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A Quality Improvement Initiative: Addressing Workplace Violence Toward Nurses to Promote a Culture of Safety in an Inpatient Psychiatric Facility

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Abstract

This quality improvement initiative aimed to address workplace violence against nurses in inpatient psychiatric facilities and promote a culture of safety. The QI project involved 27 participants, including inpatient psychiatric nurses and mental health counselors from Cahill 4 and 7 West units at the Cambridge Campus. The primary objective was to identify challenges that hindered the effective utilization of the Broset Violence Checklist (BVC) tool for referring patients to sensory modulation rooms.

Pre- and post-intervention surveys were conducted to assess participants' self-reported knowledge and barriers to BVC and sensory room utilization. Educational sessions covering workplace violence, debriefing techniques, and the application of BVC to identify patient triggers and potential aggressive behaviors were conducted.

Results indicated a significant improvement in participants' understanding of the benefits of sensory rooms among those who attended the educational sessions. This project demonstrates the effectiveness of education in enhancing staff members' comprehension of the BVC tool and the potential of sensory modulation rooms to improve emotional regulation and decrease aggression in psychiatric patients.

Keywords: workplace violence, Broset Violence Checklist, sensory modulation rooms

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Violence toward nurses in the workplace in both public and private institutions is a pervasive phenomenon with significant economic and social ramifications. Physical or verbal violence may lead to injuries, workers' compensation claims, higher medical costs, and time away from work (Niu et al., 2019). In addition, violence can result in reduced productivity and poor performance, which has an adverse impact on the overall performance of the organization (Basfr et al., 2019). The Occupational Safety and Health Administration (OSHA) uses the definition of workplace violence by the National Institute for Occupational Safety and Health to formulate guidelines to address the issue (Basfr et al., 2019), identifying workplace violence as acts directed toward persons at work.

Workplace violence, as defined by the World Health Organization, involves patients or family members making threats, engaging in abusive behavior, and physically assaulting employees (Basfr et al., 2019). According to He and Zhu (2021), there is minimal reporting of incidents of violence toward psychiatric nurses. Continuous exposure to workplace violence in psychiatric units can adversely affect nurses' physical and mental health, reduce work satisfaction and productivity, and increase turnover rates (He & Zhu, 2021). A number of tools, methods, and techniques are available to assess and mitigate aggressive behavior and violent tendencies in patients toward nurses. In this quality improvement project, we aim to address patient aggression toward psychiatric nurses by implementing strategies and techniques that minimize violence and promote a culture of safety.

Problem Description

Niu et al. (2019) revealed that nurses working in psychiatric facilities are especially vulnerable to workplace violence, with rates up to 20% higher than the general population. Psychiatric nurses play a crucial role in safeguarding their patients because they are often in direct communication with them and their loved ones. Studies conducted by Basfr et al. (2019) and Niu et al. (2019) suggested that psychiatric nurses who frequently interact with patients are at a higher risk of workplace violence due to a range of factors, including the work environment, patients, and nursing staff. The atmosphere in psychiatric units can be particularly challenging because factors such as locked units, overcrowding, and limited therapeutic activities can further increase the likelihood of aggression and violence. Violent behavior can take many forms, including verbal abuse and physical attacks. Patients and their families often physically assault nurses in the form of punching, hitting, kicking, and throwing objects (Jakobsson et al., 2020). Nurses can be discouraged from offering services to patients and may lose confidence in their clinical expertise if they feel their efforts are not appreciated. Direct or primary exposure to violence may occur through firsthand involvement, indirect or secondary exposure through secondhand witnessing, or both (Havaei, 2021). The violence strains teamwork and presents communication barriers in the unit, which can compromise patient care (Niu et al., 2019).

According to the Massachusetts Nurses Association (MNA, 2023), the number of workplace violence incidents increased from 1,500 in 2017 to 3,420 in 2020. In late 2022, nurse killings related to workplace violence made headlines. During a home visit in December 2022, a patient's son shot and killed a nurse (Cabeza, 2022). In October 2022, a social worker and nurse were killed on the hospital labor and delivery floor. A few days before, a patient stabbed their

attending psychiatric nurse to death (Cabeza, 2022). As a result, legislators decided to bring attention to the Workplace Violence Prevention for Healthcare and Social Service Workers Act in the Senate in 2022. Joe Courtney introduced the act to the House of Representatives on February 22, 2021, where it was passed on April 16, 2021, but the legislation process was at a standstill for a while (Congress.gov, 2021). The recent increase in workplace violence incidents against health-care workers triggered the move to introduce the act to the Senate (MNA, 2023). This act, if signed into law, will require organizations that employ health-care and social service workers to provide prevention training, implement risk assessment and prevention, and investigate workplace violence incidents involving their staff (Congress.gov, 2021). The employers would keep records of these activities for 5 years, and the OSHA would conduct inspections. The American Nurses Association, National Nurses United (NNU), and American Psychiatric Nurses Association (APNA) are among the organizations supporting the act (Falcone, 2023). However, some entities such as the American Hospital Association (AHA) have expressed concern over the legislation, stating that a better strategy would be finding an evidence-based and effective solution to protect health-care workers (Falcone, 2023). According to AHA, violence occurs because of financial constraints in the health sector regarding patient treatment and service delivery, primarily for behavioral health care and opioid-dependent patients (Cabeza, 2022). AHA also proposed the development of evidence-based assessment tools and other initiatives such as developing a website to disseminate information (Cabeza, 2022).

Available Knowledge

The APNA (2021) identifies workplace violence as a significant issue among psychiatric mental health nurses. The Occupational Health Safety Network statistics reveal that 40.2% of

nurses experience workplace violence injuries (APNA, 2021). According to APNA, aggression and violence are prevalent toward staff in acute care settings and emergency departments where patients receive psychiatric, and substance use treatment. These violent attacks pose significant threats to nurses' emotional, physical, and psychological health and have a negative impact on both the nurse and the institution because they can affect the quality of care provided (d'Ettorre et al., 2020). The U.S. Bureau of Labor and Statistics also states that violence toward nurses is not uncommon, with approximately 50% of reported workplace violence incidences occurring in the health-care sector (2020). The bureau singles out psychiatric units and nursing homes as hotspots for these incidents because of the mental health status of their patient demographic. An OSHA report in 2004 associated underreporting of violent incidents in psychiatric units with the perception within the industry that violence is simply part of the job (U.S. Bureau of Labor Statistics, 2020). The NNU revealed nearly 17,000 workplace violence incidents in 2014 due to the absence of nationwide standards addressing protective measures for nurses (2022).

De la Fuente and Schoenfisch (2019) established that sensory-based treatment can effectively treat distressed, anxious, agitated, or potentially aggressive clients as an alternative to coercive action. People who have suffered trauma, post-traumatic stress disorder, or self-harming behaviors may find sensory modulation approaches beneficial (Björkdahl et al., 2020). Sensory modulation rooms provide an effective way for patients to manage both physiological and emotional arousal. This self-directed approach empowers patients and supports recovery-oriented practice and trauma-informed care while reducing isolation and restraint. These therapeutic spaces promote stress management skills, learning, and practice, facilitating a safe and respectful environment (Björkdahl et al., 2020). Sensory rooms are a better alternative to seclusion rooms because they provide a quiet and respectful setting for reconnection without sensory deprivation.

Staff are trained to effectively use sensory supplies such as soft objects, textured walls, and touch-sensitive or squishy toys, which have a profound effect on the nervous system. Painting, drawing, and guided relaxation techniques can facilitate emotional control and productive expression, using diverse sensory cues that appeal to the senses (Björkdahl et al., 2020). The patients also benefit from tactile experience through touch. Patients are more relaxed when immersed in calming environments like peaceful landscapes or guided meditations.

OSHA (2016) suggests using engineering controls and workplace adaptations for hazard prevention and control to reduce the risk of violent incidents toward nurses in the workplace. It recommends establishing patient de-escalation areas apart from other sections of the facility to help patients calm down without harming others (OSHA, 2016). The United Nations has emphatically called for an end to restrictive practices and instead advocates an effective, recovery-focused, person-centered approach that takes trauma into account. The Joint Commission (TJC) has also acknowledged the utmost importance of health facilities implementing policies to prevent workplace violence by early 2022 (2021). Studies have shown that sensory approaches can benefit mental health patients through safe, effective, and valuable alternatives. Sensory interventions reduce agitation and anxiety, improve mental well-being, and eliminate the need for restrictive measures such as isolation and restraint. As Maker and McSherry (2019) noted, the sensory approach can be highly beneficial for individuals seeking to improve emotional regulation and overall quality of life. Inpatient psychiatric units must provide sensory rooms and safety plans defining individualized sensory strategies. In a randomized controlled trial (RCT) by Bensimon et al. (2018), sensory tools in seclusion rooms effectively lowered the level of psychomotor agitation in individuals and promoted a sense of calm. Sensory

interventions are increasingly effective in reducing distress, agitation, and arousal levels; promoting calm; and reducing the need for seclusion or restraint in mental health care.

The National Institute for Health and Care Excellence suggests that inpatient psychiatric settings should use prediction instruments such as the Broset Violence Checklist (BVC) or the Dynamic Appraisal of Situational Aggression (DASA-IV) rather than relying solely on clinical judgment to monitor and alleviate violent incidents in inpatient psychiatric settings (2019). When patients are admitted to Cambridge Health Alliance (CHA's) adult inpatient psychiatric unit, they undergo an assessment using the BVC tool. This tool is preferred over DASA-IV because it has been found to predict violence more accurately in adults within 24 hours (Griffith et al., 2021). This quality improvement project used the BVC to refer patients to the sensory modulation room based on the patient's scoring and interpretation.

The Broset Violet Checklist is an evidence-based short-term violence prediction checklist with six items rating patients based on their risk of violence (Partridge & Affleck, 2018). The QI project of the BVC in several psychiatric units revealed that it has favorable validity, reliability, and predictive accuracy. Instead of relying on unstructured clinical judgment, the BVC helps health-care workers identify potentially threatening patients (Partridge & Affleck, 2018). The BVC has a specificity of 0.92 and a sensitivity of 0.63, making it suitable for assessing the risk of violence among inpatient psychiatric patients. The BVC makes assessments based on the presence or absence of irritability, confusion, or boisterousness as well as attacking with objects, physical threats, and verbal threats, which are considered risky behaviors (Partridge & Affleck, 2018). Staff members assess patients upon admission and during every shift for several days over 24 hours. They compare the patient's admission assessment to the psychiatric evaluation results obtained during their emergency room stay. It is assumed that when a patient displays at least

two of these behaviors, there is a high probability of the patient becoming violent within the next 24 hours (Partridge & Affleck, 2018). Appendix A provides instructions for scoring and interpreting the BVC checklist tool, while Appendix B contains information on obtaining permission from the tool's originators.

Rationale

Violence toward nurses resulting in injuries is an ongoing issue that traumatizes patients and staff. Early detection of triggers and knowing the underlying cause of these assaults is vital in taking proactive steps to reduce if not prevent such incidents.

The health promotion model and Kotter's 8-step change model are the two theoretical frameworks on which the interventions were based (Aqtam & Darawwad, 2018). The health promotion model employs learning theory, holistic nursing, and social psychology as foundations (Aqtam & Darawwad, 2018). This model suggests that nursing actions should modify variables for behavior-specific knowledge to enhance functional ability and improve health and individual quality of life. It defines the significance of health, health control, health status, self-efficacy, and benefits and barriers to health promotion behaviors (He & Zhu, 2021). Its goal is to help nurses understand the determinants of healthy behaviors as a foundation for behavioral counseling. The health promotion model includes several assumptions to develop the interventions to explain how individuals interact with the environment in all their biopsychosocial complexity, gradually altering both the environment and themselves (He & Zhu, 2021). Also, changing behavior requires self-initiated reconfiguration of person–environment interaction patterns. The frequent exposure to workplace violence by psychiatric nurses can influence their physical and mental health over time if unaddressed, and this can affect nurses' job performance and interpersonal relationships. Pender's health promotion model formulates

programs to increase awareness of workplace violence and its potential effects, offering training on strategies to help conflict resolution during violent incidents and health promotion interventions to ensure nurses' welfare (Aqtam & Darawwad, 2018).

Harvard professor John Paul Kotter formulated Kotter's 8-step change model in 1996 to manage the steps needed to implement organizational change (Kuo & Chen, 2019). Among the steps are building and communicating a compelling vision, removing obstacles, achieving quick wins, building momentum by creating a sense of urgency, recruiting influential change leaders, helping people understand the vision, and empowering them to make it happen (Kuo & Chen, 2019). The collaborative efforts of key stakeholders, including nurse managers, occupational therapists, psychiatric nurses, and management staff, played a pivotal role in driving change within the project implementation. Together, they formed a cohesive team, leveraging their expertise and perspectives to devise strategies for establishing a sensory room with essential tools. The aim was to foster emotional regulation, offer comfort, and support self-management among patients, aligning with the insights highlighted by Kuo & Chen (2019).

Their collective brainstorming sessions likely contributed diverse ideas and perspectives, enriching the design and functionality of the sensory room. Including various stakeholders, they ensured a comprehensive approach, considering the needs of patients and staff involved in utilizing the space. This collaborative effort likely facilitated a more holistic and effective implementation of the sensory room, addressing a spectrum of emotional and behavioral needs of the patients within the psychiatric facility. During the implementation of the sensory modulation room and BVC, the team set clear goals (Anyanwu, 2021); for instance, placing the items in the sensory modulation room to help achieve the goal and encouraging staff working on psychiatric units to use the BVC. The goal is to alleviate workplace violence, which entails meeting specific

objectives. These include educating the nursing staff on workplace violence, de-escalation strategies during violent incidents, and improved reporting to facilitate healing in the patient, reduce future violent outbursts, and enhance nurses' resilience on the unit. The process must empower psychiatric nurses to be successful, educating and training them on incidents that constitute workplace violence, how to resolve conflict when an incident arises, reporting violent incidents, and protecting themselves from the adverse effects of workplace violence. The project team should highlight and celebrate any achievements, no matter how small (Kuo & Chen, 2019). Every month, each unit updates the quality boards with graphs showing the number of patient-to-staff assaults and restraints.

Kotter's model assumes that the acceptance of the change by staff, empowerment of the staff, and their motivation will determine the success of the changes; they should, therefore, be involved to ensure that they understand the intended goals (Anyanwu, 2021; Kuo & Chen, 2019). Stakeholders and management must provide the resources to facilitate the projected changes and attain the outlined objectives (Anyanwu, 2021; Kuo & Chen, 2019). Although violence toward nurses is a concerning issue, this project aims to address specific patient aggression toward psychiatric nurses in psychiatric units.

Specific Aims

- To gain an understanding of existing barriers to staff using the BVC tool to refer patients to the sensory modulation room.
- To implement a BVC protocol (Appendix C) to refer agitated or distressed patients to the sensory modulation room to improve emotional regulation and reduce aggressive behavior toward nurses.

- To provide education to bridge the knowledge gap between the BVC tool and sensory modulation rooms to support inpatient psychiatric units.

Methods

Context

Cambridge Health Alliance is a teaching hospital providing health care to local and international communities. It is affiliated with the Harvard School of Medicine, Dental and Public Health, Beth Israel Deaconess Medical Center, and Tufts University School of Medicine. It is a "safety-net" hospital that serves communities in Cambridge, Somerville, and north Boston, Massachusetts. CHA's mission statement is to "improve the health of patients and communities" (2023).

The Department of Psychiatry at CHA offers mental health and substance use treatment services. The psychiatric units provide different services such as adult psychiatry, geriatric psychiatry, psychiatry emergency services, specialty psychiatry, trauma, behavioral health integration with primary care, and the recently introduced child psychiatry services. The health system has 10 primary inpatient psychiatric units, which include the neurodevelopmental unit, child assessment unit, adolescent assessment unit, adult gerontology-psych unit, and psychiatric emergency department. The adolescent assessment unit serves patients between the ages of 13 and 17. The adult psychiatry unit offers services to patients 18 years and above. The neurodevelopmental unit provides services to children and adolescents with autism spectrum disorder, intellectual disability, and other related neurodevelopmental disorders. The facility has 155 inpatient beds, with most units serving 16–22 patients across the lifespan (Reinert, 2022). Most patients suffer from anxiety, post-traumatic stress disorder, depression, psychosis, substance use, and neurological disorders.

The psychiatry department has experienced an increased incidence of adolescents diagnosed with depression and anxiety due to social isolation during the COVID-19 pandemic (CHA, 2023). CHA collaborated with the Commonwealth of Massachusetts to expand the number of psychiatry beds to accommodate the increase in the mental health patient population.

The leaders and staff at CHA were concerned about the increased violence and aggression rate in the units and were interested in finding solutions to reduce it. The health system's nursing administration had developed initiatives to reduce the number of staff assaults and injuries in the psychiatry unit by using early de-escalation to facilitate a decrease in violence and aggression. Suggested strategies included the use of staff who were champions and experts in de-escalation, improved rounding, safety assessment upon admission, using the crisis safety checklist tool that was integrated into the Electronic Medical Record system (EMR), using screening for violence, and using the electronic DASA-IV, BVC, and Crisis Prevention and Intervention (CPI) training.

Adult patients are the specific target of the proposed project. The Cambridge campus has three adult inpatient units: Cahill 3, Cahill 4, and 7 West. Cahills 3 and 4 can house 34 patients while 7 West houses 9. The patients admitted to the units suffer from depression, bipolar disorder, trauma, psychosis, suicidal ideation or attempts, and aggressive behavior.

This quality improvement project took place in the 7 West and Cahill 4 units on the Cambridge campus. Empirical evidence supports sensory-based interventions (Bensimon et al., 2018); however, many of these sensory rooms at CHA were underutilized because they lacked the necessary sensory items. Only the sensory rooms in Cahills 3 and 4 had comfortable seating, while only the sensory room in 7 West had scenic paintings and comfortable seating. The staff reported that many sensory modulation rooms were used less often because of the loss of sensory

tools or equipment, poorly maintained sensory rooms, a lack of staff training and understanding of sensory interventions, and a lack of protocols for referring patients.

When the CHA's sensory rooms were initially built, patients could walk in any time they were feeling stressed; it was a place to reduce stress and provide relaxation. The room was later locked because facility leaders were concerned that patients might use the sensory items to harm themselves or others. The staff started removing sensory items and eventually locked the rooms altogether, so these sensory rooms were no longer in use. Cahill 4 needed some sensory items to make it a welcoming place for patients; the 7 West sensory room was a more developed space. The project team leader collaborated with staff, unit managers, and stakeholders to identify therapeutic equipment and interventions tailored to the unit's needs. Evidence-based alternatives to incorporate into an inpatient psychiatric unit were discussed, including reintroducing the sensory room to help reduce restrictive practices. This therapeutic strategy strives to reduce violence and aggression while fostering a sense of tranquility (Björkdahl et al., 2020). After conducting semi-structured interviews with staff across all three shifts, it was apparent that there needed to be more consistency in how the BVC tool was used to score patients' behavior. The staff was unsure when to refer them to the sensory room because the BVC scale focused more on observing and measuring behaviors such as agitation, irritability, and social withdrawal in patients rather than determining referrals to a sensory room. The team lead for the proposed DNP project designed pre- and post-surveys (Appendices D, E) to evaluate the nurses' understanding of the BVC by mirroring the tool. The survey assessed staff self-reported knowledge and barriers to utilizing BVC and sensory rooms, using a Likert scale questionnaire to evaluate patients and provide insights into staff understanding of sensory rooms and their decision-making process when referring the patient to the sensory room.

Data collected post-implementation was shared with psychiatric leadership and stakeholders to determine whether furnishing and developing other sensory rooms would be beneficial in reducing violence toward nurses. See Appendix F for a comparison of CHA's furnished and unfurnished sensory rooms.

Patient aggression can have significant comprehensive costs for health-care staff and facilities, including various physical, psychological, financial, and operational expenses. Using health services to treat traumatic injuries results in significant economic costs for patients, health systems, and payers. Data from the Centers for Disease Control and Prevention show that violence-related hospital costs totaled $4.1 billion in 2010 (the most recent year available), and ED care costs totaled $4.3 billion among those without fatal outcomes. The same year, medical expenses for those fatally injured by violence were $332 million. Together, they exceeded $8.7 billion in spending in 2010 (Grossman & Choucair, 2019).

Table 1

Budget and Cost–Benefit Analysis for Purchasing Sensory Items to Decrease Aggression

Item	Description	Total Cost
Stress ball	20 pieces	$240
Sensory fidget toys	100 pieces	$50
Wall foam padding	20	$1800
Dimmable lights	4 switches	$133.92
Comfortable seating	3	$1200
Animation projector	1	No-cost-units have projectors

Education		Provided at no cost to staff
Total		$3,423.92

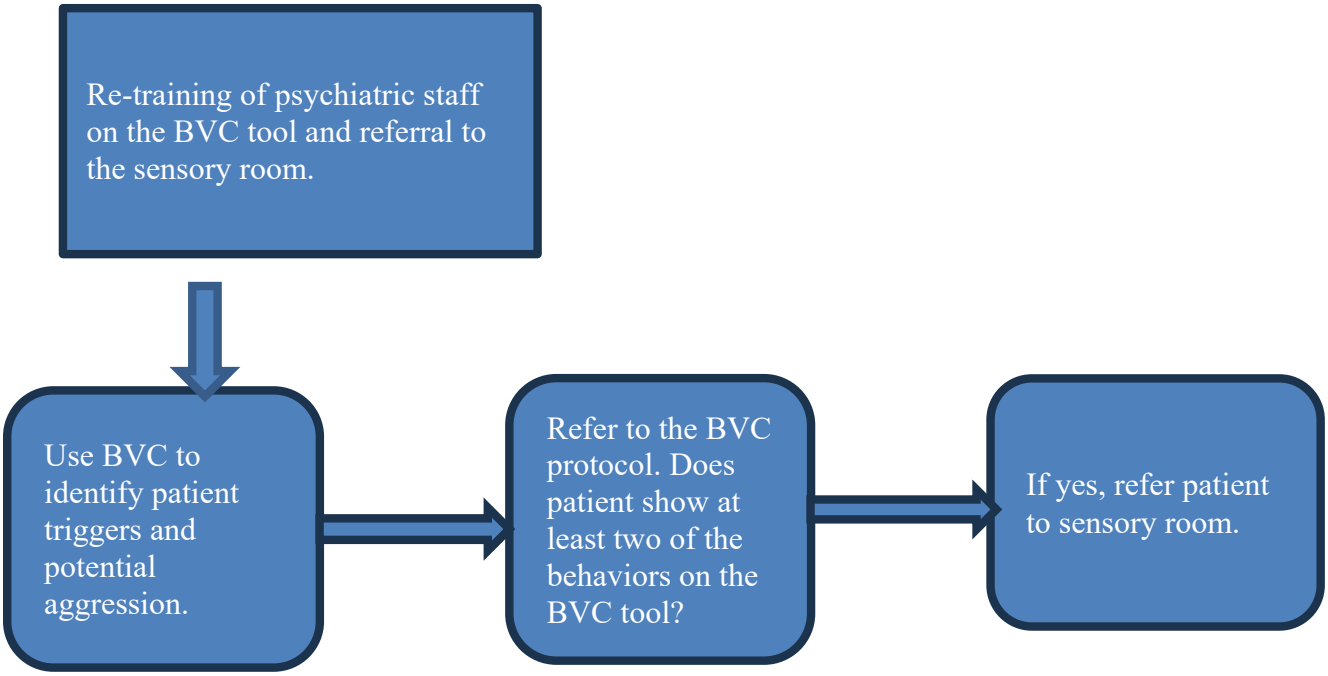
Interventions

The interventions were intended to improve the knowledge and skills of psychiatric nurses in curbing or minimizing violence, assaults, and injuries in the health system. As part of the interventions, staff members from the nursing and clinical team attended retraining and educational sessions on workplace violence, debriefing, and the use of the BVC to identify patient triggers and potentially aggressive behaviors that could lead to violence, assault, and injury (d'Ettorre et al., 2020). This intervention was necessary because staff often reported missing opportunities to identify patients' triggers promptly and de-escalate before the patients became violent. With the second intervention, a BVC protocol and a sensory modulation room were created in collaboration with mental health professionals, occupational therapists, and violence prevention experts (d'Ettorre et al., 2020). Staff received education on the types and benefits of the sensory room and the importance of using the BVC tool to identify triggers, dysregulation, and potentially aggressive behavior before referring the patients to the sensory modulation room. An invitation letter was sent to all participants, seeking informed consent to protect their anonymity, privacy, and confidentiality. The letter provided a comprehensive outline of the intervention in terms of its purpose, objectives, and expectations for participation (Appendix G). The team leader conducted educational sessions on BVC and sensory modulation approaches for psychiatric staff. The hospital's education department had many evidence-based resources on its web-based educational platform, © HealthStream. To ensure that all staff members were trained, the team lead worked in tandem with the education department and other stakeholders to provide an alternative mode of staff education for those who could not attend in-

person sessions. Education and training were tailored to meet the team's needs in managing patient triggers and aggression effectively. CHA did not have specific criteria for referring patients to the sensory modulation room. According to Partridge and Affleck (2018), when a patient presented with at least two of the behaviors on the BVC tool, the probability of the patient becoming violent within 24 hours was high; therefore, a protocol was created to indicate when it was appropriate to refer patients to the sensory room.

Figure 1

Steps to Refer a Patient to the Sensory Room Using the BVC Tool



Sensory rooms provide a calming and therapeutic environment that is valuable to patients. The appropriate use of sensory rooms facilitates self-regulation, creates a safe space, and provides opportunities for prevention and crisis de-escalation (Björkdahl et al., 2020). Sensory rooms fall into three types: sensory modulation, integration, and Snoezelen (Björkdahl et al., 2020). A sensory modulation room is a quiet, therapeutic space designed to de-escalate and prevent crises (Adam, 2023). A sensory integration room, by contrast, contains concrete

equipment and intervention processes and is created and used exclusively by occupational therapists trained in sensory integration techniques (Adam, 2023). Snoezelen rooms provide stimulation, relaxation, and social interaction for patients with cognitive impairments such as dementia and pervasive developmental disabilities. Most acute or long-term care facilities may have quiet room spaces converted to be more sensory-supportive. However, other sensory rooms in mental health care also include any additional therapeutic spaces enhanced or developed for sensory-supportive, therapeutic purposes. In this way, all these sensory room spaces primarily promote sensory modulation. Sensory modulation and Snoezelen approaches can also be combined if they benefit the specific patient population and practice environment (Adam, 2023).

The sensory modulation rooms at the CHA inpatient psychiatric units do not currently meet patients' therapeutic needs. Considering this project's proposed financial estimate, sensory rooms with most of the necessary equipment were used. Staff personalized the sensory modulation rooms to cater to the specific patient population, creating a safe, calming, and supportive environment (Adam, 2023). The space was equipped with appropriate sensory resources to engage patients' tactile, auditory, and visual senses. Following infection control advice, virtual reality gadgets were not included in the project implementation process. The initial objective was to offer a range of optional features tailored to patient needs, including calming colors, music, and lighting. However, due to time constraints, only a subset of these features was made available (Adam, 2023).

The implementation phase of the quality improvement project spanned six weeks. Despite the significance of the pre-and post-intervention evaluation surveys on the Confidence in Coping with Patient Aggression Scale (Appendix H) in measuring the effectiveness of nurses' management of aggressive patients, only six participants completed them. As a result, the

accuracy of assessing the nurses' ability to manage aggressive patients may be compromised. Participation in the survey was voluntary, and the responses were anonymous to encourage honesty and integrity in the answers. The staff members were invited to participate in a survey before and after the intervention to assess their comfort level in handling patients using the BVC and managing aggression and potential violence before referring them to the sensory room. The respondents were provided with identical numbers on pre-and post-surveys, which allowed for a seamless comparison of the survey results. Based on the questionnaire/survey outcome, the staff were encouraged to use the © HealthStream as a resource to help improve the nurses' ability to handle patients showing triggers or having aggressive episodes. The Confidence in Coping with Patient Aggression Scale (CCPA) was used to assess the staff's confidence when dealing with triggering and aggressive behavior. The CCPA instrument (de la Fuente et al., 2019) assesses the perceived confidence of mental health nurses before and after they receive training. The self-reported questionnaire evaluates the staff's preparedness, expertise in handling violent incidents, level of comfort in ensuring workplace safety, familiarity with therapeutic interventions, and ability to intervene with aggressive patients physically and psychologically while ensuring their safety (de la Fuente et al., 2019). The reliability of this instrument is high, as indicated by a Cronbach's alpha of 0.92 (de la Fuente et al., 2019), and was implemented in the pre-and post-implementation surveys to make it easier to rate the perceived confidence of the nurses in de-escalating violent situations involving psychiatric patients. However, the staff's low participation prevented statistical analysis of the data. The CCPA tool has been tested by Dr. Michael Thackery (1987), who granted permission for its use (Appendix I). The tool has 10 items rated on an 11-point Likert scale. The confidence levels range from 1 (low confidence) to 11 (high confidence) with a Cronbach's alpha of .92 and a standard error of 1.5, showing that this tool has

high internal consistency and precision (de la Fuente et al., 2019). As part of the DNP quality improvement project, an electronic Qualtrics survey was utilized to evaluate the impact of interventions addressing workplace violence toward psychiatric nurses. In this way, it was possible to determine whether the intervention contributed to the observed outcomes.

Measures

Niu et al. (2019) and Alyousef and Alhamidi (2022) relied on the experiences of the nurses interviewed to assess the impact of workplace violence on mental health staff. Their interviews identified the prevalence of violent episodes, characteristics of victims and perpetrators, victims' responses, consequences for perpetrators, reporting mechanisms, and prevention strategies. These measures determined the need for implementing strategies to improve the statistics. The staff's personal experiences are invaluable in formulating interventions to help minimize aggressive behavior and improve outcomes.

Methods used to assess the effectiveness of intervention procedures and impact included assessing patient satisfaction scores and monitoring the frequency of violent occurrences or assaults on nurses. Reductions in workplace hostilities and improvements in safety culture were measured by tracking the volume of employee grievances within the safety incident reporting system.

Staff understanding of acts that constitute workplace violence and available reporting mechanisms measured the outcomes of the project interventions. Nurses who receive proper education and training should feel more adequately equipped to handle violence and aggression with minimal adverse consequences. The project interventions improved nurses' ability to de-escalate violent incidences efficiently using the BVC protocol and to refer patients to the sensory room. The main objective of any health-care facility is to provide services promoting desirable

patient outcomes. The effects of the interventions were monitored to ensure that they were beneficial to staff and positively impacted patient care and safety. To ensure completeness and accuracy, the instruments and tests used have high reliability and validity to ensure accurate results applicable to future research. Data verification was performed by manually cross-checking the data with the sources or using automated methods to ensure its authenticity.

Analysis

A Qualtrics survey was used to collect qualitative and quantitative data from psychiatric nurses and mental health counselors before and after referrals to the sensory modulation room. The survey outcome enabled the team to identify trends, patterns, or changes needing improvement. Through qualitative data, the DNP project aims to bolster the psychiatric staff's knowledge of referring patients to sensory rooms. The project team had exclusive access to the data collected, and once the educational training is concluded, psychiatric staff was able to retrieve recordings of the sessions for reference.

Ethical Considerations

The University of New Hampshire, Department of Nursing DNP Committee required Institutional Review Board (IRB) approval prior to implementing the quality improvement project: however, CHA did not require IRB approval before commencing this QI project because there was no involvement of human subjects (Appendix J). The participants were debriefed at the end of the project and were informed of the results and any challenges encountered. Participation was voluntary and anonymous.

Results

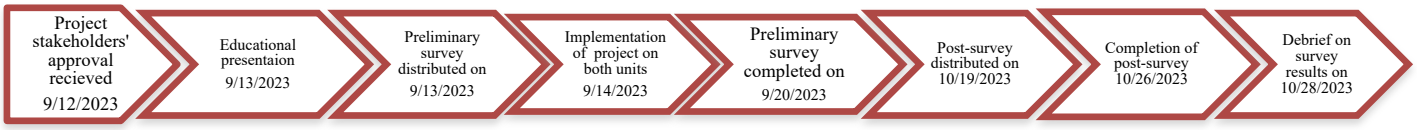
At the outset, the quality improvement initiative aimed to enhance staff knowledge by conducting educational sessions for each shift and utilizing the hospital's online education

platform to reach those unable to attend in person. However, due to time constraints, the hospital held a single comprehensive educational session to accommodate a broader audience. The primary objective behind offering education during each shift was to foster more robust learning experiences and encourage active discussion.

Twenty-seven psychiatric staff members willingly participated in a six-week project administered at the Cambridge Campus. The project, conducted from September to October 2023, included pre- and post-intervention surveys. The participants consisted of inpatient psychiatric nurses and mental health counselors employed in the Cahill 4 and 7 West units at the Cambridge campus. Of the 27 participants, 14 initiated the survey, with 13 completing it, yielding an impressive response rate of 52% and a completion rate of 93%. The respondents' demographic information was not collected to protect their privacy. Please refer to Figure 1 for a visual representation of the survey and training intervention timeline.

Figure 2

Timeline for Project Implementation



All nurses and mental health counselors received pre- and post-intervention surveys via their facility's email. Prior to the intervention phases, we conducted an educational session for inpatient psychiatric unit staff to explain the initiative and address any questions. Completion of the surveys followed, which was estimated to take 40 minutes in total. However, the Qualtrics system showed that the average times taken to complete the pre-survey and post-survey

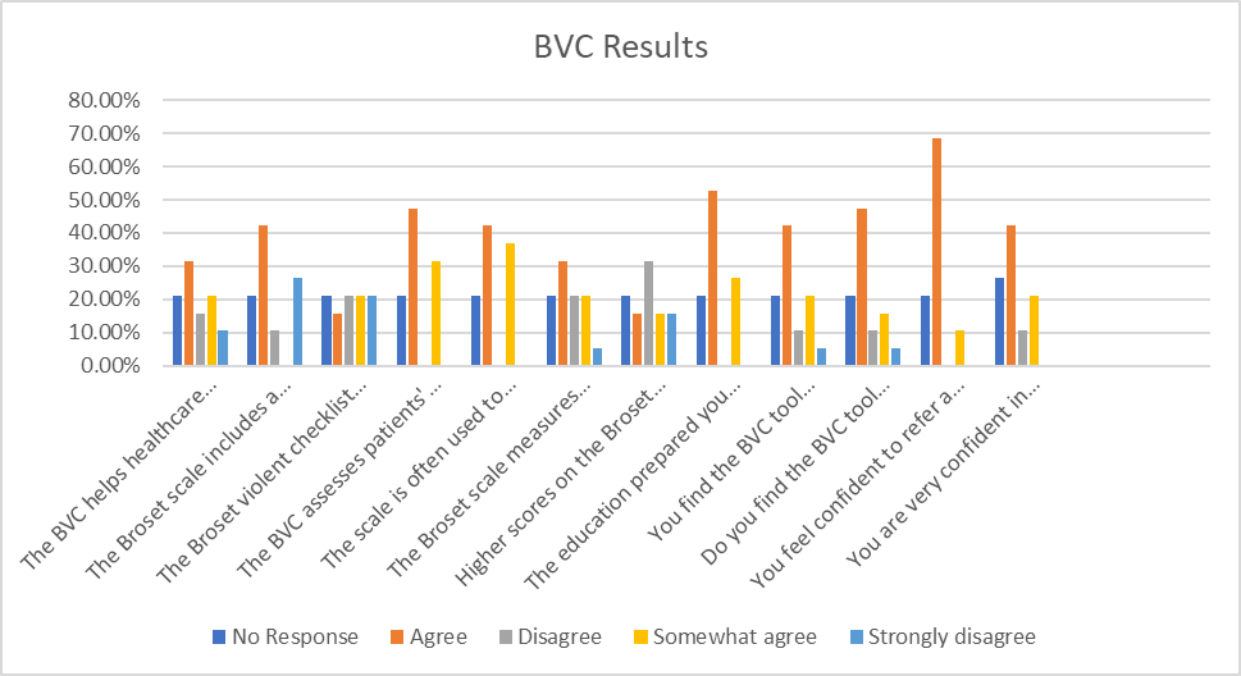
questionnaires were only 10 and 8 minutes, respectively. This significant reduction in estimated time positively influenced the cost–benefit analysis. The in-person educational session lasted 35 minutes, and the average time spent on the hospital's online educational platform was 12 minutes. After the completion of the surveys, a final debriefing on the survey results took approximately 20 minutes. Therefore, the average time spent on the educational sessions and both surveys was around 38.5 minutes.

Pre-Intervention Survey Data

The survey results suggest that many participants are unfamiliar with the BVC tool. Although most disagreed that the BVC tool assesses physical health, a majority of 60% believed it evaluates behavioral symptoms related to mental health. In addition, 53% thought it monitored patient agitation and irritability. Overall, the feedback on the tool was positive, in that 60% found it helpful in reducing aggression and assault. However, only 20% believed that higher scores on the scale indicated lower symptoms.

Regarding the sensory modulation room, 67% of respondents felt sufficiently trained to refer patients, with 87% expressing confidence. Regarding clinical scenarios, 77% believed using the BVC during heightened agitation was most appropriate. The majority considered an increased BVC score as a sign of worsening symptoms. Finally, though 57% of the participants were content with the educational materials provided on the BVC tool, the same percentage expressed high confidence in using it.

Figure 3



See the following summary.

The analysis of survey responses reveals diverse levels of familiarity and understanding of the BVC tool among participants. Although a significant proportion (specifically five out of 15) indicated a need for increased familiarity with the BVC Behavioral Observation Scale, knowledge levels varied. Four respondents reported being familiar with the tool, and three participants displayed a high level of knowledge.

Regarding assessing the BVC tool, a majority of seven out of 15 respondents disagreed with the statement that it measures a patient's physical health. However, 60% (nine out of 15) acknowledged its effectiveness in assessing patients' behavioral symptoms related to mental health, and 53% (eight out of 15) recognized its utility in monitoring agitation and irritability in patients. Nevertheless, there was less consensus on its ability to measure cognitive functioning or track social withdrawal and inactivity.

Regarding applying the BVC scale in practice, survey findings indicate that a substantial percentage of 67% (10 out of 15) of respondents felt adequately prepared by their education to

refer patients to the sensory modulation room. Additionally, a significant majority of 87% (13 out of 15) expressed confidence in their ability to refer patients to the sensory room. Notably, 50% (13 out of 15) reported using the BVC tool weekly before referring patients to the sensory room, underscoring its practical significance in their clinical practice.

Post-Implementation Survey Result

The survey data followed the specific objectives of the project, which centers on comprehending current obstacles to the use of the BVC for directing patients to sensory modulation rooms. Additionally, the project aims to establish a BVC protocol and offer educational interventions to address knowledge deficiencies. The survey's aim is to gather data regarding health-care professionals' familiarity with the BVC, their confidence in using it for referrals, and their perception of educational materials. These factors are crucial in attaining the project objectives of enhancing emotional regulation, mitigating aggressive behavior, and improving support for inpatient psychiatric units. Concerning the level of familiarity with the BVC, a considerable proportion of participants indicated either being "very familiar" (37%) or "moderately familiar" (29%) with the scale.

The analysis of the survey data indicates varying perspectives regarding the effectiveness of the BVC in assessing physical health, cognitive functioning, and monitoring social disengagement. However, the respondents generally agreed that the BVC is a reliable tool for evaluating behavioral symptoms associated with mental health conditions and played a crucial role in the ongoing observation of restlessness and irritability in patients. There was a divergence of perspectives on the extent to which the BVC is effective in evaluating cognitive functioning and monitoring social disengagement. However, a consensus has been reached among scholars that the BVC encompasses a variety of behavioral categories that facilitate comprehensive

assessment. In addition, the participants expressed disagreement with the proposition that increased scores on the BVC corresponded to diminished levels of observable symptoms.

The findings additionally suggested that a significant proportion of participants perceived the BVC tool as efficacious in mitigating or averting violence and assault and expressed confidence in their ability to direct patients to sensory modulation rooms appropriately. The user's level of trust in using the BVC tool was typically elevated. In general, this dataset offers significant insights into the opinions and expertise of health-care professionals regarding the function and usefulness of the BVC in the field of psychiatric nursing.

Discussion

In the project we aimed to address the challenges encountered by inpatient psychiatric staff in using the BVC tool for referring patients to sensory modulation rooms, bridging the knowledge gap between BVC and sensory modulation rooms through education and thus enhancing emotional regulation and reducing aggression toward nurses. We developed the project based on Pender's health promotion model and Kotter's change model, as cited by Kuo and Chen (2019). Notably, staff members who participated in the educational session or used the hospital's education platform markedly improved comprehension of the benefits associated with the sensory room. We distributed the pre- and post-survey for the CCPA scale to all staff who agreed to participate voluntarily. However, only six participants completed it, rendering the CCPA survey unusable for the project's intended purpose. Consequently, we could not evaluate the impact of nurses' confidence in managing aggressive patients. The low participation rate was attributed to time constraints, balancing multiple commitments, and feeling overwhelmed.

The survey results revealed that most respondents had a comprehensive understanding of the BVC's intended use in evaluating patients' behavioral symptoms when

referring patients to the sensory room. They were well-informed about the significance of sensory rooms in managing behavioral changes in patients. The respondents also expressed a high level of confidence in their ability to use the BVC tool effectively to refer patients to the sensory modulation rooms. They acknowledged that the sensory room is an asset in helping patients to self-regulate, improve a sense of calm, and reduce aggression and violent behaviors toward staff.

However, some respondents had concerns about certain functionalities of the BVC tool, including its ease of use and the time required to complete the assessment. There were also varying opinions regarding the frequency of its use, with some respondents suggesting that the BVC in conjunction with the sensory room should be used more frequently to monitor patient behaviors, whereas others believed that it should only be used sparingly when referring patients to the sensory room. Despite these concerns, the consensus among the respondents was that the BVC was a useful tool for assessing patients' behavioral symptoms and made the sensory room experience more surreal.

Interpretation

The analysis of the survey data provides valuable insights into the participants' familiarity with and perceptions of the BVC tool and the sensory modulation room. There is clearly a need to become more familiar with BVC because a significant percentage of participants indicated that they did not have a comprehensive understanding of the tool. There is, however, optimism regarding the tool's effectiveness in measuring behavioral mental health symptoms, as well as tracking patient agitation and irritability. Future researchers may focus on establishing a correlation between elevated BVC scores and reduced observable symptoms.

It has been reported that a significant proportion of participants feel comfortable referring patients to the sensory modulation room, suggesting that adequate training and assurances have been provided. The BVC tool has proven useful in assessing patients experiencing heightened agitation in clinical situations. In addition, participants perceive an elevated BVC score as indicating symptom deterioration, emphasizing its clinical relevance.

Regarding educational resources and self-assurance in utilizing the BVC tool, participants generally expressed satisfaction with the materials provided and were highly confident in their ability to use the tool. Overall, the survey findings suggest that respondents possess a certain degree of familiarity and comprehension of the BVC tool, indicating that education efforts have been effective in some areas. There is still room for improvement, and ongoing education and training initiatives should focus on addressing areas of concern and improving overall staff competency.

Future initiatives should aim at improving staff proficiency with the BVC tool, and these survey findings maximize its ability to evaluate and address patient behaviors in psychiatric settings. It can improve mental health outcomes and care quality by building on these insights through further research and education.

In analyzing the survey data, it is essential to consider the nature of the association between the educational intervention(s) and the outcomes observed. The intervention aimed at enhancing staff members' understanding of the BVC tool and its connection to patient outcomes. Although the data indicate improved familiarity and confidence in utilizing the BVC tool, many participants still need further education. The association between the intervention and outcomes suggests that though there has been progress, understanding the tool requires ongoing efforts from staff members.

Comparing these results with findings from other publications highlights the importance of education in health-care settings. Authors of studies emphasizing staff training and familiarity with assessment tools often report similar patterns of improved confidence and competence. However, the specific nuances and challenges within each healthcare context can lead to outcome variations. Therefore, it is crucial to tailor interventions to the institution's unique needs and circumstances.

The project's impact on people and systems is notable. Staff members have gained a heightened awareness of the BVC tool's potential and connection to patient care. This knowledge has the potential to lead to improved health outcomes, particularly in managing behavioral symptoms and tracking patient agitation. Additionally, the project revealed the importance of ongoing education and the need for refining resources and training materials to better support staff members in their roles.

Differences between observed and anticipated outcomes are attributable to several factors, including context. The short time frame and limited sample size may have constrained the project's depth of impact. Staff members' diverse backgrounds and experiences may have led to variations in their responses to the intervention. Additionally, external factors such as time constraints and competing commitments may affect participation rates and outcomes.

Regarding costs and strategic trade-offs, the project's investment in education and training materials represents a valuable allocation of resources to improve staff competence. However, there are opportunity costs associated with this investment, in that resources spent on this project could have been allocated to other initiatives. Therefore, ongoing evaluation of project cost-effectiveness and alignment with broader organizational goals is essential.

In summary, the survey data analysis highlights the ongoing need for education and training initiatives in health-care settings. This especially applies to improving staff familiarity with assessment tools like the BVC. Comparisons with other publications emphasize the importance of tailoring interventions to specific contexts. The project's impact on people and systems is positive but is subject to contextual variations. Differences between observed and anticipated outcomes can be attributed to various factors, including context and external influences. Finally, considering costs and trade-offs is essential in assessing project value and alignment with organizational priorities.

Limitations

The project was conducted in a limited timeframe thus restricting the project's potential impact. It was limited to two adult inpatient units within a specified time frame, which led to a small sample size-and a poor response rate. These limitations present obstacles to generalizing the findings and raise concerns about possible bias. Therefore, the data collected from the project are not-clinically significant and cannot be extrapolated to a larger population. Nonetheless, the small sample size was crucial in capturing the impact of the sensory modulation room experience in mitigating aggression and violent patient behavior. Despite this limitation, the data still hold significance for the clinic, and the intervention will be leveraged to enhance quality improvement efforts in the future. Because of the time constraint, it was not feasible to provide education to every unit and to cover all three shifts comprehensively. Although the hospital-outlined education platform was offered as an alternative for staff members who could not attend the training session, some staff members who missed the training opted to refrain from accessing the information online. These constraints may hinder the scope, applicability, or generalizability of the results. During the implementation phase of the project, several tools were unavailable to

patients as a result of scheduling constraints. The personnel at the Cahill 4 unit made a formal request for an increased provision of sensory gadgets. The assortment of items encompasses weighted blankets, stress balls, music therapy, and tactile toys, all of which serve to augment the sensory room encounter for individuals.

The project's findings are subject to restricted generalizability because of many factors that could have influenced internal validity. The limited number of participants who completed the CCPA survey, totaling only six individuals, raises issues over the sample's representativeness. The constraint might be ascribed to temporal limitations and conflicting obligations, impacting the capacity to participate actively in the undertaking. Consequently, we could not adequately evaluate the influence of nurses' self-assurance in handling confrontational patients after the educational intervention. Furthermore, the scope of the experiment included only two adult inpatient units within a condensed time frame, resulting in a limited sample size. The limited number of participants in this QI project, along with the relatively low response rate, challenges the extent to which the findings may be applied to a larger population.

Notwithstanding these constraints, the gathered data retain clinical importance and will contribute to informing future endeavors to enhance quality. We made attempts to mitigate conditions by offering educational resources via the hospital's online platform; moreover, certain personnel refrained from availing themselves of this opportunity. Furthermore, the implementation phase of the project could have been improved by scheduling restrictions, resulting in limited access to specific sensory equipment for patients and consequently undermining the intervention's comprehensiveness. It is essential to take these limitations into account while analyzing the results of the project and devising future research strategies and interventions within this particular setting.

Several factors could have affected the accuracy of the Quality Improvement project. These include confounding variables, biases, and inaccuracies in the project design, methodologies, measurements, and data processing. It is essential to consider the potential influence of confounding variables because there may have been unaccounted factors that affected the observed outcomes. These factors could have included differences in staff members' characteristics, variations in patient groups served, or external events throughout the project. Although efforts were made to ensure consistency in the instructional content and its delivery, accounting for all potential confounders remains a significant challenge.

It is also essential to acknowledge the potential introduction of bias in the findings due to the reliance on self-reported results and the voluntary nature of staff member participation. Those who decided to participate in the survey may have had a personal stake in the initiative's success, which may have influenced their responses favorably, potentially introducing bias. Therefore, we took deliberate measures to encourage the voluntary participation of various staff members. However, achieving complete representation proved to take a lot of work.

Potential inaccuracies in the design, techniques, measurement, or analysis may have compromised the project's internal validity. The analysis may have been affected by imprecision because of the restricted sample size and low response rate of the CCPA survey, as well as the absence of a control group. Additionally, the limited duration of the project-imposed constraints on the extent and scope of data gathering and examination.

To address the issues mentioned in the QI project , future researchers should use more rigorous designs, larger sample sizes, and longer observation periods. Despite difficulties with obtaining a larger sample, we effectively used the available sample to evaluate the effectiveness of sensory modulation rooms in reducing hostility and violent conduct toward staff. Although the

findings cannot be generalized to a wider population, they remain clinically significant for the individual units under investigation. Additionally, the feedback provided by the participants about the usability and frequency of the BVC tool can help improve its implementation in subsequent studies. The findings provide a solid foundation for future research and initiatives aimed at enhancing quality. These efforts can build upon the results to increase their validity and relevance.

Recommendations

After the project's completion, it was discovered during an inspection that staff members were still locking the sensory room. It is essential to re-educate the staff on the importance of always leaving the sensory room accessible. It violates the patients' rights to keep the doors locked per the facility protocol. The staff must undergo comprehensive training to ensure they possess the expertise and knowledge to provide adequate support for individuals with sensory processing challenges. The training should also incorporate the use of the sensory room's equipment, enabling users to regulate their sensory input efficiently.

It is imperative to provide continued and extensive training to all staff members to ensure comprehensive understanding of the sensory room. This training must encompass the sensory room's purpose, equipment, and safety protocols as well as de-escalation techniques and crisis intervention to manage aggressive behaviors effectively.

It is essential to acknowledge that every patient is distinctive, and what may prove efficacious for one person may not yield the same results for another. Thus, in using a sensory room at a psychiatric unit, it is imperative to tailor the approach to each patient's specific needs and preferences. In addition, seeking counsel from mental health experts and adhering to

institutional guidelines is pivotal to administering exemplary care to patients who exhibit aggressive tendencies.

Conclusion

As a result of this project, we have gained insight into the potential benefits of bridging the knowledge gap between the BVC tool and sensory modulation rooms for inpatient mental health. The project offers valuable insights into the effectiveness of education in improving staff members' understanding of the BVC tool and the relationship between it and patient outcomes despite limitations concerning sample size, response rates, and time constraints. Sensory modulation rooms have the potential to improve emotional regulation and reduce aggression in psychiatric patients.

As for sustainability, it is apparent that continuing education and training are essential to maintaining this project's positive impact. It should be a priority for the institution to educate and engage staff about the benefits of sensory modulation rooms and the BVC tool. The potential for spreading this work to other health-care contexts is promising. Adapting and implementing the project's core concept of bridging knowledge gaps and improving staff education can be applied to various health-care settings where sensory modulation interventions are appropriate. It may be possible to positively influence mental healthcare delivery beyond the current context by sharing the project's findings and lessons learned.

Health-care organizations should prioritize staff education and training on using sensory modulation rooms in conjunction with tools like the BVC. In addition to improving patient care, this can improve staff confidence and make the environment safer and more therapeutic. QI projects in this field should explore more extensive and diverse samples, incorporate control groups, and investigate how sensory modulation rooms impact patient behavior.

To address the limitations observed in this initial project , more comprehensive and extended research is the next step. In addition, it is crucial to refine and expand the training and education program to reach all staff members. This will address their concerns about tool usability and frequency of use. A collaborative effort with other health-care institutions could also promote the development of best practices and standardized approaches for integrating sensory modulation interventions into psychiatric treatment. Despite its limitations, this project provides a valuable foundation for improving patient care through education, as well as underscoring the potential benefits of sensory modulation rooms in psychiatric settings. As a result of the work, improved patient outcomes and practices in mental health care should be broadly applied throughout the industry.

Funding

There was no external funding for this project; it was completed solely as a requirement for an academic program.

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Appendix A

BVC Checklist tool

Scoring Interpretation

Score	Explanation/ Recommendation
0	The likelihood of violence is low
1-2	The probability of a patient having a violent episode is moderate. Precautionary measures must be put in place.
>2	The likelihood of a patient having a violent episode is very high. Precautionary measures must be put in place in addition to a plan of care needed to control the potential risk of violence.

Partridge & Affleck, 2018

Scoring Behaviors

Behavior	Day	Evening	Night
Confused			
Irritable			
Boisterous			
Verbal Threatening			
Physically Threatening			
Attacking objects			
Total score			

Appendix B Permission to use the BVC Tool

Dear Tina, thanks for the interest in the BVC and of course you have my permission to use the tools as described (research purpose). I believe you have already visited www.riskassessment.no (for free e-learning etc)? Please also visit the website of the Dutch IT company who holds the copyrights for all electronic use of the BVC (and hence the people you need to contact if you at any point want to implement the BVC permanently in to your medical record system); www.frenzs.org. Just as important as assessing for risk, is monitoring and evaluating actual incidents. In my research (and much other BVC research as well) I have used the Staff Observation Aggression Scale – Revised (SOAS-R). Just like BVC an easy-to-use form with the purpose of monitoring violent incidents, in use worldwide and the preferred tool in e.g. Scandinavia. You can read more about the SOAS-R at the Frenzs website. I am also glad to let you know that we are an international consortium/research group recently published a scoping review on the use of BVC around the world; see website for link to the open access publication. Please let me know if you have further questions, need more info regarding the use of BVC etc, I am more than happy to help.

Best wishes

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Appendix C- Brøset Violence Checklist Protocol

1. Introduction and Purpose: It is essential to explain the purpose of the Brøset Violence Checklist to staff members and ensure that staff understand and understand its significance in preventing violent incidents.

2. Staff Training: All staff should receive comprehensive training on utilizing the Brøset Violence Checklist. Each item should be explained in detail, along with each component's scoring system and importance.

3. Checklist Components: The six observable behavioral indicators that make up the Brøset Violence Checklist are as follows:

1. Verbal threats
2. Verbal aggression
3. Physical aggression against objects
4. Physical aggression against people
5. Restlessness
6. Confusion

4. Scoring: Scores ranging from 0 to 2 are assigned to each indicator of a patient's behavior in the past 24 hours.

- 0: No evidence of the behavior
- 1: Behavior is present and evident
- 2: Intense or continuous behavior

5. Frequency:

Calculate the overall score for each patient by adding up the scores from the six indicators. The total score can range from 0 to 12.

6. Risk Categories: Assess the patient's risk level by calculating their total score.

Low Risk: 0-1 points

Moderate Risk: 2-4 points

High Risk: 5-6 points

Very high Risk: 7-12 points

7. Interventions: Determine the patient's level of Risk and tailor interventions accordingly:

- Low Risk:

Maintain routine care and monitor for any alterations.

- Moderate Risk:

Observe more closely. Ensure a calm environment. Use de-escalation techniques if necessary.

- High Risk:

Make more observations. Consider consulting with a mental health professional. Take steps to de-escalate the situation. Access to weapons should be restricted.

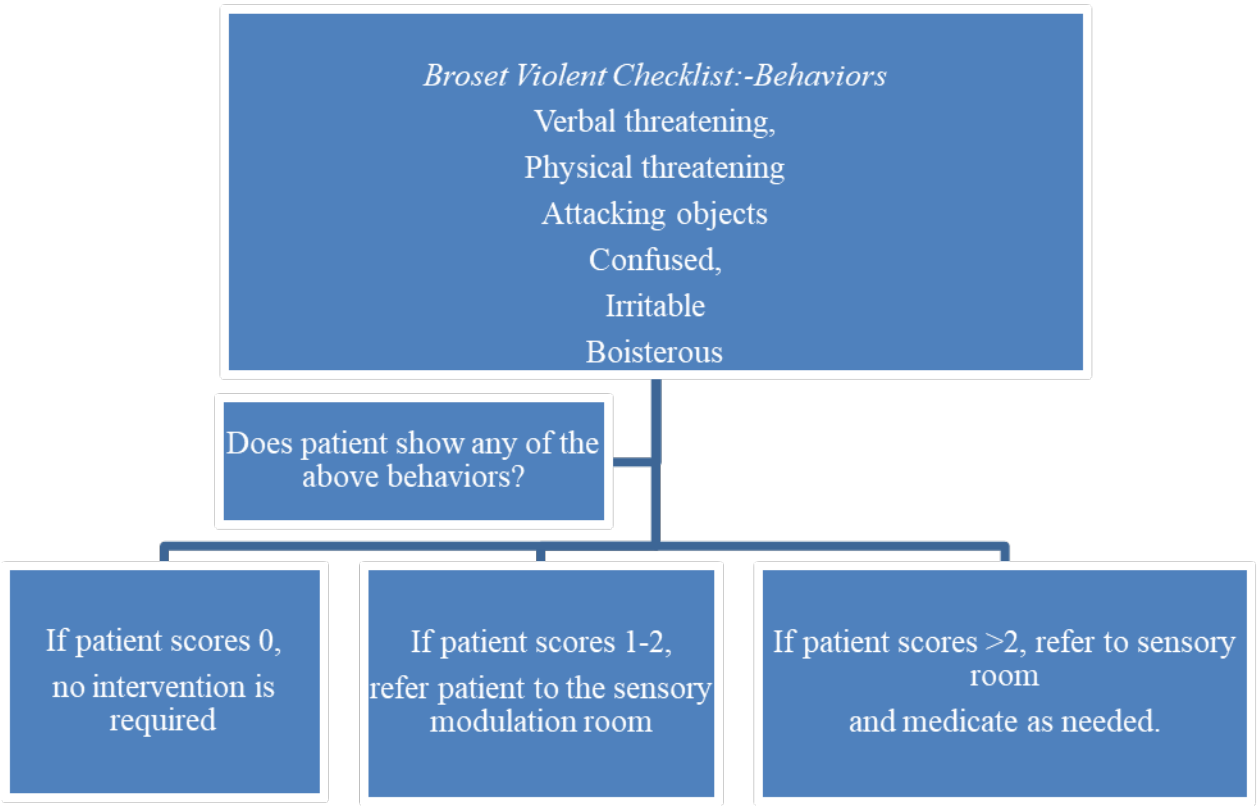
- Very High Risk:

Stay vigilant and seek mental health guidance. De-escalate the situation. Restrictive measures should only be used as a last resort.

8. Documentation: Record the patient's Brøset Violence Checklist score, risk level, interventions implemented, and outcomes in the patient's medical record. Using these records, we can track a patient's risk assessment and the effectiveness of interventions over time.

9. Ongoing Monitoring: Maintain a regular assessment of the patient's Risk using the Brøset Violence Checklist. Changes in behavior and level of Risk may require adjustments to interventions.

10. Review and Improvement: Regularly evaluate the effectiveness of the Brøset Violence Checklist protocol. To update the protocol, take staff feedback and incidents into account.



Appendix D

Pre-assessment survey

Qualtrics survey link:

https://unh.az1.qualtrics.com/jfe/form/SVtina_d9UU5No1hCrT9FY

Survey: Assessing Knowledge of Using the Broset Behavioral Observation Scale

1. What is your current role/title?

RN

Mental Health Counselors

2. Years of experience in psychiatric nursing:

1-5 years

5-10years

Greater than 10 years

3. How familiar are you with the Broset Behavioral Violent Checklist Tool?

Not familiar at all

Slightly familiar

Moderately familiar

Very familiar

Extremely familiar

Knowledge Assessment: Please indicate whether you agree or disagree with the following statements about the Broset Behavioral Observation Scale

4.The Broset scale is used to measure a patient's physical health.

Agree

Somewhat agree.

Disagree

Strongly disagree.

5.The BVC assesses patients' behavioral symptoms related to mental health.

Agree

Somewhat agree.

Disagree

Strongly disagree.

6.The scale is often used to monitor agitation and irritability in patients.

Agree

Somewhat agree.

Disagree

Strongly disagree.

7. The BVC measures cognitive functioning in patients.

Agree

Somewhat agree.

Disagree

Strongly disagree.

8.The scale helps healthcare providers track social withdrawal and inactivity.

Agree

Somewhat agree.

Disagree

Strongly disagree.

9. The Broset scale includes a range of behavioral categories for assessment.

Agree

Somewhat agree.

Disagree

Strongly disagree.

10. Higher scores on the Broset scale indicate lower levels of observed symptoms.

Agree

Somewhat agree.

Disagree

Strongly disagree.

11.The BVC tool is commonly used to assess physical pain in patients

Agree

Somewhat agree.

Disagree

Strongly disagree.

12. You find the BVC tool effective in reducing or preventing aggression and assault?

Agree

Somewhat agree.

Disagree

Strongly disagree.

13.The education prepared you to refer a patient to the sensory modulation room?

Agree

Somewhat agree.

Disagree

Strongly disagree.

14. You feel confident to refer a patient to the sensory room?

Agree

Somewhat agree.

Disagree

Strongly disagree.

15. You find the BVC tool effective in reducing or preventing aggression and assault?

Agree

Somewhat agree.

Disagree

Strongly disagree.

16. How often do you use the Broset Violent Checklist tool before referring a patient to the sensory room?

Once a week

Twice a week

Three times

17. How often do you refer patients to the sensory modulation room?

Always

Occasionally

Rarely

Never

Scenario-Based Questions: Read the following scenario and answer the question that follows.

Scenario: You are working with a patient who has been displaying increased agitation and irritability. The patient has a history of bipolar disorder and is currently in an escalated state.

15. What would be an appropriate situation to use the Broset scale for this patient? (Select one)

· During a routine physical examination

· When the patient is calm and relaxed

· During moments of heightened agitation and irritability

· Only when requested by the patient

16. How would you interpret an increased score on the Broset scale for this patient?

· The patient's symptoms are improving.

· The patient's symptoms are worsening.

The patient's symptoms remain unchanged.

17. The educational materials and guidelines provided via HealthStream prepared you well to use the BVC tool and refer patients to the sensory modulation room?

Agree

Somewhat agree.

Disagree

Strongly disagree.

You are very confident in using the BVC tool.

Agree

Somewhat agree.

Disagree

Strongly disagree.

Open-Ended Question: Please provide a brief description of the main purpose and benefits of using the Broset Behavioral Observation Scale in clinical practice.

Thank you for your participation! Your feedback will help us identify areas for improvement and enhance safety measures in the psychiatry unit.

Appendix E.

Post-assessment survey

Survey: Assessing Knowledge of Using the Broset Violent Checklist Tool

What is your current role/title?

RN

Mental Health Counselors

2. Years of experience in psychiatric nursing:

1-5 years

5-10years

Greater than 10 years

3. How familiar are you with the Broset Behavioral Observation Scale? (Scale: Not Familiar

Not familiar at all

Slightly familiar

Moderately familiar

Very familiar

Extremely familiar

Knowledge Assessment: Please indicate whether you agree or disagree with the following statements about the Broset Behavioral Observation Scale

4.The Broset scale is used to measure a patient's physical health.

Agree

Somewhat agree.

Disagree

Strongly disagree.

5.The BVC assesses patients' behavioral symptoms related to mental health.

Agree

Somewhat agree.

Disagree

Strongly disagree.

6.The scale is often used to monitor agitation and irritability in patients.

Agree

Somewhat agree.

Disagree

Strongly disagree.

7. The BVC measures cognitive functioning in patients.

Agree

Somewhat agree.

Disagree

Strongly disagree.

8.The scale helps healthcare providers track social withdrawal and inactivity.

Agree

Somewhat agree.

Disagree

Strongly disagree.

9. The Broset scale includes a range of behavioral categories for assessment.

Agree

Somewhat agree.

Disagree

Strongly disagree.

10. Higher scores on the Broset scale indicate lower levels of observed symptoms.

Agree

Somewhat agree.

Disagree

Strongly disagree.

11.The BVC tool is commonly used to assess physical pain in patients

Agree

Somewhat agree.

Disagree

Strongly disagree.

12. You find the BVC tool effective in reducing or preventing aggression and assault?

Agree

Somewhat agree.

Disagree

Strongly disagree.

13.The education prepared you to refer a patient to the sensory modulation room?

Agree

Somewhat agree.

Disagree

Strongly disagree.

14. You feel confident to refer a patient to the sensory room?

Agree

Somewhat agree.

Disagree

Strongly disagree.

15. You find the BVC tool effective in reducing or preventing aggression and assault?

Agree

Somewhat agree.

Disagree

Strongly disagree.

16. How often do you use the Broset Violent Checklist tool before referring a patient to the sensory room?

Once a week

Twice a week

Three times

17. How often do you refer patients to the sensory modulation room?

Always

Occasionally

Rarely

Never

Scenario-Based Questions: Read the following scenario and answer the question that follows.

Scenario: You are working with a patient who has been displaying increased agitation and irritability. The patient has a history of bipolar disorder and is currently in an escalated state.

15. What would be an appropriate situation to use the Broset scale for this patient? (Select one)

· During a routine physical examination

· When the patient is calm and relaxed

· During moments of heightened agitation and irritability

· Only when requested by the patient

16. How would you interpret an increased score on the Broset scale for this patient?

· The patient's symptoms are improving.

· The patient's symptoms are worsening.

The patient's symptoms remain unchanged.

17. The educational materials and guidelines provided via HealthStream prepared you well to use the BVC tool and refer patients to the sensory modulation room?

Agree

Somewhat agree.

Disagree

Strongly disagree.

You are very confident in using the BVC tool.

Agree

Somewhat agree.

Disagree

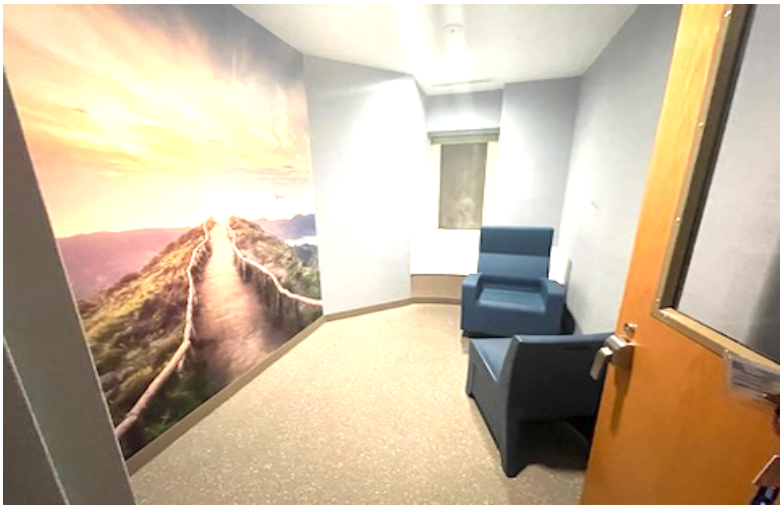
Strongly disagree.

Open-Ended Question: Please provide a brief description of the main purpose and benefits of using the Broset Behavioral Observation Scale in clinical practice.

Thank you for your participation! Your feedback will help us identify areas for improvement and enhance safety measures in the psychiatry unit.

Appendix F -*CHA Sensory Rooms*

Cahill 4 Unfurnished



7 West

Sommerville 2N – furnished.

Appendix G

University of New Hampshire

105 Main St, Durham, NH 03824

Email: Ernestina.Danso@unh.edu

Date:8/31/2023

Consent Form for Participation in Survey on **Broset Violent Checklist Tool**

Title of Quality Improvement Project:

Addressing Workplace Violence Towards Nurses to Promote a Culture of Safety in an Inpatient Psychiatric Facility

Project Lead: Ernestina Danso

Contact Information: 603 930 6299

Introduction: You are invited to participate in a quality improvement survey on Workplace Violence towards Psychiatric Nurses

The purpose of this project is to gather valuable feedback and experiences from individuals regarding their comprehension of the Broset Violent Checklist Tool and its application in directing patients to the sensory room in an inpatient psychiatric unit. Your participation in this survey will play a vital role in advancing knowledge in this crucial area and could potentially aid in mitigating incidents of aggression and violence toward psychiatric staff at the Cambridge Health Alliance. Please review the details carefully and ask any questions before agreeing to participate.

The Aim of the QI project:

The main objective of this quality improvement project is to identify the existing challenges impeding staff from effectively utilizing the BVC tool to refer patients to the sensory modulation

room. Additionally, the project aims to impart knowledge to bridge the knowledge gap between the BVC tool and sensory modulation rooms. The goal is to support inpatient psychiatric units by implementing an evidence-based protocol to refer patients to the sensory modulation room, thereby supporting inpatient psychiatric units and curbing aggression towards nurses. The data collected from the project can help identify areas for improvement in assessing patients and aid staff in promptly identifying patient triggers.

Procedures:

To participate in this survey, you must complete an online questionnaire with multiple-choice and open-ended questions. The questions will center on the Broset Violence checklist tool and the use of the sensory modulation room.

Risks and Benefits:

This survey poses minimal risk, although specific inquiries may entail introspection. Your replies will remain confidential and anonymous. By participating, you contribute to enhancing the well-being of psychiatric nurses by mitigating aggression and violence.

Confidentiality:

Your privacy and confidentiality are taken very seriously. Data collected during this survey will be kept confidential and stored securely. Your responses will be anonymous and presented in an aggregate form, ensuring no individual can be identified.

Participation and Withdrawal:

Participation in the survey is entirely voluntary, and you may choose to withdraw at any time without any negative repercussions. If you decide to withdraw, none of your complete or partial

responses will be used.

Contact Information:

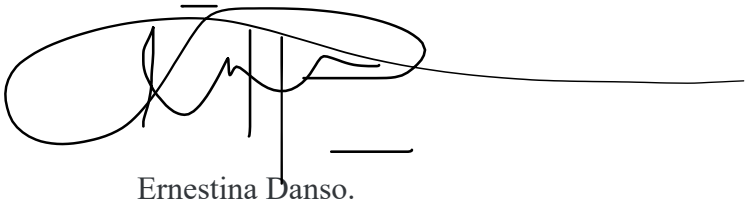
Project Lead: Ernestina Danso

Contact Information: 609 930 6299

Consent:

By clicking the "Agree" button below, you are voluntarily agreeing to participate in the survey. Your participation in this QI project is greatly appreciated, and completing the survey will be considered informed consent.

Sincerely,



Ernestina Danso.

Appendix H

Qualtrics survey link:

https://unh.az1.qualtrics.com/jfe/form/SV_eQKVgaCNFr2JlEG

Confidence in Coping with Patient Aggression" tool

Item	**Pre -survey**	**Post-survey**
How comfortable are you working with an aggressive patient. Extremely comfortable Somewhat comfortable Neither comfortable or Uncomfortable Somewhat comfortable Extremely comfortable		
How good is your present level of training for handling psychological aggression. Extremely bad Somewhat bad Neither good or bad Somewhat good Extremely good		
You can intervene physically with an aggressive patient. Agree Somewhat agree. Disagree		

Strongly disagree.		
You feel self-assured in the presence of an aggressive patient? Agree Somewhat agree. Disagree Strongly disagree.		
You feel confident in your ability to provide psychological intervention for an aggressive patient. Agree Somewhat agree. Disagree Strongly disagree.		
Your current level of training in handling physical aggression is satisfactory. Agree Somewhat agree. Disagree Strongly disagree.		
You feel safe around an aggressive patient? Agree Somewhat agree. Disagree Strongly disagree.		

You feel confident in using the techniques you know to address aggression. Agree Somewhat agree. Disagree Strongly disagree.		
You have the ability to address the requirements of an aggressive patient. Agree Somewhat agree. Disagree Strongly disagree. You have the capability to safeguard yourself from a patient who behaves aggressively. Agree Somewhat agree. Disagree Strongly disagree.		

Appendix I

Permission to use the Confidence in Coping with Patient Aggression" tool.

Your confirmation email will contain your order number for future reference.

License Number

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Printable Details

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no

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Original language of publication

With incidental promotional use

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Lifetime unit quantity of new product

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About Your Work

Title

Violence Towards Nurses in a Psychiatric Inpatient Unit

Institution name

University of New Hampshire

Expected presentation date.

Dec 2023

Appendix J

Application for Nursing Clinical Project Review

Name and contact information of student: Ernestina Danso

Program Track: DNP

Title of the Project: Addressing Workplace Violence Towards Nurses in an Inpatient Psychiatric Facility

Consider these questions:

1. Will the activities of this project occur within the standard of care? **YES.**

   If NO, then proceed to IRB review.

2. Is there a risk? If YES, this project requires QI review or IRB review by the nursing department committee. **NO.**

3. Is this project primarily intended to generate generalizable knowledge? If YES, proceed to IRB review. **NO.**

4. Does this project involve vulnerable populations? **NO**