International Emergency Nursing 31 (2017) 9–14

Contents lists available at ScienceDirect

International Emergency Nursing

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

Measuring the impact of the working environment on emergency department nurses: A cross-sectional pilot study

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ARTICLE INFO

Article history:
Received 24 December 2015
Received in revised form 19 April 2016
Accepted 21 April 2016

Keywords:
Emergency departments
Nurses
Morale
Questionnaire
Psychometrics
Work environment

ABSTRACT

Background: The emergency department (ED) is characterised by high workload and competing demands. This study describes ED nurses perceptions of their working environment with a sub group analysis for those who also worked at the local police watch house, where individuals are detained in custody.

Methods: A cross-sectional pilot study was undertaken involving a survey of nurses working in one ED in Queensland, Australia. The Working Environment Score (WES-10) consists of four subscales: Self Realisation, Workload, Conflict, and Nervousness; and is used to measure stress and staff morale. This was administered at two time periods: T1: May 2013 and T2: July 2013; before and after 10 ED nurses worked in the watch house.

Results: Questionnaires were returned by 34 nurses at T1 and 41 nurses at T2. The perception of working environment differed between T1 and T2 for nurse respondents who worked at the local police watch house but not for nurse respondents who did not work in the watch house. Of the four sub-scales, workload was the factor that impacted most on working environment in both groups and was notably higher for those who worked in the watch house and responded at T2.

Conclusions: This pilot study identified that for ED nurses' satisfaction with their working environment was relatively high, although certain areas (e.g., nervousness) were better than others (e.g., workload). The perception of workload was higher for T2 staff offered the opportunity to use their ED skills in a different setting, however further work with a larger sample size is required.

1. Introduction

The emergency department (ED) can be a stressful place to work. Stressors such as heavy workload, high acuity of patients, poor skill mix, violence, mass casualty incidents, and death or sexual abuse of a child have been reported (Healy and Tyrell, 2011; Ross-Adjie et al., 2007) and are not uncommon. Repeated exposure to stressors such as these can result in burnout and staff attrition (Adriaenssens et al., 2015). With projected declines noted for the ED health workforce, better use of the workforce and improved job satisfaction is important to inform a broader solution to provide better patient care (Australian Health Workforce Advisory Committee, 2006) and promote staff retention.

Burn-out is common amongst ED nurses; a recent systematic review indicated a burnout rate of around 1 in 5 (Adriaenssens et al., 2015). It is possible that a dose–response effect exists where increasing frequency of confronting events increases the risk of burn-out. One longitudinal study indicated that the number of traumatic events experienced was positively and significantly correlated with worsening scores on scales measuring fatigue, burnout and post-traumatic stress (van der Ploeg and Kleber, 2003). When nurses experience work stress and burnout, they may leave the profession (Jennings, 2008; MacKusick and Minick, 2010). Strategies to prevent burnout and attrition must therefore be considered. Such strategies include focussing on (i) improving safety

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http://dx.doi.org/10.1016/j.ienj.2016.04.005
1755-599X/

and quality of care delivery by improving staff scheduling, nurse: patient ratios, increasing nurse wages, recognising the contribution of emergency nurses with financial reward, investing in nursing education, developing nursing internships for nurses new to ED (Schriver et al., 2003), and (ii) the ability to engage with staff in terms of internal staff development opportunities (Nowrouzi et al., 2015), the coaching of ED leadership to improve support within the department, the provision of space and time for debriefing and counselling following traumatic events, access to training sessions on coping and what to expect in the ED, and facilitation of the reduction of repetitive exposure to traumatic events (Adriaenssens et al., 2015). Regarding the latter of these strategies, nurse managers can regularly change the work environment of ED nurses. Within the ED, they could be rostered to rotate to less acute areas. Periodically, managers could arrange secondments to other areas within or external to the hospital. Secondment is largely seen as a positive strategy (Embree et al., 2015; Gerrish and Piercy, 2014; Hamilton and Wilkie, 2001; Handley, 2015; Swenty et al., 2011) that allows individuals to develop new skills and knowledge (Dryden and Rice, 2008; Hamilton and Wilkie, 2001) as well as a period of detachment from high-intensity clinical caseload (Dryden and Rice, 2008).

In this pilot study we aimed to (1) use an existing validated tool to examine how ED nurses perceive working in their ED and which aspects of their work they were least and most concerned with and (2) examine the impact of the working environment for nurses who were and were not seconded part-time to an alternate setting (the Police watch house) for a 66 day trial period.

2. Methods

2.1. Design and sample

A pre-post cross-sectional design was used for this pilot study. A survey was administered to a convenience sample of nurses working in the ED to understand aspects pertaining to morale and stress. During the time of the study, the ED was staffed by 103 full-time equivalent (FTE) nurses. Verbal information, a study information sheet and the survey were provided by researchers to ED nurses during routine nursing education and handover time on weekdays. Nurses were informed that completing the survey would take approximately 10 min and that participation was voluntary. The survey was distributed to ED staff at two time periods: T1: May, 2013 and T2: July, 2013.

2.2. Setting

ED nurses who participated in this study worked in one (ED) or two (ED plus watch house) settings. The ED setting is within a large regional teaching hospital in Queensland, Australia that services both adults and children. Approximately 69,000 patient presentations were made to the 40 bed ED in the 2012–13 financial year. The watch house setting was located approximately 2 km from the hospital and services predominantly adults. It is a physical facility designed to temporarily detain people in police custody following arrest, and/or whilst awaiting court appearance and/or whilst awaiting transfer to a corrective services facility or detention centre (Queensland Government, 2014; Queensland Parliamentary Counsel, 2014; Queensland Police Service, 2016).

With around 1% of patient presentations being made to EDs via police (Australian Institute of Health and Welfare (AIHW), 2012), aspects of care delivery provided in the watch house were not necessarily familiar to ED nurses. Thus, following an expression of interest process (available to triage competent registered nurses who have undergone occupational violence prevention [OVP] training), orientation to the seconded setting (watch house) and delivery of a 2-day workshop was provided to 10 ED nurses. These nurses were rostered to work 8–10 h shifts; part-time in the watch house and part-time in the ED. Aspects of the role in the watch house included performing a nursing assessment on new arrivals as required, monitoring of vital signs and blood sugar levels, alcohol or other drug withdrawal screening and monitoring, administering medication, primary care assessment, treatment of injuries and wounds, mental health assessment (including risk of harm to self or others), facilitating referral to a treating facility (e.g., ED), communicating with patients, Forensic Medical Officers, ED Medical Officers, other nursing staff, paramedics and Police officers, and maintaining professional boundaries whilst working within a law enforcement environment. The model of care in the watch house was similar to the ED except the nurse was often the only health care professional on site and medical equipment was limited. Telephone advice from Forensic Medical Officers and ED Medical Officers was readily available. The uncertainty relating to prisoners' duration of custody and potential for lengthy detention periods required holistic consideration of health-related challenges that nurses are mindful of (e.g., the need to prioritise and address non-urgent medical issues such as continuation of medication, review of chronic medical conditions with potential to deteriorate).

2.3. Instrument

To assess perceptions of the working environment, nurses were asked to complete the Working Environment Score (WES-10) (Røssberg et al., 2004) (see Fig. 1). The WES-10 (Røssberg et al., 2004) has been used in settings that can be considered 'high stress'; including, mental health (Røssberg and Friis, 2004) and forensic institutions (Day et al., 2011). As far as we are aware, it has not been used in the ED. The WES-10 comprises 10 items that purport to measure staff morale and stress in the working environment. Responses are made on a 5-point Likert-type scale, with the response format differing as a function of item content (i.e., Not at all to Very Often; Very Often to Never; and Far too Few to Far too Many). It has satisfactory psychometric properties with Cronbach's alpha ranging from 0.63 to 0.85 (Day et al., 2011; Røssberg et al., 2004) across four clinically meaningful subscales (Self Realisation, Workload, Conflict, Nervousness). The self-realization subscale includes 4 items measuring the extent to which the staff members feel supported, whether they achieve more confidence, and whether they are able to use their knowledge in the working environment. The workload subscale comprises 2 items measuring the number of tasks imposed on the staff members and the extent to which they feel they should be in several places at the same time. The conflict scale includes 2 items measuring the extent to which staff members experience conflicts and loyalty problems. The nervousness subscale includes 2 items measuring the extent to which staff are worried about going to work and feel nervous or tense at work. After recoding of negatively worded items, higher scores are indicative of more positive workplace experiences.

Additional data collected on the survey included demographic information such as age, gender, years or nursing experience, years of ED experience.

2.4. Data analysis

Baseline characteristics were presented as median (interquartile range, IQR) or number (proportion). The median, rather than mean, was used, as these characteristics were slightly right skewed. Following the recommendations of Eisinga et al. (2013) internal consistency was reported using Cronbach's alpha for scales where there were more than two items and Spearman–Brown