

**Burnout and Compassion Fatigue in  
Emergency Care Nurses:  
Factors that influence development.**

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## **Abstract**

Emergency care nurses are highly susceptible to burnout and compassion fatigue. The aim of this study was to examine burnout and compassion fatigue in Irish emergency care nurses and the role of possible risk factors. A single method correlational design was employed comprising of quantitative data. Measures included; the Professional Quality of Life Scale (Stamm, 2009) which analysed compassion satisfaction and compassion fatigue (burnout and secondary traumatic stress), the Toronto Empathy Questionnaire (Spreng et al. 2009) and the Coping Self- Efficacy scale (Chesney et al. 2006). Purposive sampling acquired a sample (N= 70) of 61 females and 9 males. Findings indicate that Irish emergency care nurses are exposed to the risk of burnout and compassion fatigue. Exposure to secondary traumatic stress posed as a serious risk factor in the development of burnout and compassion fatigue while empathy, compassion satisfaction and coping self- efficacy were found to act as protectors against these criterion variables (burnout and compassion fatigue). Discussion, suggestions and limitations of the study are addressed.

# Chapter 1: Introduction

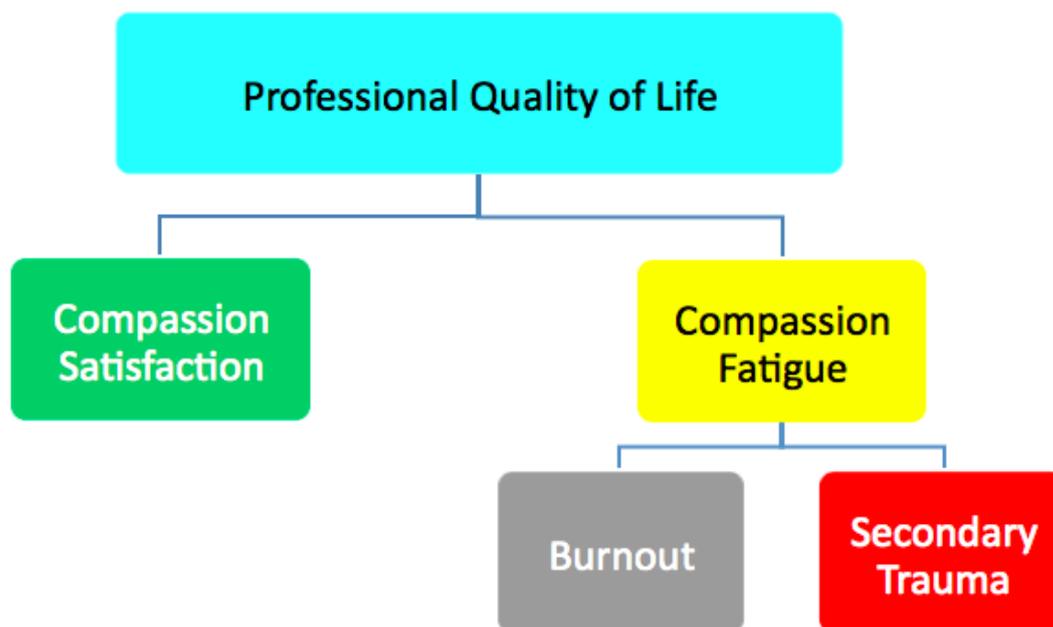
## *1:1 General Introduction*

Several studies (Yoder, 2010; Gillespie & Melby, 2003; Duffy, Avalos & Dowling, 2015) have shown that nursing professionals are at high risk of burnout, especially nursing staff who are exposed to high levels of trauma. In addition to high rates of burnout observed among emergency nurses, compassion fatigue is also prevalent. On a daily basis emergency care nurses are exposed to high levels of trauma. “Emergency nurses are particularly exposed to stressful events and unpredictable work conditions” (Adriaenssens, De Gucht, Van Der Doef, & Maes, 2011, p.78). They care for patients who have been involved in road traffic accidents, patients who have attempted death by suicide, psychiatric patients and also victims of assaults- including shootings, stabbings, domestic violence and rape. As well as witnessing traumatic scenes, emergency care nurses are also required to deal with death and to provide emotional support to the families that have lost a love one. It is widely recognised and documented that emergency care nurses are psychologically affected as a result of working in the emergency department environment, which is fast- paced and unpredictable. Furthermore, individuals who are involved in looking after people during traumatic events can be affected by secondary traumatic stress (Collins and Long, 2003).

In addition to experiencing situations of a traumatic nature, emergency care nurses within Ireland are also facing the increasingly problematic effects of overcrowding within Irish emergency departments. Irish emergency departments are operating close to 100% capacity at present; research has shown that the optimum level is approximately 85% (HSE, Emergency Department Task Force, 2015). The HSE (2015) has also reported that Ireland is

below the EU average of practicing doctors and below the EU average of hospital beds per 1,000 population. Consequently, these factors have a negative effect on the working conditions for nurses in emergency departments all over Ireland.

This study aims to research the levels of burnout and compassion fatigue among nurses within Irish Emergency Departments. The Professional Quality of Life (ProQOL-V) (Stamm, 2010) measurement will be implemented to assess for levels of burnout and compassion fatigue (CF). This measurement is comprised of three subscales; compassion satisfaction (CS), burnout and secondary traumatic stress (STS). Compassion fatigue (CF) is measured through burnout and STS. Relationships between STS, age, empathy and burnout will be measured. Analysis will also be carried out on the relationship between; night shifts and CF, length of service and CS and lastly, exposure to physical/verbal violence and empathy. The diagram below highlights the ProQOL-V measurement which breaks CF down into two components (burnout and STS) (Stamm, 2010).



## *1.2 Compassion Fatigue*

According to Coetzee and Klopper (2010) compassion fatigue, if not treated in the beginning stages, can permanently alter a nurse's ability to give compassionate care to their patients. It begins as a state of discomfort which develops into compassion stress and then eventually leads to compassion fatigue (Coetzee and Klopper, 2010). Coetzee and Klopper (2010) highlight some of the factors that contribute to a nurse's ability to provide their patient with constant compassionate care; demanding situations, intense workload, staff shortages, poor management support, lack of resources and limited educational opportunities. These contributing factors mentioned above are evident within the Irish health care system and in particular within emergency departments across Ireland. In a report carried out by RTE news (2017) it was highlighted by the Irish Midwifery and Nursing Organisation (IMNO) that the situation in Irish emergency departments is at crisis level. The General Secretary of the Irish Nurses and Midwives Organisation has said that immediate measures are needed to address the problems within emergency departments, describing the situation as a crisis (RTE news, 2017).

This is a worrying observation as according to Boyle (2011), nurses who suffer from compassion fatigue exhibit symptoms of depression, may become detached from their patients and present an apathetic demeanour. Furthermore, nurses showing symptoms of compassion fatigue may eventually become ineffective in their line of duty. As well as nursing staff feeling the negative effects of burnout and compassion fatigue the patient also suffers. "CF and nurse burnout negatively affect both the caregiver and the patient, therefore, it is imperative that CF and burnout be recognized and addressed" (Hunsaker, Chen, Maughan and Heaston, 2015, p.189). Coetzee and Klopper's (2010) study highlights that

compassion fatigue was first explored by Joinson (1992) during her studies on the nature of burnout among emergency care nurses. The concept of compassion fatigue was never fully defined until Figley (1995) used the term to describe secondary traumatic stress disorder. The evidence provided by this study gives an understanding that the area of compassion fatigue among emergency nurses had not been greatly explored at the time Joinson was conducting her research. Therefore, further research is required in order for the nursing profession to tackle the negative effects of compassion fatigue. The aim of this present study is to explore the risk factors associated with CF.

### *1.3 Burnout*

Burnout is being continually researched in hope to find effective solutions to the ongoing problem among many occupations. According to Maslach, Leiter and Schaufeli (2008) the primary measure for burnout is the Maslach Burnout Inventory, which is widely used in determining levels of burnout. Maslach et al. (2008) defines the meaning of the term burnout as emotional exhaustion which develops as a result of depersonalisation and reduced personal accomplishment which may occur among individuals who work with people. Furthermore, individuals who are suffering from burnout feel that they are no longer able to provide psychological time to other people as a result of their emotional exhaustion (Maslach et al. 2008).

According to Adriaenssens et al. (2011), occupational burnout is related to negative perception in the workplace which leads to a state of depletion of resources. In a recent study carried out by Adriaenssens et al. (2011), other leading factors were also shown to be strong predictors of burnout among emergency nurses, including; frequency of exposure to trauma, lack of social support, team spirit and quality of leadership. Interestingly, similar research

conducted by Escribà-Agüir (2006) found that there is no evidence of a link between physical workload and burnout syndrome. Further studies in the area of burnout among health care staff have examined the relationship between burnout and human error resulting in patient casualties. Hall, Johnson, Watt, Tsipa and O'Connor (2016) conducted a systematic review on forty-six studies based on burnout in the health care profession, sixteen out of twenty-seven studies found a significant correlation between poor staff wellbeing and decreased patient safety. It is however, important to note one limitation to the study regarding the results of patient casualties; due to lack of prospective studies the study was unable to determine the amount of casualties or the manner in which they occurred. As a result of these findings it is imperative that burnout among nurses is prevented to maintain patient safety.

According to Gillespie and Melby (2003) research to date focuses mainly on the prevalence of burnout among medical staff in emergency departments and there is little information given on burnout among nursing staff. "Whilst much has been written about burnout in nursing staff, hard evidence of its extent is lacking (Walsh, 1998; cited in Gillespie and Melby, 2003). Hooper et al. (2010, p. 430) found that there is an increasing pressure on nursing managers and leaders to maintain patient satisfaction and to successfully hire and retain experienced nurses. In a recent study carried out by Hooper et al. (2010) on levels of burnout and compassion fatigue among emergency nurses in comparison to three other nursing specialities (oncology, nephrology, and intensive care), nurses who worked within an emergency department scored highest on burnout and compassion fatigue levels.

"Approximately 82% of emergency nurses had moderate to high levels of burnout, and nearly 86% had moderate to high levels of compassion fatigue" (Hooper et al., 2010, p. 436). By further exploring the areas of burnout and compassion fatigue, nursing management will be able to identify the risk factors associated with these problematic occurrences and implement

appropriate interventions to protect nurse's well-being. Furthermore, increased patient satisfaction will be maintained. Further studies carried out by Hunsaker et al. (2016, p. 187) found a positive relationship between ED nurse's compassion satisfaction and strong managerial support. "A high level of manager support contributed a higher level of CS" (Hunsaker et al. 2015, p. 187). Therefore, nursing manager's awareness of the implications of compassion fatigue and burnout are empirical in the resolution of these issues.

### *1.4 Secondary Traumatic Stress*

Secondary traumatic stress can develop in nurses who provide care to trauma patients; it includes behaviours and emotions experienced as a direct result of witnessing another individual's trauma (Hinderer et al. 2014). Nurses who are suffering from STS usually display the symptoms as follows; irritability, anger, intrusive or recurrent disturbing thoughts, sleep disturbances and inability to concentrate (Hinderer et al. 2014). In a study carried out by Dominguez- Gomez and Rutledge (2009) on the prevalence of STS in emergency nurses results indicated a high existence of STS among its sample of 67 nurses, it also found that nurses who participated in stress management activities experienced less symptoms of STS. The aim of this present study is to examine the effects of STS on levels on burnout within ED nurses.

### *1.5 Compassion Satisfaction*

Compassion satisfaction (CS) is characterised by feelings of accomplishment and reward which are developed as a result of caring for trauma patients (Hinderer et al. 2014). Hooper, Craig, Janvrin, Wetsel and Reimels (2010) carried out a recent study which showed a 27.5% result for high compassion satisfaction among nurses from different disciplines

including; emergency, nephrology and oncology. However emergency nurses most frequently reported low CS. This current study will explore the idea that the longer a nurse stays working as an emergency nurse the lower their CS will be.

## *1.6 Empathy*

Several studies have shown that empathy plays an important role in nurse's ability to create interpersonal relationships with their patients (Gillespie and Melby, 2003; Duffy, Avalos and Dowling, 2015). According to Mercer and Reynolds (2002) clinical empathy involves the ability to; understand a patients feelings and perspective, to be able to communicate this ability across to the patient and to act in an understanding manner which helps the patient in a therapeutic way. Tei et al. (2014, p. 303) suggests that a possible key to exploring the relationship between burnout and empathy could be in the study of brain activity. The researchers monitored brain activity with the use of FMRI scanning. Results of the study found that burnout severity was associated with reduced empathy- related brain activity. "It is argued that individuals who are most vulnerable to burnout in human service work are those who are highly motivated, dedicated and emotionally involved in their work" (van Dierendonck et al. 2005, p. 65). Therefore, it is essential to identify early signs of burnout among emergency care nurses to prevent the negative effects of the issue at hand.

Before considering the concept that all nurses show empathy and therefore they are at an increased risk of burnout; Reynolds and Scott (2000, p. 230) conducted a study which showed that not all professional helpers offer empathy to their patients. "A low level of empathy has been reported among the helping professions, including nursing, indicating that many professional helpers are not as helpful as they ought to be" (Reynolds and Scott, 2000, p. 231). However this critique, unfortunately, implies a simplistic approach to the

understanding of empathy among nurses as the study failed to assess if the nurses had been suffering from burnout or compassion fatigue prior to the study taking place.

In a recent study carried out by Hunt et al. (2017) it was suggested that the ability to self-regulate emotions during patient-care may reduce the risk of burnout. Although the study highlights that the relationship between burnout and empathy is intricate, it appears to be suggesting that nurses should “feel less” when providing patient care. Whereas contrasting nursing literature bases nursing values on showing emotion and empathy for patients. “In nursing, empathy is believed to be a necessary component to the nurse-patient relationship” (Holden, 2017, P.189). The question is then raised, can the process of self-regulation of emotions and empathy lead to symptoms of compassion fatigue. In support of this exploration Soreson et al. (2016) suggests that more research is needed into the area of CF and also notes that the term compassion fatigue has evolved over time and a need for a well-developed concept analysis is required. The relationship between empathy and burnout will be examined in this current study.

### *1.7 Empirical Studies Related to the Study Problem*

The research above does suggest that there are high levels of CF and burnout among emergency care nurses, however in a recent study carried by Hunsaker et al. (2015, p. 189) a low to average level of CF and burnout were found among ED nurses. Reasons for the low to average measure of these two negative aspects may be due to the fact that the nurses involved in the study were members of the ED professional organization; this may have provided them with increased emotional support, resulting in lower levels of risk in regard to experiencing burnout and compassion fatigue. Before considering the idea that it is possible for ED nurses to have low levels of burnout and CF, the limitations of this study carried out

by Hunsaker et al. (2015) will be noted; small sample size, low response rate (284 surveys were completed out of 1,000), the prevalence of CF and burnout were measured at a single point in time and finally it is noted that nurses perceptions on CF and burnout are subjective. Conflicting evidence found by Dominguez-Gomez and Rutledge (2009, p. 200) in a study they carried out on the effects of stressors on nurses showed that in the presence of empathetic caring CF and burnout may occur. Results of the study showed; 54% of nurses reported irritability, 52% of nurses reported avoidance of patients and 46% of nurses reported intrusive thoughts about patients. Although these results correlate with the presence of Secondary Traumatic Stress, the study highlights that the display of STS symptoms lead to the presence of CF and burnout. "STS symptoms (intrusion, avoidance, and arousal) may lead to job dissatisfaction or burnout" (Dominguez-Gomez and Rutledge 2009, p. 201).

A mounting body of evidence has highlighted the negative effects of CF and burnout among ED nurses. The effects are evident in nurses who display obvious signs of stress and anxiety (Sabo, 2006). In addition to having a negative impact on the nurse's own mental well-being, stress and anxiety can affect the standard of care delivered to the patient. Stathopoulou et al. (2011, p. 312) highlights that several studies provide evidence for the positive relationship between work stress and mild psychiatric morbidity among emergency nurses. During Stathopoulou's et al. (2011) study the most common symptoms to manifest from work related stress and anxiety were; sleep disturbance, anxious mood and depressed mood. Interestingly, Stathopoulou et al. (2011) highlights that mild anxiety may act as a motivator for nurses working in the emergency department. "Mild anxiety usually functions as an affective force that generates energy and motivation or helps persons to cope effectively with stress and remain alert" (Kneisl et al. 2014, p. 117). However Stathopoulou et al. (2011) also highlights that anxiety can present in varying degrees and severe anxiety may lead to

panic reactions which would have a negative impact on the nurse's concentration and ability to provide safe and effective care. Although the study provides insightful research into the effects of work related stress and anxiety in emergency care nurses it is important to note one main limitation which may have affected the validity of the study, personal history and personality factors were not taken into consideration when designing the study. Furthermore nurses may have already had a pre-existing anxiety disorder non-related to the workplace.

### *1.8 Rationale of the Present Study*

The present study aims to explore the prevalent issue of burnout and compassion fatigue among emergency nurses in the Irish healthcare system. According to a recent study carried out by Rushton et al. (2015), nurses experience moral distress when they act contrary to their values of patient and family centered care, leading them to consider leaving their position or nursing profession altogether. By further exploring the areas of burnout and CF prevention of negative outcomes may be highlighted, which will prove beneficial for both health care workers and the patient. In a study carried out by Soreson et al. (2016), the benefits of better understanding compassion fatigue has the potential to improve patient care, the well-being of health care workers and may lead to retention within the profession.

Advancement in research will not only provide a clearer understanding of compassion fatigue but it will give the opportunity for researchers to identify its causes, prevention, and treatment (Soreson et al. 2017). Furthermore by identifying the predictors of CF and burnout intervention may be put in place to protect nurse's mental well-being and to ensure the standard of patient care is maintained. There has been limited research in the area of empathy and burnout, research seems to be largely documented on the link between physician empathy

levels and burnout. By examining the predicting variables of burnout and compassion fatigue this study aims to provide further knowledge into this area of interest.

### *1.9 Hypotheses*

#### **H1: Secondary Traumatic Stress and Burnout**

High levels of STS will significantly predict the presence of burnout among emergency care nurses.

#### **H2: Empathy and Burnout**

High levels of empathy will predict the presence of burnout among emergency care nurses.

#### **H3: Night shifts and Compassion Fatigue**

The number of night shifts worked per month will predict the presence of compassion fatigue.

#### **H4: Physical/ Verbal Violence and Empathy**

Exposure to physical/ verbal violence will predict low levels of empathy.

#### **H5: Length of Service and Compassion Satisfaction**

An increased length of service will predict lower levels of compassion satisfaction.

#### **H6: Age and Burnout**

An increase in age will predict higher rates of burnout.

**H7: Coping self- efficacy and Burnout**

High levels of coping self- efficacy will predict low levels of burnout.

## Chapter 2: Methodology

### *2.1 Participants*

The present study was carried out specifically on Irish emergency care nurses, therefore non-probability purposive sampling was employed. The sample (N=70) were recruited through the INMO (Irish Nurses and Midwives Organisation) website which invited participants to complete an online-survey. In addition, social media platforms were utilised to recruit participants to part take in the research study. Snowball sampling occurred as a result of recruitment through social media.

Participants (N=70) ranged in age from 23 to 50, with a mean age of 32 (SD= 6.21). Of the respondents, 61 were female (87%) and 9 were male (13%). In the sample (N=70) 60% of participants were working as an ED nurse for 0-5years, 23% for 5-10years and 17% for 10+years, with a mean number of years of 2 (SD= .77). The participants were required to give mandatory information on whether they currently worked within an Emergency Department as a nurse, 91% of participants currently work in an emergency department while 9% do not. The emergency care nurses were from all over Ireland and worked in both public and private sectors. Inclusion criteria for participation required respondents to be over 18 years old and have current or previous experience working as an emergency care nurse. Participation of this research study was voluntary and anonymous; respondents were made aware of this prior to completing the survey. No monetary incentives were provided to participants and individuals who wished to participate were offered a summary of results.

## *2.2 Design*

This study was questionnaire- based. A non- experimental correlational design was employed to investigate relationships between variables. Each participant, recruited through non- probability purposive sampling, completed the same online self- report survey (See appendices).

The predictor variables were; empathy levels, compassion satisfaction, length of service, night shifts worked per month, and Secondary Traumatic Stress (STS). The criterion variables; burnout and compassion fatigue, were scored measured on the Professional Quality of Life Scale (ProQOL-V) (Stamm, 2009). This scale has three subscales; compassion satisfaction (CS), burnout and Secondary Traumatic Stress (STS). Burnout and STS are measurements of Compassion Fatigue (CF). The ProQOL-V scale is used to measure Compassion Satisfaction (CS) and Compassion Fatigue (CF).

## *2.3 Materials*

The survey (See Appendix E) contained five sections, giving a total of 79 items. Overall the survey took approximately 6-8minutes to complete. Short completion time ensured that the participant would not lose interest throughout completion of the study and that they would give each question considerable thought before answering. Each question within the survey was made mandatory which would provide increased validity to the results.

### *2.3.1 Demographics*

A short demographic questionnaire was included in section one of the survey (See Appendix E) which collected the following data; gender, age, length of service, current employment status, amount of night shifts worked per month and experience of verbal or physical aggression.

### *2.3.2 ProQOL-V, Toronto Empathy Questionnaire & Coping Self-Efficacy Scale*

Section three included questions from the Toronto Empathy Questionnaire (Spreng et al. 2009) (see Appendix C ), section four included questions from the Coping Self- Efficacy Scale (Chesney et al. 2006) (see Appendix D) and the ProQOL-V (Stamm 2009) questionnaire was included in section five (see Appendix B).

#### *Toronto Empathy Questionnaire (Spreng et al. 2009)*

The Toronto Empathy Questionnaire (TEQ) is a brief, reliable, and valid instrument for the assessment of empathy, the questionnaire has been shown to have high internal consistency, construct validity, and test–retest reliability (Spreng et al., 2009). Developed by reviewing other available empathy instruments the TEQ (see appendix C) is a self- report brief measure of empathy which consists of 16 items. Participants were instructed to read each statement carefully and honestly answer each question by choosing a number on a four point Likert scale from ‘never’ (0) to ‘often’ (4). Positive and negative worded items were scored as follows; positively worded items (1, 3, 5, 6, 8, 9, 13, 16) scored using never=0; rarely= 1; sometimes= 2; often= 3; always= 4 and negatively worded items (2, 4, 7, 10, 11,

12, 14, 15) were negatively scored. All scores were then summed to get a total for the TEQ. Examples of positive worded questions included in the TEQ; “I can tell when others are sad even when they do not say anything”, “I get a strong urge to help when I see someone who is upset”, “When I see someone being taken advantage of, I feel kind of protective towards him\her”. Examples of negatively worded items include; “I am not really interested in how other people feel”, “I remain unaffected when someone close to me is happy”.

Spreng et al. (2009) notes that the Toronto Empathy Questionnaire is psychometrically sound with an internal consistency result of; Cronbach’s  $\alpha = .85$ . Additionally, Spreng et al. (2009) highlights that the TEQ encompasses a wide range of attributes associated with the core meaning of empathy, these include; emotional contagion, emotion comprehension, sympathetic physiological arousal and con-specific altruism, all of which are represented in the TEQ items.

### ***Coping Self-Efficacy scale (Chesney et al. 2006)***

The Coping Self- Efficacy Scale is a simple to administer non-diagnostic self-report measure contained of 26- items (see appendix D), designed by Chesney and his colleagues (2006). This scale measures an individual’s confidence in performing coping behaviours when presented with life challenges (Chesney et al. 2006). In a study carried out by Chesney et al. (2006) on the reliability and validity of the CSE scale a measurement of Cronbach’s  $\alpha$  score ( $\alpha = .95$ ) was obtained.

Respondents were instructed to answer each item referring to a Likert scale of 0-10. Anchor points on the scale were 0 (‘cannot do at all’), 5 (‘moderately certain can do’) and 10 (‘certain can do’). Prior to answering the items the participant was provided with the statement as follows; when things aren't going well for you, or when you're having problems,

how confident or certain are you that you can do the following. An overall CSE score was obtained by totalling the item ratings ( $\alpha = .95$ ; scale mean = 137.4, SD = 45.6) (Chesney et al. 2006). Each respondent must answer at least 80% percent of items as per measurement rules. In the case of a respondent missing items a “corrected sum” must be calculated by adding in the participants individual mean for the items that they answered for each item that they skipped. There were no corrected sums included in the results of the CSE scale as each item required mandatory response. Examples of items included in the CSE measure; “Make a plan of action and follow it when confronted with a problem”, “See things from the other person's point of view during a heated argument”.

***Professional Quality of Life Scale (ProQOL) – Version 5 (Stamm, 2009)***

The Professional Quality of Life Scale (ProQOL-v) is the current version of the old Compassion Fatigue self- test (Figley, 1995) (Stamm, 2009). The current ProQOL- v (see Appendix B), is a self- report non- diagnostic measure containing 30 items which observe for signs of compassion satisfaction and compassion fatigue. It has been designed to measure respondents in three key environments; compassion satisfaction, burnout and secondary traumatic stress. Three subscales are employed to measure these three variables. The construct validity upon which the test is based is well established with over 200 articles noted in the peer-review literature (Stamm 2009). Scale reliability has been reported as follows; compassion satisfaction ( $\alpha = .87$ ), burnout ( $\alpha = .72$ ) and secondary traumatic stress ( $\alpha = .80$ ).

Respondents are instructed to select a number from 1(never) to 5 (very often) on a Likert scale. There are three steps to scoring the ProQOL. The first step is to reverse some items. The second step is to sum the items by subscale and the third step is to convert the raw score to a t-score. Low level scores on all scales are 22 or less, average levels are between 23

and 41, and high levels are 42 or more. Examples of items found in the measure; “I believe I can make a difference through my work”, “Because of my [helping], I have felt "on edge" about various things”, “I can't recall important parts of my work with trauma victims”.

## *2.4 Procedure*

This research was conducted from December 2017 to mid-February 2018. Participants began the process by clicking on the online link to the survey. The first section of the survey contained an information page (see appendix A); it is here participants' consent was granted by choosing to complete the questionnaire. Written instruction was given in section three, four and five on how to answer each of the scales. Respondents were informed on the information page as to the nature of the study; the presence of burnout and compassion fatigue among emergency care nurses.

## *2.5 Ethical Considerations*

Throughout this study guidelines from the PSI (Psychological Society of Ireland) were adhered to at all times. Participants were informed on the information sheet provided prior to part taking in the study that their identity would be protected, as the study was anonymous and confidential; for this reason withdrawal from the study after completion was not possible (respondents informed of same). Respondents were informed on their right to withdraw from the study at any stage. Participation was also voluntary; respondents were not obliged to take part and no monetary reward was offered for completion. Data collected from the study was safely stored on a password protected computer. Consent was obtained by commencing the survey, as informed on the information sheet (see appendix A). In addition,

participants were made aware of potential minor negative feelings that may arise from questions, information on psychological support was provided.

## *2.6 Proposed Data Analysis*

Both descriptive and inferential statistics will be employed during analysis. Mean scores and standard deviation results will be given for demographic variables which will highlight raw data. Descriptive statistics will also be employed for criterion and predictor variables. Criterion variables include; burnout, compassion fatigue, empathy and compassion satisfaction. The predictor variables include; secondary traumatic stress, empathy, night shifts per month, exposure to physical/ verbal violence, age and length of service. If the data are normally distributed, inferential statistics will include a series of Pearson's correlations to test for relationships between the predictor and criterion variables.

## Chapter 3: Results

### *3.1 Descriptive Statistics*

#### **Demographic Descriptives**

The table below shows that of a sample size of seventy (N= 70) 9 ED nurses were male (13%) and 61 ED nurses were female (87%). The mean age was 31.53 years (SD= 6.21). The youngest emergency nurse was 23 and the oldest 50. In regards to length of service; the mean was 1.57 years (SD= .77); 60% of participants had worked 0-5years, 23% worked 5-10 years and 17% worked 10 years plus. Out of the sample (N= 70) 91% currently work in an emergency department while 9% do not but have previously.

Table 1: Demographic Variable Descriptives

Variables	N	%	Mean	SD
<b>Gender</b>				
Male	9	13		
Female	61	87		
<b>Total</b>	<b>70</b>	<b>100</b>		
<b>Age</b>				
			31.53	6.21
<b>Total</b>	<b>70</b>			
<b>Length of Service</b>				
			1.57	.77
0-5yrs	42	60		
5-10yrs	16	23		
10+ years	12	17		
<b>Total</b>	<b>70</b>	<b>100</b>		
<b>Currently working in ED</b>				
			1.09	.28
Yes	64	91		
No	6	9		
<b>Total</b>	<b>70</b>	<b>100</b>		

### 3.1.1 Predictor Descriptives

Participant scores (N= 70) for all predictor variables are displayed in Table 2 below. The mean score for night shifts worked per month was 1.60 (SD= .549); 43% work 0-7 nights per month, 54% work 7-14 nights per month and 2.9% work 14plus night shifts per month. Regarding experienced verbal/ physical abuse while working as an emergency nurse 100% answered yes (mean= 1.00, SD= .00). A mean score; mean= 152.78, SD= 36.75, for coping self- efficacy indicates that the sample measured moderate to high levels of self- efficacy, as the MIDSS ( Measurement Instrument Database for the Social Sciences) records a mean score of 137.4 for the coping self- efficacy scale. The range of scores recorded was 65 to 273. Scores measured on the Toronto Empathy Scale were as follows; mean= 48.25, SD= 7.24.

*Table 2: Descriptive Statistics for Predictor Variables*

Variable	Mean	SD
STS	26.55	6.39
Empathy	48.25	7.24
Night shifts per month	1.60	.54
Exposure to violence	1.00	.00
Length of service	1.57	.77
Age	31.53	6.21
Coping Self- efficacy	152.78	36.75

### 3.1.2 Criterion Descriptives

The mean scores and standard deviations of participants ProQOL- V (Stamm, 2009) measurement are represented in table 3 below. Analyses revealed that emergency nurses compassion satisfaction mean total score was 33.10 (SD= 5.30), indicating that the sample scored low in CS. The minimum score for CS was 15 and the maximum 43, indicating that some participants experienced extremely low levels of CS. Scores for burnout (mean= 28.90, SD= 5.10) and secondary traumatic stress (mean= 26.55, SD= 6.39) ; the two components of compassion fatigue, are also outlined in table 3. Emergency nurses levels of burnout were moderate according to Stamm's ( 2010) interpretation of results, with a minimum score of 18 and a maximum score of 42; indicating that severe levels of burnout exceeding 57 were not reported. In addition, average levels of STS were reported with a total mean score of 26.55 (SD= 6.39), minimum score of 14 and a maximum score of 43; indicating that high levels STS has been experienced by some emergency nurses.

Table 3: Criterion Variable Descriptives (ProQOL- V measure)

Variable	Mean	SD	Min	Max
CS	33.10	5.30	15	43
Burnout	28.90	5.10	18	42
STS	26.55	6.39	14	43

### *3.2 Inferential Descriptives*

#### *H1: Secondary traumatic stress and burnout*

Pearson's correlation coefficients found a strong significant positive relationship between secondary traumatic stress and burnout;  $r(60) = .529, p < .001$ . Therefore, the null has been rejected; higher levels of STS were related to higher levels of burnout.

#### *H2: Empathy and burnout*

Pearson's correlation coefficients found no significant relationship between empathy and burnout;  $r(60) = -.216, p = .072$ . This result shows that higher empathy levels do not indicate a higher rate of burnout. Therefore the null has been accepted. Although not significant; empathy and burnout may have been approaching significance ( $p = .072$ ).

#### *H3: Night shifts and compassion fatigue*

Pearson's correlations coefficients found a significant relationship between the amount of night shifts worked per month and compassion fatigue. There was a weak positive significant relationship between night shifts and burnout;  $r(60) = .244, p = .042$ . For the STS component of CF the results are as follows;  $r(60) = .122, p = .314$  therefore there was no significance found between night shifts and the STS component of CF.

#### *H4: Exposure to physical/ verbal aggression and empathy*

Kendall's correlations coefficients found no significant relationship between exposure to physical/ verbal violence and empathy;  $r(60) = .01, p = .911$ . Indicating that exposure to workplace violence does not decrease empathy levels.

### *H5: Length of service and compassion satisfaction*

Pearson's correlations coefficients found no significant relationship between length of service and compassion satisfaction;  $r(60) = .170$ ,  $p = .080$ . The null has been accepted. Length of service as an emergency nurse was not related to compassion satisfaction levels.

### *H6: Age and burnout*

Pearson's correlations found a negative statistically significant relationship between age and burnout;  $r(60) = -.268$ ,  $p = .012$ . This suggests that as age increases the level of burnout also increases. The null has been rejected.

### *H7: Coping self- efficacy and burnout*

Pearson's correlations found a strong negative significant relationship between coping self- efficacy and burnout;  $r(60) = -.550$ ,  $p < .001$ . This result indicates that high levels of coping self- efficacy reduces the risk of burnout among emergency nurses.

## Chapter 4: Discussion

### *4.1 Key Findings*

The aim of this research was to determine the levels of burnout and compassion fatigue among emergency care nurses in Ireland; and whether empathy levels, coping self-efficacy levels, length of service, age, exposure to physical/ verbal violence and night shifts could have an overall negative or positive impact on these two variables. In addition, this study aimed to find gaps in the current literature on burnout and compassion fatigue in emergency care nursing. The results of the preceding analysis have shown that emergency care nurses in this sample are at risk of suffering from burnout and compassion fatigue; with results indicating low levels of compassion satisfaction, moderate levels of burnout and average levels of secondary traumatic stress. This is in support of current literature highlighting emergency care nurses susceptibility to burnout and compassion fatigue (Hooper et al. 2010; Hunsaker et al. 2015; Sabo 2006; Flarity et al. 2013; Yoder 2010; Hinderer et al. 2014; Potter et al. 2010).

*Hypothesis 1-* showed a significant result between exposure of secondary traumatic stress and burnout, indicating that higher levels of burnout are observed as a result of secondary traumatic stress. Dominguez-Gomez & Rutledge (2009) highlight that emergency care nurses are often exposed to traumatic events which can lead to symptoms of STS (intrusion, avoidance and arousal). Overtime symptoms of STS can lead to burnout. In a recent study carried out by Duffy, Avalos and Dowling (2015) on the prevalence of STS within Irish emergency departments it was found that 64% of participants met the criteria for STS; statistical significance was also found for the variables 'change of career considered'

and 'finds alcohol helpful in alleviating work-related stress'. Burnout is seen as a psychological syndrome which occurs in response to chronic interpersonal stressors that are presented within the workplace (Deville, Wright and Varker, 2009). Perhaps increased training and education is required to protect emergency nurses against exposure to secondary traumatic stress. In a study carried out by Sprang, Clark and Whitt-Woosley (2007) on compassion fatigue in emergency nursing results found that specialized trauma training reduced levels of CF and burnout. In addition to education, debriefing sessions for the staff involved in the care of a trauma patient may be helpful to protect against the negative symptoms of STS. Despite the frequency of exposure to traumatic events ED nurses do not become immune to STS and most often they are ill prepared to deal with the symptoms of STS after a traumatic event (Well et al. 2011).

*Hypothesis 2-* results did not report a significant correlation between empathy and burnout, suggesting that empathy is not a risk factor for burnout. This is contradictory to previous research which states that the more empathetic a person is; the higher the risk of burnout is. Burnout is often seen as a risk factor for human service workers and it is mostly caused by emotional communication (Miller, Birkholt, Scott and Stage, 1995). Zenasni, Boujut, Woerner and Sultan (2012) highlight that high levels of empathy could be a leading factor in the cause of compassion fatigue; exhaustion and burnout caused directly by compassion fatigue. However, there is recent evidence to support the findings of this result. Clinical empathy may be used as a protective factor against burnout (Picard et al. 2016). In a recent study carried out by Yuguero et al. (2017) on empathy and burnout results showed that respondents who showed low empathy levels had a presence of burnout whereas respondents who showed high empathy levels had no evidence of burnout. By creating awareness about these findings emergency nurses will gain increased knowledge into the preventative factors

surrounding burnout. Furthermore, by associating high levels of empathy with decreased levels of burnout nurses may be encouraged to obtain an empathetic view towards themselves during stressful work days; leading to an increase in a more positive psychological well-being. As nursing shortages become an increasingly worrying problem it is important that the nurses own psychological well-being is maintained to increase the levels of retention within the job (Wilkinson and Whitehead, 2009).

*Hypothesis 3-* found a significant result between the amount of night shifts worked per month and compassion fatigue, supporting the idea that an increase in the number of night shifts worked has an overall negative impact on levels of compassion fatigue. This finding supports previous research. Night shifts in nursing can be associated with lower work ability, poorer sleep patterns and low job satisfaction ( Smith- Miller et al. 2014). According to Pallesen et al. (2010) night work can have severe negative effects on an individual's mental health; they are also linked to reduced productivity and work place accidents. Due to the negative impact of working night shifts, as supported by the research above, it is suggested that emergency nurses who work more night shifts than their colleagues are at increased risk of developing burnout and also at risk of becoming less resilient when faced with traumatic situations. Furthermore, the increased risk of accidents occurring as a result of night shifts may have a direct effect on compassion fatigue. It is suggested as a result of these findings that ED nursing managers take into consideration the increased risk of compassion fatigue linked to night shifts. Where possible emergency nurses should only do the minimum required number of night shifts while working in the emergency department.

*Hypothesis 4-* did not find any significant correlations between exposure to physical/ verbal aggression and levels of empathy. 100% of respondents answered yes to experiencing physical or verbal aggression within an emergency department. Positively, this highlights that

emergency care nurses (within this study sample) empathy levels are not affected by exposure to physical/ verbal violence. These results are contradictory to previous research which states that emergency care nurses usually obtain low levels of empathy due to increased exposure to trauma and violence ( Bourgault et al. 2015). In Bourgault's et al. (2015) study on empathy levels within emergency nursing a significant correlation between psychological distress and low levels of empathy were found. Findings in this current study perhaps suggest that empathy levels are not affected by physical/ verbal aggression experienced due to good psychological wellbeing among respondents. In addition, further reasoning for stable empathy levels among this sample (N=70) could possibly be a result of the mean number of years (mean= 1.57, SD= .77) worked by respondents. It is possible that the short length of service by this sample has acted as a buffer against reduced empathy when exposed to physical/ verbal violence.

*Hypothesis 5-* length of service and compassion satisfaction did not have any significant findings. These findings indicate that emergency care nurses compassion satisfaction levels are not affected by their length of service in the job. Although it must be noted again that the mean length of service among the sample (N=70) was 1.57 years. The question must be raised as to whether the sample have been exposed long enough in the job for a significant result to be obtained. Oshagbemi (2000) suggests that workers who are satisfied in their job remain there while the less satisfied workers resign. It is possible that the sample of participants have not been affected by low levels of compassion satisfaction as the nurses who experience this do not remain in the job. However, there is research to support the findings mentioned above. Recent findings from a study carried out by Kelly, Runge and Spencer (2015) on the predictors of CF and CS in nursing showed that nurses in the "Millennial" generation (21- 33years) were experiencing higher levels of burnout and lower

levels of CS than their counterparts who were ranged in ages 50 -65years with a longer history of employment in acute nursing.

*Hypothesis 6-* found a significant correlation between increasing age and levels of burnout. These findings indicate that the older the nurse is; the higher the risk of burnout is. This is contradictory to previous research carried out which states that compassion fatigue and burnout is less prevalent with increasing age (Hill and Stephens, 2003). In a study carried out by Hunsaker and Maughan (2014) results demonstrated that the older nurse had higher compassion satisfaction and lower burnout scores than their younger colleagues. Younger nurses are faced with challenges such as; inexperience, busier work environments and ongoing daily education in comparison to the older nurse who has been working in an ED department for a significant number of years, who displays; practical experience, leadership skills and knowledge (Hunsaker et al. 2014). The above mentioned findings may have been influenced by the mean age of the sample (N= 70), mean = 31.53. Only 10% of the respondents were over the age of 40.

*Hypothesis 7-* found a strong significant relationship between coping self- efficacy and burnout; suggesting that higher levels of coping self- efficacy skills reduce the risk of burnout. Previous research supports this finding. Occupational self- efficacy has been described as the mediator between job strain and employee burnout (Pisanti et al. 2008).

#### *4.2 Limitations and suggestions for future research*

This study has not been without its limitations. Firstly, a small sample size with a low response rate was one of the main limitations. The study only received 70 respondents. As a result of low sample size findings may not represent true significance for burnout and compassion fatigue among emergency nurses in Ireland. In addition, the prevalence of burnout and compassion fatigue were only measured at one point in time. Stamm (2010) suggests that it is possible for an individual's perceptions of work related conditions to change overtime. Findings were based on the nurses subjective feelings towards burnout and compassion fatigue, all of the variables examined in this study may have not related to each individual nurse. Moreover, it could be a possibility that the study's method of data collection did not appeal to the older generation of nurses. For the validity of the study a much broader age range would have been more appropriate. Strengths of this study include the use of the ProQOL-V measure (Stamm, 2009) which has been proven to be psychometrically sound.

In regard to future research perhaps a qualitative section of data collection would be useful in determining nurse's subjective thoughts on the causes of burnout and CF. This may provide practical feedback to aid intervention strategies to reduce the levels of burnout and CF in emergency departments. A qualitative approach would also ensure that older nurses are incorporated into the study. Future research would be beneficial in directing its exploration into nurses coping strategies. By identifying strategies that are helpful self-care protocols for nursing staff could be developed and implemented in emergency departments. The findings suggest that there is a great need for continued research into the area of burnout and compassion fatigue in Irish emergency departments. Extending the research beyond nurses to examine levels in medical professionals may also be productive in finding solutions.

Whereby, interventions being implemented for both nurses and doctors may see a rise in increased team work and emotional support between both professions. Furthermore, research into STS and buffers against it could be influential in reducing burnout and CF as emergency nurses are particularly vulnerable to STS due to repetitive exposure to traumatic incidences.

### *4.3 Conclusion*

This study examined burnout and compassion fatigue among emergency care nurses in the Republic of Ireland. Overall results of this study revealed moderate levels of burnout and average to moderate levels of compassion fatigue among this group of ED nurses. These workers scored low in compassion satisfaction which may be a reason for moderate levels of burnout and CF. The demographic characteristics such as age and night shifts worked per month had a negative influence on the development of burnout and CF. Length of service and exposure to physical/ verbal violence did not affect nurses compassion satisfaction or empathy levels. STS was found to have a negative influence on the development of burnout whereas empathy levels did not. Further research into the area of burnout and compassion fatigue could aid in the improvement of ED nurses working lives and overall mental health. Not only will ED nurses benefit from further research but also patients and the families of patients being treated in emergency departments. It is imperative that support strategies are implemented across Irish emergency departments for the protection of ED nurses against burnout and compassion fatigue.

## References

- Adriaenssens, J., De Gucht, V., Van Der Doef, M., & Maes, S. (2011). Exploring the burden of emergency care: predictors of stress-health outcomes in emergency nurses. *Journal of Advanced nursing*, 67(6), 1317-1328.
- Bourgault, P., Lavoie, S., Paul-Savoie, E., Grégoire, M., Michaud, C., Gosselin, E., & Johnston, C. C. (2015). Relationship between empathy and well-being among emergency nurses. *Journal of Emergency Nursing*, 41(4), 323-328.
- Chesney, M. A., Neilands, T. B., Chambers, D. B., Taylor, J. M., & Folkman, S. (2006). A validity and reliability study of the coping self-efficacy scale. *British journal of Health Psychology*, 11(3), 421-437.
- Coetzee, S. K., & Klopper, H. C. (2010). Compassion fatigue within nursing practice: A concept analysis. *Nursing & health sciences*, 12(2), 235-243.
- Collins, S., & Long, A. (2003). Working with the psychological effects of trauma: consequences for mental health-care workers—a literature review. *Journal of psychiatric and mental health nursing*, 10(4), 417-424.
- Demerouti, E., & Bakker, A. (2008). The Oldenburg Burnout Inventory: A good alternative to measure burnout and engagement. *Handbook of Stress and Burnout in Health Care*.Uk.

- Devilley, G. J., Wright, R., & Varker, T. (2009). Vicarious trauma, secondary traumatic stress or simply burnout? Effect of trauma therapy on mental health professionals. *Australian & New Zealand Journal of Psychiatry, 43*(4), 373-385.
- Dominguez-Gomez, E., & Rutledge, D. N. (2009). Prevalence of secondary traumatic stress among emergency nurses. *Journal of Emergency Nursing, 35*(3), 199-204.
- Duffy, E., Avalos, G., & Dowling, M. (2015). Secondary traumatic stress among emergency nurses: a cross-sectional study. *International emergency nursing, 23*(2), 53-58.
- Escribà-Agüir, V., Martín-Baena, D., & Pérez-Hoyos, S. (2006). Psychosocial work environment and burnout among emergency medical and nursing staff. *International archives of occupational and environmental health, 80*(2), 127-133.
- Flarity, K., Gentry, J. E., & Mesnikoff, N. (2013). The effectiveness of an educational program on preventing and treating compassion fatigue in emergency nurses. *Advanced emergency nursing journal, 35*(3), 247-258.
- Gillespie, M., & Melby, V. (2003). Burnout among nursing staff in accident and emergency and acute medicine: a comparative study. *Journal of clinical nursing, 12*(6), 842-851.
- Halbesleben, J., & Demerouti, E. (2005). The construct validity of an alternative measure of burnout: Investigating the English translation of the Oldenburg Burnout Inventory. *Work & Stress, 19* (3), 125- 430.

- Hall, L., Johnson, J., Watt, I., Tsipa, A., & O'Connor, D. (2016). Healthcare Staff Wellbeing, Burnout, and Patient Safety: A Systematic Review. Retrieved from <https://doi.org/10.1371/journal.pone.0159015>.
- Health Service Executive. (2015). *Emergency Department Task Force*. Retrieved from <https://www.hse.ie/eng/services/list/3/acutehospitals/edtaskforce/>.
- Hill, R. P., & Stephens, D. L. (2003). The compassionate organization in the 21st century. *Organizational Dynamics*, 32(4), 331-341.
- Hinderer, K. A., VonRueden, K. T., Friedmann, E., McQuillan, K. A., Gilmore, R., Kramer, B., & Murray, M. (2014). Burnout, compassion fatigue, compassion satisfaction, and secondary traumatic stress in trauma nurses. *Journal of Trauma Nursing*, 21(4), 160-169.
- Hooper, C., Craig, J., Janvrin, D. R., Wetsel, M. A., & Reimels, E. (2010). Compassion satisfaction, burnout, and compassion fatigue among emergency nurses compared with nurses in other selected inpatient specialties. *Journal of Emergency Nursing*, 36(5), 420-427.
- Hunsaker, S., Chen, H. C., Maughan, D., & Heaston, S. (2015). Factors that influence the development of compassion fatigue, burnout, and compassion satisfaction in emergency department nurses. *Journal of Nursing Scholarship*, 47(2), 186-194.
- Kelly, L., Runge, J., & Spencer, C. (2015). Predictors of compassion fatigue and compassion satisfaction in acute care nurses. *Journal of Nursing Scholarship*, 47(6), 522-528.

Kneisl, C. R., Wilson, S., & Trigoboff, E. (2004). Stress, anxiety and coping. *Contemporary Psychiatric-Mental Health Nursing*. Upper Saddle River, NJ: Pearson-Prentice Hall.

Maslach, C., Leiter, M. P., & Schaufeli, W. (2008). *Measuring burnout*. Retrieved from Academic Research Library database.

Maslach, C., Jackson, S. E., & Leiter, M. P. (2006). *Maslach burnout inventory*. Retrieved from Academic Research Library database.

Mercer, S. W., & Reynolds, W. J. (2002). Empathy and quality of care. *Journal of advanced nursing*, 52, (3), 9-12.

Miller, K., Birkholt, M., Scott, C., & Stage, C. (1995). Empathy and burnout in human service work: An extension of a communication model. *Communication Research*, 22(2), 123-147.

Oshagbemi, T. (2000). Is length of service related to the level of job satisfaction?. *International Journal of Social Economics*, 27(3), 213-226.

Pallesen, S., Bjorvatn, B., Magerøy, N., Saksvik, I. B., Waage, S., & Moen, B. E. (2010). Measures to counteract the negative effects of night work. *Scandinavian Journal of Work, Environment & Health*, 43 (7), 109-120.

Picard, J., Catu-Pinault, A., Boujut, E., Botella, M., Jaury, P., & Zenasni, F. (2016). Burnout, empathy and their relationships: a qualitative study with residents in General Medicine. *Psychology, Health & Medicine*, 21(3), 354-361.

Pisanti, R., Lombardo, C., Lucidi, F., Lazzari, D., & Bertini, M. (2008). Development and validation of a brief Occupational Coping Self-Efficacy Questionnaire for Nurses.

*Journal of Advanced Nursing*, 62 (2), 238–247.

Potter, P., Deshields, T., Divanbeigi, J., Berger, J., Cipriano, D., Norris, L., & Olsen, S.

(2010). Compassion Fatigue and Burnout. *Clinical Journal of Oncology Nursing*, 14(5), 67- 90.

Reynolds, W. J., & Scott, B. (2000). Do nurses and other professional helpers normally

display much empathy? *Journal of Advanced Nursing*, 31(1), 226-234.

RTE News Report. (2017). *HSE announces 'enhanced measures' to deal with overcrowding.*

Retrieved from <https://www.rte.ie/news/2017/0105/842758-health-emergency-departments>

Sabo, B. M. (2006). Compassion fatigue and nursing work: can we accurately capture the

consequences of caring work? *International Journal of Nursing Practice*, 12(3), 136-142.

Smith-Miller, C. A., Shaw-Kokot, J., Curro, B., & Jones, C. B. (2014). An integrative review:

fatigue among nurses in acute care settings. *Journal of Nursing Administration*, 44(9), 487-494.

Spreng, R. N., McKinnon, M. C., Mar, R. A., & Levine, B. (2009). The Toronto Empathy

Questionnaire: Scale development and initial validation of a factor-analytic solution to multiple empathy measures. *Journal of Personality Assessment*, 91(1), 62-71.

- Sprang, G., Clark, J. J., & Whitt-Woosley, A. (2007). Compassion fatigue, compassion satisfaction, and burnout: Factors impacting a professional's quality of life. *Journal of Loss and Trauma, 12*(3), 259-280.
- Stathopoulou, H., Karanikola, M. N., Panagiotopoulou, F., & Papathanassoglou, E. D. (2011). Anxiety levels and related symptoms in emergency nursing personnel in Greece. *Journal of Emergency Nursing, 37*(4), 314-320.
- Stamm, B. H. (2010). The Concise ProQOL Manual (2ed ed.). Retrieved from <http://www.ProQOL.org>.
- Stamm, B. H. (2005). The ProQOL manual. Retrieved from <http://www.ProQOL.org>.
- Tei, S., Becker, C., Kawada, R., Fujino, J., Jankowski, K. F., Sugihara, G., & Takahashi, H. (2014). Can we predict burnout severity from empathy-related brain activity? *Translational psychiatry, 4*(6), 393- 400.
- Van Dierendonck, D.G., & Visser, B. (2005). Burnout: Prevention through personal growth. *Journal of Stress Management, 12*(2), 62–77.
- Well, E., First, F., Dignity, P., & Training, C. B. (2011). Stress in emergency departments: experiences of nurses and doctors. *Journal of Emergency nursing, 19*(4), 105- 123.
- Wilkinson, A., & Whitehead, L. (2009). Evolution of the concept of self-care and implications for nurses: a literature review. *International Journal of nursing studies, 46*(8), 1143-1147.

Yoder, E. A. (2010). Compassion fatigue in nurses. *Applied Nursing Research*, 23(4), 191-197.

Yuguero, O., Ramon Marsal, J., Esquerda, M., Vivanco, L., & Soler-González, J. (2017).

Association between low empathy and high burnout among primary care physicians and nurses in Lleida, Spain. *European Journal of General Practice*, 23(1), 4-10.

Zenasni, F., Boujut, E., Woerner, A., & Sultan, S. (2012). Burnout and empathy in primary care: three hypotheses. *Journal of Emergency Nursing*, 45 (5), 334- 400.

## Appendices

### Appendix A: Information Sheet and Consent Form

Study Title: Burnout and compassion fatigue among emergency care nurses.

My name is Niamh Burgess and I am conducting research in the Department of Psychology that explores burnout and compassion fatigue among emergency care nurses. This research is being conducted as part of my studies and will be submitted for examination.

You are invited to take part in this study and participation involves completing and returning the attached anonymous survey. While the questionnaire asks some questions that might cause some minor negative feelings, it has been used widely in research. If any of the questions do raise difficult feelings for you, contact information for support services are included on the final page.

Participation is completely voluntary and so you are not obliged to take part.

Participation is anonymous and confidential. Thus responses cannot be attributed to any one participant. For this reason, it will not be possible to withdraw from participation after the questionnaire has been collected.

The questionnaires will be securely stored and data from the questionnaires will be transferred from the paper record to electronic format and stored on a password protected computer.

It is important that you understand that by completing and submitting the questionnaire that you are consenting to participate in the study.

Should you require any further information about the research, please contact

Niamh Burgess, xxxxxxx@mydbs.ie. My supervisor can be contacted at [xxxxxxx@dbs.ie].

Thank you for taking the time to complete this survey.

## **Appendix B: Professional Quality of Life Scale (ProQOL): Compassion Satisfaction and Compassion Fatigue [Version 5] (Stamm, 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.

### Scoring:

There are three steps to scoring the ProQOL. The first step is to reverse some items. The second step is to sum the items by subscale and the third step is to convert the raw score to a t-score. The first set below shows the scoring actions in detail. Two methods for scoring are presented. The first is to follow Steps 1-2 and then use the table at the end of this section to convert raw scores to t-scores. The second method uses computer. The computer code presented below is written for SPSS that can be converted by the user to other statistical programs if needed.

Step 1: Reverse items 1, 4, 15, 17, and 29 into 1r, 4r, 15r, 17r and 29r (1=5) (2=4) (3=3)  
(4=2) (5=1)

Step 2: Sum the items for each subscale.

CS = SUM(pq3,pq6,pq12,pq16,pq18,p20,pq22,pq24,pq27,pq30).

BO = SUM(pq1r,pq4r,pq8,pq10,pq15r,pq17r, pq19, pq21, pq26, pq29r).

STS = SUM(pq2,pq5,pq7,pq9,pq11,pq13,pq14,pq23, pq25,pq28).

Step 3: Convert the Z scores to t-scores with raw score mean = 50 and the raw score standard deviation = 10.

## Appendix C: The Toronto Empathy Questionnaire: (Spreng et al 2009)

**Instructions:** Below is a list of statements. Please read each statement carefully and rate how frequently you feel or act in the manner described. Circle your answer on the response form. There are no right or wrong answers or trick questions. Please answer each question as honestly as you can.

- Never=0 Rarely=1 Sometimes=2 Often=3 Always=4**
- |     |   |   |   |   |   |   |
|-----|---|---|---|---|---|---|
| 1.  | When someone else is feeling excited, I tend to get excited too   | 0 | 1 | 2 | 3 | 4 |
| 2.  | Other people's misfortunes do not disturb me a great deal   | 0 | 1 | 2 | 3 | 4 |
| 3.  | It upsets me to see someone being treated disrespectfully   | 0 | 1 | 2 | 3 | 4 |
| 4.  | I remain unaffected when someone close to me is happy   | 0 | 1 | 2 | 3 | 4 |
| 5.  | I enjoy making other people feel better   | 0 | 1 | 2 | 3 | 4 |
| 6.  | I have tender, concerned feelings for people less fortunate than me   | 0 | 1 | 2 | 3 | 4 |
| 7.  | When a friend starts to talk about his\her problems, I try to steer the conversation towards something else | 0 | 1 | 2 | 3 | 4 |
| 8.  | I can tell when others are sad even when they do not say anything   | 0 | 1 | 2 | 3 | 4 |
| 9.  | I find that I am "in tune" with other people's moods  | 0 | 1 | 2 | 3 | 4 |
| 10. | I do not feel sympathy for people who cause their own serious illnesses                                     | 0 | 1 | 2 | 3 | 4 |
| 11. | I become irritated when someone cries   | 0 | 1 | 2 | 3 | 4 |
| 12. | I am not really interested in how other people feel   | 0 | 1 | 2 | 3 | 4 |
| 13. | I get a strong urge to help when I see someone who is upset   | 0 | 1 | 2 | 3 | 4 |
| 14. | When I see someone being treated unfairly, I do not feel very much pity for them                            | 0 | 1 | 2 | 3 | 4 |
| 15. | I find it silly for people to cry out of happiness  | 0 | 1 | 2 | 3 | 4 |

16. When I see someone being taken advantage of, I feel kind of protective towards  
him\her      0      1      2      3      4

**Scoring:** Item responses are scored according to the following scale for positively worded  
Items 1, 3, 5, 6, 8, 9, 13, 16. Never = 0; Rarely = 1; Sometimes = 2; Often = 3; Always = 4.  
The following negatively worded items are reverse scored: 2, 4, 7, 10, 11, 12, 14, 15. Scores  
are summed to derive total for the Toronto Empathy Questionnaire.

## **Appendix D: Coping Self-Efficacy Scale (Chesney et al. 2006)**

When things aren't going well for you, or when you're having problems, how confident or certain are you that you can do the following:

**0= cannot do at all    5= moderately certain can do    10= certain can do**

For each of the following items, write a number from 0 - 10, using the scale above.

When things aren't going well for you, how confident are you that you can:

1. Keep from getting down in the dumps.
2. Talk positively to yourself.
3. Sort out what can be changed, and what cannot be changed.
4. Get emotional support from friends and family.
5. Find solutions to your most difficult problems.
6. Break an upsetting problem down into smaller parts.
7. Leave options open when things get stressful.
8. Make a plan of action and follow it when confronted with a problem.
9. Develop new hobbies or recreations.
10. Take your mind off unpleasant thoughts.
11. Look for something good in a negative situation.
12. Keep from feeling sad.
13. See things from the other person's point of view during a heated argument.
14. Try other solutions to your problems if your first solutions don't work.
15. Stop yourself from being upset by unpleasant thoughts.
16. Make new friends.
17. Get friends to help you with the things you need.
18. Do something positive for yourself when you are feeling discouraged.
19. Make unpleasant thoughts go away.
20. Think about one part of the problem at a time.
21. Visualize a pleasant activity or place.
22. Keep yourself from feeling lonely.

23. Pray or meditate.
24. Get emotional support from community organizations or resources.
25. Stand your ground and fight for what you want.
26. Resist the impulse to act hastily when under pressure.

**Scoring:** An overall CSES score is created by summing the item ratings ( $\alpha = .95$ ; scale mean = 137.4, SD = 45.6). Our standard scoring rule with summated rating scale scores is that respondents must answer at least 80% of the scale items. For respondents missing an item or items, we estimate an individual's score for the missing item(s) by adding in their mean for the items that they answered for each item that they skipped, resulting in a "corrected sum".

**Appendix E:** Link to online survey used in study

<https://docs.google.com/forms/d/1qwgAqd4PqacKkN3XdBp79yVRQttupOco9jAvc0IXUM4/edit>