The Relationship Between Critical Care Work Environment and Professional Quality of Life

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Background  Professional quality of life is the quality a person feels in relation to work. For critical care nurses, it is composed of compassion satisfaction and compassion fatigue. Professional quality of life is affected by work environment. The American Association of Critical-Care Nurses (AACN) has identified 6 standards for a healthy work environment.

Objective  To explore which of the AACN healthy work environment standards have the strongest impact on professional quality of life in critical care nurses.

Methods  In an exploratory, cross-sectional survey of nurses working in 4 adult critical care units of a single health care facility, professional quality of life was assessed using the Professional Quality of Life Scale (ProQOL), and work environment was evaluated using the AACN Healthy Work Environment Assessment Tool.

Results  Participants reported compassion satisfaction and burnout levels as average and secondary traumatic stress levels as high. The composite average for all 6 AACN healthy work environment standards was good. A multiple regression analysis revealed true collaboration, effective decision-making, and authentic leadership as significant predictors of compassion satisfaction. Authentic leadership was the only predictor of burnout. Appropriate staffing, meaningful recognition, and authentic leadership were predictors of secondary traumatic stress.

Conclusion  Authentic leadership is the strongest predictor of compassion satisfaction, burnout, and secondary traumatic stress. Therefore, improving leadership should be a priority in intensive care units seeking to improve nurses’ professional quality of life. (American Journal of Critical Care. 2020;29:145-149)
Professional quality of life is the quality a person feels in relation to work. For critical care nurses, it is composed of compassion satisfaction and compassion fatigue. Compassion satisfaction encompasses the positive elements of caring for others, and compassion fatigue comprises the negatives. Compassion fatigue is composed of burnout and secondary traumatic stress. Burnout is exhaustion from emotionally demanding situations, resulting in poor attitudes and detachment. Secondary traumatic stress was described by Charles Figley as an event occurring to one person but affecting many. Critical care nurses are subjected to secondary traumatic stress through indirect exposure, resulting in fear and helplessness. All of these elements collectively make up professional quality of life, which is affected by work environment (see Figure). Unhealthy environments result in increased turnover, lowered productivity, physical exhaustion, and compassion fatigue.

The healthy work environment (HWE) initiative of the American Association of Critical-Care Nurses (AACN) seeks to improve work environments through 6 standards: skilled communication, true collaboration, effective decision-making, appropriate staffing, meaningful recognition, and authentic leadership. These standards were developed by a 9-person panel and reviewed by 50 experts and align with the American Nurses Association’s Code of Ethics for Nurses as well as the core competencies endorsed by the National Academy of Medicine.

Skilled communication is crucial in providing excellent patient care. Poor communication is a major cause of burnout, and clinicians who receive communication training are less likely to experience burnout. True collaboration is essential, with 90% of nurses believing it to be the most important factor for an HWE, and can decrease compassion fatigue. Effective decision-making improves patients’ outcomes and compassion satisfaction while decreasing compassion fatigue. Appropriate staffing exists when patient needs match nurse competencies; mismatches increase the incidence of complications and reduce nurses’ well-being. Nurses with high patient loads have a 23% increased incidence of burnout, and 48% of nurses who left their jobs cited poor staffing as their reason for quitting. Lack of meaningful recognition can result in burnout and compassion fatigue. Recognizing contributions and rewarding compassionate care lead to compassion satisfaction. Authentic leadership refers to nursing leaders as skilled communicators, team builders, and collaborators. Poor leadership can increase burnout by setting unrealistic expectations of staff members, failing to address ongoing problems, and not involving staff members in decisions.

Objective
This study was conducted to assess the relationship between the AACN HWE standards and the Professional Quality of Life Scale (ProQOL) in order to identify factors affecting compassion satisfaction and compassion fatigue. The results may determine which HWE components have the strongest impact on professional quality of life and inform quality improvement initiatives by prioritizing policies that promote an HWE.

Methods
This exploratory, cross-sectional study was conducted at the University of Tennessee Medical Center, a Magnet-recognized, 750-bed facility in Knoxville. The projected sample size was 219 nurses from 4 intensive care units (ICUs): trauma/surgical, neurologic, medical, cardiovascular; the remaining 11 nurses were registry nurses (floating among units as needed). All nurses working in adult ICUs were included. This facility does not have a pediatric ICU.

Demographic data collected included age, sex, years in nursing and current unit, type of unit and visitation policy, education, management support,
and time of shift. Professional quality of life was assessed using the ProQOL version 5, a 30-item Likert scale measuring compassion satisfaction, burnout, and secondary traumatic stress. The scale does not have a composite score, and each domain is categorized as low, average, or high. The ProQOL’s Cronbach α values for reliability are 0.88 (n = 1130) for compassion satisfaction, 0.81 (n = 1135) for compassion fatigue, and 0.75 (n = 976) for burnout. The AACN Healthy Work Environment Assessment Tool (HWEAT) is an 18-item Likert scale ranking standard adherence as “needs improvement,” “good,” or “excellent.” It has been reviewed for face validity and administered to 2 groups of 250 people; each sample was tested for reliability and showed internal consistency with identical factor structures and a Cronbach α value of 0.8 or higher.

After receipt of institutional review board approval for the study, the ProQOL, HWEAT, and demographic questions were uploaded into Qualtrics survey software. Nurse managers were emailed a survey link to forward to their nurses. Participation was voluntary, and informed consent was implied by survey completion.

Results

The participation rate was 45%. Demographic data indicated that 80.7% of respondents were female, 54.6% worked the night shift and 45.4% worked the day shift, and most respondents had a bachelor’s degree (78.3%), followed by an associate’s degree (12.5%) and a master’s degree or diploma (4.6% each). Seventy-six percent of nurses felt that they had adequate manager support. The mean unit experience was 4 years, nursing experience was 8.7 years, and age was 33.8 years.

Raw scores for compassion satisfaction, burnout, and secondary traumatic stress were converted into standardized t scores in accordance with the ProQOL manual. Standardized t scores were categorized as low (≤ 43), average (>50), or high (≥ 57). The mean (SD) score for compassion satisfaction was average at 52 (7.9), for burnout was average at 55.3 (7.6), and for secondary traumatic stress was high at 63 (7.5).

The HWEAT categorical thresholds are 1.00 to 2.99 for needs improvement, 3.00 to 3.99 for good, and 4.00 to 5.00 for excellent. The mean (SD) adherence for skilled communication was good at 3.59 (0.73), for true collaboration was good at 3.54 (0.75), for effective decision-making was good at 3.82 (0.57), for appropriate staffing was needs improvement at 2.99 (0.96), for meaningful recognition was good at 3.25 (0.80), and for authentic leadership was good at 3.77 (0.60). The composite average of all 6 standards was good at 3.5.
A multiple regression analysis was performed for compassion satisfaction, burnout, and secondary traumatic stress (see Table). Thirty-three percent of the variance for compassion satisfaction (adjusted $R^2 = 0.33$) was accounted for by the HWE standards ($F = 7.92, P < .001$), with true collaboration ($\beta = .47, P = .003$), effective decision-making ($\beta = −.30, P = .02$), and authentic leadership ($\beta = .50, P = .001$) having significant coefficients. Twenty-two percent of the variance for burnout (adjusted $R^2 = 0.22$) was accounted for by the HWE standards ($F = 5.04, P < .001$), with authentic leadership ($\beta = −.41, P = .01$) having the only significant coefficient. Sixteen percent of the variance for secondary traumatic stress (adjusted $R^2 = 0.16$) was accounted for by the HWE standards ($F = 3.75, P = .002$), with appropriate staffing ($\beta = −.36, P = .01$), meaningful recognition ($\beta = .37, P = .03$), and authentic leadership ($\beta = −.53, P = .001$) having significant coefficients. Skilled communication was the only standard without a significant correlation with the ProQOL.

### Discussion

This study indicated that critical care nurses have high secondary traumatic stress, a finding that is consistent with previous research suggesting that working in an ICU is demanding and predisposes nurses to stress. Authentic leadership, true collaboration, and effective decision-making were significantly correlated with compassion satisfaction, indicating that lowered stress and increased job satisfaction can improve compassion satisfaction. Authentic leadership had the strongest relationship with compassion satisfaction, suggesting that strong leaders are key to retention and satisfaction. This standard was the only one that was significantly correlated with burnout, implying that nurse empowerment and strong leadership can decrease burnout. Authentic leadership had the strongest correlation with secondary traumatic stress, a finding consistent with previous data indicating that nurse leaders are central to an HWE. Appropriate staffing and meaningful recognition were correlated with secondary traumatic stress, suggesting that poor staffing increases exposure to secondary traumatic stress whereas nurse recognition may counterbalance its effects.

Nurses at this facility reported high levels of secondary traumatic stress and rated appropriate staffing as “needs improvement.” Because of the significant correlation between appropriate staffing and secondary traumatic stress, improved staffing may create a more balanced work life at this facility.

An important limitation of this study was its cross-sectional nature, which precluded an evaluation of temporal precedence and causality of the observed associations. Future studies with longitudinal data are needed to confirm the causal relationships suggested by our findings.

### Conclusion

The results of this study may help hospitals prioritize implementation of the AACN HWE standards.
Authentic leadership had the strongest relationship with compassion satisfaction, burnout, and secondary traumatic stress. Therefore, leadership should be a priority in ICUs seeking to improve nurses’ professional quality of life.

FINANCIAL DISCLOSURES
None reported.

REFERENCES

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