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Reducing Violence in the Workplace: A Quality Improvement Project

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Abstract

BACKGROUND: Violence in the United States has significant impacts on the healthcare system. On average, there are about 7.8 per 1,000 workers yearly that experience violent injuries (Grossman & Choucair, 2019). In 2016, it was estimated that approximately \$429 million was added to treat and prevent injuries to healthcare workers (Grossman & Choucair, 2019). By implementing the Broset Violence Checklist (BVC) as a screening tool for early identification of risk for violence, there is a possibility for a reduction in the number of violent occurrences in the workplace.

LOCAL PROBLEM: Within the given microsystem, there is a lack of education regarding violent behaviors resulting in an increase in violent occurrences in the workplace. The specific aim of the project was to decrease the number of violent occurrences in the microsystem by 50%.

METHODS: Utilizing the Plan-Do-Study-Act model, a pre-/post-test survey design with accompanying educational materials was provided to healthcare staff in the microsystem. Responses for both pre-test and post-test surveys were analyzed to examine not only the effectiveness of the Broset Violence Checklist but staff perception of safety in the microsystem.

INTERVENTIONS: An educational component was presented asynchronously on workplace violence and the use of the BVC for early identification of risk.

RESULTS: Data analysis indicates an increase in staff perception of safety, and an overall decrease in physical and verbal assaults in the microsystem. Prior to the implementation of the BVC, 83% of staff reported that if they encountered a violent situation, they would have the necessary tools and education to handle the situation properly and effectively. Following the intervention, this number increased to 94%. Physical assaults prior to implementation were 83%, which decreased to 66% following the intervention. Verbal assaults prior to implementation were 100%, which

decreased to 88% following the intervention. Overall, the implementation of the BVC was successful in reducing violence in the workplace.

CONCLUSIONS: The Broset Violence Checklist was an effective tool in reducing violence in the workplace. Staff members reported a decrease in physical and verbal assaults after the implementation. Also reported, was an increase in perception of safety in the microsystem.

Keywords: Broset violence checklist, workplace violence, mental health, violence, nursing staff, quality improvement

Introduction

Violence in the United States has significant impacts on the healthcare system. On average, there are about 7.8 per 1,000 workers yearly that experience violent injuries (Grossman & Choucair, 2019). In 2016, it was estimated that approximately \$429 million was added to treat and prevent injuries to healthcare workers (Grossman & Choucair, 2019). Within the given microsystem, there is a lack of education regarding violent behaviors resulting in an increase in violent occurrences in the workplace. By implementing the Broset Violence Checklist as a screening tool for early identification of risk for violence, there is a possibility for a reduction in the number of violent occurrences in the workplace.

Problem Description

A facility in the Northeastern section of the United States provides inpatient psychiatric services to patients ranging from eighteen years to sixty-five years old. The microsystem is a sixteen-bed unit where patients can be admitted on an involuntary emergency basis or voluntary admitted by self or guardian authority. During a patient's time in this behavioral health unit, it is expected that safety and stabilization of the patient with acute and persistent mental illness is achieved. This admission status determines the length of stay (LOS) which can range from 3-10 days. Typically, admissions are either 3-5 days or 7-10 days. This microsystem is a crisis stabilization unit, where patients are cared for until they are stabilized and readied for discharge. An important component of this microsystem is to provide safety to patients and staff members.

With violence occurring more frequently in healthcare settings, especially in behavioral health settings, the safety of the patients and staff members is imperative. Recently, there were two reported assaults in the hospital's emergency psychiatric unit (EPU). Previously, there were two reported assaults but in the last month, there were six assaults reported with 4 in EPU and 2

on the microsystem. With an upward trend of violent occurrences, it is important to assess why these are occurring, are there any triggers, how are staff handling the situations, are debriefs happening afterwards, and what is already being done to prevent these occurrences? Violent behavior could be a reaction due to being nonadherent with medications, staff shortages, and an overstimulating environment. A possible solution to reduce violence in the microsystem could be implementing the Broset Violence Checklist, which will lead to early identification of those at risk which can reduce violent incidences and possibly increase safety for patients and staff members.

Available Knowledge

Systematic Review on Workplace Violence

Healthcare workers, especially nurses are at a greater risk of experiencing workplace violence. Somani et. al, performed a systematic review to evaluate different interventions that aim to decrease the magnitude/prevalence of workplace violence against nurses (2021). This review consisted of twenty-six studies. To be included in this review, the studies had to test the impact/effectiveness of interventions to prevent violence in the workplace. These studies had to use Randomized controlled trials, Quasi-Experimental, and Pre and Post designs. All studies that were reviewed, were written in English with the interventions conducted within the timeframe of 2000 and 2020 (Somani et. al, 2021). Three interventions were used in hopes of decreasing violence in the workplace against nurses, including stand-alone trainings to educate nurses, structured educated programs, and multicomponent interventions.

Out of the twenty-six studies, ten implemented the stand-alone interventions such as awareness training sessions and/or workshops (Somani et. al, 2021). Out of the ten stand-alone studies, five of them focused on verbal and physical abuse where the primary perpetrators are

patients and their relatives. One study focused on sexual abuse with males and physicians. The remainder of the studies focused on workplace aggression and bullying (Somani et. al, 2021). As a result of the stand-alone training sessions, nurses reported that they felt more comfortable and confident in their ability to deal with and assess violent situations (Somani et. al, 2021). The next eleven studies evaluated the effectiveness of structured education programs. This type of program continues for several weeks allowing the nurses to obtain more information. Part of this program implemented a cognitive rehearsal program, allowing nurses to practice and analyze effective responses to common violent behaviors (Somani et. al, 2021). This resulted in nurses being able to strengthen their coping skills and develop prevention skills that can be utilized. The last intervention that was reviewed was the multicomponent intervention. Different strategies were noted such as the inclusion of environmental measures (panic buttons and security locks) and policy revisions to address workplace violence prevention and safety. Lastly, behavioral strategies including staff training for violence management was important. With all three interventions, there was a reduction in workplace violence rates (Somani et. al, 2021).

Results showed that the most effective intervention in reducing violent occurrences in the workplace was the multicomponent interventions. This review identified the different components that were needed to make the most impact in reducing violence. These included, the involvement of key stakeholders, management support, and time commitment of nurses to learn, practice, and implement different strategies (Somani et. al, 2021). The evidence from this review allows us to understand what this microsystem needs to decrease the violence rates. This would include involving all necessary staff members such as providers, nurses, and management team. Trainings that are already required, could be reviewed and necessary changes would be made, or new trainings would be created.

Integrative Literature Review on Violence Assessment

The clinical question used for this review of the literature was *in an acute care mental health setting, what violence risk-assessment screening tool for patient violence would be best to identify potential violence within the first seventy-two hours of admission?* (Anderson & Jenson, 2018, p. 114). The eight tools that were used consisted of a) *Dynamic Appraisal of Situational Aggression (DASA)* b) *Psychopathy Checklist: Screening Version*, c) *Violence Risk Screening-10*, d) *Short-term Assessment of Risk and Treatability*, e) *Violence Risk Appraisal Guide*, f) *Historical Clinical Risk Management-20*, g) *McNiel-Binder Violence Screening Checklist*, h) *Broset Violence Checklist (BVC)* (Anderson & Jenson, 2018). In conclusion, the researchers determined that only two screening tools, *Violence Risk Screening-10* and *Broset Violence Checklist* were the best suited for use in acute care mental health settings (Anderson & Jenson, 2018). Using one of these screening tools on the mental health inpatient unit, will allow providers and nursing staff to identify patients that are at an increased risk for violence, allowing for them to prepare and implement quick interventions to not only prevent violent episodes from occurring, but also preventing injuries to staff.

By implementing violence screening tools, the goal is to better identify patients who are a high risk of violent behavior. This could reduce violent occurrences due to early detection and intervention for violent behavior (Anderson & Jenson, 2018). When evaluating a patient to determine if they are at risk for violence there are different components that are looked at. First, internal factors such as demographics, psychopathy, and personality characteristics. Next are external factors including privacy, unit design, and staff-patient relations. Lastly, static factors are reviewed to determine if the patient has had a history of violence (Anderson & Jenson, 2018).

Systematic Review and Meta Analysis for Predictive Accuracy of Instruments

Ramesh et. al, conducted a systematic review and meta-analysis to identify studies that examined the predictive accuracy of the violence risk-assessment tools in psychiatric inpatient settings (2018). For this review, nine of the most used violence assessment tools were identified. A systematic search was then conducted to determine what studies measured the predictive validity in psychiatric inpatient settings to determine violent behavior (Ramesh et. al, 2018). These nine risk assessment tools were divided into two categories. One category was for those that were designed for the prediction of violence over a twenty-four-hour period following an assessment. The other category was those designed for the prediction of violence over a longer period (Ramesh et. al, 2018). For group one the average period was twenty-four hours, while the other group on average was six hundred and ninety-two days. The mean rate of violence over the designated follow-up times for the twenty-four-hour group was 23.8% and was 32.6% for the longer-term tools (Ramesh et. al, 2018). Total, seventy-eight samples involving 7,705 patients from fourteen different countries were used (Ramesh et. al, 2018). Results showed that the assessments designed to predict accuracy of violence performed better at predicting violence more than the one designed for longer-term follow up periods (Ramesh et. al, 2018). Findings indicated that the BVC and DASA provided the most accuracy when determining if a patient was at risk for violent behavior or not. Both assessment tools are recommended to be implemented for short-term management of violence and aggression in inpatient psychiatric settings (Ramesh et. al, 2018). Having the twenty-four-hour window for prediction, allows for prevention and management strategies to be implemented when they are most needed, in the first twenty-four hours (Ramesh et. al, 2018).

Relationship between the BVC and incidence of Violence

Sarver et. al, reviewed a study that was conducted to determine the relationship between Broset Violence Checklist scores and incidences of violent behaviors within twenty-four hours of admission (2019). This was done to compare scores among those patients that required high-level nursing interventions for violence, as well as evaluate the impact of scores on length of stay and thirty-day readmission rates (Sarver et. al, 2019). The purpose of the Broset Violence Checklist is to predict violent behavior within a twenty-four-hour period based on presence or absence of the patients' behaviors and characteristics (Sarver et. al, 2019). This checklist evaluates confusion, irritability, boisterousness, verbal threats, physical threats, and attacks (Sarver et. al, 2019). If the patient displays two or more of the behaviors, they are more likely to become violent within twenty-four hours of their admission (Sarver et. al, 2019).

This setting was a 20-bed inpatient psychiatric unit at a Midwest hospital over a three-month period. The data was collected for the first three days of admission with the total sample size being 222 participants (Sarver et. al, 2019). Twenty nursing staff were trained on how to properly use the Broset Violence Checklist. This training included a video demonstration of an interaction with an agitated patient and a nurse. The next scenario included the viewer evaluating the behavior using the terms that were provided on the checklist and then reviewing the nurses' responses with the answers provided (Sarver et. al, 2019). After trainings were completed, nurses were responsible for obtaining scores of each patient on admission and every day until the patient was discharged or transferred (Sarver et. al, 2019). Scores were then calculated and a score of zero indicated the risk of violence is small, a score of one and two indicated the risk of violence is moderate and preventative measures should be taken, and a score of three or more indicated high risk of violence and preventative measures should be taken as well as activating a

plan of how to handle an attack (Sarver et. al, 2019). This study concluded that the Broset Violence Checklist is an effective tool in determining the risk of violent behavior in psychiatric settings. Results also concluded that patients who scored higher on the Broset Violence Checklist, had a longer length of stay in the hospital (Sarver et. al, 2019). With the prevalence of violent behavior on psychiatric units, predicting when violence could potentially occur can help maximize the safety of patients and staff members (Sarver et. al, 2019)

Appraisal Synthesis and Implications for this Quality Improvement Project

All reviews that were analyzed landed at the top of the evidence pyramid, with all articles being level one evidence. This indicates that the evidence used was high quality, reliable, and there was enough evidence to support the aim. Collectively, all the evidence provided, have concluded that implementing a violence screening tool, has positive effects in reducing violent behaviors and staff injuries. Nursing interventions are used to deescalate behavior from least restrictive to restrictive progression to calm the patient, maintain the safety of the patient and staff members, and to reduce stimulation (Sarver et. al, 2019). The first step in reducing violence occurrences includes being able to recognize the signs of violence, understanding the causes of violent behavior and developing a person-centered approach to minimize escalation (Sarver et. al, 2019). The Broset Violence Checklist helps providers and nursing staff to recognize any signs that a patient might be at risk for becoming violent. Along with this checklist, studies showed evidence suggesting that education trainings for nursing staff and providers are also beneficial in reducing violent behaviors and giving nursing staff the necessary tools and information to prevent themselves from being injured.

Rationale

Throughout this project, the Plan-Do-Study-Act (PDSA) model was used. In the planning phase, nurses were surveyed asking if they feel safe at work, if they have encountered any violent behavior and if so, did they get injured, and if they were to encounter a situation like that, do they feel prepared with enough education and tools to handle it correctly. The *do* phase included education training to teach staff techniques used when they approach a violent situation. The checklist was finalized and added to the electronic health record where staff were instructed to document the assessment of behaviors. The *study* phase included educating the staff on what exactly the Broset Violence Checklist is and provided educational trainings on how to assess for different behaviors, as well as, teaching the interventions that can be implemented if the violence reduction protocol is initiated. Nurses were observed during violent interactions, their documentation on assessment was reviewed, and assessed the data on number of violent occurrences after implementation has been put into place. During the *act* phase, a post-intervention survey for staff was filled out and if numbers had not changed, a re-assessment was to be completed to determine what could be done differently for a more successful outcome.

Specific Aims

The purpose of the microsystem is to stabilize patients with behavioral disabilities. This unit is a crisis stabilization unit facilitating the return to baseline for patients in crisis with the help of their treatment team and medications. In the past couple of months, there has been an increase in violent behaviors, putting staff and other patients at risk for injury.

The global aim of this Quality Improvement (QI) project was to identify those at risk for violence, which may help reduce violent behavior, via the BVC. This assessment mimicked the Columbia Suicide Assessment and was performed in triage and upon admissions to all units. The

assessment populated a score of 0-6, and based on this score, *a risk for violence* banner appeared on the dashboard indicating the risk for violence is moderate or very high. With a score of one or more, the violence reduction protocol was initiated, and the interventions were implemented. The specific aim of this project was to note a decrease in violent occurrences by 50% by July 2022. The global aim of this project was to assess and manage patients who are identified as a risk for violent behavior. Currently, there is a workplace violence committee that meets monthly to discuss strategies, staff trainings, and any incidents that have occurred. There is also a yearly Agency for Healthcare Research and Quality (AHRQ) survey which assesses the nurses' perception on Patient Safety Culture and is an anonymous survey that asks healthcare providers and staff about the extent to which their organizational culture supports patient safety. This feedback is then used to identify gaps and implement changes to the processes based on themes and trends. Within six months of hire, during onboarding, new staff members are required to take Crisis Prevention Intervention (CPI). During this, staff safety is discussed at orientation with the behavioral health educator.

Methods

Context

The microsystem is a sixteen-bed inpatient behavioral health unit. During a patient's admission in this behavioral health unit, it is expected that safety and stabilization of the patient with acute and persistent mental illness is achieved. On the unit the target population age distribution is eighteen to sixty-five years old with an average length of stay being three to ten days.

Violence in the United States has significant impacts on the healthcare system. On average, there are about 7.8 per 1,000 workers yearly that experience violent injuries (Grossman

& Choucair, 2019). In 2016, it was estimated that approximately \$429 million was added to treat and prevent injuries to healthcare workers (Grossman & Choucair, 2019). There are many pros and cons for implementing the BVC. The concern for using the tool consists of the cost, how it can disrupt the system, and the person's perception. For example, one of the behaviors that is assessed during the screening process such as confusion, could mean one thing to one person, and something completely different for a different person. The macrosystem must purchase a copy of the Broset Violence Checklist tool annually. On the other hand, the benefits of using this tool are that it's quick, easy, and helps with communication among healthcare workers. It can be used to proactively screen for patient risk for violence, which has been shown to reduce violent behaviors. The clinical team is made up of members from this macrosystem as well as a collaborating macrosystem in Northern United States. Members of the QI team include their leadership team, manager, and director. The electronic medical record team consists of a clinical application analyst who determines if the BVC has value for the return on investment (ROI) by completing a cost-benefit analysis. The informatics nurse determines the utility and implementation for the nurse in the microsystem. Lastly, the electronic medical record release and testing manager puts this tool in a test environment to evaluate how it will work. The macrosystem includes the Clinical Nurse Leader (CNL) and director of the inpatient behavioral health unit, as well as CNLs from other microsystems including the emergency room and urgent care. When creating the policy, a description of the alignment and implementation across macrosystems was important.

Intervention

The health system macrosystem implemented appropriate and protective measures to ensure the safety of all staff members and patients. The pre-intervention phase included assessing

the nurses' knowledge through a survey and assessing the baseline data looking at violence. Following the pre-intervention phase an educational component was provided, consisting of training the staff on how to assess the six behaviors that are used to identify risk of violence. Staff were then trained on how to document these scores into the electronic health record. The Broset Violence Risk Assessment was intended to be performed to identify and provide safety interventions for patients at risk for violent behavior. Assessment starts at the time of admission or initial contact in the medical surgical inpatient, emergency department, or behavioral health unit settings. Violence risk may be re-assessed at identified intervals based on score and unit setting. The Broset Violence Checklist is a six-item checklist which assists in the prediction of imminent violent behavior within the first twenty-four hours. To identify whether the patient is appropriate for violence risk screening, they must be a patient over the age of 18 years and admitted to the microsystem. If patients are under the age of eighteen, the patient must have a primary presenting condition involving aggression/violence/assaultive behaviors. If the patient meets criteria and is appropriate for violence risk screening, the patient's nurse or paramedic proceeded with an assessment for the risk of violence using the BVC. The checklist assesses for confusion, irritability, boisterous behavior, physical threatening, verbally threatening, and attacking objects. Patients can score anywhere from a zero to six. A score of zero indicates that the risk for violence is minimal and no further action needs to take place. A score of one or more indicates the risk for violence is moderate and preventative measures were to be implemented including the use of the Violence Reduction Protocol.

While assessing a patient for risk of violence there are six different behaviors that are included in the Broset Violence Checklist. First is confusion, described as appearing obviously confused and disoriented and may be unaware of time, place or person. Irritability is defined as

easily annoyed or angered and unable to tolerate the presence of others. Boisterous is a behavior that is overly loud or noisy. An example of this could be slamming doors, shouts while speaking, etc. If a patient is physically threatening, where there is a definite intent to physically threaten another person. An example of this would be taking an aggressive stance; grabbing of another person's clothing; raising of arm or leg; making a fist or modeling a head-butt directed at another person. Verbally threatening, defined as a verbal outburst which is more than just a raised voice; and where there is a definite intent to intimidate or threaten another person. For example, verbal attacks, abuse, name calling, verbally neutral comments uttered in a snarling aggressive manner. Lastly, attacking objects is defined as an attack directed at an object and not an individual. For example, the indiscriminate throwing of an object; banging or smashing windows; kicking; banging or head-butting an object; or the smashing of furniture. Moog et. al performed a study to determine the validity and reliability of the Broset Violence Checklist (2019). Results concluded that in two or more patient behaviors that were assessed to be present, the BVC was 63% accurate in predicting that the patient would exhibit violence within the next twenty-four hours and 92% accurate in predicting that violence will not be exhibited by the patient in the next twenty-four hours (Moog et. al, 2019).

When the Violence Reduction Protocol is initiated, the attending provider is notified immediately, and the interventions are initiated. The interventions include ensuring environmental safety, including removing or securing any non-medically necessary equipment from the patient's room including mobility equipment, sharps, shears, and any potentially weaponizable objects. When approaching the patient, there should always be two or more staff members while ensuring you position yourself two to three feet away from the patient. During handoff in care, making sure there is clear communication including the patient's most recent

BVC score and interventions that helped to de-escalate the patient. If the patient is not responsive to non-pharmacological interventions, the patient should be offered any as needed medications and the provider should be notified immediately. If the staff members feel that there is imminent risk of harm to others, a code grey should be called, and security will come assist. When accessing the patient's chart, it is important to ensure that the registered nurse has added a safety flag indicating that the patient is at moderate to high risk for violence. These flags were to be reviewed annually for continued appropriateness. On inpatient units, specific calming measures selected by the patient should be included in the care plan and honored by staff members. A daily treatment team meeting, including the patient should be conducted to discuss the patient's behavior and how the team is addressing the patient's needs. If the patient refuses to participate in the meeting, the treatment team should approach the patient once the meetings are completed.

For Behavioral Health settings, repeat assessments were to be completed every shift by the registered nurse assigned to that patient. This assessed for any improvement or deterioration, regardless of what the patient scores. If the patient scores a one or above, they were entered into the Violence Reduction Protocol. Once entered into the protocol, the patient remained on the protocol for forty-eight hours. The patient was not removed from the protocol until the patient's current behavioral presentation is discussed and there was a plan in place to address the patient's needs outside of these interventions. If necessary, the patient may be re-entered into the Violence Reduction Protocol after discontinuation. This would be appropriate after the completion of a new BVC with a score of one or more, as per protocol.

Study of the Intervention

The most effective way to assess the impact of this intervention included the assessment of baseline data on assaults before and after implementation. This included how many assaults

happened before the interventions were initiated. Staff perception of the new protocol was assessed by having a staff meeting to discuss it, and the completion of a survey that evaluates their knowledge on the protocol. Both these metrics were performed by the project lead and CNL, with the survey being completed pre-intervention and post-intervention, and the data on violence reviewed weekly and monthly.

Measures

In addition to assessing the baseline data on assaults on the unit, a survey was distributed to nurses pre- and post- intervention to assess current knowledge on violence and safety in the workplace. Both the pre- and post- intervention survey included questions to assess current knowledge on violence and safety in the workplace. To determine overall risk for workplace violence, the pre- intervention survey included several demographic data questions for gender, age, and race. Both the perceived safety at work and perceived adequacy of knowledge and tools for proper and safe handling of violence was assessed with Likert style items with a 1-5 scale indicating strongly disagree to strongly agree. The incidence of assaults at work were measured with a categorical response for yes/no. Participants were asked to note the type of violence that they had encountered with a categorical response of yes/no. This survey was distributed before and after the intervention was implemented to assess if the intervention had been successful, along with assessing the nurses' knowledge after educational trainings.

Analysis

The demographic portion of the survey will be analyzed descriptively noting frequency and percentage. The pre- and post- intervention responses will be compared. The nurses' report of involvement in a violent situation as well as the type of violence encountered will be analyzed descriptively noting frequency and percentage. Likert style items were also analyzed

descriptively noting frequency and percentage. The comparison of data from the pre-interventions and post-interventions will determine the effectiveness of the implementation on decreasing violence in the workplace. A decrease in the nurses' report of violent behavior in the microsystem may indicate that the BVC was an effective screening tool to identify those at risk for early intervention.

Ethical Considerations

One of the biggest ethical considerations is the overall stigma around mental illness. It is imperative for members of the healthcare team to avoid labeling patients with violence. This prevents the label *violence* from following the patient once they are discharged. For an example, if a patient is discharged, and they need to go to their primary care office or an urgent care, the healthcare team there can't see anything about violence. Patients that are at a high risk for violence should be treated the same and receive the same level of care as any other patient. For confidentiality, the data is anonymized, and no identifying information will be collected. The University of New Hampshire Department of Nursing Quality Council reviewed this proposal to verify that it is QI which is exempt from the Institutional Review Board review process.

Results

Results

Initial steps of the intervention

A pre-test and post/test survey, consisting of four questions, was developed by the project leader to gather data on violence in the microsystem. Participants included nursing staff and mental health technicians that worked on the unit. Staff members were asked to answer questions on if they felt safe at work, if they encountered a violent situation and if so what type, along with if they felt they had the proper education to handle the situation. Before implementing of the

policy, staff was educated on the Broset Violence Checklist, the purpose of it, and how to use it. Total, there were eighteen staff members that completed the survey within this QI project.

Process measures and outcomes

Of the 18 staff, 77% identified as female while 22% identified as male. Most participants, 94% identified as White/Caucasian, while 6% identified as other. No participants were 18-20 years of age, 77% of participants were 21-30 years of age, 16% of participants were 31-40 years of age, there were no participants 41-50 years of age, and there was 1 participant who was 51-60 years of age. Thus, the majority of participants were under the age of 40. 94% of the staff reported being involved in a violent situation with high percentages of reported physical assaults (66%), verbal assaults (88%), object aggression (94%), verbal threats (94%), and physical treats (94%), (See Table 1).

Table 1

General Characteristics

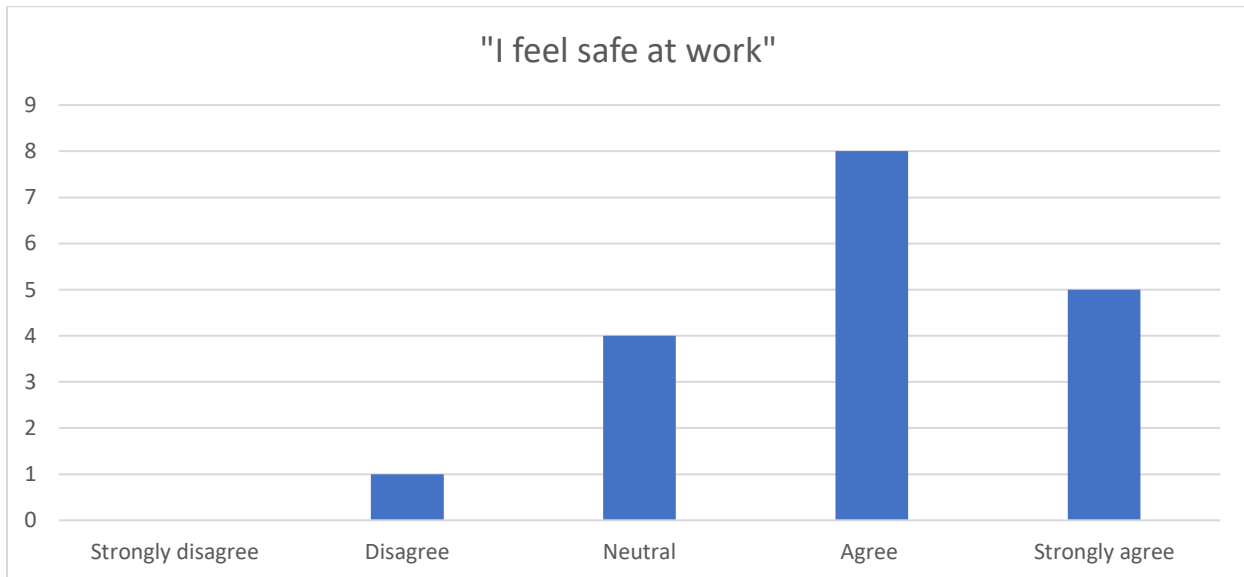
<u>General Characteristics</u>	<u>Total Participants (N=18) n (%)</u>
Gender	
Male	4 (22)
Female	14 (77)
Age	
18-20	0 (0)
21-30	14 (77)
31-40	3 (16)
41-50	0 (0)
51-60	1 (6)
Race	
White/Caucasian	17 (94)
Other	1 (6)

Involved in Violent Situation	17 (94)
Yes	1 (6)
No	
Type of Violent Situation	
Physical Assault	12 (66)
Verbal Assault	16 (88)
Object Aggression	17 (94)
Verbal Threats	17 (94)
Physical Threats	14 (77)
Other	1 (0.5)

Prior to the intervention, of the 18 participants, 5 participants stated that they strongly agreed to feeling safe at work (27%). 8 participants stated they agreed to feeling safe at work (44%). 4 participants were neutral about whether they felt safe while at work (22%). There was only one participant that stated they did not feel safe at work (0.5%), (See Figure 1).

Figure 1

Participants Perceptions of Safety at Work, Pre-Intervention



Prior to the intervention, all 18 participants stated they had been involved in a violent situation (See Figure 2). 15 participants were involved in a physical assault (83%). All 18

participants were involved in verbal assault (100%). 17 participants were involved in object aggression (94%). All 18 participants were involved in verbal threats. (100%). 15 participants were involved in physical threats (83%). Lastly, one participant was involved in other, consisting of spitting (0.05%), (See Figure 3).

Figure 2

Participants Involved in a Violent Situation, Pre-Intervention

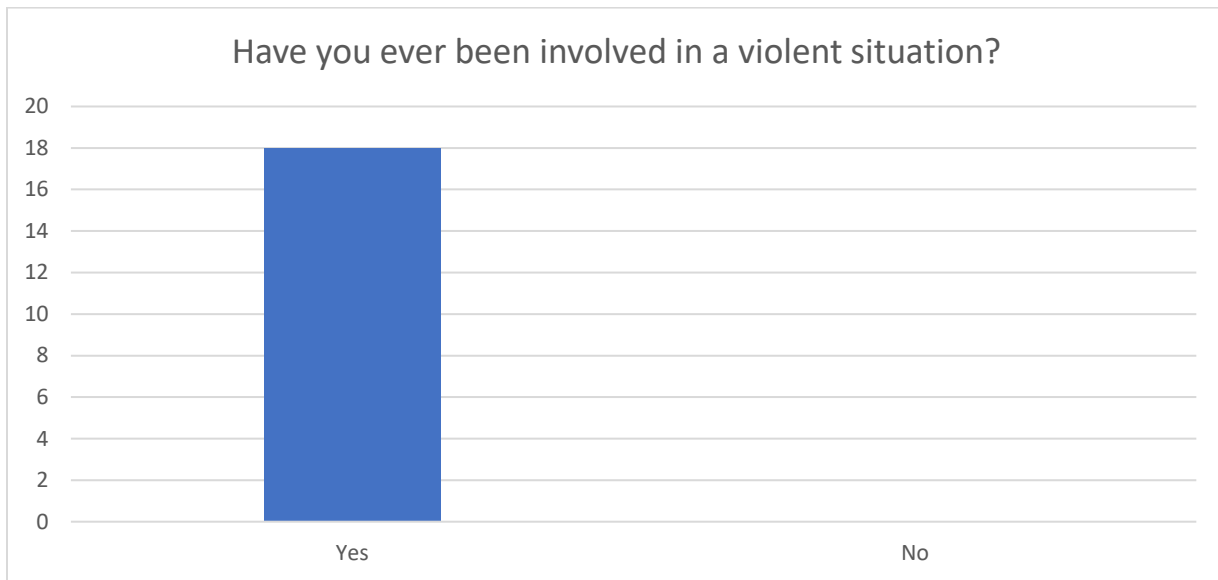
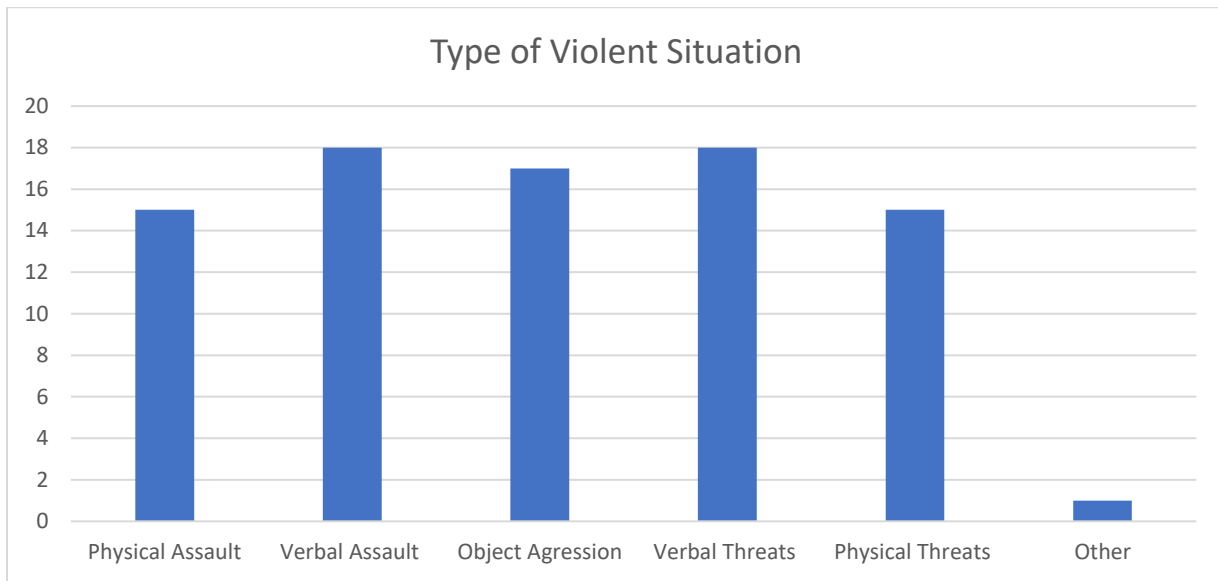


Figure 3

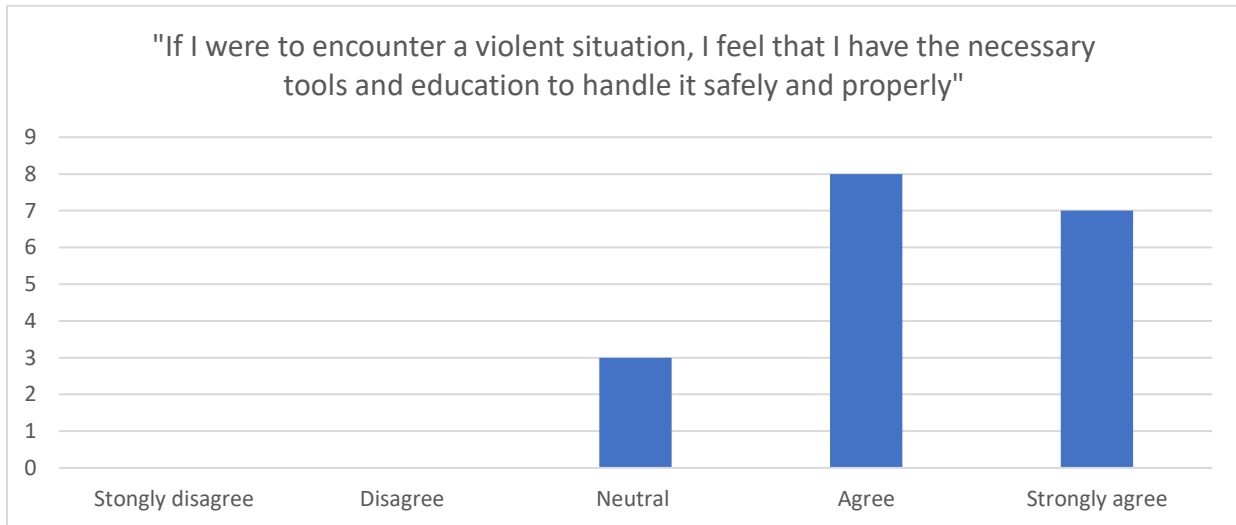
Type of Violent Situation Participants were Involved in Pre-Intervention



If participants had to encounter a violent situation, 7 participants (38%) strongly agreed they felt they had the necessary tools and education to handle the situation properly, 8 participants (44%) agreed, and 3 participants (16%) were neutral and were not sure if they had the proper tools and education, (See Figure 4).

Figure 4

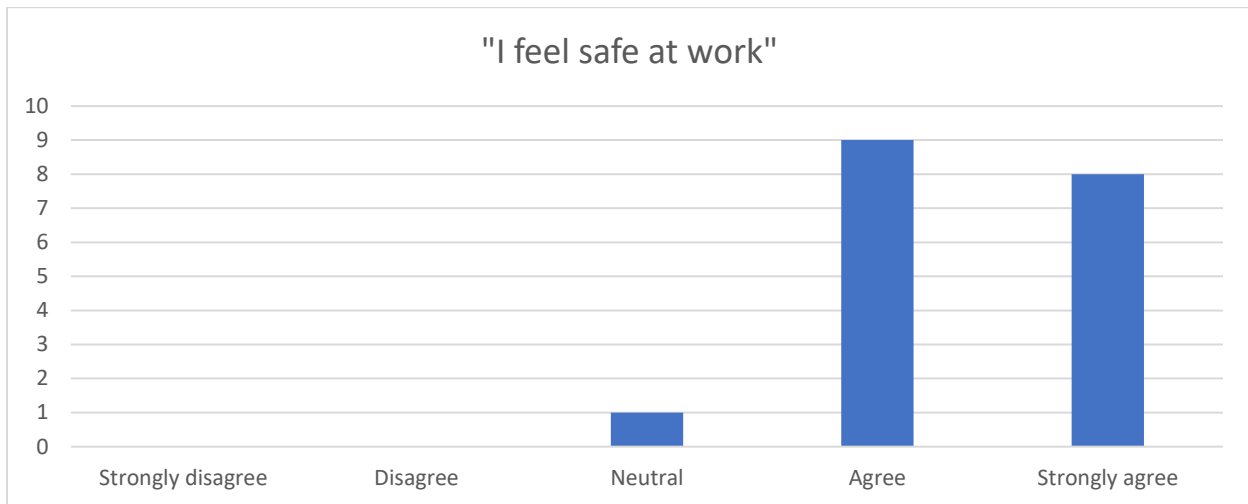
Participants Who Felt They Had the Proper Tools and Education if They Encountered a Violent Situation, Pre-Intervention



Following the implementation of the Broset Violence Checklist, of 18 participants, 8 (44%) strongly agreed they felt safe at work. 9 participants (50%) agreed they felt safe at work. Only one participant (0.5%) was neutral and was not sure if they felt safer following the intervention. Results show that after implementing the Broset Violence Checklist, staff perception of safety in the workplace increased, (See Figure 5).

Figure 5

Participants Perceptions of Safety at Work, Post-Intervention



Following the intervention, 17 participants stated they had been involved in a violent situation, whereas one participant stated they had not been involved, (See Figure 6). 12 participants reported they were physically assaulted. 16 participants reported they were verbally assaulted. 17 participants reported they were involved with object aggression and verbal threats. 14 participants reported they were involved with physical threats. One participant reported they were involved with bodily fluids. Overall, post-intervention, there was a decrease in verbal and physical assaults, (See Figure 7).

Figure 6

Participants Involved in a Violent Situation Post-Intervention

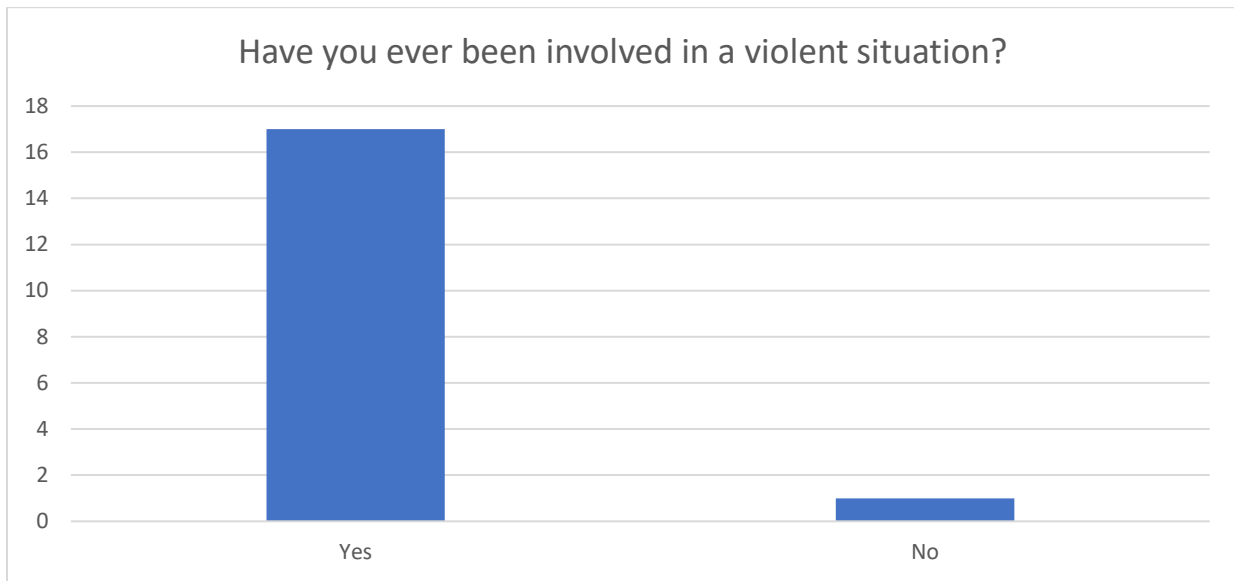
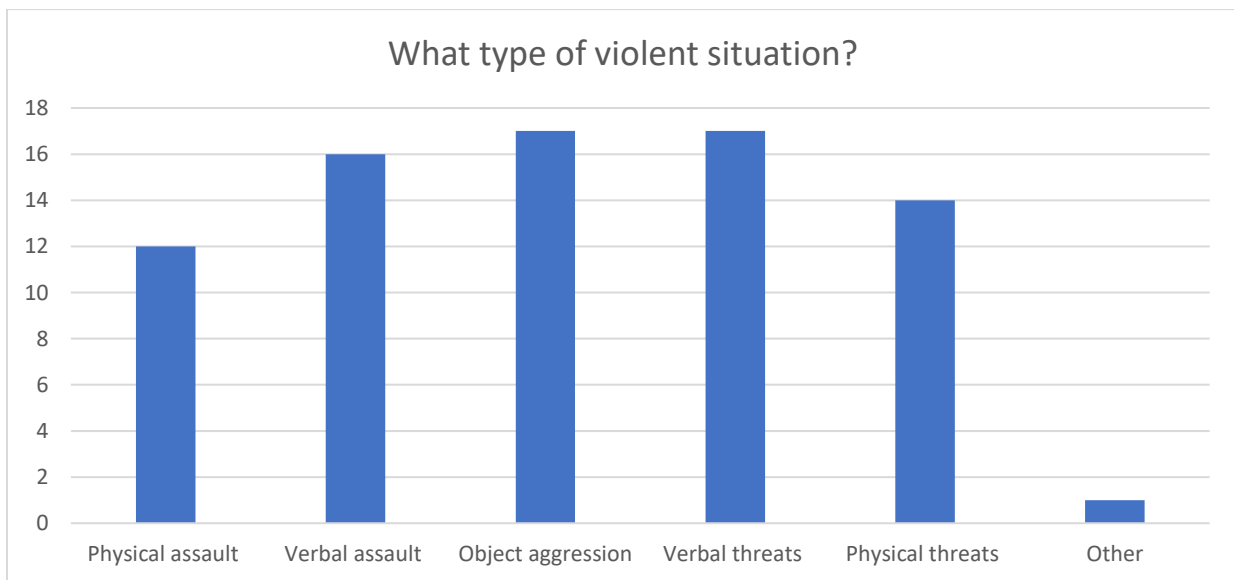


Figure 7

Type of Violent Situation Participants Were Involved in Post-Intervention

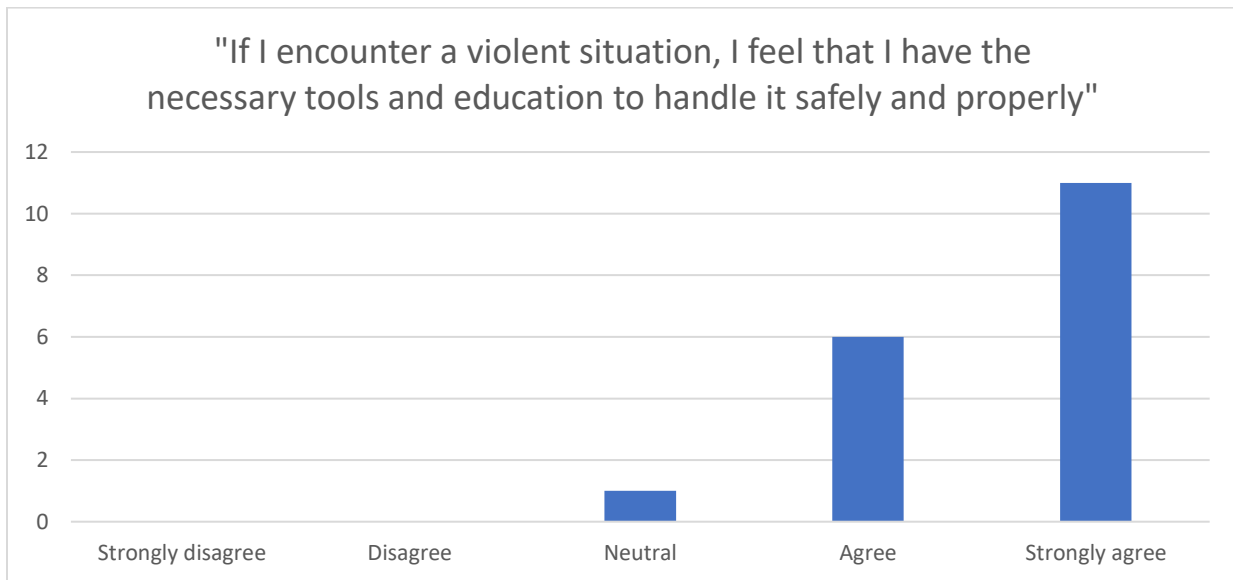


11 participants, following the intervention reported that they strongly agreed with having the proper education and tools if they encountered a violent situation, whereas pre-intervention only 7 participants strongly agreed. 6 participants reported they agreed they had the proper

education and tools whereas pre-intervention 8 participants agreed. 1 participant was neutral whereas pre-intervention, 3 participants were neutral. Overall, post-intervention, more staff members felt like they had the necessary tools and education to handle a violent situation.

Figure 8

Participants Who Felt They Had the Proper Tools and Education if They Encountered a Violent Situation, Post-Intervention



Contextual elements

A contextual element playing a role into this intervention was the different staff members. Due to the survey being out for a short period of time before the data was collected, depending on if that staff member was working or not, they might not have completed the survey. The survey the participants filled out was anonymous. Both pre-survey and post-survey had 18 responses, not knowing whether they were the same participants for both, therefore aggregate data was reported.

Associations

The microsystem is an acute stabilization unit where patients stay on average 3-5 days. During this time, patients are stressed, anxious, and at times frustrated. For some, this could lead to heightened reactions where they react in a way they normally wouldn't. Some patients are admitted voluntarily, whereas others don't have a choice. This could result in a higher number of violence occurrences.

Unintended consequences

There were no unintended consequences that occurred throughout the entirety of this quality improvement project.

Missing data

During their time on the unit, one patient assaulted 6 different staff members, causing the data to be skewed. As a result, the single patient data was not included, removing the patient's violence occurrences from the overall data. This was to provide a more accurate representation of the Broset Violence Checklist in the microsystem.

Discussion

Summary

The specific aim of this project was to decrease violent occurrences in the microsystem by 50%. When evaluating the data from the post-intervention surveys, there were many key findings. Key findings included an increase in perception of safety in the microsystem, changes in reported physical and verbal assaults, and an improvement in awareness of measures that may be effective in a violent encounter.

Perception of Safety in the Microsystem

When surveyed prior to the implementation of the policy, 27% of participants reported they strongly agreed with feeling safe at work, 44% reported they agree with feeling safe at work, 22% reported they felt neutral, and 0.5% reported they did not feel safe while at work. Following the intervention of the Broset Violence Checklist, there was an increase in perception of safety in the microsystem. 44% of staff members reported they strongly agreed with feeling safer at work following the implementation. 50% of staff members reported they agreed with feeling safer at work. 0.5% of staff members reported they felt neutral following the intervention.

Changes in Reported Physical and Verbal Assaults

When reviewing data from the pre-intervention surveys, 83% of participants reported they were involved in a physical assault with a patient. 100% of participants reported they experienced verbal assault from a patient. Post-intervention there was a decrease in both physical and verbal assaults on staff members. Following the implementation, 66% of staff members reported they were physically assaulted. 88% of the staff members reported they were verbally assaulted. Although both percentages following the intervention show improvement with a decrease in both physical and verbal assaults, yet more attention needs to be given to this problem.

Prior to the Broset Violence Checklist being initiated, there were eight total assaults in the microsystem. Following the implementation of the Broset Violence Checklist, there were a total of six assaults on the unit. Results show that by implementing the Broset Violence Checklist, there was a decrease in number of violent occurrences. While a reduction in the number of violent occurrences was noted at 25%, the specific aim of reducing by 50% was not met.

Awareness of Measures That May be Effective in a Violent Encounter

Prior to the education session provided to staff members, 38% reported they strongly agreed with having the necessary tools and education if a violent situation would occur. 44% of staff members reported they agreed with feeling prepared. The remainder 16%, reported they felt neutral about whether they felt prepared or not. Following the educational session and implementation of the Broset Violence Checklist, there was a significant increase in awareness of measures that may be effective in a violent encounter. 61% of staff reported they strongly agreed to feeling prepared if they were to encounter a violent situation. 33% of staff members reported they agreed to feeling prepared if they were to encounter a violent situation. Lastly, 0.5% reported they felt neutral.

Interpretation

With violence occurring more frequently in healthcare settings, especially in behavioral health settings, the safety of the patients and staff members are a top priority. There have been trainings on how to de-escalate patients when they are elevated, but there has not been any specific interventions or education on how to identify if someone is high risk for violence and how to approach it. The education component that was created during this quality improvement project was a way to educate nursing staff on specific behaviors shown by patients that can lead to violent behavior, if not handled or identified in a timely manner. Within a couple of months, there was a decrease in violent occurrences. For this microsystem there were multicomponent interventions that were utilized. According to Somani et. al, 2021, multicomponent interventions had the most impact in decreasing workplace violence. Key stakeholders that were involved included members of the QI team, electronic medical record team, management support, and

nursing staff. Collectively, working together and attending the educational training, had a positive outcome.

Similar to findings in the literature, staff that participated in the educational trainings, reported that they felt more comfortable and confident in their ability to deal with and assess violent situations (Somani et. al, 2021). Prior to the intervention, 83% of staff reported that if they encountered a violent situation, they would have the necessary tools and education to handle the situation properly and effectively. Whereas, following the intervention, after staff members attended educational trainings, 94% reported they felt confident in their ability. Following the implementation of the Broset Violence Checklist, there was a decrease in physical assaults, from 83% to 66%, and a decrease in verbal assaults from 100% to 88%. Staff members perception on safety in the workplace environment changed drastically following the implementation of the Broset Violence Checklist. Before the implementation, 72% of staff felt safe while at work. However, after the implementation, 94% of staff felt safe while being at work.

As noted by Grossman and Choucair, 2019, it was estimated that approximately \$429 million was added to treat and prevent injuries in healthcare workers. On average, there are about 7.8 per 1,000 healthcare workers that are involved in a violent situation in their workplace (Grossman & Choucair, 2019). To date, the macrosystem has not had to treat their healthcare workers due to violence in the workplace. Each year, the facility must purchase a copy of the Broset Violence Checklist. This cost pales in comparison to the cost of treatment for staff who have been assaulted. Overall, the data collected supports the literature that the Broset Violence Checklist is an effective tool in reducing and preventing violence in the workplace.

Limitations

The purpose of this quality improvement project was to educate staff members and initiate the Broset Violence Checklist in to address the global aim of decreasing the number of violent occurrences in the microsystem. The method that was used to promote the educational component occurred virtually through a PowerPoint™ presentation. However, it is not guaranteed that every staff member on the unit participated in the educational component in this manner. The microsystem is a small facility in Northern New Hampshire, the findings from this QI project are not generalizable to other settings such as the inner city or anywhere else in the country. The findings reflect that of a small microsystem in New England.

This project leader accepted employment from this unit before the QI project was finished. As a student and co-worker in the microsystem, there is a risk for response bias. There is a chance that staff members altered their answers to reflect a desired response. This could result in inaccurate data. Lastly, due to the Broset Violence Checklist being a relatively new screening tool, there was not an abundance of research, resulting in a much narrow search.

The initial plan was discussed and revised by the student and preceptor to best accommodate the staff members. It was determined that staff members would be checked off once they have completed the educational component of the QI project. This project leader analyzed all answers from the surveys to best determine if there was any response bias.

Conclusions

The goal of this project was to implement the Broset Violence Checklist in hopes to decrease the number of violent occurrences in the microsystem. Although, this was only a beginning step in the reduction of violence in the workplace, with the use of education and the

Broset Violence Checklist, there are possibilities for other interventions to be implemented in the future.

While looking at the data collected for violent occurrences after the implementation was initiated, it might be beneficial in the future, to gather data on violence in the first 24 hours of being admitted to the hospital. Does a higher score on the Broset Violence checklist indicate the patient is more likely to become violent within the first 24 hours of being admitted? With this information, nursing staff will hopefully be able to identify patients at risk for becoming violent sooner. Length of stay for each patient should be considered. This could determine if being involved in a violent situation resulted in a longer length of stay at the hospital versus a shorter length of stay. Another important factor to consider would be the age of the staff members taking care of these patients. It would be interesting to evaluate if there was a difference in violent situations when a patient has a younger nurse versus an older nurse, who might have more experience in addressing violent encounters. Although education was provided, something to consider in the future could be more interactive educational sessions. This could be completed annually, and it could be added to the competencies that need to be done each year. Lastly, possibly looking to see if a category could be added to include bodily fluids, including spit, urine, feces, etc, for future data collection.

To conclude, this quality improvement project was beneficial as a first step to taking action on reducing violence in the workplace. While it did not achieve the goal of decreasing violence by 50%, it was a great start in reducing violence in the workplace. It proved that with educating staff and with practice, it was successful and made an impact, despite not reaching the goal. There is still violence in the workplace, there always will be due to unpredictable patients. With the Broset Violence Checklist, hopefully healthcare workers can identify and implement

the proper interventions to help eliminate the violent behaviors in the most efficient and safe way possible to ensure safety of not only the patients, but healthcare workers too.

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