWOT Analysis

The advantage of the SWOT analysis is its effectiveness in building an organizational and competitive strategy. The SWOT analysis was selected for organization assessment (See Appendix A) because it covers both external and internal analyses and helps an organization become productive in managing resources to achieve its goals (Marketline, 2016). The most significant strengths of WSHA are the robust advocacy competencies and the rich opportunities to collaborate with member hospitals in Washington State. WSHA continuously develops appropriate standards and safety procedures for member hospitals. The weakness of the WSHA is inefficient communication when its operations are conducted on a large scale.

The Driver Diagram

The driver diagram (See Appendix B) provides information for stakeholders to efficiently communicate with other team members (Quality Improvement Essentials Toolkit | IHI - Institute for Healthcare Improvement, n.d.). The analysis emphasized the primary driver, who was the most significant accountability for employees' environmental safety, and the secondary driver, who were in charged of the initial implementation. The possibility of creating a substantial Type 2 WPV training program relied on both the primary and secondary driver's support, the Washington State law, and the WPV committee in Astria Health System.

Purpose/Aim Statement

The purpose of this DNP project was to develop and implement a patient-to-staff violence prevention education program to increase the worker's knowledge in recognition of violent behaviors and situations in healthcare organizations. In addition, the intention was to impart the knowledge of WPV and increase the healthcare employees' confidence to deal with WPV incidences to all healthcare employees, including social workers, volunteers, and security staff who experience nonfatal occupational injuries. The short-term goal was to increase the Type 2 WPV knowledge and risk identification for violent behavior. In contrast, the long-term goal was to decrease the incidents of Type 2 WPV.

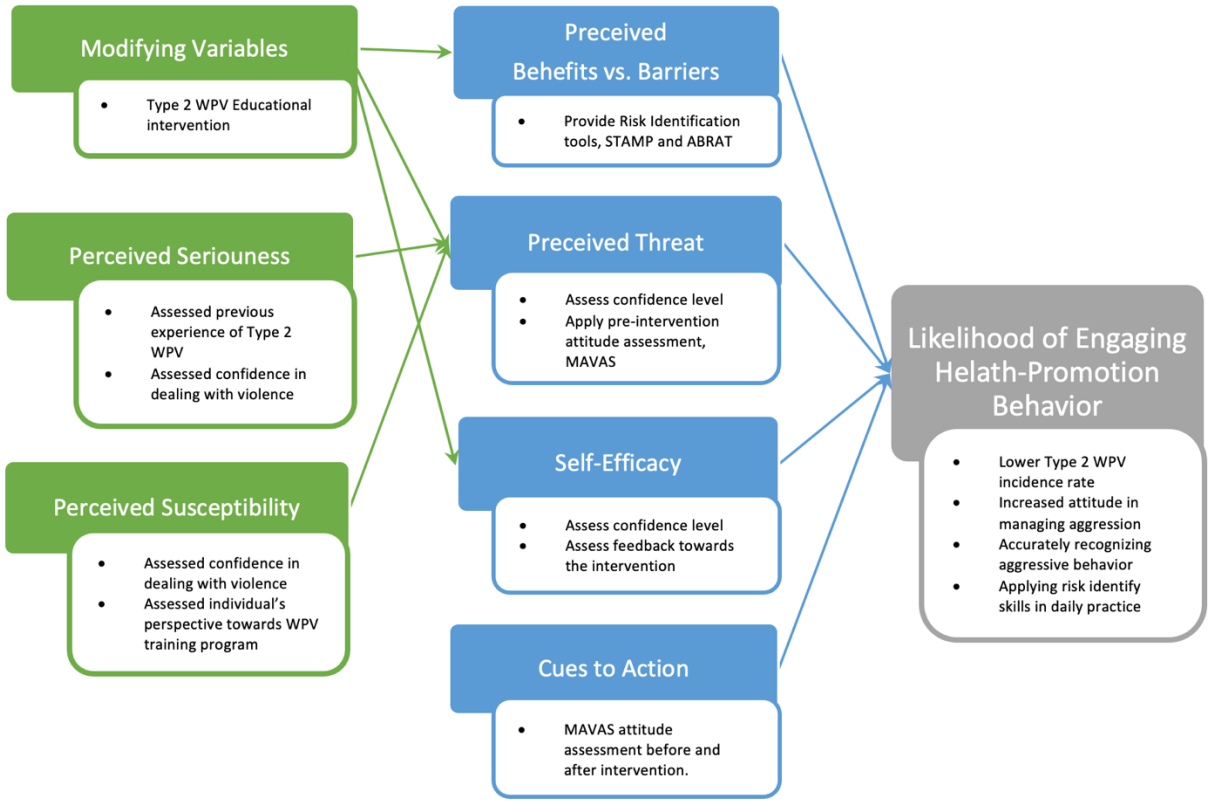
Conceptual and Theoretical Framework

Healthcare workers are at the greatest risk of Type 2 WPV. The conceptual framework, Health Belief Model (HBM) (See Figure 1), by Rosenstock, indicates the importance of self-efficacy and self-motivation toward behavior changes; it is one of the most widely used educational intervention frameworks (Sadeghi et al., 2018). According to the model, several negative factors are emphasized, including perceived susceptibility, severity, barriers, and costs. The effectiveness of a preventative health attitude is the essential elements for an individual's

health belief in changing in daily practice (Sadeghi et al., 2018). It extends to discovering the positive factors leading to healthy behaviors, including demographic variables, perceived self-efficacy, cues to action, health motivation, perceived control, and perceived threat (Raingruber, 2014). These factors are directed at participants to engage in health-promoting behavior; in this case, it is how likely the participants will adopt the risk identification skills they learn from the educational intervention for violence prevention in daily practice.

Figure 1.

Health Belief Model (HBM) Theoretical Framework.



Note. This figure demonstrates the elements of project intervention and how these interventions would lead to prevention action changes.

The Plan-Do-Study-Act (PDSA) cycles guide the educational intervention design (See Appendix C). The PDSA cycle, also known as the Deming cycle, is a four-stage cycle widely

used within healthcare settings (Crowfoot & Prasad, 2017). The purpose, methodology, and assessment tools for the WPV implementation were identified in the *Plan* stage. The *Do* stage discussed about the intervention and how it would be applied to the target. In this stage, a pre-educational survey, readable educational material, and a post-educational survey were given to participants. In the *Study* stage, data analysis was conducted from the two survey results. The data analysis was performed using the Statistical Package for Social Sciences (SPSS) software, adopting a significance level of $p < 0.05$. The *Act* stage emphasizes outcomes; if the outcome was not statistically significant ($p < 0.05$), results could not be confirmed and potentially not reproducible, meaning a new PDSA cycle would be needed. (Taylor et al., 2013). Finally, in the *Act* stage, data interpretation was made by comparing the survey results before and after the educational intervention, concluding participants' changes in attitudes and confidence in managing skills for patient aggression. The PDSA cycle was extensively used within the healthcare setting and is recommended by the Institute for Healthcare Improvement (IHI) as the Quality Improvement Essentials Toolkit (Crowfoot & Prasad, 2017). Utilization of the PDSA cycle would dictate the outcome of the educational intervention.

Methodology

Setting and Population

The DNP project applied in a 63-bed, non-profit healthcare system based in Eastern Washington, the Astria Health System. The target population was healthcare employees in Astria Health System, which covers both inpatient and outpatient facilities. All employees who have direct patient contact were invited, including but not limited to RNs, MDs, NPs, volunteers, and the security guards. Education levels may vary in the local community hospital. It is multi-cultural and features many seasonal workers and a large permanent metropolitan population. The

goal for this DNP project was to have a minimum of fifty healthcare workers participate in the education session, and twenty healthcare workers to complete both pre-and post- educational surveys. The project facilitators included the risk manage officer (agency mentor), the education coordinator in Astria Health System, the schools' faculty chair in Seattle Pacific University, and the project's lead. The education coordinator was responsible for educational session uploading into the internal education system. All Astria Health System employees received the invitation of the intervention and was accredited a one-hour continuing education credit (CE) after they completed the pre-educational survey, educational session, and post-educational survey.

Project Design

The project used a single-group, pre-, and post-educational survey design, and an asynchronous educational session format with readable educational materials. The project was set in the employee' internal education system, called HealthStream to deliver the educational material. All participants were required to complete a WPV pre-educational survey before they read the lecture. A post-educational survey was required after the participants read though the educational materials as the course completion. The pre-and post-educational survey were carried by web-based survey software, The Google Form, and the survey link was loaded into the HealthStream with the educational material to ensure accessibility. A confidence scale survey and the pre- and post-educational survey were included as a separate section to measure the confidence level towards violent behavior. The pre-and post-survey aimed to measure the immediate changes in attitude to patient' aggressive behavior by knowledge reinforcement with risk identification and confidence level in managing violent behavior before and after the educational intervention of WPV. Data from the pre-and post-educational survey, and the participants' confidence level were analyzed in the project results to answer the clinical question.

Participants Description

The participants were enrolled in the employee continual educational course through the Astria Health System. The educational material was open to all healthcare personnel from Jul 25 to August 25, 2021. Staff at high risk for Type 2 WPV and those who have experienced Type 2 WPV were encouraged to participate, including inpatient and outpatient units, including but not limited to the Emergency Department and Behavioral Department. According to State law, other frontline workers, such as physicians, nursing assistants, volunteers, and security guards, were also invited to participate in the employers' educational requirements. Exclusion criteria included employees under 18 and no identified risk of patient-to-staff violence (i.e., a staff position with no patient contact).

A convenience sample of 28 participants working in Astria Health System completed both pre-and post-educational surveys of MAVAS (N=28), and an education session. The demographic characteristics included gender, occupation, years of work in the current role, work department, education level, previously trained with WPV program, and previous experience with Type 2 WPV (See table for demographic characteristics). Twenty-two of the participants were female (76%), six of the participants were male (21%). Most of the participants had less than 5-years of working in their current role (69%). The primary respondents were RN (55%), followed by medical assistants (21%). In terms of previously training on WPV, 62% of participants had related training in the past. Thirty-one percent of participants reported exposure to Type 2 WPV in the past 12 months. Additionally, 7% of the respondents selected "maybe" for previous violent experience.

Intervention and Data Collection

Intervention: Type 2 WPV Risk Identification Education and Dissemination

Despite the types of behavioral interventions (classroom, online, or hybrid training programs) on WPV training programs, studies showed that interventions had a positive effect in the form of a reduction of violent incidents or an improvement in inherent ability when facing violent situations (Gerdtz et al., 2013; Wirth et al., 2021). The educational intervention introduced the cues of aggressive behaviors from two evident-based tools, the STAMP, and ABRAT and reviewed the characteristics of perpetrators that should be considered cues to violent behaviors. Thus, participants could learn the risk identification of violent behavior ahead of becoming a victim, actively preventing themselves from verbal or physical violence by pre-exposure Type 2 WPV knowledge.

The educational intervention contained readable educational material with validated risk assessment tools for Type 2 WPV. Current research has found common characteristics of violent behaviors to recognize aggressive behavior cues from perpetrators who may commit a violent event (Ghosh et al., 2019; Ideker et al., 2011; Kim et al., 2012; Luck et al., 2007; Pinzon-Rondon et al., 2015). Currently, available aggressive risk assessment methods have different focuses depending on the practices setting, (etc., ED, psychiatric department, and surgical department). Although most of the established methods focus on distinguishing violent behavior targets for the psychiatric unit, transferability to other work settings is also feasible given that more and more WPV incidents occur outside of the psychiatric unit and negatively impact the work environment in various settings. Therefore, two risk assessment tools were selected as the main content for the educational intervention; the STAMP, and the Aggressive Behavior Risk Assessment Tool (ABRAT) (See Appendix D).

The STAMP is composed of five components of observable behavior that indicate the early identification of violent behavior in favor of the Emergency Department setting (Luck et

al., 2007; Calow, et al., 2016). STAMP is the five-letter acronym for predicting violent behavior: there include: (a) Staring and eye contact, (b) Tone and volume of voice, (c) Anxiety, (d) Mumbling, and(e) Pacing. Studies have shown the STAMP violence risk assessment framework is effective as foundational work regarding violence risk assessment specific to the emergency department (Calow et al., 2016).

The ABRAT, on the other hand, has found favorable predictivity for identifying violence within 24 hours of admission from ten components (Kim et al., 2011; Ghosh, 2019). The ABRAT was initially developed from a 17-item checklist that combined items from another violent identification tools, the M55 tool, and the STAMP (Kim et al., 2017). ABRAT was tested in a medical-surgical unit with 2063 participants and found 3% of patients admitted to the medical-surgical unit to be violent. Both selected risk assessment tools match the educational intervention's goal to enhance the preventative knowledge of Type 2 WPV and are statistically validated for inter-rater reliability, sensitivity, and specificity. (Luck et al., 2007; Kim et al., 2017; Calow, et al., 2016).

Data Collection

Prior to the educational intervention, data on WPV incidents in Astria Health System for the previous six months were collected for data analysis. The educational intervention aims to increase preventative attitude development via WPV knowledge enhancement. Thus, participants were asked to complete a pre-educational survey in Google Form that incorporates the via the Management of Aggression and Violence Attitude Scale [MAVAS] (See Appendix E) with additional five demographic questions (See Appendix E). Astria Health System conducted the educational intervention for continual employee education began from July 25, 2021. In addition, participants were asked to complete the post-educational survey after reading though the

educational materials in the one-month window. Data collection ended on August 25, 2021; the survey analysis report was provided after the post-educational survey's completion.

Measures Tools, & Instruments

The intervention outcome was examined the attitude changes in managing patient aggression via the MAVAS, a published survey from a British nursing education group that has shown reliability and internal validity to assess staff attitudes toward patient aggression (Cheung et al., 2018; Duxbury et al., 2008; Vargas et al., 2015; Wong et al., 2015). The MAVAS is divided into four constructs risk factors contributing to patient aggression: internal and biomedical factors; external and healthcare workers' factors; situational/interactional perspectives; and healthcare workers' attitudes towards managing of patient aggression (Duxbury et al., 2008). The MAVAS has acceptable internal consistency (Cronbach's alpha = 0.75) (Vargas et al., 2015) and demonstrates a strong correlation between questionnaires and recognition of aggressive behaviors (Pearson's coefficient of 0.84) as reported (Cheung et al., 2018).

The MAVAS consists of 27 statements: 13 relate to motivations of aggressiveness, and 14 relate to violence management. Participants were asked to complete the MAVAS assessment in their pre-and the post-educational survey to assess the education interventions' direct impact. The MAVAS's interpretation of scored responses uses a two-point Likert scale (0–1), where 0 indicates 'agree' and 1indicates 'disagree'. Lower scores denote higher levels of agreement with given statements. The project aimed to enhance participants' attitudes towards violent management after pre-exposure to Type 2 WPV educational implementation. As the project focused on prevention training and violent risk identification, the survey accurately reflected the intended interventions.

A self-rating confidence scale (0-10) towards aggression management were added in the pre-and post-survey as a separate session to measure self-efficacy improvement post-intervention. The assumption was that increase confidence would improve proactive action to manage Type 2 WPV. Adding an assessment for self-efficacy also reflected the theoretical model, HBM, and intended interventions. Additional five demographic questions (See Appendix E) were added to conclude if the result matched the previous research findings in violent risk factors, such as gender, work unit, year of work in the current role, etc.

Ethical Considerations

The DNP project followed the Health Insurance Portability and Accountability Ac (HIPPA) accordingly. Approval of the Institutional Review Board (IRB) of Seattle Pacific University was obtained before the project was initiated (IRB # 202105013). Agency approval was obtained by the Chief of Nursing Officer in Astria Health System. All participants were asked to review the project instructions. All surveys were completed via Google Docs; personal data collected during the pre-selection phase were recorded under the participant's preferred nickname throughout the project. Only the project lead could access the Google Docs Cloud data. All surveys were collected, stored, and locked by the project lead and would be keeping for three years. The project deliverable and timeline changes were also obtained IRB approval in response to the COVID- 19 pandemic.

Evaluation

Analysis Plan

Descriptive statistics were used to summarize the characteristics of the study sample. The mean score and standard deviation were calculated from the pre-and post-scores on a two-point Likert scale. Prior to the data analysis, all information was manually reviewed for missing

data. The value changes from the pre-educational survey were evaluated and compared to the post-educational survey. Data of MAVAS assessment was analyzed using the IBM Statistical Package for the Social Sciences (SPSS), version 28. The paired sample *t*-tests were used to evaluate the correlation coefficient of the MAVAS for reliability based on the pre-and post-intervention survey. The significance level ($p < .05$) ensured the sample followed a normal distribution between the pre-education and post-education surveys.

On the pre-and post-educational survey, the participants were asked to give a self-report confidence level. The mean score and standard deviation were calculated on a 0-10 Likert scale from the pre-and post-scores.

Overall Project Goal

The post-educational survey goal was that participants would have their attitudes changed towards managing violent behaviors by 10% from the pre-educational survey, and 95% of participants would have their confidence level increased by 10% in the mean score.

Analysis

Pre-exposure knowledge intervention has been found effective for improving healthcare workers' attitudes in dealing with violent behavior, which is consistent with the literature review. The efficiency of educational intervention is demonstrated by data analysis showing that participants had a significant increase in attitude by 12% towards patient aggression ($p < .001$) and participants' confidence level improved from the post-intervention survey.

Participants Response

One hundred twenty-two (N=122) Astria Health Systems' employees read through the education material, generating a total of 38 paired pre-post surveys. Seventy percent of staff in Astria Health System participated in the pre-educational survey; only 38 of respondents

completed the post-intervention survey. Additionally, according to the project design, ten respondents who checked the box of not having direct patient contact were manually removed from data analysis. Thus, the total number of survey analyses was 28 (N=28). See the table below for a detailed list of demographics characteristics.

Table 1.
Demographic Characteristics

Characteristics	N=28	%
Gender		
Male	6	21%
Female	22	79%
Year of experience in current role	19	68%
<5 years	2	7%
6-10 years	2	7%
11-15 years	5	18%
>20 years		
Job position		
RN	15	54%
Medical Assistant	7	25%
Physical Therapist	1	4%
Social Worker	1	4%
Pharmacologist	1	4%
Technical Support	1	4%
Radiologist	1	4%
Administrator Officer	1	4%
Work Department		
Inpatient Department	9	32%
Outpatient Department	5	18%
ED or Intensive Care	6	21%
Units	1	4%
Mental Health	1	4%
Department	1	4%
Administration	2	7%
Lab	3	11%
Pharmacy		
IT		
Education level		
Non-Degree	2	7%
Two- Year College	18	64%
Bachelor's degree	5	18%

Master and above	3	11%
Previous Training on WPV		
Yes	18	64%
No	11	36%
Experience of Type 2 WPV in past 12 months		
Yes	8	28%
No	17	61%
Maybe	2	7%
Never	1	4%

Survey Result

Data Analysis

A paired sample t-test was conducted to evaluate whether a statistically significant difference existed between the MAVAS assessment before and after the educational intervention (See Table 2). A bar chart (See Figure 3) displayed the positive changes in confidence level before and after the educational intervention. Moreover, the data analysis confirmed improvement in respondents' attitudes toward managing violent behaviors from pre-and post-intervention surveys.

MAVAS Assessment Result

The result of the paired sample showed participants' attitudes toward management of patient aggression have significantly changed: $t(27) = 3.625$ ($p<0.001$), indicating that there was a significant increase in MAVAS assessment from the pre-educational survey ($M= .30$, $SD= .13$, $N=28$) to the post-educational survey ($M= .36$, $SD= .11$, $N=28$). The mean increases were .6, for the difference between the means. A Pearson correlation of .68 indicates a strong positive correction between the pre-and post-intervention survey.

Table 2.

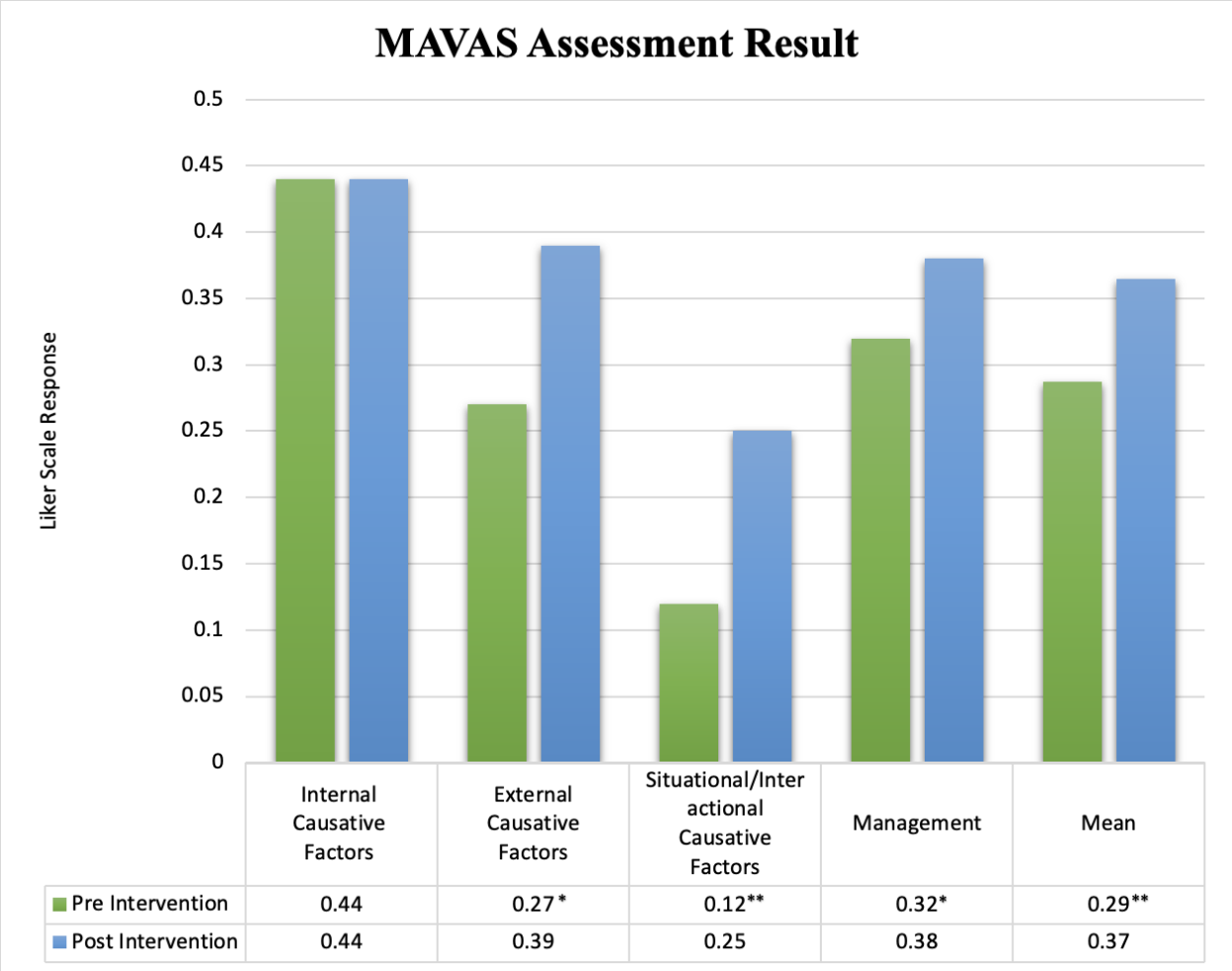
Survey Result in t-test: Paired Two Simple for Means.

	Pre-Intervention Survey	Post-Intervention Survey
Mean	0.297619048	0.364417989
Variance	0.015697012	0.014201432
Observations	28	28
Pearson Correlation	0.682804694	
Hypothesized Mean Difference	0	
df	27	
t Stat	-3.624737315	
P(T<=t) one-tail	0.000591799	
t Critical one-tail	1.703288446	
P(T<=t) two-tail	0.001183599	
t Critical two-tail	2.051830516	

According to MAVAS assessment in the four constructs, participants' external causative factors and situational/interactional factors on patient aggression significantly improved post-intervention (See figure 2). Participants' attitudes toward managing patient aggression have slightly increased from .32 to .38, while the attitude towards internal causative factors remains the same (.44). Although there are few positive changes in internal causative factors and employees' attitudes in managing patients' aggression, the results of the MAVAS survey reflected the participants' positive changes in attitudes toward patient aggression.

Figure 2.

Management of Aggression and Violence Attitude Scale (MAVAS) Results.



Note. Liker scale shows individuals' changes in attitude towards patient aggression in pre- and post-intervention survey.
* $p<.05$
** $p< .001$

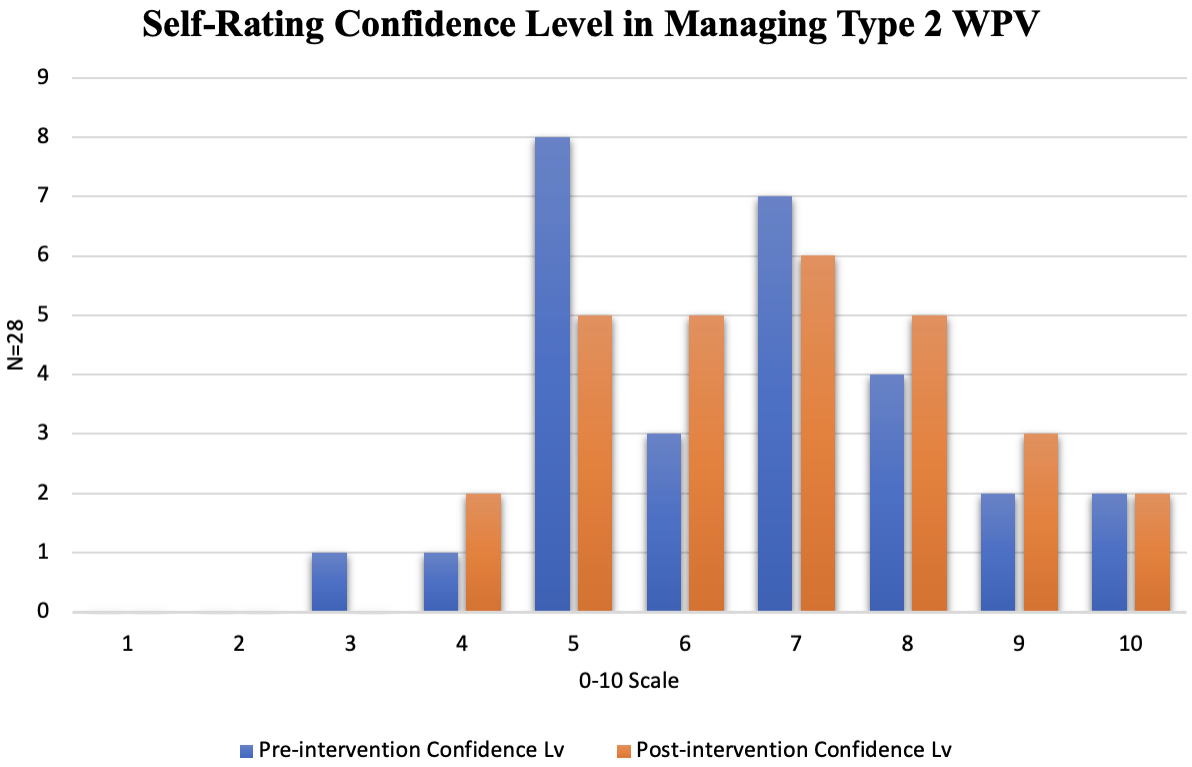
Self-Rating Confidence Level

The self-rating confidence result showed that confidence levels increased on zero to ten scale (See Figure 3). However, the mean score did not reach the original project goal, which was set as 10% improvement from pre-intervention to post-intervention. Figure 3 illustrates the change in self-rating confidence level. One of the respondents, who selected a lower confidence level (3 out of 10) towards patient aggression, did not present in the post-survey. More

significantly, several participants selected from 5 to 7 out of 10 have shifted to 7 to 9 in the post-intervention survey, showing that they were more confident in dealing with patient aggression.

Figure 3.

Self-Rating Confidence Level Survey.



Type 2 WPV Incident Occurrence

The type 2 WPV incident report was made up of two sets of data: (1) the incident report from the hospital; (2) the total incidents count from respondents (N=122) in pre-intervention survey who reported that they had experienced Type 2 WPV. Among the 122 staff who participated in the pre-intervention survey, 41 (34%) reported that they were victims of some kind of violence (verbal, physical, or both). In these 44 respondents who reported they had experienced Types 2 WPV, 24 (55%) experienced Type 2 WPV in the past 12 months; 10 (23%) experienced Type 2 WPV in recent 6 months. Among 122 respondents, 7 (6%) respondents

selected "Maybe" as the answer towards previous experience to Type 2 WPV. In regard to violent incident reporting from the hospital, by July 2021, there was one incident reported in 2021, 21 incidents reported in 2020, 13 incidents reported back in 2019, and 3 incidents in 2018. The discrepancy was revealed between the number of WPV incident reports provided by the hospital and the number of people who stated been victims in the past 12 months.

Discussion

The result of the DNP project is summarized by the following points: (1) the attitude increased after intervention in comparing to pre-intervention (p= .001) (N=28); (2) the confidence level grew post-intervention (N=28); and (3) Type 2 WPV incident analysis (N=122).

Attitudes towards the Cause of Patient Aggression

The survey completion rate was 23% (N=28), many of the respondents (77%) did not complete the post-intervention survey. Thus, there were only 28 respondents who completed both pre-and post- intervention survey, and this data was analyzed in reflecting respondents' attitude towards patient aggression (See Figure 2). A statistically significant improvement was found on the mean score of the post-intervention MAVAS assessment (p< .001). The mean score of the internal causative factors (.44) presents participants' views in agreeing or disagreeing that the patients' aggression was caused by internal factors or biomedical factors, such as illness, behavioral issues, and whether the patient should take responsibility to control their agitation. There was no difference between pre- (.44) and post- (.44) MAVAS assessment (p< 1), which was anticipated because the primary educational content for this project did not emphasize internal or biomedical factors. The primary content of the educational material focuses on violent risk identification, which would more likely impact the external or environmental factors, but not

internal factors. Staff attitudes toward management of patient aggression did not significantly change; a slight increase (.6) of the mean score ($p < .013$).

In contrast, there were significant differences in participants' external causative factors and situational/interactional factors. The external causative factors imply that patients' aggression was caused by environmental factors, such as restrictive environments or hospital settings. The mean score rose from .27 to .39, which demonstrated the attitude enhancement towards patients' aggression ($p< .017$) caused by external factors. Double the growth was displayed in the situational causative factors from .12 to .25 ($p< .003$), indicating support for the impact of interpersonal and situational influences, such as communication and de-escalation. As the project focused on prevention and recognizing risks contributing to aggression rather than the specific medical treatment of patient aggression, the survey accurately reflected our intended interventions.

Confidence Level Post-intervention

There were 28 out of 122 respondents who completed both pre- and post-intervention surveys. The education session delivered the contents of violence prevention skills. While the participants' attitude towards violent behavior was evaluated post-intervention, the confidence evaluation could also contribute to drawing the conclusion from a different perspective.

The confidence level increased after intervention in comparison to pre-intervention (See Figure 3). There were ten participants who reported confidence levels lower than five on a 0 to 10 scale. The number of participants who selected confidence levels lower than five decreased in the post-intervention survey from ten to seven. Meanwhile, participants who reported a high confidence level (< 5 on a 0 to 10 scale) increased from 18 to 21. This violence prevention training program required that every employee complete the reading course to earn the

continuing education credit, despite previously being trained. It was anticipated that participants who had previous training might not change a lot in confidence levels towards violent behavior, but those who had not yet been trained with violence prevention skills would benefit the most, which was consistent with the post-intervention survey result.

Type 2 WPV Incident Analysis

One hundred twenty-two (N=122) Astria Health Systems' employees completed the pre-intervention survey, which asked respondents if they had experience with Type 2 WPV prior to the education session. Based on the total respondents in the pre-intervention survey (N=122), the incidence rate of Type 2 WPV in the agency was 33%. Forty-one out of 122 reported they had experienced Type 2 WPV. Seven out of 122 reported they may have experienced Type 2 WPV (6%). According to the U.S. Bureau of Labor Statistics, the incidence rate for WPV was 10.4% per 10,000 full-time workers. Although the U.S. Bureau of Labor Statistics database might contain large numbers of underreporting incidents of Type 2 WPV, the incidents reported remain higher in the pre-intervention survey than the U.S. Bureau of Labor Statistics incidence rate from 2018 (U.S. Bureau of Labor Statistics, 2020).

One of the reasons for the incident discrepant number between the agency's official incident report and the pre-intervention survey might be led by the project mythology, an anonymous and self-administered survey setting. An anonymous survey may give participants more confidence to respond than the formal report, especially to sensitive issues, such as violent experiences, which would be turned in to the hospital's administration. Additionally, the survey questions regarding the Type 2 WPV incidents only asked participants to select from multiple choice. In contrast, in the incidents reporting system, employees are required to fill out pages of format and asked to summarize what happened that would take more time and effort to complete.

Moreover, several reasons were contributing to the higher incidence rate of Type 2 WPV, including the reasons mentioned in the literature review, such as lack of antiviolence policy, comprehensive WPV training, and environmental factors. The COVID pandemic is another strong factor that exacerbates the violence in the healthcare industry in 2019 as well.

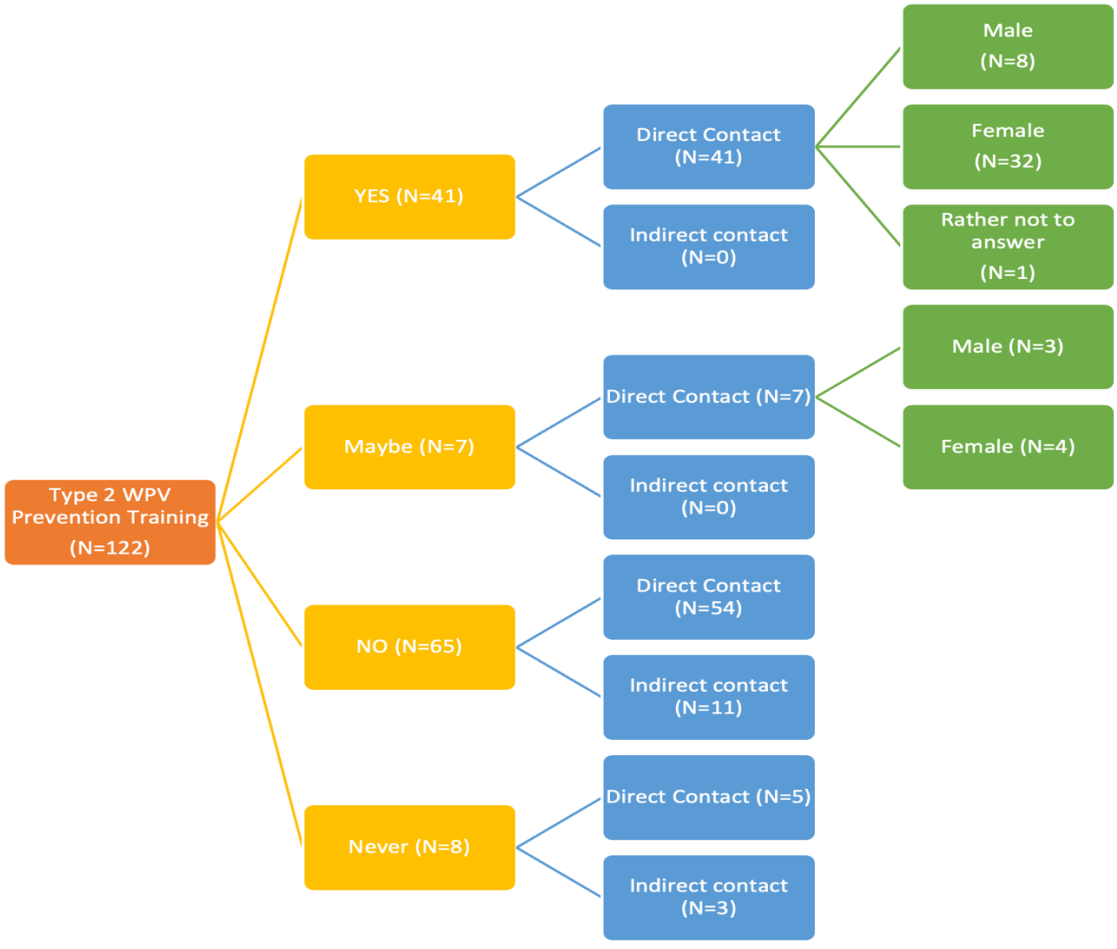
Several demographic characteristics in this project were consistent with previous research findings of risk factors for Type 2 WPV (See Figure 4). First, respondents with less direct patient contact (e.g., administrator, quality coordinator, IT, and accountant) had 0% incident reports in the past 12 months. Meanwhile, prolonged patient contact workers presented an advanced incidence rate (88%) of Type 2 WPV. These prolonged patient direct contact positions, including medical assistance, and RNs were more prevalent than other job positions. Additionally, 43% of medical assistants reported experiencing Type 2 WPV that was two times higher than RNs (20%). These facts may offer insight that it is necessary to include employees who have direct patient contact to undergo WPV training. They should be required to take the training course and/or offered a returning training course for sufficient in pre-exposure knowledge. In contrast, employees who do not have direct patient care could be provided an alternative course.

Furthermore, respondents who have had less working experience than 5-year in their current role had a higher incidence of Type 2 WPV than senior workers (88%). Compared with the seniors, the novice has four times the chance to experience Type 2 WPV. Working experience in the same position displayed a decisive factor contributing to a lower incidence rate of Type 2 WPV. Moreover, females (78%) were more prevalent than males (22%) for Type 2 WPV. The proportion of gender count was uneven; female employees count as 81% of respondents. Emergency and/or Intensive Care Unit, which have been found a high-risk work

setting for Type2 WPV, have a higher incidence rate (37%) than outpatient (17%) and inpatient departments (12%). The risk factors of being involved in Type 2 WPV from previous research findings include gender, work unit, year of working in the current role, and if the job required long-time patient contact were all consistence with DNP projects' data result.

Figure 4.

Demographic Characteristics Analysis in Tree Diagram



Implications for Practice

Most WPV training programs currently combine all types of WPV education in one package; however, it is not suitable for frontline workers in the medical profession. Because healthcare workers are more prevalent in Type 2 WPV than other industries, so healthcare

organizations should define educational programs that accurately target healthcare workers' needs. The training teaches healthcare workers to recognize and manage violent behavior situations; in addition, the training is helpful for the employees themselves to know how to de-escalate and work calmly. The outcome of this Type 2 WPV prevention training program provided baseline data for the future modification of Type 2 WPV training programs in both Astria Health System and WSHA. By doing so, healthcare workers may have improved satisfaction in their career journey and a supportive safe, and healthy working environment.

Sustainability Plan

The statistical result demonstrates the strong effect of the educational intervention. An additional oral report and recommendations will be presented to the Safety Committee in Astria Health System, the primary stakeholders, in September 2021. Regarding continuous improvements about Type 2 WPV incident prevention, recommendations included initiate simulation-based training, pilot the risk identification tools, ABRAT into the admission process in Astria Health System. Regarding continuous improvements in staff attitudes about coping with aggressive patients, recommendations included encouraging Type 2 WPV reporting and open peer support collaboration, which needed clear communication from leadership about policies and protocols. As agreed by the Astria Health System, the educational material will be maintained through HealthStream for new hired orientation as directed by the administration of the Astria Health System Safety Committee.

The next step will be sharing the project outcome for future dissemination plan to WSHA for broader implementation in Washington State. While the DNP project has achieved the desired goals in the Astria Health System, the educational implementation and its value will be greater under a systemic approach from a larger organization association like WSHA.

Nevertheless, the current COVID-19 pandemic could hinder the execution and should be considered in the sustainability plan.

Strengths and Limitation

Barriers to implementation included a limited opportunity to provide an interactive education session via an online platform due to staffing constraints and limited availabilities under a broader application into the whole agency. The social distancing limitation of the COVID-19 also restricted the opportunity to provide simulation-based training. The plan to mitigate barriers included implementing readable condensed educational material not to disrupt clinical care and counting the participation time into staff education courses as reward hours. The project lead sustained consistent and persistent stakeholder engagement to negotiate project design and implementation by communicating via email, text, and zoom. These communication strategies helped mitigate pandemic barriers, too. The initial project stage considered how to provide low-cost, high-impact alternatives to Type 2 WPV prevention education that focus on staff safety to encourage stakeholders to invest. Lastly, an ideal experimental setting for the outcome measurement is to have a control group of participants implements the MAVAS assessment without a educational session, which cannot be accomplished due to limited capacity and availability.

Conclusion

A Type 2 Workplace Violence (WPV) training program confirmed that implementing violence risk identified tools can effectively promote staff attitude and confidence towards patient aggression management. In addition, the risk identification knowledge empowers staff to provide appropriate responses during clinical practice. Moreover, the anonymous survey setup reveals the underreporting issue of Type 2 WPV, which needs to be addressed. In the future, we

hope simulation-based training can be resumed after the COVID-19 pandemic to improve patient and staff safety utilizing team effectiveness in caring for the potentially aggressive patient.

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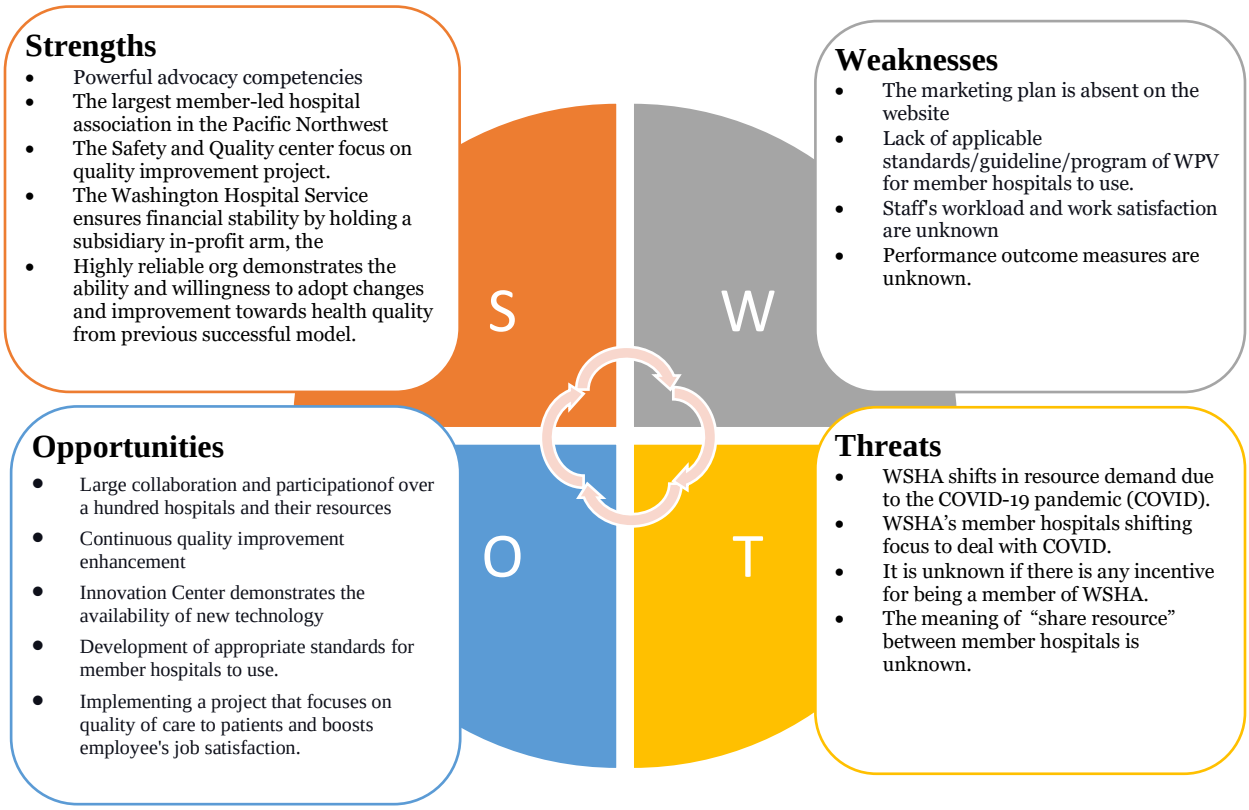
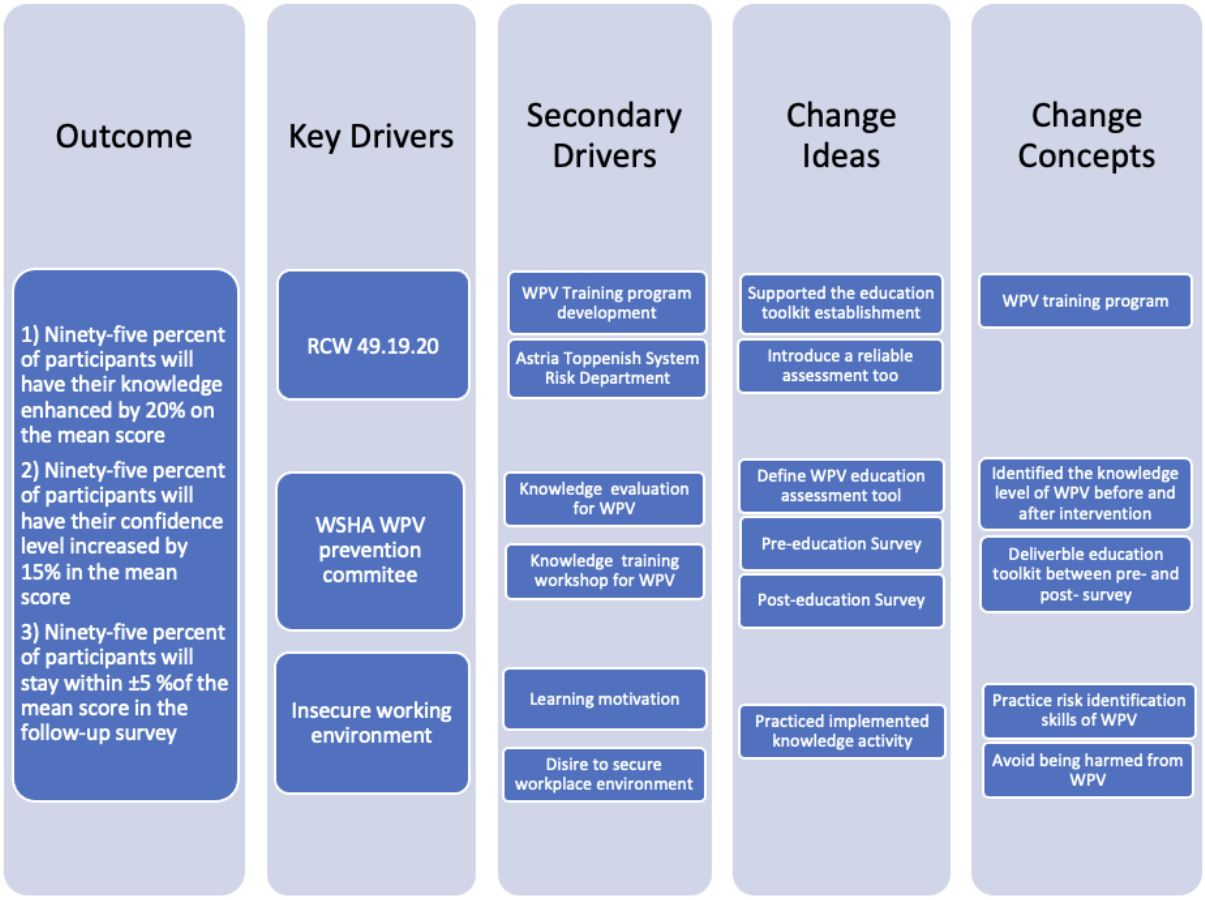
Appendix A

The Strengths, Weakness, Opportunities and Threats (SWOT) analysis:



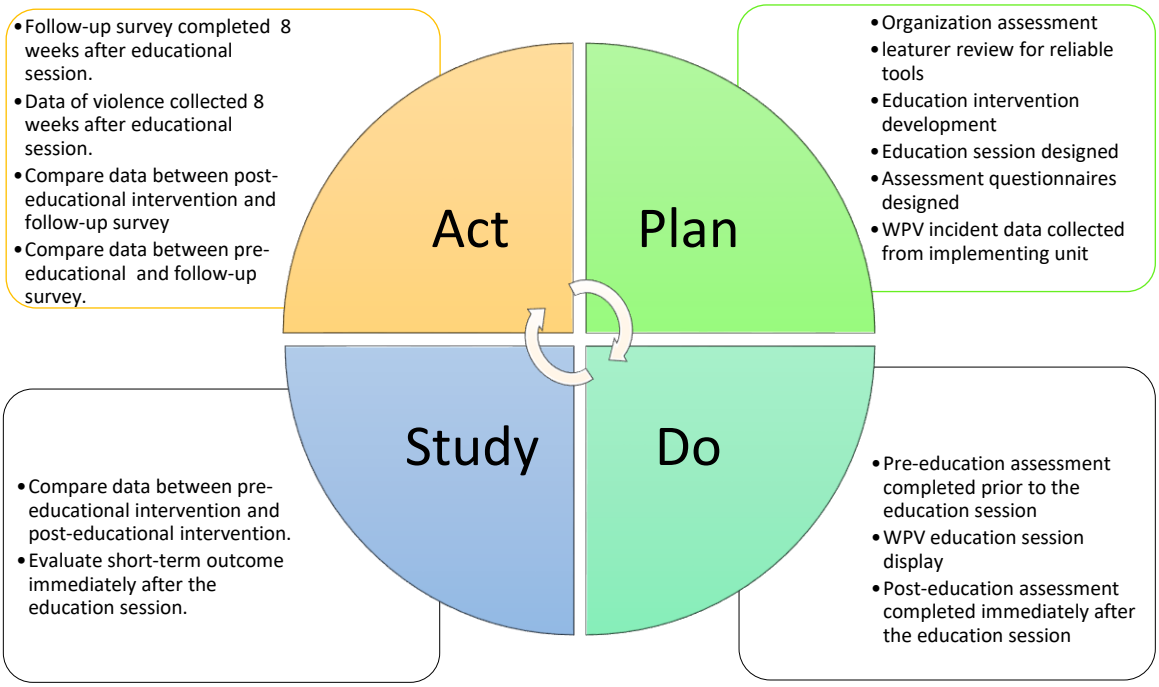
Appendix B

Driver Diagram



Appendix C

Plan-Do-Study-Act cycles (PDSA)



Appendix D

Aggressive Behavior Risk Assessment Tool (ABRAT)

ABRAT items	Prevalence, *n* (%)	Violent Pts*, *n* (%)	Sensitivity (%)	Specificity (%)
Confusion/cognitive impairment	139 (67)	21 (15·1)	37·5	94·1
Anxiety	62 (3·0)	9 (14·5)	16·1	97·4
Agitation	40 (1·9)	12 (30·0)	21·4	98·6
Shouting/demanding	27 (1·3)	10 (37·0)	17·9	99·2
History of physical aggression	21 (1·0)	10 (47·6)	17·9	99·5
Threatening to leave	15 (0·7)	6 (40·0)	10·7	99·6
Physically aggressive/threatening	14 (07)	12 (85·7)	21·4	99·9
History, signs/symptoms of mania	12 (06)	3 (25·0)	5·4	99·6
Staring	8 (0·4)	2 (25·0)	3·6	99·7
Mumbling	7 (0·3)	3 (42·9)	5·4	99·8

*Percent violent patient with the ABRAT scores.

Appendix E

Pretest-WPV Risk Identification

The purpose of the survey is to obtain your perceptions in management of workplace violence before the following WPV Education.
IRB Approved by Seattle Pacific University # 202105013

* Required

1. Code Name choice *

Choice your favorite vegetable plus FOUR NUMBERs as the nick name for the assessment. For example, "Carrot1654". REMEMBER this name for post-educational survey

_____

2. What is your gender identity *

Mark only one oval.

- M
- a
- l
- e
- F
- e
- m
- a
- l
- e
- Rather not to answer
- Other: _____

3. How many years have you worked in current unit? *

Mark only one oval.

- 0-5
- 6-10
- 11-15
- 16-20
- >20
- Rather not to answer

4. What best describes your role? *

Mark only one oval.

- ◯ RN
- ◯ LPN
- ◯ Security guardNP
- ◯ Physician
- ◯ Officer
- ◯ Rather not to answer
- ◯ Other: _____

5. In which department do you work? *

Mark only one oval.

- ◯ ED or Intensive Care Units (ICUs)
- ◯ Behavior center/Mental health department
- ◯ Long-term care
- ◯ Outpatient departmentRather
- ◯ not to answer
- ◯ Other: _____

6. Have you participated a workplace violence training course that provided by your employer?

Mark only one oval.

- ◯ Yes
- ◯ No

Management of Aggression and Violence Attitude Scale (MAVAS)

7. Patients are aggressive because of the environment they are in

Check all that apply.

- [ ] Agree Disagree
- [ ]

8. Other people make patients aggressive or violent.

Check all that apply.

- [ ] Agree Disagree
- [ ]

9. Patients commonly become aggressive because staff do not listen to the*m 1 point

Check all that apply.

- [ ] Agree
- [ ] Disagree

10. It is difficult to prevent patients from becoming violent or aggressive. * 1 point

Check all that apply.

- [ ] Agree
- [ ] Disagree

11. Patients are aggressive because they are ill. *

Check all that apply.

- [ ] Agree
- [ ] Disagree

12. Poor communication between staff and patients leads to patient aggression.

Check all that apply.

- [ ] Agree
- [ ] Disagree

13. There are types of patients who are aggressive

Check all that apply.

- [ ] Agree
- [ ] Disagree

14. Different approaches are used on the ward to manage aggression

Check all that apply.

- [ ] Agree
- [ ] Disagree

15. Patients who are aggressive should try to control their feelings

Check all that apply.

- [ ] Agree
- [ ] Disagree

16. When a patient is violent, seclusion is one of the most effective approaches

Check all that apply.

- [ ] Agree
- [ ] Disagree

17. Patients who are violent are restrained for their own safety

Check all that apply.

- [ ] Agree
- [ ] Disagree

18. The practice of secluding violent patients should be discontinued

Check all that apply.

- [ ] Agree
- [ ] Disagree

19. Medication is a valuable approach for treating aggressive and violent behaviour

Check all that apply.

- [ ] Agree
- [ ] Disagree

20. Aggressive patients will calm down if left alone

Check all that apply.

- [ ] Agree
- [ ] Disagree

21. Negotiation could be used more effectively when managing aggression andviolence

Check all that apply.

- [ ] Agree Disagree
- [ ]

22. Restrictive environments can contribute to aggression

Check all that apply.

- [ ] Agree
- [ ] Disagree

Other: [ ] _____

23. Expressions of anger do not always require staff intervention

Check all that apply.

- [ ] Agree
- [ ] Disagree

24. Physical restraint is sometimes used more than necessary

Check all that apply.

- [ ] Agree
- [ ] Disagree

25. Alternatives to the use of containment and sedation to manage physicalviolence could be used more frequently

Check all that apply.

- [ ] Agree Disagree
- [ ]

26. Improved one to one relationship between staff and patients can reduce theincidence of aggression

Check all that apply.

- [ ] Agree Disagree
- [ ]

27. Patient aggression could be handled more effectively on this ward

Check all that apply.

- [ ] Agree
- [ ] Disagree

28. Prescribed medication can sometimes lead to aggression *Check all that apply.*

- [ ] Agree
- [ ] Disagree

29. It is largely situations that can contribute towards the expression of aggressionby patients

Mark only one oval.

- ◯ Agree
- ◯ Disagree

30. Seclusion is sometimes used more than necessary *Mark only one oval.*

- ◯ Agree
- ◯ Disagree

31. Prescribed medication should be used more frequently for aggressive patients *Mark only one oval.*

- Agree
- Disagree

32. The use of de-escalation is successful in preventing violence *Mark only one oval.*

- Agree
- Disagree

33. If the physical environment were different, patients would be less aggressive

Mark only one oval.

- Agree
- Disagree

34. How would you evaluate your confident level when facing aggressive behavioral?

Mark only one oval.

1	2	3	4	5	6	7	8	9	10

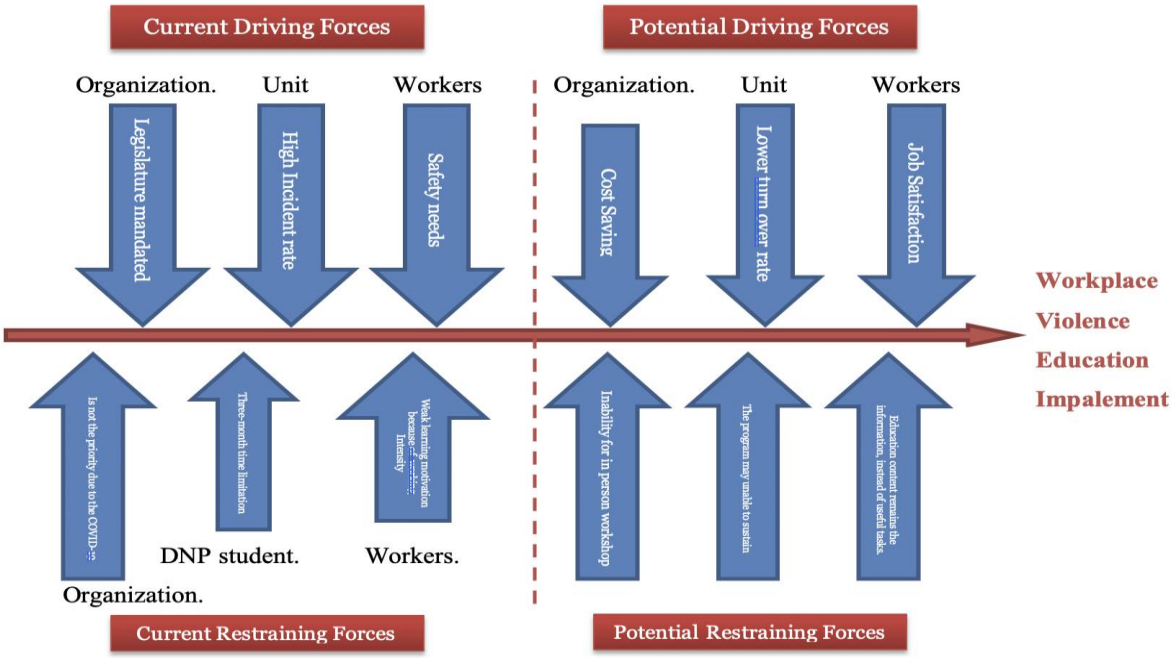
35. Do you think a workshop of WPV would be helpful? *

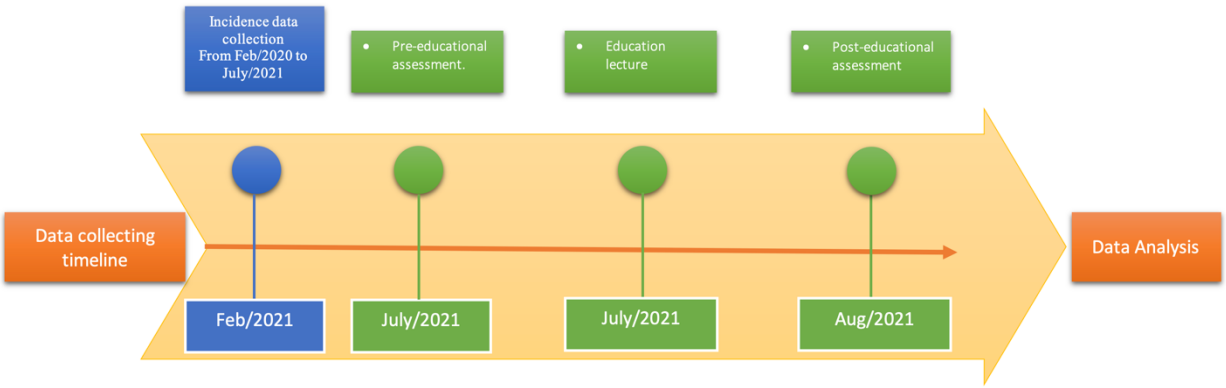
Mark only one oval.

1	2	3	4	5	6	7	8	9	10
⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭

Appendix F

Force Field Analysis



Appendix G

Timeline of the DNP Scholarly Project