11-20-2020

Tailoring Violence Prevention Programming to a Critical Care Area

Jaime Campbell
University of Missouri-St. Louis, jaw7e8@mail.umsl.edu

Tailoring Violence Prevention Programming to a Critical Care Area

Jaime A. Campbell, BSN, RN

Bachelor of Nursing Science, University of Missouri-Columbia, 2002

A Dissertation Submitted to The Graduate School at the University of Missouri-St. Louis

in partial fulfillment of the requirements for the degree of

Doctor of Nursing Practice with an emphasis in Psychiatric Mental Health Nurse Practitioner

December, 2020

Advisory Committee

Susan Dean-Baar, Ph.D., RN, CENP, FAAN, Chairperson

Louise C. Miller, Ph.D., RN, Co-Chairperson

Kimberly Siemons, MSN, RN

Abstract

Problem: Rising rates of violence in health care environments signal a need for health care workers, specifically frontline nurses, to be trained in effective de-escalation management skills. Since January 2017, there has been an increase in the number of patients categorized as aggressive with more violent patient events taking place at a selected midwestern hospital facility in the critical care department, particularly the intensive care and transitional care units.

Methods: Using a pre-post design, this project compared nurses' verbal de-escalation skills using the English Modified De-escalating Aggressive Behaviour Scale (EMDABS) to determine effectiveness of de-escalation strategies in simulated scenarios prior to and following classroom training. Ten nurses met study criteria and completed pre-and post-intervention simulations as well as the classroom training.

Results: Results demonstrated all categories of the EMDABS increased to acceptable practice levels in nurses' abilities to de-escalate patients. Additionally, there was an 11% increase in the total EMDABS score from pre to post intervention. One EMDABS category, *Risky,* reached statistical significance.

Implications for Practice: Use of the EMDABS tool paired with high fidelity simulations and verbal de-escalation training increases nursing staff's verbal de-escalation skills. Ongoing integration of verbal de-escalation techniques into educational programs offered system-wide, with particular attention to nurse skill-building in the critical care units can accurately be measured by the EMDABS tool to objectively assess nurse de-escalation capabilities.

Tailoring Violence Prevention Programming to a Critical Care Area

Workplace violence, also known by the term type II violence, is defined by the National Institute for Occupational Safety and Health (NIOSH) as "...any physical assault, threatening behavior, or verbal abuse occurring in the work setting" (Centers for Disease Control and Prevention [CDC], 2016, p. 4). Notably, between 2002 and 2013, the rate of serious workplace violence in healthcare was four times the rate of other industries (Occupational Safety and Health Administration [OSHA], 2015). Data show healthcare settings account for 71.1% of all violent incidents that take place in a work environment, nearly doubling from slightly over 8,000 in 2011 to 13,808 in 2017 (National Safety Council, 2019). The aftermath leaves nursing staff often suffering psychological and physical effects (Edward et al., 2014).

Type II violence extends to the critical care areas as documented by a recent survey conducted by the American Association of Critical-Care Nurses (AACN) (Ulrich, Barden, Cassidey, & Varn-Davis, 2019). Of the 8,800 nurses who participated in the survey, 6,700 (76%) reported experiencing 198,340 incidents of either physical, verbal, or sexual abuse in the year 2018. While the overall response rate was low (8800/100,000 or 8.8%), the number of assaults from those who did respond is alarming. Despite this disturbing statistic, there is a gap in the current research literature to address ways to reduce violence in healthcare, specifically research targeting critical care areas.

Data from an 859-bed suburban hospital in the Midwest demonstrated an increase in violent patient events in the critical care setting, particularly in the medical-surgical intensive care unit, trauma-neuro intensive care unit (ICU) and transitional care unit (TCU) from 2017 to present. While the cause of these violent events is not documented,

anecdotal reports and follow up with staff indicate these may include Emergency Department (ED) to ICU/TCU transition times (at times prolonged due to lack of behavioral health or ICU/TCU beds) and increases in drug and alcohol addictions in patients admitted. In addition, higher numbers of graduate nurses in the work force without clinical experience in managing patient aggression are associated with violent events. High risk areas where graduate nurses often work include ICU/TCUs housing behavioral health patients before medical clearance, and the traumatic and stressful environment of the ICU/TCU (Pol, Carter, & Bouchoucha, 2018).

The purpose of this project was to improve nurses' skills in verbal de-escalation at the bedside in the intensive and transitional care units. The intervention was high fidelity simulations of aggressive patients and tailored education in verbal de-escalation skills to help novice critical care nurses demonstrate competence in managing violent patients and events. Therefore, the focus was to determine whether simulated de-escalation training was effective in nurses' ability to implement appropriate de-escalation skills. Nurses who are able to successfully choose and implement de-escalation skills can lead to a reduced number of violent events in the critical care area, benefitting patient care as well as contribute to staff safety.

Review of Literature

A literature review focused on type II violence in the workplace was conducted using the databases Cochrane, Medline, CINAHL, PubMed, and PsycINFO, with terms 'de-escalation, workplace violence, type II violence, intensive care, critical care, talk down, defuse, assaults, simulation training, and behavioral intervention response team(s)'. Relevant articles were narrowed to studies that explored hospital-based

violence, examined violence concerning nurses', and was limited to type II violence. Exclusion criteria included community-based studies, non-nurse health workers, and coworker-to-coworker violence. Due to a shortage in published studies examining violence in an ICU or TCU, a majority of studies reviewed examined violence in a variety of hospital settings, including behavioral health units, medical-surgical units, as well as studies conducted outside the United States. The review included years 2015 to 2019, and an additional study by Richmond et al. (2012) considered to be a seminal study in the field of de-escalation. Six quantitative, three qualitative, and three consensus panel studies were reviewed. All studies underlined the need for further research in type II violence to delineate interventions that are most effective in reducing further rates of violence.

Arnetz et al. (2017) completed a randomized controlled trial (RCT) in a Midwest hospital system, enrolling 41 various patient care areas with highest rates of violent events. These 41 units included medical floors, behavioral health units, and ICUs and were randomly assigned to the intervention or control condition. Intervention units received their own data on unit-level violence, with directions to develop an action plan for violence prevention; control units received no such data and were not required to develop an action plan. Rates of violent events per 100 full-time employees were calculated comparing the intervention and control groups. Six months and 24 months post-intervention, incident rate ratios of violent events and violence-related injuries were significantly lower on intervention units compared with controls (Incident Rate Ratio [IRR] = 0.48 at six months; IRR = 0.37 at 24 months), thus highlighting the effectiveness of unit specific violence prevention planning.

A cross sectional survey study conducted in South Korea examined violence in 47 different nursing units including general medical-surgical, oncology, intensive care, operating rooms, and outpatient departments (Parks et al., 2014). Nurses working in intensive care units were found to experience some level of abuse (n = 164/198; 82.8%) within the past year. For all 47 units aggregated, abuse was found to be lower at 63.8% (n = 689/970) (Parks et al., 2014). The authors of this study as well as Ming et al. (2019) who studied violence prevention education's effect on nurses recommend that violence prevention be tailored to specific nursing units based on prevalence and filtered by type of perpetrator.

There are no notable systematic reviews for de-escalating aggressive behaviors specific to the critical care setting. However, a review of studies of prevention of aggressive behaviors in the psychiatric setting can be useful to give direction to best practices (Gaynes et al., 2017). A systematic review of such included 13 RCTs, reporting the most efficacious techniques for driving down violence. Use of a risk assessment protocol or multimodal interventions, defined as de-escalation training for staff presented in different contexts demonstrated the most robust results.

Importantly, increases in nurses' confidence levels after de-escalation training demonstrate practical applicability associated with skill building in delivering safe, quality care to at-risk patients (Brown et al., 2018; Ferrara et al., 2017; Heckermann et al., 2016; Ming et al., 2019). A focus group of seven Swedish nurses who were trained in de-escalation techniques reported they were less inclined to use restraints or sedation until all de-escalation options had been exhausted; this training was particularly beneficial for less experienced nurses (Heckerman et al., 2016).

High fidelity simulation training has long been a mainstay of nursing education. This educational tool was studied in violence prevention training in an RCT study of 392 Taiwanese nurses. Nurses were randomly assigned to either participate in a clinical simulation violence prevention training program or no training. Improvements in attitudes, self-confidence, and awareness regarding patient aggression were higher in the intervention group (n = 200/392; 51%) compared to the control group (n = 192/392; 49%) (Ming et al., 2019). Using a Plan Do Study Act approach, an Ohio hospital system constructed a workplace violence simulation training program to enable employees to lessen fear-induced inaction and loss of critical thinking skills in escalating situations (Brown et al., 2018). Participants (N = 322) demonstrated higher levels of preparedness, using self-report and observational evaluation by experts.

Only one validated scale, *De-escalating Aggressive Behaviour Scale*, published in German and translated to English, is available to assess de-escalation skill level (Mavandadi, Bieling, & Madsen, 2016). The English version (*English Modified De-Escalating Aggressive Behaviour Scale) [EMDABS]* was applied to assess nurses' de-escalation techniques using 272 videotaped de-escalation simulations. Simulations were scored by raters for a sum total score as well as an average score for each of the seven descriptors represented in the EMDABS. Staff de-escalation skills were found to average 23.3 (SD = 3.24) with the lowest ranking at 9.33 and the highest at 32.2 A score of 21 or greater indicates acceptable practice; range of scores for the scale is 7 to 35. Inter-rater reliability for all videos compared across three raters found the EMDABS calculated the interclass coefficient at 0.752, indicating *substantial agreement*. This tool therefore holds

clinical value in its ability to systematically assess staff's development of de-escalation skill, including use in multiple client populations and settings.

The CDC estimated in 2010 that assaultive injuries cost an average of $6,509 for the worker (2014) and when a fall was involved, the total rose to $41,635 cost per violent episode (CDC, 2015). A review of one hospital system's reports found a net loss of $94,156 based on data from 30 nurses treated for violent incurred injuries (Speroni, Fitch, Dawson, Dugan, & Atherton, 2014). Each violent event avoided can realize significant savings for institutions. Improvement in clinical staff's verbal de-escalation skill level generates cost saving over time.

This project used the Plan Do Study Act (PDSA) cycle framework. The PDSA cycle tests change by plan development, test execution, observing the learned impact, and deciding next steps for change as a result in rapidly changing clinical environments (Institute for Healthcare Improvement, 2019). In the *Plan* phase the problem was identified and clarified with data from the facility's Safety and Accountability for Everyone (SAFE) database that tracks violent events. Use of simulations to present the intervention were planned, with the EMDABS tool selected to measure nurse responses. In the *Do* cycle, pre-post simulations were completed, with materials tailored to needs of participants. In the *Study* phase, pre and post data from the EMDABS tool were analyzed for change in scores as a result of training. Recommendations (*Act* phase) for further tailoring of the de-escalation training intervention (scenarios and materials) were summarized and forwarded to the Education department for future implementation and evaluation using a second PSDA cycle.

Methods

Design

This project used a prospective observational pre-post design. The intervention included three components: (1) high fidelity patient aggression simulation of often-encountered violent situation in the clinical area, (2) follow up classroom instruction on verbal de-escalation skills presented by the investigator and supplemented with a hard-copy quick-tip badge buddy reminder, and (3) a final high fidelity patient aggression simulation. Simulations were delivered prior to de-escalation training and after tailored training. Nurse behaviors were evaluated by trained raters using the EMDABS tool. Timeframe for the project was: (1) pre-training skill assessment using the EMDABS tool week one, (2) teaching de-escalation techniques in the classroom during week two, and (3) re-assessing nurses' skills three weeks after initial training/teaching.

Setting

This project was conducted at a suburban 859-bed hospital providing level one trauma services and comprehensive care in a midwestern metropolitan area. The simulations took place in the hospital's simulation lab that replicates a patient's room. The educational component was delivered in a classroom used by the critical care fellowship program.

Sample

A convenience sample of new graduate nurses and nurses without prior critical care experience who were currently enrolled in the critical care nurse fellowship program (a requirement in order to work in the critical care environment) were recruited to

participate. One nurse in the fellowship cohort felt the simulations would be triggering and opted to not participate. The final sample consisted of ten nurse fellows.

Procedures

Simulation scenarios were based on the most common situations of behavior escalation reported in the hospital's event tracking system (SAFE). Formal classroom training on de-escalation techniques was based on Richmond et al.'s (2012) *Ten Domains of De-escalation*. Examples of education component included defining the different types of aggression, education about correct ways to agree with disagreeable patients, techniques to show empathy and how to emotionally separate from the patient's behavior among other topics.

Scenarios were presented by an actor who was trained in each scenario and briefed about the project purpose. The EMDABS tool was used by two raters for each scenario. Expert nurse educators served as raters. They were fully informed about the purpose of the simulation and their roles in the project. To test inter-rater reliability between two raters, two practice scenarios were scored using the EMDABS scale. Discrepancies were negotiated after each scenario scoring to bring about consensus in use of the rating categories. Therefore, rater agreement on scoring was agreed upon prior to the intervention, i.e. pre-assessment of participants' de-escalation skills. A definition of 'incident' was provided to participants prior to completion of the demographic survey.

In the pre-intervention phase, each nurse was evaluated individually using the EMDABS tool on the first simulation prior to de-escalation training. After each nurse participated in the initial simulation, a debriefing occurred between investigator and participant to clarify correct de-escalation techniques and answer questions. Follow up

formal education, which was a structured 30-minute verbal de-escalation class based on Richmond et al.'s *Ten Domains of De-escalation* (2012), took place approximately one week later after all nurses completed the simulation pre-intervention. A *Breakfast and Learn* classroom format was used to present specific examples of de-escalation strategies with applications to the critical care environment. A badge buddy with quick de-escalation tips corresponding to class materials was distributed during the session to reinforce training skills. Approximately three weeks following the initial simulation scenario, the post-intervention simulation was presented to each participant and rated using a different scenario with the same debriefing procedure. Outcomes collected were the EMDABS scores pre- and post-intervention including an overall score and sub scales.

Data Collection/Analysis

Eligible nurses who agreed to participate in the project were evaluated on their de-escalation skills during two simulation scenarios. Prior to the intervention, participants were informed of the purpose of the project and written consent was obtained. Each nursing participant was assigned her or his own unique identifier using the first letter of first car color, first letter of elementary school, total number of aunts, and first letter of mother's maiden name. Descriptive variables were collected for each participant, including gender, years of practice as a nurse, age of the nurse, and number of experiences de-escalating a patient. Scores on the EMDABS tool were recorded pre and post simulations on individual coded worksheets. Scores from both raters were summed and averaged for each section of the EMDABS tool. Demographic variables were summarized using descriptive statistics. Data from the simulation exercises were analyzed as a summed group of ten using a two-tailed paired samples t-test statistic.

Project data were stored on the encrypted, password-protected hospital's computer system. Data will be retained for a period of seven years, after which they will be electronically deleted, and any paper records shredded.

Approval Process

The proposal was initially approved by investigator's Doctor of Nursing Practice committee. Additional approvals were obtained from system's Institutional Review Board and the University of Missouri - Saint Louis Institutional Review Board. Ethical considerations were minimized by use of coworkers for the tailored de-escalation intervention.

Results

Ten nurses were enrolled in the fellowship program, met inclusion criteria, and completed the training program (Table 1). Of these ten, nine nurses were female and one was male. Age of participants ranged from 21 years to 39 years. Six of the participants had more than one year of direct patient care time. Past experiences with de-escalation in the clinical area ranged from less than two situations to more than ten situations. A paired t-test was used to compare summed means on the EMDABS scale for all participants as a total group; pre mean scores (21.55) compared to post mean scores (23.95) were not significant ($\alpha = 0.05$, $p = 0.166$). The summed means pre (21.55) and post (23.95) represents an 11% increase in EMDABS scoring for the group overall. A paired t-test of individual descriptors demonstrated *Risky* descriptor statistically significant ($\alpha = 0.05$, $p = 0.039$); no other descriptors met the parameters of significance (Table 2). Mean values of individual participant EMDABS total score pre-intervention ranged from 18.5 to 28 while post intervention scores ranged from 19.5 to 29.5; difference scores ranged from -5

to 10.5 (Table 3). Six nurses' pre-intervention EMDABS scores were between 18 to 20 (Figure 1). One nurse's post-intervention EMDABS score was between 18 to 20 (Figure 2).

Discussion

Replication of the simulation portion of this project for any future studies using the EMDABS scoring can pinpoint particular areas for needed improvement in the staff's de-escalation abilities. Facilities can then further tailor education to identified needs of staff. High fidelity simulations give a real-life experience that could otherwise not be achieved and lend to confidence-building in staff's skills. This was reflective of the descriptor *Risky* achieving statistical significance ($\alpha = 0.05$, $p = 0.039$) and improvements in the mean values of all seven EMDABS descriptors.

The mean increase of 11% for total EMDABS scoring from pre to post-intervention indicates nurses' improvement in verbal de-escalation skill. Six nurses' EMDABS scored between 18 to 20 pre-intervention which is below acceptable practice; acceptable practice is a total EMDABS score of 21. This was improved in post-intervention with only one nurse scoring below acceptable practice at 19.5. Descriptive statistics for this group of six was varied. While the summed total and six of the seven subscales were not statistically significant, the *Risky* subscale did demonstrate significant results. The *Risky* indicator represents a nurse's ability to assess threat and maintain safe distancing from patients while not seeming fearful and guarded. The subscales *Valuing the client* pre (3.20) and post (3.30), *Inquiring about the client's queries and anxiety* pre (3.00) and post (3.20), and *Remaining calm* pre (3.60) and post (3.80) were all at acceptable practice levels pre-intervention; acceptable practice is scored as a 3 or above.

These three subscales did show modest but not significant increases in the post-intervention phase.

Three subscales generated summed mean results below acceptable practice pre-intervention; acceptable practice is scored at 3 or above. Indicators below acceptable practice include *Reducing fear* pre (2.85) and post (3.35), *Providing guidance to the client* pre (2.9) and post (3.1), and *Working out possible agreements* pre (2.9) and post (3.35). Lower scores highlight that staff were weakest in providing empathetic support, instilling hope, and negotiating action plans. Participants' follow-up feedback corresponded with these results. Further tailoring of training in the future should put emphasis on these aspects of de-escalation.

Because dedicated staff time is significant to deliver these simulations, use of badge buddies and printed materials corresponding to de-escalation training offer reinforcement that can be used outside of formal classroom training. As a result, cost for training in de-escalation strategies can be reduced. Avoiding assaultive injuries can lead to significant savings for institutions (estimated at $6,509 per injury in 2010) as well as limiting nursing turnover (CDC, 2014).

Violence is a growing threat in all aspects of American society. De-escalation skills are needed by workers in all sectors – health care, law enforcement, education, retail, and work that involves direct communications with the general public. Using a validated tool to measure the effectiveness of de-escalation skill training through simulation and assessed in real-time situations involving frontline workers offers an opportunity to change the focus of violent behaviors from confrontation to management and diffusion in uncontrolled situations.

Limitations of this project include a small sample size and overrepresentation of female participants. Additionally, the sample size was confounded in that all participants had prior work experience as patient care technicians. Therefore, replication of this project with a larger sample size more reflective of the experience level of incoming nurses may yield statistically significant results on individual descriptors and total EMDABS scoring. Replicated results can add to the body of evidence that tailored verbal de-escalation training provided to critical care staff increases de-escalation competency. This was not readily measured until the EMDABS scale was recently validated and available for use in simulated training situations.

Conclusion

The right to a safe work environment is part of United States federal law (OSHA, 2015). The healthcare industry is at increased risk of violence due to several factors that are intensified in the critical care setting. Positive findings from this project contribute to the needed skill set of graduate nurses and support the critical care department and the healthcare system's focus on safety and efforts to decrease violent patient events. Beyond the violence routinely experienced in healthcare settings, use of simulated training with objective assessment of participants' ability to learn and execute appropriate responses to violent episodes has value in impacting society in a significant way. Emphasis on empathy and a supportive plan-based approach to verbal de-escalation coupled with tailored ongoing development of these key skills has the possibility to make a sustained change in healthcare and other public service sectors.

References

Arnetz, J.E., Hamblin, L., Russell, J., Upfal, M.J., Luborsky, M., Janisse, J., & Essenmacher, L. (2017, January 1). Preventing patient-to-worker violence in hospitals: Outcome of a randomized controlled intervention. *Journal of Advanced Nursing*, *71*(2), 338-348. doi:10.1097/JOM.0000000000000909 doi: http://dx.doi.org.ezproxy.umsl.edu/10.1177/2165079915574684

Brown, R. G., Anderson, S., Brunt, B., Enos, T., Blough, K., & Kropp, D. (2018). Workplace violence training using simulation: A combination of classroom learning, simulation, and hands-on defense techniques improves preparedness. *AJN American Journal of Nursing*, *118*(10), 56–68. doi:10.1097/01.NAJ.0000546382.12045.54

Centers for Disease Control and Prevention [CDC]. (2015). Costs of falls among older Adults. Home and Recreational Safety. CDC Injury Center. Retrieved from https://www.cdc.gov/homeandreactionalsafety/falls/fallcost.html

Centers for Disease Control and Prevention [CDC]. (2014). Injury - WISQARS Cost of Injury Reports. Retrieved from: http://www.cdc.gov/injury/wisqars.

Centers for Disease Control and Prevention [CDC]. (2016, January 27th). Workplace violence prevention for nurses. *The National Institute for Occupational Safety and Health (NIOSH).* Retrieved from: https://wwwn.cdc.gov/WPVHC/Course.aspx/Slide/Unit1_4

Edward, K.L., Ousey, K., Wareflow, P. & Lui, S. (2014). Nursing and aggression in the workplace: A systematic review. *British Journal of Nursing, 23*, 653-659. doi:10.12968/BJON.2014.23.12.653

Gaynes, B.N., Brown, C.L, Lux, L.J., Brownley, K.A., Van Dorn, R.A., Edlund, M.J., …& Lohr, K.N. (2017, August). Preventing and de-escalating aggressive behavior amoung adult psychiatric patients: A systematic review of the evidence. *Psychiatric Services, 68*(8), 819-831. doi:10.1176/appi/ps201600314.

Heckemann, B., Breimaier, H.E., Halfens, R.J, Schols, J., & Hahn, S. (2016). The participant's perspective from an aggression management training course for nurses. Insights from a qualitative interview study. *Scandinavian Journal of Caring Sciences, 30*, 574-585. doi: 10.1111/scs.12281.

Institute for Healthcare Improvement. (2019). *Plan-Do-Study-Act (PDSA) Worksheet.* Retrieved from: http://www.ihi.org/resources/Pages/Tools/PlanDoStudyAct

Mavandadi, V., Bieling, P.J., & Madsen, V. (2016, April 14). Effective ingredients of verbal de-escalation: Validating an English modified version of the 'De-Escalating Aggressive Behaviour Scale'. *Journal of Psychiatric and Mental Health Nursing, 23*, 357-368. doi:10.1111/jpm.12310.

Ming, J.L., Tseng, L.H., Huang, H.M., Hong, S.P., Chang, C.I., & Tung, C.Y. (2019, August 31). Clinical simulation teaching program to promote the effectiveness of nurses in coping with workplace violence. *Journal of Nursing, 66*(3), 59-71. Retrieved from: doi:10.6224/JN.201906_66(3).08

National Safety Council. (2019). *Assault at work - Injury facts.* Retrieved from: https://injuryfacts.nsc.org/work/safety-topics/assault/

Occupational Safety and Health Administration [OSHA]. (2015, December). *Workplace violence in healthcare, Understanding the challenge.* Retrieved from: https://www.osha.gov/publications/OSHA3826.PDF.

Park, M., Cho, S., & Hong, H. (2014, September 13). Prevalence and perpetrators of workplace violence by nursing unit and the relationship between violence and the perceived work environment. *Journal of Nursing Scholarship, 47*(1), 87-95. doi: 10.1111/jnu.12112.

Pol, A., Carter, M., & Bouchoucha, S. (2018). Violence and aggression in the intensive care unit: What is the impact of Australian National Emergency Access Target? *Australian Critical Care*, 1-7. doi:10.1016/j.aucc.2018.10.003.

Richmond, J.S., Berlin, J.S., Fishkind, A.B., Holloman, G.H., Zeller, S.L., Wilson, M.P., & Ng, A.T. (2012). Verbal de-escalation of the agitated patient: Consensus statement of the American Association of Emergency Psychiatry Project BETA de-escalation workgroup. *The Western Journal of Emergency Medicine, 13*(1), 17-25. doi.org/10.5811/westjem.2011.9.6864.

Speroni, K.G., Fitch, T., Dawson, E., Dugan, L., & Atherton, M. (2014). Incidence and cost of nurse workplace violence perpetrated by hospital patients or patient visitors. *Journal of Emergency Nursing, 40*(3), 218–228. doi:10.1016/j.jen.2013.05.014

Ulrich, B., Barden, C., Cassidy, L., & Varn-Davis, N. (2019, April). Critical care nurse work environments 2018: Findings and implications. *Critical Care Nurse, 39*(2), 67-84. doi: 10.4037/ccn2019605.

Table 1

Participants Characteristics

Variable	*n*	%
Age of Novice Nurse		
21-23	5	50
24-26	2	20
27-30	1	10
30-34	1	10
35-39	1	10
Gender (female, male, non-binary)		
Female	9	90
Male	1	10
Non-binary	0	0
Estimation of de-escalation in past year		
0-2	3	30
3-6	4	40
7-10	1	10
10+	2	20
Direct patient care time		
Less than six months	1	10
Six months to one year	3	30
One year and greater	6	60

Adapted from “Intellectus Statistics” [Online computer software]”. (2020). Intellectus Statistics. https://analyze.intellectusstatistics.com/

Table 2
Two-Tailed Paired Samples t-Test of EMDABS descriptors

Descriptor	*M*	*SD*	*t*	*p value*	*d*
EMDABS Total Sim 1	21.55	3.62	-1.51	0.166	0.48
EMDABS Total Sim 2	23.95	3.52			
Valuing the client Sim 1	3.20	0.82	-0.26	0.801	0.08
Valuing the client Sim 2	3.30	0.82			
Reducing fear Sim 1	2.85	0.58	-1.46	0.177	0.46
Reducing fear Sim 2	3.35	0.63			
Inquiry anxiety Sim 1	3.00	0.53	-1.0	0.343	0.32
Inquiry anxiety Sim 2	3.20	0.63			
Providing guidance Sim 1	2.90	0.39	-0.77	0.462	0.24
Providing guidance Sim 2	3.10	0.66			
Work out agreements Sim 1	2.90	0.39	-1.65	0.134	0.52
Work out agreements Sim 2	3.35	0.58			
Remaining calm Sim 1	3.60	0.77	-0.71	0.494	0.23
Remaining calm Sim 2	3.80	0.54			
Risky Sim 1	3.10	0.61	-2.41	0.039*	0.76
Risky Sim 2	3.75	0.63			

*Indicates significance at alpha <0.05

N = 10. Degrees of Freedom for the t-statistic = 9. d represents Cohen's d.

Adapted from “Intellectus Statistics” [Online computer software]”. (2020). Intellectus Statistics. https://analyze.intellectusstatistics.com/

Figure 1
Histogram Representation of Participant Scoring Pre and Post Intervention