

## An Ounce of Prevention: Interprofessional Education, Burnout Syndrome, and Healthy Work Environments: A Pilot Study

### Background

Burnout syndrome (BOS), characterized by exhaustion, depersonalization, and reduced satisfaction in performance<sup>1</sup>, has been associated with increased job turnover, reduced patient satisfaction, and decreased quality of care. It affects physicians and nurses alike, particularly in high acuity areas<sup>2</sup>. In response to alarming rates of BOS, the Critical Care Societies Collaborative (CCSC), comprised of four U.S. professional and scientific societies, issued a call to action, advocating for healthy work environments (HWE), where mutual respect between team members occurs<sup>2</sup>. HWE, supported by six evidenced-based, relationship focused standards of care, empower nurses and their colleagues to practice to their full potential<sup>3</sup>. The purpose of this paper is to report pilot study findings related to the effectiveness of a critical care interprofessional education (IPE) intervention on pre-licensure medical and nursing students to develop knowledge regarding the American Association of Critical Care Nurses (AACN) standards of HWE<sup>3</sup> and to develop confidence regarding practice in interprofessional teams.

### Methods

The IPE elective was delivered weekly during spring semester 2016 at a large, state- supported university. Nursing and medical school faculty trained 21 nursing and eight medical students utilizing lecture, skill demonstration, group discussion, and role play. HWE standards, skilled communication and true collaboration, which prepare nurses to demonstrate they are: (1) as proficient in communication skills as they are in clinical skills and (2) persistent in pursuing and fostering rich, equal collaboration, were highlighted weekly (AACN, 2005). Course

procedures included central line insertion, intubation, trauma management, and interprofessional conflict resolution.

### Data Collection

University IRB approval was obtained prior to data collection. Students in the experimental group self-elected to enroll in the elective. The control/comparison group was 50 5th semester nursing and 29 3rd and 4th year medical students from the same cohort. Using a post-test with nonequivalent groups design, surveys were sent electronically via Qualtrics (Qualtrics, Provo, Utah).

### Assessment

The Interprofessional Socialization and Valuing Scale (ISVS; Cronbach's  $\alpha = .95$ ), a 34-item, 7-point response scale was used. The tool has three subscales: (1) ability to work with others ( $\alpha = .90$ ), (2) value in working with others ( $\alpha = .92$ ), and (3) comfort in working with others ( $\alpha = .82$ )<sup>4</sup>. The 12-item, researcher designed AACN HWE Survey was used to evaluate student knowledge regarding standards of HWE ( $\alpha = .92$ ). Sample items included: (a) I am familiar with the link between work environment and patient safety, (b) I am familiar with the percentage of wrong site surgeries and delays in treatment related to communication issues, and (c) I am familiar with strategies to address unhealthy communication practices to prevent disruptive behaviors.

### Data Analysis

Data was analyzed using SPSS Version 23 (IBM Corporation, 2015). Participant scores were compared on the measures of interest, including differences between males and females, older and younger participants, or



nursing and medical students.

### Results

The majority of participants were nursing students ( $N=62$ , 78.5%), female ( $N=71$ , 88.9%), and Caucasian ( $N= 73$ , 92.4%). The ISVS ability to work with others subscale was significantly correlated with both value in working with others ( $r = 0.85$ ) and comfort in working with others ( $r = 0.63$ ). The value in working with others and comfort in working with others were also significantly correlated ( $r = 0.48$ ).

Males ( $M = 5.81$ ,  $SD = 0.60$ ) reported greater comfort in working with others than females ( $M = 4.83$ ,  $SD = 0.92$ ),  $t(77) = 2.95$ ,  $p = .004$ . There was a marginally significant difference on value of working with others, with nursing students ( $M = 5.85$ ,  $SD = 0.78$ ) placing greater value than medical students ( $M = 5.25$ ,  $SD = 1.15$ )  $t(75) = 1.93$ ,  $p = .07$ . Nursing students ( $M = 4.98$ ,  $SD = 0.97$ ) also reported greater overall familiarity with HWE standards than medical students ( $M = 4.26$ ,  $SD = 1.24$ ),  $t(75) = 2.44$ ,  $p = .02$ .

### Discussion

A small, non-diverse sample, with data collection occurring at a single time point

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preclude generalization of findings. Whereas males were more comfortable working with others and nursing students placed more value on collaboration, ongoing interprofessional team work in medical and nursing curricula may be required. Although one would expect nursing students to be more aware of AACN HWE standards, the development and sustenance of these supportive environments will require cooperation between all professionals. Future research should include longitudinal designs with diverse student groups to capture the effects of IPE on the development and sustenance of HWE.

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