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Staff Education Program Assessment of Violence in an Acute Psychiatric Hospital

Steven Dickson
Walden University

Walden University

College of Nursing

This is to certify that the doctoral study by

Steven Dickson

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
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Dr. Robert Anders, Committee Chairperson, Nursing Faculty
Dr. Anna Valdez, Committee Member, Nursing Faculty
Dr. Jonas Nguh, University Reviewer, Nursing Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
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Abstract

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by

Steven Dickson

MSN, Grand Canyon University, 2014

BSN, Chamberlain University, 2012

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

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Abstract

Physical aggression and violence are sizable concerns for mental health nursing professionals. More than 80% of nurses working in mental health areas have faced verbal or physical abuse from patients. The practicum site noted that patient violence towards staff accounted for 18-20% of workplace injuries involving days away from work, compared to 10-11% in other healthcare settings. The purpose of this project was to develop a program to educate staff on the Brøset violence screen (BVC), an evidence-based, violence-risk screening tool, to increase staff's knowledge about this tool. Five behavioral health experts used the Lynn model to evaluate the project's educational program, learning materials, and the pre- and posttest. The experts determined that the educational program and all learning materials were useful educational tools. Knowles' adult learning theory was used to support the educational program. Twelve licensed nurse participants completed the educational program. The pre-test findings identified a mean between 2.16 and 3.33, with a mode of 2-3 for all questions indicating staff had little to some knowledge of the content. The posttest data suggests that the educational intervention met the lesson objectives. All questions on the posttest had a mode of 4, indicating that staff felt knowledgeable about the content following the educational program intervention. The project has the potential to impact nursing practice in the state-operated health system. Social change will occur when nurses proactively assess patients at risk for violence, potentially decreasing the use of patient restraints and seclusion, and thus improving working conditions for staff by reducing work-related injuries.

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Section 1: Nature of the Project

Physical aggression and violence are sizable concerns for mental health nursing professionals. More than 80% of nurses working in mental health areas have faced verbal or physical abuse from patients (Anderson & Jenson, 2019). An estimated 17% of patients commit at least one violent act like physical aggression while hospitalized (Iozzino et al., 2015). Assaults against health care workers have increased by more than 13% in the past five years, with up to 27% of attacks and violent acts resulting in fatalities (Sarver et al., 2019). Reports of assaults, sexual misconduct, and homicide are among the 10 most frequently reported sentinel events in healthcare settings throughout the United States (The Joint Commission, 2016).

Caring for individuals who live with severe mental disorders has its own set of challenges. When staff becomes the target of aggression and violence, the results can include serious physical injury, low staff morale, and low retention rates (Sarver et al., 2019; Sharifi et al., 2020). Staff do not receive training on, or use an evidence-based-practice assessment tool to identify, high-risk aggression and violent patients. The purpose of this project was to develop a program to educate staff on the Brøset violence checklist (BVC). BVC is an evidence-based, violence-risk screening tool. After an expert panel approved the staff educational program, using Lynn's validation tool (Lynn, 1986), I set out to determine the validity of the program to operate in the practicum site. Once the staff educational program was validated, I educated staff on using the violence risk screening tool and evaluated their understanding of how to use it. This project's positive impacts are expected to include decreasing the use of restraints and seclusion, the risk of

patient trauma, and the length of stay (Sarver et al., 2019). Proper patient assessment could decrease the risks for health care workers, including work-related injuries and emotional distress, and could increase nurse satisfaction (Barlow et al., 2000; Sarver et al., 2019).

Problem Statement

Physical aggression and violence are sizable concerns for mental health nursing professionals. More than 80% of nurses working in mental health areas have faced verbal or physical abuse from patients (Anderson & Jenson, 2019). An estimated 17% of patients commit at least one violent act while hospitalized (Iozzino et al., 2015). Assaults against health care workers have increased by more than 13% in recent years, with up to 27% of attacks and violent acts resulting in fatalities (Sarver et al., 2019). Reports of assaults, sexual misconduct, and homicide are among the 10 most frequently reported sentinel events in healthcare settings throughout the United States (The Joint Commission, 2016). The results of this violence on staff include serious injury, low staff morale, and low retention rates (Sarver et al., 2019; Sharifi et al., 2020). Violence can also impact patient outcomes, including increased use of restraint and seclusion, patient harm, and an overall increased length of stay (Cheng et al., 2016; Sarver et al., 2019).

The practicum site noted that patient violence towards staff accounted for 18-20% of workplace injuries involving days away from work, compared to 10-11% in other healthcare settings (Occupational Safety and Health Administration [OSHA], 2015). The local problem is that the practicum site's leadership has recognized the need to implement a violence risk screen to improve the staff's ability to properly assess patients

and identify patients with the highest risk of violence and aggression. Prior to this project, the hospital did not use an evidence-based risk-of-violence screening tool to assess patients. The staff did not receive formal education to identify and mitigate the risks associated with patients at high risk for aggression or violence.

Purpose Statement

The acute behavioral health hospital had not implemented an evidence-based violence risk tool to assess patients' risk for violence. The site identified a practice gap due to ongoing episodes of patient violence. The practice-focused questions for this project were:

1. Will the staff development activity with the BVC, evaluated using Lynn's model, meet evaluation criteria?

2. After attending the educational session on using the BVC, will the staff meet the learning outcome objectives?

According to Sarver et al. (2019), integrating a staff education program and validated violence risk screening tool will offer nurses an effective means to identify patients at risk of violence. Early identification of trouble can result in swift intervention and decrease the overall number of violent episodes in acute psychiatric units. I developed an educational program to educate staff on the BVC, an evidence-based, violence-risk screening tool. The project sought to educate staff on the use of the screen to evaluate patients at risk for violence and aggression effectively and efficiently. The validated BVC screen would support the prediction of violent behaviors. It can predict

violent behavior within 24 hours based on the presence or absence of specific patient behaviors and observations (Sarver et al., 2019).

Nature of the Doctoral Project

As a part of my DNP project, I developed an educational program to educate staff on the BVC, an evidence-based, violence-risk screening tool, to increase staff's knowledge of assessing patients at risk for violence. The program was designed for staff working in a state-operated, acute behavioral health hospital in the Midwest. The sources of evidence used to support this project included a literature search, professional websites, personal experiences caring for the patient population, chart review, and conversations with content experts. Professional sites used included American Nurses Association, American Psychiatric Nurses Association, American Psychiatric Association, and the National Alliance on Mental Illness. The following electronic databases were used: CINAHL, EBSCO, PubMed, Medline, Cochrane Library, and Ovid. The search terms used were *aggression assessment, violence assessment, violence screen, Brøset Violence Checklist,* and *psychiatric nursing assessment*.

The first step in the DNP project was to develop the staff education program to teach the staff how to use the BVC assessment. Next, the lesson plan was presented to an expert panel consisting of five content experts in mental health. The group assessed the objectives and learning activities, including the knowledge-based quiz, to ensure validity and alignment with the educational program according to Lynn's protocol. Once the educational program was validated, I presented the instructional material in written and verbal formats to the staff. Knowles' adult learning theory guided the educational

program (Knowles et al., 2005). To evaluate the staff's acquisition of knowledge, a knowledge-based quiz was administered before and after the educational program . The integration of a staff education program and validated violence risk screening tool offered nurses an effective means to identify patients at the highest risk of violence. Early identification of risk can result in swift intervention and decrease the overall violent episodes in acute psychiatric units. A decrease in violent attacks could also reduce the use of restraint and seclusion, risk of patient trauma, and reduction in the length of stay for patients (Barlow et al., 2000; Sarver et al., 2019). There could also be decreased staff work-related injuries, emotional distress, and increased staff satisfaction (Barlow et al., 2000; Sarver et al., 2019).

Significance

The DNP project focused on the development of an educational program to educate staff on the BVC, an evidence-based, violence-risk screening tool, to increase staff's knowledge of this violence risk screening tool. The program was directed toward staff working in a state-operated acute psychiatric hospital in the Midwest. The stakeholders are both internal and external to the practicum site, Internal stakeholders included the content expert panel comprised of the chief nursing officer, medical director, clinical director, clinical psychologist, and the social work director. Other internal stakeholders include the staff who are responsible for assessing for risk of violence and aggression and all patients admitted to the facility. External stakeholders include the Centers for Medicare and Medicaid Services (CMS), the state department of health, families, and community members who live with severe and persistent mental illness.

The project can impact social change by educating and empowering nurses working in acute behavioral health hospitals so that they would have the skill and ability to identify and assess patients at high risk for violence.

The DNP project focused on the development of an educational program to educate staff on the BVC, an evidence-based, violence-risk screening tool, to increase staff's knowledge of this violence risk screening tool. The program was directed toward staff working in a state-operated acute psychiatric hospital in the Midwest.

Summary

This section provided a detailed overview of patient aggression and violence in acute mental health hospitals. The project sought to validate a staff educational program to improve staff knowledge about assessing and identifying patients at high risk for aggression and violence in an acute care psychiatric hospital. The staff education program was validated by an expert panel five behavioral health professionals using Lynn's validation tool (Lynn, 1986). Following validation, staff education was provided on the BVC screen with its proven validity and reliability for identifying patients at the highest risk of aggression. When hospitals implement and train staff on a violence risk screen, the number of violent episodes decreases (Sarver et al., 2019; Sharifi et al., 2020). The BVC has been validated to predict violent behaviors within 24 hours based on the presence or absence of specific patient behaviors and observations (Sarver et al., 2019). The integration of a validated staff education program offers nurses an effective means to identify patients at risk of violence. The program can also impact early intervention and decrease the overall number of violent episodes in inpatient mental health units.

In Section 2, I will be review the literature used to support the project. and include an analysis of the current best practices surrounding the assessment of violence risk screening. Additionally, conceptual models and theoretical frameworks that support the project will be identified and reviewed. Finally, my rôle and the project team's rôle, along with the relevance of the local site, will be examined .

Section 2: Background and Context

Workplace violence occurs at higher-than-average rates in health care settings (OSHA, 2015). More than 80% of nurses working in mental health areas have faced verbal or physical abuse from patients (Anderson & Jenson, 2019). The purpose of this project was to develop an educational program to educate staff on the BVC, an evidence-based, violence-risk screening tool, to increase their knowledge about assessing for the risk of violence.

An expert panel reviewed the staff educational program using Lynn's validation tool (Lynn, 1986). Knowles's adult learning theory was used to support the educational program. Explained in Section 2 are the concepts, models, theories, and clarification of terms. This section includes a review of the relevance of what exactly? to nursing practice, local nursing practice background, the project site's context, my role as the DNP student, and the project team's role.

Concepts, Models, and Theories

Theoretical Foundation for the Project

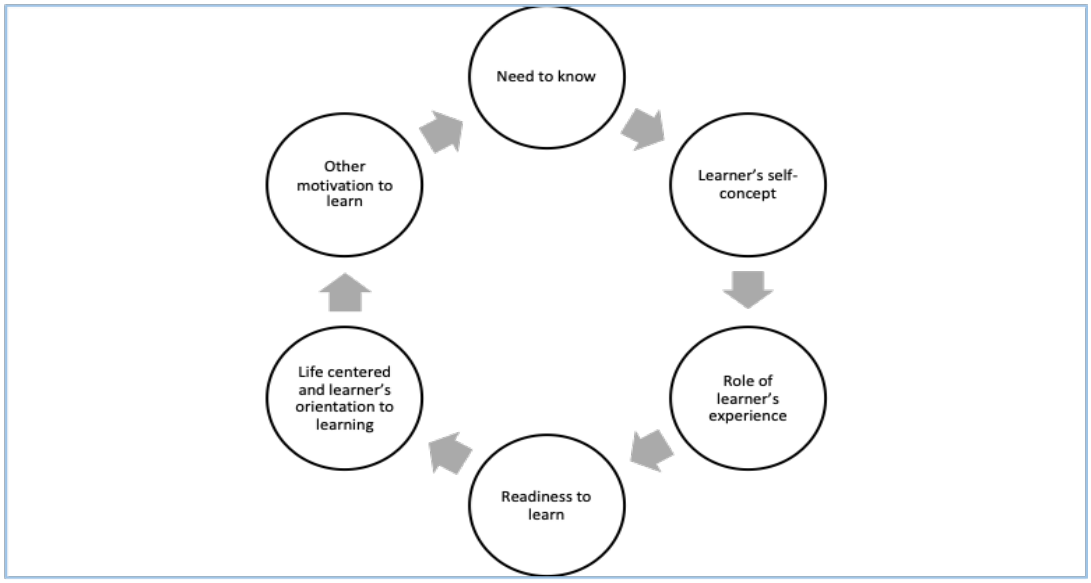
This project used Knowles' adult learning theory of andragogy, defined as teaching adults (Knowles, 1950). The theory identifies that adults learn outside traditional educational settings such as colleges and universities. Instead, learning occurs through ongoing professional training (Knowles, 1950). Knowles viewed adult learning as an internal process in which the learner is responsible for education.

Synthesis of Primary Writing

Knowles' adult learning theory makes six assumptions about adult learners. Figure 1 provides a graphical representation of the premises and how they are related.

Figure 1

Knowles' Adult Learning Theory, Graphical Model

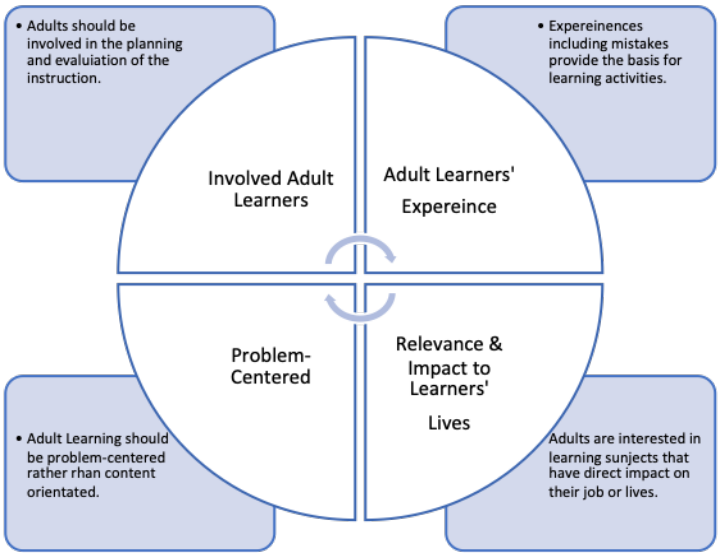


Note. Adapted from "Coaching and Adult Learning: Theory and Practice," by E. Cox, 2015, *New Directions for Adult & Continuing Education,* 148, p. 27.

Knowles also identified four principles of andragogy that he applied to adult learning. Figure 2 provides a graphical review of how learners apply knowledge acquisition.

Figure 2

Knowles' Four Principles of Andragogy



Note. Adapted from "Leveraging Adult Learning Theory with Online Modules," by R. Halpern and C. Tucker, 2015.

Knowles' adult learning theory was appropriate for this project because the instructor is a facilitator of learning. Participants were educated staff with previous psychiatric experience. The adult learning relates directly to the practice setting, focused on the interaction between the facilitator to engage participants in previous ventures and learnings surrounding assessment of patient aggression and violence. The goal was to translate the evidence-based information into daily nursing practice and allow staff to assess patients at risk for violence and aggression.

Relevance to Nursing Practice

History of Existing Scholarship Related to this Project

Violence is a critical public health problem in the United States. Nurses have historically been victims of patient violence. One out of four nurses reported experiencing physical violence frequently while working (more than 20 times in the past 3 years) (Healthy People, 2020). Evidence supports that when hospitals implement and train staff on a violence risk screen, the number of violent episodes decreases (Sarver et al., 2019; Sharifi et al., 2020). Despite the evidence to support the use of validated violence risk assessments, only approximately 67% of inpatient mental health settings use an evidence-based tool to conduct formal risk assessments on all patients (Sarver et al., 2019). Nurses have a responsibility and ethical duty to assess, facilitate, and implement interventions to reduce and ultimately prevent violence (Healthy People, 2020).

Current State of Nursing and Recommendations

Directed towards nursing staff are 80% of the assaults. Twenty one percent of nursing staff report a physical assault by patients. Over 50% report a verbal assault within the past twelve months (Anderson & Jenson, 2019). Eighteen percent of civically committed patients have physically assaulted other people and are most likely to engage in some violence within 72 hours of being admitted to an acute care mental health hospital (Anderson & Jenson, 2019). Evidence-based practices suggest that psychiatric nurses can decrease violent episodes. Achieving reduction occurs by using serial violence risk assessments, actively engaging patients in the milieu, and identifying early signs of agitation and distress (Polacek et al., 2015). The BVC is validated to predict violent

behaviors within 24 hours based on the presence or absence of specific patient behaviors and observations (Sarver et al., 2019).

One meta-analysis identified the BVC offered a pooled effect prediction of aggression against people. For any aggression type was, respectively, Hedges' g = 1.35[1.15–1.56]) and g = 1.24[0.99, 1.50] after removing outliers (Dickens et al., 2019). The validated BVC screen will support the prediction of violent behaviors. The tool can predict violent behavior within 24 hours based on the presence or absence of specific patient behaviors and observations (Sarver et al., 2019). The BVC tool allows serial recordings of observable behaviors over time. It demonstrates a sensitivity and predictability ratio of 62% that violence will occur. A 92% predictability that violence will not occur within the next 24 hours - (Almvik et al., 2000; Sarver et al., 2019). The BVC demonstrates interrater reliability with kappa values of 0.48 to 1.0, a total of k=0.44 (Almvik et al., 2000; Van de Sande et al., 2011).

Previous Strategies and Standards of Practice

In the past, the staff has resorted to implementing more restrictive interventions, including restraint and seclusion, to control and contain violent or aggressive situations. These interventions are less effective than proactive assessment and intervention. They can exacerbate the problem or result in staff or patient injury and even patient death (Polacek et al., 2015).

How the Project Advances Nursing Practice

The integration of a validated staff education program offers nurses an effective means to identify patients at risk of violence. Proper identification and intervention can

impact early intervention and care planning, decreasing the overall violent episodes in inpatient mental health units. The positive impacts include decreasing the use of restraint and seclusion, risk of patient trauma, and reduce the length of stay for mental health patients (Barlow et al., 2000; Sarver et al., 2019). The proper patient assessment could also decrease the risks involved for health care workers, including work-related injuries, emotional distress, and increase nurse satisfaction (Barlow et al., 2000; Sarver et al., 2019).

Local Background and Context

Summary of Local Evidence on the Relevance of the Problem

The facility had not implemented an evidence-based practice tool to assess violence and provides care to patients at the highest risk for violence. During a six-month timeframe, the facility identified that 66% of all incident reports generated resulted from aggression or violence. The executive leadership team identified the need to implement an evidence-based practice tool and a staff education program to assess at-risk patients. The risk assessment includes aggression and violence. Completing a risk assessment allows for proactive treatment planning and intervention.

Institutional and Local Context

The practicum site was a 110-bed state-operated hospital in the Midwest. The hospital provides care to patients who live with severe and persistent mental illness committed to remain in the hospital. The average daily census was 91, and the average length of stay for patients was typically 70-90 days. Approximately 60-70% of patients were This DNP project explored if a staff development program focused on the BVC

would meet evaluation criteria using Lynn's model; and if staff would meet the learning objectives and outcomes after attending the educational session regarding using the BVC. The educational program was validated by a panel of five mental health experts using Lynn's model. All staff attending the educational session did meet the learning objectives and knowledge acquisition accrued surrounding use of the BVC to assess patients at risk for violence. The project has the potential to positively impact patient and staff outcomes in acute behavioral health hospitals. This project has allowed me to grow as a nurse leader, scholar, and educator in the health care setting. admitted from jail and are undergoing psychiatric assessment for the ability to stand trial for crimes ranging from misdemeanor theft to sex crimes to murder charges. Many patients served by the hospital are male, foreign-born, and have low levels of formal education. Many have a history of multiple psychiatric hospitalizations and previous incarcerations. There are several patient characteristics associated with the potential for increased violence. They are (a) diagnosis of schizophrenia, (b) diagnosis of an alcohol use disorder, (c) being a male, (d) and involuntarily detention (Iozzino et al., 2015).

State and Federal Context

Federal regulations developed by CMS provide basic practice guidelines and rules surrounding patient care. These guidelines and rules indicate that the hospital must give ongoing patient assessment and planning to ensure optimal patient outcomes (CMS, 2006). The hospital must implement the restraint and seclusion after less restrictive interventions have failed when the imminent risk to self or others is present. A trained clinician completes the assessment. The restraint and seclusion must stop as soon as

release criteria are met (CMS, 2006). The Joint Commission and CMS require that staff be adequately trained on all assessment tools used and proper and safe use of restraint and seclusion [citation needed] .

Role of the DNP Student

My Professional Context and Relationship to the Doctoral Project

I have been a nurse leader in acute care and mental health hospitals, working with patients from all walks of life who live with psychiatric disorders. My role is to ensure that our most vulnerable patients receive high-quality nursing care that is safe and effective. Approximately 60-70% of patients admitted to the hospital are committed to the state commissioner's care and are deemed a risk to themselves or others. Many have a history of multiple psychiatric hospitalizations and previous incarcerations, which increase their risk of violence and aggression.

Doctorally prepared nurse leaders focus on innovation and process improvements that positively impact patient care and outcomes by incorporating evidence-based practices. My role was to translate the available evidence into practice innovation and provide staff with the knowledge and skill to assess patients for violence risk properly. The results of the staff education program have the potential to impact patient outcomes, including a decrease in the use of restraint and seclusion, risk of patient trauma, and a reduction in the length of stay for mental health patients (Barlow et al., 2000; Sarver et al., 2019). The proper patient assessment could also decrease the risks involved for health care workers, including work-related injuries, emotional distress, and increase nurse satisfaction (Barlow et al., 2000; Sarver et al., 2019).

My Role in the Doctoral Project

I worked as a nurse leader in this setting. However, for this project, my role was to develop a staff education program on the BVC, an evidence-based, violence-risk screening tool, to increase staff knowledge of assessing violence and aggression risk. As the project developer, I reviewed the available literature and evidence-based information regarding the significance of implementing an educational program to address the issue of aggression and violence in the mental health setting.

I was responsible for ensuring that an expert panel validated the educational program. The expert panel consisted of at least five content experts in mental health using Lynn's protocol. When the educational program was validated, I presented the instructional material in written and verbal format to staff. Knowles' adult learning theory guided the educational program (Knowles et. al., 2005). A knowledge-based quiz was administered pre- and post-educational program intervention to evaluate staff knowledge acquisition.

My Motivation and Perspective about this Project

The motivation for this project was the underserved patient population who are cared for in the state-operated mental health hospital. All patients admitted to the hospital have a mental disorder. Many have a co-occurring mental disorder and substance use disorders. This patient population is at increased risk of displaying violence towards others. The organization had identified the risk but had not yet implemented an evidence-based tool to identify and mitigate the increased risk of violence. The project educated

staff on using the BVC tool to assess patients effectively and efficiently at risk for violence and aggression.

Potential Biases

Implicit bias can impact diagnosis and treatment decisions, including the level of care and restrictive interventions provided to a specific patient population (Fitzgerald & Hurst, 2017). The following steps were implemented to address potential implicit biases; an objective review of practicum site data to ensure a correlation between the data and the practice problem. Completion of a constructive uncertainty exercise was completed with the practicum site executive leadership team, which allowed for slowed decision making based upon data review. Implicit bias was included in the educational program to increase participant awareness. The educational program also emphasized clinical judgment when interacting with and planning the patient's plan of care. Finally, an objective review of practicum site data and practice problem by the content expert panel was completed. The following protections were implemented before the project's initiation; the site representative signed a site agreement. The project was approved by Walden University's Institutional Review Board (IRB), Approval No. 01-06-21-0370598. The panel of experts and hospital staff all voluntarily participated in the expert panel review and educational program presentation. All participants identified pre- and posttest documents with a self-selected, matching, four-digit code. This allowed the student to match the pre -and posttest and assess for learning acquisition while maintaining participant confidentiality. All paper documents were placed in an envelope at the end of

the program, and all information remained confidential and stored in a locked office drawer.

Role of the Project Team

The Use of a Project Team

The site for this doctoral project was a state-operated acute mental health hospital. An expert content panel of mental health professionals including the project site's chief nursing officer, medical director, clinical director, clinical psychologist, and the social work director. Other team members included the staff who will participate in the educational program primarily comprised of licensed nursing staff.

Project Presentation to the Team

The project included a team of expert behavioral health clinicians who reviewed the learning objectives and learning activities to ensure validity and alignment with the educational program using Lynn's protocol. The learning activities, including learning aids, handouts, and PowerPoint presentation, were also be reviewed by the experts to ensure they are easily understood and provide value to the adult learning experience. Sufficient time was offered for feedback during the staff education program regarding the BVC and its use. I developed the PowerPoint presentation and all learning actives for the staff education project. A knowledge-based quiz was administered before and after the educational program to evaluate what staff learned.

Use of Contextual Insights of Team and Timeline

During the evaluation period of one week, the expert team was responsible for assessing the educational content for contextual, literacy, and language relevant to the

available research and intended staff audience. Once validated and approved, I presented the educational program using Knowles' adult learning theory (Knowles et al., 2005). The staff education program presentation and evaluation occurred over one week.

Summary

In this project, I sought to validate a staff educational program to improve staff knowledge surrounding assessment and identification of patients at high risk for aggression and violence in a state-operated acute mental health hospital. The practice gap was that the facility had not implemented an evidence-based practice assessment tool to identify patients at risk for violence, and staff did not receive training to use the tool. The concepts used for this project included Knowles' adult learning theory, which was applied to develop an evidence-based educational program on the BVC screen. The integration of a validated staff education program offered nurses an effective means to identify patients at risk of violence. It can also impact early intervention and decrease the overall violent episodes in inpatient mental health units. The DNP student's role as project developer and the project team, including the expert panel, were reviewed, and defined. The participation of the team was critical to the success of the project.

Section 3 will discuss the evidence used to support the project and a review of how data was collected and analyzed.

Section 3: Collection and Analysis of Evidence

Violence is a critical public health problem in the United States, and nurses have historically been victims of patient violence. One out of four nurses reports experiencing physical violence frequently while working (more than 20 times in the past 3 years) (Healthy People, 2020). The project site was a state-operated mental health hospital that cares for civilly committed patients. The site had not implemented an evidence-based tool to assess patients for the risk of violence and had experienced many such episodes. The experts at the site agreed with the need to develop an educational program to identify and assess patients at risk for violence.

The purpose of the project was to develop an educational program to educate staff on the BVC, an evidence-based, violence-risk screening tool, and how to use it to assess patients for potential violence. The research supports implementing the validated BVC screen to help predict violent behaviors (Anderson & Jenson, 2019; Dickens et al., 2019; Sarver et al., 2019). In this section, the development of the educational program are discussed.

Practice-Focused Questions

The acute psychiatric hospital had not implemented an evidence-based violence risk tool to assess the risk for patient violence. The site identified a practice gap due to ongoing patient violence episodes. The practice-focused questions for this project were as follows:

1. Will the staff development activity with the BVS, evaluated using Lynn's model, meet evaluation criteria?

2. After attending the educational session on using the Brøset violence screen, will the staff meet the learning outcome objectives?

Clarification of Purpose

The project aimed to develop a program to educate staff on the BVC. The BVC is an evidence-based, violence-risk screening tool designed to increase staff knowledge of the violence risk screening tool. The first phase of the project included the development of the staff education program. The second phase included an expert panel review of the staff educational program using Lynn's validation tool. (Lynn, 1986). The project determined that the educational program was valid to operate in the practicum site. Once the educational program was validated, in the third phase of the project the staff were educated on using the violence risk screening tool and evaluated on their understanding of how to use it. The fourth and last step was administration of a knowledge-based quiz, before and after the educational program to see what the staff learned. The results of the pre- and posttest would guide updates to the educational program.

Operational Definitions

Assessment: A systematic, dynamic process by which the registered nurse collects and analyzes data received through interaction with the health consumer, family, groups, communities, populations, and health care providers. Assessment may include the following dimensions: physical, psychological, sociocultural, spiritual, cognitive, function abilities, developmental, economic, and lifestyle (American Psychiatric Nurses Association, 2016).

Psychiatric disorder: Any condition of the brain that adversely affects a person's cognition, emotions, or behaviors (American Psychiatric Nurses Association, 2016).

Staff education: Educational activities intended to expand the knowledge of health care professionals regarding patients' care, and improve outcomes (Ramberg et al., 2016).

Violence: "The intentional use of physical force or power, threatened or actual, against oneself, another person, or a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation" (World Health Organization, 1996, add page number because of the quotation.).

Sources of Evidence

The sources of evidence used to support this project included a literature search, professional websites, personal experiences caring for the patient population, chart review, and conversation with content experts. Professional sites used include The American Nurses Association, The American Psychiatric Nurses Association, American Psychiatric Association, and the National Alliance for Mental Illness. The following electronic databases were used CINAHL, EBSCO, PubMed, Medline, Cochrane Library, and Ovid. The search terms used were *aggression assessment, violence assessment, violence screen, Brøset Violence Checklist,* and *psychiatric nursing assessment*.

Participants

Health care providers, primarily licensed nursing staff, were the educational program's intended participants of this doctoral project. The team consisted of five

experts who evaluated the educational program using Lynn's protocol. The expert panel of mental health professionals included the project site's chief nursing officer, medical director, clinical director, clinical psychologist, and the social work director. The experts were chosen based on their extensive experience in the mental health setting who care for individuals with mental disorders. The clinical psychologist and medical director had advanced training in forensic mental health. The others hold master's degrees in their respective professions, and all have experience in health care leadership and clinical experience assessing patients' risk of violence and aggression.

I worked closely with the executive leadership team of the practicum site, including the administrator, chief nurse, medical director, and clinical director, to identify the significant gap in practice. The organization's quality and the education department assisted with data collection and implementation of the educational program. The educational program was developed for licensed nursing staff.

Procedure

The DNP project's first step was to develop the staff education program to teach the staff how to use the BVC assessment. Next, the lesson plan was presented to the expert panel. The student contacted each of the experts directly to provide the educational program and learning materials. The evaluation protocol and directions were sent in a follow-up email. The experts assessed the objectives and learning activities to ensure validity and alignment with the educational program using Lynn's protocol. The four-point ordinal rating scale was used to rate the lesson plan, learning objectives, and activities. (1 = not pertinent, 2 = unable to assess relevance without item alteration, 3 =

relevant but need minor revision, and 4 = very relevant and clear). The content validity index (CVI) was defined as the proportion of items that received a rating of 3 or 4 by the experts (Lynn, 1986). A CVI of .78 or higher for three or more experts is considered to have content validity (Polit et al., 2007).

Table 1

Lynn's Model

Number of experts	Number of experts endorsing item or instrument as content valid						
	2	3	4	5	6	7	8
2	1.00						
3	0.67	1.00					
4	0.50	0.75	1.00				
5	0.40	0.60	0.80	1.00			
6	0.33	0.50	0.67	0.83	1.00	1.00	
7	0.29	0.43	0.57	0.71	0.86	0.88	1.00
8	0.25	0.38	0.50	0.63	0.75	0.78	0.89

Note. Adapted from "Determination and Quantification of Content Validity," by M. Lynn, 1986, *Nursing Research, 35*(6), p. 384.

If the scores did not meet successful evaluation, the content was updated to ensure the audience can understand and comprehend the educational information (Altmiller, 2019). The minimum score CVI for this project was be 0.80 (see Table 1). The results of the evaluation will be reported by descriptive analysis. Once the educational program was validated, I presented the instructional material in written and verbal format to the practicum site staff. Knowles' adult learning theory guided the educational program (Knowles et. al., 2005). The staff education program's learning objectives included (a) educate the staff on the background and components of the BVC. (b) teach the staff how to complete and score the BVC (c) increase staff confidence in using the BVC to assess

patient observed behaviors. (d) Teach staff immediate risk mitigation interventions that will decrease the risk of violence. The student allowed for adequate time to address participant questions, and a knowledge-based quiz was administered pre- and post-educational program intervention to evaluate staff knowledge acquisition. The results of the pre- and posttest will guide future updates to the educational program. The team was informed of the education program via an all-staff email, and it was offered during a monthly staff meeting.

Protections

There were considerable efforts made to ensure the ethical protections of the project participants. Written permission was sought, and the project was approved by Walden University's IRB before the implementation All participation in the project was voluntary, including the expert panel, participation in the staff educational program, evaluation, and pre- and post-testing. All participants were offered the freedom to depart from the project at any time, and no members of the team or project were paid or incentivized to participate. All participants agreed to confidentiality during the project. All participants identified pre- and posttest documents with a self-selected four-digit code. This allowed the student to match the pre-and posttest and assess for learning acquisition while maintaining participant confidentiality. All paper documents generated from the project remained onsite at the practicum site and were securely stored. Electronic information was password protected. The practicum organization's name remained confidential and was not identified in any of the project materials. The BVC has variable Kappa values from weak to almost perfect. The staff education program

included three case studies to allow participants to use and practice BVC scoring. The educational program also stressed the importance of clinical judgment at all times and that interventions to mitigate risk were always acceptable, regardless of the patient's BVC score.

Analysis and Synthesis

Five behavioral health experts completed an analysis of the education program using Lynn's protocol. A CVI of 0.80 was sought, if this has not been achieved, the educational program would have been updated and reevaluated to ensure all criteria was met. The feedback and comments from the experts were included in the final educational program content. Participants were asked to complete a pre-education exam to identify prior knowledge. I provided an evidence-based PowerPoint education program using Knowles' adult learning theory, followed by active learning activities and open discussion with participants. After completing the educational program, staff were asked to complete the same exam to identify knowledge acquisition.

The student used the experts' data following the educational program's evaluation to identify the CVI of the educational material. The overall assessment of validity was calculated by the student using Lynn's protocol. The feedback, including comments and suggestions, were collected by the student and incorporated into the final education program. The pre- and post- exams were evaluated using the descriptive statistical analysis to assess if knowledge acquisition occurred. The pre- and post-exams were based on the educational programs learning objectives. Descriptive statistics were used to

describe the assessment of the formative and summative evaluation from the staff development activity.

Summary

The purpose of the project was to develop an educational program to educate staff on the BVC, an evidence-based, violence-risk screening tool, to assess violence. The evaluation process was based on Lynn's protocol using content experts. The educational program used Knowles' adult learning theory as the theoretical framework. The educational program was presented to staff during monthly staff meeting. The confidentiality of program participants was maintained, and all data generated was secured. The project used descriptive statistical analysis and summative evaluation to describe the success of the educational program.

The findings, implications to practice, and recommendations will be discussed in Section 4.

Section 4: Findings and Recommendations

The local site noted that patient violence towards staff accounted for 18-20% of workplace injuries involving days away from work, compared to 10-11% in other healthcare settings (OSHA, 2015). The acute psychiatric hospital had not implemented an evidence-based violence risk tool to assess patient risk for violence. The site identified a practice gap due to ongoing patient violence episodes. This project's practice-focused questions were as follows: Will the staff development activity with the BVS, evaluated using Lynn's model, meet evaluation criteria? After attending the educational session on using the Brøset violence screen, will the staff meet the learning outcome objectives? The evaluation was completed by five expert mental health professionals using the Lynn model (1986).

The project used Knowles' adult learning theory based on andragogy. The education program was developed to help staff improve knowledge about assessing for the risk of violence. The sources of evidence used to support this project included a literature search, professional websites, personal experiences caring for the patient population, chart review, and conversations with content experts. Evidence-based practices suggested that psychiatric nurses can decrease violent episodes. Reduction is achieved by using serial violence risk assessments, actively engaging patients in the milieu, and identifying early signs of agitation and distress (Polacek et al., 2015). The BVC is validated to predict violent behaviors within 24 hours based on the presence or absence of specific patient behaviors and observations (Sarver et al., 2019).

Findings and Implications

I contacted the five experts based on their extensive experience in the mental health setting: the project site's chief nursing officer, medical director, clinical director, clinical psychologist, and the social work director. I discussed the objectives of the project and reviewed the program evaluation form and scoring process to ensure understanding. Following in-person review by the five content experts, all project materials were sent electronically to the participants to ensure validity and alignment with the educational program. Over five days, each of the experts independently reviewed and scored the contents of the educational program.

Educational Evaluation

The expert panel used the four-point ordinal rating scale to rate the educational program. The questions focused on relevancy of the introduction, background, and clinical correlation. The BVC educational learning materials, tools, application scenarios, and relevance to the practice setting and operationalization of the BVC in the environment were evaluated. Once all evaluation forms were collected, reviewed for completeness, and analyzed, the evaluators indicated a successful validation with a CVI above 0.78 on all queries and content areas according to Lynn's (1986) model (see Table 2). The Likert scale results showed that the expert panel had confidence in the educational program, including all learning materials, application scenarios, and the pre- and posttest.

Table 2

Evaluation of Staff Development(N=5)

Questions	CVI	Free Text Comments
Introduction/ Background, Clinical Correlation	1.00/1.00	Consider adding more facility data to support the need for implementation in the setting.
BVC: Education and Application Scenarios	0.80/1.00	It may be helpful to define further and discuss the use of the BVC tool and clinical judgment.
BVC: Practice Setting Operationalization	1.00/1.00	
Overall rating	1.00/1.00	

The implication resulting from this project includes a validated BVC staff educational program that can be used by the acute psychiatric hospitals to educate staff to evaluate patients effectively and efficiently at risk for violence and aggression and will support the prediction of violent behaviors. The early prediction of behaviors and swift intervention to mitigate risk can decrease the need for restraint and seclusion, risk of patient trauma, and reduce the length of stay for mental health patients (Barlow et al., 2000; Sarver et al., 2019). The proper patient assessment could also decrease the risks involved for health care workers, including work-related injuries, emotional distress, and increase nurse satisfaction (Sarver et al., 2019).

Staff Education

Before the education session, a pre-test was provided to all 12 participants who were asked to anonymously complete the test by identifying it with a self-selected four-digit code and return the form to a manila envelope. The pretest (see Appendix C) comprised of questions surrounding the lesson objectives, the perceived gap in practice knowledge, and skill of violence risk assessment (Questions 1-5), along with questions specific to the use of the BVC, which identify if the education program results in staff knowledge acquisition (Questions 6-8). Twelve participants took part and completed the pre-test ($N = 12$). The pre-test findings (see Appendix E and F) surrounding violence risk assessment (Questions 1-5) identified a mean between 2.41 and 3.33, with a mode of 2-3 for all questions indicating staff had little to some knowledge of the content. Staff identified the most knowledge surrounding immediate risk interventions to reduce the risk of violence with a pretest mean of 3.33. The pretest findings for Questions 6-8, which asked specific questions related to the BVC, had a mean ranging from 2.16 to 2.25 with a mode of 2 for each question, indicating staff had little knowledge of content. Pre-test scores identified that staff had the least degree of knowledge surrounding proper scoring for the presence or absence of the six behaviors assessed by the BVC and scoring the total sum for the BVC with both questions having a mean of 2.16 and a mode of 2.

The posttest data suggests that the educational intervention met the lesson objectives. All Questions 1-8 had a posttest mode of 4, indicating that staff felt knowledgeable about the content following the educational program intervention. Questions 6-8 had the most significant change in the mean, mode, and standard deviation

from pre-test to posttest, which was expected because the practicum site had not previously trained staff to assess patients using the BVC. The pre- and posttest intervention questioner results are in Appendix E and F. The staff education intervention indicates an improvement in staff knowledge surrounding the gap in clinical practice and the use of the BVC to identify patients' risk for violence.

During the presentation, adequate time was allowed for participants to ask additional questions. The participants' questions were limited and primarily focused on the operationalization of the BVC in the health care setting. One suggestion from the staff was to have the BVC built in the electronic health record. Overall, the staff provided positive verbal feedback regarding the presentation, ease of use of the BVC and offered that they felt the tool would meet the patient population's needs served by the hospital. Staff also provided verbal feedback that the tool would allow them to proactively identify the risk of aggression and mitigate these risks sooner.

Recommendations

According to the educational program evaluations, the expert planal recommended incorporating the educational program and BVC in the practicum site. Based on the pre- and posttest results, health care professionals' knowledge of the violence risk assessment and use of the BVS improved, allowing staff to quickly and effectively assess each patient, each shift, for risk of violence. Recommendations identified following analysis of test results include the need for the unit leader to reinforce the use of the BVC on an ongoing basis and provide monthly group case study reviews to stimulate conversation and critical thinking skills surrounding BVC scoring

and immediate intervention strategies to mitigate risk. The unit should audit BVC results for a 3 month period of time to identify and review interrater reliability. Finally, all new staff hired in the unit should complete the education program during their orientation period, and all staff should complete the program annually.

Contribution of the Project Team

The project team was influential in the development, implementation, and evaluation of the educational program. While I was the team leader responsible for developing and implementing the project, the practicum site's executive leadership team supported problem identification and offered ongoing support and direction throughout the project. The expert panel reviewed, validated, and provided suggestions for improvement to the educational program, lesson plan, and pre- and posttest evaluation. The organization's quality and the education department also assisted with data collection and provided technical equipment to present the educational program to staff. The organization's nurse educators and unit nurse leaders completed the educational program to expand the use of BVC to all hospital units throughout the health system. The expert panel and the practicum site's executive leadership team undoubtedly impacted the project's ability to meet the educational goals.

Strengths and Limitations

This project's strengths included the collaboration with the site's executive leadership team and the behavioral health content experts who volunteered to validate the educational program to improve patient outcomes. Another strength of this project is that the educational program was validated by a multidisciplinary team of behavioral health

experts. The ease of use of the BVC to implement in other health care settings to assess patients efficiently and effectively at risk for violence is another strength. This project's limitations include the small number of staff who completed the educational program; the sample size was 12. Another limitation is the lack of formal written participant program evaluation, which may have provided useful information and suggestions for future course offerings. The variable interrater reliability of the BVC should be considered when implementing, and further testing should be considered. There was an on-going conversation in the practicum site to implement the staff education program and BVC across all units in the hospital and throughout the health system. Once the project has been adopted and implemented throughout the practicum site and across the health system, the next step would be to implement the project outside of the system, in other acute behavioral health hospitals, and in other health care settings such as emergency departments. There should be further evaluation of the staff education program to determine if the program met expectations in other health care settings.

Summary

The project focused on evaluating a staff education program that educated nursing staff on using the BVC tool to assess and identify patients at risk for violence. The education program, learning materials, and pre- and posttest evaluation were validated using Lynn’s protocol by an expert panel of behavioral health clinicians. The panel found the tool and learning materials valid and recommended implementation in the acute behavioral health hospital. A pre- and posttest was used to assess if knowledge acquisition accrued, and results indicated an improvement in all areas. The participants

who completed the education program identified positive comments about how the BVC would impact their daily practice and improve safety. The education program closed the identified gap in practice in the practicum site, which had not implemented an evidence-based practice assessment tool to identify violence risk.

Section 5 includes the project dissemination plan and analysis of self.

Section 5: Dissemination Plan

This project's results were presented to the practicum site's executive leadership team, and there was support to disseminate the use of the staff education program and BVC in all areas of the hospital. The staff education program will be required for all licensed nurses to complete. It will also be incorporated into the site's new staff onboarding program and become an annual competency. There will also be further discussion of disseminating the project throughout the entire state-operated health system. Based on the validation of the education program and the positive staff reviews, there was a request to build the BVC in the electronic health record, which will allow for ease of use and monitoring of serial assessments.

The project's ongoing goal will be to identify patients at risk for violence, identify mitigation interventions, and aim to decrease the number of violent episodes that occur in the practicum setting. Once the project has been adopted and implemented throughout the practicum site and across the health system, the next step would be to implement the project outside of the system, in other acute behavioral health hospitals, and in other health care settings such as emergency departments. The project could be presented during a local state chapter meeting or at the American Psychiatric Nurses Association (APNA) national conference.

Analysis of Self

This project has offered me the ability to grow both as a nurse leader and nurse scholar. My role in this project was to develop a staff education program on the BVC to increase staff knowledge of assessing violence and aggression risk. My role as project

leader enabled me to think and act outside of my comfort zone to adequately review, identify and address a practice-focused problem. The DNP course work and completion of this project offered me necessary experiences in advocating for patients, addressing practice focused problems, and improving quality outcomes. It also offered me the ability to expand upon my skills and abilities to educate and empower nursing staff to use evidence-based practices. This project expanded my leadership skill through skillful and open communication and collaboration with the project stakeholders, including the expert panel, project participants, and the practicum site's executive leadership team. All of which will assist me in achieving my future nursing leadership and scholarly career aspirations.

Summary

This DNP project explored if a staff development program focused on the BVC would meet evaluation criteria using Lynn's model; and if staff would meet the learning objectives and outcomes after attending the educational session regarding using the BVC. The educational program was validated by a panel of five mental health experts using Lynn's model. All staff attending the educational session did meet the learning objectives and knowledge acquisition accrued surrounding use of the BVC to assess patients at risk for violence. The project has the potential to positively impact patient and staff outcomes in acute behavioral health hospitals. This project has allowed me to grow as a nurse leader, scholar, and educator.

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Appendix A: Lesson Plan for Staff Development Project

Staff Development Project for Brøset Violence Checklist (BVC)			
Goal: Increase the clinic staff's knowledge of how to use the BVC to assess patients at risk for violence.			
Objectives	Methods/Strategies	Timeframe	Outcome measurement
1. To orient the hospital staff regarding the components of violence, violence outcomes, and the BVC. 2. To enhance the knowledge of the staff regarding the BVC as an assessment tool. 3. To improve the skills of the hospital staff with use and implementation of the BVC procedure. 4. To enhance the knowledge of staff regarding immediate risk mitigation interventions to reduce the risk of violence.	Share the full explanation of the gap in the practice. Summative evaluation using a pre- and post-educational program test. Instructional tool: Power point slides with oral presentation. Evaluation method: descriptive statistics	Two weeks	Improved knowledge, skill and ability to implement and use the BVC as a resource to properly assess patients at risk for violence.

Appendix B: Staff Development Evaluation Form

This is to evaluate staff development tool on use and implementation of the Brøset violence checklist (BVC). *Please review the staff development tool, application scenario, and proposed violence risk assessment policy and provide evaluations and recommendations.*

Please check next to the box 1= not relevant, 2= unable to assess relevance without item revision, 3= relevant but need minor alterations, and 4=very relevant and succinct

Introduction, Background, and Clinical Correlation

How relevant is the introductory background information?

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

The staff development tool addresses the noted clinical gap is practice?

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

The staff development tool addresses relevance to noted practicum site and includes objective data?

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

The staff development tool addresses the BVC and provides evidence-based information to support the use within the practice setting?

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

Open Comments

BVC: Education and Application Scenarios

How relevant is the history and background of the BVC?

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

The staff development tool clearly addresses relevance to and defines each of the six behaviors assessed on the BVC ?

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

The staff development tool clearly addresses relevance to and defines how staff should assess each of the six behaviors addressed on the BVC ?

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

The staff development tool clearly addresses relevance to and defines how staff should interpret the total sum of the BVC score?

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

The staff development tool application scenarios are relevant to the practice setting and increase understanding, skill, and comfort for staff to complete the BVC?

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

Open Comments

BVC: Practice Setting Operationalization

How relevant is the proposed BVC instrument tool to the practice setting?

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

How relevant are the immediate intervention techniques to the practice setting?

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

How relevant is the proposed violence risk assessment policy to the practice setting?

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

Open Comments

Overall Rating

How relevant are the components of the staff development tool is meeting the overall learning objectives?

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

Open Comments

Appendix C: Staff Development Intervention Pre- and Posttest

Lesson Objective: To orient the hospital staff regarding the components of violence, violence outcomes, and the BVC. Please rate your degree of knowledge regarding the components of violence, violence outcomes, and the BVC. Please mark the square that corresponds to your answer.

- ☐ Knowledgeable
- ☐ Somewhat knowledgeable
- ☐ Little knowledge
- ☐ Not knowledgeable

Lesson Objective: To enhance the knowledge of the staff regarding the BVC as an assessment tool. Please rate your degree of knowledge regarding the BVC as an assessment tool. Please mark the square that corresponds to your answer.

- ☐ Knowledgeable
- ☐ Somewhat knowledgeable
- ☐ Little knowledge
- ☐ No knowledge

Lesson Objective: To improve the skill of the hospital staff with use and implementation of the BVC and procedure. Please rate your degree of knowledge and skill to assess a patient using the BVC. Please mark the square that corresponds to your answer.

- ☐ Knowledgeable
- ☐ Somewhat knowledgeable
- ☐ Little knowledge
- ☐ No knowledge

Lesson Objective: To enhance the knowledge of staff regarding immediate risk mitigation interventions to reduce the risk of violence. Please rate your degree of knowledge and skill to implement mitigation interventions. Please mark the square that corresponds to your answer.

- ☐ Knowledgeable
- ☐ Somewhat knowledgeable
- ☐ Little knowledge
- ☐ No knowledge

Please rate your degree of knowledge with the gap in current practice surrounding assessment and identification of violence risk. Please mark the square that corresponds to your answer.

- ☐ Knowledgeable
- ☐ Somewhat knowledgeable
- ☐ Little knowledge
- ☐ No knowledge

Please rate your degree of knowledge when assessing patients using the BVC six behavior domains including, confusion, irritability, boisterousness, verbal threats, physical threats and attacking objects. Please mark the square that corresponds to your answer.

- ☐ Knowledgeable
- ☐ Somewhat knowledgeable
- ☐ Little knowledge
- ☐ No knowledge

Please rate your degree of knowledge related to scoring a patient for the presence or absence of a behavior. Please mark the square that corresponds to your answer.

- ☐ Knowledgeable
- ☐ Somewhat knowledgeable
- ☐ Little knowledge
- ☐ No knowledge

Please rate your degree of knowledge related to analyzing a BVC total sum and developing an individualized patient plan of care. Please mark the square that corresponds to your answer.

- ☐ Knowledgeable
- ☐ Somewhat knowledgeable
- ☐ Little knowledge
- ☐ No knowledge

Appendix D: Lynn's Assessment for the Staff Development Pre- and Posttest

Lesson Objective: To orient the hospital staff regarding the components of violence, violence outcomes, and the BVC. How relevant is the objective for the staff development activity?

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

Lesson Objective: Lesson Objective: To enhance the knowledge of the staff regarding the BVC as an assessment tool. How relevant is the objective for the staff development activity?

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

Lesson Objective: To improve the skill of the hospital staff with use and implementation of the BVC and procedure. How relevant is the objective for the staff development activity?

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

Lesson Objective: To improve the attitude and confidence of the staff to use and implement the BVC. How relevant is the objective for the staff development activity?

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

How relevant is the proposed BVC instrument tool to the practice setting?

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

The staff development tool addresses the BVC and provides evidence-based information to support the use within the practice setting?

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

The relevancy of the educational intervention to promote participant's knowledge, skills and attitudes.

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

The overall relevancy of this project to address the gap in practice surrounding staff assessment and identification of violence risk.

- ☐ 1 = not relevant
- ☐ 2 = unable to assess relevance without item revision
- ☐ 3 = relevant but needs minor alterations
- ☐ 4 = very relevant and succinct

Appendix E: Pre- and Posttest Results

Staff	Lesson Objective: To orient the hospital staff regarding the components of violence, violence outcomes, and the BVC. Please rate your degree of knowledge regarding the components of violence, violence outcomes, and the BVC. Please mark the square that corresponds to your answer.		Lesson Objective: To enhance the knowledge of the staff regarding the BVC as an assessment tool. Please rate your degree of knowledge regarding the BVC as an assessment tool. Please mark the square that corresponds to your answer.		Lesson Objective: To improve the skill of the hospital staff with use and implementation of the BVC and procedure. Please rate your degree of knowledge and skill to assess a patient using the BVC. Please mark the square that corresponds to your answer.		Lesson Objective: To enhance the knowledge of staff regarding immediate risk mitigation interventions to reduce the risk of violence. Please rate your degree of knowledge and skill to implement mitigation interventions. Please mark the square that corresponds to your answer.	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
1	Somewhat knowledgeable	Knowledgeable	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable	Somewhat knowledgeable	Knowledgeable
2	Somewhat knowledgeable	Knowledgeable	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable	Somewhat knowledgeable	Knowledgeable
3	Little knowledge	Somewhat Knowledgeable	Little knowledge	Somewhat Knowledgeable	Little knowledge	Knowledgeable	Knowledgeable	Knowledgeable
4	Somewhat knowledgeable	Knowledgeable	Somewhat knowledgeable	Knowledgeable	Little knowledge	Knowledgeable	Knowledgeable	Knowledgeable
5	Somewhat knowledgeable	Knowledgeable	Somewhat knowledgeable	Knowledgeable	Somewhat knowledgeable	Knowledgeable	Somewhat knowledgeable	Knowledgeable
6	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable	Somewhat knowledgeable	Knowledgeable
7	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable	Little knowledge	Somewhat Knowledgeable	Somewhat knowledgeable	Knowledgeable
8	Somewhat knowledgeable	Knowledgeable	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable	Little Knowledge	Somewhat Knowledgeable
9	Somewhat knowledgeable	Knowledgeable	Somewhat knowledgeable	Knowledgeable	Somewhat knowledgeable	Knowledgeable	Knowledgeable	Knowledgeable
10	Somewhat knowledgeable	Knowledgeable	Somewhat knowledgeable	Somewhat knowledgeable	Somewhat knowledgeable	Knowledgeable	Knowledgeable	Knowledgeable
11	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable	Somewhat knowledgeable	Knowledgeable
12	Knowledgeable	Knowledgeable	Knowledgeable	Knowledgeable	Knowledgeable	Knowledgeable	Knowledgeable	Knowledgeable

Staff	Please rate your degree of knowledge with the gap in current practice surrounding assessment and identification of violence risk. Please mark the square that corresponds to your answer.		Please rate your degree of knowledge when assessing patients using the BVC six behavior domains including, confusion, irritability, boisterousness, verbal threats, physical threats and attacking objects. Please mark the square that corresponds to your answer.		Please rate your degree of knowledge related to scoring a patient for the presence or absence of a behavior. Please mark the square that corresponds to your answer.		Please rate your degree of knowledge related to analyzing a BVC total sum and developing an individualized patient plan of care. Please mark the square that corresponds to your answer.	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
1	Somewhat knowledgeable	Knowledgeable	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable
2	Somewhat knowledgeable	Knowledgeable	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable
3	Somewhat knowledgeable	Knowledgeable	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable
4	Somewhat knowledgeable	Knowledgeable	No knowledge	Knowledgeable	No knowledge	Somewhat Knowledgeable	No knowledge	Somewhat Knowledgeable
5	Somewhat knowledgeable	Knowledgeable	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable
6	Little knowledge	Somewhat Knowledgeable	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable
7	Little knowledge	Knowledgeable	No knowledge	Somewhat Knowledgeable	No knowledge	Knowledgeable	No knowledge	Somewhat Knowledgeable
8	Somewhat knowledgeable	Knowledgeable	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable
9	Somewhat knowledgeable	Knowledgeable	Somewhat knowledgeable	Knowledgeable	Somewhat knowledgeable	Knowledgeable	Somewhat knowledgeable	Knowledgeable
10	Somewhat knowledgeable	Knowledgeable	Little knowledge	Somewhat Knowledgeable	Little knowledge	Knowledgeable	Little knowledge	Knowledgeable
11	Little knowledge	Knowledgeable	Somewhat knowledgeable	Knowledgeable	Somewhat knowledgeable	Knowledgeable	Somewhat knowledgeable	Knowledgeable
12	Knowledgeable	Knowledgeable	Knowledgeable	Knowledgeable	knowledgeable	Knowledgeable	knowledgeable	Knowledgeable

Appendix F: Descriptive Statistics Pre- and Posttest

Question	Pretest Mean	Posttest Mean	Pretest Median	Posttest Median	Pretest Mode	Posttest Mode	Pretest STDEV	Posttest STDEV
Lesson Objective: To orient the hospital staff regarding the components of violence, violence outcomes, and the BVC. Please rate your degree of knowledge regarding the components of violence, violence outcomes, and the BVC. Please mark the square that corresponds to your answer.	2.75	3.91	3	4	3	4	0.595119036	0.276385399
Lesson Objective: To enhance the knowledge of the staff regarding the BVC as an assessment tool. Please rate your degree of knowledge regarding the BVC as an assessment tool. Please mark the square that corresponds to your answer.	2.5	3.91	2	4	2	4	0.645497224	0.276385399
Lesson Objective: To improve the skill of the hospital staff with use and implementation of the BVC and procedure. Please rate your degree of knowledge and skill to assess a patient using the BVC. Please mark the square that corresponds to your answer	2.41	3.91	2	4	2	4	0.640095479	0.276385399
Lesson Objective: To enhance the knowledge of staff regarding immediate risk mitigation interventions to reduce the risk of violence. Please rate your degree of knowledge and skill to implement mitigation interventions. Please mark the square that corresponds to your answer.	3.33	3.91	3	4	3	4	0.623609564	0.276385399
Please rate your degree of knowledge with the gap in current practice surrounding assessment and identification of violence risk. Please mark the square that corresponds to your answer.	2.83	3.91	3	4	3	4	0.552770798	0.276385399
Please rate your degree of knowledge when assessing patients using the BVC six behavior domains including, confusion, irritability, boisterousness, verbal threats, physical threats and attacking objects. Please mark the square that corresponds to your answer.	2.25	3.83	2	4	2	4	0.829156198	0.372677996
Please rate your degree of knowledge related to scoring a patient for the presence or absence of a behavior. Please mark the square that corresponds to your answer.	2.16	3.83	2	4	2	4	0.799305254	0.372677996
Please rate your degree of knowledge related to analyzing a BVC total sum and developing an individualized patient plan of care. Please mark the square that corresponds to your answer.	2.16	3.83	2	4	2	4	0.799305254	0.372677996