Decreasing Seclusion and Restraint Events Among Clients Within an Inpatient and Crisis Stabilization Behavioral Health Facility

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Decreasing Seclusion and Restraint Events Among Clients Within an Inpatient and
Crisis Stabilization Behavioral Health Facility

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Decreasing Seclusion and Restraint Events Among Clients Within an Inpatient and Crisis Stabilization Behavioral Health Facility

Abstract

**Background:** Despite global shifts in behavioral health treatment, changes regarding use of seclusion and restraint (S/R) continues to be extremely slow.

**Local Problem:** Increasing S/R events and subsequent staff injuries and financial burden.

**Methods:** A quality improvement project providing education in trauma-informed care (TIC), sensory modulation (SM), and S/R debriefing (S/RD).

**Interventions:** Education and training for S/RD, TIC, and SM using a variety of materials and methods over a 6 to 12-month period was provided to staff within a 16-bed inpatient adult psychiatric health facility (PHF) and a crisis stabilization unit (CSU). Because of positively affecting the use of S/R, utilizing evidence-based practices, the values of providing a culture of respect, dignity, and social responsibility align with the values of the University of San Francisco’s Jesuit tradition (University of San Francisco, n.d.).

**Measures:** Project outcomes were assessed by pre- and post-project surveys (N=90), and S/R events and S/R debriefing comparisons. Regression analysis was used to test for intervention effect on TIC understanding and S/RD.

**Results:** No significantly strong evidence was provided for the intervention [t(987.1)=0.29, p=0.98). Increases were noted in SM understanding, and staff desire for a SM room.

**Conclusion:** Multiple studies indicate education in TIC, SM, and S/RD present a viable avenue for decreasing S/R events. In our study, multiple confounds such as fluid leadership, staffing, project delays, and global events were strong contributors to outcomes; indicating further study is warranted in these areas.
Keywords: seclusion, restraint, interventions, trauma informed care education, adult, inpatient, education, psychiatric, SM, debriefing
Decreasing Seclusion and Restraint Events Among Clients Within an Inpatient and
Crisis Stabilization Behavioral Health Facility

Introduction

Background

Seclusion and restraint (S/R) events are viewed as a treatment failure that has received much critical attention and continues to prevail in our current behavioral health care system. Causative factors include staff resistance to alternative interventions secondary to inadequate education, poor leadership support, and lack of resources (Blair et al., 2017; Wright et al., 2020).

In behavioral health, seclusion is described as the physical detainment of an individual in a room or area, and restraints are the use of devices such as ankle and wrist straps, which are secured to a frame, limiting the mobility of an individual’s four limbs (Department of Health and Human Services [DHHS], 2008). These interventions are used to decrease the risk of harm when clients display non-redirectable behaviors and are either a danger to themselves or others.

According to the Substance Abuse and Mental Health Services Administration (SAMHSA, 2018), 80% of psychiatric and general hospitals continue to use S/R, 92%, and 85%, respectively. These same facilities have also implemented programs to decrease the use of these interventions, 91%, and 85%, respectively. From 2013 through 2017, the Centers for Medicaid and Medicare Services (CMS) reported rates, defined as hours in seclusion or restraint per 1,000 patient hours, showed a significant decrease (DHHS, 2008). Despite this, psychiatric patients spent an average of 5.5% of their time (greater than 1.3 hours per day) in physical restraints, secondary to assaultive behaviors. Similarly, patients spent greater than 1 hour out of every 20 hours in seclusion, indicating an opportunity for interventions to decrease the duration of these events (Staggs, 2015a, 2015b) and come closer to national guidelines to utilize S/R appropriately,
as a last resort and for the least amount of time necessary to ensure client and staff safety (American Psychiatric Nurses Association, 2018; Condition of Participation: Patient’s Rights, 2019).

Multiple factors have contributed to the shift towards dignified and respectful mental health interventions, for example, death. In an investigative report, 50 to 100 clients died yearly because of S/R interventions (Weiss et al, 1998) In addition, the aftermath of re-traumatizing a population who already carries a large proportion of trauma history. Several studies illuminated the use of S/R as a traumatizing intervention for both clients and staff members (Cusak et al., 2016; Goulet et al., 2017; Sweeney et al., 2018), along with the monetary burden of these events, which includes the cost of turnover, workman’s compensation from client assaults resulting in staff injury, and lost time expenses, such as increased sick calls resulting from post-traumatic trauma as sequelae of S/R (Craig & Sanders, 2018). In a study completed by Serrano-Blanco et al. (2017), of those diagnosed with a mental illness, direct hospital costs from S/R events may have accounted for over 6% of acute hospitalizations. In addition, Rubio-Valera et al. (2015) noted an increased length of hospital stay and increased readmissions because of coercive interventions such as S/R, increasing financial concerns.

Revenue is another factor driving healthcare organizations to decrease the use of S/R. Major funding and accreditation organizations, such as the Joint Commission (2017) and CMS (2020a), are implementing incentives to influence healthcare organizations towards decreasing the use of these restrictive interventions. Additionally, in a report from CMS (2020b), wherein hospitals are required to report S/R-related deaths, 104 deaths were reported between August 2, 1999, and December 21, 2004. Unfortunately, according to the same report, 44 of these deaths were unreported by hospitals, indicating that stronger incentives must be instituted to provide
more accurate reporting and data collection (DHHS, 2006). Global views of S/R use are slowly shifting, adding pressure to limit the use of S/R and associated anxiety involved with such ethical dilemmas as providing compassionate and dignified care versus client and staff safety (Aguilera-Serrano et al., 2018; Jalil et al., 2017; SAMHSA, 2018). Despite the recognition that the reduction of S/R events is necessary, research is limited regarding a multimodal approach toward this goal. Consequently, the purpose of this quality improvement project is to implement a multimodal approach for decreasing S/R within an acute and crisis stabilization behavioral health environment.

Reducing the use of S/R has been ongoing since the Reign of Terror in 1974, which occurred during the French Revolution and was so named because of the denial of rights of the people by the monarchy (Weiner, 1992). Masses of individuals were hanged, often without trial, or subjected to starvation and violence to subdue and control the population. Philippe Pinel advocated at the Revolutionary Council during the French Revolution for liberty, freedom, and the right for mental health clients to be treated equally and fairly when applying interventions to control unsafe behaviors (Weiner, 1992); yet, S/R events continue to occur to this day. The increasing prevalence of dual diagnosis clients is another factor that slows culture shift. These individuals are working with both a behavioral health diagnosis and a substance use disorder diagnosis and often present as extremely violent, resulting in staff utilizing familiar interventions, such as S/R, despite their own personal and moral views of these interventions (Gerace & Cochrane, 2019).

**Problem Description**

The implications for improving quality care regarding alternative interventions for S/R are profound within a psychiatric facility. For the fiscal year (FY) 2018/2019, 16 minor
evaluations and 1,662 adult and 275 adolescent evaluations were conducted, with 13 patient-to-staff assaults. Additionally, for the same period, there were 67 adult restraint episodes and six adolescent episodes, with adult restraint hours of 77.7 and adolescent hours of 11.67. No data are available regarding seclusion, as the crisis stabilization unit does not contain a seclusion room and no further comparison data were available for FY 2017/2018.

Between FY 2017/2018 and FY 2018/2019, there was a 42% decrease in client-to-staff assaults reported within the psychiatric health facility; however, there was an increase of 500% in worker’s compensation claims during the same period for the facility. Additionally, there was a 46% decrease in seclusion events (84 to 45), with a 43% decrease in seclusion hours (117.6 to 56.8). Interestingly, restraint episodes increased in FY 2018/2019 from 16 to 22, indicating a 38% increase, although restraint hours demonstrated an 83% decrease, from 63 to 11. Conceivably, the changes in data may have been a result of a house-wide staff retraining in nonviolent crisis intervention techniques, which included limited information regarding trauma-informed care in 2018. Furthermore, S/R debriefing experienced a 36% decrease, from 89 to 57 events, and per admission assessment screening, with 97% of clients reporting a self-history of trauma. Per a microsystem analysis of staff within the facility, approximately 70% of staff did not participate in an S/R debriefing, and at least 70% of S/R debriefing episodes completed were conducted with the goal of obtaining staff signatures versus education. Of the 20 staff members interviewed, less than 50% were aware of what trauma-informed care was and how it was utilized in the facility. Also, no sensory modulation room or staff education is currently in place. It follows that improving education, increasing alternative options, and involving leadership can result in decreasing unnecessary trauma and injuries from S/R events while simultaneously improving financial gains.
Staff and client safety is a strong driver for this intervention. The increasing prevalence of dual diagnosis clients is another factor that slows culture shift. These individuals are working with both a behavioral health diagnosis and a substance use disorder diagnosis and often present as extremely violent, resulting in staff utilizing familiar interventions such as S/R, despite their own personal and moral views of these interventions (Gerace & Cochrane, 2019). For the project site in 2019, $180,000 was incurred due to shortages related to injuries and subsequent leave absences. Worker’s compensation claims rose from one to six within the same period. By implementing a multimodal innovation utilizing teams derived from voluntary staff members, it was estimated that both overtime and worker’s compensation claims will decrease, resulting in a return on investment (ROI) of 628%, with an 86% profit derived from cost savings related to overtime. The ROI translates into an approximate projected expense reduction related to overtime equal to $77,640 after the innovation time period. Conceivably, the changes in data may have been a result of house-wide training of all staff in nonviolent crisis intervention techniques, which included limited information regarding trauma-informed care in 2018. Trauma-informed care speaks to the ethical dilemma raised between ensuring client and staff safety versus client dignity and autonomy.

**Setting**

The project setting is a crisis stabilization unit and a locked adult behavioral health facility serving the seaside county of Santa Cruz, California. It is the primary receiving facility for children through adults with a variety of behavioral health diagnoses, many of whom struggle with a dual diagnosis of a behavioral health disorder and substance abuse. Short-term behavioral health crisis stabilization and placement are provided to all ages within the crisis stabilization unit. Average 7 to 10-day hospitalization occurs within the psychiatric health facility, a 16-bed,
locked adult unit, and includes daily programs with rehabilitation department staff, daily multidisciplinary treatment planning, medications, and medical and behavioral management.

**Specific Aim**

The aim of this Doctor of Nursing Practice quality improvement project was to decrease S/R events by 50% within an inpatient and crisis stabilization facility by Fall 2022. The goals are to increase staff participation in post-S/R debriefing sessions by 30%, improve staff understanding of trauma-informed care by 30%, and develop and implement a sensory modulation room with the utilization of 20% within the proposed site within a 6-month to 1-year period. Due to multiple constraints, the final goal was changed late in the project course to improve sensory modulation education. Accordingly, the project aim was in alignment with the organization’s mission to “Deliver excellent and effective behavioral health services that engage individuals with complex needs in recovering their health, hopes, and dreams” (Telecare, 2018, para. 1).

**Available Knowledge**

**PICOT Question**

Within an inpatient behavioral health facility, does improving S/R post debriefing, enhancing trauma-informed care, and enhancing sensory modulation education, compared to no intervention, improve S/R event outcomes within a 6-month to 1-year period?

**Search Methodology**

Using CINAHL, Cochrane/DARE, PubMed, ProQuest, and APA PsychInfo databases, 967 references from 2014 to 2020 were searched using the keywords of *seclusion*, *restraint*, and *psychiatric*. Of these references, four duplicate studies were removed. Of the remaining 60 citations, 31 met the inclusionary criteria of peer-reviewed article and additional keywords of
adult, inpatient, sensory modulation, debriefing, or trauma-informed care education interventions. Using these criteria, eight studies with quality and level of evidence ratings presented by Dang and Dearholt’s (2017) Johns Hopkins research evidence appraisal tool, good/B, and level II studies were selected (see Appendix A. Evaluation Table).

**Integrated Review of the Literature**

**Multimodal Approach**

Several studies examined the relationship between a multimodal intervention approach and S/R. In their systematic review, Goulet et al. (2017) examined the effectiveness of programs in decreasing S/R events within adult psychiatric settings. The strengths of this review included a combination of random controlled trials (RCTs). Goulet et al. used quasi-experimental studies with clearly identified limitations, such as varying programs among differing facilities, RCTs with most of the citations having a retrospective analysis, before and after outline, and observational studies. The researchers provide a clear description of methods and the use of multiple review authors adding to the quality of this research. One of the more significant findings to emerge from this study was the identification of core components of leadership, prevention tools, post-S/R reviews, training, a therapeutic environment, and a positive correlation between a combined interventional approach and S/R reduction. These findings may help us understand the relationship between trauma-informed care, training, and sensory modulation on S/R reduction within a psychiatric inpatient setting.

In their experimental pilot study, Blair et al. (2017) designed a multimodal intervention consisting of the evidence-based Broset Violence Checklist, required trauma-informed care, escalated review by the medical team, formal leadership review of S/R events, and sensory modulation rooms. Results were statistically significant ($p < 0.01$), with a 52% decrease in the
number of seclusions and a \( (p < 0.001) \) 27% decrease in the duration of seclusion events after the intervention. The large, randomly selected sample size \( (N = 8,029) \) and use of chi-square analysis and \( t \)-tests for data comparison add to the study quality. Despite study limitations of the sequential implementation of interventions, study findings suggest trauma-informed care, debriefing, and sensory modulation as a combined intervention may have a positive effect on S/R reduction and evidence-based practices in this area, providing supportive research for a program incorporating both trauma-informed care and sensory modulation as alternatives for S/R.

Guzman-Parra et al. (2016) attempted to demonstrate the relationship between seclusion rates and a multimodal approach using the six core strategies. The study outline included a quantitative, retroactive review of the number and length of seclusion rates from 2012 and 2013, using a program consisting of leadership and organizational changes and trauma-informed care education for nursing staff. By using multivariate analysis, which adjusted for confounding variables, researchers added to the reliability of the study results. Measurement of these variables was completed via chi-square and Fisher’s exact tests, confidence intervals, and \( p \) values, demonstrating a positive correlation between leadership, S/R debriefing, and staff training, and a 35.37% decrease in restraint use (adjusted odds ratio = .587; confidence interval = .411 - .838; \( p = .003 \)). These findings have important implications for developing a project incorporating staff training, trauma-informed care education, and S/R debriefings to decrease S/R events in a psychiatric setting.

**Trauma-Informed Care Education**

In a quantitative study, Newman et al. (2018) studied the relationship between trauma-informed care training and S/R reduction. The study was based on the sanctuary model, which attempts to provide a therapeutic milieu for trauma victims. Purposive, voluntary sampling
provided participants with a 90-minute staff training using trauma-informed care theories and interventions. Immediately after training, 92% of the 88 participating staff engaged in the first review; at 90 days, only 40% of participants finished the post-training questionnaire, adding to the research limitations. The evidence from this study, which was a 90.2% decrease in seclusion rates, suggests a strong association between trauma-informed care education and S/R reduction (Newman et al., 2018). Additional studies are needed to develop a full picture of this correlation.

S/R Debriefing

In their mixed-method pilot study among three out of 12 clients and 12 out of 12 staff members, Goulet et al. (2018) developed and assessed an S/R debriefing tool and the correlation between S/R events. Client inclusionary criteria consisted of at least one S/R event within 30 days of the meeting and the capability to participate in the study. Workers also had to experience at least one S/R and be consistently employed, staff members. Strengths of the study included the length, over 12 months, and the validation of data using Mann Whitney and chi-squared tests, as well as interrater reliability, with limitations consisting of the small sample size and no physician participation. A significant positive association between seclusion rates and the use of the S/R debriefing ($p = 0.46$) was noted. These study results demonstrate a cost-effective and easily implemented debriefing tool as an adjunct to other interventions in decreasing S/R. Further studies that take this variable into account will need to be undertaken.

Sensory Modulation.

Regarding decreasing S/R events, comfort or sensory modulation rooms also support the client in managing their behaviors by providing an environment outside the unit milieu. Sensory modulation rooms consist of various sensory options, such as rocking chairs, music, soothing colors, and soft lighting. In the qualitative descriptive design study, Wright et al. (2020)
discovered new insights into the barriers to implementing and using a comfort room within an inpatient setting. Those involved in the study were segregated into several focus groups. Answers to questions regarding sensory modulation approaches were determined from the theoretical domain framework, consisting of domains of behavior change: knowledge/skills, social/professional role and identity, optimism, beliefs about capabilities, beliefs about consequences, reinforcement, intentions, goals, memory/attention, decision processes, environmental context and resources, social influences, emotion, and behavioral regulation. Saliency analysis of the data, voluntary participants and de-identification of results support data quality, and results suggested a strong indication to look at addressing the influences of peers, concerns regarding sensory modulation equipment, roles, access, provision, and maintenance of sensory modulation resources as deterrents to using of sensory modulation interventions by mental health providers.

In a quantitative case-control study, Anderson et al. (2017) investigated the effects of sensory modulation and staff training in S/R reduction. The research involved 218 men and women between the ages of 18 and 65 with the intervention of sensory modulation and a similar control group without the intervention. Study quality was evidenced using confidence intervals and the sample size, length of the study, and a control group. The findings of the study indicated a 38% reduction in belt restraints and a 46% reduction in forced medication ($p < .05$), which lays the groundwork for the development of a project incorporating sensory modulation as a client-centered alternative to S/R interventions.

Lloyd et al.’s (2014) aim was to assess the effect of a sensory modulation room on client anxiety and S/R. Their naturalistic study included two parts consisting of a comparison of two inpatient mental health units, using one as a control with no sensory modulation room and the
other with staff training and a sensory modulation room combined with the Emotions Rating Scale to assess the anxiety levels of clients within these units, with a sample size of 337. The second part of the research included a prospective quasi-experimental design that compared S/R over the 12-month study period, before and after the sensory modulation intervention on each unit. Results indicated a decrease in mean scores of anxieties (6.58 to 3.72) and a decrease in S/R (157 to 1) in Unit 1, compared to a slight increase of S/R in Unit 2 ($p < 0.001$). The strengths of this research are indicated in the large sample size and the control comparisons of anxiety and S/R. Limitations include clients being assigned to the two units based on bed availability and not a random selection, as well as the age and sex of study participants (Lloyd et al., 2014). These findings have important implications for developing a project involving a modality that incorporates all the individual’s senses, subsequently encouraging the development of self-mastery during a crisis.

**Summary/Synthesis of the Evidence**

Overall, these studies displayed a decrease in S/R episodes, although restraint times were not always decreased. All studies included some form of education, nonviolent de-escalation techniques, debriefing, and leadership. A variety of limitations among the studies were identified, including length of the study, differences with implementation among facilities, and validity of various surveys utilized. These limitations could have influenced the length of S/R episodes (Blair et al., 2017; Guzman-Parra et al., 2016; Newman et al., 2018; Wieman et al., 2014).

A positive correlation between trauma-informed care education, S/R debriefing, and sensory modulation, and S/R reduction within inpatient psychiatric settings as indicated. As in previous studies on S/R reduction, different variables are related to S/R alternatives. However, new light has been shed on contributing factors to staff resistance to using these alternatives,
such as self-perceived competency, the effect of availability of supplies, and staff training (Anderson et al., 2017; Wright et al., 2020). Other research findings may help us understand the relationship between consistent and supportive leadership and the effectiveness of decreasing S/R events (Anderson et al., 2017; Goulet et al., 2016; Wright et al., 2020).

**Rationale**

Emancipatory knowing is the newest addition to Barbara Carper’s description of nurses’ core of nursing knowledge (as cited in Rafii et al., 2021). Other areas of nursing knowing include personal (knowing self so that one can interact with others authentically), ethical (what is right and not right and subsequent actions), aesthetic (art of nursing), and empirical (science of knowing). Emancipatory knowing involves the ability to be both aware of societal, political, and cultural views and critical personal awareness to effect a positive change (important for questioning social injustice and equity among individuals). Some questions that come from this type of knowing are who benefits, what is wrong with this picture, and what needs to change (Rafii et al., 2021). Through emancipatory knowing, healthcare providers and the behavioral healthcare system will experience an improved quality of care with fewer traumatic interventions. It is both a difficult and an emotional choice to place another human being into either an isolation room or restraints. These events take away the client’s dignity and their choice to utilize personal empowerment to control their own behaviors through alternative interventions for assisting clients with unsafe behaviors.

Certainly, these events lead to other patterns of knowing, such as aesthetic and personal. These patterns come into play as staff attempt to explore their own personal bias between keeping the unit and staff safe and client safety and dignity. Chinn and Kramer (2018) describe aesthetic knowing as the “art of nursing” (p. 140), wherein the experience of nursing and the
experience of health and illness come together. In this case, the understanding of the mechanics of S/R is interconnected with the personal experiences of healthcare providers who have been involved in these interventions.

These patterns of knowing not only added further depth and direction to the project but provided a basis for continuous evaluation throughout the project’s course. The theoretical framework provides further guidance regarding choosing relevant literature reviews, appropriate and quality research methods, and results in interpretations. Utilizing Hildegard Peplau’s nursing theory of interpersonal relations, which involves shared experience between the nurse and the client (Hagerty et al., 2017) provided the project with a foundation of trust between staff, leadership, and clients subsequently increasing engagement of all involved. Per Peplau’s theory the nurse engages in several roles, such as the stranger, resources, teaching, counseling, surrogate, and leadership, to involve the client in their care versus having the client be a passive recipient of nursing care which further provides a base for the project’s goal of client centered, dignified, and self-empowering care (Pelprin, 2016). Peplau’s theory also provides a team-oriented approach to care, thus strengthening the client’s and the nurse’s desire to facilitate a decrease in coercion events such as S/R.

Add to this, Kotter’s 8-step Change Model, which includes creating urgency, forming a powerful team, creating a vision for change, communication of that change, removing obstacles, developing short term wins, building on the change, and solidifying the change in the corporate culture. (Craig & Sanders, 2018). By additionally, using this model, further team and leadership cooperation was developed towards the common goal of decreasing S/R. As well as continued project development by celebrating wins with raffles and recognition for achievements which were communicated via newsletters and email.
Methods

Context

With the support of multiple influences emphasizing the need to decrease S/R events, nurses are once again uniquely qualified to develop supporting policy and procedures, implement nonviolent interventions, and provide much-needed education to shift the culture to a more holistic and cost-effective approach in providing behavioral health interventions.

As such, key stakeholders for the project included the medical director, program administrator, clinical director, director of nursing, and facility staff, as well as individuals who are part of the corporation that oversees the project site. These individuals are the vice president of operations, chief nursing officer, regional director, and medical director. In addition, Santa Cruz County’s key stakeholders include the director of behavioral health and chief county liaison. A DNP student was the project leader and, in collaboration with the rehabilitation department, provided staff and clients with sensory modulation education. Trauma-informed care education and S/R debriefing education and training were also instituted in a collaborative effort with the director of nursing and staff champions. All these individuals were aware of the project, and several concerns have been expressed by corporate stakeholders late in the project course, which included fluid leadership, including several open positions; decreasing retention rates in all disciplines; pandemic conditions; and limited resources.

Interventions

In response to the increasing rates of S/R financial burden, staff burnout, and injuries, a quality improvement project was initiated. The project, overseen by the DNP student project manager, had a timeline of August 2020 through Fall 2022 and began with obtaining stakeholder
engagement and project approval. A gap analysis (see Appendix B) was conducted in 2020 Q4, indicating educational deficits in trauma-informed care and S/R debriefing. An additional deficit was no sensory modulation room in the facility. During this period, the recruitment of staff champions, obtaining pre- and post-project survey data, brief staff educational sessions, and communication dissemination were initiated by the DNP student project manager, as described in the work breakdown structure (WBS; see Appendix C). Education and trainings were completed during brief meetings at shift change, monthly meetings using newsletters, posters, text messages, PowerPoint presentations, and an S/R debriefing form (see Appendix D).

To maintain transparency and stakeholder engagement, a variety of methods were initiated, including posters, flyers, text messages, and a sensory modulation raffle. Stakeholder meetings were held with the project manager and program administrator, lead social worker, and rehabilitation director in Fall 2021. Additional meetings were conducted with the medical director, regional vice president, staff psychiatrist, and crisis director (see Appendix E).

**Gap Analysis**

Per a microsystem analysis of staff within the site, approximately 70% of staff did not participate in a post-S/R debriefing, and at least 70% of completed S/R debriefing episodes were conducted, with the goal of obtaining staff signatures and not education. Similarly, of the 20 staff members interviewed, less than 50% were aware of what trauma-informed care was and how it was utilized in the facility. Also, no sensory modulation room is currently in place within the site (see Appendix B). It follows that improving education, increasing alternative options, and involving leadership can result in decreasing unnecessary trauma and injuries from S/R events while simultaneously improving financial gains.
Gantt Chart

The project consisted of three phases beginning in 2020 Q4 and outlined in the Gantt chart (see Appendix F). This period began with project approval from the program administrator and medical director of the facility. During this time, the recruitment of voluntary staff champions, the development of trauma-informed care education programs and materials, and the development of an S/R debriefing tool began. Furthermore, a baseline survey regarding trauma-informed care was distributed via Survey Monkey, as well as the obtainment of baseline S/R data. The focus of the second phase consisted of interdisciplinary education in trauma-informed care, S/R debriefing, and sensory modulation. Finally, project completion was in the Fall of 2022, wherein results were reviewed and disseminated.

Work Breakdown Structure

The WBS (see Appendix C) includes three deliverables or tasks of development, education, and results that must be accomplished to sustain the project. From these deliverables, smaller tasks or workgroups were initiated, such as a literature review of evidence-based information and guidelines to provide a basis for the project. The development deliverable involved project approval and subsequent baseline data collection. Facilitation of a sensory room began with volunteer staff workgroups involved in the budget, policy development, and staff education. Moving on to education, staff education sessions and continuation of communication among the disciplines were included. Finally, analysis of surveys and S/R events determined the outcomes of the intervention, and results were reported to stakeholders with recommendations for further quality improvement projects regarding the connection between S/R reduction and stable leadership.
Budget / Return on Investment

Implementation of this project and subsequent S/R event reduction, was estimated to decrease staff injuries and subsequent leave of absences, as well as decrease overtime. As a result, proving profitable to the facility, as indicated by an improved ROI (see Appendix G). Budget limitations were met by providing education and training within the facility during scheduled work hours. The project manager provided gratis services for project facilitation, which included time, use of personal equipment, and supplies. This left the total cost for supplies at approximately $800, with the majority reserved for sensory modulation funding (see Appendix H).

Responsibility / Communication Matrix

Communication consists of a variety of components. For example, it must be clear, compassionate, respectful, and transparent. Hence, the project manager and stakeholders consistently utilized effective communication throughout the course of this innovation to provide education and effect a decrease in S/R events. As mentioned previously, the task of disseminating project information was completed via educational sessions at meetings, impromptu interactions with staff during shift change, posters, whiteboards, and text (see Appendix E).

SWOT Analysis

The completed SWOT analysis describes this facility’s strengths as corporate and leadership support for the project and the strong influence from the Joint Commission to decrease S/R events. There is a large proportion of new staff who are eager to embrace a trauma-informed care culture, and existing staff have expressed a strong desire to decrease staff injuries and anxiety resulting from these events. One of the strongest internal weaknesses is in the culture of this site. According to a 3-year cross-sectional study completed among mental health services
in Brisbane, shifting organizational culture is very challenging as culture is extremely robust and resilient to change (Dark et al., 2017). Project facility staff have historically chosen to utilize S/R to assist with a client’s unsafe behaviors because these interventions are “quick” and “that’s what we always did.” Furthermore, a large percentage of the current staff are registry, with weaknesses of time constraints, limited staffing, and limited education.

Opportunities include the project becoming transferrable throughout the organization. Also, as data collection regarding interventions for decreasing S/R events is limited, project data will assist with this deficit. Lastly, threats are the current corporate focus on decreasing overtime and an increase to 23.3% of dual-diagnosis individuals within Santa Cruz County in 2015 (Center for Behavioral Health Statistics and Quality, 2015). These clients often present acutely agitated when under the influence of various substances. The challenges of shifting culture, violent clients, staffing, and time constraints make it paramount that an organized approach be followed to support the successful implementation of this project (see Appendix I).

**Outcome Measures**

Program evaluation was ongoing during the project and overseen by the project manager, who developed the outcome measure of decreasing S/R events by 50% by improving trauma-informed care education and S/R debriefing and initiating a 20% utilization of a sensory modulation room within the facility. The overall evaluation of the innovation was completed through pre- and post-comparison of the number of S/R events from quarterly corporate S/R reports.

Review of hard copy staff debrief reports were analyzed by the project manager and director of nursing. Finally, outcome measures to analyze sensory modulation education and
room use were obtained via a Survey Monkey survey collected by hand and online using a Likert scale combined with free-text option (see Appendix J and Appendix K).

**Analysis**

Anonymous pre- and post-surveys were developed through Survey Monkey and disseminated by electronic and paper methods to evaluate trauma-informed care education, sensory modulation, and S/R debriefing education outcomes. The survey questions consisted of Likert scale and free-text options, and results were entered into SPSS for statistical analysis. Outcomes for S/R events were reviewed pre- and post-intervention through electronic, unidentified data.

**Ethical Considerations**

The question of “is this right?” speaks not only to the American Nurses Association (2015) Code of Ethics, Provision 1.1, which describes the obligation of the nurse to practice with the core fundamentals of respect, dignity, worth, uniqueness, and attention to the human rights of every individual, but also speaks to the Jesuit values of the University of San Francisco (n.d.). S/R interventions inherently involve ethics, as S/R provides an opportunity to review personal views on the ethical dilemma of keeping the client safe, utilizing an intervention that inherently opposes the dignity and respectful treatment of the client (see Appendix L). According to research completed by Gerace and Muir-Cochrane (2019), behavioral health nurses in an inpatient psychiatric hospital in Australia felt that the use of S/R resulted in emotional harm to clients, and these interventions were used primarily due to the lack of availability of alternate resources. The study results revealed empathy and rapport between staff and clients, as well as introduction of trauma-informed care, had a positive correlation on S/R events.
Discussion

Results

S/R events had increased by the conclusion of the project. An independent samples $t$-test conducted to compare trauma-informed care understanding and S/R debriefing use and understanding, with and without the intervention, indicated there was no significantly strong evidence that no intervention in the areas of trauma-informed care, $M = 10.2$, $SD = 2.9$, and with education, $M = 10.1$, $SD = 2.3$; or no intervention in S/R debriefing use, $M = 5.5$, $SD = 1.5$, and with intervention, $M = 5.5$, $SD = 1.1$, conditions; $t (87.1) = 0.29$, $p = .98$). Sensory modulation education results indicated an increase in understanding of sensory modulation, as well as an increase in staff desire to be involved in a sensory modulation room implementation project (see Appendix K).

Though this study suggested that education does not influence trauma-informed care understanding and S/R debriefing use, multiple studies have shown opposing results, providing opportunities for further research. Additionally, study outcomes may have been significantly influenced by multiple unforeseeable confounds, indicating a need for future studies in these areas.

Limitations

Perceived limitations of the project included time constraints of the project leader and unit champions who continued to work in their prospective roles while completing the project goals. Because of global events, unforeseen delays in the project course resulted in long gaps with no education modules being initiated and a late revision from implementing a SM room to SM education. There was also a significant decrease in staff retention, resulting in nursing predominately filled by registry nurses and a significant turnover of floor staff towards the
project conclusion. This turnover contributed to the project’s outcomes by different staff completing the post-survey with brief trauma-informed care, S/R debriefing, and sensory modulation education exposure. Simultaneously, the pandemic required multiple changes in education presentation, decreased participation in limited virtual meetings, and additional time constraints because of multiple outbreaks within the facility and staffing.

Other limitations included a 90% turnover in leadership during project implementation, which included several interim program directors and several other key positions remaining vacant. Consequently, multiple constraints occurred, such as a reported negative effect on staff’s ability to trust in leadership support and decreased morale.

Conclusions

Much like the nursing profession’s foundation, starting with Florence Nightingale and her environment theory, in which she proposed that environmental factors affected the client’s recovery and overall health (Smith & Parker, 2015), nursing has always had a strong foundation in education and treating the client in a mind, body, and spirit approach, and we must continue to do so by adding to current knowledge regarding the effect of evidence-based interventions and alternatives to coercive measures such as S/R in behavioral health care.

Granted, the results of this project did not coincide with multiple studies which demonstrated positive correlations between TICE, S/RD, and SM. Nonetheless the project’s outcomes do challenge us to pursue further research in the areas of leadership, consistency, staffing, and S/R alternatives regarding decreasing the use of coercive measures such as S/R if we are truly to move forward with the holistic, client centered, compassionate care our profession is uniquely qualified to provide.
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## Appendix A. Evaluation Table

<table>
<thead>
<tr>
<th>Purpose of Article or Review</th>
<th>Conceptual Framework/Method/Design</th>
<th>Sample Setting</th>
<th>Major Variables Studied (and their Definitions)</th>
<th>Measurement of Major Variables</th>
<th>Data Analysis</th>
<th>Study Findings</th>
<th>Level of Evidence (Critical Appraisal Score) / Worth to Practice / Strengths and Weaknesses / Feasibility / Conclusion(s) / Recommendation(s) /</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examine effectiveness of programs in decreasing S/R events with adults in mental health settings.</td>
<td>None described Quantitative review</td>
<td>7,844 studies from United States, Australia, Netherlands, United Kingdom, Sweden, and Finland; N = 284 met inclusionary criteria (written in English/French, between 2010 and 2015; adult psychiatric setting; S/R programs involving two or more activities for reducing S/R</td>
<td>IV = Therapeutic environment, leadership, training post-seclusion and restraint review, patient involvement, prevention tools DV = S/R</td>
<td>X3 authors reviewed studies; disagreements resolved via mutual consensus; each study screened with Cochrane Risk of Bias Tool.</td>
<td>None</td>
<td>Discovery of effective S/R program reduction elements; leadership (key component), training, post S/R review, involving client, prevention tools, environment &amp; multimodal approach.</td>
<td>LOE: Good/B, L-II &lt;br&gt;Practice Worth: Interventions towards reduction of S/R are effective alternatives for safe/quality care. &lt;br&gt;Strengths: Cochrane Risk of Bias Tool, x3 screening authors, varied databases, adequate sample size. &lt;br&gt;Limitations: High risk of bias, exception x2 RCTs with lower risk of bias, varying interventions, and populations across varying studies (unable to assess for bias between studies), majority of studies pre-post design with retrospective analysis, some no statistical or explanation of analysis.</td>
</tr>
</tbody>
</table>
### Feasibility: Cost-effective intervention, easily implemented into practice setting

Conclusion: Research supports a positive correlation between simultaneous interventions, in an adult psychiatric setting and S/R reduction. Contributing factors include leadership (essential component), training (de-escalation and trauma), post-event debriefing, patient involvement, sensory modulation environment, prevention tools, culture shift.

Recommendation: Supportive of program using a multimodal approach to decrease S/R in an adult, psychiatric setting.

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<table>
<thead>
<tr>
<th>Effectiveness of INT on reducing S/R.</th>
<th>None indicated</th>
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<tbody>
<tr>
<td>Quantitative RCT/Comparison S/R occurrences/duration before &amp; after</td>
<td>Post INT N = 8,029 S/R events/120-bed IP service; large urban hospital.</td>
</tr>
<tr>
<td>t-test, Chi square analysis</td>
<td>IV1=S/R rate; IV2=rate of restraints IV3 duration of seclusions DV=INT</td>
</tr>
<tr>
<td>S/R rate, restraint rate, seclusion duration</td>
<td>IV1 = p &lt; 0.01, 52% IV2 = p = 0.44, 6% IV3 = 27%</td>
</tr>
</tbody>
</table>

LOE: Good/B L-II

Practice Worth: Multi-model intervention decreases S/R events.

Strengths: Large sample size, large number of variables assessed, sequential introduction of interventions.

Gain insights into barriers to implementation of SM use in mental health units.

Qualitative study/voluntary
FG/3 different sites. Groups conducted by independent, experienced, qualitative

<table>
<thead>
<tr>
<th>N = 15; inclusion criteria: employed in psychiatric IP services; received sensory awareness training/</th>
<th>IV1 = SI</th>
<th>IV2 = BC</th>
<th>IV3 = PR</th>
<th>IV4 = E/CR</th>
<th>IV5 = K/S</th>
<th>IV6 = BC</th>
<th>IV7 = O</th>
<th>IV8 = M/A</th>
<th>IV9 = E</th>
<th>DV = SM use</th>
<th>NA</th>
</tr>
</thead>
</table>

Key Factors:
IV1 = modeling
IV2 = varied
IV3 = ID single professional leader
IV4 = access
IV5 = workplace skill development

LOE: Good/ B, L-II

Worth to Practice: SM viable alternative to S/R if utilized.

Strengths: Purposive/voluntary sampling.

Limitation: Small sample size, focus on a single healthcare setting.
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<tbody>
<tr>
<td><strong>Effect of 90-minute, staff, TICE intervention on reducing S/R</strong></td>
<td><strong>Qualitative study</strong></td>
<td><strong>Mandatory TICE with 30-minute EB didactic PowerPoint on seclusion trauma, S/R alternative - de-escalation resource sheet, 60-minute</strong></td>
<td><strong>92% of 88 staff (leadership, psychiatrists, PAs, RNs, SWs, mental health and occupational therapists, unit secretaries, and mental health assistants). 1st survey;</strong></td>
<td><strong>IV1 = Q1,3,4, 5b IV2 = Q10,11 DV = patient seclusion hours</strong></td>
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<td><strong>p-value</strong></td>
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<td><strong>Survey questions, patient seclusion hours</strong></td>
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<td></td>
<td><strong>IV1 = p &lt; 0.01 IV2 = 17% DV = 90.2%</strong></td>
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<td></td>
<td><strong>LOE: Good/B, L-II</strong></td>
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<td><strong>Worth to Practice: Adding to limited research: focused staff training/TIC decrease S/R.</strong></td>
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<td><strong>Strengths: Purposive, anonymous sample.</strong></td>
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<td><strong>Limitation: Small sample, single-site, 6-month duration (40% response at 3 months), questionnaires not tested for validity/reliability.</strong></td>
</tr>
<tr>
<td>Effect of multimodal program based on six core strategies on S/R</td>
<td>Quantitative, retrospective analysis</td>
<td>Frequency and duration of S/R between 2012-2013, using INTP</td>
<td>None indicated</td>
<td>IV1 = INTP DDV1 = restrained clients DDV2 = mean monthly restraint episodes</td>
</tr>
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</table>
Conclusion: Leadership/S/RD staff training showed positive relationship with decrease of restraints (35.37%).

Recommendation: Supportive of a program using a multimodal approach to decrease S/R in an adult, psychiatric setting.


Implementing SM, with staff training will reduce S/R, including forced medications, in IP mental health care. Quantitative, Case Control Study

Comparable IP psychiatric units; control no use of ASPA, no staff training, no SM room

None indicated

Men/Women, 18-65 yrs., DX: schizophrenia, bipolar DO, depression, N = 218

Project, N = 224

Control/17 beds each with seclusion room, same hospital, south of Denmark, Augustenborg Psychiatric Hospital

IV1 = staff education/SM

IV2 = no staff education/SM

DV1 = belt restraints

DV2 = forced medication

Confidence interval

Belt restraints, forced medications

DV1 = 0.62 (38%)

DV2 = 0.54 (46%)

LOE: Good/B, L-II

Worth to Practice: SM effective intervention in decreasing seclusion/forced medication use.

Strengths: Similar control group and setting, length of study (12 months).

Limitation: Sample size, which clients to assess chosen by OT, possible error in data reporting.

Feasibility: Challenge: similar control unit.

Conclusion: Education in SM and SM theory decreases use of restraint/forced medication.
| #1 SM decreased anxiety | #2 Effect of SM room on seclusion rates | Naturalistic study | 2 IP MH units/one as control (without SM room); repeated measures; sensory screening tool #2: prospective quasi-experimental comparing seclusion rates over 12 months, before and after SM room, two units (P1/P2) | None indicated | #1 clients using SM x 6 months/ completed pre- & post-ratings scale #2 clients in seclusion in 12 months, N = 337 | IV1 = SM | IV2 = seclusions | DV1 = anxiety | DV2 = seclusion | Emotions Rating Scale, seclusions | Confidence Intervals, $P$ values, effect size | DV1 = decrease mean scores (6.58 to 3.72; decreased 2.68), $p < 0.001$ | DV2= decrease (157 to 53-P1); small increase (P2). | LOE: Good/B, L-II | Worth to Practice: SM decreases client anxiety, SM decrease frequency of S/R. | Strengths: Comparison of two factors affected by SM- (anxiety / S/R), large sample size/age, sex. | Limitation: Clients not randomly assigned to units. | Feasibility: Minimally cost effective (equipment), study duplication adaptable to IP setting. | Conclusion: SM positive correlation between anxiety / S/R. | Recommendation: Supportive of a program incorporating SM into a multimodal approach to decrease S/R in an adult, psychiatric setting. |


<table>
<thead>
<tr>
<th>Create and assess S/RD</th>
<th>Mixed-method/pilot study</th>
<th><strong>N</strong> = 3/12, inclusionary criteria client: x1 S/R within 30 days of interview; able to participate and give consent. Staff: <strong>N</strong> = 12, x1 S/R exposure, consistent employee. Study length = 12 months</th>
<th><strong>IV</strong> = S/RD <strong>DV</strong> = S/R</th>
<th>Mann Whitney test, chi-squared test, intrarater reliability</th>
<th><strong>S/R</strong></th>
<th>Significant correlation S/R and S/RD (<strong>p</strong> = 0.46); non-significant restraint and S/RD</th>
<th>LOE: Good/B, L-II</th>
</tr>
</thead>
<tbody>
<tr>
<td>None indicated</td>
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<td>Worth to Practice: S/RD positive effect on S/R, client participation key driver in S/RD and S/R reduction</td>
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<td>Strengths: Length of study, S/RD tools</td>
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<td>Limitation: Small study sample, no physician participation.</td>
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<td></td>
<td>Feasibility: Cost effective</td>
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<td>Conclusion: Tool easily incorporated into similar settings S/RD positive results clients/staff regarding learning, reflection-effect on S/R.</td>
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<td>Recommendation: Supportive of a program incorporating S/RD into a multi-modal approach to decrease S/R in an adult, psychiatric setting.</td>
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</tbody>
</table>

Definition of abbreviations:

- **ASPA**: Adult/Adolescent Sensory Profile Assessment (screening tool for clients who would benefit from SM)
- **BC**: Beliefs about Capabilities
- **B&C**: Beliefs about Consequences
- **BVC**: Broset Violence Checklist
- **DM**: Decision Making
- **DO**: Disorder
- **DV**: Dependent Variable
- **DX**: Diagnosis
- **E**: Emotions
- **E/CR**: Environmental Context/Resources
- **FG**: Focus Groups
INT: Intervention: BVC, mandated crisis intervention staff education in crisis intervention & TIC, increased physician assessment, leadership review of S/R, and sensory modulation would decrease S/R events
INTP: Leadership/organizational changes, Nursing staff training (de-escalation techniques/prevention)
IP: Inpatient
IV: Independent Variable
K/S: Knowledge/Skills
L-I: Random Controlled Trial
L-II: Combination of Random Controlled Trial’s and quasi-experimental
LOE: Level of Observation
O: Optimism
M/A: Memory/Attention
MH: Mental health
OT: Occupational Therapist
PA: Physician Assistant
PR: Professional Role
PRN: As needed; often referred to a medication
### Appendix B. Gap Analysis

Best Practice: Utilizing seclusion and restraints (S/R) as a last resort

<table>
<thead>
<tr>
<th>Best Practice Strategies</th>
<th>How Current Practice Differs from Best Practice</th>
<th>Barriers to Best Practice Implementation</th>
<th>Will Implement Best Practice (Yes/No; why not?)</th>
<th>Level of Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. All individuals have the right to be restraint free. Utilize seclusion and restraint as a last resort (DHHS, 2006).</td>
<td>S/R events require a debrief post event.</td>
<td>1. Lack of time 2. Culture 3. Lack of consistent direction, influence from leadership</td>
<td>Yes</td>
<td>30% increase in staff S/RD by Fall 2022</td>
</tr>
<tr>
<td>2. Organizational change towards decreased use of alternatives for S/R, use of debriefing tools (DHHS, 2006; Joint Commission, 2019).</td>
<td>Director of nursing, leadership team to facilitate at least 80% of debriefing episodes. Train core staff to facilitate debriefings.</td>
<td>70% of debriefing episodes not used for education. Staff signing document without performing debrief.</td>
<td>Blair et al. (2016), in their study of a 120-bed, psychiatric inpatient service indicated a 27% decrease in seclusion duration, and a 52% increase in restraint duration with the initiation of mandatory education and leadership review regarding S/R events.</td>
<td>30% increase in staff S/RD by Fall 2022</td>
</tr>
<tr>
<td>Best Practice Strategies</td>
<td>How Current Practice Differs from Best Practice</td>
<td>Barriers to Best Practice Implementation</td>
<td>Will Implement Best Practice (Yes/No; why not?)</td>
<td>Level of Measurement</td>
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<tr>
<td>3. Education regarding de-escalation techniques (DHHS, 2006; Joint Commission, 2019).</td>
<td>1. Education of all staff in trauma-informed care and de-escalation techniques.</td>
<td>1. No designated educator for facility. 2. Staff work 24/7. 3. Adverse event reports only viewed by leadership team.</td>
<td>Yes In a study of 88 staff members, Newman et al. (2018) indicated a reduction of S/R at 90.2% utilizing an interactive training program involving trauma-informed care.</td>
<td>30% improvement of staff understanding of trauma-informed care by Fall 2022</td>
</tr>
<tr>
<td></td>
<td>2. Initiate pre- and post-survey for staff regarding trauma-informed care, culture, and education.</td>
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<td>3. Daily review of S/R events by leadership, as well as monthly meetings.</td>
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<tr>
<td>4. Evidence-based practice interventions (DHHS, 2006).</td>
<td>Use of least restrictive interventions before S/R. Design / Implementation of sensory modulation/room education.</td>
<td>Clients agitated from milieu environment placed in confining area to decrease stimulation for their safety and the safety of others.</td>
<td>Yes Several studies have shown a decrease in anxiety of behavioral health clients, and a decrease in S/R as a result (Anderson et al., 2017; Lloyd et al., 2014; Wright et al., 2020).</td>
<td>Development, implementation of sensory modulation room (20% utilization)/education by Fall 2022</td>
</tr>
</tbody>
</table>
Appendix C. Work Breakdown Structure

Post Seclusion and Restraint Event Debriefing, Trauma-Informed Care Education, Sensory Modulation

1.0 Development

1.1 Literature review of evidence-based information and guidelines

1.2 Project meeting with key stakeholders

1.3 Confirmation with leadership of meeting schedules

1.4 Recruitment of staff champions for project

1.5 Data collection

2.0 Education

2.2 Staff educational sessions

2.3 Development of communication resources

3.0 Results

3.1 Analysis of pre- and post-survey from staff

3.2 Analysis of pre and post S/R events

3.3 Dissemination of results to stakeholders
Appendix D. Education Materials

TRAUma Informed CARE (TIC)

What is Trauma Informed Care (TIC)?

- TIC is an intervention and organizational approach that focuses on how trauma may affect an individual’s life.
- Informed and the client’s response to behavioral health services from prevention through treatment.
- A trauma-informed approach is based on the recognition that many behaviors and responses expressed by survivors are directly related to the traumatic event.

What is TIC?

- Traumatic experiences that cause intense physical and psychological stress reactions.
- Experienced by an individual as physically or emotionally harmful or threatening and that has lasting adverse effects on the person’s functioning and physical, social, emotional, or spiritual well-being.

It’s not “what’s wrong with you.”
- It’s about “what happened to you.”

Why is TIC Important for Quality Care?

Data Suggests We Need to Presume ALL Individuals Have a History of Trauma Stress

- In the United States, 20% of children have experienced traumatic stress.
- In public behavioral health settings, 20-70% of clients have experienced trauma.

Trauma Informed Care

- A strength-based framework.
- Acknowledges how experiences of trauma impact an individual.
- Affirms the survival and resilience of individuals.
- Provides an understanding of and responsiveness to the impact of trauma.
- Creates opportunities for services to rebuild a sense of control and empowerment.
B. PRINCIPLES OF A TRAUMA-INFORMED APPROACH

1. SAFETY
- Throughout the organization, all individuals feel physically and psychologically safe.
- The physical setting is safe and interpersonal interactions promote a sense of safety. (EPI, weighted blanket)

2. TRUSTWORTHINESS AND TRANSPARENCY
- Organization operations/decisions are conducted with transparency with the goal of building and maintaining trust with all individuals within the organization, staff, family members and others.

3. EQUITY AND EQUITY AND CHOICE
- Encouragement of individuality and a focus on strengths of client and staff members.
- Staff are empowered to do their work as well as possible.
- Clients are supported in shared decision-making, choice, and goal-setting to determine the plan of action they need to heal and move forward.
- Staff are facilitators of recovery rather than controllers of recovery.

4. COLLABORATION AND INTEGRITY
- Organization realizes everyone has a role to play in a trauma-informed approach.
- "Our does not have to be a therapist to be therapeutic."

5. CULTURAL, HISTORICAL AND OTHER ISSUES
- Environment actively works past cultural stereotypes and biases.
- Recognizes the cultural needs of individuals served.
- The organization recognizes and addresses historical trauma.
- Helps individuals develop valued societal roles, interests and hobbies and other meaningful activities and roles.
- Helps develop connections with communities, a range of services to provide evidence-based practices related to trauma and healing.

C. HOW CAN WE UTILIZE TIC IN OUR DAILY PRACTICE?

1. Use of evidence based practices in supporting trauma informed care.
2. Be especially aware of your own judgements and biases.
3. Remember: "Behavior is not personal, it is always a reaction to past traumas or events."
4. Approach each other and the clients as individuals, making exceptions trauma sensitive.
5. Use of language and its effects: "What is it that you are doing?", utilizing stories, and supporting as needed to "process them," patient is functioning as well as possible for them. "Repetition is not the same thing as repetition."
6. Be aware of vicarious/secondary trauma as healthcare providers.

Vicarious/secondary trauma:
- Results from repeated exposure to stories of harm, trauma and pain.
- Also known as burnout.
- Results in:
  - Higher rates of physical illness.
  - Greater use of sick leave.
  - Higher turnover.
  - Lower morale.
  - Lower productivity that may lead to errors.

(Fromell & Thornwood, 2013)
TAKE AWAYS:

- Often have our own traumatic histories
- Experience vicarious trauma in our work
- Seek to avoid re-experiencing our own emotion
- Respond personally to other's emotional states
- Perceive behavior as a personal threat or provocation vs. a re-enactment of a traumatic event

CONCLUSION

“Never be ashamed of a scar. It simply means you were stronger than whatever tried to hurt you.”

Unknown
# Appendix E. Responsibility / Communication Matrix

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Responsibility</th>
<th>Communication Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNP Student Karen Richards</td>
<td>Project Manager</td>
<td>• Develop literature review, AIM statement and goals</td>
<td>• Text message, in-person meetings, posters, newsletter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Oversight of project and team</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Initiate and participate in stakeholder meetings</td>
<td></td>
</tr>
<tr>
<td>Multidisciplinary Volunteer Staff Champions, DNP Student</td>
<td>Collaboration</td>
<td>• Attend, contribute to project development meetings</td>
<td>• In-person or video conference meetings, brief change of shift meetings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Disseminate project outcomes, goals</td>
<td>• E-mail, text message, flyers, posters</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Educating staff</td>
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### Appendix F. Gantt Chart

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<tr>
<th>Description</th>
<th>Oct</th>
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<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
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### Appendix G. Cost Avoidance Analysis / Return on Investment

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<th>Difference</th>
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<td>6</td>
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<tr>
<td>Total Staff Injuries</td>
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<td>21</td>
<td>4</td>
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<tr>
<td>Total Expenses/Intervention</td>
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<td>Overtime</td>
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<table>
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<th>Year 2021 - 2022</th>
<th>Prior Year (2020)</th>
<th>Difference</th>
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<td>5</td>
<td>1</td>
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<td>Total Staff Injuries</td>
<td>14 (20%)</td>
<td>17</td>
<td>3</td>
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<tr>
<td>Total Expenses/Intervention</td>
<td>$7,080</td>
<td>$1,420</td>
<td>($5,660)</td>
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<tr>
<td>Overtime</td>
<td>$120,000</td>
<td>$150,000</td>
<td>$30,000</td>
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<table>
<thead>
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<th>Year 2022-2023</th>
<th>Prior Year (2021)</th>
<th>Difference</th>
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<td>Total Worker’s Compensation Cases</td>
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<td>Total Staff Injuries</td>
<td>11 (20%)</td>
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<td>Total Expenses/Intervention</td>
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<td>Overtime</td>
<td>$90,000</td>
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Return on investment (ROI) is projected in the fourth quarter of 2022, following the last phase of the intervention. Using the cost/benefit savings from overtime ($90,000) divided by the total cost of the project ($12,025) x 100, the ROI is 628%. As a result, yielding an 86% ($77,640) expense reduction in overtime incurred secondary to staff injuries as an outcome from S/R events.
## Appendix H. S/R Budget Estimate

Legend: SM = Sensory Modulation Room

<table>
<thead>
<tr>
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<th>Year 2021</th>
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<th>Grand Total</th>
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<td>Qtr. 3</td>
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<td>Sum Total</td>
<td>$200</td>
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<td></td>
<td>$100</td>
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Appendix I. SWOT Analysis S/R Interventions

- **Helpful**
  - **Strengths**
    - Corporate Support
    - Joint Commission Influence
    - Leadership Support.
    - Staff are motivated to decrease injuries/emotional angst.
    - Large Proportion New Staff
    - Staff/leadership Motivated to Improve Quality of Care
  - **Opportunities**
    - Project May Be Transferable Throughout Organization
    - Increased Data Resources RegardingSuilcetion and Restraint Interventions
- **Harmful**
  - **Weaknesses**
    - Culture
    - Large Percentage of Registry Staff
    - Time Constraints
    - Staffing
    - Educating Staff on All Shifts
  - **Threats**
    - Corporate Focus on Overtime
    - Increased Presentations of Violent Dual Diagnosis Clients
Appendix J. Data Collection – Trauma-Informed Care Survey

Copy of Trauma Informed Care (TIC)
1. This survey is anonymous and data will be used to support quality improvement.
   Please help us in determining areas where the organization might improve, or is doing well in providing a trauma informed environment. The following questions were adapted from the Substance Abuse and Mental Health Services Administration "Toolkit" on Trauma Informed Care (TIC).

   * 1. I am satisfied with the investment my organization makes in training and education in:
      What trauma informed care is.

      | Strongly Disagree | Disagree | Agree | Strongly Agree | Do Not Know |
      |-------------------|---------|------|---------------|------------|
      | 0                 | 0       | 0    | 0             | 0          |
      Other (please specify)
      
   * 2. I am satisfied with the investment my organization makes in training and education in: How working with trauma survivors impacts staff:

      | Strongly Disagree | Disagree | Agree | Strongly Agree | Do Not Know |
      |-------------------|---------|------|---------------|------------|
      | 0                 | 0       | 0    | 0             | 0          |
      Other (please specify)
      
   * 3. I am satisfied with the investment my organization makes in training and education in the following area: How to help consumers manage their feelings (e.g. helplessness, rage, sadness, terror).

      | Strongly Disagree | Disagree | Agree | Strongly Agree | Do Not Know |
      |-------------------|---------|------|---------------|------------|
      | 0                 | 0       | 0    | 0             | 0          |
      Other (please specify)
* 4. I am satisfied with the investment my organization makes in training and education in the following area: **De-escalation strategies** (e.g. ways to help people (staff/consumer) to calm down before reaching point of crisis).

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
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</table>

Other (please specify)

* 5. I am satisfied with the investment my organization makes in training and education in the following area: **The relationship between mental health and trauma**.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Do Not Know</th>
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</table>

Other (please specify)

* 6. Establishing a Supportive Environment
**Materials are posted about traumatic stress** (e.g. what it is, how it impacts people, and available trauma-specifics resources).

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Do Not Know</th>
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</tbody>
</table>

Other (please specify)

* 7. Establishing a Supportive Environment
**Trauma informed care information** is available in different languages.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Do Not Know</th>
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<tbody>
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<td>0</td>
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</tbody>
</table>

Other (please specify)
8. Establishing a Supportive Environment
Outside agencies with expertise in cultural competence provide on-going training and consultation.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Do Not Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
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</tbody>
</table>

Other (please specify)

9. Establishing a Supportive Environment
Staff members ask consumers for their definitions of emotional safety (e.g. safety plan).

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Do Not Know</th>
</tr>
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<tbody>
<tr>
<td>0</td>
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</tr>
</tbody>
</table>

Other (please specify)

10. Trauma Informed Language
The organization uses "people first" language rather than labels (e.g. "people who are experiencing homelessness" rather than "homeless people").

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>Do Not Know</td>
</tr>
<tr>
<td>Agree</td>
<td></td>
</tr>
</tbody>
</table>

Other (please specify)
* 11. Trauma Informed Language
Staff use descriptive language rather than characterizing terms to describe consumers (e.g. describing a person as "having a hard time getting his/her needs met" rather than "attention seeking").

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Strongly agree</th>
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</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>Do Not Know</td>
</tr>
<tr>
<td>Agree</td>
<td></td>
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</table>

Other (please specify):

* 12. Staff Supervision, Support, and Self Care
The organization has a written policy that includes a commitment to understanding trauma and engaging in trauma-sensitive practices.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Do Not Know</th>
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</table>

Other (please specify):

* 13. Staff Supervision, Support, and Self Care
Topics related to trauma are addressed in team/staff meetings.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Do Not Know</th>
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</table>

Other (please specify):

* 14. Staff Supervision, Support, and Self Care
The organization helps staff members debrief after a crisis.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Do Not Know</th>
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</tr>
</tbody>
</table>

Other (please specify):

15. Staff Supervision, Support, and Self Care

Topics related to self care are addressed in team/staff meetings (e.g. vicarious trauma, burnout, stress reducing strategies).

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
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</table>

16. Staff Supervision, Support, and Self Care

Staff members have a regularly scheduled time for individual supervision, and part of that time is used to help staff members understand how their stress reactions impact their work with consumers.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
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</table>

17. Staff Supervision, Support, and Self Care

The organization provides opportunities for staff input into program practices.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Do Not Know</th>
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</thead>
<tbody>
<tr>
<td>Other (please specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. Are you familiar with Sensory Modulation in mental health?
   - Yes
   - No
   - Other (please specify)

2. Would you be interested in utilizing sensory modulation and/or a sensory modulation room to assist client’s in the facility?
   - Yes
   - No
   - Other (please specify)

3. What might stop you from utilizing sensory modulation techniques or a sensory modulation room with clients at the facility?
Appendix K. Pre- and Post- Trauma-Informed Care Survey Results

I am satisfied with the investment my organization makes in training/education in:

Q1. What trauma informed care is:
   - Pre-Survey: 49.06%
   - Post-Survey: 45.95%

Q2. How working with trauma survivors impacts staff:
   - Pre-Survey: 35.85%
   - Post-Survey: 37.84%

Q3. How to help consumers manage their feelings (e.g. helplessness, rage, sadness, terror):
   - Pre-Survey: 49.06%
   - Post-Survey: 43.24%

Q4. De-escalation strategies (e.g. ways to help people staff/consumer, to calm down before reaching point of crisis):
   - Pre-Survey: 36.60%
   - Post-Survey: 43.24%

Q5. The relationship between mental health and trauma:
   - Pre-Survey: 39.62%
   - Post-Survey: 45.95%

Q6. Materials are posted about traumatic stress (e.g. what it is, how it impacts people, and available trauma-specifics resources):
   - Pre-Survey: 30.19%
   - Post-Survey: 51.35%

Q7. Trauma Informed Care information is available in different languages:
   - Pre-Survey: 26.42%
   - Post-Survey: 40.54%

Q8. Outside agencies with expertise in cultural competence provide on-going training/consultation:
   - Pre-Survey: 20.75%
   - Post-Survey: 32.43%

Q9. Staff members ask consumers for their definitions of emotional safety (e.g. safety plan):
   - Pre-Survey: 47.17%
   - Post-Survey: 59.46%

Q10. The organization uses “people first” language rather than labels:
    - Pre-Survey: 47.17%
    - Post-Survey: 59.46%
Pre-Post Sensory Modulation Survey Results

Q11. Staff use descriptive language rather than characterizing terms to describe consumers

Q12. The organization has a written policy that includes a commitment to understanding trauma and engaging in trauma-sensitive practices

Q13. Staff supervision, support, and self care topics related to trauma are addressed in team/staff meetings

Q14. The organization helps staff members debrief after a crisis

Q15. Topics related to self care are addressed in team/staff meetings (e.g. vicarious trauma, burnout, stress reducing strategies)

Q16. Staff members have a regularly scheduled time for individual supervision, and part of that time is used to help staff members understand how their stress reactions...

Q17. The organization provides opportunities for staff input into program practices

Pre-Survey | Post-Survey
---|---
Q1. Are you familiar with SM in mental health?

Q2. Would you be interested in utilizing SM and/or a SM room to assist client’s in the facility?
### Trauma Informed Care Understanding

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<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
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<tr>
<td>Equal variances</td>
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<td></td>
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<td>not assumed</td>
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### Seclusion/Restraint Debriefing

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
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<td>Post-test</td>
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<td>5.4865</td>
<td>1.12105</td>
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<tr>
<th></th>
<th>F</th>
<th>Sig</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
<th>95% Confidence Interval of the difference</th>
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<td>.210</td>
<td>88</td>
<td>.834</td>
<td>.06068</td>
<td>.28921</td>
<td>- .51406 to .63542</td>
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<td></td>
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<td>.029</td>
<td>87.106</td>
<td>.977</td>
<td>.01581</td>
<td>.27521</td>
<td></td>
<td>- .48629 to .60766</td>
<td></td>
</tr>
<tr>
<td>Equal variances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
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</table>
Appendix L. Internal Review Board Statement of Determination

Doctor of Nursing Practice
Statement of Non-Research Determination (SOD) Form

The SOD should be completed in NURS 7005 and NURS 791E/P or NURS 749/A/E

General Information

Last Name: Richards
First Name: Karen
CWID Number: 20321948
Semester/Year: Fall/2019
Course Name & Number: Population Health Leadership & Teamwork Project Planning (NURS 7005)
Chairperson Name: Dr. Trinette Radasa
Advisor Name: Dr. Trinette Radasa

Project Description

1. Title of Project: Decreasing Seclusion and Restraint Events Among Clients Within an Inpatient and Crisis Stabilization Behavioral Health Facility

2. Brief Description of Project: Despite shifts in behavioral health treatment globally, regarding use of seclusion and restraint (S/R) continues to be extremely slow. Causative factors include staff resistance to use of alternative interventions secondary to inadequate education, poor leadership support, and lack of resources (Wright et al., 2020 & Blair et al., 2017). Yet another factor to slow culture shift is the increasing prevalence of dual diagnosis clients. These individuals are working with both a behavioral health diagnosis and a substance use disorder diagnosis and often present as extremely violent, resulting in staff utilizing familiar interventions such as seclusion and restraints, despite their own personal and moral views of these interventions (Gerace & Cochrane, 2019).

S/R events are to be viewed as a treatment failure which has received much critical attention and continues to prevail in our current behavioral health care system. As a consequence of positively affecting the use of S/R utilizing evidence-based practices the values to provide a culture of respect, dignity, and social responsibility will be strengthened among behavioral health clients within the project facility.

3. AIM Statement: What are you trying to accomplish?

What do you hope to accomplish with this project? Aims should be SMART, specific, clear, well-defined, and at a minimum describe the target population, the desired improvement, and the targeted timeframe.

Complete the AIM statement by answering the following elements:

What? To decrease seclusion and restraint (S/R) events

How much improvement? by 50%
For whom? Clients
Where? Santa Cruz County Behavioral Health Facility
By when? September 2022

4 Brief Description of Intervention (150 words).

Using Hildegard Peplau's Middle Range Nursing Theory of Interpersonal Relations and Kurt Lewin's Change theories the following interventions will be incorporated into the project outline. 1. Staff and leadership education and training in Trauma Informed Care via monthly meetings, crisis prevention

DNP Department Approval 5/8/14
training, and helicopter meetings with staff on the various shifts. 2. Education, training, and review of S/R events using a multidisciplinary team approach after each S/R event and review of debriefings at monthly meetings (staff, medical, nursing, etc.). 3. Implementation of a sensory modulation room within the proposed facility, following approved P & P and staff education/competency regarding sensory modulation.

4a. How will this intervention be implemented?
- Where will you implement the project? Within a 16-bed, adult, locked, psychiatric health facility and 14-bed crisis stabilization facility in Santa Cruz, California
- Attach a letter from the agency with approval of your project.
- Who is the focus of the intervention? (Needs to match population [for whom?] in Aim statement.) Staff of project facility
- How will you inform stakeholders/participants about the project and the intervention? Via white boards, email, poster-boards and meetings

5. Outcome measurements: How will you know that a change is an improvement?
- Measurement over time is essential to QI. Measures can be outcome, process, or balancing measures. Baseline or benchmark data are needed to show improvement.
- Align your measure with your problem statement and aim.
- Try to define your measure as a numerator/denominator.
- What is the reliability and validity of the measure? Provide any tools that you will use as appendices.
- Describe how you will protect participant confidentiality.
Overall outcome measures for decreasing S/R events will be assessed via comparison of pre and post project data collection through de-identified S/R data obtained from adverse event reports, review of staff debriefing reports, and implementation of an anonymous survey, to measure staff understanding of Trauma Informed Care.
DNP Statement of Determination
Evidence-Based Change of Practice Project Checklist*

The SOD should be completed in NURS 7005 and NURS 791/E/P or NURS 749/A/E

Project Title:
Decreasing Seclusion and Restraint Events Among Clients Within an Inpatient and Crisis Stabilization Behavioral Health Facility

<table>
<thead>
<tr>
<th>Mark an “X” under “Yes” or “No” for each of the following statements:</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>The aim of the project is to improve the process or delivery of care with established/accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The specific aim is to improve performance on a specific service or program and is a part of usual care. All participants will receive standard of care.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The project is not designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does not follow a protocol that overrides clinical decision-making.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does not develop paradigms or untested methods or new untested standards.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does not seek to test an intervention that is beyond current science and experience.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The project has no funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., not a personal research project that is dependent upon the voluntary participation of colleagues, students and/or patients.</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: “This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not formally supervised by the Institutional Review Board.”

Answer Key:
- If the answer to all of these items is “Yes”, the project can be considered an evidence-based activity that does not meet the definition of research. IRB review is not required. Keep a copy of this checklist in your files.
- If the answer to any of these questions is “No”, you must submit for IRB approval.

*Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.
DNP Statement of Determination
Evidence-Based Change of Practice Project Checklist Outcome
The SOD should be completed in NURS 7005 and NURS 791E/P or NURS 749/A/E

Project Title: Decreasing Seclusion and Restraint Events Among Clients Within an Inpatient and Crisis Stabilization Behavioral Health Facility

☐ This project meets the guidelines for an Evidence-based Change in Practice Project as outlined in the Project Checklist (attached). Student may proceed with implementation.
☐ This project involves research with human subjects and must be submitted for IRB approval before project activity can commence.

Student Name: Richards

Last Name: ____________
First Name: ____________

CVID Number: 20321948

Semester/Year: Fall/2019

Date: ____________

Student Signature: ____________________________

Chairperson Name: Trinette Radasa

Date: May 31, 2022

DNP SOD Review Committee Member Name: Alexa Curtis

Date: ____________

DNP Department Approval 5/8/14
Appendix M. Letter of Support

This is a letter of support for Karen Richards to implement her DNP Comprehensive Project Decreasing Seclusion and Restraint Events Among Clients Within an Inpatient and Crisis Stabilization Behavioral Health Unit at Santa Cruz Behavioral Health Center.

Voluntary: We give her permission to use the name of our agency in their DNP Comprehensive Project Paper and in future presentations and publications.

Signature: [Signature]
Date: 9/2/21