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Professional Quality of Life Indicators and Turnover Intention in Forensic Nurses

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Doctor of Nursing Practice Final Scholarly Project

In Partial Fulfillment of the Requirements of the Degree

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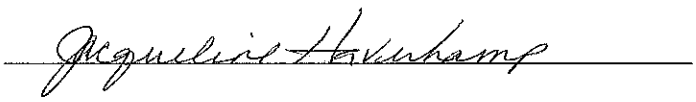
DNP Final Scholarly Project Committee:



Primary Adviser: Jacqueline Haverkamp, DNP, MBA, APRN, FNP-C

Community Member: Ruth Downing, MSN, RN, CNP, SANE-A

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Executive Summary

Background/Significance: Forensic nurses have a specialized skill set that is critical to providing high quality care to survivors of violence. Significant barriers to forensic nurse workforce development exist, affecting patient access to care. Retention of forensic nurses is a persistent and costly problem. Turn-over of forensic nurses can be attributed to many factors related to professional quality of life which include compassion satisfaction (CS), burnout (BO) and secondary traumatic stress (STS).

Methods: A convenience sample of forensic nurse program coordinators was used to identify the effect of an educational session on the topic of professional quality of life and strategies for mitigating the impact of stressors within the professional role on ProQOL-5 and TIS-6 scores using a pre- post-test quasi-experimental survey design. Correlation between professional quality of life indicators and turnover intention was also explored.

Results: Thirty-eight forensic nurse coordinators completed an initial administration of both survey tools, and eight participants completed the follow up administration. Cohort (n= 38) pre-intervention compassion satisfaction levels were average to high ($\bar{x}$ = 41.42), burnout levels were average to low ($\bar{x}$ = 22.53) and secondary traumatic stress levels were average to low ($\bar{x}$ = 22.89). Statistically significant positive correlations were noted between each professional quality of life scale indicator and turnover intention (CS $r = 0.59$, $p < 0.0001$; BO $r = 0.98$, $p < 0.0000$; STS $r = 0.67$, $p < 0.0000$). A statistically significant decrease in burnout level ($\alpha = 0.05$, $p = 0.0454$) was noted post-intervention.

Conclusions: Burnout and secondary traumatic stress were found to have strong positive correlation to turnover intention. Burnout levels decreased to a statistically significant degree for participants reassessed 3 months following the educational intervention. This demonstrated that increased awareness of the impact of compassion satisfaction, burnout and secondary traumatic stress could decrease the impact of burnout syndrome in forensic nurses and reduce turnover.

Recommendations: Strategies to reduce burnout and secondary traumatic stress in forensic nurses have the potential to decrease turnover in the role and enhance professional quality of life. Education about professional quality of life may be an effective strategy. Decreased forensic nurse turnover may improve access to care for survivors of violence and reduce the financial impact to health care organizations.

Professional Quality of Life Scale and Turnover Intention in Forensic Nurses

Forensic nursing is an evolving specialty practice area which concentrates on the application of the nursing process and provision of care for patients where legal implications are involved utilizing principles of forensic science (IAFN, 2020). Forensic nurses work at the crossroads of healthcare and the law (IAFN, 2020). Sexual assault nurse examiners (SANEs) represent the earliest example of focused forensic nursing practice (Amar & Sekula, 2016, p. 2), though the role has expanded to include the care of all patients where legal ramifications exist. This includes survivors of sexual assault, intimate partner violence, elder and child abuse, human trafficking, strangulation, and gun and stab injuries (Flarity et al., 2016). The use of the title "Forensic Nurse", rather than "SANE", reflects the inclusion of the variety of care services provided. Forensic nurses are instrumental to the delivery of holistic, comprehensive care from a trauma-informed perspective. Forensic nurse experts use a specialized skill set to attend to the acute physical needs of the client while promoting advocacy, providing empathy, and preserving evidence. Though the value forensic nurses bring to patient care is readily recognizable, substantial barriers to access to forensic nurses persist throughout the country.

Current State of Forensic Nursing Workforce Development

Lacking Supportive Federal and Local Policies

Many healthcare facilities depend on emergency services personnel to provide medical forensic care to survivors of violence, though the literature has consistently recognized the need and desire for increased training in the care of patients with forensic needs (Henderson et al., 2012; Sakalli & Aslan, 2020). The Department of Justice, International Association of Forensic Nurses (IAFN), and the American College of Emergency Physicians (ACEP) all recommend that forensic examinations are performed by care providers with specialized education in the collection and preservation of evidence, though not all states have specified guidelines related to minimum training requirements (GAO, 2018) or mandated access to forensic nursing care. Federal legislation to standardize care access nationwide is lacking, and the Survivor's Access to Supportive Care Act (SASCA), which would develop national standards of care for survivors of sexual trauma and support forensic nurse workforce development, has

been introduced to the senate multiple times without passing as of December 2020 (US Congress, 2019; US Senate, 2016). Significant variation in regional availability of forensic nursing care exists across Ohio. Most hospitals offering forensic services are concentrated in urban areas, with many counties in the state, especially rural counties, completely lacking available dedicated forensic nursing programs (Ohio Alliance to End Sexual Violence, 2020). Only one in three of the over 250 hospitals in Ohio have a dedicated SANE program and there is no existing legal mandate in Ohio requiring hospitals to staff forensically trained personnel (Polansky & Trexler, 2020). The forensic programs currently established in Ohio demonstrate significant variation in staffing models which could include dedicated full-time forensic nursing teams, cross-training of emergency department nursing personnel in forensic medical examination, or regional coordination of on-call forensic nurses who work in other capacities for their primary employment.

High Training and Turnover Costs

A primary barrier in survivors accessing expert forensic nursing care is the availability of forensically trained nurses. Of the over 200,000 registered nurses in Ohio, there are only 51 who are certified through the IAFN to perform sexual assault examinations for adults (Polansky & Trexler, 2020). There is significant cost to hospitals associated with training of forensic nurses, which has been estimated at approximately $3,000 dollars per nurse when factoring in the cost of training and lost wages (Potiker, 2016). Though medical facilities in Ohio are now reimbursed for providing medical forensic care to survivors of sexual assault with the Ohio SAFE program through the Ohio Victims of Crime Compensation Fund (SAFEta.org, 2020), the flat rate $532 reimbursement may not be adequate to cover all associated costs. High training costs and low reimbursement rates create an environment where hospitals lack financial incentive for maintaining forensic nursing programs.

There are many costs associated with the provision of adequate staffing of forensic nurses. The primary costs incurred relate to training and orientation to the role, and ongoing re-training when attrition occurs. According to the current President of the Academy of Forensic Nurses, forensic nurse training courses are frequently not completed. Many nurses will complete the initial 40 didactic hours of training,

but only half also complete the clinical training portion required. Of the half that complete the training, on average only half of those would still be working within the role two years later (Catherine Rossi, personal communication, November 24, 2020). This creates an untenable financial situation for hospitals seeking to support forensic nurse staffing.

Costs incurred in training include direct and indirect costs to hospitals. The direct orientation costs per nurse can be high. Cost to attend the initial 40-hour training is approximately $500 per individual nurse (Catherine Rossi, personal communication, November 24, 2020) or $20,000 per training session for a larger group of up to 30 nurses (Ruth Downing, personal communication, November 6, 2020). Travel reimbursement to nurses who leave the immediate area for training are incurred by healthcare organizations. If trainers are brought to the hospital, travel expenses of the training faculty are reimbursed. Hospitals must pay the wages of the nurses who attend the training, and additionally pay wages to staff coverage at the facility. Frequently, cross training of Emergency Department staff is utilized to fulfill forensic nurse roles on an as needed basis, and costs are often incurred by the individual department. A summary of these broad costs is noted in Table 1, assuming an average RN wage of $32.67 for the state of Ohio (Indeed.com, 2020).

The development and maintenance of a competent forensic nursing workforce has significant value to patient outcomes, but current health policy and fiscal constraints have limited workforce development.

Forensic Nurse Turnover

Forensic nurse turnover is a persistent problem with substantial financial implications. Low retention rates of forensic nurse examiners are an ongoing concern nationally, with retention rates reported as low as 7.7% two years after training (GAO, 2018) and the average forensic nurse persisting in practice only three years (Fisher, 2004). A commonly recognized factor that impacts forensic nurse turnover is the increased stress and vicarious trauma associated with caring for survivors of violence. Forensic nurses are repeatedly exposed to the traumatic experiences of others, increasing the risk of vicarious trauma (Raunick et al., 2015) and stress-related disorders (Strunk & Strunk, 2012) which may

contribute to increased levels of compassion fatigue and burnout. Elevated levels of compassion fatigue have been associated with increased turnover intention in nurses (Wells-English et al., 2019). Identification of variables that affect forensic nurses' professional quality of life and intention to leave the role is essential to recruit and retain forensic nurses to provide critical care for survivors of violence. Nurses are taught the technical skills and cognitive knowledge necessary to meet the demands of client care, but the development of skills in resilience are often neglected in nursing educational curricula.

Problem Statement

The purpose of this scholarly project is to examine the impact of an educational intervention for forensic nurses on the topic of professional quality of life on ProQOL-5 measures and turnover intention utilizing a pre-test-post-test survey design. In forensic nurses, how does receiving education about professional quality of life versus no education effect ProQOL-5 measures and turnover intention 3 months after the educational session?

Literature Review

Understanding Stress in Nursing

Stress is based on individual perception (Lazarus & Folkman, 1984). A stressor is a situation that creates acute or chronic tension, leading to both physical and emotional reactions by the individual requiring adaptive responses (Preto et al., 2018). Selye identified the effect of stress on overall health, introducing the concept of the general adaptive syndrome in the 1930's (Preto et al., 2018). Stress can be positive when it results in an individual working to a higher level of ability and is necessary for personal growth and productivity. Conversely, negative stress occurs when the individual's ability to cope with stress positively is saturated, resulting in the potential for physical and psychological harm (Judkins et al., 2006).

The numerous occupational demands experienced by nurses can result in excessive levels of stress. Daily stressors of nurses include conflict management within the healthcare team, management of difficult patient assignments, coping with patient/family demands and health outcomes of patients, adapting to new treatments, and lack of staff support (Sadovich, 2005). Various classification systems

have been developed to demonstrate the diverse causes of stress in a nurse's workday, noting additional factors such as unclear or conflicting expectations, a lack of feeling autonomous as a professional (Salmond & Ropis, 2005), increasing demands related to documentation, and frequently changing administration personnel and policies (Krichbaum et al., 2007). No single system identifying occupational stressors of nursing is all encompassing. When the literature is broadly viewed, it becomes apparent the nursing profession is subject to a large variety of demands that can lead to increased stress and that there are significant potential benefits to both nurses and patients in improving the professional quality of life of nurses.

The CINAHL Plus with full text and MEDLINE databases were chosen for completion of the literature review. Initial results combining the search terms "Professional Quality of Life" alternately with "forensic nurs*" and "SANE" in combination with the Boolean operator "AND" yielded one relevant result. This indicated a dearth of previous research focusing on professional quality of life measures in the forensic nurse population specifically. "Professional Quality of Life" in combination with "nurs*" yielded 124 results, which was reduced to 97 when limiting journals to those published within the last five years. Abstracts were reviewed for relevance and 18 were further evaluated to inform the clinical question (See Appendix A). Articles included for review were English language containing data related to professional quality of life measures with study populations including nurses to provide perspective to the topic's importance.

Professional Quality of Life Indicators

Professional quality of life is a complex concept, reflecting the interplay between workplace environment characteristics, personal characteristics of the individual, and exposure to primary or secondary trauma while working (Stamm, 2010, p. 10). Compassion satisfaction is a measure of the positive attributes gained by providing care through one's ability to help others and the pleasure of doing one's work well. Compassion fatigue, conversely, measures the negative perceptions that occur when caring for others in stressful situations, and is comprised of measures of both burnout and secondary traumatic stress (Stamm), being described as the combination of burnout and secondary traumatic stress

over a period of time (Okoli et al., 2020) (See Image 1). The demanding nature of nursing work makes nurses particularly susceptible to compassion fatigue (Borges et al., 2019).

Compassion Satisfaction.

Compassion is a fundamental aspect of caring. Dossey (2007) noted that compassion requires the caregiver to put another individual at the center of their personal world. Those who enter the work of nursing often do so as an act of compassionate service or because of a fundamentally compassionate nature which compels them to work on the behalf of others. Compassion satisfaction is a consequence of the positive attributes felt by individuals engaged in compassionate caring work, allowing the caregiver to feel contentment or happiness in their work (Todara-Franceschi, 2019, p. 4). One of the most significant requisites to compassion satisfaction is for caregivers to have a sense of meaning and productivity in their role (Stamm, 2002; Todaro-Franceschi, 2019). Nurses are able to find meaning in their work when they are able to provide high-quality patient care and have control over their nursing practice. Compassion satisfaction is thus impacted by variables that are both internal and external to the individual nurse.

A recent study including 1521 nurses by Ruiz-Fernández et al. (2020) found compassion satisfaction mean values lower than the expected range overall. Borges et al. (2019) found higher levels of compassion satisfaction in Emergency room and Urgent care nurses with older reported age, and acute care nurse leaders report increased compassion satisfaction with more years in the role (Kelly, Lefton, & Fisher, 2019). This could indicate a relationship between experience and increased compassion satisfaction. Authentic leadership, enhanced collaboration, and the perception of effective decision making all enhanced compassion satisfaction in ICU nurses (Monroe et al., 2020). In a recent systematic review, positive work environments, social support, and leadership support all positively impacted nurse's reports of compassion satisfaction (Cavanagh et al., 2020). These variables can be impacted by support from informed administrative leadership, as "…leadership is considered a key factor in creating workplace empowerment and a positive work environment" (Mudallal, Othman & Hassan, 2017, p. 2). Specific interventions which increased compassion satisfaction in nurses include mindfulness training (Ceravolo & Raines, 2019) and implementation of meaningful recognition programs (Kelly & Lefton,

2017). Multiple factors have been identified in the literature that correlate to diminished reports of compassion satisfaction. Sacco et al. (2015) noted critical care nurses reported decreased compassion satisfaction with recent manager change and in nurses aged 40-49 years. Reports of compassion satisfaction also decreased in nurses exposed to workplace violence and in those reporting decreased sleep hours per night (Okoli et al., 2019). Elevated levels of compassion satisfaction can be protective against compassion fatigue (Ruiz-Fernández et al., 2020).

Compassion fatigue & Secondary traumatic stress.

Compassion fatigue is a distinct phenomenon, separate from though related to burnout syndrome (Stamm, 2010). Compassion fatigue is prompted by multiple factors, including prolonged witnessing of traumatic suffering in others and a continuous use of emotional energy and empathy towards others who are suffering (Cavanagh et al., 2020). Secondary traumatic stress is a component of compassion fatigue and is frequently used interchangeably in the literature with "vicarious trauma" (Kiley et al., 2018). Compassion fatigue and secondary traumatic stress arise from the relationship between caregiver and patient, as the caregiver bearing witness to trauma begins to feel their own emotional suffering in response (Todaro-Franceschi, 2019, p. 5). Elevated rates of compassion fatigue have been found to increase nurse turnover rates, decrease overall patient satisfaction and diminish the quality of direct patient care (Pehlivan & Guner (2020). In an interdisciplinary study completed by Austin, Saylor, and Finley (2017), intent to leave one's current position was correlated with high levels of compassion fatigue, moral distress, and burnout. Compassion fatigue and secondary traumatic stress increased with nurses' perception of ineffective care provision and increased patient load (Austin et al., 2017). Additional factors that contribute to compassion fatigue include poor staffing (Monroe et al., 2020), major practice changes, and mixed acuity units (Sacco et al., 2015).

Burnout Syndrome.

Burnout, or burnout syndrome, is a negative outcome of consistent levels of high stress in one's job role and is prevalent in nursing. The literature describes three dimensions to the burnout syndrome, which are emotional exhaustion, depersonalization with feelings of occupational negativity, and reduced

feelings of personal accomplishment or professional efficacy (Moreno et al., 2018; Sadovich, 2005; WHO, 2019). These three factors interplay with one another, causing the nurse experiencing burnout to feel hopeless and cynical related to their professional activities which could translate into an intention to leave either their position or the profession. Burnout syndrome has become so prevalent that the World Health Organization (WHO) now recognizes and includes it in the 11th edition of the International Classifications of Diseases (ICD-11) as an occupational phenomenon the contributes to individuals seeking healthcare. The WHO has developed plans for the creation of evidence-based guidelines for workplace leaders (WHO, 2019).

Burnout syndrome is directly linked to stress in occupational activities which surround the nurse-patient interaction; the context in which nursing care is provided. Burnout and compassion fatigue are often correlated, with burnout highly associated with negative work environments (Cavanagh et al., 2020). Excessive work demands, limited resources, lack of autonomy in practice, strained relationships with colleagues, and increased work hazards can all negatively impact levels of nurse burnout (Mudallal, et al., 2017). Younger nurse leaders with less experience in their role are more likely to report burnout symptoms (Kelly et al., 2019). Austin et al. (2016) found a correlation between elevated levels of moral distress and burnout with increased report of intent to leave one's current position. Various mindfulness interventions have been found to reduce burnout when purposefully included within the workplace (Steinberg et al., 2017; Cavanagh et al., 2020). Intentional focus by nursing leaders on the creation of positive work environments for nurses can contribute to reducing burnout.

Project Description and Design

Theoretical Framework

Lazarus and Folkman's (1984) transactional theory of stress and coping was used for the theoretical framework for the completion of this project. Lazarus and Folkman's seminal work suggested stress is the result of the interaction between the multiple systems within an individual with complexities within their environment. This results in both cognitive and behavioral responses by the individual to attempt to manage stressors exceeding their perception of available personal coping resources. The

perception of an individual's experience of stressful events and their available coping strategies are instrumental to responses, adaptation, and coping to stressful events. Those who perceive stressful events as controllable will respond with problem-focused coping, while those who perceive the event as lacking in controllability are more likely to respond with emotion-focused coping (Jang, Gu, & Jeong, 2019).

Project Objectives

Objectives of this project include:

1) Assess baseline scores on ProQOL-5 in forensic nurses prior to an educational session.
2) Identify prevalence of professional quality of life indicators in forensic nurses.
3) Identify if correlations exist between ProQOL-5 indicators and turnover intention, as measured by the TIS-6, in forensic nurses.
4) Facilitate an educational session about professional quality of life for forensic nurses.
5) Re-survey three months following education to identify any significant changes in ProQOL-5 indicators.

Methodology

A convenience sample of forensic nurses attending quarterly statewide forensic nurse coordinator meetings was used to solicit participation in the project. The estimated target sample size was approximately 30 forensic nurses from across the state of Ohio representing multiple regions. All registered nurses in attendance working within a forensic nursing role were eligible for inclusion in the project. Incomplete surveys were to be excluded from analysis. Both the initial and follow up surveys were completed through the Qualtrics software platform. Survey responses were obtained anonymously and de-identified prior to analyzing responses. Informed consent information was provided upon entering the survey platform, and consent was inferred by completion of the survey. IRB approval through Otterbein University was obtained via exempt review due to the minimal risk to human subjects. No monetary incentives were offered for participation.

The initial survey was conducted following a brief explanation of project aims and informed consent. An educational session followed the completion of the initial survey, which included an

overview of compassion satisfaction, burnout, and secondary traumatic stress as measured through the survey instrument. Instruction for individual analysis of their own ProQOL-5 results was provided. Strategies for increasing compassion satisfaction and decreasing compassion fatigue and secondary traumatic stress were also reviewed. The follow up survey was conducted at the next quarterly forensic coordinator meeting, three months after the educational session and baseline survey completion. There were no variances from the originally planned project timeline, and there were no costs incurred in the implementation of this project.

Instrumentation

Two previously validated survey tools were used, including the Professional Quality of Life Scale (ProQOL-5) (see Appendix C) and the Turnover Intention Scale (TIS-6) (see Appendix D). Both tools include quantitative measures asking participants to respond to questions on a Likert scale. Additional demographic information was obtained prior to survey completion, including age, gender (Fraser, 2018), race/ethnicity (Pew Research Center, 2012), number of years in nursing practice, number of years in forensic nursing practice, initial nursing education for licensure and type of forensic nursing employment (See Appendix B).

The Professional Quality of Life Scale-5 (ProQOL-5) is a tool utilized in a variety of disciplines in healthcare and other helping professions which measures the phenomena of compassion satisfaction (CS), compassion fatigue, and the related phenomena of burnout (BO) and secondary traumatic stress (STS). (Stamm, 2010; See Image 1). As of 2010, nearly half of the published papers discussing these three constructs utilized the ProQOL (Stamm, 2010). The ProQOL-5 is a 30 question, Likert based instrument that is free to use if no changes are made outside of changing the word “helper” to a more precise term for the group being tested and the tool owner is credited (CVT, 2019). The ProQOL-5 is validated in numerous languages. Each of the three constructs is scored separately, with the same scoring range cut offs applied to all (high = 42 or above, average = 23-41, low = 22 or less). These are measured through three subscales which cannot be combined for evaluation. Though the scales that measure burnout and secondary traumatic stress both measure negative effects of caregiving, the two constructs

are measured separately. Compassion satisfaction is measured on a separate subscale which has been found to be reliable (α=0.87). Higher scores indicate increased professional satisfaction. Compassion fatigue includes both Burnout and Secondary Trauma scores. The burnout questions focus on negative feelings associated with the work role, with higher scores indicating higher burnout risk (α=0.72). Secondary traumatic stress is the second component of the compassion fatigue measure, with questions focused on traumatic experience and fear responses (α=0.72) (Kelly & Lefton, 2017). Higher scores indicate higher levels of secondary traumatic stress. Cut scores indicating relative risk or protective factors are provided and set to the 25th and 75th percentiles, and tend toward Type 1 error, or false positive error, due to the tool's intent as a screening tool (Stamm, 2010). The 5th version of the tool utilizes a standardized score which allows for a simplification of meaning of scores for all three measures and a consistent mean (50) and standard deviation (10) for all survey constructs (Stamm, 2010, p. 69).

The Turnover Intention Scale-6 (TIS-6) is a shortened version of the TIS-15 that has been validated as a reliable predictor of actual employee turnover (α=0.80). The TIS-6 has been found to be a reliable tool with α=0.80 which has been found to have both criterion-predictive validity and differential validity, meaning it can be utilized reliably to predict actual turnover or accurately assess turnover intention (Bothma & Roodt, 2013). Permission for use has been obtained by the original creator, Professor Gert Roodt, who initially developed the TIS-15 in 2004 and holds the copyright for the instrument (Roodt, 2004).

Outcomes & Evaluation

Initial survey administration occurred in November 2020 during the virtual forensic nurse coordinator meeting for the state of Ohio, with 31 persons in attendance eligible for participation. 28 choose to participate in initial survey completion and were present for the educational intervention and self-assessment (response rate = 90.3%). The follow-up survey was implemented in February 2021, also during a virtual forensic nurse coordinator meeting. 27 individuals were present for the meeting, and 20 responses were received (74.1%). Of those responses, 1 declined to consent and 10 self-reported taking

the assessment for the first time, leaving 9 participants who participated in the initial intervention as the post-intervention group.

Quantitative data was extracted from Qualtrics, imported to Excel for data cleaning and removal of results from incomplete surveys, and analysis completed. Data was reviewed for completeness, and all surveys were found to be complete. One response was removed from the post-intervention group due to a completion in significantly less time than average and the straight-line responses provided. After all data review and exclusion, the pre-intervention group totaled 38 participants, and 8 participants comprised the post-intervention group.

Statistical Analysis

Statistical analysis functions within Excel were utilized according to the analysis direction provided with the survey administration instructions for both tools to evaluate project objectives. Due to the high degree of variability within the attendance of the two sessions, the planned paired *t*-test was no longer an appropriate test for data analysis, as the unequal sample sizes created a lack of ability to pair pre-post intervention responses. Assumptions for adequate sample sizes and similar variance could not be met for use of the student *t*-test. Welch's *t*-test was utilized due to the increased variance in the samples. Spearman's rank order correlation coefficient was computed between each ProQOL-5 subset total score and TIS-6 total score.

Results

Most participants were 41 years or older (*n* = 23, 60.5%), with only 3 aged 30 or below (7.8%). Participants were predominately female (*n* = 37, 97.3%), white (*n* = 36, 94.7%), and all were Non-Hispanic (n = 38, 100%) (See Table 2). Most participants entered nursing with at least a bachelor's degree or higher for educational preparation (*n* = 27, 71.0%). The majority had been a nurse for 12 or more years (*n* = 25, 65%), with 10 participants practicing nursing for 20 or more years. 52.7% (*n* = 21) have worked as a forensic nurse for 8 or more years, and 63% (*n* = 24) are employed as full-time forensic nurses (See Table 3).

All participants completed the initial ProQOL-5. Group mean scores indicated levels within the average range for compassion satisfaction (CS), burnout (BO) and secondary traumatic stress (STS) ($\bar{x}$ = 41.42, *SD* = 4.71, $\bar{x}$ = 22.53, *SD* = 4.45, and $\bar{x}$ = 23.89, *SD* = 5.68, respectively). Compassion satisfaction scores trended towards the high range of the scale, with 44.7% (*n* = 17) within the high range, and all others in the average range (*n* = 21, 55.3%). No participant total scores fell within the low range for compassion satisfaction. Burnout scores were within the average range, but trended towards the lower range, with 55.3% (*n* = 21) of participant scores within the low range of burnout. No participant total scores fell within the high range for burnout. Secondary traumatic stress scores also trended towards the lower average range, with 44.7 % (*n* = 17) of participant scores within the low range of secondary traumatic stress. No participant scores fell within the high range for secondary traumatic stress (See Table 4).

All participants also completed the TIS-6 ($\bar{x}$ = 15.76, *SD* = 5.35). The majority of participant scores indicated a desire to stay in one's current position (*n* = 23, 60%) with a total score of less than 18. Just over one third (n =14, 36.8%) of participants scored above 18, indicating a desire to leave one's position (Roodt, 2004).

The relationship between compassion satisfaction, burnout, and secondary traumatic stress to turnover intention was investigated. Violation in normality and small sample size required the use of Spearman's rho correlation coefficient for analysis. There was a medium positive correlation between turnover intention and compassion satisfaction ($r = 0.59$, $p < 0.0001$). There were strong positive correlations between turnover intention and burnout ($r = 0.98$, $p < 0.0000$), as well as turnover intention and secondary traumatic stress ($r = 0.67$, $p < 0.0000$) (See Table 5).

Comparison of pre-intervention to post-intervention group means was completed using Welch's *t*-test. When comparing pre- and post-intervention group means, compassion satisfaction levels increased, and burnout, secondary traumatic stress, and turnover intention all decreased (See Table 6). Thus, all areas demonstrated a degree of improvement. The only change between pre- and post-intervention group mean scores which was statistically significant was reported burnout level ($p = 0.045$).

Discussion

The sample group is broadly reflective demographically of the overall population of nurses as predominately female, white, Non-Hispanic, and over age 40 years. Per the 2017 National Nursing Workforce Survey (Smiley et al., 2018), the general nursing population is 90.9% female, 80.8% white, 94.7% Non-Hispanic, and 56.6% aged 40 years and above. There was a notable lack of diversity in racial and ethnic background as well as male representation within the sample group compared to the general nursing population. Given the disproportionate effect and increased incidence of violence and intimate partner violence in minority groups (Stockman, et al., 2015), ongoing efforts to improve the diversity in the nursing workforce, including the forensic nursing workforce, should remain a broad priority for the profession. The sample group demonstrated a higher percentage of nurses prepared with a bachelor's degree or higher for initial nursing licensure than the national average (70.1% vs. 45.6%, respectively). The number of years of practice within the sample group was similar to the national average of 67.1% of nurses in practice for 11 or more years (Smiley et al., 2018).

Group average scores on the ProQOL-5 for compassion satisfaction were average, bordering on high levels. This indicated average to high levels of pleasure derived from the helping work of a forensic nurse and greater satisfaction in the perception of effectiveness as a caregiver within the participants. It has been demonstrated previously that increased compassion satisfaction is associated with increased years in the role (Borges et al., 2019; Kelly, Lefton, & Fisher, 2019), which could be reflected in these outcomes as the participant group has a high degree of both nursing experience and years within the forensic nursing role. The lack of any participant scoring within a low range of compassion satisfaction could reflect the high degree of meaning and positive attributes of caring for survivors of violence experienced by forensic nurses.

Group average burnout and secondary traumatic stress scores on the ProQOL-5 tool also fell into the average range, with all participants scoring within the average to low range for burnout and no participant scores falling in the high range for either measure. This is consistent with other studies using the ProQOL-5 in other nursing populations, including oncology and intensive care nurses (Zajac et al.,

2017; Kelly & Lefton, 2017). Secondary traumatic stress rates were marginally higher than burnout rates within the sample group. Because forensic nurses care for patients affected by violence and trauma, the risk for secondary traumatic stress is high for this group. Within the sample, low levels of secondary trauma and burnout could be indicative of existing positive coping strategies that should be investigated further.

Though burnout and secondary traumatic stress scores in the group fell within the average and no participants scored in the high range for these measures, a significant number of participants still scored high on the TIS-6, indicating a desire to leave their organization. Overall, though the participants ProQOL-5 scores were near ideal with high average compassion satisfaction and low average burnout and secondary traumatic stress, nurses who reported higher levels of burnout or secondary traumatic stress on ProQOL-5 subscales also had higher turnover intention scores on the TIS-6, which is consistent with previous studies (Wells-English, Giese, & Price, 2019; Austin et al., 2017). The correlation supports the notion that elevated stress, burnout, and exposure to the trauma of others effects forensic nurse's desire to stay in the role.

A noteworthy percentage, 36.8%, of participants scored in a high range of turnover intention with scores of greater than 18. Scores were as high as 26 on TIS-6, which has a maximum score of 30. This level of turnover intention with the sample is concerning, and is reflective of the elevated rates of turnover in this nursing specialty.

The positive correlation, though moderate, between compassion satisfaction and turnover intention is not consistent with previous studies (Kelly et al., 2015; Wells-English et al., 2019) which have found a negative correlation between compassion satisfaction and turnover intent. That is, other studies have found increased compassion satisfaction scores to be protective from burnout and secondary traumatic stress, reducing turnover intention. This inconsistency could be a reflection of the small sample size and further validation of this finding is warranted.

In response to the PICOT question "In forensic nurses, how does receiving education about professional quality of life versus no education effect ProQOL-5 measures and turnover intention 3

months after the educational session?", further investigation is needed to answer with confidence. Though improved ProQOL-5 indicator scores were noted in all areas, and turnover intention average scores were reduced, the only statistically significant change noted was in burnout level. The results of this project are suggestive that receiving education about professional quality of life could positively affect professional quality of life indicators and mitigate turnover intention. Further investigation with a larger cohort of forensic nurses is warranted, with more controlled access to participants for follow up post-intervention.

Barriers

An anticipated potential barrier related to the design of this project was that survey response rates are generally low. The allowance of time for survey completion during the forensic nurse coordinator meeting time was intended to, and did, results in high rates of participation. What was not anticipated was the potential impact of the high degree of attendance variability which limited the size of the post-intervention group. Though a statistically significant decrease in the average burnout scores were noted in the post-intervention group, the limited number of participants decreases the generalizability of these findings. Any future iterations of the project will make attempts to address this variability in the project design.

Limitations

Findings for this project should be viewed considering the small sample size of the overall project and use of convenience sampling. The small sample size of 38 total participants for this initial pilot exploration of professional quality of life and turnover intention in forensic nurses may limit the applicability of overall findings, but results are reflective of potential correlations and further exploration with a larger sample of forensic nurses is warranted. Of note, the cohort was also comprised primarily of forensic nurse program coordinators. Coordinators can have variable responsibilities with an increased administrative focus to some aspects of their forensic nursing role. The overall demographics of forensic nurse coordinators may vary from the broader pool of forensic nurses. Ongoing projects exploring professional quality of life and turnover intention in a broader population of forensic nurses would clarify

these potential differences. The short timeline for assessment of the intervention's impact limits the ability to identify any potential long-term outcomes or benefits.

Future directions for inquiry would be investigating a larger sample comprised of forensic nurses generally. As this project was conducted with forensic nurse coordinators, it cannot be assumed that the findings are transferable to the general forensic nursing population. Forensic nurse coordinators likely have increased experience and a higher number of years in the role and are likely to have developed increased coping strategies that could be protective in promoting professional quality of life.

Of note, the project was implemented during the height of the COVID-19 pandemic in the winter of 2020-2021, which substantially impacted nursing practice and health care broadly during this time across the globe. Anecdotal reports by forensic nurse coordinators shared February 2021 was the total number of forensic cases at their facilities were generally lower year of year compared to pre-pandemic levels. This could have had an impact on the participants responses in unknown ways.

Conclusions and Recommendations

Burnout and secondary traumatic stress were found to have strong positive correlation to turnover intention. Burnout levels decreased to a statistically significant degree for participants reassessed 3 months following the educational intervention. This demonstrated that increased awareness of the impact of compassion satisfaction, burnout and secondary traumatic stress could decrease the impact of burnout syndrome in forensic nurses. Strategies to reduce burnout and secondary traumatic stress in forensic nurses have the potential to decrease turnover in the role and enhance professional quality of life. Education about professional quality of life may be an effective strategy. The need for healthcare leaders to prioritize the professional quality of life of forensic nurses cannot be emphasized enough and has significant substantial beneficial to both nurses and the survivors of trauma. Over one third of forensic nurses participating in this project indicated elevated levels of turnover intention, which reflects the urgency by which healthcare leaders must work to address this issue. Decreased forensic nurse turnover may improve access to care for survivors of violence and reduce the financial impact to health care

organizations. Mitigating factors that increase nurses perceived occupational stress which precipitates burnout is imperative to ensure the stability of the forensic nursing workforce.

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The collaboration with the Forensic Nursing Network for project implementation was a significant facilitator for the project. This collaboration allowed for increased understanding of and access to the target population and the previously established relationship between the potential participants and this not-for-profit organization who facilitated the meeting time improved the perception of importance for project participation. The author expresses sincere appreciation.

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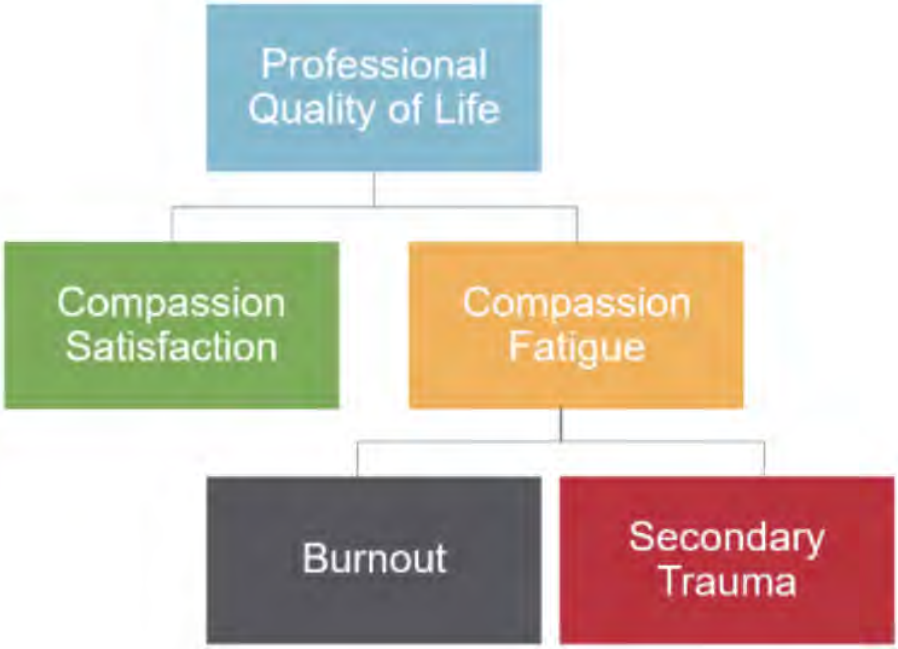
Table 1.

Summary of Estimated Orientation Costs of 15 Forensic Nurses

	Training Course	Travel Reimbursement	Hourly wage of training nurse	Hourly wage of coverage	Total
Per nurse	$500	$300	$32.67 x 40 = $1,306.80	$32.67 x 40= $1,306.80	$3,413.60
				Per nurse x 15	$51, 204
Training group (15)	$20,000	$1000 for trainer	$32.67 x 40= $1,306.80	$32.67 x 40= $1,306.80	$23,613.60

Image 1.



From ProQOL.org https://www.proqol.org/

Table 2.

General Demographics	**N=38**	**%**
Age (years)		
20-25	1	2.6
26-30	2	5.2
31-35	5	13.2
36-40	7	18.4
41-45	9	23.7
46-50	7	18.4
51-55	4	10.5
56+	3	7.9
Gender		
Female	37	97.4
Male	1	2.6
Trans male/trans man	0	0
Trans female/Trans woman	0	0
Non-binary	0	0
Not listed	0	0
Race		
American Indian or Alaska Native	0	0
Asian	1	2.6
Black or African American	1	2.6
Native Hawaiian or other Pacific Islander	0	0
White	36	94.7
Other	0	0
Hispanic or Latino		
Yes	0	0
No	38	100

Table 3.

Nursing Demographics	**N=38**	**%**
Degree for initial nursing entry		
Associate degree in nursing	9	23.7
Diploma program completion	2	5.2
Bachelor's degree in nursing	21	55.3
Master's degree in nursing	6	15.8
Years as Nurse		
1-3 years	1	2.6
4-7 years	5	13.2
8-11 years	7	18.4
12-15 years	8	21.1
16-19 years	7	18.4
20+ years	10	26.3
Years as Forensic Nurse		
1-3 years	7	18.4
4-7 years	11	28.9
8-11 years	8	21.1
12-15 years	7	18.4
16-19 years	2	5.2
20+ years	3	7.9
Employment Type		
Full-time forensic nurse	24	29.0
Part-time forensic nurse	8	21.1
Contingent/per diem/PRN forensic nurse	6	15.8

Table 4.

Prevalence: ProQOL-5 and TIS-6- Pre-intervention

	Mean	Median	SD	Range	Total scoring high	Total scoring average	Total scoring low
Compassion Satisfaction	41.42	41	4.711	32-50	17(44.7%)	21 (55.3%)	0 (0%)
Burnout	22.53	22	4.452	14-33	0 (0%)	17(44.7%)	21 (55.3%)
Secondary Traumatic Stress	23.89	23	5.684	12-39	0 (0%)	21 (55.3%)	17(44.7%)
	Mean	Median	SD	Range	Total desire to leave	Total at midpoint	Total desire to stay
Turnover Intention	15.76	15	5.354	6-26	14(36.8%)	1 (2.6%)	23 (60.5%)

n=38

ProQOL-5 ranges: High = 42 or more; Average = 23-41, Low- 22 or less

TIS-6 midpoint = 18, desire to leave = above 18, desire to stay = below 18

Table 5.

Professional Quality of Life Indicators Correlation to TIS-6 Score			
	r_s	*t*	p
Compassion Satisfaction & Turnover Intention	0.5868614	4.3488	0.0001
Burnout & Turnover Intention	0.9780216	28.1440	0.0000
Secondary Traumatic Stress & Turnover Intention	0.6734362	5.4659	0.0000

p=0.05

N=38, Critical value of r =0.3210, df = 36, critical value of t=2.0281

Table 6.

Welch's t-test Pre- Post-Intervention					
	Mean: Pre	Mean: Post	σ2 Pre-test	σ2 Post-test	p value
Compassion Satisfaction	41.42	43.63	22.19630156	17.98214286	0.21706848
Burnout	22.53	18.88	19.82361309	16.69642857	0.045440635
Secondary Traumatic Stress	23.89	20.38	32.27951636	18.26785714	0.070333995
TIS	15.76	13.38	28.67211949	16.8393	0.182064065

p=0.05; two-tailed

Appendix A: Literature Synthesis Table

Study Author	Year	Number of Participants	Study Design	Intervention	Level of Evidence	Primary Findings
Austin et al.	2017	Medical doctors, midlevel providers & nurses n=329 (nurse = 211)	D	Cross-sectional survey; no intervention	Level V	↑ Intent to leave correlated with ↑ moral distress, BO & CF/STS ↑ moral distress and BO in nurses and medical providers; higher rates in nurses ↑ BO & CF/STS with perception of ineffective care provision and ↑ patient load
Borges et al.	2019	ER and urgent care nurses n=87	D	Sociodemographic information correlated with responses on ProQOL	Level V	High CS, BO, and CF/STS more than half ↑ CS in older participants, ↑ CF/STS in younger participants
Cavanagh et al.	2020	71 studies Healthcare providers, not only nursing	S & M	Systematic Review of literature with metanalysis of like data. No intervention specified.	Level I	BO & CF correlated ↑ BO r/t negative environment ↑ CS r/t positive environment, social and leadership support Recent negative events worsened overall scores
Ceravolo et al.	2019	Nurse managers n=12	UC Pre-Posttest	8-week mindfulness practice training; weekly 60-minute sessions ProQOL-5 at start, completion, and 3 months after	Level IV	↑ CS and ↓ BO ↔ CF/STS immediately after At 3 months, only ↑ CS persisted Need for frequent reinforcing

Study Author	Year	Number of Participants	Study Design	Intervention	Level of Evidence	Primary Findings
Flarity et al.	2016	Forensic Nurses n=55 prevalence study n=9 intervention group	D UC Pre-Posttest	Descriptive component with 55 forensic nurses completing ProQOL-5 with demographics 4-hour CF resilience training	Level IV	69% moderate to low CS 73% moderate to high BO 73% moderate to high STS ↑ CS and ↓ STS with education program
Kelly & Lefton	2017	Multicenter national sample of critical care nurses N=726 ICU nurses	CC	Compared hospitals with meaningful recognition program (Daisy awards) in place vs. none to evaluate effect on ProQOL measures. Evaluated predictors of BO, CF/STS, and CS	Level III	↑ BO with ↑ stress and ↓ job satisfaction and ↓ job enjoyment. ↓ BO with Daisy nomination ↑ CS with Daisy nomination No significant difference in BO, CS, CF/STS in hospitals with or without recognition programs
Kelly et al.	2019	Acute care nurse leaders n=672 for ProQOL n=16 for qualitative component	Mixed methods	ProQOL scale for all Qualitative interviews for small number of participants	Level V	↑ CS with more years in role ↑ BO with younger age and less experience in role ↓ BO and ↑ CS with improved work-life balance Clinical managers ↓ overall satisfaction and ↑ intent to leave compared to higher level directors
Kiley et al.	2018	Employees in patient care at mental health facility Multidisciplinary n=69	RCT	Guided imagery training over 4-week period	Level II	↑ sleep quality ↓ anxiety ↔ BO, CF/STS, CS Noted short implementation time; may need longer to see △ in BO, CF/STS, CS

Study Author	Year	Number of Participants	Study Design	Intervention	Level of Evidence	Primary Findings
Monroe et al.	2020	ICU nurses from 4 separate ICU units in single facility n= 219	D	Explore relationship between 6 AACN Healthy work environment standards and ProQOL measures	Level V	↑ levels of CF/STS Authentic leadership, true collaboration, and effective decision making ↑ CS Poor staffing ↑ CF/STS Meaningful recognition ↓ CF/STS
Okoli et al.	2019	Multiple disciplines; 43% nurses n=764	D	Describe relationship between ProQOL measures and various demographic, work-related behavioral, and work setting factors	Level V	↑ BO and CF/STS with ↓ CS with workplace violence exposure and ↓ sleep hours per night
Pehlivan, & Guner	2020	Oncology nurses n=125	RCT	Control group Experimental I- 5 hr x 2 day training Experimental II- 2 hr/wk x 5 wk training	Level II	Results similar for both training lengths ↔ BO, CF/STS ↑ CS
Ruiz-Fernández et al.	2020	Nurses in various roles in public health system Spain n=1521	D, cross-sectional	Demographic survey and ProQOL-5	Level V	CS ↓ overall below expected mean ↑ levels of BO & CF BO most influenced by work shift
Sacco et al.	2015	Critical care nurses n=221	D	Demographic survey and ProQOL-5	Level V	CS ↓ with recent manager change, ↓ age 40-49 years, ↑ single acuity unit, ↑ ADN entry CF/STS ↑ with major practice changes & mixed acuity units BO ↑ with recent manager change and mixed acuity units ↓ BO, CF/STS and ↑ CF with higher age

Study Author	Year	Number of Participants	Study Design	Intervention	Level of Evidence	Primary Findings
Steinberg et al.	2017	SICU patient care clinical staff, 75% nurses; OSU n= 32	RCT	1-hour weekly mindfulness intervention including meditation, yoga, and music for 8 weeks with daily 20-minute individual practice	Level II	↑ work satisfaction ↓ BO
Wells-English et al.	2019	Oncology nurses n = 92	UC	Cross-sectional convenience sampling of oncology nurses using ProQOL and TIS-6	Level IV	↑ BO & ↑ CF/STS had ↑ TI ↑ CS ↓ TI
Wood et al.	2017	Mental health care providers from VA hospital n=30 (interdisciplinary, 13% nurses)	UC Pre-Posttest	Use of "Provider Resilience" application that uses ProQOL measures with resilience builders/killer self-rating tools	Level IV	↑ provider awareness reported ↓ BO ↓ CF/STS ↔ CS
Zajac et al.	2017	Staff nurses and assistive personnel on in-patient oncology unit n=91	D	Unit death rate inversely correlated with surviving patient satisfaction scores preintervention. Intervention of unit-based debriefing after deaths	Level V	Average ProQOL scores at start with near ideal scores postintervention ↔ no correlation between Press Ganey scores and ProQOL

Notes: S, Systematic Review; M, Meta-Analysis; R, Randomized Control Trial; Q, Quasi-experimental, CC, Controlled Cohort; UC, Uncontrolled Cohort; D, Descriptive; CS, Compassion Satisfaction; CF/STS, Compassion Fatigue/Secondary Traumatic Stress; BO, Burnout; TI, Turnover Intention;

↑, increased; ↓, decreased, ↔, no change; △, significant change

Appendix B

Demographic Questions for Inclusion with Survey for Distribution

Exclusion Criteria Questions:

1) Do you currently work in a forensic nursing role?

   Yes or No (if no; excluded and thanked. Survey ended.)

Demographic information: General

1) What is your age in years? Select one.

   20-25

   26-30

   31-35

   36-40

   41-45

   46-50

   51-55

   56+

2) Which best describes your gender? Select one.

   Male

   Female

   Trans male/trans man

   Trans female/trans woman

   Non-binary

   Not listed (please state): _____

3) Which best describes your race? Select one.

American Indian or Alaska Native

Asian

Black or African American

Native Hawaiian or Other Pacific Islander

White

Other (please state): _____

4) Ethnicity

Do you identify as Hispanic or Latino? (yes or no)

Demographic information: Nursing background

5) What degree did you initially obtain to become a registered nurse? (Select one)

Associates degree in nursing

Diploma program completion

Bachelor's degree in nursing

Master's degree in nursing

6) How many total years have you worked as a registered nurse? (Select one)

1-3 years

4-7 years

8-11 years

12-15 years

16-19 years

20+ years

7) How many total years have you worked as a forensic nurse? (Select one)

1-3 years

4-7 years

8-11 years

12-15 years

16-19 years

20+ years

8) Which best describes your employment as a forensic nurse? (Select one)

Full-time forensic nurse

Part-time forensic nurse

Contingent/per diem/PRN forensic nurse

Secondary question if reports part-time or contingent/per diem/PRN forensic nurse:

Do you have a nursing job in addition to your employment as a forensic nurse? (Yes or no)

Appendix C

Professional Quality of Life Scale (ProQOL)

Compassion Satisfaction and Compassion Fatigue (ProQOL) Version 5 (2009)

When you *[help]* people you have direct contact with their lives. As you may have found, your compassion for those you *[help]* can affect you in positive and negative ways. Below are some questions about your experiences, both positive and negative, as a *[helper]*. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the *last 30 days*.

1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

_____ 1. I am happy.
_____ 2. I am preoccupied with more than one person I *[help]*.
_____ 3. I get satisfaction from being able to *[help]* people.
_____ 4. I feel connected to others.
_____ 5. I jump or am startled by unexpected sounds.
_____ 6. I feel invigorated after working with those I *[help]*.
_____ 7. I find it difficult to separate my personal life from my life as a *[helper]*.
_____ 8. I am not as productive at work because I am losing sleep over traumatic experiences of a person I *[help]*.
_____ 9. I think that I might have been affected by the traumatic stress of those I *[help]*.
_____ 10. I feel trapped by my job as a *[helper]*.
_____ 11. Because of my *[helping]*, I have felt "on edge" about various things.
_____ 12. I like my work as a *[helper]*.
_____ 13. I feel depressed because of the traumatic experiences of the people I *[help]*.
_____ 14. I feel as though I am experiencing the trauma of someone I have *[helped]*.
_____ 15. I have beliefs that sustain me.
_____ 16. I am pleased with how I am able to keep up with *[helping]* techniques and protocols.
_____ 17. I am the person I always wanted to be.
_____ 18. My work makes me feel satisfied.
_____ 19. I feel worn out because of my work as a *[helper]*.
_____ 20. I have happy thoughts and feelings about those I *[help]* and how I could help them.
_____ 21. I feel overwhelmed because my case [work] load seems endless.
_____ 22. I believe I can make a difference through my work.
_____ 23. I avoid certain activities or situations because they remind me of frightening experiences of the people I *[help]*.
_____ 24. I am proud of what I can do to *[help]*.
_____ 25. As a result of my *[helping]*, I have intrusive, frightening thoughts.
_____ 26. I feel "bogged down" by the system.
_____ 27. I have thoughts that I am a "success" as a *[helper]*.
_____ 28. I can't recall important parts of my work with trauma victims.
_____ 29. I am a very caring person.
_____ 30. I am happy that I chose to do this work.

https://proqol.org/uploads/ProQOL_5_English.pdf

Permission to Use the ProQOL

Thank you for your interest in using the Professional Quality of Life Measure (ProQOL). Please share the following information with us to obtain permission to use the measure:

Please provide your contact information:

Email Address

lmeyer1@otterbein.edu

Name

Leigh Anne Meyer

Organization Name, if applicable

Otterbein University

Country

United States

Please tell us briefly about your project:

Evaluating professional quality of life measures in forensic nurses.

What is the population you will be using the ProQOL with?

Forensic nurses, who care for victims of violence and sexual assault.

In what language/s do you plan to use the ProQOL?

Listed here are the languages in which the ProQOL is currently available (see https://proqol.org/ProQol_Test.html). If you wish to use a language not listed here, please select "Other" and specify which language/s.

English

The ProQOL measure may be freely copied and used, without individualized permission from the ProQOL office, as long as:

- **You credit The Center for Victims of Torture and provide a link to www.ProQOL.org;**
- **It is not sold; and**
- **No changes are made, other than creating or using a translation, and/or replacing "[helper]" with a more specific term such as "nurse."**

Note that the following situations are acceptable:

- **You can reformat the ProQOL, including putting it in a virtual format**
- **You can use the ProQOL as part of work you are paid to do, such as at a training: you just cannot sell the measure itself**

Does your use of the ProQOL abide by the three criteria listed above? (If yes, you are free to use the ProQOL immediately upon submitting this form. If not, the ProQOL office will be in contact in order to establish your permission to use the measure.)

Yes

Thank you for your interest in the ProQOL! We hope that you find it useful. You will receive an email from the ProQOL office that records your answers to these questions and provides your permission to use the ProQOL.

We invite any comments from you about the ProQOL and the experience of using it at proqol@cvt.org. Please also contact us if you have any questions about using the ProQOL, even if you noted them on this form. Note that unfortunately, our capacity is quite limited so we may not be able to respond to your note: however, we greatly appreciate your engagement.

Appendix D

TURNOVER INTENTION SCALE (TIS)

The following section aims to ascertain the extent to which you intend to stay at the organisation.

Please read each question and indicate your response using the scale provided for each question:

DURING THE PAST 9 MONTHS.....

1	How often have you considered leaving your job?	Never	1——2——3——4——5	Always
2	How frequently do you scan the newspapers in search of alternative job opportunities?	Never	1——2——3——4——5	All the time
3	How satisfying is your job in fulfilling your personal needs?	Very satisfying	1——2——3——4——5	Totally dissatisfying
4	How often are you frustrated when not given the opportunity at work to achieve your personal work-related goals?	Never	1——2——3——4——5	Always
5	How often are your personal values at work compromised?	Never	1——2——3——4——5	Always
6	How often do you dream about getting another job that will better suit your personal needs?	Never	1——2——3——4——5	Always
7	How likely are you to accept another job at the same compensation level should it be offered to you?	Highly unlikely	1——2——3——4——5	Highly likely
8	How often do you look forward to another day at work?	Always	1——2——3——4——5	Never
9	How often do you think about starting your own business?	Never	1——2——3——4——5	Always
10R	To what extent do responsibilities prevent you from quitting your job?	To no extent	1——2——3——4——5	To a very large extent
11R	To what extent do the benefits associated with your current job prevent you from quitting your job?	To no extent	1——2——3——4——5	To a very large extent
12	How frequently are you emotionally agitated when arriving home after work?	Never	1——2——3——4——5	All of the time
13	To what extent does your current job have a negative effect on your personal well-being?	To no extent	1——2——3——4——5	To a very large extent
14R	To what extent does the "fear of the unknown", prevent you from quitting?	To no extent	1——2——3——4——5	To a very large extent
15	How frequently do you scan the internet in search of alternative job opportunities?	Never	1——2——3——4——5	All of the time

10/15/2020 Mail - Meyer, Leigh Anne - Outlook

Letter seeking permission to use TIS-6 tool

Meyer, Leigh Anne <lmeyer1@otterbein.edu>
Thu 10/15/2020 11:01 AM
To: groodt@uj.ac.za <groodt@uj.ac.za>
Cc: Haverkamp, Jacqueline <jhaverkamp@otterbein.edu>

Good morning Dr. Roodt,

My name is Leigh Anne Meyer, a doctoral student from Otterbein University in Westerville, Ohio. I am currently working on my final scholarly project, titled: *Professional Quality of Life Indicators and Turnover Intention in Forensic Nurses* under the direction of my project committee chaired by Dr. Jacqueline Haverkamp, DNP, MBA, APRN, FNP-C who can be reached at jhaverkamp@otterbein.edu. I will be evaluating the correlation between professional quality of life and intent to leave one's position in forensic nurses practicing in the state of Ohio, US.

I am writing to request permission for the use of the instrument, the TIS-6, in completion of my scholarly work towards attainment of my Doctor of Nursing Practice degree. I would like to use the instrument in the following conditions:

- I will use the instrument as written.
- I will distribute only in a secured online survey platform (Qualtrics) to participants for implementation.
- I will use the instrument only for completion of my scholarly work and will not sell or use the tool for any compensated activities.
- I will include the copyright statement with the instrument.

If this is acceptable, please indicate so by replying to me through email at lmeyer1@otterbein.edu. I thank you for your time in consideration of my request.

Respectfully,
Leigh Anne Meyer
DNP-Executive Candidate

Leigh Anne Meyer, MS, RN, CNE
Instructor
Department of Nursing
Otterbein University

"Most Health Care is Self Care"

Re: [External Email] RE: Letter seeking permission to use TIS-6 tool

Meyer, Leigh Anne <lmeyer1@otterbein.edu>
Thu 10/15/2020 11:40 AM
To: roodtg8@gmail.com <roodtg8@gmail.com>

Dear Dr. Roodt,

Thank you so much for your prompt response and encouragement. I will take all information you included into account as a complete my work.

Have a wonderful evening,

Leigh Anne

From: roodtg8@gmail.com <roodtg8@gmail.com>
Sent: Thursday, October 15, 2020 11:37 AM
To: Meyer, Leigh Anne <lmeyer1@otterbein.edu>
Subject: [External Email] RE: Letter seeking permission to use TIS-6 tool

Dear Leigh Anne

You are welcome to use the TIS for your research. For this purpose please find the TIS-15 attached for your convenience. This TIS-6 (version 4) consists of the first six items high-lighted in yellow. You may use any one of these two versions. The TIS is based on the Theory of Planned Behaviour

The only two conditions for using the TIS are that it may not be used for commercial purposes and second that it should be properly referenced as (Roodt, 2004) as in the article by Bothma & Roodt (2013) in the **SA Journal of Human Resource Management** (open access).

It is easy to score the TIS-6. Merely add the item scores to get a total score. The midpoint of the scale is 18 (3 x 6). If the total score is below 18 then the it indicates a desire to stay. If the scores are above 18 it indicates a desire to leave the organisation. The minimum a person can get is 6 (6 x 1) and the maximum is 30 (5 x 6). No item scores need to be reflected (reverse scored).

It is recommended that you conduct a CFA on the item scores to assess the dimensionality of the scale. We found that respondents with a matric (grade 12) tertiary school qualification tend to understand the items better and consequently an uni-dimensional factor structure is obtained.

If you wish to translate the TIS in a local language, you are welcome to do so. It is recommended that a language expert is used in the translate - back translate method.

I wish you all the best with your research!

Best regards

Prof Gert Roodt

Welch's t-test individual comparison results raw data

Welch's t-Test: ProQOL-5 Compassion Satisfaction		
	Compassion Sat Scores: Pre	Compassion Sat Scores: Post
Mean	41.42105263	43.625
Variance	22.19630156	17.98214286
Observations	38	8
Hypothesized Mean Difference	0	
df	11	
t Stat	-1.309675535	
P(T<=t) one-tail	0.108499413	
t Critical one-tail	1.795884819	
P(T<=t) two-tail	0.216998827	
t Critical two-tail	2.20098516	

p=0.05

Welch's t-Test: ProQOL-5 Burnout		
	Burnout Scores: Pre	Burnout Scores: Post
Mean	22.52631579	18.875
Variance	19.82361309	16.69642857
Observations	38	8
Hypothesized Mean Difference	0	
df	11	
t Stat	2.260658848	
P(T<=t) one-tail	0.022519986	
t Critical one-tail	1.795884819	
P(T<=t) two-tail	0.045039973*	
t Critical two-tail	2.20098516	

p=0.05; *Statistically significant

Welch's t-Test: ProQOL-5 Secondary Traumatic Stress		
	Secondary Traumatic Stress: Pre	Secondary Traumatic Stress Post
Mean	23.86842105	20.375
Variance	32.27951636	18.26785714
Observations	38	8
Hypothesized Mean Difference	0	
df	13	
t Stat	1.973670635	
P(T<=t) one-tail	0.03503044	
t Critical one-tail	1.770933396	
P(T<=t) two-tail	0.070060881	
t Critical two-tail	2.160368656	

p=0.05

Welch's t-Test: TIS-6		
	TI- 6 Score Pre	TIS-6 Score Post
Mean	15.76315789	13.375
Variance	28.67211949	16.83928571
Observations	38	8
Hypothesized Mean Difference	0	
df	13	
t Stat	1.412285596	
P(T<=t) one-tail	0.090677403	
t Critical one-tail	1.770933396	
P(T<=t) two-tail	0.181354805	
t Critical two-tail	2.160368656	

p=0.05