

De-escalating Aggressive Behavior in Patients at a Psychiatric Hospital in Central Massachusetts: A Quality Improvement Project.

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**De-escalating Aggressive Behavior in Patients at a Psychiatric Hospital in
Central Massachusetts: A Quality Improvement Project.**

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April 29, 2025

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Dedication

I dedicate this project to God, my late parents, Dr. and Mrs. Stephen Ihesiene, my wife Roseline, and my children, Meyer, Casey, and Victor.

Acknowledgment

I want to express my deep appreciation to Dr. Gabrielle Abelard for her steadfast support and expert guidance throughout my nursing journey and project review. I thank my DNP faculty members for their diverse expertise and mentorship, shaping my understanding of nursing practice. I recognize Dr. Saleh Amam for his valuable mentorship at the beginning of this project, which helped guide my research proposal. Thank you to Kathy Wenzel for her belief in me and the project and to Oluwafemi Samuel and Dr. Margaret Guyer-Dearson for their support in meeting the IRB standards.

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Abstract

Background: Recent Increases in aggressive behavior within psychiatric hospitals have heightened safety concerns. Delayed or ineffective de-escalation may expose staff to patient aggression, leading to serious consequences. **Aim:** This Quality Improvement (QI) project evaluates the effectiveness of de-escalation training for nurses and mental health workers in managing aggressive patient behavior utilizing the Transtheoretical Model for change in behavior. **Method:** A pre- and post-intervention design was used with nurse and mental health worker participants. Data collection involved a questionnaire grounded in the Mandt System®, a holistic training program aimed at reducing workplace violence, alongside an inpatient aggression flowsheet tracker. Statistical analysis included descriptive statistics, paired samples t-tests, and Spearman correlations to evaluate changes in patient behavior on the units following the intervention. **Result:** Forty-five staff members participated in the QI project. Posttest scores showed a statistically significant improvement following the intervention ($MD = -0.67333$, $SD = 0.57422$, $t(44) = -7.866$, $p < .001$). A positive correlation was observed between aggressive behaviors and Code Grey incidents ($r(85) = 0.249$, $p < .022$), with similar trends noted across units ($r(85) = 0.229$, $p < .035$). Most staff (90%) reported increased confidence in utilizing de-escalation techniques. **Implications:** Incorporating violence prevention training into medical and nursing school curricula, as well as staff education. Regular refresher training and up-to-date behavioral management techniques. **Conclusion:** De-escalation training enhances safety within healthcare settings for both patients and professionals.

Keywords: Psychiatric Nursing, Aggressive Behavior, De-escalation, De-escalation Techniques, Adolescent, Forensic, Workplace Violence, and Patient Outcome.

.De-escalating Aggressive Behavior in Patients at a Psychiatric Hospital in Central Massachusetts: A Quality Improvement Project.

Introduction

Violent and aggressive behavior toward healthcare professionals is increasing at an alarming rate. The primary goal of de-escalation is to reduce or eliminate patient aggression and or agitation- regardless of its cause- while fostering therapeutic staff-patient relationships and minimizing the use of coercion or restrictive interventions. Disruptive behavior often stems from a range of complex factors, including mental health conditions (e.g., anxiety, depression), neurological disorders (e.g., dementia), developmental disabilities (e.g., autism), trauma histories, and chronic pain (Caruso et al., 2021). These factors can intensify emotional distress and lead to aggressive behaviors if not properly addressed. Although healthcare staff often attribute such behavior to mental illness, patients are more likely to cite situational stressors and staff interactions as contributing factors (Fletcher et al., 2021). Failure to implement timely and effective de-escalation strategies may result in increased staff injuries, psychological distress, reduced productivity, higher medical costs, and greater turnover (Iskander, 2018). Evidence supports that targeted de-escalation training can improve safety and reduce aggression in clinical settings (Brenig et al., 2023). The Quality Improvement (QI) project aims to evaluate the effectiveness of de-escalation training in strengthening the ability of nurses and mental health workers to safely and confidently manage aggressive patient behavior.

Background

Rising rates of aggression are frequently linked to unmet expectations, poor

communication, and systemic issues such as inadequate staffing, limited resources, and strained infrastructure. These organizational challenges contribute to burnout, diminished job satisfaction, and increased turnover among healthcare professionals (O'Brien et al., 2024). Additional risk factors for heightened aggression include patients' hemodynamic instability, impaired neurological functioning, provider workloads, inexperience, and high-stress hospital environments (Mundey et al., 2023).

The epidemiology of workplace violence (WPV) varies widely across regions. For instance, 51.4% of nurses in Ethiopia have reported experiencing patient aggression (Chalachew et al., 2023), while WPV prevalence among nurses in Taiwan has been reported between 24.7% and 88.9% (Pompeii et al., 2022). These findings highlight the global scale and variability of the issue, underscoring the urgent need for effective interventions.

Patient-aggressive behavior in healthcare settings has significant consequences for both healthcare workers and quality of care delivered. Such behavior not only endangers staff but also disrupts therapeutic environments, negatively influencing patient outcomes. Violence tends to escalate during times of crisis, emergencies, uncertainty, and emotional distress, when patients or their families are overwhelmed by fear, shock, or concern about medical conditions (Lim et al., 2022). In these moments, healthcare workers often become unintended targets for patients' anger and frustration. Addressing these issues, interventions including de-escalation training, transparent policies, available resources, and mental health support will improve safety for healthcare workers and patients.

Problem Statement

The rise in aggressive behavior within healthcare settings poses significant risks to

both staff and patients and is often linked to the absence or ineffectiveness of de-escalation strategies. Mental health nurses and other frontline professionals are especially vulnerable when managing patients who exhibit aggression in response to perceived violations of personal boundaries or institutional rules (Converso et al., 2021). This growing concern threatens not only the safety of healthcare workers but also the overall quality of patient care. This vulnerability raises concerns about staff safety and the quality of patient care. Addressing the underlying causes of aggressive behavior is crucial for protecting everyone involved.

A concerning statistic reveals that 91.5% of mental health professionals have faced aggression in the past year, with 90.8% encountering verbal abuse, 44.5% experiencing physical aggression, and 21.3% sustaining injuries (Bizzarri et al., 2020). This trend is echoed globally, where approximately 61% of healthcare workers (HCWs) have reported some form of violence (Liu et al., 2019). Mental health nurses are three times more likely to experience violent incidents than their counterparts in other professions (Liu et al., 2019). There is widespread underreporting of workplace violence in various countries, including India and Bangladesh, which highlights the urgent need for improved awareness and more effective reporting mechanisms (Garg et al., 2019; Hassan et al., 2018). Specific risk factors present in patients can escalate the likelihood of aggression, underscoring the importance of implementing robust safety measures and training for healthcare workers. The situation calls for immediate action to enhance mental health professionals' workplace safety and provide de-escalation training (Cranage et al., 2022).

Review of Literature

A literature review to gather peer-reviewed articles published in English from

January 2014 to October 2024 was conducted to establish the evidence base in addressing this topic. The search used several electronic databases, including Academic Search Premier, Embase, CINAHL, PubMed, Cochrane Database of Systematic Reviews, and PsycINFO; The Boolean operators was used to refine search. Specific words such as aggressive behavior, adolescent patient, forensic, aggression management, de- escalation techniques, workplace violence, managing patient aggression, patient outcome, de-escalation, and behavioral support intervention were used to identify the most relevant articles. The initial search identified 68 articles. After reviewing the inclusion criteria, which include high-quality empirical or theoretical studies published between 2015 and 2024 in English, mental health workers or registered nurses over age 20 in adolescent and forensic units across various shifts, 17 articles were selected for the QI project. Key information on de-escalation contexts was extracted, and proposed framework were evaluated against quality standards. Exclusion criteria ruled out include health administrators, social workers, primary care providers, and ancillary staff not directly involved in patient care.

Synthesis of Key Concepts of Literature

De-escalation involves using communication to calm distressed or aggressive individuals and is recognized as a primary intervention for managing aggression in mental health settings (Lavelle et al., 2024). It serves as a less coercive alternative to restraints and is essential in many advanced care models. De-escalation helps prevent conflicts and creates a safer work environment for patients and healthcare workers. A systematic review that included 79 studies identified that mental health facilities were identified as the most common environments where de-escalation techniques are applied, and nursing was the disciplinary group most frequently mentioned in the discussions (Hallett et al., 2017). The

findings indicated that de-escalation is the recommended first-line approach for addressing potential violence and aggression in healthcare settings. It consists of a range of interwoven staff-delivered components comprising communication, self-regulation, assessment, actions, and safety maintenance that reduced patient aggression/agitation irrespective of its cause and improved staff-patient relationships while eliminating or minimizing coercion or restriction (Hallett et al., 2017). De-escalation remains a valuable tool used by healthcare workers in clinical practice, and staff equipped with de-escalation skills are empowered with improved confidence in utilizing appropriate techniques that create a safer work environment.

Most of the research to date has focused on patient characteristics and behaviors; schizophrenia, young age, alcohol use, drug misuse, a history of violence, and hostile-dominant interpersonal styles were found to be the predictors of patient violence (d'Ettorre & Pellicani, 2017). Caruso et al. (2021) examined factors associated with aggressive behaviors in hospitals, noting that these arise from a complex interplay of biological, psychological, and environmental influences. While mental health disorders are significant risk factors, drug abuse, past aggression, childhood abuse, and social patterns also contribute. Understanding these interactions is important for developing effective interventions, including pharmacological treatments and psychotherapy focused on emotional regulation, cognitive processes, and de-escalation technique. In psychiatric and healthcare settings, patients with severe mental illnesses often struggle to resolve interpersonal conflicts, which makes them resort to physical violence as a means of coping to deal with these challenges (Černý et al., 2018). Healthcare professionals have developed guidelines to improve early detection and management of aggressive behavior, focusing on effective strategies for prevention and overall management.

A study of 522 patients in an acute setting found that 53% experienced de-escalation within two weeks, with 60% of those being successful (Lavelle et al., 2017). Successful de-escalation sequences had fewer precursors ($M=.91$, $SD=1.05$) than unsuccessful sequences ($M=1.39$, $SD=1.46$) $Z(752)=-5.42$, $p<.001$. Successful de-escalations correlated with fewer aggressive incidents, while individuals with a history of violence faced more challenges. The result from Lavelle et al. highlighted the factors that influence the use of de-escalation and its success in halting conflict in acute psychiatric inpatient settings. The use of verbal or non-verbal communication when implemented often ends the conflict or containment sequence of aggression. Evidence-based staff training enhanced confidence in using de-escalation techniques, particularly with high-risk patients. De-escalation is successful when fewer and less aggressive conflict events lead to it, highlighting the significance of early intervention and effective communication in preventing escalations.

Celofiga et al. (2022), assessed the effect of verbal and non-verbal de-escalation on the incidence and severity of aggression and the use of physical restraints in acute psychiatric wards. The result reveals that the incidence rates of aggressive events and physical restraints per 100 treatment day decreased significantly after de-escalation. The incidence rate of aggressive events was 73% lower in the experimental group ($IRR = .268$, 95% CI [.221; .342]), while the rate of severe events was 86% lower ($IRR = .142$, 95% CI [.107; .189]). During the intervention period, the incidence rate of physical restraints due to aggression in the experimental group decreased to 30% of the rate in the control group ($IRR = .304$, 95% CI [.238; .386]). De-escalation training was effective in reducing the incidence and severity of aggression and the use of physical restraints in acute psychiatric units. Perez-Toribio et al., 2022, examined the relationship between nurses' verbal de-escalation use and

the clinical profile of patients who had received mechanical restraint at an acute mental health unit. The results show that establishing an adequate therapeutic relationship from the start of hospitalization is essential to getting to know the patient and enabling timely verbal de-escalation, thus avoiding mechanical restraint.

Kuivalainen et al. (2017), examined the reasons for seclusion and restraint and whether any de-escalation techniques were used to help patients calm down. A total of 144 episodes of seclusion and restraint were included to analyze the reasons for seclusion and restraint, and 113 episodes were analyzed to examine unsuccessful de-escalation techniques. Findings suggest that the most common de-escalation techniques were one-to-one interactions with the patient ($n = 74$, 65.5% of $n = 113$) and the administering extra medications ($n = 37$, 32.7% of $n = 113$). Others include individual means of self-regulation and patient guidance. Staff should be educated in a diverse range of de-escalation techniques. Future studies should focus on examining these techniques to prevent seclusion.

De-escalation techniques are vital for improving safety in acute care settings. Chase et al. (2022) identified which intervention leads to decreased physical and psychological injury to patients and staff. De-escalation techniques taught to patients decreased injury in 100% of the studies included in this review. Educating patients about these strategies led to a complete elimination of injuries, according to several studies reviewed. Caution should be exercised when choosing a de-escalation technique because the indiscriminate use of de-escalation techniques due to a lack of regulatory guidance and standardization can lead to inconsistency in implementation. Restraint and seclusion carry significant risks and should only be used as a last resort in critical crisis. Chase (2022)

suggests that institutions should conduct focus groups or staff surveys and invest in structured training programs focused on regulatory guidelines to identify triggers of aggressive behavior and evidence-based protocols.

Du et al. (2017) examined the use of de-escalation techniques for managing aggression in psychotic patients, finding that although these methods are commonly accepted in clinical practice, there is insufficient trial-based evidence to confirm their effectiveness. Ye et al. (2021) evaluated the Communication, Response, Solution, Care, and Environment (CRCSE) model, a structured de-escalation training program for psychiatric nurses. The findings indicate that staff trained in de-escalation techniques are effective in reducing aggressive behavior in high-risk environments. Early intervention strategies, like offering choices and adjustment of the environmental are essential for successful de-escalation. Health organizations should prioritize interdisciplinary collaboration and continuous quality assurance while implementing evidence-based training programs that improve the safety of both patients and staff. Future research is necessary to evaluate the long-term effectiveness of various training models and develop standardized guidelines to enhance safety in complex healthcare environments.

Staff descriptions of de-escalation techniques currently used in mental health settings influence their implementation and effectiveness. Results show that charting the reasoning for technique selection enabled a preliminary understanding of staff, the patient, and environmental influences on de-escalation success or failure (Price et al., 2023). Notably, there was evidence of a link between coercive 'non- physical control' techniques and increased aggression/use of restrictive practices. The risk could have been a more

consistent factor in adopting more controlling techniques. Moral judgments regarding the function of the aggression, trial-and-error, ingrained local customs (especially around instruction to low stimulus areas), knowledge of the patient, time-efficiency, and staff anxiety were crucial in escalating intervention.

Caruso et al. (2021) identified a notable association in the adolescent units that increased risk of aggressive behavior might be attributed to their reduced capacity for emotional regulation, which could stem from their developmental stage or the intensity of their symptoms. Fauzi et al. (2023) conducted an observational study with 463 students from four public secondary schools, finding a median aggression score of 23.00 (IQR=12.00). Significant predictors of aggression identified included frequent dessert intake, attitude toward aggression, low family income, and peer deviant affiliation ($F [8, 244] = 15.980, p < .001, \text{adjusted } R^2 = .290$). A moderate positive correlation was found between peer deviant affiliation and aggression ($r = .386, p < .001$). Peer pressure significantly influenced aggression development, as adolescents tend to select peers with similar deviant attitudes, encouraging antisocial behaviors.

High rates of aggression and violence are a persistent problem in inpatient mental health environments. A systematic review by Fauzi et al. (2023) identified key psychosocial factors influencing adolescent aggression, including personality traits, emotional challenges, peer dynamics, and substance use. Spencer et al. (2018) assessed the effects of de-escalation techniques for managing non-psychosis-induced aggression in adults in care settings, both staff and service users. Physical and verbal aggression measures showed reductions, but not all, after de-escalation training. Although de-escalation training shows potential in reducing

aggression, current evidence is insufficient to determine its overall efficacy or best practices. Findings show that there is limited evidence, which means that uncertainty remains regarding the effectiveness of de-escalation and the relative efficacy of different techniques. Future studies should compare techniques, evaluate long-term outcomes for staff and service users, and investigate factors influencing the success of de-escalation strategies.

Multipronged approaches are needed to reduce the incidence of violence in healthcare settings. Baig et al. (2018) assessed how effectively conducting worker training will help prevent, de-escalate, and manage violence in healthcare settings. The findings revealed that de-escalation of violence training was effective in improving the confidence of healthcare providers in coping with patient aggression, which includes raising awareness regarding respect for healthcare providers, incorporating violence prevention training in medical and nursing curricula at the undergraduate level, and refresher training for trained HCPs. Brenig et al. (2023), assessed the effectiveness of staff training in de-escalation techniques in forensic psychiatry. There is no relevant impact of mental health staff training in de-escalation techniques on the rate of violent incidents in forensic psychiatric wards. However, staff seemed to feel safer following the training. Positive changes are reported across a variety of outcome measures. However, it remains to be seen to what extent staff training in de-escalation techniques reduces aggressive incidents and restrictive measures.

A systematic review emphasized the diverse range of interventions that can be implemented to address workplace violence aimed at nursing healthcare providers, which include nurses, midwives, nurse managers, nursing supervisors, clinical nurse instructors, clinical nurse specialists, directors of nursing services, nursing superintendents, head nurses,

and nursing case managers (Somani et al., 2021). These interventions include standalone training and structured education programs designed to enhance knowledge about workplace violence, as well as practical skills that nurses can use to prevent or minimize issues such as workplace incivility, lateral violence, verbal abuse, physical violence, sexual harassment, and bullying. Shah et al., 2016, identified the effective de-escalation strategies that nurses utilize to prevent aggressive behaviors, and revealed that management should equip nurses in psychiatric settings must be equipped with adequate, relevant, and applicable knowledge in the effective de-escalation of aggression in patients with mental illness. Current programs designed to teach nurses the necessary skills to manage aggressive patients can influence the incidence and outcome of aggression. De-escalation training is expected to reduce both the total incidence and negative impacts of workplace violence, with additional improvements in psychiatric nurses' coping skills.

Johnston et al. (2022) utilized a qualitative design, with data collection and analysis guided by the Theoretical Domains Framework (TDF). Participants included two medium secure forensic mental health inpatient wards and one low secure mental health inpatient ward. Participants included two medium- secure forensic mental health inpatient wards and one low-secure mental health inpatient ward. Based on participant preference, 12 inpatients and 18 staff members took part in five focus groups and one individual interview. The discussions were structured using a semi-structured interview schedule informed by the TDF domains. Johnston et al. (2022) tried to identify and describe individual professional, cultural, and system-level barriers and enablers to implement de-escalation in forensic mental health inpatient settings. The results show that skills necessary for effective de-escalation include relationship-building, emotional regulation, and a better understanding of

patients. However, opportunities for staff to practice de-escalation are hindered by shared beliefs within nursing teams that stigmatize therapeutic intimacy in nurse-patient relationships and emotional vulnerability among staff.

De-escalation training should be implemented with adjunct interventions targeting collaborative antipsychotic prescribing, debriefing, and de-escalation planning; modifications to the physical environment; and ward manager role-modeling of emotional vulnerability and therapeutic intimacy in nurse-patient relationships.

Gaynes et al. (2017), compared the effectiveness of strategies to prevent and de-escalate aggressive behaviors among psychiatric patients in acute care settings, including interventions for reducing the use of seclusion and restraint. Relevant databases were systematically reviewed to identify comparative studies on violence prevention and de-escalation strategies involving adult psychiatric patients in acute care settings. Studies, including trials and cohort studies, were required to report on aggression, seclusion, or restraint outcomes. The findings reveal that there was minimal evidence surrounding strategies for preventing and de-escalating aggressive behavior among psychiatric patients. De-escalation training has evolved from staff anecdotal reports of what works, rather than empirical evidence (Gaynes et al., 2017). More research and evidence are needed on effective de-escalation techniques and methods that can be used in psychiatric settings, including inpatient and outpatient settings. This shows the need for further study and implementation of appropriate evaluation methods.

Theoretical Framework

Prochaska and DiClemente (1983) developed the Transtheoretical Model (TTM) in

the late 1970s, an evidence-based framework crucial for supporting behavior change through six changes (See Appendix A). The process of behavioral change consists of several stages. Each stage is characterized by a unique set of attitudes, beliefs, and behaviors influencing an individual's decision-making and intention to change. In the pre-contemplation stage, individuals are not considering change. During the *Contemplation stage*, they recognize the need for change. In the Preparation stage, the individual makes necessary plans for change. During the *Action stage*, individuals carry out the plan. Finally, during the *Maintenance stage*, individuals focus on sustaining their new behaviors and preventing relapses. Finally, in the *Termination stage*, individuals reach a point of confidence where they have no desire to revert to their previous behaviors, feeling assured that they will not fall back into old patterns. The theoretical framework of the TTM was applied to assist patients in reducing aggressive behavior in adolescent and forensic units, offering guidance through tailored strategies for behavior modification.

Methods

The DNP student used a prospective pre- and post-intervention design to evaluate the efficacy of de-escalation training for registered nurses and mental health workers at an inpatient psychiatric hospital. Training effectiveness was also assessed by measuring variables (de-escalation skills) both before and after the intervention, as noted by Aggarwal and Ranganathan (2019). Data was collected through questionnaires, an inpatient aggressive tool tracker designed by the student, and an interactive question-and-answer session. The project included five training sessions within two weeks for a cohort of nine participants per session. The DNP student facilitated each session, comprising a 45-minute PowerPoint presentation and followed by a 15-

minute Q&A. The intervention incorporated the transtheoretical model of behavior change to evaluate shifts in participant behavior, as articulated by Prochaska & Velicer (1997).

Goals and Objective

The goal of the QI project was to equip nurses and mental health workers with practical, evidence-based strategies for managing aggressive patient behavior. The DNP student implemented an educational intervention that enhanced staff competency in de-escalation techniques to promote safer and more therapeutic clinical environments. The project began by using a pre-intervention survey to assess participant's baseline confidence and skills. All participants completed PowerPoint-based training designed to deliver theoretical knowledge and highlight essential practical skills for managing aggression. The primary objective was to enhance the learning and skill development of 90% of nurses and mental health workers on adolescent and forensic units within the inpatient psychiatric hospital. Success was measured by demonstrated proficiency in de-escalation techniques, aiming to effectively manage aggressive behavior and promote a safe, therapeutic environment for patients.

Expected Outcome

Post-training, 90% of nurses and mental health workers in adolescent and forensic units within inpatient psychiatric hospital applied these techniques in actual situations within four weeks. The DNP student identified from the 90% of participants' post-intervention survey and feedback from the questions and answers sessions' feedback challenges, leading to program adjustments. The student provided continuous support, resources, and on-the-job mentoring during the follow-up period to reinforce skills. Ultimately, 90% of staff achieved confidence and practical use of de-escalation techniques.

Population and Project Site

The QI project was conducted at a psychiatric hospital with a bed capacity of 320 in Massachusetts for patients across the lifespan between September 1, 2024, and November 30, 2024. The hospital serves adults with severe mental illness and children with emotional disturbances and consist of a multidisciplinary team of professionals, including psychiatrists, psychologists, and nurses, who create personalized treatment plans that may involve therapy, rehabilitative services, and medication education. The hospital emphasizes active rehabilitation through various therapeutic activities like recreational, art, music, and pet therapy, and maintains a strong focus on compassionate care for patients and their families. The modern facilities and environment make it an ideal setting for the QI project.

The inclusion criteria consisted of individuals aged 20 years or older who were employed as a mental health worker and or registered nurse working in the psychiatric hospital. The exclusion criteria included healthcare administrators, social workers, primary care providers, and other secondary ancillary staff not involved in direct patient care.

Implementation Process

Invitation: Two weeks before the project launch, flyers and emails were distributed to all full-time registered nurses and mental health workers in the adolescent and forensic units, inviting them to participate in this quality improvement initiative voluntarily. The invitation included details about the QI project and its associated educational intervention focused on de-escalation techniques (see Appendices B and C), how to complete the pre-and posttest questionnaires, attending training sessions, and engaging interactive Question and Answer (Q&A) sessions. All participants signed an informed consent form to ensure they could make a fully informed

decision about participating in this project (See Appendix D). Participants were offered \$20 gift cards and snacks to incentivize attendance.

Pretest: Participants completed a pretest via Google Forms on the same day as the presentation and then four weeks later. The DNP student adapted the Mandt System® network (2024) with permission to adapt both the pretest and posttest. The result was a self-reported questionnaire based on the Mandt principles (See Appendices F). The questionnaire employs a five-point Likert scale: Strongly Disagree 1), Disagree 2), Not Sure 3), Agree 4), and Strongly Agree 5) and consists of ten items which each pertain to de-escalation techniques: 1) communication, 2) Focus on feelings, 3) Moment of silence, 4) Clarify what they said, 5) Remaining in Control, 6) Formulate a plan, 7) Work together, 8) Remain positive, 9) Understand your limit, and 10) Debriefing (See Appendix G). The questionnaire's internal consistency was evaluated using Cronbach's alpha, which resulted in .817, indicating good reliability. Demographic data collected included gender, age, race, education, job position, role, and shift (See Table 1).

Posttest: Posttest and QA sessions were administered four weeks after the initial training for a one- week period. The DNP student emailed the posttest to all 45 participants, who were given one week to complete the posttest. After one week, the student received all forms, and participants were then invited back to the hospital F2 training center for a QA session, which included five groups and 15-minute open-ended question-and-answer sessions inclusive of nine participants each. Each QA session included the following three questions:

1. How has the training improved your communication practices and approach to resolving aggressive behaviors?

2. What de-escalation techniques are most effective for managing emotions during challenging situations?
3. In what ways does de-escalation training contribute to creating a safer and more supportive environment for everyone involved?

The DNP student collected responses during Q&A sessions following the training.

Inpatient Aggressive Flowsheet Tracker: The Inpatient Aggressive Flowsheet Tracker was created by the DNP student to monitor psychiatric emergencies, specifically Code Grey situations, and instances of aggressive behavior over an eight-week timeframe, divided into two four-week sections—one prior to de-escalation training and another following it. The objective was to analyze trends and evaluate the effectiveness of the training in minimizing aggressive incidents within inpatient environments. Unit managers facilitated the distribution of tracking forms across adolescent and forensic units, where staff documented essential metrics for each shift. These metrics included the number of Code Grey incidents, occurrences of aggressive behaviors, specific aggressive events, and the interventions employed. The collected data offered valuable insights into the influence of de-escalation strategies on managing aggression and responding to emergencies in the inpatient setting.

Training: The "De-escalating Aggressive Behavior in Patients" educational intervention program included a PowerPoint training designed for registered nurses and mental health professionals to enhance their skills in managing challenging patient behaviors. The training took place over five sessions, spread across a two-week period, in the F2 training center located within the hospital. Throughout this training, participants engaged in an in-depth exploration of several critical topics. The sessions began with an examination of the underlying causes of

aggression in patients, encouraging attendees to understand better the psychological and situational risk factors that can contribute to aggressive outbursts. The training then shifted focus to the fundamental principles of de-escalation. Participants learned effective communication strategies and body language cues that can help diffuse tension and foster a positive environment. The DNP student discussed key de-escalation techniques that were discussed, enabling participants to apply these strategies directly in their interactions with patients. Additionally, the training emphasized strategies to prevent the need for coercive interventions, equipping participants with valuable tools to enhance patient safety and well-being.

Data Analysis

Before and after the de-escalation training program, participants completed pretest and posttest questionnaires designed to gauge their understanding and preparedness for handling aggressive situations. The results of these questionnaires were analyzed using Google Survey for data collection and IBM SPSS version 29 for statistical analysis, with the significance threshold set at $p < .05$. The DNP student compared the mean scores of participants' pretest and posttest responses with the paired sample t-test, revealing their knowledge and attitude changes. The relationship between pretest and posttest scores was explored using the paired sample correlation analysis to provide insight into the training's impact on individual participants. The connection between code grey incidents—which refer to emergencies involving potentially violent behavior—and instances of aggressive behavior were examined using the Spearman correlation. The DNP student used this analysis to uncover significant relationships that could inform future training and intervention strategies.

The student evaluated the qualitative responses gathered from Q&A sessions with thematic analysis in complement to the quantitative data and identified three themes: communication, emotional management, and safe environment emerged, which provided a deeper understanding of participants' experiences and perceptions of the de-escalation training.

Human Subject Protection

The Internal Review Board (IRB) approval was obtained before starting the QI Project from the University of Massachusetts, Amherst (UMass) (see Appendix I) and Department of Mental Health, Massachusetts (see Appendix J). The QI project met all ethical standards, and the rights and protection of human subjects involved in the research were safeguarded (Appendix K). Data was de-identified and maintained participant data confidentiality and avoided disclosing personal information. The QI project did not present any risks to the participants. All electronic files related to the project were secured with encrypted passwords and accessible only by the DNP student, mentor, and program chair, guaranteeing the highest level of data security.

Results

This QI project involved 45 healthcare professionals, which included 27 registered nurses and 18 mental health workers, selected through convenience sampling. Sociodemographic characteristics in the questionnaire helped understand the participants, and fair representation. The participants (Table 1) include male (35.56%), female (64.44%), Black/African American (71.11%), White (15.56%) and Asian (6.67%). Most of participants were RN (60%), with over five years of experience (80%), nearly half (48.89%) worked the 3 pm–11 pm shift.

Table 1

Sociodemographic Characteristics

Category	Variable	Pretest	Posttest	Percentages %
		N=45	N=45	
Gender	Male	16	16	35.56%
	Female	29	29	64.44%
Age	20-29	4	4	8.89%
	30-39	7	7	15.56%
	40-49	16	16	35.56%
	50-59	10	10	22.22%
	60-69	7	7	15.56%
Ethnicity	Asia	3	3	6.67%
	Black/African			
	American	32	32	71.11%
	Caucasian	7	7	15.56%
	Hispanic	2	2	4.44%
	Native America	0	0	0%
	Pacific Island	0	0	0%
	Prefer not to answer	1	1	2.22%
Job Title	Mental Health Worker	18	18	40%
	Registered Nurse	27	27	60%
Years of Experience	Less than 5 years	9	9	20%
	More than 5 years	36	36	80%
Shift	7am-3 pm	10	10	22.22%
	3pm-11pm	13	13	28.89%
	11pm-7 am	22	22	48.89%

The pretest and posttest scores were compared to assess whether the de-escalation training enhanced the knowledge of registered nurses (RNs) and mental health workers (MHWs) in managing aggression. The analysis of mean scores from the questionnaire (Table 2) highlights a significant improvement in participants' understanding and application of key de-escalation techniques. There was a significant increase in understanding of limitations (3.9-5.0), formulating a plan (3.7-5.0), and

debriefing (3.9-5.0). The results (See Table 3) indicate a statistically significant improvement from pretest to posttest ($MD = -.67333$, $SD = .57422$, $t(44) = -7.866$, $p < .001$), with a 95% confidence interval for the mean difference of $-.84585$ to $-.50082$. These findings suggest that de-escalation training effectively enhanced participants' knowledge and performance.

Table 2

Pretest and Posttest Mean/Median Score

Item	Pre-test	Post-test
	Mean ($\bar{X}$)	Mean ($\bar{X}$)
1. Communication	4.5	5
2. Focus on Feeling	4.2	4.6
3. Moment of Silence	4.3	4.8
4. Clarify what is Said	4.5	4.6
5. Remain in Control	4.2	4.7
6. Formulate a Plan	3.8	5
7. Work Together	4.0	5
8. Remain Positive	4.1	4.8
9. Understand Limitations	3.7	5
10. Debriefing	3.9	5

A paired sample correlation analysis was conducted to determine whether participants' initial knowledge levels were associated with improvements following de-escalation training by examining whether higher pretest scores were associated with higher posttest scores (See Table 4).

The analysis revealed a moderate positive correlation ($r = .333$) between pretest

and posttest scores among 45 participants. Both a one-sided p-value of (.01) and a two-sided p-value of (.025) were below the significance threshold, indicating that higher pretest scores are associated with higher post test scores. These results indicate that participants who began with higher pretest scores tended to show stronger posttest performance, reinforcing the role of structured training in improving de-escalation techniques.

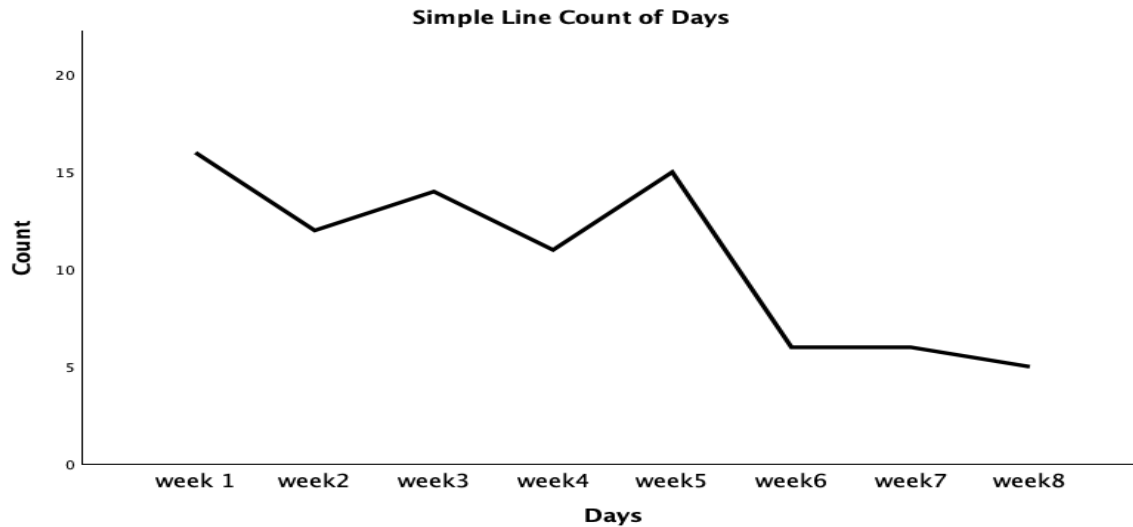
The project conducted over eight weeks focused on monitoring incidents of aggressive behavior in adolescent and forensic units, utilizing the inpatient aggressive flowsheet tracker. A key aspect of the analysis was the tracking of Code Grey events, which are psychiatric emergency responses, to understand their patterns and the influence of de-escalation training.

Unit B1 of the Forensic unit emerged as the most problematic, accounting for 52.9% of aggressive behaviors and 49.4% of Code Grey events. However, the overall findings revealed a steady decline in aggressive incidents and emergency events across all units, as illustrated in Table 6 and Figure 2.

In the initial weeks, the data showed fluctuating trends, with the first four weeks demonstrating inconsistent patterns of aggressive behavior. Notably, week five experienced a significant spike in incidents, which was then followed by a consistent decrease in occurrences from weeks six to eight. This downward trend coincided with the implementation of de-escalation training in week four, suggesting a correlation between the training and the reduced incidents of aggression in the subsequent weeks, thereby highlighting its effectiveness in managing aggressive behavior

Figure 1

Inpatient Aggressive Flowsheet Tracker Weekly Count Graph



The Spearman rho correlation analysis found a significant positive correlation between aggressive behaviors and code grey incidents in both units ($r = .249$, $p = .022$). The result (See Table 5) showed that the correlation was weaker ($r = .219$, $p = .044$), and no correlation was observed between aggressive behaviors in the adolescent unit and code grey incidents in the forensic Unit. A weak positive correlation was noted between code grey incidents across both units ($r = .229$, $p = .035$) emphasizing the need for safety strategies.

Qualitative data was collected for the QI project using open ended questions to capture experiences of participants. Through thematic analysis three key themes emerged: effective communication, emotional management, and the importance of fostering a safe environment. These themes are discussed in greater detail below.

Effective Communication

One of the most notable themes of the training was the enhancement of communication skills

among participants.

How has the training improved your communication practices and approach to resolving aggressive behaviors?

Twelve participants stated, *"The training taught me good listening skills and how to respond during times of conflict."* This suggests that the program fostered an understanding of how effective communication can de-escalate tense situations and promote mutual understanding.

Emotional Management

Managing emotions during conflicts was a key theme. Participants identified emotional triggers and developed strategies for better response regulation.

What de-escalation techniques are most effective for managing emotions during challenging situations?

As noted by seventeen participants, *"The training contributed to greater self-awareness, enabling us to handle emotionally charged situations more effectively,"* leading to more positive interactions overall.

Safe Environment

The training emphasized a structured approach to de-escalating aggressive behaviors.

In what ways does de-escalation training contribute to creating a safer and more supportive environment for everyone involved?

Sixteen participants felt more confident in using these techniques, noting, *"The training has equipped us with a plan for resolving conflicts."* This highlights the importance of de-escalation skills in managing aggressive behaviors effectively and fostering a sense of safety.

Discussion

This QI project evaluated de-escalation training for nurses and mental health workers in managing aggressive patient behavior. The age distribution of the participants primarily consisted of middle-aged healthcare workers between 25 and 34 years old. This demographic concentration highlights the importance of implementing preventive measures that promote overall well-being within this age group. Registered nurses (RNs) and mental health workers (MHWs) frequently encounter unique challenges, particularly when supporting patients experiencing severe emotional distress or exhibiting aggressive behaviors. Healthcare settings—especially urgent care facilities and psychiatric units—are associated with higher rates of workplace violence, placing healthcare professionals at substantial risk (Carver et al., 2021; Hiebert et al., 2022).

Most participants that took part in this QI project have over five years of clinical experience. However, studies indicate that younger, less experienced nurses and mental health workers are more vulnerable to incidents of aggressive behaviors, possibly due to a lower threshold for tolerance (Välimäki et al., 2022). On the other hand, experienced RNs and MHWs are more familiar with challenging behaviors and how and when to incorporate de-escalation techniques. Training is crucial for less experienced staff because they struggle to manage aggressive situations. Targeted education helps build their confidence, competence, and self-efficacy in responding to challenging behaviors.

The result of this QI project highlighted that most participants worked evening shift, which reflects the impact that shift schedules can have on the effectiveness of de-escalation training in mental health environments. Whereas daytime shifts offer more structured

opportunities for implementing de-escalation techniques, while evening and night shifts are often more unpredictable and present greater challenges. Additionally, the variability in scheduling, particularly with rotational shifts, has been linked to an increased risk of workplace violence (Afshari et al., 2020).

The findings from the project indicated that majority of the participants have more than five years of experience. Studies indicate that younger, less experienced nurses and mental health workers are more vulnerable to incidents of aggressive behaviors, possibly due to a lower threshold for tolerance (Välimäki et al., 2022). On the other hand, experienced RNs and MHWs are more familiar with challenging behaviors and how and when to incorporate de-escalation techniques. Training is crucial for less experienced staff because they struggle to manage aggressive situations. Targeted education helps build their confidence, competence, and self-efficacy in responding to challenging behaviors.

The project's results reveal that de-escalation training significantly positively impacts participants' skills and behaviors related to de-escalation. The findings underscore that improved training effectively enhances the knowledge and abilities of professionals, ultimately leading to better de-escalation practices within clinical environments as evidenced by the decreased number of restraints shortly after the training sessions offered (Johnston et al., 2022).

The adolescent unit in this project experienced a higher rate of aggressive incidents compared to the forensic unit, which is factored into the fundamental hypothesis that moral disengagement, personality traits, self-esteem, values, parenting, sex, nutritional factors, and socioeconomic situation can be causal factors of adolescent aggression (Robles-Haydar et

al., 2021). In contrast, the forensic unit manifests similar trends, which indicate that environmental, situational, or psychological factors play a role in aggressive behavior.

Furthermore, findings demonstrated that in the adolescent unit, there is a positive correlation between the frequency of code grey incidents and aggressive behaviors, indicating that more code grey events are linked to increased aggression. Conversely, a rise in code grey incidents in the forensic unit corresponds with decreased reported aggressive behaviors, suggesting effective behavioral management strategies that may lead to de-escalation.

The observed behavioral changes among healthcare professionals align with the Transtheoretical Model (TTM) of behavior change, which describes progression through distinct stages. In this context, healthcare professionals often advance from initially not recognizing the need for training to actively applying de-escalation techniques and seeking additional skill development. Nurses consistently use de-escalation methods to enhance their competencies. Health organizations should meet staff needs at different stages by preparing staff to handle aggressive behaviors, thereby contributing to a safer healthcare environment. Training grounded in organized frameworks, like the Mandt principles, promotes therapeutic interactions between staff and patients and helps to improve workplace safety culture (Knox & Holloman, 2021).

Strength

The quality improvement (QI) project effectively tackled challenges associated with de-escalation training in healthcare by actively involving stakeholders, implementing structured training, and establishing continuous feedback mechanisms. All 45 participants completed pre-

and post-test evaluations, highlighting a thorough approach to building essential skills. As a result, the project emphasized the importance of a mentorship program, quarterly training sessions, standardized protocols, and staff support programs, all of which significantly enhanced the initiative's safety and effectiveness.

Barriers

The QI project encountered some challenges, including staffing shortages and scheduling conflicts that limited participant engagement. Additionally, gaps in computer literacy and concerns about potential retribution further hindered participation. Logistical barriers, such as long commutes, also impacted attendance. Nevertheless, the project demonstrated that de-escalation training can lead to meaningful improvements in skills and awareness even under difficult circumstances.

Implications for Nursing

Specialized de-escalation training is essential for healthcare professionals, particularly in high-stress environments where aggressive patient behaviors occur. Nurses play a critical role in de-escalating aggressive behaviors and managing crises, requiring confidence, assertiveness, and emotional resilience to navigate these situations effectively. Regular simulation-based learning offers a practical, hands-on approach for practicing de-escalation techniques, enabling healthcare professionals to refine their skills in realistic, controlled environments. Mentorship programs further enhance this training by connecting experienced staff with newer professionals and fostering guidance, support, and confidence in handling complex interactions. Additionally, structured communication strategies help standardize responses to aggression, ensuring consistency and effectiveness in conflict resolution. Equally important is cultivating a supportive organizational culture that prioritizes staff well-being and safety. By integrating these strategies,

healthcare organizations can enhance both staff preparedness and patient care, creating a safer and more resilient work environment.

Recommendation

Integrating violence prevention training into nursing curricula and refresher courses for existing staff is essential for improving the management of aggressive behaviors in healthcare settings. Early exposure to de-escalation techniques equips future nurses with the skills and confidence to handle challenging situations effectively, fostering a proactive approach to workplace safety. For current staff, regular refresher courses ensure continued competency, reinforce best practices, and allow healthcare professionals to stay updated on evolving strategies. Training sessions can include simulation-based learning, scenario analysis, and interdisciplinary collaboration to strengthen response mechanisms. By embedding these initiatives into education and ongoing professional development, healthcare organizations create a workforce better prepared to enhance staff well-being, patient safety, and workplace security.

Conclusion

The rise in violent behavior toward healthcare professionals has created a pressing need for effective response strategies. Without proper de-escalation measures, healthcare settings face the risk of increased staff injuries, psychological stress, decreased efficiency, higher medical costs, and greater employee turnover. This project emphasized the significance of structured de-escalation training, in enhancing staff skills and promoting effective teamwork when managing aggressive behaviors. Participants reported improved application of de-escalation techniques, resulting in fewer incidents of aggression and psychiatric emergencies. Despite some initial data variability, there was a consistent decline in aggressive incidents, showcasing the effectiveness of

these strategies. Ongoing education and refresher courses are essential for maintaining positive outcomes and fostering a safe environment for both patients and staff.

References

- Aggarwal, R., & Ranganathan, P. (2019). Study designs Part 4 - Interventional studies. *Perspectives in clinical research*, 10(3), 137–139.
https://doi.org/10.4103/picr.PICR_91_19
- Afshari Saleh, L., Niroumand, S., Dehghani, Z., Afshari Saleh, T., Mousavi, S. M., & Zakeri, H. (2020). Relationship between workplace violence and work stress in the emergency department. *Journal of Injury and Violence Research*, 12(2), 183–190.
<https://doi.org/10.5249/jivr.vo112i2.1526>
- Baig, L., Tanzil, S., Shaikh, S., Hashmi, I., Khan, M. A., & Polkowski, M. (2018). Effectiveness of training on de-escalating violence and managing aggressive behavior faced by health care providers in a public sector hospital of Karachi. *Pakistan journal of medical sciences*, 34(2), 294–299. <https://doi.org/10.12669/pjms.342.14432>
- Bizzarri, J. V., Piacentino, D., Kotzalidis, G. D., Moser, S., Cappelletti, S., Weissenberger, G., Pompili, M., & Conca, A. (2020). Aggression and Violence Toward Healthcare Workers in a Psychiatric Service in Italy: A Retrospective Questionnaire-Based Survey. *The Journal of nervous and mental disease*, 208(4), 299–305.
<https://doi.org/10.1097/NMD.00000000000011111111111126>
- Brenig, D., Gade, P., & Voellm, B. (2023). Is mental health staff training in de-escalation techniques effective in reducing violent incidents in forensic psychiatric settings? - A systematic review of the literature. *BMC psychiatry*, 23(1), 246.

<https://doi.org/10.1186/s12888-023-04714-y>

<https://doi.org/10.1016/j.socscimed.2018.08.029>

Caruso, R., Antenora, F., Riba, M., Belvederi Murri, M., Biancosino, B., Zerbinati, L., & Grassi, L. (2021). Aggressive behavior and psychiatric inpatients: a narrative review of the literature focusing on the European experience. *Current psychiatry reports*, 23(5), 29.

<https://doi.org/10.1007/s11920-021-01233-z>

Carver, M., & Beard, H. (2021). Managing violence and aggression in the emergency department. *Emergency nurse: the RCN Accident and Emergency Nursing Association journal*, 29(6), 32–39. <https://doi.org/10.7748/en.2021.e2094>

Celofiga, A., Kores Plesnicar, B., Koprivsek, J., Moskon, M., Benkovic, D., & Gregoric Kumperscak, H. (2022). Effectiveness of De-Escalation in Reducing Aggression and Coercion in Acute Psychiatric Units. A Cluster Randomized Study. *Frontiers in psychiatry*, 13, 856153. <https://doi.org/10.3389/fpsy.2022.856153>

Černý, M., Hodgins, S., Kučíková, R., Kázmér, L., Lambertová, A., Nawka, A., Nawková, L., Parzelka, A., Raboch, J., Bob, P., & Vevera, J. (2018). Violence in persons with and without psychosis in the Czech Republic: risk and protective factors. *Neuropsychiatric disease and treatment*, 14, 2793–2805. <https://doi.org/10.2147/NDT.S167928>

Chase, S. (2021). The Effectiveness of De-Escalation Techniques as Compared to Physical Restraint/Seclusion on Inpatient Psychiatric Units: A Quantitative Systematic Review. *CNS Spectrums*, 26(2), 175–176. doi:10.1017/S1092852920002874

Chalachew, A., Bikis I., Tilahun, K. (2023). Prevalence and forms of workplace violence against nurses. *International Journal of Africa Nursing Sciences*. Volume 19, 2023, 100620 <https://doi.org/10.1016/j.ijans.2023.100620>

- Cranage, K., & Foster, K. (2022). Mental health nurses' experience of challenging workplace situations: A qualitative descriptive study. *International journal of mental health nursing, 31*(3), 665–676. <https://doi.org/10.1111/inm.12986>
- Converso, D., Sottimano, I., & Balducci, C. (2021). Violence exposure and burnout in the healthcare sector: the mediating role of workability. *La Medicina del lavoro, 112*(1), 58–67. <https://doi.org/10.23749/mdl.v112i1.9906>
- d'Ettorre, G., & Pellicani, V. (2017). Workplace Violence Toward Mental Healthcare Workers Employed in Psychiatric Wards. *Safety and health at work, 8*(4), 337–342. <https://doi.org/10.1016/j.shaw.2017.01.004>
- Du, M., Wang, X., Yin, S., Shu, W., Hao, R., Zhao, S., Rao, H., Yeung, W. L., Jayaram, M. B., & Xia, J. (2017). De-escalation techniques for psychosis-induced aggression or agitation. *The Cochrane database of systematic reviews, 4*(4), CD009922. <https://doi.org/10.1002/14651858.CD009922.pub2>
- Fauzi, F. A., Zulkefli, N. A. M., & Baharom, A. (2023). Aggressive behavior in adolescent: The importance of biopsychosocial predictors among secondary school students. *Frontiers in public health, 11*, 992159. <https://doi.org/10.3389/fpubh.2023.992159>
- Fletcher, A., Crowe, M., Manuel, J., & Foulds, J. (2021). Comparison of patients' and staff's perspectives on the causes of violence and aggression in psychiatric inpatient settings: An integrative review. *Journal of psychiatric and mental health nursing, 28*(5), 924–939. <https://doi.org/10.1111/jpm.12758>
- Garg, R., Garg, N., Sharma, D. K., & Gupta, S. (2019). Low reporting of violence against healthcare workers in India in spite of high prevalence. *Medical journal, Armed Forces India, 75*(2), 211–215. <https://doi.org/10.1016/j.mjafi.2018.11.011>

- Gaynes, B. N., Brown, C. L., Lux, L. J., Brownley, K. A., Van Dorn, R. A., Edlund, M. J., Coker-Schwimmer, E., Weber, R. P., Sheitman, B., Zarzar, T., Viswanathan, M., & Lohr, K. N. (2017). Preventing and De-escalating Aggressive Behavior Among Adult Psychiatric Patients: A Systematic Review of the Evidence. *Psychiatric services (Washington, D.C.)*, 68(8), 819–831. <https://doi.org/10.1176/appi.ps.201600314>
- Hallett, N., & Dickens, G. L. (2017). De-escalation of aggressive behavior in healthcare settings: Concept analysis. *International journal of nursing studies*, 75, 10–20. <https://doi.org/10.1016/j.ijnur>
- Hasan, M. I., Hassan, M. Z., Bulbul, M. M. I., Joarder, T., & Chisti, M. J. (2018). Iceberg of workplace violence in health sector of Bangladesh. *BMC research notes*, 11(1), 702. <https://doi.org/10.1186/s13104-018-3795-6>
- Hiebert, B. J., Care, W. D., Udod, S. A., & Waddell, C. M. (2022). Psychiatric Nurses' Lived Experiences of Workplace Violence in Acute Care Psychiatric Units in Western Canada. *Issues in mental health nursing*, 43(2), 146–153.
- Iskander, M. (2018). Burnout, cognitive overload, and metacognition in medicine. *Medical Science Educator*, 29(1), 325–328. <https://doi.org/10.1007/s40670-018-00654-5>
PMID:34457483
- Johnston, I., Price, O., McPherson, P., Armitage, C. J., Brooks, H., Bee, P., Lovell, K., & Brooks, C. P. (2022). De-escalation of conflict in forensic mental health inpatient settings: a theoretical domain framework-informed qualitative investigation of staff and patient perspectives. *BMC psychology*, 10(1), 30. <https://doi.org/10.1186/s40359-022-00735-6>

- Knox, D. K., & Holloman, G. H. (2021). Use and avoidance of seclusion and restraint: Consensus statement of the American Association for Emergency Psychiatry Project BETA Seclusion and Restraint Workgroup. *Western Journal of Emergency Medicine*, 22(1), 45-52. <https://doi.org/10.5811/westjem.2020.11.49509>
- Kuivalainen, S., Vehviläinen, J. K., Louheranta, O., Putkonen, A., Repo, T. E., & Tiihonen, J. (2017). De-escalation techniques used, and reasons for seclusion and restraint, in a forensic psychiatric hospital. *International journal of mental health nursing*, 26(5), 513–524. <https://doi.org/10.1111/inm.12389>
- Lavelle, M., Ferreira, A.L., Dixen, S., Berring, L.L. (2024). De-Escalation in Mental Health Care Settings. In: Hallett, N., Whittington, R., Richter, D., Eneje, E. (eds) *Coercion and Violence in Mental Health Settings*. Springer, Cham. https://doi.org/10.1007/978-3-031-61224-4_15
- Lavelle, M., Stewart, D., James, K., Richardson, M., Renwick, L., Brennan, G., & Bowers, L. (2017). Predictors of effective de-escalation in acute inpatient psychiatric settings. *Journal of Clinical Nursing*, 25(15-16), pp. 2180–2188. <https://doi.org/10.1111/jocn.13239>
- Lim, M. C., Jeffree, M. S., Saupin, S. S., Giloi, N., & Lukman, K. A. (2022). Workplace violence in healthcare settings: The risk factors, implications, and collaborative preventive measures. *Annals of medicine and surgery* (2012), 78, 103727. <https://doi.org/10.1016/j.amsu.2022.103727>
- Liu, J., Gan, Y., Jiang, H., Li, L., Dwyer, R., Lu, K., Yan, S., Sampson, O., Xu, H., Wang, C., Zhu, Y., Chang, Y., Yang, Y., Yang, T., Chen, Y., Song, F., & Lu, Z. (2019). Prevalence of workplace violence against healthcare workers: a systematic review and meta-analysis.

Occupational and environmental medicine, 76(12), 927–937.

<https://doi.org/10.1136/oemed-2019-105849>

Mandt Systems (2024). Holistic training to reduce workplace violence. Retrieved from

<http://www.mandtsystem.com/who-we-serve/healthcare-services/>

Munday, N., Terry, V., Gow, J., Duff, J., Ralph, N. (2023). Preventing violence against healthcare workers in hospitals: A systematic review of nonpharmacological interventions. *Journal of Nursing Management*, vol. 2023, pp. 1–14. <https://doi.org/10.1155/2023/3239640>

O'Brien, C. J., van Zundert, A. A. J., & Barach, P. R. (2024). The growing burden of workplace violence against healthcare workers: trends in prevalence, risk factors, consequences, and prevention - a narrative review. *EClinicalMedicine*, 72, 102641.

<https://doi.org/10.1016/j.eclinm.2024.102641>

Pérez-Toribio, A., Moreno-Poyato, A. R., Lluch-Canut, T., Molina-Martínez, L., Bastidas-Salvadó, A., Puig-Llobet, M., & Roldán-Merino, J. F. (2022). Relationship between nurses' use of verbal de-escalation and mechanical restraint in acute inpatient mental health care: a retrospective study. *International journal of mental health nursing*, 31(2), 339–347. <https://doi.org/10.1111/inm.12961>

Pompeii, L., Benavides, E., Pop, O., Rojas, Y., Emery, R., Delclos, G., Markham, C., Oluyomi, A., Vellani, K., & Levine, N. (2020). Workplace Violence in Outpatient Physician Clinics: A Systematic Review. *International journal of environmental research and public health*, 17(18), 6587. <https://doi.org/10.3390/ijerph17186587>

Price, O., Papastavrou Brooks, C., Johnston, I., McPherson, P., Goodman, H., Grundy, A., Cree, L., Motala, Z., Robinson, J., Doyle, M., Stokes, N., Armitage, C. J., Barley, E., Brooks, H., Callaghan, P., Carter, L. A., Davies, L. M., Drake, R. J., Lovell, K., & Bee, P. (2023).

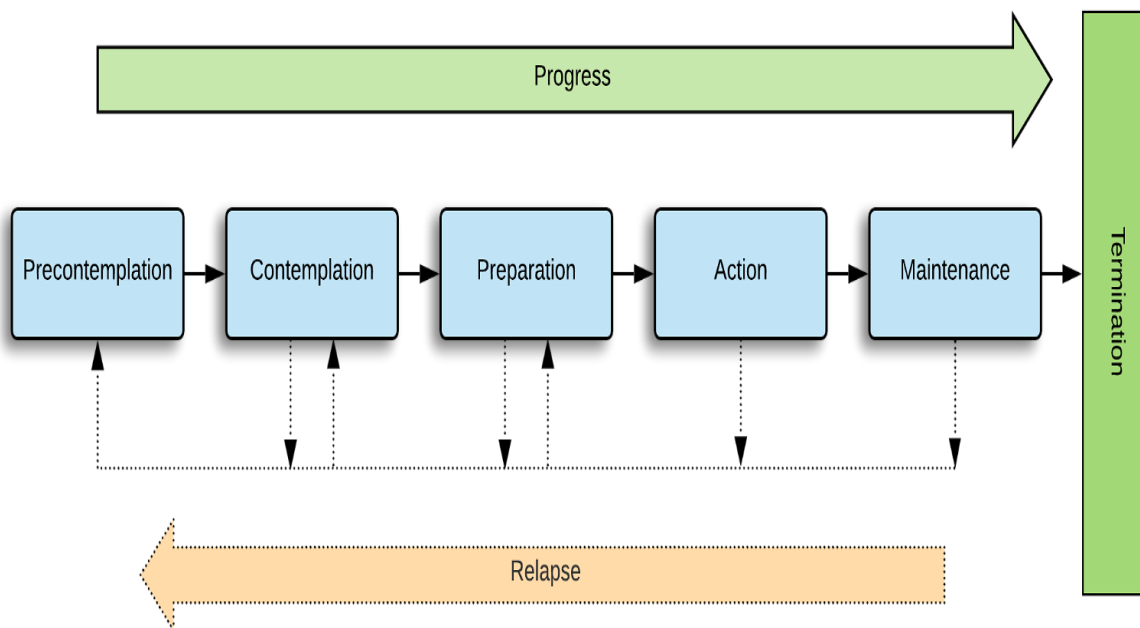
- Development and evaluation of a de-escalation training intervention in adult acute and forensic units: the EDITION systematic review and feasibility trial. *Health technology assessment (Winchester, England)*, 28(3), 1–120. <https://doi.org/10.3310/FGGW6874>
- Prochaska, J. O., & DiClemente, C. C. (1983). Stages and processes of self-change of smoking: toward an integrative model of change. *Journal of consulting and clinical psychology*, 51(3), 390–395. <https://doi.org/10.1037//0022-006x.51.3.390>
- Prochaska, J. O., & Velicer, W. F. (1997). The transtheoretical model of health behavior change. *American journal of health promotion: AJHP*, 12(1), 38–48. <https://doi.org/10.4278/0890-1171-12.1.38>
- Robles-Haydar, A., Martínez-González, B., Flórez-Niño, A., Ibáñez-Navarro, M., & Amar-Amar, J. (2021). Personal and Environmental Predictors of Aggression in Adolescence. *Brain sciences*, 11(7), 933. <https://doi.org/10.3390/brainsci11070933>
- Shah, H., Somaiya, M., Chauhan, N., & Gautam, A. (2023). Clinical practice guidelines for assessment and management of children and adolescents presenting with psychiatric emergencies. *Indian Journal of Psychiatry*, 65(2), 159–174. https://doi.org/10.4103/indianjpsychiatry.indianjpsychiatry_494_22
- Somani, R., Muntaner, C., Hillan, E., Velonis, A. J., & Smith, P. (2021). A Systematic Review: Effectiveness of Interventions to De-escalate Workplace Violence against Nurses in Healthcare Settings. *Safety and health at work*, 12(3), 289–295. <https://doi.org/10.1016/j.shaw.2021.04.004>
- Spencer, S., Johnson, P., & Smith, I. C. (2018). De-escalation techniques for managing non-psychosis induced aggression in adults. *The Cochrane database of systematic reviews*, 7(7), CD012034. <https://doi.org/10.1002/14651858.CD012034.pub2>

- Välimäki, M., Lam, J., Bressington, D., Cheung, T., Wong, W. K., Cheng, P. Y. I., Ng, C. F., Ng, T., Yam, C. P., Ip, G., Paul, L., & Lantta, T. (2022). Nurses', patients', and informal caregivers' attitudes toward aggression in psychiatric hospitals: A comparative survey study. *PloS one*, 17(9), e0274536. <https://doi.org/10.1371/journal.pone.0274536>
- Ye, J., Xiao, A., Wang, C., Xia, Z., Yu, L., Li, S., Lin, J., Liao, Y., Xu, Y., & Zhang, Y. L. (2020). Evaluating the effectiveness of a CRSCE-based de-escalation training program among psychiatric nurses: a study protocol for a cluster randomized controlled trial. *BMC health services research*, 20(1), 642. <https://doi.org/10.1186/s12913-020-05506-w>

Appendices

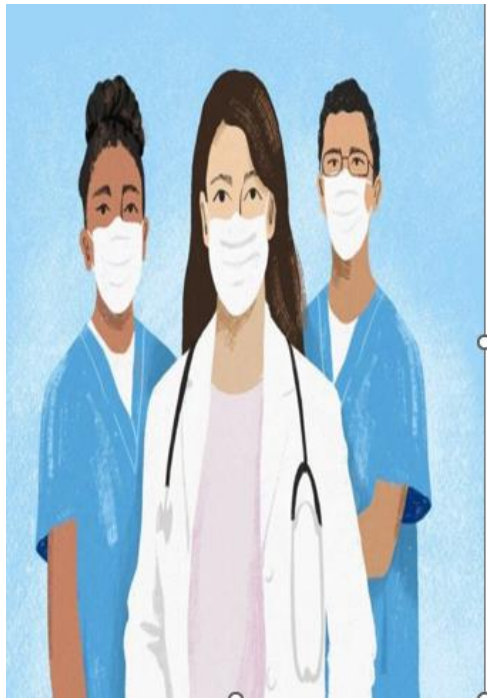
Appendix A

Transtheoretical Model of Behavioral Change



Appendix B

Recruitment Flyer



We are Recruiting!

**TRAINING TOPIC: DE-ESCALATING AGGRESSIVE
BEHAVIOR FOR REGISTERED NURSES' AND MENTAL
HEALTH WORKERS**

PRESENTER: BRIGHT IHESIENE (DNP STUDENT)

Location: F2 Training Room

Date: October 21 to November 1, 2024.

Upcoming Training Session on Select Days:

Monday: 1pm-2pm, Wed: 6pm-7pm, Friday: 1pm-2pm

Are you ready to join the study as a volunteer?

Target: Registered Nurses and Mental Health Workers.

For Registration to participate in the study and select training session,
and question, Please contact: bihesiene@umass.edu

Food will be served and \$20 Gift card for participation.

Appendix C

Voluntary Recruitment Letter

Subject: Invitation to Participate in De-Escalation Training and Survey

Hi,

You are invited to participate in a research study required for my Doctor of Nursing Practice degree at the University of Massachusetts, Amherst. This letter serves as a recruitment invitation and an opportunity for you to participate in de-escalation training and a survey. This study investigates how practical de-escalation training can empower nurses and mental health workers to manage aggressive patient behavior effectively, thereby improving patient outcomes and reducing violent incidents. Your assistance in collecting data on aggressive patient incidents and staff de-escalation skills is precious.

Description of the Project: This DNP project is not just about data collection but aims to assess the effectiveness of de-escalation training in enhancing staff's ability to handle aggressive patient behavior. Training is a crucial part of this project and a valuable opportunity for you to gain the necessary skills and knowledge to improve patient outcomes and minimize violent incidents. Participating in this training will benefit the study and enhance your professional development.

Tracking Aggressive/Potentially Aggressive Incidents: Enclosed, you will find a copy of the proactive tracking tool for the inpatient ward. The principal investigator will add the aggressive inpatient tool tracker daily to the charge nurse clipboard. The nurses in charge, with your support, will be responsible for filling out this sheet based on the information provided to them

by the staff about any incidents that occur during their shifts. This data will be gathered manually to address inquiries, highlighting the importance of accurate and timely reporting.

Tracking Dates: The principal researcher will start monitoring any instances of aggressive behavior or potential aggression four weeks before and after the training session on Thursday, September 9 to October 7, 2024, at 7 am, and October 21 to November 21, 2024. At the end of this monitoring period, the PI will allow the staff to participate in a training session focusing on effective de-escalation techniques.

Training Session: Join us for our upcoming de-escalation training, which includes five sessions and will take place in the F 2 Training Room from October 7, 2024, to November 14, 2024. The schedule follows Mondays from 1 pm to 2 pm, Wednesdays from 6 pm to 7 pm, and Fridays from 1 pm to 2 pm. Please note that each session can only accommodate a maximum of seven participants, so signing up in advance is essential. To register, please contact the PI at bihesiene@umass.edu.

Participation: In this upcoming project, participants will be able to participate in a specialized training session that focuses on learning effective de-escalation strategies. Participants will be asked to complete a brief pretest survey. Once the pretest survey is completed, the PI will present a PowerPoint presentation on “De-escalating Aggressive Behavior in Patients” and a 15-minute Q&A session for the participants to share their constructive responses and arguments concerning the presentation. Participants will also receive and complete an email containing a link to a post-test survey four weeks after the training. Each survey takes around 10 minutes to complete. The PI will provide these incentives to all participants, regardless of the length of their attendance. Participation in the de-escalation training program is optional, and participants are not obligated

to continue if they feel not to stay, as there are no additional compensations apart from the voluntary incentives provided.

Confidentiality is of utmost importance in this project. Participants can join the study and leave at any point, and all information gathered will be analyzed and reported without any personal identifiers. Your privacy is our priority, and all data is handled carefully.

Contact Information: For questions or queries about this DNP project, please contact the PI, Bright Ihesiene, directly at bihesiene@umass.edu. I look forward to working with you on this project, which aims to significantly impact patient care and staff safety by assessing de-escalation training.

Appendix D

Informed Consent Letter

Consent Form for Participation in a Research Study

University of Massachusetts Amherst

Researcher(s): Bright Uloma Ihesiene**Study Title: De-escalating Aggressive Behavior in Patients at a Psychiatric Hospital Central Massachusetts: A Quality Improvement Project****What is this form?**

Your participation in this quality improvement project is crucial and greatly appreciated. I invite you to participate in a project required to complete my Doctor of Nursing Practice degree at the University of Massachusetts, Amherst. This form is called a Consent Form. It will give you information about the study so you can make an informed decision about participating in this project. We encourage you to take some time to think this over and ask questions now and at any other time. If you decide to participate, you will be asked to sign this form and given a copy of your records.

What Are Some of The Essential Aspects of This Research Study That I Should be Aware of?

The fact that consent is being sought for research and that participation is voluntary. The research aims to investigate how practical de-escalation training can empower nurses and mental health workers to reduce aggressive behavior among patients. The expected duration of the subject's participation is three months, and the procedures to be followed in the study include recruitment, signing informed consent forms, pre-and post-test surveys, and a PowerPoint presentation during a training session.

The reasonably foreseeable risks or discomforts to the prospective subject may include:

Physical Risks: The study expects minimal risk of injury and offers no compensation for injuries.

Psychological Risks: Participants experiencing anxiety or distress can immediately access counseling services for support. *Economic Risks:* Steps have been taken to minimize economic risks, such as maintaining wages and conducting the study outside regular work hours.

Social, Cultural, and Political Risks: Measures have been taken to minimize embarrassment and ensure comfort during participation. *Breach of Confidentiality Risk:* Only essential personal information will be collected to minimize the risk of loss of privacy.

The Participants may not directly benefit from this research; The PI will provide voluntary incentives of \$20 gift cards and snacks to all participating participants, regardless of the length of their attendance. Participants are not obligated to continue if they feel they should not stay, as there are no additional compensations apart from the voluntary incentives. Appropriate alternative procedures or courses of treatment, if any, that might benefit the prospective subject do not apply to this study.

Why Are You Doing This Research Study?

This research study investigates how de-escalation training can empower nurses and mental health workers to reduce aggressive patient behavior effectively.

Who Can Participate in This Research Study?

The target population for this study is adult healthy volunteers of diverse ethnicities who meet the inclusionary criteria, which include age 20 years and above and a role as a mental health worker or registered nurse working three shifts: morning, evening, and night at the adolescent and forensic units in a psychiatric hospital. The exclusion criteria are health administrators, social workers, primary care providers, and other secondary ancillary staff who are not directly involved in patient care and work in different facility departments.

Where Will This Research Study Take Place and How Many People Will Participate?

The research will be conducted in a psychiatric hospital's forensic and adolescent units in Central Massachusetts, chosen due to their higher incidence of aggressive behaviors. The sample size of participants for this research is 45 enrollees consisting of 27 registered nurses and 18 mental health workers sampled using convenience sampling. The participation time for this study is three months.

What Will I Be Asked to Do, And How Much Time Will It Take?

If you agree to participate in this study, you will be asked to:

Sign an attendance form and provide informed consent before participating. The Principal Investigator (PI) will thoroughly explain the DNP project to the participants and allow them to ask questions or decline to participate. The PI will also collect the participants' email addresses to

link them to pretest and posttest surveys. The PI will protect the identities and responses of the participants by assigning a unique Subject Identification Number, which will not link any participant's personal information. This method will ensure confidentiality and trustworthiness of the research process.

Pretest: The PI will ask the participants to complete the pretest question survey. You may skip any questions that you feel uncomfortable answering. Participants will use the training center's computers by clicking a Google survey link. Each participant will receive a link to the pretest survey in their email, which includes their demographic data as specified by the PI. Upon completion, the participants will answer the self-reported questionnaire, which will feature five-item Likert-anchored response options: Strongly Disagree (1), Disagree (2), Not Sure (3), Agree (4), and Strongly Agree (5). Once the pretest survey is completed, the PI will present a PowerPoint presentation on the effectiveness of de-escalation strategies and a 15-minute Q&A session for the participants to share their constructive criticism, responses, and arguments concerning the presentation.

Post-test: After completing the PowerPoint presentation and the interactive Q&A session, the PI will express gratitude to the participants and inform them that they will receive an email requesting them to complete a post-test survey using the Google form platform to assess the effectiveness of the de-escalation training after four weeks.

Duration: Participants willing to participate in the study will be asked to take a pretest survey (10 minutes). Each participant will be involved in two sessions: a 45-minute PowerPoint presentation and 15 minutes of question-and-answer, each lasting 60 minutes. After completing the

PowerPoint presentation and the interactive Q&A session, they will later complete a post-test survey (10 minutes) using Google Survey four weeks after the training.

Will Being in This Research Study Help Me in Any Way?

You may not directly benefit from this research; however, we hope your participation in the study and de-escalation training program is voluntary. The PI will provide voluntary incentives of \$20 gift cards and snacks to all participating participants, regardless of the length of their attendance. Participants are not obliged to continue if they feel they should not stay, as there is no additional compensation apart from the voluntary incentives provided. The research findings may yield little benefit, but they show promising potential for expanding or extending the training program. These findings could positively impact patient care by giving registered nurses and mental health workers the tools to effectively handle aggressive patient behavior using a practical and reassuring de-escalation training approach. These findings could improve patient outcomes and decrease aggressive incidents in forensic and adolescent units.

What Are My Risks of Being in This Research Study?

The reasonably foreseeable risks or discomforts to the prospective subject may include:

Physical Risks: The study expects minimal risk of injury and offers no compensation for injuries. **Psychological Risks:** Participants experiencing anxiety and distress and feeling uncertain about how the study findings will be shared can immediately access counseling services for support from the Center for Counselling and Psychological Health at the University of Massachusetts or the project site's Counseling and Psychological Health Support. **Economic Risks:** Steps have been taken to minimize financial risks, such as getting full support from the

project site to conduct the study, ensuring that wages for employees are not lost, and conducting the survey outside regular work hours, off-schedule, and non-peak periods. **Social, Cultural, and Political Risks:** Measures have been taken to minimize embarrassment and ensure comfort during participation. Interviews are conducted in the closed and secured training room office, where only authorized study team members can meet with the participants. **Breach of Confidentiality Risk:** The risk of breach of confidentiality always exists. However, steps have been taken to minimize this risk. Only essential personal information will be collected to reduce the risk of loss of privacy.

How Will My Personal Information Be Protected?

Your privacy and confidentiality are of utmost importance to us. The PI will use the following procedures to protect the confidentiality of your study records. The PI will protect the identities and responses of the participants by assigning a unique Subject Identification Number, which will not link any participant's personal information. The PI will keep all study records in a secure, locked file cabinet, including any codes to your data. The PI will store signed consent documents securely and separately from the research data. The PI will not collect audio, video, or digital recordings involving the participants during the study. All electronic files containing identifiable information such as age, race, level of education, and role in the unit will be in a secure, password-protected Excel spreadsheet for three months and destroyed three years after participants complete the follow-up post-test survey.

Any computer hosting such files will also have password protection to prevent access by unauthorized users. Only the members of the research staff will have access to the passwords. After this study, the PI may publish their findings. Information will be presented in summary

format, and you will not be identified in any publications or presentations. Only the members of the research staff will have access to the passwords. The participants' privacy will be protected when conducting study procedures in a private location, and only authorized research team members will be allowed to meet with research participants. In some situations, such as during the question-and-answer training sessions, your confidentiality cannot be guaranteed; the PI has taken steps to minimize this risk.

After this study, the PI may publish their findings, and information will be presented in summary format. You will not be identified in any publications or presentations. The PI may publish their findings. Information will be presented in summary format, and you will not be identified in any publications or presentations.

What If There Is an Unexpected Finding on Tests Conducted on My Biospecimens?

Not Applicable

Will My Information (Biospecimens or Private Information) Be Used for Research in The Future?

Not Applicable

Will I Be Given Any Money or Other Compensation for Being in This Research Study?

Participation in this research is entirely voluntary. You may not directly benefit from this research; however, the PI will give a \$20 gift card and snacks to participants who participate in the study and the de-escalation training program, regardless of the length of their attendance. It is important to note that you are not obligated to continue if you feel you should not stay. We respect your decision and want you to feel in control of your participation.

Who Can I Talk to if I Have Questions?

The PI will happily answer any questions you have about this study. If you have further questions about this project or a research-related problem, contact the principal investigator, Bright Ihesiene. If you have any questions concerning your rights as a research subject, you may contact the University of Massachusetts Amherst Human Research Protection Office (HRPO) at (413) 545-3428 or humansubjects@ora.umass.edu

What Happens If I Say Yes but Change My Mind Later?

You do not have to be in this study if you do not want to. If you agree to be in the study but later change your mind, you may drop out at any time. There are no penalties or consequences if you decide you do not want to participate.

What If I Am Injured?

This is not applicable because, given the minimal participation in this study, no injuries or adverse events are expected to occur, and no compensation for injuries will be provided. Also, the University of Massachusetts does not have a program for compensating subjects for injury or complications related to human subjects' research.

Subject Statement of Voluntary Consent

When signing this form, I agreed to enter this study voluntarily. I have had a chance to read this consent form, and it was explained to me in a language that I use. I have had the opportunity to ask questions and have received satisfactory answers. I have been informed that I can withdraw at any time. A copy of this signed Informed Consent Form has been given to me.

Participant Signature: _____ Print Name: _____ Date: _____

By signing below, I indicate that the participant has read and, to the best of my knowledge, understands the details in this document and has been given a copy.

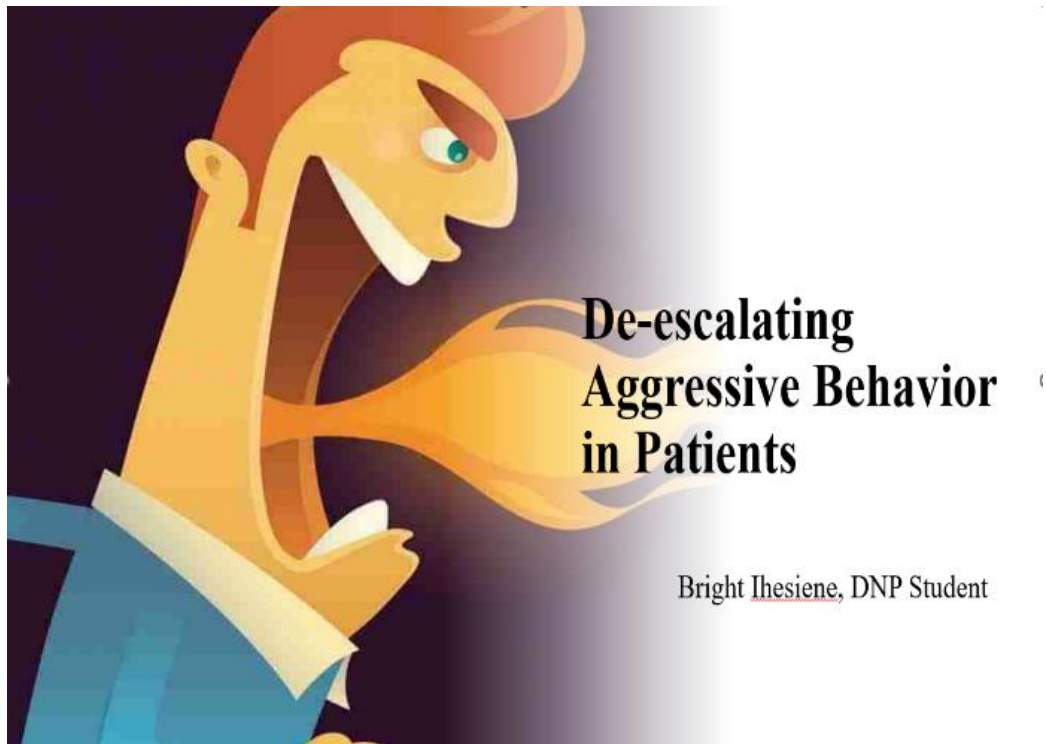
Signature of Person

Print Name:

Date:

Appendix E

PowerPoint Presentation



What is Aggressive Behavior?

- Aggressive behavior is the observable manifestation of aggression and is often associated with developmental transitions and a range of medical & psychiatric diagnoses across the lifespan.

(Liu et al., 2013)



Facts about Aggressive Behavior

- Aggressive behavior and violence are not synonymous.
- Violence is a form of physical assault, while Aggressive behavior includes physical, verbal, psychological, & other means of causing harm.



Why Aggressive Behavior?

- Possible adverse public health outcomes.
- Youth violence.
- Increased medical resource use (e.g., emergency department, psychiatric, and critical care).
- Economic costs.
- Greater involvement in the criminal justice system.



Risk Factors

- Biological causes include genetics, medical and psychiatric diseases, neurotransmitters, hormones, substances of abuse, pain, and medications.
- Psychological causes include bipolar affective disorder, schizophrenia, major depression, general anxiety disorder, and antisocial personality.
- Socioeconomic causes include interpersonal, social, group, neighborhood, economic, and cultural conditions.



([Soreff et al.](#), 2023)

Prevalence Rate of Aggressive Behavior

- 50% of all violent incidents with psychiatric illness occur during psychiatric care. (Lopez-Garcia et al., 2019)
- One-fifth of patients experienced suicidal thoughts and behavior during their first psychosis episode (Lopez-Garcia et al., 2019)
- 8% to 44% of patients classified as aggressive during their acute psychiatric treatment (Zhou et al., 2016)
- 27.8% and 7.4% of patients with Alzheimer's disease (AD) and mild cognitive impairment (MCI). (Zhou et al., 2016)
- Patients with schizophrenia have higher rates of 15.3%–53.2%. (Markiewicz, 2020)

Mandt System and Aggression

- The Mandt System offers holistic, evidence-based training to reduce workplace violence.
- Emphasizes building positive relationships and focuses on prevention, de-escalation, and intervention strategies.
- Mandt System training programs are trauma-informed and aim to build positive relationships and foster a safer workplace culture.



(The Mandt System, 2024).



Key Areas Of Mandt System For Healthcare Services

The Mandt System emphasizes relational skills, conceptual skills, and technical skills.

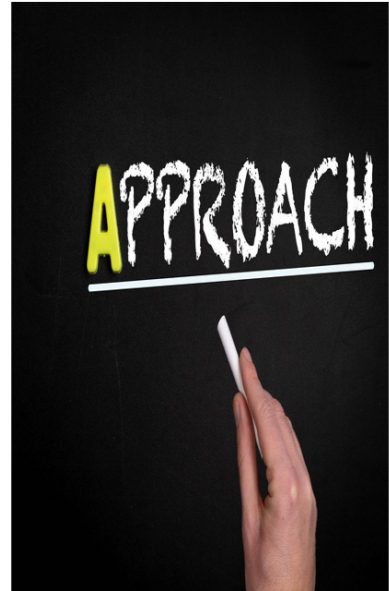
- I. Relational skills focus on building healthy relationships, effective communication, and conflict resolution.
- II. Conceptual skills involve understanding models like Maslow's Hierarchy of Needs and the Crisis Cycle.
- III. Technical skills include physical interactions and restraint as a last resort. The goal is to minimize physical interventions by improving non-physical interactions.

Mandt System, 2024



Holistic Approaches of Mandt

- **Relational Approach:** This is the core of the Mandt System. It focuses on building and maintaining healthy relationships based on trust, dignity, and respect.
- **Proactive Strategies:** Techniques like RADAR (Recognize, Assess, Decide, Act, and Review) are proactive measures that help identify potential issues early and take appropriate actions to prevent escalation.
- **Crisis Cycle Management:** It is crucial to understand the stages of a crisis and how to respond at each stage. This helps de-escalate situations before they become more serious.



- **Healthy Communication:** Emphasizing clear, open, and honest communication to build trust and prevent misunderstandings. This includes both verbal and non-verbal communication techniques.
- **Conflict Resolution:** Techniques for managing and resolving conflicts healthily, ensuring all parties feel heard and respected.
- **Physical Techniques:** When necessary, the Mandt System includes physical techniques designed to ensure safety and minimize harm.
- **Ongoing Learning and Development:** The program emphasizes continuous learning and growth, encouraging participants to update their skills and knowledge regularly.



De-escalation Skills Using Mandt Relational Approach

Communicate

Talk to the client experiencing conflict and evaluate their responses.

Focus on Feelings

Listen and give a validating, heartfelt response to the client during a crisis.

Moment of Silence

Allow the client to think about the answer and repeat the question if the client needs clarification.

Clarify What They Said

Understand the client by asking questions for clarification.

Remain in Control

Always remain in control of my behaviors during a crisis event, ensuring the client feels safe and secure.



Formulate a plan

Make decisions before a crisis, visualize potential outcomes, and plan accordingly.

Work Together

Stay professional and stable when there is a supportive team during a crisis event.

Remain Positive

Do not harp on negatives, but remain positive when the client in crisis.

Understand Your Limits

Know when to step back and let someone else handle an aggressive situation.

Debrief

After an incident, huddle with colleagues and talk about it.



De-escalation Strategies

- Be calm and clear
- Use non-threatening body language
- Avoid abbreviations and healthcare terms
- Be respectful
- Support the patient's issues
- Use risk assessment tools
- Set clear limits
- Offer concise and respectful choices
- Consider environmental controls

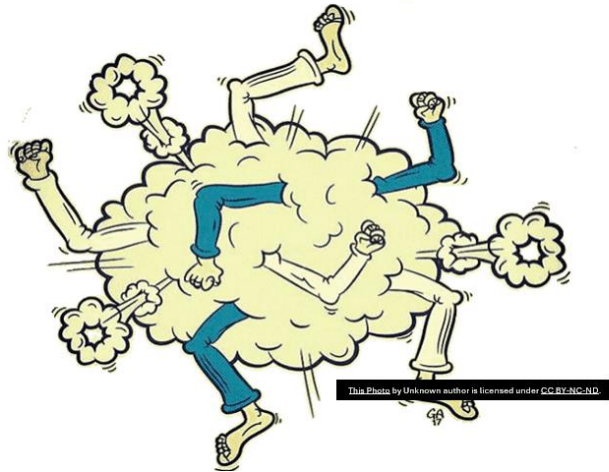
(Joint Commission, 2019)



Components of Staff-delivered De-escalation Technique

-
- Effective communication
 - Self-regulation,
 - Thorough assessment,
 - Timely actions,
 - Safety maintenance.

Hallett et al., 2017



References

- Hallett, N., & Dickens, G. L. (2017). De-escalation of aggressive behavior in healthcare settings: Concept analysis. *International journal of nursing studies*, 75, 10–20. <https://doi.org/10.1016/j.ijnur>
- Krahé, B. (2021). Aggression: Risk Factors in the Person and the Situation. *Oxford Research Encyclopedia of Psychology*. <https://doi.org/10.1093/acrefore/9780190236557.013.744>
- Liu, J., Lewis, G., & Evans, L. (2013). Understanding aggressive behavior across the lifespan. *Journal of psychiatric and mental health nursing*, 20(2), 156–168. <https://doi.org/10.1111/j.1365-2850.2012.01902.x>
- Lopez-Garcia, P., Ashby, S., Patel, P., Pierce, K. M., Meyer, M., Rosenthal, A., Titone, M., Carter, C., & Niendam, T. (2019). Clinical and neurodevelopmental correlates of aggression in early psychosis. *Schizophrenia Research*, 212, 171–176. <https://doi.org/10.1016/j.schres.2019.07.045>
- Mandt Systems (2024). Holistic training to reduce workplace violence. Retrieved from <http://www.mandtsystem.com/who-we-serve/healthcare-services/>
- Markiewicz, I., Pilszyk, A., & Kudlak, G. (2020). Psychological factors of aggressive behavior in patients of forensic psychiatry wards with the diagnosis of schizophrenia. *International journal of law and psychiatry*, 72, 101612. <https://doi.org/10.1016/j.ijlp.2020.101612>
- Soreff, S., Gupta, V., Wadhwa, R., Arif, H. (2023). Aggression. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK448073/>
- The Joint Commission. (2019). Physical and verbal violence against health care workers." Sentinel Event Alert 57.
- Zhou, J. S., Zhong, B. L., Xiang, Y. T., Chen, Q., Cao, X. L., Correll, C. U., Ungvari, G. S., Chiu, H. F., Lai, K. Y., & Wang, X. P. (2016). Prevalence of aggression in hospitalized patients with schizophrenia in China: A meta-analysis. *Asia-Pacific psychiatry : official journal of the Pacific Rim College of Psychiatrists*, 8(1), 60–69. <https://doi.org/10.1111/appy.12209>

Appendix F

Permission Letter to use the Mandt Material

Bright Ihesiene

Mon, Sep 9, 4:09 AM

(3days ago)

Hi Dr Shannon

Good morning. McKenzie referred me to you. My name is Bright Ihesiene, and I am a doctoral student in Nursing Practice at the University of Massachusetts, Amherst, specializing in psychiatric mental health. I am leading a scholarly quality improvement project titled "Assessing the Effectiveness of De-escalation Training in Enhancing the Ability of Registered Nurses and Mental Health Workers to Handle Aggressive Patient Behavior." I am seeking your permission to use some information from the Mandt System® Approach outline as a relational concept to develop a self-reporting tool (questionnaire). Additionally, I plan to incorporate a PowerPoint presentation on de-escalation during the educational intervention training for registered nurses and mental health workers. I intend to use some parts of the wording from the Mandt outline for the presentation. I am eager to hear back from you since I plan to conduct the training and presentation this month. I appreciate your consideration.

Bright Ihesiene

Dale Shannon

9:21 AM (1 hour ago)

to Simon, John@mandt, Kevin, me

Bright,

You may use Mandt materials in your project. Here are a few considerations.

I have made a few edits to your presentation to present our Mandt 3.0 materials. If you choose to use your original wording, be aware that those materials will be replaced in January 2025. The Mandt 2.0 material is neither wrong nor incorrect; we are improving it with 3.0. These changes are primarily on slide #8, where you lay out the critical areas of Mandt.

A few choices in how you present our material in the presentation and questionnaire could be improved. From Questionnaire #1 Communication, the wording could be misinterpreted. It reads, "I talk to the client experiencing conflict and evaluate their responses." The word 'evaluate' could be misunderstood. It would align with our approach to phrase this: "I talk with the client experiencing conflict and work to understand their responses."

Question #8, Remain Positive, reads, "I do not harp on negatives but remain positive when a client is in crisis." The word 'harp' seems judgmental. It would fit our approach better if you reworded this as "I do not focus on negatives but remain positive when a client is in crisis."

Both wording choices are in the presentation and the questionnaire.

When you have completed your project, we would appreciate it if you could send us a copy.

Best of luck with your work. If I can be of any assistance, please let me know!

Sincerely

Dale L. Shannon, PhD (He/Him)

Director of Instructional Design and Governance/National Faculty Member

Cell: [616.915.2480](tel:616.915.2480) | dale@mandtsystem.com

Office: [800.810.0755](tel:800.810.0755) | Fax: [877.205.2821](tel:877.205.2821)

Appendix G

Self-Reporting Questionnaire on De-escalation Skill

Date:

ID # (Full initials including middle initial - the year you were born: "SMB -1980") _____

Choose the number that best describes your de-escalation skill.

		Strongly Disagree 1	Disagree 2	Not sure 3	Agree 4	Strongly Agree 5
1	Communication. I talk with the client experiencing conflict and words to understand their responses.					
2	Focus on Feeling. I listen and give a validating, heartfelt response to the client during a crisis.					
3	Moment of Silence. During a crisis event, I allow the client to think about the answer and repeat the question if the patient is confused.					
4	Clarify what is Said. I understand the client by asking questions for clarification during a crisis event.					
5	Remain in Control. I always remain in control of my behaviors during a crisis event.					
6	Formulate a Plan. I make decisions before a crisis, visualize potential outcomes, and plan accordingly.					
7	Work Together. I stay professional and stable when there is a team to support me during a client crisis event.					
8	Remain Positive. I do not focus on negatives but remain positive when a client is in crisis.					
9	Understand Limit. I know when to step back and let someone else handle the client's aggressive situation.					
10	Debriefing. After a client crisis incident, I huddled with colleagues and talk about it.					

Appendix H

Inpatient Flowsheet Aggression Tracker

[illegible]

Appendix I

UMass IRB

UMassAmherst

Human Research Protection Office

Mass Venture Center
100 Venture Way, Suite 116
Hadley, MA 01035
Telephone: 413-545-3428

Date: August 30, 2024

To: Professor Hyeyoung Park and Bright Ihesiene, College of Nursing

From: Professor Lynnette Leidy Sievert, Chair, University of Massachusetts Amherst IRB

Protocol Title: *De-escalating Aggressive Behavior in Patients at a Psychiatric Hospital Central Massachusetts: A Quality Improvement Project*

Protocol ID: 5704

Review Type: Expedited – NEW

Category: 7

Approval Date: 08/30/2024

Award #:

No Continuing Review Required

This study has been reviewed and approved by the University of Massachusetts Amherst IRB, Federal Wide Assurance # 00003909. Approval is granted with the understanding that investigator(s) are responsible for:

Consent forms - A copy of the approved consent form (with the IRB stamp) must be used for each participant (Please note: Online consent forms will not be stamped). Investigators must retain copies of signed consent forms for six (6) years after close of the grant, or three (3) years if unfunded.

Use only IRB-approved study materials (e.g., questionnaires, letters, advertisements, flyers, scripts, etc.) in your research.

Revisions - All changes to the study (e.g. protocol, recruitment materials, consent form, additional key personnel), must be submitted for approval in e-protocol before implementing the changes. New personnel must have completed CITI training.

Final Reports - Notify the IRB when your study is complete by submitting a Close Request Form in the electronic protocol system.

Serious Adverse Events and Unanticipated problems involving risks to participants or others - All such events must be reported in the electronic protocol system as soon as possible, but no later than five (5) working days.

Annual Check In - HRPO will conduct an annual check in to determine the study status.

Please contact the Human Research Protection Office if you have any further questions. Best wishes for a successful project.

Appendix J

Department of Mental Health IRB



*The Commonwealth of Massachusetts
Executive Office of Health and Human Services
Department of Mental Health
25 Staniford Street
Boston, Massachusetts 02114-2575*

CHARLES D. BAKER
Governor

KARYN E. POLITO
Lieutenant Governor

MARYLOU SUDDERS
Secretary

BROOKE DOYLE
Commissioner

(617) 626-8000
www.mass.gov/dmh

Amendment: Notification of IRB Approval

To: Bright Uloma Ihesiene

Protocol #: 2024-08

Title of Protocol: De-escalating Aggressive Behavior in Patients at a Psychiatric Hospital Central
Massachusetts: A Quality Improvement Project

Review Type: Expedited

Amendment #: 1

Approval Date: 09/19/2024

Expiration Date: 09/04/2025

This certifies that the action on the research study referenced was reviewed by the DMH Institutional Review Board (DMH IRB), the appropriately authorized Institutional Review Board (IRB) and Privacy Board appointed to review research involving human subjects. This action was reviewed via expedited review.

This amendment was eligible for expedited review and is approved as follows:

1. Minor edits to Demographic, Questionnaire and Appendix to incorporate MANDT faculty feedback

The following documents were reviewed and approved:

1. Demographic, Questionnaire and Appendix, v.2024.09.19

PLEASE NOTE:

As Principal Investigator, you are responsible for ensuring that this project is conducted in compliance with all applicable Federal, State and Local Laws and regulations, DMH institutional policies, and requirements of the DMH IRB, which include, but are not limited to, the following:

1. No changes will be made to the IRB-approved research protocol and associated documents without first submitting a request to the DMH IRB and receiving the IRB's approval. The only exception to this requirement to obtain prior approval is when it is necessary to eliminate an apparent immediate hazard to subjects (45 CFR 46.103(b)(4)). Changes made to eliminate apparent hazards to subjects must be reported to the IRB as a deviation.
2. Using the DMH IRB-approved consent process(es), PI and research staff will obtain and document informed consent (unless waived) and HIPAA research authorization (when applicable) from participants or their legally authorized representative (LAR) prior to the participant's involvement in the research. Please photocopy and use only the DMH IRB date stamped consent form for this project.
3. Submission of any and all reportable events including adverse events, protocol deviations and new information consistent with the DMH IRB policy on unanticipated problems and informing all investigators

and research staff listed on the study of protocol modifications and unanticipated problems, including adverse event(s), involving risks to subjects or others.

4. Promptly reporting to the DMH IRB any known instances of noncompliance and complaints made by subjects in connection with this study.
5. Informing subjects of any significant new findings during the course of the study that may relate to their willingness to continue to participate.
6. Obtaining Continuing Review and approval of ongoing research at the interval determined by the IRB (at least annually) to avoid expiration of IRB approval and cessation of all research activities. PI will submit a final DMH IRB Progress Report to the IRB and other required reports to sponsors or funding/regulatory agencies, as applicable, when all research activities have ended.
7. Investigators and research staff are responsible for informing the IRB whenever there is a change to the information contained in the initial COI disclosure if a) he/she has acquired new financial interest(s) related to the study protocol and/or b) any of their previously reported financial interests related to the study protocol have changed.

If there are any questions you may contact the DMH IRB at 617-626-8072.

For the Committee,

A handwritten signature in dark ink, appearing to read 'M Guyer PhD', is written over a light blue horizontal line.

Margaret Guyer, PhD
Chair, DMH Institutional Review Board
IRB Registration IORG0000186, FWA00000324

09/19/2024
Date of Correspondence

cc:

Appendix K

Certificate of Human Research



Completion Date 29-Sep-2021
Expiration Date 28-Sep-2026
Record ID 45351545

This is to certify that:

BRIGHT IHESIENE

Has completed the following CITI Program course:

Not valid for renewal of
certification through CME.

Human Research
(Curriculum Group)

Group 1 Biomedical Research Investigators and Key Personnel
(Course Learner Group)

1 - Basic Course
(Stage)

Under requirements set by:

University of Massachusetts Amherst

CITI
Collaborative Institutional Training Initiative

101 NE 3rd Avenue, Suite 320
Fort Lauderdale, FL 33301 US
www.citiprogram.org

Generated on 16-Aug-2024. Verify at www.citiprogram.org/verify/?w5e986b3e-96a1-4aea-ae1a-819e87a28fed-45351545

Appendix L

Projected Summary of Expenses

Budget Item	Cost	Total Cost to Student	In-Kind
Staff time for attending training sessions	20 RNs at \$47/hr. x 1 = \$940 30 MHWs at \$20/hr. x 1 = \$600	\$00.00	Project Site
Stationaries	A4 Paper at \$25 x 1 box = \$25 Printer ink at \$86 x 1 Packet = \$86 Ballpoint pen x 1 Packet at \$25 = \$25	\$00.00	Project Site
Training Room and audio-visual equipment	Hospital-owned training room with seven desktop computers, one printer, one projector, one laptop, two microphones, and one medium-sized speaker at \$0/hr x 1	\$ 00.00	Project site
Printing poster for DNP presentation	Poster	\$120.00	
Gift Cards	Walmart gift cards at \$20/card x 10 = \$180	\$180.00	
Light refreshment	10 boxes of O' Joe at 17.99 x 5 = \$89.95 Dozen donuts at \$13.99 x 5 = \$69.95	\$159.90	
Statistician for survey design /data analysis	\$35 per/hour x 5 hours = \$175	\$175.00	
Grand Total		\$634.00	

Appendix M

Timeline for DNP Q.I Project

Task	Start Date	Completion Date
*IRB approval public hearing with DMH *UMass IRB amendment and approval.	June 04- 2024	Sept 18-2024
*Write the first proposal draft. * Meet with the project chair.	June 04-2024	Sept 13-2024
*Revision of the 2nd draft proposal and approval from chair. * Zoom meeting with the faculty.	Sept 16- 2024	Sept 27-2024
*Meeting with stakeholders: unit managers, forensic/adolescent, nurse educators, lead mental health workers, directors of nursing, learning and development, nursing education, and research.	Sept 23-2024	Oct 04-2024
*Meeting with the project implementation team.	Sept 30- 2024	Oct 4-2024
*Recruitment of voluntary participants	Sept 30- 2024	Oct 4-2024
*Commencement of phase one pretest survey and Inpatient Aggression Tracker use in Forensic and Adolescent units.	Sept 30- 2024	Oct 28-2024
*Commencement of phase two (posttest) inpatient Aggression Tracker in Forensic and Adolescent units.	Oct 28- 2024	Nov 25-2024
*Pre-test survey, PowerPoint Presentation Training in six cohort sessions of nine participants each, and Q&A interactive session.	Oct 21 – 2024	Oct 31-2024
*Posttest survey, Feedback Q &A and with Faculty	Nov 18 –2024	Nov 29-2024
*Data Collection and Result	Nov 18-2024	Dec 2-2024
*Implementation of Feedback Draft 1 with Faculty, and chair.	Nov 18-2024	Dec 2-2024
*Finalize and Edit Draft 2 nd Revision	Dec 03-2024	Jan 30-2025
Data analysis	Dec 03- 2024	Jan 30- 2025
Final QI Draft 3 and 4 project write-ups	Feb 01- 2025	March 01-2025
Final QI Draft 5 and 6 project write-ups	March 02-2025	April 01-2025
Dissemination of results to faculty and units	April 15-2025	May 02-2025

Table 1

Sociodemographic Characteristics

Category	Variable	Pretest	Posttest	
		N=45	N=45	Percentages %
Gender	Male	16	16	35.56%
	Female	29	29	64.44%
Age	20-29	4	4	8.89%
	30-39	7	7	15.56%
	40-49	16	16	35.56%
	50-59	10	10	22.22%
	60-69	7	7	15.56%
Ethnicity	Asia	3	3	6.67%
	Black/African			
	American	32	32	71.11%
	Caucasian	7	7	15.56%
	Hispanic	2	2	4.44%
	Native America	0	0	0%
	Pacific Island	0	0	0%
	Prefer not to answer	1	1	2.22%
Job Title	Mental Health Worker	18	18	40%
	Registered Nurse	27	27	60%
Years of Experience	Less than 5 years	9	9	20%
	More than 5 years	36	36	80%
Shift	7am -3 pm	10	10	22.22%
	3pm- 11pm	13	13	28.89%
	11pm – 7 am	22	22	48.89%

Table 2

Pretest and Post test Mean Score

Item	Pre-test Mean ($\bar{X}$)	Post-test Mean ($\bar{X}$)
1. Communication	4.5	5
2. Focus on Feeling	4.2	4.6
3. Moment of Silence	4.3	4.8
4. Clarify what is Said	4.5	4.6
5. Remain in Control	4.2	4.7
6. Formulate a Plan	3.8	5
7. Work Together	4.0	5
8. Remain Positive	4.1	4.8
9. Understand Limitations	3.7	5
10. Debriefing	3.9	5

Table 3

Paired T-Test

				95% Confidence Interval of the Difference			.	Significance
Pretest-Posttest	Mean Difference	Standard Deviation	Standard Error Mean	Lower	Upper	T	Df	2-Sided
	-.67333	.57422	.8560	-.84585	-.50082	-7.866	44	<.001

Table 4

Paired Sample Correlation

	N	Correlation	Significance	
Pretest-Posttest			One-Sided p	Two-sided p
	45	.333	.013	.025

Table 5

Inpatient Aggression Flowsheet Tracker

Week	Adolescent		Unit		Forensic		Unit	
Week	E1 Unit		E2 Unit		B1 Unit		C1 Unit	
	AB	CG	AB	CG	AB	CG	AB	CG
1	24	10	13	2	28	2	15	0
2	36	8	28	1	31	3	21	2
3	14	7	19	5	45	2	29	2
4	21	4	4	1	67	1	24	2
5	17	2	8	2	36	0	13	0
6	2	0	11	1	6	5	9	5
7	2	0	4	1	4	2	2	1
8	2	1	2	1	3	1	1	0

AB: Aggressive Behavior, CG: Code Grey

Adolescent Unit: E1 and E2

Forensic Unit: B1 and C1

Table 6

Spearman Correlation

			Adolescent Unit # of Aggressive behavior	Adolescent Unit # of Aggressive behavior	Adolescent Unit # of Aggressive behavior	Adolescent Unit # of Aggressive behavior
Spearman's rho	Adolescent	Correlation	1.000	.249*	.219	.178
	Unit # of	Coefficient				
	Aggressive	Sig(2-tailed)	-	.022	.044	.102
	Behavior	N	85	85	85	85
,	Adolescent	Correlation				
	Unit # of	Coefficient	.249	1.000	-.069	.229*
	Code Grey	Sig(2-tailed)	.022	-	.530	.035
		N	85	85	85	85
	Forensic	Correlation				
	Unit # of	Coefficient	.219	-.069	1.000	-.058
	Aggressive	Sig(2-tailed)	.044	.530	-	.597
	Behavior	N	85	85	85	85
	Forensic	Correlation				
	Unit # of	Coefficient	.178	.229*	-.058	1.000
	Code Grey	Sig(2-tailed)	.102	.035	.597	-
		N	85	85	85	85

Figure 1

Aggressive Behavior Weekly Count Graph

