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Violence Against Nursing Students: A Review of Potential Literature

Tina Hostetler[1]

[1] Nursing Educator, Memorial Epworth (Psychiatric) Educational Services, Beacon Health System, South Bend, Indiana, USA

Correspondence: Samuel P. Abraham, Associate Professor of Nursing, Bethel University, 1001 Bethel Circle, Mishawaka, Indiana, USA.

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Abstract

Background: The incidence of workplace violence has continued to occupy a significant place in healthcare at a rate nearly double that in other industries. Those providing direct bedside care are among the most vulnerable to violence, including nursing students. Among the evidence-based tools which may be deployed in such circumstances is verbal de-escalation, or the practice of verbal and physical behaviors and actions meant to calm (or at least not exacerbate) the patient. This literature review outlines the history of research on violence against nursing students and identifies the next steps for addressing this problem. **Method:** A search for relevant studies included using the Cumulative Index to Nursing and Allied Health Literature (CINAHL), ProQuest, Ovid, Science Direct, Medline, and PubMed databases using key terms such as *nursing student, verbal de-escalation, aggression,* and *violence.* **Results**: Search identified 19,000 articles but only 28 focused on violence experienced by nursing students and are covered in this review. **Conclusion:** Verbal de-escalation training may represent a promising solution for teaching students how to handle workplace violence. Furthur investigation of this and other solutions is necessary.

Keywords: verbal de-escalation, workplace violence, nursing student

1. Background

Few workplaces are free from the possibility of violence. Employers in the United States are required to provide a job site that is free of predictable hazards which may cause serious injury or death, but no specific national standard pertaining to workplace violence exists (United States Department of Labor, 2019). Two million people are injured every year with a thousand injuries resulting in death in all industries. Workplace violence causes emotional consequences for the victims of these tragic actions, immediately after and possibly for extended periods of time following the event (Brann & Hartley, 2017). Up to 58% of students report verbal or physical aggression or violence prior to graduating from nursing school (Hopkins, Fetherston, & Morrison, 2014).

Human nature encourages one to run away from danger, to steer clear of the precipitants, to be cautious, and careful not to repeat the same actions which may have led to the previous involvement. One-fifth of those frightening incidents occur in the healthcare and social service environments (Centers for Disease Control and Prevention, 2015), in the rooms of the patients where nurses are tasked as the primary caregivers (Brann & Hartley, 2017). Nurses and nursing staff suffer more injuries nationwide than almost any other profession (Department of Labor, 2016), and between 70 and 88% have experienced some form of violence in their careers (Brann & Hartley, 2017).

Hospitals are one of the most dangerous places to work (United States Department of Labor, 2016). While rates of injury and illness have fallen in the past two decades in all areas, healthcare rates remain almost double all other private industry (Department of Labor, 2016). Violence in healthcare has become so widespread that the World Health Organization has developed prevention guidelines and publications for specific regions of the world (World Health Organization, 2018). Nursing students are not immune to violence and are often unwilling participants shortly after beginning clinical placements in a hospital environment (Jonas-Dwyer et al., 2017). The mental health unit is an especially dangerous environment for physical violence toward the nursing staff (Yang, Stone, Petrini, & Morris, 2018). This review aims to identify solutions that can help nursing students handle and process workplace violence.

2. Methods

Research into the effect of teaching verbal de-escalation techniques to student nurses is minimal (Beech & Leather, 2003; Nau et al., 2007). A search for relevant studies using the Cumulative Index to Nursing and Allied Health Literature (CINAHL), ProQuest, Ovid, Science Direct, Medline, and PubMed databases using such words as *nursing student, verbal de-escalation, aggression,* and *violence* provided over 19,000 articles. These results were narrowed further to limit the population of interest to only student nurses, which yielded 28 articles describing various aspects of nursing students' exposure to, and training in how to handle, violence.

These 28 articles represented twenty-five years of research which confirmed that nursing students are one of the most vulnerable groups in healthcare (Brann & Hartley, 2017; Jarvis & Bhodraj, 2017; Jonas-Dwyer et al., 2017; Wondrak & Dolan, 1992). Many nursing students began school in their late teens or early twenties, so that by the time a degree was earned, the new career professional was no more than 25 to 30 years of age (Edward, Ousey, Playle, & Giandinoto, 2017). Eager to please and to use the skills and knowledge learned over years of arduous study, new graduates were often unsure of their role as a nurse. Such role uncertainty jeopardized their readiness for dealing with the multifaceted work environment, which may have included agitated patients (Edward et al., 2017).

Definitions: *Workplace violence* are acts which are directed toward persons during employment duties or traveling to or from work, including physical assault and verbal threats of violence. *Clinical rotation:* The time during which a student practices in an instructor-supervised environment on real patients. The clinical rotation may take place in many settings, such as the acute care hospital, an extended-care facility, or a community setting. *Aggression:* Behavior that is meant to cause injury to another person, whether of a physical or emotional nature. *Nursing students* are students in their psychiatric clinical rotation.

3. Results of the Literature Review

3.1 Responses of Accrediting Bodies and Institutions to Violence Against Nursing

There are few laws specifically geared toward protecting our most vulnerable of the nursing workforce, the nursing student (Association of PeriOperative Registered Nurses, 2016). National accrediting bodies must assure the quality of higher education programs (Accreditation Commission for Education in Nursing, 2017; Commission on Collegiate Nursing Education, 2013), however, the question of which party is responsible to ensure the student's welfare is less clear. Universities may use marketing materials of their choice to sway student enrollment, as long as the Clery Act is not violated (United States Department of Education, 2014), including *alluding* to a safe campus; which is not quite the same as publishing violence statistics openly.

3.2 Violence Against Nursing and Nursing Students

Forty years ago, nurses first began speaking about violence in healthcare (McPhaul & Lipscomb, 2004; Whelan, 2008) crossing over from conversations on the unacceptability of violence against women (Ferns, 2007; Hinchberger, 2009). For more than two decades, hospital administrators and healthcare experts pondered an appropriate resolution for the violence toward nursing staff suffered daily in emergency rooms, nursing homes, and psychiatric wards across the country (Johnson & Delaney, 2006). When nurses no longer tolerated increasing levels of violence, nursing schools also began to wonder if the placement of students in highly volatile clinical areas was worth the price of the gained knowledge and experience (Magnavita & Heponiemi, 2011). Nursing students questioned the context of of violence in healthcare settings, but faculty often ignored or did not address those concerns (Magnavita & Heponiemi, 2011; Nau, Halfens, Needham, & Dassen, 2010).

Little formal research had been conducted on the effects of healthcare violence on nursing students during this tenuous time (Nau, Dassen, Halfens, & Needham, 2007). Journal articles reciting the expert opinion of psychiatric unit administration suggested nurses use their sweetly melodious voice and servitude toward the patient to stave off verbal or physical abuse (Stevenson, 1991). At the same time, basic human rights discussions pointed to patient seclusion and restraint as unnecessarily barbaric, further forcing nurses to find creative ways to quell the upsurge in violence or leave high-risk healthcare areas in favor of quietude (Huckshorn, 2004).

In the 1980s, a societal peak in suicide and homicide rates (Dahlberg & Mercy, 2009) accompanied the continued integration of state mental hospital patients into communities (Lyons, 1984). Violence in healthcare was seen as a tolerable necessity, as those former state-supervised psychiatric patients filtered back into the acute care environment, many off their medications. The increased use of tranquilizers and other neuroleptics meant a renewed reliance on medications to *manage* patients, an imperfect system though it was (Lyons, 1984). Risk management and loss prevention strategies focused on educating the public on the limitations of inpatient mental health treatment, and relaying that complete success was an unrealistic expectation (Tan, 2000). Yet, the 1979

Surgeon General's Healthy People report cited violence and stress reduction as necessary to the health of the American public (Dahlberg & Mercy, 2009).

On inpatient psychiatric units, lengths of stay extended into weeks instead of days to stabilize formerly institutionalized patients, and all manner of symptoms and behaviors were tolerated by unit staff and management (Deans, 2004; Lyons, 1984). As psychiatrists promised that the control of serious mental illness could be handled by the new system of community mental health centers, politicians counted the dollars saved by closure of entire wings of state hospitals (Lyons, 1984).

Those of us unfortunate enough to be in the midst of *inpatient stabilization* found violence a frequent occurrence, and the initial shock of being punched for the first time shrugged off by peers as the patient having a bad day. The nurse was expected to walk it off; no validity was given to feelings, fears, or pain. Staff were expected to endure the units' conditions or find a calmer workplace and leave psychiatric care to those battle-worn who were brave enough to take it (Whelan, 2008). Healthcare workers were left beleaguered with thoughts of how violence could occur in an environment that staff told patients was safe (Whelan, 2008).

3.3 Impact of Violence on Student Nurses

Nursing students have a fear of psychiatric patients (Sarikoc, Ozcan, & Elcin, 2017) who often appear overwhelmed with symptoms and per admission criteria to the unit, are unstable. Drug and alcohol abuse, and psychiatric illness are co-occurring disorders (Centers for Disease Control and Prevention, 2014; Substance Abuse and Mental Health Services Administration, 2017), and patients under the effect of drugs and alcohol are especially prone to becoming verbally and physically aggressive with young, inexperienced students (Nau, Dassen, & Halfens, 2009). Female nursing students are particularly vulnerable to all forms of violence, including bullying by staff on clinical rotation units (Gurken & Komurcu, 2017; Hinchberger, 2009). Enduring an episode of violence can have permanent emotional or physical effects on the nursing student in a psychiatric clinical rotation (Beech & Leather, 2003; Heckemann et al., 2015; Jonas-Dwyer et al., 2017; Needham et al., 2005).

Anxiety heightens the senses but does not necessarily ready the body to act. Nursing students expressed feeling shocked, anger, embarrassment, and powerlessness after verbal or physical abuse (Truman, Goldman, Lehna, Berger, & Topp, 2013). Mental health patients are at a higher risk for poor self-care, with medical illness often exacerbating psychiatric issues, resulting in a complex mix of symptoms and behaviors (Unsworth, McKeever & Kelleher, 2012). The student on the inpatient psychiatric unit must become familiar with the concept of a therapeutic milieu, inhabited by ambulatory patients who display various medical and psychiatric diagnoses, symptomatology, and levels of coping. Verbal de-escalation is a measure to calm the patient without physical contact (Mavandadi, Bieling, & Madsen, 2016).

Workplace violence occurs in all countries, cultures, and venues in the modern world (Hopkins, Fetherston, & Morrison, 2014). Relatively recently, healthcare workers began to consider the scope of the issue as a rise in worker injuries became evident, and the widespread presence of violence became a global problem (International Labour Organization, International Council of Nurses, World Health Organization, & Public Services International, 2002).

Nursing students are vulnerable to violence in the psychiatric units, emergency rooms, elderly care facilities, and potentially any inpatient setting. Studies over the years on the dangers of aggression focused toward student nurses have produced requests for better training from nursing schools and more significant support from hospitals (Beech, 2008; Deans, 2004; Grenyer et al., 2004; Heckemann et al., 2015; Magnavita & Heponiemi, 2011; Nau, Dassen Needham, & Halfens, 2009; Tee, Ozcetin, & Russell-Westhead, 2016). Rarely have schools of nursing and their clinical site host hospitals worked together on patient aggression training. The entity responsible for any given study was often noted blaming the other for lack of educational follow-through (Beech, 1999). Preliminary attempts at research by nursing schools gauged the success of an antiviolence program of instruction based on the evaluations collected immediately afterward (Beech & Leather, 2003). Most participants provided positive responses as students were happy to have *any* training which would lessen fear and anxiety.

A 2015 court case made the point that adult learners were responsible for themselves, after a female student was brutally attacked by a mentally ill male student (Helwick, 2015). The university was adjudicated as *not* responsible for the crime committed by the third party mentally ill student, for whom the premeditated stabbing was possibly foreseeable. The California Court of Appeals indicated that there was no implied guarantee of safety for any student simply by attendance at a university. The school had no legal obligation to ensure criminal acts were prevented from occurring, and therefore the university was not legally liable (Helwick, 2015).

Comparable to the Joint Commission for the accreditation of hospitals, the Accreditation Commission for Education in Nursing and the Commission on Collegiate Nursing Education do expect the educational programs to adhere to the policies formulated by the educational institution itself (Accreditation Commission for Education in Nursing, 2017; Commission on Collegiate Nursing Education, 2013). For instance, if a university assured that students would be free from any potential for violence in the clinical setting, the accrediting bodies would expect to see steps taken to bring about this end. Therefore, the *lack* of such an antiviolence statement would not be a barrier to accreditation, as there would be no such rule enforcement to track for compliance.

Today's nursing education utilizes a variety of teaching strategies, including clinical rotations with live patients in the hospital setting. Much of the study of violence toward healthcare workers has been directed toward registered nurses and nursing students combined together, but not students alone (Nau et al., 2010). Early training in handling patient aggression for nursing students can have extended benefits after graduation from nursing school.

DuFault (1990) found the first three months to be a crucial time in a new registered nurses' life in deciding if nursing was the correct career choice. Student nurses need to feel confident and competent in the ability to handle adverse situations and need to engage in education that will sustain healthcare practice independently. Therefore, research with nursing student participants on the effect of de-escalation training will inform the best course of action for engaging with, and caring for, agitated or aggressive patients.

In addition, the healthcare organization has a vested interest in protecting nursing students from harm while participating in clinical coursework at the facility. One of the main reasons for minimizing nursing student risk is the potential to recruit those future nurses into open positions in the facility (Beech, 1999; Benner, Sutphen, Leonard, & Day, 2010). The hospital may also bear responsibility if it fails to provide a safe environment in which the student may practice (Shinn, 2001). Both of these reasons, along with a concern for the student nurses' overall personal safety, are the primary indicators of interest for the facility to promote research into the effectiveness of verbal de-escalation training

Sauer, Hannon, and Beyer (2017) surveyed 87 nursing students, whose mean age was twenty-two; 71% ($n = 59$) reported having their peers intentionally speak over their conversation. The purpose of the study was to look at peer incivility within the nursing student population, and to examine the effects of incivility on both the physical and mental health of the affected students. Fourteen different uncivil behaviors were studied, including the interrupting actions mentioned, plus eye-rolling, physically turning away from the student while they were speaking, hostile looks directed toward the student nurse, yelling, and swearing (Sauer et al., 2017). Via an online survey, this cross-sectional study found 54% of students ($n = 45$) reported having been victims of demeaning behavior.

Additionally, the students were asked to identify the perpetrator group, such as patient or peer. The 126 students who participated were registered for an online course on health promotion: half ($n = 63$) were Associate Degree in Nursing (ADN) to BSN students, and the rest belonged to Master of Science in Nursing (MSN) and Master's entry nursing courses ($n = 42$ and 21, respectively). Of the 126 student participants, 100% had experienced at least one type of violence, with the primary offenders being nursing and other staff members (50% of the violence, though no specific numbers of participants were given), patients (25%), and visitors and others, 25% (Hinchberger, 2009). Verbal abuse was the most common form of violence (69%), with bullying (21%) and physical abuse (10%) in lesser amounts. Of those who experienced or witnessed violence, only 30% notified the security or police department.

While speaking of abuse by peers, Hinchberger (2009, p. 42) noted "many student nurses and new graduates accept horizontal violence as a 'rite of passage,' only to mimic and repeat the behavior" in their own nursing careers. The implications from this research were that healthcare violence was underreported by students, necessitating student education on the signs of impending violence, and initiation of the workplace violence prevention procedures to ensure safety for all students, staff, and patients (Hinchberger, 2009).

Incivility in the academic setting disrupts learning and points to a lack of respect for human beings, a decidedly non-nursing trait (Altmiller, 2012). Twenty-four junior and senior nursing students participated in a qualitative research project looking at incivility from both the nursing student and faculty perspectives. The purpose was to explore both sides, and to develop resolutions prior to the issue hitting a crisis level (Altmiller, 2012). Four focus group meetings revealed several themes, including poor communication techniques, loss of control over one's world, difficult peer behaviors, power gradients, inequality, stressful clinical environment, and authority failure. These are many of the same behaviors which caused violence in other environments (Altmiller, 2012).

The results of the study indicated that students often found the uncivil behaviors just as disruptive as the academic staff, and the lack of governance looked like a lack of concern or control (Altmiller, 2012). If the behaviors of the bully nursing students are allowed to persist, the result may be a bullying nurse who may have the care of the most vulnerable of patients in their charge (Altmiller, 2012). Neglecting to enforce behavioral boundaries in the students caused faculty anxiety, and some considered leaving teaching, while in students, conflict caused disengagement from the learning process (Altmiller, 2012; Sauer et al., 2017).

Violence against nursing students by patients was widespread, occurring in multiple places, in a variety of ways, with numerous physical and psychological consequences (Brann & Hartley, 2017; Jarvis & Bhodraj, 2017; Jonas-Dwyer et al., 2017; Tee et al., 2016). Studies have cited from 25 to 58% of nursing students having suffered an episode of violence primarily instigated by patients (Hinchberger, 2009; Hopkins, Fetherston, & Morrison, 2014; Jarvis & Bhodraj, 2017; Nau et al., 2007; Nau, Needham, Dassen, & Halfens, 2009; Needham et al., 2005; Tee et al., 2016; Wondrak & Dolan, 1992). Few new nurses consciously think about the possibility of a violent patient, and even fewer nursing students consider those risks and stop to think about the preventative action that should be taken (Nau et al., 2010).

The feeling of preparedness in student nurses to deal with violence was not consistent across all programs, genders, or countries. Jarvis and Bhodraj (2017) studied 31 third-year Bachelor of Nursing students in South Africa using a two-part questionnaire. The purpose of the study was to investigate the nursing students' perception of adequacy of resources to deal with aggression by mental health patients. Participants were primarily female (87.1%) with a mean age of 22 years old (SD = 2.96 years) and had some experience with mental health patients (Jarvis & Bhodraj, 2017). Over 41%, a total of 13 participants, experienced harm or the threat of harm while working with mental health patients.

South Africa's district hospitals had an overflow of mental health patients, and not enough psychiatric ward beds (Jarvis & Bhodraj, 2017). Patients brought in on a 72- hour hold were admitted to the medical wards if there was no psychiatric ward space, regardless of how angry or violent the patient. These factors, combined with the reported rate of harm attempted or completed, made an extraordinary contrast to the findings that a majority (86%, n = 27) of students believed there were enough resources to deal with aggressive patients (Jarvis & Bhodraj, 2017).

Students were asked if they knew when to ask for help, if they used outside resources, if they were confident help was available, and if they were confident hospital resources were available (Jarvis & Bhodraj, 2017). The study's authors speculated that because of the students' relative youth and lack of experience, they were unable to recognize the danger of the environment in which they worked. Alternatively, the students could infrequently be confident of the resources available but called them too late to avoid injury. The implications for this study were that without some type of intervention, the rate of attempts to harm nursing students, would escalate further (Jarvis & Bhodraj, 2017).

The research addressing the needs of student nurses in the face of anger suggests an unfamiliarity and lack of experience in dealing with violence, whether the source of aggression is peer-derived or not. Equally disturbing is the contradiction in rising rates of healthcare worker violence versus the decreasing numbers of studies addressing this risk in student nurses. Of the articles directly addressing nursing student interventions to verbally de-escalate agitated patients, only three have been published in the last five years (Brann & Hartley, 2017; Gurkan, & Komurcu, 2017; Jonas-Dwyer et al., 2017). More should be done to assist the vulnerable nursing student to protect themselves during this important time of life (Brann & Hartley, 2017).

3.4 Verbal De-escalation Education Intervention

In the early preliminary studies of the 1980s and 1990s, an idea began to take shape which questioned the need to train nursing students in anti-violence techniques, in line with the reports of widespread victimization (Beech, 1999; Wondrak & Dolan, 1992). The main point of contention centered around *which* tools or techniques to teach students (Heckemann et al., 2015), as "professional responsibility and accountability" could not allow more complicated concepts to be imparted than were strictly necessary (Beech, 1999, p. 611), for fear the students would then expose themselves unnecessarily to danger. Though the United Kingdom (UK)'s 1993 nursing board suggested some type of anti-violence material should be taught prior to nursing students graduating, there were no specific guidelines about what or when these items should appear in the curriculum; the schools were left to decide for themselves (Beech, 1999).

In 1992, Wondrak and Dolan conducted a study of 29 second-year nursing students who were preparing for their psychiatric rotation. The purpose was to investigate the differences in scores for live-simulated aggressive-patient interactions, between students who received a 90-minute educational module (intervention

group) and those who did not (control group). The simulation sessions were videotaped, then scored by three subject matter experts (male psychiatric nurses) and the scores averaged to come up with one grade at the end. After the initial simulation, the education module was conducted, then the two live simulators changed groups, and the simulations were run again. After the final simulation, the control group received the 90-minute education that the intervention group had received at the beginning of the study.

Prior to the educational module and during the initial simulations, both groups scored equally in all aspects of the scales. After the educational module for the intervention group and the second live simulations, the intervention group scored significantly lower in three areas: feelings of anger when dealing with the aggressive patient (36.9 versus 9.4, respectively), feelings of the situation being out of control (51.1 versus 31.9) and would feel as threatened in a similar situation in the future (30.8 versus 18.3). The raters believed the intervention group appeared more relaxed and better able to deal with the aggressive patient, but the scores for these measures did not reach a level of significance. The implication of the study was that apathy toward education in de-escalation and self-preservation techniques existed because it was thought violence to be a routine part of nursing. The study showed that even a short workshop could make a significant difference.

The British Royal College of Nursing admitted that violence was occurring against nursing students, though accurate statistics for rates of occurrence could not be found (Beech, 1999). In the United States, the American Association of Colleges of Nursing (AACN) issued a position paper in 1999 outlining a set of competencies for nursing students regarding the assessment and intervention strategies for combatting violence (American Association of Colleges of Nursing, 1999). The suggested requirements from AACN were broad and focused on domestic violence (American Association of Colleges of Nursing, 1999).

Thoughts of true violence prevention training for nursing students began in earnest around 1987, though the earliest evidence of a therapeutic intervention for any healthcare workers was noted in 1976 (Fein, Gareri, & Hansen, 1981). The British Health Services Advisory Council suggested that good training consisted of modules covering theories on aggression and violence, assessment, and both verbal and non-verbal interactions with agitated persons, at the bare minimum (Beech, 1999). Beech studied changes in attitudes in a three-day training for 58 diploma-degree nursing students eight months into their program.

The purpose of the study was to show the efficacy of the workshop in changing the attitudes of students regarding violence and aggression towards healthcare workers via a pre-and post-intervention survey (Beech, 1999), Course objectives included having an awareness of theories of aggression, prevalence and risks of violence, verbal and nonverbal de-escalation approaches, and personal safety attainment including the teaching of breakaway skills (to physically disengage from a violent person). The results reached statistical significance ($p < 0.5$) on fourteen of the twenty attitude questions, such as *Much of the aggression and violence I see at work is preventable* ($p = 0.000$)*, Doing the right thing will make a bad situation better* (($p = 0.0000$)*,* and *I feel confident in my own ability to manage a patient's behavior as it becomes verbally aggressive* ($p = 0.0000$). The implications of the study were that attitudes of students can be changed and that they greatly appreciate this type of training.

By 2007, researchers in Germany, the Netherlands, and Switzerland conducted qualitative research, by asking twelve nursing students with at least six months of work experience about encounters of patient aggression. Utilizing the discussion group input, educational content and methods were designed accordingly (Nau et al., 2007). The purpose of the study was to investigate how nursing students deal with patient aggression. Themes which came to light for many students included the need to do what the nursing instructor or program would want while trying to protect their legal rights when faced with a violent patient, and how to deal with minor issues such as someone who violated the rules or refused nursing actions (Nau et al., 2007). The authors speculated that sometimes students triggered aggression from the patient, as the student believed their intervention to be more important and should override the patient's self-determination. The major implication from the study were that students doubt their competency in verbal de-escalation (Nau et al., 2007).

Jonas-Dwyer et al. (2017) trained 18 graduate-level nurses in a one- day, nine and-a-half hour program, to gauge their level of readiness to manage violence. Various studies have discussed the length of program needed to adequately educate student nurses to the extent that is desirable (Beech, 2008; Brann & Hartley, 2017; Needham et al., 2005), Though the students were in their first year, the graduate program garnered adults mainly with bachelor's degrees in a case study-designed project (versus experimental study, perhaps due to only nine students completing all the study requirements).

Questions were completed at four points during the study (Jonas-Dwyer et al., 2017), including via iPads immediately prior to training and at the end of the training, and via SurveyMonkey link one week after the first

clinical placement, and then six months later after a week at the second clinical placement. The purpose of the study was to explore student experiences in the training program and their ability to handle aggression in the hospital units. The longer-term survey period saw a loss of half the study participants to follow-up. Still, the authors counted all 18 in many parts of the results.

Prior to training, 44% (*n* = 8) felt unsure of their ability to prevent or manage an episode of workplace aggression (Jonas-Dwyer et al, 2017). Immediately after training, 99% (*n* = 17) strongly agreed or agreed they were able to prevent or manage workplace violence. Fifty-six percent of the students experienced or witnessed violence during their first clinicals (*n* = 10), in the form of verbal abuse (*n* = 9), physical abuse (*n* = 4), intimidation (*n* = 4) or implied threat (*n* = 1). Yet, 100% (*N* = 18) stated they felt capable to manage or prevent workplace violence. The second clinical placement saw 33% (*n* = 4) experiencing or witnessing aggression or violence, and a drop in feeling able to handle violence to 56% (*n* = 4), with the rest feeling unsure.

The implications of this study were embodied in the rest of the results: when asked if the students employed physical breakaway techniques in a violent situation during the first placement, 44% *(n* = 8) said they did not, while the same amount did not answer the question (Jonas-Dwyer et al., 2017). After the second clinical, the numbers declined and so did the number of students answering questions: 25% stated they did not employ breakaway techniques (*n* = 3 out of 12), and most (57%, *n* = 8) refused to answer. The three students who did employ physical breakaway techniques said they did so successfully during clinicals one and two. Even after education, in this study the effects of the intervention were not long-lasting (Jonas-Dwyer et al., 2017).

3.5 Comparison of Scores After Education

Educating in the tools and techniques to use in de-escalation with agitated patients can take various forms. One of the most unique was reported from a study in Turkey, which was ingeniously designed to have 22 senior-level nursing student peer educators teach principles of protection specifically geared toward 136 females first- and second-year nursing students (Gurkan & Komurcu, 2017). The purpose of the study was to assess the effect of peer education about violence on women in knowledge, attitudes, and skills of the participants.

Utilizing a randomized controlled format to divide the participants into two groups- one for the intervention group (*n* = 63) and one for the control (*n* = 73), peer educators used eight sessions, one hour long, to teach the prevalence and impact of violence against women, assessment, services, and responsibilities of healthcare workers (Gurkan & Komurcu, 2017). A pre- and post-test design questioned women before and two months after the training. There was a statistically significant increase in knowledge of violence against women in the two-month post-test compared to the pre-test for both groups (intervention group: 37.8 ±8.7 versus 63.5 ± 1; control group: 31.3 ± 10 versus 38.4 ± 10; *p* < .001 for both groups). There was also a statistically significant increase when the two groups were compared with each other for pre- and post-test scores (knowledge: intervention group 25.6 ± 15.6 versus control group 7.1 ± 11).

The literature comparing the use of various types of verbal de-escalation educational training is minimal. However, in a mixed-methods study of 48 BSN or MSN students, Brann and Hartley (2017) aimed to assess the effectiveness of an online workplace violence module by testing the awareness and knowledge of workplace violence. Utilizing a pre-test and post-test survey as a baseline, other information was gleaned from nursing students through group discussions on issues such as suggestions for retention of the material, increased participation, and improvement of the website. Broken into thirteen 20-minute modules, the content was meant to be worked at the student's pace, and in their own timeframe instead of needing to be present for a lecture or demonstration (Brann & Hartley, 2017).

Via online links to the survey, students completed the pre-test survey, then emailed the instructor for a link to the education (Brann & Hartley, 2017). After completing the thirteen modules, students again emailed the instructor for the immediate post-test survey. An email with the survey link was sent, as well as for one four weeks later. After the first post-test survey, students were invited to participate in one of two focus group discussions. The mean scores for the measure of awareness of workplace violence showed a statistically significant increase from pre-test to post-test (pre-test: 0.75, *SD* = 0.44; post-test: 2.13, *SD* = 0.79; 4 weeks post-test: 1.96, *SD* = 0.77). The mean knowledge scores reached an even greater increase (pre-test: 6.65, *SD* = 1.45; post-test: 8.56, *SD* = 1.32; 4 weeks post-test: 8.19, *SD* = 1.42) but both with a dip immediately afterward (Brann & Hartley, 2017).

Brann and Hartley (2017) speculated that the focus groups' meeting prior to the four-week follow-up survey may have had an impact on the scores and may have been partially responsible for the increase in that timeframe. The implications from this study were that knowledge and awareness of workplace violence can be increased and retained with an asynchronous online educational program geared toward health professionals. In addition, each

of the focus group participants found the education helpful, and suggest it be a routine part of the early classes for all nursing students (Brann & Hartley, 2017).

In an older study, Doyle and Klein (2001) compared the use of a poster session format to a video with lecture format for the teaching of workplace violence prevention. To understand which format yielded higher pre-test and post-test scores on a 25-item data collection tool, the education department divided 135 staff into two groups according to their hire date. During this quasi-experimental study, older staff (n = 84) were considered the experimental group and were asked to learn about workplace violence from a poster session and participate in pre-test and post-test surveys. New employees (n = 51) were considered the control group and were given education via video scenarios and lecture, which had been the typical format used in previous years (Doyle & Klein, 2001).

The two groups' mean scores at pre-test were not significantly different (intervention: 15.2; control: 14.5) on the Violence in the Workplace Knowledge Test (Doyle & Klein, 2001). The post-test scores revealed a statistically significant difference between the intervention and the control groups' means (intervention: 22.6; control: 17.7; $p < 0.000$). The implications for the study were that there was a need to explore different methods of instruction, and that poster sessions could be just as effective, if not more, than traditional video and lecture combinations. Changing the progression toward violence is an uncertain process, and those invested in an overarching air of calm have trialed numerous methods to educate on the desired outcome.

"Strong contributions to peaceful de-escalation" (Reade & Nourse, 2012) are made by experienced staff who have de-escalated many potentially violent patients. Outcomes in the PICOT format for this literature review pertained mainly to knowledge gained through de-escalation education and the students' greater feelings of self-efficacy in this skill. The researched articles mainly utilized pretest and posttest survey questions, mining for a possible change in ability or confidence in using verbal de-escalation techniques, and for other factors such as attitude toward violence (Needham et al., 2005), knowledge of theories and models behind verbal de-escalation (Beech & Leather, 2003), and detailed information about the experienced assaults (Magnavita & Heponiemi, 2011).

In the nearly 25 years since researchers first began to consider that nursing students also had a stake in the workplace violence realm, the focus has moved full-circle from *how* and *how much* to teach for maximum outcome *to which* verbal de-escalation education style and training would be best, and back (Jonas-Dwyer et al., 2017; Wondrak & Dolan, 1992). Most studies reported positive changes in attitude for predicting aggressive behavior and appropriate interventions via boosted self-confidence and self-efficacy, according to a literature review on the subject by Heckemann, Zeller, Hahn, Dassen, Schols, and Halfens (2015). Longitudinal studies post-intervention often witnessed a retention of some portion of the information immediately after training, but inconsistency in the longer-term. Heckemann et al. (2015) initiated a literature review to gather the past quantitative research, analyze, and make recommendations for further studies

Heckemann et al.'s (2015) literature review gathered past research on workplace violence training for nursing students, but also for nurses after licensure was in place. Nine quantitative studies were found to have been completed between the years of 2000 and 2011. Of those, two were felt to possess a weak study design, as determined by the Quality Assessment Tool for Quantitative Studies (Doyle and Klein, 2001 and Grenyer et al., 2004). One study, Nau et al. (2009) was thought to be strong in its design, with the rest being mediocre (Beech, 2001; Beech and Leather, 2003; Deans, 2004; Fernandes et al., 2002; Nau et al., 2010).

Nau et al.'s 2009 study used 63 nursing students from one school in a quasi-experimental longitudinal pre-test and post-test format over three days. Based on a previous study the same lead author completed in 2007, the study identified an educational program with a range of topics that may have helped to sustain knowledge retention up to eight weeks later (survey one pre-test to survey three eight weeks later: M= 2.51 to 3.69, p= 0.00). The one caveat was that four of the students dropped out but their data was not scrubbed from the measures of central tendency.

Heckemann et al. (2015, p. 218) went on to state the implications of their study were that "training increases nurses' knowledge about risk assessment, [and] management of aggression. It boosts confidence in dealing with PVA [patient or visitor aggression] yet training effects no long-term reduction in incidence of PVA." Cultural shifts, both within the students and staff by way of reporting such incidents, and in the work environments, are needed to make our healthcare units safe for nurses and students to provide care.

Attitudes toward those who perpetrate violence are sometimes more difficult to change and more ingrained in the student nurses' personality. Beech (2008) conducted a study of 243 student nurses in their first year of a diploma program. The purpose was to study the effects of a three-day training program on various aspects and learning

domains of the students, including knowledge, attitudes, confidence, and competence. This study was a reinvestigation of the original research (Beech & Leather, 2006), which utilized a longitudinal interrupted time-series design, surveying participants at two points before the educational intervention and two points afterward, over an eight-month period.

Results indicated that in attitudes toward personal safety, men scored themselves higher at being able to maintain their personal safety (sample was 85% female; $p = 0.04$) than women. Attitudes in blaming the possible perpetrators varied, according to whether the participant had received training in aggression theory for the first scenario, but not for the second.

In the original research (Beech & Leather, 2003,) those who had not received aggression theory training scored a t-test of 0.971(significance of 0.333) in the first simulation scenario and for the second scenario t-test -1.19 (significance 0.235). At the end of the third day, after aggression theory training, those who were given the first scenario showed a t-test score of 4.61 (significance < 0.001) while the second scenario t-test scored 0.15 (significance 0.88). The question of blame was measured on a ten- centimeter visual analog scale for the perpetrator in each scenario. In scenario one, the perpetrator was a 30-year-old man in the emergency department, and in the second scenario, the perpetrator was a 75-year-old woman in a residential home. The authors expected the man to be blamed more for his violence but found this not to be the case.

The implications for this portion of the study were that attitudes toward who is to blame for an episode of violence are multifactorial (Beech, 2008; Beech & Leather 2003). The authors offered other suggestions for blame avoidance on several factors in each scenario, including staff issues such as fatigue and mannerisms of the staff when dealing with the patient (gruff versus compassionate, for example). More disturbingly, the student nurses also scored themselves as *not* believing they should remain in the background when a violent incident occurs. This attitude that nursing students believed their role was as *junior* nurses and in an advanced position over mental health technicians without recognition of their own limits of de-escalation training and practice, could be endangering the entire unit's safety (Giarelli et al., 2018).

In the found studies, researchers linked the baseline measurements of aggression awareness and identification before education to post-intervention scores, to reflect that knowledge changes do not happen without education (Beech, 2008). In one of the few research studies into student verbal de-escalation that used a control group, Wondrak and Dolan (1992) commented that the control group's test scores worsened in anxiety, anger, and upset self-scoring scales after watching a simulated aggressive patient-nurse scenario but not receiving additional educational input. This result seems to verify that verbal de-escalation training does not occur naturally and of its own accord (Beech, 2008; Nau et al., 2010). Without de-escalation education, further episodes of aggression only served to make the non-intervention nursing students *less* able to internally deal with events.

Needham et al. (2005) researched the influence that an educational course had on nursing students' confidence in managing patient aggression. One hundred and seventeen students were divided into intervention ($n = 57$) and control ($n = 60$) groups from two nursing schools in Switzerland, in various parts of their four-year academic career. This quasi-experimental pre-test and post-test design revealed that the students in the intervention group sustained a "highly significant increase in confidence, compared to students in the control group on both within and between subject factors ($p < 0.001$). No other specific data on this point are given, except to say the instrument used to collect the data held up well. The implications were that the four-day aggression management training course was successful in enhancing the students' confidence to handle patient aggression without having to change their basic underlying attitudes toward aggression or its perpetrators.

The time to train in verbal de-escalation seems to point to earlier rather than later, before the future nurse forms a tolerance to the violence (Whittington, 2002), and considers it part of the job (Brann & Hartley, 2017). Magnavita and Heponiemi (2011) proposed a study which would investigate the individual idiosyncrasies of the student and the effect of violence on them so that appropriate, specific education could be tailored to their needs. In a retrospective survey design, 346 nursing students were compared to 275 nurses in a general hospital on domains of violence, psychiatric stability, work conditions, and organizational culture. Participants were asked to describe their most upsetting experience, and then questions were answered relative to this event.

Licensed nurses reported greater levels of threats, aggression, and sexual harassment (occurrences: 44, 76, and 37, respectively) than students (occurrences: 26, 71, 20; p values = .001, .022, and ,001 respectively) over a one-year period (Magnavita & Heponiemi, 2011). However, the effect on students was much greater in the areas of humiliation ($r = 13.7$, $p < 0.001$), thinking they had done something wrong ($r = 16.3$, $p < 0.001$), thoughts of needing to change their behavior ($r = 8.1$, $p = 0.004$), and desire for revenge ($r = 13.7$, $p < 0.001$). The implications from this piece of the study (Magnavita & Heponiemi, 2011) were that nursing students do not have

the same level of professional role development and support as nurses who are licensed and working in a setting shared, and have a salary and career on which to rely. Verbal abuse can have especially severe and lasting effects in undermining students' self-esteem and morale (Magnavita & Heponiemi, 2011). This study supports the need for student nurses to participate in anti-aggression training and verbal de-escalation communication skills education.

At minimum, prudence would seem to suggest an educational session early in the nursing students' school career and then again prior to graduation from the nursing program, although the Crisis Prevention Institute (2009) suggests retraining every six to twelve months. Placement early in the nursing curriculum may be particularly beneficial if research is a consideration, as there will be less chance of recall bias if conducted prior to clinical placements. If the student had experienced multiple episodes of violence or prior educational programs on dealing with violence, the results of research in a later portion of the program may inadvertently skew data outcomes (Beech, 2008; Beech & Leather, 2003; Jonas-Dwyer et al., 2017; Nau et al., 2009). Based on the literature review, there is ample evidence to suggest further research to benefit the students, as well as future patients and staff. Themes derived from the literature review are listed in Figure 1. This strengthens the need for further research into this topic.

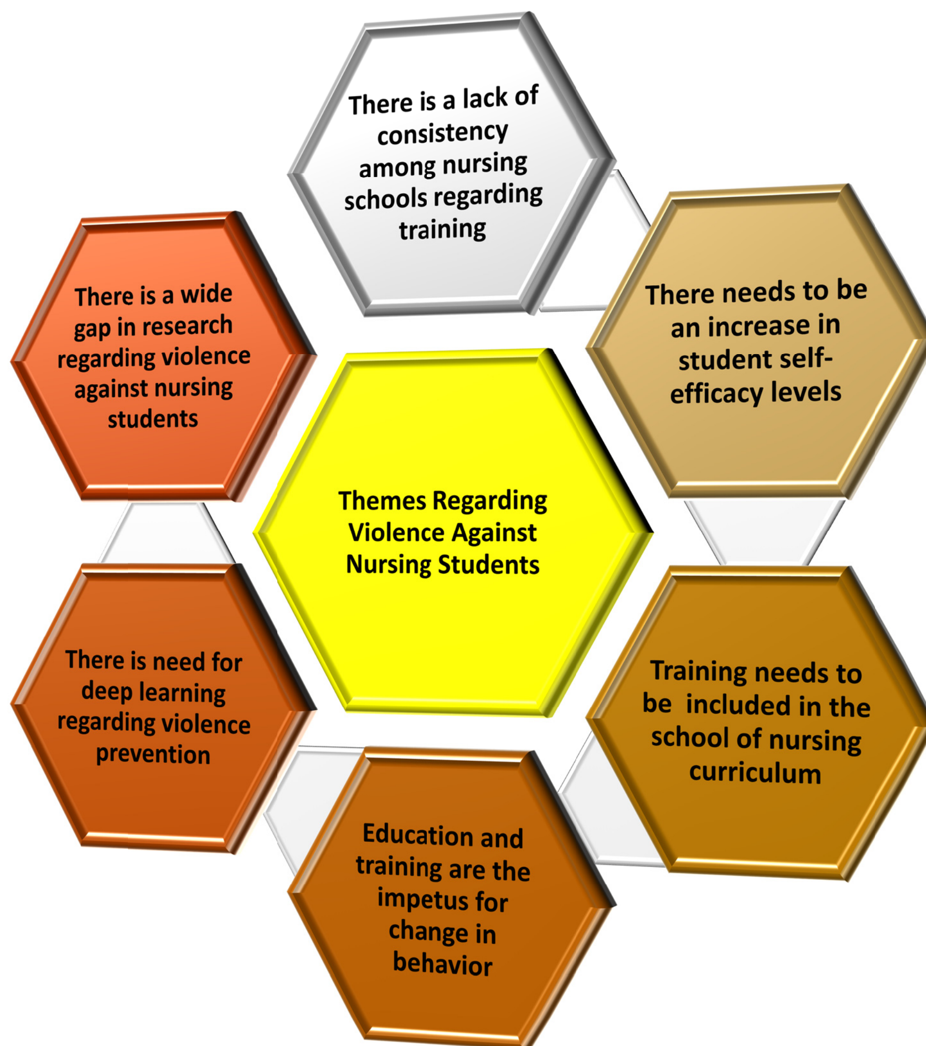

Figure 1. Six major themes derived from the literature review regarding violence against nursing students

4. Discussion

Though violence against nurses has been an issue on the frontline of nursing for over 40 years, little has been accomplished in eliminating this ever-increasing problem. Research groups attempted to ascertain the factors necessary to ensure knowledge retention and then appropriate action when nursing students faced the same possibility of violence.

4.1 Strengths

One strength inherent in each study was the abundance of material covered in the de-escalation educational module to nursing students, regardless of the format, specific content, or delivery method. Each research team correctly exhibited great concern for the safety of the students. The results of surveys completed during the post-training phase illuminated a common theme felt by the students of a need for increased knowledge of violence and action choices when faced with being a victim of abuse. In conjunction with this finding, all research outcomes recommended integrating some form of de-escalation training within the core nursing curriculum.

4.2 Weaknesses

One profound weakness which emerged was the inability of the large German and Swiss research teams to work cooperatively, in consideration of the limited financial, scientific, and cognitive resources available. It was apparent quite early that a competition was occurring, as more articles were written premised on the findings of the previous manuscript by the same groups. The mind boggles to think of the possibilities of progress which could have been made if the teams had used each other's findings as a steppingstone to progress to the next level of discovery. Promotion of one's own research as better is not necessarily an improvement more than a different opinion thrown into the mix.

It is disappointing to note the genuine caring attitude toward the safety of the nursing students without also mentioning the need for a marked culture shift within nursing programs and other healthcare venues away from the tolerance of violence in any form. Teaching de-escalation techniques is a short-term patch for the more pervasive issue of nursing professionals' willingness to subjugate their safety in lieu of the patient's health care. The overarching need to stay focused on the nursing students' welfare was lost at times, in lieu of finger-pointing and layers of blame and bureaucracy.

4.3 Gaps

Of the studies reviewed, only one was conducted in the United States (Brann & Hartley, 2017). One study sample of 48 participants, looking at the healthcare violence which may affect almost 500,000 nursing students, is not enough. The primary gap within this topic is the lack of public knowledge, nursing school and clinical site accountability, and faculty transparency to potential and current nursing students of the almost certain risk for violence at some point in the nurses' career, especially in high risk areas such as the emergency department, dementia-care units, and psychiatry (Beech, 2008; Brann & Hartley, 2017; Gurkan & Komurcu, 2017; Jones-Dwyer et al., 2017; Needham et al., 2005).

Lack of a control group was often noted in the literature reviewed (Beech, 1999; Beech & Leather, 2003; Brann & Hartley, 2017; Jonas-Dwyer et al., 2017; Nau, Dassen, Needham, & Halfens, 2009). The wisdom or ethical consideration of giving no education on de-escalation techniques to control participants which may prevent injury, was not addressed (Gurkan & Komurcu, 2017). A minimum amount of information could have been relayed which would not have interfered with study results to the control groups, such as mandating the immediate departure from the area of any student within 15 feet of an agitated or aggressive patient. For such an important research topic, three of the five research groups chose to use self-engineered data instruments, which had been tested on a limited basis if at all, or there was no information on the validity and reliability of the instrument (Brann & Hartley, 2017; Gurkan & Komurcu, 2017; Jonas-Dwyer et al., 2017). Such an obvious lack of adherence to good scientific principles speaks to the rigor of the study, as well as the authenticity of the research.

5. Conclusion

Violence against nursing students perpetrated by patients and its impact was described in this review. Violence in health care is on the rise, and nursing students are often viewed as more vulnerable to possible harm than other care providers (Beech, 1999; Magnavita & Heponiemi, 2011). Whitley, Jacobson, and Gawrys (1996) suggest that the safety of student nurses is as important as the patients that are served and cannot be sacrificed. Minimal research has been conducted over the last 40 years, and even fewer efforts have been directed toward the safety of nursing students. The small amount of research to date has been uncoordinated and noncumulative, leading to

a piecemeal effect of outcomes. Gaps in method and instrumentation have added fuel to the issue, and it is no wonder that inconsistencies exist in the inclusion, content, or placement of de-escalation and anti-violence measures in nursing curriculum (Brann & Hartley, 2017; Hopkins, Fetherston, & Morrison, 2014). Based on this literature review, it is evident that more research (sp.) is needed on this topic, especially experimental studies using a control group and larger sample sizes.

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