Nurse Education Today 68 (2018) 45–52

Contents lists available at ScienceDirect

Nurse Education Today

journal homepage: www.elsevier.com/locate/nedt

The effect of a workplace violence training program for generalist nurses in the acute hospital setting: A quasi-experimental study

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ARTICLE INFO

Keywords:
Violence
Aggression
Challenging behaviour
Interventions
Training
Nursing
General hospital

ABSTRACT

Background: Workplace violence prevalence has attracted significant attention within the international nursing literature. Little attention to non-mental health settings and a lack of evaluation rigor have been identified within review literature.

Objectives: To examine the effects of a workplace violence training program in relation to risk assessment and management practices, de-escalation skills, breakaway techniques, and confidence levels, within an acute hospital setting.

Design: A quasi-experimental study of nurses using pretest-posttest measurements of educational objectives and confidence levels, with two week follow-up.

Setting: A 440 bed metropolitan tertiary referral hospital in Sydney, Australia.

Participants: Nurses working in specialties identified as a 'high risk' for violence.

Method: A pre-post-test design was used with participants attending a one day workshop. The workshop evaluation comprised the use of two validated questionnaires: the Continuing Professional Development Reaction questionnaire, and the Confidence in Coping with Patient Aggression Instrument. Descriptive and inferential statistics were calculated. The paired *t*-test was used to assess the statistical significance of changes in the clinical behaviour intention and confidence scores from pre- to post-intervention. Cohen's *d* effect sizes were calculated to determine the extent of the significant results.

Results: Seventy-eight participants completed both pre- and post-workshop evaluation questionnaires. Statistically significant increases in behaviour intention scores were found in fourteen of the fifteen constructs relating to the three broad workshop objectives, and confidence ratings, with medium to large effect sizes observed in some constructs. A significant increase in overall confidence in coping with patient aggression was also found post-test with large effect size.

Conclusions: Positive results were observed from the workplace violence training. Training needs to be complimented by a multi-faceted organisational approach which includes governance, quality and review processes.

1. Introduction

Workplace violence (WPV) is recognised internationally as a major workforce concern, with the literature within healthcare, and particularly nursing reporting its high prevalence (Heckemann et al., 2015; Spector et al., 2014). The International Council of Nurses, via a joint program, defined workplace violence as "incidents where staff are abused, threatened or assaulted in circumstances related to their work", and suggested that nursing staff are more likely to be attacked than prison or police officers (International Labour Office et al., 2002, p.3). Workplace violence prevalence has therefore attracted significant attention within the international nursing literature.

Workplace violence in mental health settings has received the most attention with widely documented high prevalence (Chen et al., 2008; Iozzino et al., 2015); however, there has been increasing evidence for some time to suggest that WPV in Australian (Kynoch et al., 2009), United Kingdom (Winstanley and Whittington, 2004), and United States (Kansagra et al., 2008) non-mental settings is of a similar concern. A meta-analysis examining 136 articles with data on 151,347 nurses identified overall exposure rates for WPV at 36.4% for physical WPV and 66.9% for non-physical WPV; with 32.7% reporting physical injury following assault (Spector et al., 2014). Healthcare studies in Australia, Europe and Asia demonstrate that 12 month exposure rates for any WPV range from 50% to 75% (Chapman et al., 2009; Cheung

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https://doi.org/10.1016/j.nedt.2018.05.008
Received 26 February 2018; Received in revised form 9 April 2018; Accepted 12 May 2018

et al., 2017; Hahn et al., 2012). Exposure prevalence is similarly high for student nurses, where 50.3% in one study had already been subjected to WPV (Çelebioğlu et al., 2010). Internationally, nursing studies suggest that non-physical WPV is highest in 12 month prevalence (41.6%–91.1%) when compared to physical WPV (7.8%–33%) (Çelik et al., 2007; Jiao et al., 2015).

The effects of WPV on health workers include a range of psychological, physical and workplace symptoms (Iozzino et al., 2015). Workplace violence prevention and management have become an increasing priority for healthcare facilities, with employers consequently having an obligation to address this problem under their duty of care to employees (Chapman et al., 2009). In 2013, several US states enacted legislation to this effect, requiring heath authorities to have mandatory WPV prevention programs (Cheung et al., 2017). Healthcare WPV studies have been heavily criticised in the past for lacking uniformity and rigorous evaluation, and thus inconclusive evidence as to their effectiveness (Gacki-Smith et al., 2009; Kynoch et al., 2009) There has been little evidence in the recent literature to suggest that these issues have been addressed sufficiently (Heckemann et al., 2015; Price et al., 2015; Tölli et al., 2017)

A systematic review of WPV in acute hospital settings identified that whilst WPV training may increase nurses' knowledge of risk assessment and management, and improve confidence in managing WPV, no effect can be found on WPV incidence reduction (Heckemann et al., 2015). In a review of mental health WPV programs relating to de-escalation techniques, the strongest evidence for these training programs appears to be related to increased knowledge and confidence aspects. However, the authors caution that no strong conclusions can be drawn about the impact of training on staff safety, patient management or organisational outcomes, due to the low quality evidence and conflicting results (Price et al., 2015). Similarly, a recent review highlighted increased confidence in managing WPV amongst respective participants but did little to change staff knowledge or attitudes. The authors conclude that comparisons are difficult due to the heterogeneity of measurements used in studies, and recommended that structured and comprehensive tools to evaluate competence to manage WPV are required (Tölli et al., 2017).

The literature within the acute care setting context suggests that training content should seek to increase confidence, attitude, and knowledge of participants in managing WPV; whilst strategies aimed at reducing employee vulnerability to assault should also be considered. Training components of WPV programs traditionally involve theoretical aspects of identifying and managing risk factors associated with WPV, communication and de-escalation techniques, legal issues, breakaway techniques, and restraint training.

In 2012 in the state New South Wales, the setting for this study, the Ministry of Health released a policy framework, following several violent critical incidents within healthcare. This framework identified the need for formal mandatory training of generalist health professionals, and nurses in particular, in the effective prevention and management of WPV. Generalist specialties identified as high risk areas included Emergency Departments, Neurosciences, Aged Care and Community Services; and Local Health Districts were required to implement WPV training programs for staff in these specialties. This study sought to examine the effects of a workplace violence training program in relation to risk assessment and management practices, de-escalation skills, breakaway techniques, and confidence levels, within an acute hospital setting.

2. Methods

2.1. Design

The study employed a quasi-experimental pre-post-test measurement of a single group with matched follow up at two weeks post-intervention. This design is consistent with recommendations identified in contemporary WPV literature. The study was approved by the Local Health District Human Research Ethics Committee (HREC Ref Number 17/065).

2.2. Sample and Setting

Participants were nursing staff from a range of identified high risk specialties including the Emergency Department, Neurosciences, Aged Care, and Community Services. Nurses from Respiratory and Infectious Diseases, and Spinal services, were also invited to enroll as these specialties have been identified locally as high risk for WPV. Participants self-enrolled in the mandatory workshops via a centralised learning management system associated with their mandatory employment requirements. However, completion of study questionnaires was voluntary, with consent implied by completion and return of questionnaires.

Sample size calculation for this study is based on a previous violence minimisation study using the Confidence in Coping with Aggression Instrument (Grenyer et al., 2004) of an increase in mean confidence score from 62.67 to 68.85. Therefore, a sample size of 71 participants is required, with power of 80% (two-sided test at alpha of 0.05). The setting was a 440 bed tertiary referral hospital in the state of New South Wales, Australia.

2.3. Intervention

The training was facilitated by two Mental Health Liaison Nurse Consultants with extensive experience with the topic (Brunero and Lamont, 2017; Lamont and Brunero, 2009; Lamont et al., 2012), who had previously attended a WPV 'Train the Trainer' course. Eleven workshops were facilitated between March and December 2017, which addressed the following three broad objectives: 1) Formulating violence risk assessment and management plans; 2) Using de-escalation techniques during escalating aggression; and 3) Using breakaways when responding to a violent person. Enquiry-based learning methodology (Kirwan and Adams, 2009) underpinned the sessions relating to risk assessment and management. Simulation methodology (Bland et al., 2011) using a simulated patient approach (MacLean et al., 2017) was used during the de-escalation role plays. Supervised psychomotor skills training (Oermann et al., 2016) informed the breakaway techniques sessions.

The training content was piloted in a one day workshop involving twelve senior nurses (managers, educators and nurse consultants). The subsequent WPV training content was adapted after feedback from the pilot workshop and a critical review of the contemporary literature. All learning activities and learning materials are included in a comprehensive participant manual, which allows participants to document reflective notes and experiences throughout the workshop. A workshop outline with relevant material sources can be found in Table 1.

2.4. Instruments

A paper questionnaire comprising demographic characteristics and two validated instruments was used in the study. The questionnaire also asked participants to rate their level of exposure to workplace violence on a 10 point scale.

2.5. Continuing Professional Development (CPD) Reaction Questionnaire

This recently developed innovative instrument assesses change in health practitioners' clinical behaviour intentions (Légaré et al., 2014). It is a generic instrument intended to be tailored to individual learning activities. The instrument uses a 12-item Likert-type scale to evaluate five constructs: 1) Intention; 2) Social Influence (perception of approval or disapproval by persons significant to the individual regarding the adoption of the behaviour); 3) Beliefs about Capabilities; 4) Moral Norms (feeling of personal obligation regarding the adoption of the