# COMPASSION FATIGUE AND BURNOUT IN NURSING

## A SYSTEMATIC LITERATURE REVIEW

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# Abstract

Nursing professionalism is based on competency of care in therapeutic relationships. Constantly changing caring environments demand nurses adapt to new technology, work with health care systems and develop and maintain professional relationships. A fundamental element of nursing professionalism requires a compassionate attitude towards the caring role. Despite these important points, some nurses may experience compassion fatigue due to indirect traumatic events for a short time or burnout which is caused by chronic stress over an extended period. Both stressful experiences can cause emotional exhaustion which often leads directly to compassion fatigue and further, may develop into chronic burnout. These conditions can threaten nurses' wellbeing and professionalism as well as patients' safety due to substandard care, depersonalisation and staff retention rates. Despite the potential impact of compassion fatigue and burnout, lack of awareness and confusing definitions mean that the significance is quite often overlooked which may negatively influence nurses' ability to deliver quality care.

Through this systematic review, concise definitions of these two concepts will be investigated according to different theories. The prevalence of the two conditions will be examined by comparison and contrast between international and the New Zealand literature in order to understand the concepts of compassion fatigue and burnout as well as to explore the effective interventions for New Zealand nurses.

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# Chapter 1

## Introduction

In the ever-changing health care environment, nurses may be exposed to repeated emotional and physical stress. Nurses who care for psychological and physical traumatised patients may encounter their own traumatised emotions (secondary traumatic stress). Ironically, many compassionate nurses tend to be exposed to secondary traumatic stress more than nurses who are less empathetic (Mealer, Shelton, Berg, Rothbaum, & Moss, 2007). Research suggests compassion is an integral component of a therapeutic nursing approach. Compassion initiates and maintains therapeutic relationships based on sympathetic concern with patients who suffer in unfortunate circumstances (Davies, 2009; Roberts, Fenton, & Barnard, 2015; Young, Derr, Cicchillo, & Bressler, 2011). This, however, may contribute to increased risk of emotional stress and job dissatisfaction as well as poor quality of care. The consequences can occur due to mirror neurons which allow nurses to experience patients' emotional distress indirectly. These mirror neurons contribute to people's ability to share human empathy and to respond to the emotional and physical pains of others (Hinderer et al., 2014). Repeated exposure to this type of situation can lead to nurses' disengagement from compassionate emotions and this can develop into compassion fatigue. For the purpose of clarity, the term compassion fatigue refers to negative emotional indirect experiences associated with the caring process in particular nursing those who have suffered from pain, and distress in exceptionally traumatic events (Davies, 2009; Figley, 1995; Hinderer et al., 2014). By extension, the definitions of secondary traumatic stress and vicarious traumatisation are similar to compassion fatigue,

so that these terminologies will be used interchangeably in this review (Chung, 2015). Burnout refers to chronic emotional fatigue and psychological distress which can contribute to the deterioration of professional relationships among, patients, their family, nursing colleagues, other health professionals and other working relationships (Ahmadi, Azizkhani, & Basravi, 2014; Young et al., 2011). Suffering from compassion fatigue can spill over into the development of burnout as a long-term impact (Dominguez-Gomez & Rutledge, 2009; Sabo, 2011). Ultimately, nurses may experience psychological, physical, and emotional exhaustion leading to a decrease in nursing professionalism, an increase in depersonalisation and absence of individual achievement (Figley, 1995; Mealer et al., 2007).

Nurses may suffer serious symptoms of compassion fatigue and burnout in various clinical settings but the absence of clear definitions may discourage nurses from understanding their own emotional stress. Despite the potential for nurses in different clinical settings, suffering from distressing working conditions, the risk of compassion fatigue and burnout has not been thoroughly researched, yet. A succinct definition of compassion fatigue and burnout is required so that health professionals understand possible symptoms and learn to recognise secondary emotional trauma as a legitimate diagnosis. In the case of oncology, nurses may develop compassion fatigue through constantly being exposed to patients' suffering and witnessing the unpredictable developments of hostile cancer and the last stages of aggressive cancer treatment (Gillespie, 2013; Potter et al., 2010). Burnout occurs due to accumulated stress from patients, their family, colleagues or health systems. Burnout is a result of long-term unresolved continuous stress at workplace which causes low staff retention rates (Daniels, 2004). The concept of compassion fatigue

is closely linked to burnout which leads to ambiguous definitions. Compassion fatigue addresses the close therapeutic interaction with traumatised patients in a certain caring condition whereas burnout is acquired from the environment or systemic clinical stressors (Figley, 1995, 2002; Potter et al., 2010). The clear and concise definitions of these terms may help to identify nurses' changing emotional status and to find appropriate interventions. Appropriate interventions can be derived from comprehension of compassion fatigue and burnout, which share comparable emotional symptoms and can appear in sequence. Nurses may experience compassion fatigue in a distressing scenario within a short timeframe, while burnout affects nurses in clinical settings after an extended period. The short-term exposure of compassion fatigue may develop into the long-term condition of burnout (Dominguez-Gomez & Rutledge, 2009; Figley, 1995; Hinderer et al., 2014). With regards to these two conditions, researchers have studied effective interventions for nurses; mindfulness, self-empowerment and education programs (Flarity, Gentry, & Mesnikoff, 2013; Gauthier, Meyer, Grefe, & Gold, 2015; Günüşen & Üstün, 2009, 2010). Even though these interventions are not new concepts, their effectiveness has been studied widely due to the benefits for nurses, and maintenance of nursing professionalism as well as improving stigmatisation regarding, and misconceptions about, compassion fatigue and burnout.

Regardless of the two concepts being clearly defined in international literature, these two terms have been used confusingly in New Zealand due to lack of thorough research. It is necessary to define compassion fatigue and burnout clearly, on a national basis, so that the prevalence of the two conditions can be examined. Additionally, researching appropriate

interventions to address compassion fatigue and burnout will be discussed. The subject of emotionally exhausted staff was recently reported in The Press: “Stressed staff a safety risk” (Stewart, 2015). This may have alerted the New Zealand government and District Health Board (DHB) to the issues of cumulative fatigue due to growing workload and inadequate staffing levels. New Zealand nurses have recently raised the issue of fatigue, and the psychological damage it can have on nurses, causing poor quality of care. Potential risks about patient care have not yet been acknowledged by the Government and DHB (Stewart, 2015). This systematic literature review may contribute to raise awareness of the seriousness of compassion fatigue and burnout and provide a foundation of understanding for the two terms in conjunction with searching for efficient interventions for New Zealand nurses.

**Purpose of research**

This dissertation aims to examine the definitions and prevalence of compassion fatigue and burnout through comparing and contrasting the international and national reviews of literature. Coping strategies will also be examined in terms of national and international interventions. In reference to this exploration, implications for the New Zealand context and limits of this systematic literature review will be discussed.

# Chapter 2

## Method

A systematic review strategy was adopted from Bettany-Saltikov (2012) and each step of the systematic literature search and verification were recorded with the intention to pinpoint research and articles related to compassion fatigue and burnout: theories, definitions, exposure, impacts and interventions. Plus, inclusion criteria were used to maintain rigour and transparent decision making processes (Adriaenssens, De Gucht, & Maes, 2015; Bettany-Saltikov, 2012; Epp, 2012). The selection criteria directed the search and selection of appropriate articles to meet the word limitation of the dissertation. The author created the inclusion criteria and discussed with a supervisor, the reasoning behind the literature selection and its implications. Exclusion criteria were not created due to limited literature about compassion fatigue and burnout internationally and nationally.

The search started with a general examination of the nursing literature and extended to meet inclusion criteria. CINAHL and PsycINFO were used. Key words were used for the primary search; professional burnout, compassion, stress or fatigue, post-traumatic stress disorder, vicarious trauma, nurs*, crisis intervention, program or evaluat* and stress management (Appendix 1), natural disasters, earthquake*, tsunami*, hurricane*, cyclone*, flood*or bush fire*, nurs* (Appendix 2). Following the search, all identified keywords were utilised across other databases; ProQuest, PubMed, Scopus and Google Scholar. English literature only was used for this review. Within the results, a period between 2000 and 2015 was set to select compassion fatigue or secondary traumatic stress and burnout

literature. This period can provide recently updated literature to examine the main stream of research.

An adjustment was made to compassion fatigue criteria following a discussion with the supervisor, due to the limited literature in New Zealand. The search terms were modified from nurs* to emergency, ICU, general, medical, surgical and palliative nursing care. Even though the search terms were altered, compassion fatigue literature was limited. The search was expanded from published literature to include dissertations and the result was positive. The three websites utilised to search full theses were; NZresearch.Org.nz, University of Canterbury and Victoria University of Wellington.

465 articles and 22 New Zealand dissertations were found and each abstract or summary of literature was read and checked by each inclusion criteria; author, title, subject, argument/purpose, methodology, sample size, country and evaluation. Individual articles and theses were assessed by each selective criterion (Appendix 3). After the literature and dissertations met all the inclusion standards, the data extraction and appraising processes began. The purpose of using the appraising frameworks was to select rigorous data and the process of selecting literature was transparent (Caldwell, Henshaw, & Taylor, 2011; Bettany-Saltikov, 2012). This search identified sixty one items of literature; forty seven—international, fourteen New Zealand literature articles, one international quantitative dissertation, two quantitative and two qualitative theses from New Zealand were included. Two theories which contributed to define compassion fatigue and burnout (Figley, 1995, 2002; Maslach & Jackson, 1981; Maslach, Schaufeli, & Leiter, 2001) and

another two theories which were used as frameworks for examining effectiveness of interventions (Folkman, 1984; Spreitzer, 1995) were included in this review.

The literature search process, selection, appraising and data extraction were concluded and the data was arranged into categories as themes. The topics were applied to create the structure of the systematic review. Search results and construction of themes will be explained in the result section.

# Chapter 3

## Results

Four search results were divided into eight categories and authors and locations were presented below (Table 1 & Table 2).

Table 1

*Categories of Authors and Locations of New Zealand and International Literature*

| **Theme** | **(NEW ZEALAND=NZ/ INTERNATIONAL=I)** | **NUMBER OF STUDIES IN TOTAL** |
|---|---|---|
| COMPASSION FATIGUE | NZ=6 I=10 | 16 |
| NATURAL DISASTER R/T COMPASSION FATIGUE | NZ=5 I=14 | 19 |
| BURNOUT | NZ=3 I=12 | 15 |
| INTERVENTION | NZ=0 I=11 | 11 |

Results from the literature review suggest that the USA has undertaken the greatest amount of research on compassion fatigue, burnout and intervention followed by Turkey, Taiwan, Canada and Iran. The majority of international research was quantitative while the majority of New Zealand research was based on qualitative/descriptive studies or literature reviews (Appendix 4). International researchers used mainly quantitative methods or mixed methods, in contrast New Zealand research was dominated by qualitative methods.

Table 2

*Authors and Locations of New Zealand and International Literature*

| Theme | LOCATIONS | AUTHORS |
|---|---|---|
| **COMPASSION FATIGUE** | NZ | Butt, 2010, Davies, 2009, Gillespie, 2013, Hughes, Grigg, Fritsch, & Calder, 2007, Itzhaki et al., 2015, Puckey, 2001 |
| COMPASSION FATIGUE | Canada | Sabo, 2011 |
| COMPASSION FATIGUE | Czech | Janda & Jandová, 2015 |
| COMPASSION FATIGUE | USA | Boyle, 2011, Kim, 2013, Lombardo & Eyre, 2011, Mealer et al., 2007, Petleski, 2013, Potter et al., 2010, Sacco, Ciurzynski, Harvey, & Lngersoll, 2015, Young et al., 2011 |
| **NATURAL DISASTER R/T COMPASSION FATIGUE** | NZ | Al-Shaqsi, Gauld, McBride, Al-Kashmiri, & Al-Harthy, 2015, Chang et al., 2007, Dolan, Esson, Grainger, Richardson, & Ardagh, 2011, Lyneham & Byrne, 2011, Richardson, Ardagh, Grainger, & Robinson, 2013 |
| NATURAL DISASTER R/T COMPASSION FATIGUE | Australia | Hammad, Arbon, Gebbie, & Hutton, 2012 |
| NATURAL DISASTER R/T COMPASSION FATIGUE | Canada | Ledoux, 2015 |
| NATURAL DISASTER R/T COMPASSION FATIGUE | China | Yang, Xiao, Cheng, Zhu, & Arbon, 2010, Zhen et al., 2010 |
| NATURAL DISASTER R/T COMPASSION FATIGUE | Japan | Ben-Ezra, Palgi, Hamama-Raz, Soffer, & Shrira, 2013 |
| NATURAL DISASTER R/T COMPASSION FATIGUE | Taiwan | Guo et al., 2004, Shih, Liao, Chan, & Gau, 2002 |
| NATURAL DISASTER R/T COMPASSION FATIGUE | Turkey | Armagan, Engindeniz, Devay, Erdur, & Ozcakir, 2006 |
| NATURAL DISASTER R/T COMPASSION FATIGUE | USA | Battles, 2007, Dominguez-Gomez & Rutledge, 2009, Figley, 1995, 2002, Palm, Polusny, &Follette, 2004, Park, 2011 |
| **BURNOUT** | NZ | Daniels, 2004, Hall, 2001, Hall, 2005 |
| BURNOUT | Canada | Epp, 2012 |
| BURNOUT | Iran | Ahmadi et al., 2014, Shoorideh, Ashktorab, Yaghmaei, & Majd, 2014 |
| BURNOUT | Netherland | Adriaenssens et al., 2015 |
| BURNOUT | Portugal | Teixeira, Ribeiro, Fonseca, & Carvalho, 2014 |
| BURNOUT | Turkey | Özden Karagözoğlu, & Yıldırım, 2013 |
| BURNOUT | USA | Hinderer et al., 2014, Hooper, Craig, Janvrin, Wetsel, & Reimels, 2010, Hunsaker, Chen, Maughan, & Heaston, 2015, Maslach & Jackson, 1981, Maslach et al., 2001, Murray, 2010, |
| **INTERVENTION** | Canada | Moll, Frolic, & Key, 2015 |
| INTERVENTION | Japan | Ishihara, Ishibashi, Takahashi, & Nakashima, 2014 |
| INTERVENTION | Sweden | Hochwälder, 2007 |
| INTERVENTION | Turkey | Günüşen & Üstün, 2009, 2010 |
| INTERVENTION | USA | Dereen Houck, 2014, Flarity et al., 2013, Folkman, 1984, Gauthier et al., 2015, Mealer et al, 2014, Spreitzer, 1995 |

In international quantitative research two main tools were used to measure compassion fatigue and burnout; Professional Quality of Life / Post or Secondary Traumatic Stress for compassion fatigue and Maslach Burnout Interventory (MBI) for burnout. There were also studies that used the Connor Davidson Resilience Scale, different hospital anxiety and depression measurement and other tools (Appendix 4).

The literature was divided into four main themes. The first theme related to definitions, theories and the prevalence of compassion fatigue and burnout and to examine relationships between the two concepts. The second theme focused on exposure to compassion fatigue and burnout in order to increase awareness. The third theme considered the impact of symptoms and possible determinants (causes). Finally, the reminder of studies suggested or sought suitable interventions for nurses.

The next chapter will explore the four themes: definitions and theories, exposure, impacts and interventions. It will also discuss the precise definitions of compassion fatigue and burnout, which have originated from theoretical concepts. The interrelationships among the definitions, exposure, impacts and interventions were investigated internationally and nationally. In order to promote understanding of the incidence of the two conditions and to find potential interventions, the comparisons and contrasts between international and national literature will be considered.

# Chapter 4

## Themes in literature

This chapter will present the four themes which have been identified following the systematic review. Each theme will be explained in detail, and the research limitations and implications will be examined.

### 1. Definitions and theories

On reviewing the literature it became evident that researchers use both definitions and theories to explain the concepts of compassion fatigue and burnout. Conceptual ideas were explained by the two main theories; compassion fatigue by Figley (1995, 2001), and the measurement of burnout by Maslach (1981, 2001). Even though the theories were outside of the searching time frame between 2000 and 2015, the theories are considered seminal work and have been utilised by the majority of literature in this review. The reasons for using the theories in literature can help to describe compassion fatigue and burnout appropriately and to reduce confusion in diagnosing symptoms. The pragmatic adaptation of these two theories will be explored to define the two terms, compassion fatigue and burnout.

***Compassion fatigue.*** Anecdotally, nurses may have recognised their own symptoms of indirect traumatic emotions while caring for patients in stressful circumstances. The concept of compassion fatigue in nursing, along with its negative psychosocial implications and physical responses; anger, helplessness, frustration, despair, detachment from patients, avoidance of remembering traumatic events, chest pain/pressure,

headaches and gastrointestinal pain was first officially noted by nurses in practice (Joinson, 1992). Since then, Figley defined compassion fatigue as indirect (acute) traumatisation of individuals who help traumatised people in stressful environments (Figley, 1995, 2001). The emotional cost associated with care delivery in a stressful environment may lead to nurses' indirectly experiencing patients' pain, fear and agony. Through secondary traumatic emotional experiences, nurses may feel vulnerable and defenceless causing loss of self-awareness as well as nursing professionalism (Boyle, 2011; Sabo, 2011). Professional insecurity can result in loss of compassion and distance in the therapeutic client/nurse relationship. It is clear that the short-term and intense emotional distress in nursing therapeutic relationships within traumatic caring environments is the core element when defining compassion fatigue. Additionally, the traumatic symptoms may present within a short time and the depth of nurses' empathy may affect these symptomatic manifestations (Figley 1995, 2002). Consequently, it is important that theoretical concepts surrounding compassion fatigue are used to understand nurses' symptomatic experiences due to the potential devastating consequences in terms of patient care. A clear and universal definition of compassion fatigue would help to improve comprehension and recognition amongst health professionals.

***Burnout.*** A definition of burnout is chronic emotional exhaustion due to interpersonal stressors in professional relationships at the organisational level (Maslach et al., 2001). Burnout is a condition in which nurses may experience emotional exhaustion at an organisational level, as a result of strained professional relationships among colleagues, managers and multidisciplinary team members over extended period. The prominence of burnout has been discussed since the 1970s in the United States where studies focused on

people who worked in human services. Since the importance of burnout was recognised, systematic research has begun in all health sectors (Maslach et al., 2001). The academic studies of burnout have been shaped by a psychological syndrome which is rooted in the chronic interpersonal stressors of jobs. Even though the origin of studying burnout is clear, it has been challenging to define the term of burnout precisely due to numerous academic definitions of burnout presented by researchers. Inconsistent definitions and lack of understanding burnout led to thorough research and the multidimensional Maslach Burnout Inventory (MBI) was developed (Maslach et al., 2001). The fundamental element of identifying burnout is based on its most apparent manifestation, emotional exhaustion. Frequently, it is described by health professionals and it may rely on personal perceptions and reflect the cause of stress within the organisation (Maslach et al., 2001). To understand burnout at the organisational level accurately, personal and organisational perspectives related to emotional exhaustion should be consolidated in terms of caring circumstances. The caring environment has become complicated and demanding, and nurses are required to provide continuous compassionate care. It can lead to nurses' depersonalisation and cynicism within their professional relationships due to overwhelming emotional requirements to meet care needs for patients. Health workers may attempt to maintain distance from emotionally demanding people and disengage compassionate care. A recognised self-defence technique is treating people as though they are impersonal objects, furthermore cynicism may also occur secondary to emotionally and physically demanding work environments (Maslach & Jackson, 1981; Maslach et al., 2001). Continuous emotional demands and stressful professional relationships at work may trigger adverse psychological responses. These stressful situations can yield constant enduring emotional

suffering for health professionals, over an extended period. The theories identified the pathways leading to accumulative and devastating emotional exhaustion. This description can guide health professionals to comprehend burnout. This understanding is necessary to define burnout, which can cause problems in the health system over a prolonged period.

***Comparison and contrast between compassion fatigue and burnout.*** Compassion fatigue and burnout share similar symptoms, namely emotional exhaustion and depersonalisation, probably due to the fact that compassion fatigue potentially leads to burnout (Figley, 1995, 2002).

There are also significant differences which may help to distinguish these terms properly. Compassion fatigue/Secondary Traumatic Stress (STS) may occur when delivering professional care and building up therapeutic relationships in traumatic environments. It focuses on traumatic nursing professional relationships with patients over a short time period. During that time, health professionals may experience indirect traumas repeatedly, and as a result, emotional depletion can be observed. However, burnout is based on heavy work-load and stressful professional relationships with patients, families, colleagues and managers within health systems over a long term. Health professionals can experience compassion fatigue/STS and burnout at different times, in diverse working environments and in varied emotional involvements, even though they share similar symptoms.

***Limitations and implications.*** These theories were introduced around thirty years ago and caring environments may now be more complex due to things such as development of technology and increasing severity of disasters. Despite this, the

fundamental concepts of these theories have been used as a guideline for researchers who searched for solutions to define compassion fatigue and burnout concisely.

Thus, it is essential to use these theories to define the two terms in order to recognise and diagnose symptoms of both conditions properly and to seek appropriate interventions promptly.

In the next section, compassion fatigue and burnout theories will be integrated in order to understand exposure. In further investigation, the exposure to compassion fatigue and burnout will be compared and contrasted at the national and international levels.

## 2. Exposure

The professional nursing role can be stressful and challenging when nurses are exposed to distressing situations or environments while delivering care. In all circumstances, nurses have responsibilities to care for physically or psychologically unwell patients and this exposure can lead to compassion fatigue and burnout (Ledoux, 2015; Lombardo & Eyre, 2011). Widespread exposure causing compassion fatigue and burnout can clash with nursing obligations and duty of care. This can place nurses in emotionally distressing positions and increase the risk of emotional depletion. The issue of what constitutes exposure and how this relates to emotional exhaustion, compassion fatigue and burnout in nursing will be discussed from the perspective of national and international literature.

Following a natural disaster, nurses in particular may be exposed to diverse, high risk and potentially life threatening situations. Extreme working environments can subject nurses to unexpected emotionally demanding situations. In the Canterbury earthquakes, people were severely injured, and the toll of casualties and damages were extensive. During and after

the earthquakes, the largest health professional group, nurses, were expected to manage unpredictable and distressing circumstances to deliver care for the public. Caring for patients in demanding working environments like this is likely to cause nurses to be exposed to various emotional challenging situations (Al-Shaqsi et al., 2015; Dolan et al., 2011; Lyneham & Byrne, 2011; Richardson et al., 2013; Shih et al., 2002). These emotionally draining situations are likely to expose nurses to compassion fatigue according to national and international literature (Armagan et al., 2006; Battles, 2007; Ben-Ezra et al., 2013; Gillespie, 2013; Guo et al., 2004; Hughes et al., 2007; Palm et al., 2004; Park, 2011; Potter et al., 2010; Shih et al., 2002; Yang et al., 2010; Zhen et al., 2012).

Findings (Table 3) from both international and national literature suggest that common situations that may lead to compassion fatigue were changes in caring routines, re-exposing indirect trauma, safety and limited access to caring resources. Conversely, international literature highlighted ethical dilemmas, weakness of health infrastructures, nurses' adverse feelings of powerlessness and helplessness. New Zealand researchers cited limited access to necessary resources for caring, high toll of injury patient burden ratios, continuous aftershocks, unpredictable caring routine daily and lack of preparedness for natural disasters as the varied and challenging potential risks for compassion fatigue.

Table 3

*Situational Exposure to Compassion Fatigue Following a Natural Disaster – Similarities and Differences Between International and New Zealand Literature*

| **Factors leading to compassion fatigue following a natural disaster (New Zealand literature)** | **Factors leading to compassion fatigue following a disaster (International literature)** |
|---|---|
| • Disconnected from multidisciplinary teams and outside of the hospitals | |
| | • Increasing frustration with multidisciplinary team members |
| • Limited caring resources, and limited job control related to causalities and death | • Low availabilities of resources |
| • Nurse and severe patient injury burden ratios | |
| • Nurses and their family's safety | |
| | • Actual or threatened injuries |
| | • Being isolated |
| | • Dead or missing family members |
| | • Loss of both personal or professional relationships |
| • Repetitive aftershocks | • Re-experiencing the traumatic events |
| • Unexpected daily caring routines | |
| | • Repeatedly, witness the devastating aftermath and catastrophic events— including deaths, severe injuries, people crying for help |
| • Insufficient natural disaster preparedness | |
| | • Dilemma between professional duties and boundaries |
| | • Emotional residue of working with suffering or traumatised patients |
| | • Helplessness |
| | • Horror |
| | • Intense pressure to make rapid decisions directly related to saving lives |
| | • Powerlessness |
| | • Victims' dying before arriving at the hospitals |
| | • Vulnerability/exploitation due to media |
| | • Weak health care infrastructures |

Table 4

*Situational Exposure to Compassion Fatigue—Similarities and Differences Between International and New Zealand*

| Factors leading to compassion fatigue (New Zealand) | Factors leading to compassion fatigue (International) |
|---|---|
| • Constantly suffering patients | • Constant human suffering |
| • Complex treatments for patients | |
| • Challenging to separate professional and personal boundaries with patients | • Ethical dilemma |
| • Ineffectually controlling disease/illness progression | |
| • Patients' sudden death | • Increasing mortality and morbidity |
| | • Unbalanced working environment |
| | • Lower compassion satisfaction due to indirect traumatic stress |
| | • Overwhelming emotional supports for patients |
| | • Hopelessness of nurses' personal emotions |
| | • Possibilities of cardiopulmonary resuscitation |
| | • Care for continuous open surgical wounds |
| | • Massive and uncontrollable/unexpected bleeding |
| | • Physically or psychologically serious injuries |
| | • Incapable of save certain patients |

Exposure to natural disaster is not the only situational factor contributing to compassion fatigue. The parallel factors (Table 4) between New Zealand and international literature include patients' suffering, growing deaths and perplexing ethical dilemmas nationally and internationally. However, international research also covered a wide range of threats such as potential cardiopulmonary resuscitation, care for open surgical wounds and massive or uncontrollable/unexpected bleeding. New Zealand studies explained the risks and frustration of nurses due to ineffectively controlled illness/diseases, ineffective control over progresses in illness and complex treatments for patients (Butt, 2010; Dominguez-Gomez & Rutledge, 2009; Gillespie, 2013; Hooper et al., 2010; Janda & Jandová, 2015; Itzhaki et al., 2015; Kim, 2013; Mealer et al., 2007; Palm et al., 2004; Petleski, 2013; Potter et al., 2010; Puckey, 2001; Sacco et al., 2015).

These distressing and unpredictable events can occur in any area of a health care system, and as a result nurses can be repeatedly exposed to emotionally laborious circumstances. The nature of nursing care can lead to a significant percentage of burnout due to on-going emotionally demanding caring and consistently changing health care environments. The enduring job-related stresses have been researched as a single subject or a combined stress-reduced workplace issue in order to define the term of burnout (Hall, 2005; Hall, 2001; Hughes et al., 2007). Work-related stressful exposures are closely related to emotional exhaustion, and this is the main constituent of burnout.

Complexity of patient care and associated decision-making, limited staff support and dysfunctional health care systems may increase levels of exhaustion within the nursing workforce. Ineffective or challenging relationships within the organisational systems can cause individual nurses to suffer chronic emotional overload as a result of job stress. In addition, the challenge of maintaining nursing professionalism and maintaining patients' quality of life in an end of life situation can lead to severe emotional exhaustion. Subsequently, nurses may experience increased emotional stress and physical depletion if they are repeatedly exposed to such factors. Also, prioritising other's needs above their own requirements used to give emotional rewards for nurses, but as time passes, accumulated job-related stress exposure may exhaust nurses to care for patients compassionately.

Table 5

*Situational Exposure Leading to Burnout—Similarities and Differences Between International and New Zealand Literature*

| Factors leading to burnout (New Zealand) | Factors leading to burnout (International) |
|---|---|
| • Concerning patient's treatment | |
| | • Consistent human suffering |
| • Concerns about technical knowledge and skills | |
| • Struggling with other nurses/supervisors/medical staff | |
| • Continuous severe illness | |
| | • Critically ill patients on life support |
| • Denial of care by health professionals | |
| • Workloads | • Workloads |
| • Hopelessness | |
| • Insufficient opportunities to participate in decision making processes | |
| • Fixed work schedules | |
| • Irregular working hours and antisocial hours of work | |
| • Limited opportunity in career development and pay | |
| • Limited staff support | |
| • Limited control over happenings in workplaces | |
| • Management difficulties | • Ineffectual management |
| • Demanding patients/family | |
| • Unreasonable patients' behaviour | • Patients and their families' complaints and abusive behaviour |
| • Unrealistic responsibility levels | • Overstretched responsibilities due to inadequate nurse to patients ratios |
| • Shift work | |
| • Staffing level | |
| • Time pressure | |
| • Uncertainty | |
| | • Ineffective leadership |
| | • Ethical decisions |
| | • Fairness |
| | • Professional expectations |
| | • Preparedness for the end of life |
| | • Overcrowding |

The recurrent exposure to sorrow, pain, death, frustration and ethical decisions at work may contribute to the prevalence of burnout (Table 5). According to research, nurses working in New Zealand are more likely to encounter burnout secondary to an imbalance

between personal and professional life, shift work, uncertainty, far from ideal socialising time and time pressure (Adriaenssens et al., 2015; Ahmadi et al., 2014; Daniels, 2004; Dominguez-Gomez & Rutledge, 2009; Epp, 2012; Hinderer et al., 2014; Hunsaker et al., 2015; Murray, 2010; Özden et al., 2013; Sacco et al., 2015; Shoorideh et al., 2014; Teixeira et al., 2014). Organisational work pressure and various stressful relationships are the main sources of increased nursing burnout. Experiences in burnout can accumulate which exhausts and emotionally drains nurses exposed to continuous job-related stresses. These painful and accumulated emotional burdens may cause a vicious cycle which damages nursing professionalism and compromises patient care quality over an extended period.

Professionally, various factors leading to compassion fatigue and burnout are profound concerns for nurses around the world. Despite compassion fatigue and burnout being the result of emotionally demanding situations, research has demonstrated differences between them. Compassion fatigue is likely to be influenced by intensely emotional involvement in therapeutic relationships with patients in distressing caring environments. Meanwhile, burnout does occur due to organisational dysfunction and poor professional relationships over a longer term. Analysis of the factors leading to compassion fatigue and burnout may increase understanding surrounding the two concepts and aid recognition and management of the symptoms.

***Limitations and implications***. Limitations of this literature review were that the majority of literature related to natural disasters, and human driven disasters, such as wars, were not included. In addition, nurses' ages and experiences can affect exposure to

compassion fatigue and burnout. These two factors may interfere with recognising these two conditions (Hinderer et al., 2014; Hunsaker et al., 2015).

While, the majority of studies were limited to one place such as one department or one hospital, there was one cooperative study with five different countries, however the response rates from participants were low (Itzhaki et al., 2015).

Even though there are some limitations, the factors leading to compassion fatigue and burnout can assist health professionals to recognise them early, in order to protect nurses from the two conditions. Further research can be conducted to find the precise factors leading to compassion fatigue in order to raise awareness in nurses.

### 3. Impact

Emotional stress in the workplace has long been recognised as a serious concern for nurses psychologically and physically (Chang et al., 2007). Especially compassion fatigue and burnout can have serious implications for health care systems due to growing issues in nursing shortages universally (Chang et al., 2007). The emotional and physical impact of compassion fatigue and burnout requires further investigation so as to improve recognition and aid the development of effective interventions in the health care setting. In this section, the impact of compassion fatigue and burnout will be examined based on the integration of the theories and the effects on nurses.

Compassion fatigue can be a condition that develops from emotional burdens on nurses and may lead to health risks. Critical health care situations may affect nurses substantially. The impacts (Table 6) by the challenging care environments can vary and may include: job-related, emotional and physical aspects (Armagan et al., 2006; Boyle,

2011; Chang et al., 2007; Dominguez-Gomez & Rutledge, 2009; Lombardo & Eyre, 2011; Lyneham & Byrne, 2011; Park, 2011; Yang et al., 2010; Zhen et al., 2012).

Table 6

*Symptomatic Impact of Compassion Fatigue Following a Natural Disaster Similarities and Differences Between International and New Zealand Literature*

| | New Zealand | International |
|---|---|---|
| **Job-related** | | • Avoidance of patients |
| | | • Detachment |
| | | • Hopelessness |
| | | • Hypersensitive |
| | | • Increased vigilance |
| | | • Increasing sick leave |
| | | • Loss of energy |
| | | • Overloaded empathy |
| | | • Poor concentration or professional judgement |
| | | • Reduced joyfulness/enjoyment |
| | | • Strained empathy |
| **Emotional** | • The fear of unexpected earthquakes | |
| | • Negative impacts on mental health | • Anxiety/ depressed mood |
| | | • Easily startled |
| | | • Exaggerated sudden response |
| | | • Existential suffering |
| | | • Feelings of inadequacy |
| | | • Frustration |
| | | • Guilty |
| | | • Increased arousal |
| | | • Irritability |
| | | • Sadness |
| | | • Suicidal ideas |
| | | • Violence |
| **Physical** | | • Cardiac symptoms such as chest pain and tachycardia |
| | | • Increasing severe headaches |
| | | • Decreased daily activity level |
| | | • Digestive issues such as upset stomach and constipation |
| | | • Increases in substances abuse |
| | | • Increases in severe headaches |
| | | • Insomnia |
| | | • Loss of energy |
| | | • Physiological reactions to trauma reminders |

Table 7

*Similar and Dissimilar Impacts of Compassion Fatigue in Medical and Surgical Setting Nationally and Internationally*

| | New Zealand | Other countries |
|---|---|---|
| **Job-related** | | • Inability to nurture |
| | • Helpless | |
| | • Isolation from patients and other staff | |
| | • Premature job changes | |
| | • Withdraw from professional relationships | |
| | | • Lack of enjoyment/joy in professional life |
| **Emotional** | • A sense of loss | • Emotional depletion |
| | • Confused | |
| | • Depressed | • Depressed |
| | • Despair | |
| | • Doubts about own identify, role and self-worth | |
| | • Hopeless | |
| | • Overwhelmed | |
| | • Sudden anger | • Feeling hopeless |
| | | • Spiritual depletion |
| **Physical** | • Loss own value on body | • Physical exhaustion |

Due to the limited New Zealand literature related to compassion fatigue in natural disasters, only two aspects of symptomatic impact were identified (Table 6). They were associated with emotions and demonstrate the significant impact upon nurses' mental health and anxiety levels during and after the Canterbury earthquakes. Alternatively, international literature has covered the impacts on health professionals by compassion fatigue extensively. The wide range of effects indicates the importance of awareness.

In other caring medical and surgical settings compassion fatigue/STS can affect nurses and the results can be devastating (Table 7). The overwhelming impacts can extend to nurses' personal lives, and they may struggle to separate their own life from those of traumatised patients (Dominguez-Gomez & Rutledge, 2009; Kim, 2013; Mealer et al.,

2007; Palm et al., 2004; Puckey, 2001; Sacco et al., 2015). Emotional and physical exhaustion as well as depressed feelings were common features when nurses experienced burnout worldwide, while some different views of the symptoms were acknowledged. Two New Zealand dissertations have covered the effects of compassion fatigue/vicarious traumatisation comprehensively on mental health nurses. In particular the research emphasised the involuntary nature of defence mechanisms, suggesting that for majority of cases nurses were unaware that their professional behaviour had altered (Davies, 2009; Puckey 2001). Even though the international literature covered similar points as the New Zealand dissertations, one factor stood out; spiritual depletion. The importance of spirituality in international literature emphasises the potential positive impacts to reduce compassion fatigue of nurses (Boyle, 2011; Lombardo & Eyre, 2011). The extensive multi-relationships among nurses, patients and even health care systems can cause complicated cascade effects.

In the case of burnout, effects on nurses are related mostly to an organisational level and it may cause direct impact on patients' care satisfaction (Table 7). Patients' satisfaction in the hospital has become one of the important standards due to emphasis on patient centred care (Hunsaker et al., 2015). Directly, burnout can bring a negative impact on the quality of care that is highly relevant to nursing practice, furthermore burnout in the nursing workforce may have financial and social implications in current hospital care systems (Ahmadi et al., 2014; Daniels, 2004; Hall, 2001; Hinderer et al., 2014; Hunsaker et al., 2015; Lyneham & Byrne, 2011; Özden et al., 2013).

Table 8

*Symptomatic Impact of Burnout—Similarities and Differences between International and New Zealand Literature*

| | New Zealand | International |
|---|---|---|
| **Job-related** | | • Avoidance of clients |
| | | • Ability to remember clients' information |
| | • Depersonalisation | • Depersonalisation |
| | • Decreases in job performance | • Decreases in job performance |
| | • Increases in number of nursing tasks or responsibilities | |
| | | • Unable/incompetent to relieve clients' pain/trauma |
| | • Increases in absenteeism | • Increases in absenteeism |
| | • Increases in job turnover | • Job turnover |
| | • Increases in medical errors | |
| | • Poor patient care | |
| | • Reduced personal accomplishment | |
| | • Take longer breaks | |
| | • Considerably decreases in job enjoyment | • Significantly decreases in job enjoyment |
| | | • Decreases in activity levels |
| **Emotional** | • Being worn-out | |
| | • Emotional exhaustion | • Emotional exhaustion |
| | • Feeling ineffectiveness and frustration | • Feeling ineffectiveness and frustration |
| | • Psychological withdraw | • Psychological withdraw |
| **Physical** | • Increases in illness | • Increases in illness |

Job-related impact of burnout is the main concern associated with health systems. In the organisational level, individual nurses' burnout can be directly related to the quality of care and the retention of staff and it can be directly related to maintenance in patients' satisfaction (Daniels, 2004; Hunsaker et al., 2015). By extension, meeting patients' requirements may be difficult due to predicted nursing shortages in the near future (Hall, 2001). If workforce shortages lead to nursing burnout, the negative impacts test the health organisations' ability to maintain efficient management support for public safety. In New Zealand job related stress is likely to be a leading contributory factor for increased absenteeism and medical errors (Daniel, 2004; Hall, 2001). Job related stress may also

influence the multidisciplinary team performance and their ability to deliver effective patient care. Moreover, individual nurses' accomplishment and satisfaction can be decreased and the overall patient centred care as well as nurses' wellbeing may be compromised. Ultimately, nurses and patients both may be unsatisfied in the health care system. Similarly, international literature has shown the seriousness of forgotten patients' necessary health information, avoidance of patients and increases in turnover, and feeling incompetent (Table 8). As a result of this, it is possible that work activity may decrease and nurses may resign (Daniels, 2004).

Compassion fatigue and burnout share some commonalities to indirect trauma/distress and impacts. Theoretically, compassion fatigue and burnout focus on compassion depletion within stressful situations during caring processes. In these distressing working environments, nurses can be exposed to unexpected life and death caring situations as well as ethically challenging circumstances (Figley, 1995; Teixeira et al., 2014). Nurses may be part of a clinical team who are compelled to make ethical decisions regarding when to stop or start treatment or interventions. Such emotionally-driven care may impact upon nurses negatively. Ultimately, emotionally exhausted nurses may deliver poor quality of care or even stop caring due to increasing stressful nursing professional relationships with patients. This ferocious cycle of compassion fatigue and burnout can substantially impact on ineffectiveness in health care systems; high turnover and nursing shortage in the near future (Hooper et al., 2010; Young et al., 2011).

Despite the similarities in primary causes, there are differences in the secondary traumatic stresses and burnout. These secondary stresses focus on professional therapeutic relationship with patients. Theoretically, nurses' exposure to patients' traumatic

experiences may lead to compassion fatigue due to professional therapeutic relationships with patients (Figley, 1995, 2002). Professional relationships are based on professional empathy and this emotion can be powerful enough to overwhelm nurses. The exposure to and impact of compassion fatigue may damage nurses' eagerness and passion for caring. Eventually, nurses may suffer indirect traumatic symptoms such as eruption of anger within a short time frame. If this serious situation continues, it can lead to chronic burnout (Dominguez-Gomez & Rutledge, 2009; Figley, 1995, 2001). However, nurses can experience burnout due to organisational pressures as a result of different relationships among other nurses, patients and their family and multidisciplinary team members. These complicated relationships require a holistic approach. According to the burnout theory, internal and external relationships may contribute to worsen the symptoms over an extended period (Maslach et al., 2001). Nurses may experience the loss of identify, motivation and nursing professionalism directly and indirectly. Integrating theories, nurses' experiences and analysis of caring relationships among nurses, patients and multidisciplinary team members are important to understand and diagnose compassion fatigue and burnout at the personal and organisational level. Incorporation of the theories can assist nurses to understand the impacts of these two conditions and their symptoms can be recognised rapidly.

***Limitations and implications.*** Response rates of some studies were not high, either due to nurses' tight working schedules or lack of interest in the research (Adriaenssens et al., 2015). Some studies have weaknesses methodologically due to limited availability of resources (Adriaenssens et al., 2015). Within this limited research environment, the nursing literature can be skewed due to voluntary participation. Nurses

who are interested in this topic may participate in research and they may suffer severe emotionally depleted conditions (Dominguez-Gomez & Rutledge, 2009; Hooper et al., 2010; Hunsaker et al., 2015). Some literature may not reflect the general emotional status of nurses who are required to recall traumatising events for the studies. Additionally, non-random voluntary participation and incomplete responses may affect the results (Young et al., 2011). Particularly, the co-related nature of compassion fatigue and burnout can increase causal interactions related to response rates due to individual subjective points of views (Hunsaker et al., 2015; Mealer et al., 2007). Another limit relates to understanding individual nurse's symptoms of emotional depletion. To define standard symptoms for all nurses can be challenging due to their different backgrounds and personal values (Ahmadi, et al., 2014). This highlights that further studies are required to investigate relationships between compassion fatigue/burnout and personal traits.

In the intervention section, widely investigated interventions to relieve the symptoms of compassion fatigue and burnout will be examined. These potential solutions will facilitate the incorporation of theories, exposure and impacts to search appropriate resolutions promptly.

## 4. Intervention

Following the literature review, two theories for interventions were identified: personal control and stress and coping processes by Folkman (1984) and psychological empowerment in the workplace by Spreitzer (1995). Even though they were placed out of the selection criteria between 2000 and 2015, these works are considered seminal pieces.

***Intervention theories.*** Compassion fatigue and burnout can cause devastating results in the health sector and it is important to find effective solutions for health

professionals, from a personal level of care to an organisational care level. In either level, nurses require effective responses to stress in order to maintain professionalism. Nursing professionalism can be maintained through positive adaptation to stress. Productive stress management via mindfulness, self-empowerment, and educational interventions have been discussed in the nursing literature. These interventions were divided into theoretical frameworks based on personal control and stress and coping processes by Folkman (1984) and psychological empowerment in the workplace by Spreitzer (1995). Folkman's theory considers personal and organisational coping mechanisms that are emotional and problem focused respectively. Emotional focus coping based on individual management strategies while problem focus coping is based on organisational coping plans. The theory suggests that emotional and problem focus coping could manage or improve the overall response to stressful situations. Alternatively, Spreitzer's theory considers both; individual and organisational coping mechanisms. It offers more detailed psychological empowerment components: meaning, competence, self-determination and impact. The first component, meaning, is formed by an individual nurse's own standards and ability to assess their own work performance and competence, or self-efficacy. Self-determination relates to initiative which ultimately has a positive impact on work outcomes. These components can prepare nurses to manage risk, seek solutions and cope with highly stressful and uncertain work places. This attitude towards work can empower employees to adapt in continuously changing working environments. Successful interventions for stress management emphasise autonomy, initiation and continuity.

***Interventions.*** Patient-centred care and patient satisfaction reflects nursing professionalism, and its goal to meet and satisfy individuals' health requirements

(Hunsaker et al., 2015). This is an important consideration when attempting to attend to individual patient requirements (Hooper et al., 2010; Moll et al., 2015). Satisfied patients can lead to nursing satisfaction (compassion satisfaction) while reduced compassion satisfaction can cause compassion fatigue and possibly burnout. To detect compassion fatigue and burnout earlier and to manage or even prevent the occurrence, two theoretical works offer suggestions about appropriate preventive steps, and interventions, according to the theories of Folkman (1984) and Spreitzer (1995). The integration of the two theories can provide self-empowered interventions that emphasise autonomy. Autonomous behavioural and emotional interventions can be utilised and adapted to meet a specific individual's requirements or even to address demands at an organisational level. There are three main streams of interventions related to these two theories, mindfulness, self-empowerment and education. These concepts are based on self-care and self-determination. Empowered nurses can be well-equipped to face unpredictable challenges while delivering care in diverse caring situations.

Mindfulness-Based Stress Reduction (MBSR) was developed by Jon Kabat-Zinn in 1979. It focuses on emotional coping, self-awareness and improvement in self-resilience (Moll et al., 2015). Experiences in compassion fatigue and burnout are derived from re-exposure to traumatic experiences and continuous work stress and pressure (Hinderer et al., 2014; Moll et al., 2015). Nurses may struggle to focus on current tasks due to consistent flashbacks to traumatic events or stresses which may occupy their mind. Paying attention to the present moment can help nurses to refocus on their work. Focusing on the present moment can allow nurses to calm themselves, and non-judgementally allow themselves to remember past events and to examine their experiences more objectively. Once nurses are

able to objectively face emotionally distressing events, they can understand potential emotional issues, fears and pain. Objectivity related to professional performance may assist nurses to reflect positively and to construct productive coping strategies with self-resilience (Flarity et al., 2013; Hinderer et al., 2014). Resilience and reflection are important factors in the decision making process and in the effective management of complicated therapeutic relationships. Hence, autonomous decisions can empower nurses to deliver professional care for the public.

One of the most widely utilised interventions is mindfulness meditation and its effectiveness is significant when practiced regularly. Regular meditation can assist nurses to re-focus on their daily tasks (Moll et al., 2015). According to research, meditating alone is observed more frequently than group meditation due to potentially unsupportive management teams or possibly being labelled as emotionally incompetent nurses by other colleagues (Günüşen & Üstün, 2009, 2010). As a result, nurses are likely to struggle to attend group educational sessions due to lack of management and colleagues' support.

Even though individual meditation is more popular, regular group meditation sessions with other staff also help individual nurses to check their progress and to share their own experiences (Günüşen & Üstün, 2009, 2010). Additionally, working in a cooperative manner through meditation can be useful from an organisational point of view in order to detect any problems with professional relationships. Mindfulness can be a bridge to connect nurses and the whole team and foster an environment where discussion is calm and stable.

Self-empowerment was the second intervention referred to by Spreitzer (1995). Self-empowerment focuses on cognition reflecting each person's work attitude and responses at

work: meaning, competence, self-determination and impact. These four elements may assist health professionals to improve self-empowerment in stressful working environments (Dereen Houck, 2014; Günüşen & Üstün, 2009; Spreitzer, 1995). Improving professional competency can be achieved by self-determination and searching autonomously for solutions to manage emotional trauma and challenges. The coping methods can help nurses to approach stresses or stressful situations pragmatically: by journaling, spiritual activities, seeking professional medical help to stabilise emotions, spending time with family and regular exercise. These self-empowered actions can help to construct positive networks in nursing professions and to improve self-esteem and control over work- related stresses (Dereen Houck, 2014; Hinderer et al., 2014; Hochwälder, 2007; Sacco et al., 2015). Exploration of self-empowerment can be the one of the most powerful processes for nurses to prevent and overcome emotional exhaustion.

Finally, education programs as problem-focus intervention may improve compassion fatigue and burnout. Educational interventions such as effective communication, positive co-workers' relationships, efficient leadership by management teams, debriefing sessions based on cultural recognitions and a mentoring program at an organisational level (Hunsaker et al., 2015; Mealer et al., 2014; Sacco et al., 2015). New graduates can be exposed to higher risk of compassion fatigue and burnout and lose compassion satisfaction due to lack of experience (Hunsaker et al., 2015; Sacco et al., 2015). The program can assist new graduates to learn from veteran nurses related to management in stress, challenging patients and families, personal preference of debriefing sessions or methods (Günüşen & Üstün, 2010; Hinderer et al., 2014; Hooper et al., 2010; Ishihara et al., 2014). These three interventions have been studied for their effectiveness and applicability in a

wide range of nursing care environments. The outcomes are promising, and the flexibility of these interventions can be of significant benefit from the personal to the organisational level.

***Limitations and implications.*** The intervention theories were developed in the 1980s and the 1990s, so the theories do not include some modern concepts such as induced pressures due to complicated nursing environments brought about by advanced technology. Plus, limited numbers of nurses participated in the research, and there was no longitudinal studies which investigated the long-term impacts of the interventions on nurses (Hooper et al., 2010). This is one reason that the effectiveness of an intervention cannot be implied for the whole nursing population (Al-Shaqsi et al., 2015; Chang et al., 2007; Hammad et al., 2012; Lyneham & Byrne, 2011).

Other pre-existing mental conditions of nurses can interact with emotional exhaustion and it may be challenging to find the exact point when nurses start experiencing emotional difficulties. It is possible to exacerbate existing mental conditions due to emotional depletion and vice versa (Al-Shaqsi et al., 2015; Chang et al., 2007; Mealer et al., 2014). Additionally, some participants in research may not fully understand the principles of mindfulness. They may not observe themselves nonjudgmentally, which can lead to change in self-perceptions and actions (Gauthier et al., 2015). Furthermore, the three interventions from personal focus problem solving to organisational focus solving methods are required to develop standard evaluation processes in order to appraise the approaches (Günüşen & Üstün, 2009).

In this chapter, four themes were explored to understand compassion fatigue and burnout based on comparison and contrast between international and New Zealand literature. Clear and succinct definitions were established, and the reasons for confusion between compassion and burnout were identified based on the theoretical frameworks. In addition, different and similar situational factors of compassion fatigue and burnout were compared and contrasted internationally and nationally. Based on this comparison and contrast, different coping mechanisms from personal level to organisational level were identified and discussed. Finally the need for continuous investigation into effective interventions was highlighted.

# Chapter 5

## Discussion

International and national literature have different approaches to compassion fatigue and burnout. Despite the concepts of both conditions being recognised in New Zealand, it is possible usage of these terms is confusing due to lack of standard definitions. New Zealand based researchers mainly opted for qualitative research methodologies to understand individual nurses' experiences and bring personal values into research. The qualitative research provides individuals' in-depth experiences of compassion fatigue and burnout (Creswell, 2014; Daniels, 2004; Davies, 2009). Internationally, quantitative research has helped to clarify definitions related to compassion fatigue and burnout to test validity and reliability of the theories (Creswell, 2014; Günüşen & Üstün, 2010; Hinderer et al., 2014; Itzhaki et al., 2015). Literature reviews or descriptive research methods identified in this review were also useful in clarifying aspects of compassion fatigue and burnout (Butt, 2010; Hall, 2005).

By definition, compassion fatigue focuses on indirect emotional trauma in professionally close therapeutic relationships with traumatised patients in challenging environment. Nurses may experience specific symptoms such as arousal of anger after a relatively short time period (Figley, 1995, 2001). In the case of burnout, it is a chronic work-related stress in an organisational level which drive nurses to be emotionally exhausted and depleted (Maslach et al., 2001). The symptoms of burnout such as depersonalisation can be experienced by nurses over an extended time and may contribute to high turnover rates. The exposure related to emotional stressors can be similar but actual causes of these two conditions are fundamentally different (Figley, 1995, 2001; Hinderer et

al., 2014). Compassion fatigue is more focused on interpersonal relationships whereas burnout is based on interpersonal and intrapersonal relationships. There is a possibility that emotionally depleted nurses who suffer compassion fatigue can suffer burnout in the long term due to frustrating organisational relationships with managers, team members even health systems (Figley, 1995, 2002; Dominguez-Gomez & Rutledge, 2009; Hunsaker et al., 2015).

The impacts of the extensive exposure to compassion fatigue and burnout can be significant. Nurses' emotional depletion can be directly related to quality of care, which in turn may influence hospitals' ability to meet patients' requirements (Hunsaker et al., 2015). If ignored or not addressed both compassion fatigue and burnout have the potential to create a vicious cycle in the nursing workforce. The inability to deliver quality care may lead to dissatisfied patients. Poor standards may increase the pressure on the nursing workforce to meet standards which may result in emotional exhaustion and impact upon quality at an organisational level. It is important that nurses can maintain their well-being to perform sufficiently in an organisational caring environment which patients can be safely treated.

Interventions are necessary to tackle the nurses' emotional exhaustion. Even though there is limited research aimed at nurses only, three methods have shown promising outcomes; mindfulness, self-empowerment and education (Folkman, 1984; Gauthier et al., 2015; Spreitzer, 1995). These three methods are based on improving self-determination and self-care as professionals. However, there are some obstacles for nurses who want to take part in mindfulness sessions, such as being categorised as emotionally incompetent. This is one of the reasons that nurses prefer to have private sessions rather than to attend

group intervention sessions (Günüşen & Üstün, 2009, 2010). However, the most important aspect of practicing mindfulness is maintenance of a calm and balanced psychological status. This balanced mind can assist nurses to face stressful caring situations and to deliver necessary care for traumatised patients. Moreover, self-empowerment which is based on self-determination can contribute to improve organisational issues; improving communication, positive social network, co-worker relationships, debriefing time and mentoring programs (Dereen Houck, 2014; Hinderer et al., 2014; Hunsaker et al., 2015; Sacco et al., 2015). Through a self-empowering processes, self-determined nurses can prepare to embrace organisational concerns, challenges and risks in order to improve their working circumstances.

Probably, it is an appropriate time to re-evaluate the concept of compassion fatigue and burnout in New Zealand to improve awareness. After the Canterbury earthquakes, increased awareness allows for appropriate evaluation including the potential benefits of interventions, which are limited in the New Zealand context. New Zealand has a small population compared to other countries and it has a tight and small nursing network. New Zealand literature explains that nursing colleagues are likely to support other colleagues and this is one of the reasons that less serious emotional depletion has been recognised compared to international studies (Hall, 2001, 2005). It is possible that these issues have been treated less seriously compared to the international context due to limited studies. Despite this, it will be necessary to develop organisational support systems and self-empowerment strategies which can assist nurses to prevent the two conditions. The necessities of the psychological and physical preparedness in stressful caring environments have already been proved since the Canterbury earthquakes. Emotional and psychological

preparedness for the worse caring scenarios can provide opportunities for nurses to learn about the implications of potential emotional depletion.

In agreement with findings in international research, New Zealand literature showed that compassion fatigue and burnout occurred due to emotional depletion. Even though New Zealand has a similar understanding of the two psychological conditions as international studies, limited numbers of studies have been conducted to define these terms correctly and to diagnose symptoms precisely. Limited research may lead to confusion in identifying these psychological symptoms, so that some researchers may possibly use compassion fatigue and burnout interchangeably. Widespread concerns of potential compassion fatigue and burnout have been recognised through the New Zealand national nursing survey (Daniels, 2004), so that the relationship between emotional depletion, nurses' staff turnover, and quality of care require further investigation especially from a New Zealand perspective.

Many studies are based on Figley's compassion fatigue theory which focus on natural disasters, so that there are no studies with other forms of disasters such as wars, in this review. Even though many potential research participants may have a personal interest in, or some experiences of compassion fatigue or burnout, the response rates have been low (Dominguez-Gomez & Rutledge, 2009; Hinderer et al., 2014; Hooper et al., 2010). Consequently, limited sample sizes and available resources lead to lack of causational studies and longitudinal studies to investigate long-term exposure, impacts and effectiveness of interventions (Adriaenssens et al., 2015; Dominguez-Gomez & Rutledge,

2009). Subsequently, more research is required to generalise findings in order to apply them to a wide range of nursing practice.

All of these results show that caring is very demanding work and it can affect nurses' wellbeing, quality of care, and nursing professionalism. Accordingly, these negative effects can lead to high staff turnover rates due to emotional devastation. It may cause nurses to withdraw themselves from patients in order to emotionally protect themselves. Thus, therapeutic nursing relationships may not be maintained. The overwhelming emotional impact may continue to make nurses question themselves and possibly abuse drugs or substances and they may start losing the balance between their career and personal life (Park, 2011). Therefore, effective interventions from the personal level to the organisational level should be examined in order to maintain nursing professionalism along with delivering efficient care for the public.

In the last section, implications which can be applicable to the New Zealand perspective will be illustrated and limits of this systematic literature review will be explained.

**Implications and limitations**

Comparison and contrast between New Zealand and overseas' studies showed that caring can be emotionally demanding at the possible cost of nurses' psychological wellbeing as well as professionalism. As a result of this, nurses may emotionally withdraw themselves from patients in order to protect themselves. The impact of feelings emotionally drained may lead nurses to question themselves about their own lives and the meaning of being professional (Hinderer et al., 2014; Teixeira et al., 2014). Subsequently, emotionally depleted nurses may fall into substance-abuse, especially excessive drinking and this can be a temporary or last-long effect (Park, 2011).

International research has highlighted the seriousness of compassion fatigue and burnout and attempts to have been made to find effective interventions. In New Zealand research, these two conditions have been studied less. New Zealand nurses may suffer compassion fatigue and burnout less than nurses overseas as they are likely to support their colleagues in a tight nursing community, and this may artificially suppress the apparent seriousness of psychologically challenging conditions (Hall, 2001, 2005). Simultaneously, New Zealand's small and tight community can present problematic for nurses who are inclined to participate in an emotional recovery program, due to the fear of being stigmatised as an incompetent professional nurse. Stigmatisation may prevent diagnosis and treatment (Günüşen&Üstün, 2009, 2010). Fear of being labelled as unprofessional can be reduced or eliminated when the correct definitions of compassion fatigue and burnout are established (Günüşen&Üstün, 2009, 2010; Hinderer, 2014). However, the possible correlation between the negative psychological feedback loop from recognising emotional damage to being stigmatised may require more research. Extensive research will assist

health professionals to understand the seriousness of these two conditions objectively and constructively.

New Zealand has a great opportunity to set up clear definitions of compassion fatigue and burnout after the Canterbury earthquakes. The recovery process has been challenging to all Cantabrians including health professionals. Nurses have worked with the public for their safety and proper care during and after the quakes. Their open attitude, professionalism and dedication in disastrous environments have stood out and their services have been applauded (Dolan et al., 2011; Lyneham & Byrne, 2011). It is a time for nurses to recharge themselves emotionally in order to continue to deliver high quality professional nursing care to the public. Nurses need to be encouraged to learn about their emotional status and to search for effective interventions, which can be customised for their working and personal life styles. Increasing awareness and supportive working environments can assist nurses to safely recover from emotionally challenging secondary traumas which they may not have been prioritised before. In addition, inflexible work schedules and overtime have possibly contributed to burnout so that these concerns should be integrated into finding appropriate interventions for nurses (Chang et al., 2007; Daniels, 2004; Hall, 2001; Gillespie, 2013). For instance, the widely studied interventions of mindfulness and self-empowerment can be a good starting point to search for useful methods to apply to a New Zealand context. Additionally, the New Zealand health system can contribute to increase awareness of the seriousness of compassion fatigue and burnout through education programs. Increasing awareness can assist health management systems to prevent devastating psychological consequences in nursing, in order to help minimise the upcoming nursing shortage.

This systematic literature review is not able to cover every aspect of compassion fatigue and burnout. The majority of the international studies were quantitative research and they all were written in English (Hammad et al., 2012). The majority of literature was based on one country, USA and many articles had small sample sizes from restricted study areas. In New Zealand, the limited amount of research makes it even harder to investigate the actual situation, when trying to understand compassion fatigue and burnout. The majority of research was qualitative or literature review, so that more quantitative research is required in various nursing settings. This systematic review acknowledges the gaps in New Zealand research.

## Conclusion

A review of the international literature has shown that increased understanding of the concepts of compassion fatigue/Secondary Traumatic Stress (STS) and burnout have contributed to the identification of symptoms, potential personal coping strategies and organisational interventions. Clear and universal definitions may help to reduce confusion and help to distinguish similarities and differences between the risks and impacts of these two conditions. Compassion fatigue is emotional depletion within therapeutic relationships with patients for a shorter period while burnout is cumulative emotional depletion within stressful organisational environments over a longer period. Nurses may become a part of a self-perpetuating cycle which has the potential to exacerbate emotional exhaustion and compromise therapeutic relationships during or after distressing circumstances, such as earthquakes. Emotional inability can damage or destroy the therapeutic nursing relationship and can also cause nurses to lose their professional identities as well as self-identities and their own world views. Loss of identity professionally and personally can be disruptive and distressing for nurses who endeavour to deliver professional care. Nurses may distance themselves from their work and patients in order to protect their emotions, as a defence mechanism. It is possible nurses can begin to suffer from compassion fatigue which may advance to burnout. Finally, nurses become depersonalised and treat patients as objects without compassion, which directly relates to their job performance. Decreased work performance will affect quality of care for patients and a vicious cycle ensues.

It is important to find the right interventions for reducing and even preventing compassion fatigue and burnout for nurses. Through research, common themes can be established and evidence based guidelines developed. Currently, the main interventions for

managing compassion fatigue and burnout appear to be mindfulness, self-empowerment and education. These interventions are designed to apply to different circumstances and to relieve stress, anxiety and anger, which are based on the concepts of self-care and flexibility. Nurses can refocus on their daily tasks through mindfulness and self-empowerment after emotionally distressing experiences and these actions can guide the nurses to embrace risks and challenges in their work places. By extension, nurses can gear themselves up to be tasked with implementation of organisational interventions through education; improvements in professional communication and relationships with patients, family and management team members. Especially, mentoring programs can help nurses to build up confidence through learning from more experienced nurses who can efficiently deal with stresses in multi-disciplinary team environments or even at the organisational level. The results from the international research considering the effectiveness of these interventions are promising although further research would help to validate this, especially from a New Zealand perspective.

In conclusion, the systematic literature has shown the importance of understanding compassion fatigue, burnout and the devastating impact they have on nurses personally, as well as at the professional (organisational) level. In New Zealand, particularly after a major disaster such as the Canterbury earthquakes, there is a pressing need to define these two terms correctly which may lead to improvement in awareness and management. Such research may help to address the concerns of the forecasted nursing shortage, increasing turnover rates and poor quality of care for patients. The systematic review questions have provided the basis for formulating more specific research questions in the light of what the literature has revealed. Arguably, compassion fatigue and burnout are critical concerns for

nurses and they may threaten quality of care, nurses' wellbeing, and increase turnover rates. Further studies will help to form compelling and holistic accounts of how to successfully combat compassion fatigue and burnout, by creating desirable outcomes through building nursing resilience in New Zealand.

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**Appendix 1**

CINAHL Search Strategy: Nursing and Interventions for Nurses with Compassion Fatigue or Burnout

| | Search key words | # Query Results |
|---|---|---|
| S16 | S11 AND S 15 | 388 |
| S15 | S15 S12 OR S13 OR S14 | 357,996 |
| S14 | (MH "Stress Management") | 4841 |
| S13 | AB intervention OR program* OR evaluat* | 352,234 |
| S12 | (MH "Crisis Intervention") | 2,384 |
| S11 | S7 AND S10 | 2,058 |
| S10 | S8 OR S9 | 265,830 |
| S9 | TI nurs* | 242,719 |
| S8 | MH "Nurses" | 42,871 |
| S7 | S1 OR S2 OR S3 OR S4 OR S5 OR S6 | 13,806 |
| S6 | Vicarious trauma* | 103 |
| S5 | TI post traumatic stress | 1,005 |
| S4 | (MH "Stress Disorders, Post-Traumatic") | 9,111 |
| S3 | Compassion AND ((stress OR fatigue)) | 410 |
| S2 | TI burnout | 2,002 |
| S1 | (MH "Burnout, Professional") | 4,333 |

## Appendix 2

PsychINFO Search Strategy: Nursing and Natural Disasters

| | Search key words | # Query Results |
|---|---|---|
| S7 | S3 AND S6 | 77 |
| S6 | S4 or S5 | 35,922 |
| S5 | TI nurs* | 29,653 |
| S4 | DE “Nurses” | 19,656 |
| S3 | S1 OR S2 | 7,029 |
| S2 | Earthquake*or tsunami* or hurricane* or cyclone* or flood* or bush fire* | 6,204 |
| S1 | DE “Natural Disasters” | 3,553 |

**Appendix 3**

Inclusion Criteria

| Literature title | | Tick V |
|---|---|---|
| **Bibliographic details** | **Inclusion** | |
| **Theories** | Figley's compassion fatigue | |
| | Maslach Burnout Inventory (MBI) | |
| | Watson's theory of human caring | |
| | Maslow's theory of hierarchy of needs | |
| | | |
| **Exposure** | Experiences in compassion fatigue | |
| | Experiences in burnout | |
| | Stress | |
| | Pressure | |
| | Stressful environment | |
| | Individual characteristics | |
| | Others | |
| | | |
| **Interventions** | Personal intervention | |
| | Organisational intervention | |
| **Measurement of outcome** | Professional Quality of Life Scale (Pro-QOL) | |
| | Secondary Traumatic Stress Tool | |
| | Traumatic Stress Scale | |
| | Burnout Scale | |
| | Others | |
| | | |
| **Type of studies** | Qualitative | |
| | Quantitative | |

## Appendix 4

International and New Zealand Research of Compassion Fatigue and Burnout: Methodological Details

| TOPIC | LOCATION | AUTHOR | PURPOSE/ARGUMENT | METHOD/INSTRUMENT | SAMPLE SIZE |
|---|---|---|---|---|---|
| COMPASSION FATIGUE | New Zealand | Butt (2010) | To investigate nurses' experiences while delivering care for chronically critically ill patients | Qualitative(descriptive) research/semi-structured interview | 6 |
| COMPASSION FATIGUE | New Zealand | Davies (2009) | To examine mental health nurses' understanding and experiences of vicarious traumatization | Qualitative research/In-depth interview | 4 |
| COMPASSION FATIGUE | New Zealand | Gillespie (2013) | To find the factors that can influence oncology nurses to experience compassion fatigue while caring for cancer patients in New Zealand | Quantitative research/survey/Professional Quality of Life (ProQOL) | 207 |
| COMPASSION FATIGUE | New Zealand | Hughes et al., (2007) | To provide guidelines for nurses in emergency situations, related to preparedness for the long term emotional impacts on nurses | Literature review | |
| COMPASSION FATIGUE | New Zealand | Itzhaki et al. (2015) | To understand and compare nurses' burnout, compassion fatigue and self-caring across the five countries; New Zealand, Botswana, Ireland, Israel and Spain | Quantitative research/survey/The Compassion Fatigue Self-Assessment (CFSA) | 283 |
| COMPASSION FATIGUE | New Zealand | Puckey (2001) | To examine the concepts of vicarious traumatization | Literature review | |
| COMPASSION FATIGUE | Canada | Sabo (2011) | To review the literature related to nurses' psychosocial and physical health and well-being | Literature review | |

| TOPIC | LOCATION | AUTHOR | PURPOSE/ARGUMENT | METHOD/INSTRUMENT | SAMPLE SIZE |
|---|---|---|---|---|---|
| COMPASSION FATIGUE | Czech | Janda & Jandová (2015) | To examine symptomatic factors of post-trauma and their relationships; stressful working environments, interpersonal relationships and work overload | Qualitative research/ Post Traumatic Stress Syndrome 10 Questions Inventory (PTSS – 10) | 263 |
| COMPASSION FATIGUE | USA | Boyle (2011) | To explore compassion fatigue | Literature review | |
| COMPASSION FATIGUE | USA | Kim (2013) | To examine compassion fatigue and burnout of liver and kidney transplant nurse coordinators | Quantitative research/ Professional Quality of Life | 14 |
| COMPASSION FATIGUE | USA | Lombardo & Eyre (2011) | To review compassion fatigue | Literature review | |
| COMPASSION FATIGUE | USA | Mealer et al. (2007) | To investigate increasing psychological symptoms in ICU nurses compared to general nurses | Quantitative research/Post Traumatic Stress Syndrome 10 Questions Inventory (PTSS – 10) | 491 |
| COMPASSION FATIGUE | USA | Peteski (2013) | To examine compassion fatigue among emergency department nurses | Quantitative research/Professional Quality of Life | 24 |
| COMPASSION FATIGUE | USA | Potter et al. (2010) | To investigate the frequency of burnout and compassion fatigue among oncology healthcare professionals | Quantitative (Descriptive) research/ Professional Quality of Life | 153 |
| COMPASSION FATIGUE | USA | Sacco et al. (2015) | To understand compassion satisfaction and compassion fatigue in adult, pediatric, and neonatal critical care nurses | Quantitative research/ survey/Professional Quality of Life | 221 |

| TOPIC | LOCATION | AUTHOR | PURPOSE/ARGUMENT | METHOD/INSTRUMENT | SAMPLE SIZE |
|---|---|---|---|---|---|
| COMPASSION FATIGUE | USA | Young et al., 2011 | To investigate compassion satisfaction, burnout and secondary traumatic stress in heart and vascular nurses | Quantitative research/Professional Quality of Life | 70 |
| NATURAL DISASTER R/T COMPASSION FATIGUE | NZ | Al-Shaqsi et al. (2015) | To investigate health professionals' responses to emergency circumstances prior to the Canterbury earthquakes | Quantitative research/ cross-sectional national survey | 911; (206 doctors/ 441 nurses and 264/ paramedics) |
| NATURAL DISASTER R/T COMPASSION FATIGUE | NZ | Chang et Al. (2007) | To study the rates of stress, coping mechanisms and physical and mental health status through comparing New South Wales and New Zealand nurses | Quantitative research/ Postal survey | 518; (328 from New South Wales and 190 from New Zealand) |
| NATURAL DISASTER R/T COMPASSION FATIGUE | NZ | Dolan et al. (2011) | To describe nurses' responses to the Canterbury earthquakes | Descriptive study | |
| NATURAL DISASTER R/T COMPASSION FATIGUE | NZ | Lyneham & Byrne (2011) | To study factors that assisted or delayed the nurses when delivering nursing care in the three days after the Canterbury earthquakes | Qualitative (phenomenological) research/ Narrative method | 17 |
| NATURAL DISASTER R/T COMPASSION FATIGUE | NZ | Richardson et al. (2013) | To review initial responses and lessons from the Canterbury earthquakes | Qualitative research/Interview | 36 |
| NATURAL DISASTER R/T COMPASSION FATIGUE | Australasia | Hammad et al. (2012) | To review nursing knowledge while working during a disaster | Literature review | |

| TOPIC | LOCATION | AUTHOR | PURPOSE/ARGUMENT | METHOD/INSTRUMENT | SAMPLE SIZE |
|---|---|---|---|---|---|
| NATURAL DISASTER R/T COMPASSION FATIGUE | Canada | Ledoux (2015) | To understand what compassion fatigue is | Literature review | |
| NATURAL DISASTER R/T COMPASSION FATIGUE | China | Yang et al. (2010) | To investigate Chinese nurses responses to the 2008 Wenchuan earthquake | Qualitative research/Gadamer's Philosophical Hermeneutics | 10 |
| NATURAL DISASTER R/T COMPASSION FATIGUE | China | Zhen et al. (2010) | To study the occurrence of Post Traumatic Stress Disorder (PTSD) after the 2008 Wenchuan China earthquake | Quantitative research (Survey)/PTSD Scale (CAPS)/Majoir Depressive Episode (MDE) module of the Structured Interview for DSM-IV (SCID) for comparison | 446 |
| NATURAL DISASTER R/T COMPASSION FATIGUE | Japan | Ben-Ezra et al. (2013) | To study the potential difference between hospital professionals and residents' reactions to the 2011 Tohoku earthquake and tsunami | Quantitative research/Survey (questionnaire)/The 22-item impact of Event Scale-Revised (IES-R) | 73 (34 health professionals /39 Japanese civilians) |
| NATURAL DISASTER R/T COMPASSION FATIGUE | Taiwan | Guo et al. (2004) | To investigate different stress responses between professional and non-professional rescue workers | Quantitative research/Questionnaire including Davidson Trauma Scale (DTS-C) in Chinese | 252 (167 professional rescuers/85 volunteers) |
| NATRUAL DISASTER R/T COMPASSION FATIGUE | Taiwan | Shih et al. (2002) | To examine nurses' experiences at the central site of the 9-21 Taiwan earthquake | Qualitative research/ Interview | 46 |
| NATURAL DISASTER R/T COMPASSION FATIGUE | Turkey | Armagan et al. (2006) | To assess the occurrence of post-traumatic stress disorder among the members of the Turkish Red Cross Disaster Relief Team after the Tsunami in Asia | Quantitative research/CAPS – 1 (Clinician-Administered Post Traumatic Stress Disorder Scale) | 33; (15 doctors/12 nurse/6 logistic workers) |

| TOPIC | LOCATION | AUTHOR | PURPOSE/ARGUMENT | METHOD/INSTRUMENT | SAMPLE SIZE |
|---|---|---|---|---|---|
| NATURAL DISASTER R/T COMPASSION FATIGUE | USA | Battle (2007) | To investigate emergency nurses' signs and symptoms of Post-Traumatic Stress Disorder (PTSD) during and immediately after Hurricane Katrina | Quantitative research/Questionnaire/The Post Traumatic Checklist (PCL) | 21 |
| NATURAL DISASTER R/T COMPASSION FATIGUE | USA | Dominguez-Gomez & Rutledge (2009) | To investigate Secondary Traumatic Stress (STS) in emergency nurses | Quantitative research/ Secondary Traumatic Stress Scale (STSS) | 67 |
| NATURAL DISASTER R/T COMPASSION FATIGUE | USA | Figley (1995) | To investigate and examine compassion fatigue | Theory | |
| NATURAL DISASTER R/T COMPASSION FATIGUE | USA | Figley (2002) | To comprehend compassion fatigue | Theory | |
| NATURAL DISASTER R/T COMPASSION FATIGUE | USA | Palm et al. (2004) | To study vicarious trauma reactions across different professionals | Literature review | |
| NATURAL DISASTER R/T COMPASSION FATIGUE | USA | Park (2011) | To examine the professional responders' level of PTSD resulting from Hurricane Katrina | Quantitative research(Cross-sectional correlational design)/Events Scale-Revised ((IES-R) Scale) | 995 |
| BURNOUT | NZ | Daniels (2004) | To investigate the relationships among job satisfaction, job stress, burnout and New Zealand nurses intention to quit. | Quantitative research (correlation design-Survey)/ Questionnaire/ McLcoskey/Mueller Satisfaction Scale (MMSS)/Maslach Burnout Inventory (MBI) | 297 |

| TOPIC | LOCATION | AUTHOR | PURPOSE/ARGUMENT | METHOD/INSTRUMENT | SAMPLE SIZE |
|---|---|---|---|---|---|
| BURNOUT | NZ | Hall (2001) | To investigate burnout in New Zealand nurses | Quantitative research/Professional, Quality of Life/ Maslach Burnout Inventory (MBI) | 1140 |
| BURNOUT | NZ | Hall (2005) | To review nurse stress and burnout in New Zealand | Literature review | |
| BURNOUT | Canada | Epp (2012) | To examine relationships among the chronic stressors that critical care nurses' develop in burnout and prevention strategies | Literature review | |
| BURNOUT | Iran | Ahmadi et al. (2014) | To examine factors (nurses' workplaces) which may influence nurses' burnout | Quantitative research / questionnaire /Maslach Burnout Inventory (MBI) | 100 |
| BURNOUT | Iran | Shoorideh et al. (2014) | To investigate correlation between moral distress with burnout and turnover in intensive care unit nurses | Quantitative research (correlation study)/ Moral Distress Scale (IMDS)/ Copenhagen Burnout Inventory (CBI)/Anticipated Turnover Scale (ATS) | 159 |
| BURNOUT | Netherland | Adriaenssens et al. (2015) | To examine burnout in emergency nurses and to find factors which affect burnout | Systematic literature review | |

| TOPIC | LOCATION | AUTHOR | PURPOSE/ARGUMENT | METHOD/INSTRUMENT | SAMPLE SIZE |
|---|---|---|---|---|---|
| BURNOUT | Portugal | Teixeira, et al. (2014) | To study the ethical issues related to increasing burnout levels among health professionals working in Portuguese intensive care units (ICUs) | Quantitative research/ Maslach Burnout Inventory (MBI) | 300 (81 physicians/219 nurses) |
| BURNOUT | Turkey | Özden et al. (2013) | To examine the levels of job satisfaction and exhaustion of intensive care nurses and the relationship between job satisfaction and burnout | Quantitative research/ Maslach Burnout Inventory (MBI) | 138 |
| BURNOUT | USA | Hinderer et al. (2014) | To investigate burnout, compassion fatigue and compassion satisfaction | Quantitative research (surveys)/ Professional Quality of Life (Pro-QOL) | 128 |
| BURNOUT | USA | Hooper et al. (2010) | To investigate the prevalence of compassion satisfaction, burnout and compassion fatigue among frontline nurses in an ED(emergency department) setting and other selected specialty areas | Quantitative research/Professional Quality of Life (Pro-QOL) | 114 |
| BURNOUT | USA | Hunsaker et al. (2015) | To examine compassion satisfaction, compassion fatigue and burnout | Quantitative research/ Professional Quality of Life (Pro-QOL) | 284 |

| TOPIC | LOCATION | AUTHOR | PURPOSE/ARGUMENT | METHOD/INSTRUMENT | SAMPLE SIZE |
|---|---|---|---|---|---|
| BURNOUT | USA | Maslach & Jackson (1981) | To study specific patterns of burnout and to formulate an instrument | Quantitative research/ Maslach Burnout Inventory (MBI) | 1025 |
| BURNOUT | USA | Maslach et al. (2001) | To analyse job burnout based on the past 25 years research | Review | |
| BURNOUT | USA | Murray (2010) | To explain how to recognise moral courage and to suggest strategies for recognising and developing moral courage | Discussion paper | |
| INVENTORY | Canada | Moll et al. (2015) | To investigate the impact of mindfulness-based interventions on interactions of nurses with their co-workers, patients and families | Mixed methods(qualitative and quantitative research) /questionnaire/Maslach Burnout Inventory | 164 |
| INTERVENTION | Japan | Ishihara et al. (2014) | To examine newly graduated nurses' intention to leave related to organisational matters and working environments | Quantitative research/questionnaire | 148 |

| TOPIC | LOCATION | AUTHOR | PURPOSE/ARGUMENT | METHOD/INSTRUMENT | SAMPLE SIZE |
|---|---|---|---|---|---|
| INTERVENTION | Sweden | Hochwälder (2007) | To study the effectiveness of empowerment on burnout | Quantitative research/ questionnaire/Maslach Burnout Inventory | 1356 |
| INTERVENTION | Turkey | Günüşen & Üstün (2009) | To examine causes of burnout and issues influencing their engagement in a burnout intervention program | Qualitative research/semi-structured interviews | 18 |
| INTERVENTION | Turkey | Günüşen & Üstün (2010) | To assess the efficacy of coping and supporting group interventions to decrease burnout in nurses | Quantitative research (Randomised controlled trial)/ Maslach Burnout Inventory | 108 |
| INTERVENTION | USA | Dereen Houck (2014) | To provide useful intervention resources for nurses to recognise when assistance is required | Literature review | |
| INTERVENTION | USA | Flarity et al. (2013) | To investigate the effectiveness of an educational program to prevent compassion fatigue and increase resilience in emergency nurses | Quantitative research/ Professional Quality of Life | 73 |

| TOPIC | LOCATION | AUTHOR | PURPOSE/ARGUMENT | METHOD/INSTRUMENT | SAMPLE SIZE |
|---|---|---|---|---|---|
| INTERVENTION | USA | Folkman (1984) | To examine stress and coping processes | Theory | |
| INTERVENTION | USA | Gauthier et al. (2015) | To evaluate efficiency of mindfulness on nursing stress, burnout, self-compassion and job satisfaction | Quantitative research/ Nursing Stress Scale, Maslach Burnout Inventory(MBI), Mindfulness Attention Awareness Scale and Self-Compassion Scale | 38 |
| INTERVENTION | USA | Mealer et al. (2014) | To examine psychological disorders and the effectiveness of a 12 week intervention (a multimodal resilience training program) | Quantitative research /questionnaire/Connor Davidson Resilience Scale (CDRISC)/ Posttraumatic Diagnostic Scale (PDS)/ Hospital Anxiety and Depression Scale/Maslach Burnout Inventory (MBI) | 27 |
| INVENTORY | USA | Spreitzer (1995) | To investigate and validate measurements of psychological empowerment at work | Quantitative research/Confirmatory Factor Analysis | 521; (393 managers and 128 employees) |