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AN INVESTIGATION OF COMPASSION FATIGUE, COMPASSION SATISFACTION, BURNOUT AND COPING STRATEGIES IN HOSPICE WORKERS

by

Laura Baxendale, BSc, MSc

Thesis for the degree of Doctor of Clinical Psychology

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ABSTRACT

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Firstly, the literature investigating burnout, compassion fatigue and occupational stress in the hospice worker population was reviewed. This added to previous reviews by also exploring job satisfaction and the impact of coping strategies and individual factors on these experiences. Twenty-four empirical studies were identified and together the evidence suggested that levels of compassion fatigue in this population are average, whilst burnout levels are low to average, as indicated by cut-off scores on validated measures, whilst stress levels seem to vary. Satisfaction levels are indicated to be high. The use of social support and effective coping strategies appear to be related to lower burnout and compassion fatigue whilst other strategies are also reported to be helpful and individual characteristics may play a role. Study limitations include the use of correlational methods, gender bias and self-selection methods.

The empirical paper investigated the prevalence of compassion fatigue, burnout and compassion satisfaction in hospice nurses, including the impact that coping strategies and locus of control may have on these experiences. In a sample of 72 hospice nurses, levels of burnout and compassion fatigue were low whilst compassion satisfaction was at the high end of the average range on the PRO-QOL. Regression analyses suggested that the use of 'ineffective' coping strategies predicted higher levels of burnout and compassion fatigue whilst the use of 'emotion-focussed' coping strategies predicted higher satisfaction and less burnout. No associations were found with locus of control. Qualitative data provided additional information about the experiences of hospice nurses. Clinical and theoretical implications are discussed and directions for future research are considered.

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DECLARATION OF AUTHORSHIP

I, Laura Baxendale

declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

An Investigation of Compassion Fatigue, Compassion Satisfaction,

Burnout and Coping Strategies in Hospice Workers

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. None of this work has been published before submission

Signed: .....

Date:.....

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Chapter 1: Literature Review

1.1 Introduction

Health care is one of the three industries with the highest prevalence of work related stress, depression and anxiety, with nurses in particular reporting some of the highest rates in the UK, (The Health and Safety Executive (HSE), 2014). Individuals working in palliative care may experience burnout, occupational stress and compassion fatigue due to the presence of many stress factors and through high levels of death and dying, all of which could contribute to suffering of care-givers, (Pereira, Fonseca, & Carvalho, 2011). Additionally health care professionals do not always have the opportunity to discuss their emotions in a way which could help them manage this suffering, (Pereira et al., 2011). It is thought that burnout and compassion fatigue are likely to impair work performance which in health care settings will affect the quality of patient care, (Keidel, 2002).

1.1.1 Compassion Fatigue

The term 'Compassion Fatigue' (CF) was introduced by Joinson in 1992 to explain how empathic, caring individuals, such as nurses, may be affected by the traumatic stress and suffering of those that they care for, (Najjar, Davis, Beck-Coon, & Doebbeling, 2009). It is thought to arise as the result of experiencing a period of discomfort and stress which is both cumulative and progressive, (Coetzee & Klopper, 2010). Figley (1995) described CF as a stress response which causes feelings of confusion, isolation and helplessness. This in turn results in a diminished ability to respond empathically towards patients, (McGarry et al., 2013). It has also been suggested that compassion fatigue is likely to impact on the wider workplace through decreased productivity, increased work absences

and higher turnover of staff, (Najjar et al., 2009). Compassion Fatigue has been studied in a variety of health professionals including paediatric health care professionals, emergency nurses, oncology nurses, intensive care nurses and social workers, (Bride, 2007; Hooper, Craig, Janvrin, Wetsel, & Reimels, 2010; McGarry et al., 2013).

1.1.2 Burnout

Burnout is thought to be the result of high levels of work-related stress over a period of time and differs from compassion fatigue in that individuals working in any profession may develop it, (Alkema, Linton, & Davies, 2008). Work related stressors may include organisational stressors, role ambiguity, overload, and social factors and exposure to such stressors over a prolonged period of time may result in burnout, (Sardiwalla, VandenBerg, & Esterhuyse, 2007). Maslach and Jackson (1986) suggested that burnout comprises of three dimensions: emotional exhaustion from chronic stress, depersonalisation and detachment from the job, and a lack of personal accomplishment related to feelings of incompetency and a lack of achievement. This will impact on the physical and mental health of an individual, (Keidel, 2002). Although not specific to caring professions, it is suggested that those working in such environments are particularly susceptible to burnout due to the emotional intensity of working with patients, (Sardiwalla et al., 2007). Research by Mallett, Price, Jurs, and Slenker (1991) with 209 hospice nurses and 167 critical care nurses indicated that although burnout levels, death anxiety and occupational stress levels were lower in hospice nurses than the critical care nurses, work place situations were still rated as stressful by the hospice nurse. Social support and death anxiety were also important factors in burnout levels.

1.1.3 Work Stress

The Health and Safety Executive (2014) define work related stress as 'a harmful reaction that people have to undue pressures and demands placed on them at work.' (p.3). It is thought that numerous stressors are likely to exist in healthcare settings including the physical and emotional distress of patients, managing and supporting the relatives of patients, and the work environment itself such as role ambiguity, decision making and time constraints (Plante & Bouchard, 1995). A theoretical model of stress proposed by McAbee (1991) suggests that occupational stress is the result of exposure to stressors and is likely to be positively related to burnout as burnout is thought to be the result of a prolonged period of stress. It is also thought that occupational stress is an important factor in the ill health of those who are experiencing it and is likely to impact upon work quality, (Martens, 2009).

1.1.4 Job Satisfaction

Despite the stressful and demanding nature of hospice care, it has been proposed that the work is also highly rewarding, (Whitebird, Asche, Thompson, Rossom, & Heinrich, 2013). It has been suggested that through meaningful connection with patients and helping to relieve suffering, nurses are able to experience a sense of fulfilment and compassion satisfaction, (Coetzee & Klopper, 2010). It is important to investigate job satisfaction further as previous research has suggested that higher levels of satisfaction are related to lower rates of staff turnover (Estryn-Behar, Van der Heijden, Fry, & Hasselhorn, 2010). Therefore, through understanding factors related to improving job satisfaction of healthcare workers further, quality of care and job retention is likely to be maximised, (Clark et al., 2007).

1.1.5 Previous Reviews

Previous reviews have been conducted to investigate compassion fatigue and burnout. A review of compassion fatigue in cancer care providers was conducted by Najjar et al. (2009) and suggested that the risk of developing compassion fatigue may be increased by personal characteristics and increasing work demands. The researchers concluded that through improvements in work environments and increasing awareness of triggers and coping strategies, compassion fatigue and burnout may be better managed. It was noted that there were a lack of validated measures for compassion fatigue and that differentiation between similar concepts is unclear. It was also suggested that there is a lack of research investigating the use of coping strategies or social support.

Similarly, a review of burnout in palliative care nurses was conducted by Pereira et al. (2011) which suggested that although burnout levels do not seem to be higher than those seen in other healthcare contexts, there is a need to further investigate the risk factors and preventative measures for burnout. The researchers conducting the review suggested that there is need for further research into this area as many studies examining burnout seemed to focus on oncology settings, where there is a focus on curing patients, rather than palliative care units.

1.2 Aims and Scope of Literature Review

The current literature review aims to bring together findings from research investigating burnout, compassion fatigue and occupational stress in the hospice worker population. It will add to previous reviews by also exploring satisfaction and the impact of coping strategies and individual factors on these experiences.

An in depth, systematic review of these studies will allow an exploration of these concepts within hospice staff along with influencing factors.

1.2.1 Review Objectives

1. To identify levels of burnout, compassion fatigue and/or stress in the hospice workforce.
2. To explore the presence of job satisfaction in hospice workers.
3. To review factors which may influence these experiences in the hospice workforce.
4. To investigate the impact of support levels and coping strategies which may be used by hospice staff and how these may be associated with levels of compassion fatigue, burnout and/or stress.
5. To review and critique the literature on compassion fatigue, burnout and/or stress in hospice workers.
6. To provide suggestions about how hospice organisations can support their staff based on findings in this review.

1.3 Method

1.3.1 Search Strategy

The electronic databases psycINFO and Cumulative Index of Nursing and Allied Health Literature (CINAHL) were searched using terms identified from previous research, (Abendroth & Flannery, 2006; Alkema et al., 2008; Bride, 2007; Hooper et al., 2010; Maslach, Schaufeli, & Leiter, 2001; Najjar et al., 2009; Rössler, 2012; Slocum-Gori, Hemsworth, Chan, Carson, & Kazanjian, 2013). Due to the way that articles are indexed in PsycINFO and CINAHL, slightly different but

comparable search strategies were used. Terms were adjusted according to the thesaurus and CINAHL Headings for each database and the term occupational stress was found to encompass burnout and work stress.

PsycINFO via Ebsco

Articles are indexed according to 'major concepts' in PsycINFO. The terms in Table 1 were included in PsycINFO

Table 1 *PsycINFO Search Terms*

Population		Research area
Health Personnel		Occupational Stress
OR		OR
Allied Health Personnel		Job Satisfaction
OR		OR
Medical Personnel	AND	Role Satisfaction
OR		OR
Hospice		Dissatisfaction
Or		OR
Palliative care		Compassion Fatigue
		OR
		Compassion Satisfaction
		OR
		Secondary Traumatic Stress

The search returned 26,055 articles for population search terms and 32,172 articles for research area search terms. When these searches were combined using the Boolean operator "AND" 1,452 articles were returned. Filtering to included only peer-reviewed journal articles in English published within the last 20 years (since 1994) resulted in the return of 718 articles.

CINAHL

Within the CINAH database and following use of the CINAHL headings, slightly different terms were used to conduct a search comparable to that of PsycINFO. Table 2 outlines these terms.

Table 2 *CINAHL Search Terms*

Population		Research area
Health Personnel OR Allied Health Personnel OR Medical Personnel OR Palliative care OR Hospice	AND	Occupational Stress OR Job Satisfaction OR Compassion Fatigue OR Compassion Satisfaction OR Secondary Traumatic Stress

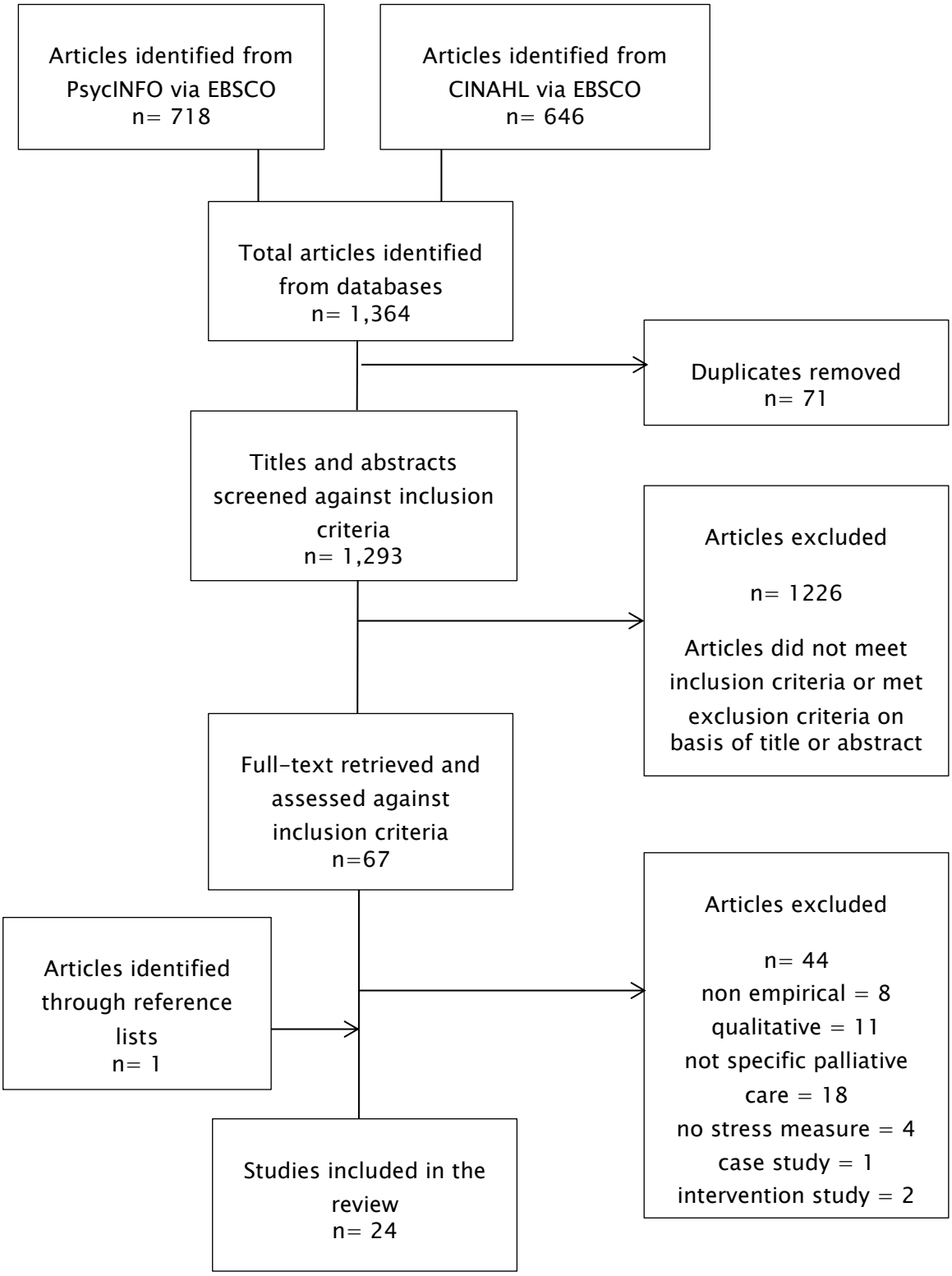
This search returned 55,502 articles for population search terms and 23,469 articles for research area search terms. When these searches were combined using the Boolean operator "AND" 891 articles were returned. Filtering to include only peer-reviewed journal articles in English published within the last 20 years (since 1994) resulted in the return of 646 articles.

The two databases therefore yielded a total of 1,364 articles. Of these, 71 were duplicates and were therefore excluded.

Titles and abstracts were scrutinised according to predetermined inclusion and exclusion criteria. Papers were included if the paper was empirical, if the population considered was hospice workers, or included hospice workers and if the research was quantitative. Papers were excluded if the research was purely qualitative or if there appeared to be no formal assessment of occupational stress, burnout, compassion fatigue or satisfaction. Papers were also excluded if the purpose of the study was to test an intervention, if the population considered was purely hospice volunteers, or if the palliative care setting was with children or in long term residential settings for older adults.

Sixty-seven articles were thought to be relevant and full texts were accessed. On further scrutiny, 23 of these articles were found to be relevant (see figure 1). One additional article was found through examination of reference lists and citations in these included papers. This resulted in a total sample of 24 studies.

Figure 1 *Flow chart of study selection process used in the review*



1.4 Data Extraction and Synthesis

A summary of included studies will be given together with an exploration of these results. Table 3 outlines design and results of included studies.

Table 3 *Quantitative empirical studies investigating occupational stress, compassion fatigue, satisfaction and/or burnout in hospice workers (1994-2014)*

Reference	Population	Setting	Design	Sample Size	Measures	Results
Abendroth & Flannery, (2006)	Hospice nurses	Florida hospices	Cross-sectional, correlational, postal surveys and at a State Hospice Symposium.	N = 216; 94% female, Age M=53.9 60.2% = community hospice nurses, 23.1% = hospice wards.	Demographic questionnaires - demographic,work & health related. The Professional Quality of Life Compassion Satisfaction and Fatigue Subscales: Revision-III (ProQOL-CSF-R-III; Stamm, 2002)	CF: 26.4% = high, 52.3% = average Burnout: 10.2% = high, 61.1% = mod to high. Stress, trauma, anxiety, life demands and excessive empathy = key determinants for CF
Alkema, Linton, & Davies, (2008)	Hospice professionals - including nurses, social workers, chaplains,	Two hospices, America	cross-sectional, questionnaire survey	N =37; 95% female Age M = 46.3	Demographic questionnaire, Professional Quality of Life Assessment (ProQOL-RIII; Stamm, 2002), Self-Care Assessment Worksheet (SCAW; Saakvitne & Pearlman, 1996)	Mean CF = high average range, Mean CS = high average range, Mean burnout = average range. Burnout and CF were neg correlated to all aspects of self -care (p<.05) [except CF and physical care], CS sig correlated with emotional care, spiritual care & having a balance between work and personal life (p<.05). Age was only sig pos correlated with burnout (r=.31, p<.05).

Reference	Population	Setting	Design	Sample Size	Measures	Results
Asai et al., (2007)	Clinical oncologists and palliative care physicians	Japan	Cross-sectional, questionnaire based, postal.	N = 697, 6% Females Age M= 45	The Maslach Burnout Inventory (MBI; Maslach & Jackson, 1986); The General Health Questionnaire (Goldberg & Williams, 1988); Individual factors questionnaire designed by researcher – attitudes towards terminal sedation	22% = High EE, 11% = High DP, 62% = Low PA, Psychiatric Morbidity = 20%, Higher prevalence of psychiatric morbidity in Clinical Oncologists (21%) than palliative care physicians (12%) p=.05. More clinical oncologists = low levels of personal accomplishment (65% vs 53%, p=.05). High EE and low PA were each associated with high levels of burnout (p<.01). Physician confidence in having enough time to communicate with patients = most strongly associated with burnout.
Casarett, Spence, Haskins, & Teno, (2011)	Hospice staff – nurses, social workers, physicians, chaplain, non-clinical staff.	177 hospices in America	Cross-sectional questionnaire design.	N= 8,495, 89% female, nurses = 27.8%, social workers = 8.6%, non-clinical staff = 38.7%	Demographics. The Survey of Team Attitudes and Relationships (STAR; Qaseem, Shea, Connor & Casarett, 2007) – measures daily work, teamwork, management & oversight, organisational structure, rewards of work and global job satisfaction.	Physicians had the highest satisfaction (M=42), followed by chaplains (M= 30). Nurses (M=26) and social workers (M=25) had lowest satisfaction scores.

Reference	Population	Setting	Design	Sample Size	Measures	Results
DeLoach, (2003)	Hospice workers – inc nurses, social workers, home health aides	Hospices in Ohio, US	Cross-sectional survey.	N=76, 89.5% females 42.7%=45-54 years old	Questionnaire based on The Revised Causal Model of Job Satisfaction (RCMJS, Agho, Mueller & Price, 1993)	Job Satisfaction: Most sig predictor was supervisory support (β=.63, *p*<.0005). Other sig predictors = positive affectivity, role ambiguity, autonomy, routinisation.
Dougherty et al., (2009)	Palliative care workers – inc. physicians, social workers, nurses	cancer centre – palliative care unit and oncology inpatient unit, America	Cross-sectional, questionnaire based.	(Same sample as Pierce et al, 2007) N=60 (PCU=25, OIU=35), 87.9% Female Nurses = 71.1% 47.4% = 25-39 years old, 43.8% = 40-54 years old	Idiosyncratic likert questionnaire – self-care, coping methods, stress, satisfaction and team support	A 'great deal of stress' reported by 63%, Stress symptoms = feeling emotionally drained (56%), negative changes in eating habits (42%), feelings of worthlessness/hopelessness (28%). Neg corr perceived stress & work satisfaction (*R*=-.47, *p*=.0001), Sig corr between perceived stress and feelings of helplessness/worthlessness (*R*=.43, *P*=.0007); changes in eating (*R*=.44, *P*=.0004); feeling emotionally drained (*R*=.46, *P*=.0003). Workplace did not predict degree of perceived stress. Predictors of work-related stress: perception that workload neg impacted patient care (OR=32.2, p<.0001); not enough time to grieve (OR=9.75, p=.0007), and not enough resources to cope (OR=0.06, p=.007). Being well supported by the hospital predicted less stress (OR=.16, p=.009)

Reference	Population	Setting	Design	Sample Size	Measures	Results
Dunwoodie & Auret, (2007)	palliative care physicians	Western Australla -	cross-sectional, postal questionnaire;	N=41, 79% female, Age (M=50), 24% hospital, 59% community 17% tertiary hospital	Demographic questionnaire, General Health Questionnaire, Maslach Burnout Inventory	Mean EE = low range, Mean DP = low range, Mean PA = average range, 24% met criteria for burnout, 39% met criteria for burnout &/or scored 4+ on GHQ. GHQ ass with working hours (p=.004), Length of time worked in palliative care ass with EE (p=.024) and DP (p=.006). High GHQ predicted by number of hours worked in palliative care (OR=1.291, p=.006), work exclusively in palliative care (OR=.007, p=.04). Length of time working in palliative care explained 20% of variance in EE (R^2= 0.198, p = .008) DP predicted by years of work (p=.013), tertiary workplace (p=.031), hours of work (p=.048).

Reference	Population	Setting	Design	Sample Size	Measures	Results
Duffy & Jackson, 1996	Hospice workers - nurses, care co-ordinators, other	48 hospices in Michigan, America	Cross-sectional questionnaire design,	N= 168, 100% female, Age M = 44.5	Hospice Nursing Census Questionnaire developed for the study - demographic and stressors were explored	Most stressful factors: physicians who do not understand hospice care (81.8%), too many patients dying at one time (77.8%), paperwork (76.7%). Least stressful: poor communication with administration, number of patients seen per day, poor nursing staff relations, poor communication with the team, the hospice environment, participating in research. Most difficult aspects of patient/family management: pain & symptom control and managing physical symptoms. Least difficult: emotional support of patient & family, coordinating community resources. Most helpful stress reducer: discussing work-related concerns with work colleagues (60.7%), Exercise, religious/spiritual practices, working part-time, taking time off and humour (30-43%). Least helpful: discussing concerns with family & friends, meditation. 39% reported informal support, 32.3% reported formal support, 28.7% thought support was inadequate. 92.7% reported receiving in-service training.

Reference	Population	Setting	Design	Sample Size	Measures	Results
Fillion et al., (2007)	Palliative care nurses	community and hospital palliative care health providers, Quebec	cross-sectional questionnaire based study,	N=209 Age M = 43 92.3% Females	General Satisfaction subscale of Job Diagnostic Survey (JDS; Hackman & Oldham, 1975), Profile of Mood States (POMS; Shacham, 1983), Karasek's Job Content Questionaire (JCQ; Karasek, 1985), Effort/Reward Imbalance questionnaire - Extrinsic effort and reward subscales (ERI; Siegrist, 1996); Nursing Stress Scale (NSS; Gray-Toft & Anderson, 1981); Idiosyncratic measure for perceived self-efficacy; Sub-scale of Organizations Policy and Practices Scale (OPP; Amick et al, 2000)	Compared to normative sample, similar levels of job satisfaction $t(206.5)=-.07$, $p=.47$ and significantly lower emotional distress $t(717.5)=-4.31$, $p=.00$ Nurses in community settings perceived fewer job demands ($r=.28$, $p<.001$) and were more satisfied at work ($r=.44$, $p<.001$). Significant positive relationship: job demands and emotional distress ($\beta=.19$, $p<.05$), job resources and job satisfaction ($\beta=.52$, $p.05$) Significant negative relationships: Job resources and emotional distress ($\beta=-.42$, $p<.05$), job demands and job satisfaction ($\beta= -.22$, $p<.05$)

Reference	Population	Setting	Design	Sample Size	Measures	Results
Graham, Ramirez, Cull, & Finlay, (1996)	Physicians from palliative care and other specialities	UK based	Cross-sectional, postal questionnaire;	Palliative physicians n=126, 42% female, Age: 46% = 36-45 Physicians from other specialities n=882, 12% female Age: 44% = 36-45	General Health Questionnaire (Goldberg & Williams, 1988), Maslach Burnout Inventory (MBI, Maslach & Jackson, 1986) Idiosyncratic questionnaires for stressful and satisfying aspects of job.	Female palliative physicians = sig higher prevalence of psychiatric morbidity than male palliative physicians (χ^2 =6.3, p= 0.01.) In the other physicians, non sig trend in same direction (χ2 =2.2, p>.05). No sig diff in psychiatric morbidity between specialities. Palliative physicians rep. less stress and higher levels of job satisfaction. More palliative physicians reported experiencing stress from difficulties in relationships with nurses. Overload and its effect on home life = most stressful aspect of work for senior palliative physicians, 44% rated this as contributing 'quite a bit' or 'a lot' to overall job stress. This was still rated as lower than that of other physicians (P<.001). Palliative physicians rated having good relationships with patients, relatives and staff as the biggest contributor to job satisfaction, 85% rated this as contributing as 'quite a lot' or a 'lot.' This was significantly higher than the other physicians (<.001).

Reference	Population	Setting	Design	Sample Size	Measures	Results
Hackett, Palmer, & Farrants, (2009)	Hospice staff inc nurses, doctors, social workers	UK hospices	Cross-sectional questionnaire,	N=91	Demographic questionnaire Depression, Anxiety & Stress Scale (DASS-21, Lovibond & Lovibond, 1995), HSE Management Standard Indicator Tool ((HSE, 2001),	HSE: demands, managers' support, relationships and chang need improvement, role needs urgent attention. Hospice 1: DASS scores =above norms, Hospice 2 = close to norms. Do not difer sig from general pop. 28.9% = mild to extremely severe stress. HSE 'change'= sig predictor of depression (β= -2.68, p<.01), HSE 'demand' = sig predictor of stress (β= -3.73, p<.01), Sig predictors of negative affect = HSE 'demand' (β= -6.533, p<.05) and 'change' (β= -5.781, p<.05)
Hawkins, Howard, & Oyebode, (2007)	Nursing staff	Hospices, UK	Cross-sectional questionnaire based study,	N=84, 99% Females, Age M= 46, 57% inpatient 24% community 12% day hospices	Experiences in Close Relationships Scale (ECR; Shaver & Fraley, 2002); Nursing Stress Scale (NSS; Gray-Toft & Anderson, 1981); General Health Questionnaire (GHQ-12; Goldberg & Williams, 1988); The COPE (Carver, Scheier & Weintraub, 1989); Days absent; Demographics	Sources of stress = death & dying, workload, inadequate preparation sig more frequent than other sources studied. 6 Coping strategies = sig higher (z=-4.14, p<.01): positive reinterpretation, planning, seeking instrumental social support, seeking emotional support, active coping & acceptance. 49% of nurses had insecure attachment styles. No sig diff in stress between securely and insecurely attached. Higher proportion of the insecurely attached group scored at caseness for psychiatric morbidity (p<.01)

Reference	Population	Setting	Design	Sample Size	Measures	Results
Head, Washington & Myers, (2013)	Hospice & palliative Nursing Assistants	Hospice & palliative care settings, America	Cross-sectional questionnaire.	N=626, 95.8% females Age M= 43.7.	Better Jobs Better Care Survey of Direct Care Workers (Survey Research Centre, Penn State, 2008)	96.4% = satisfied with their job, 83.9% were not at all likely to leave their job in the next 12 months . Sig predictors of job satisfaction were team spirit-rewards (OR=2.63, p<.02), quality of supervision (OR=13.39, p=.03) and job problems (OR=.012, p=.001).
Hulbert & Morrison, (2006)	Palliative care staff and volunteers	Hospice, hospital, community volunteers	cross-sectional questionnaire, between-group design	Total N=36 Age M= 54.3 years [Hospice n=24, hospital n=6, community volunteers n=6] N=18 in each group volunteer and professionals), 83% female	Demographic questionnaire, psychological predictor variables - Optimism, Life Orientation Test (Scheier & Carver, 1987); Generalised Self-Efficacy Scale (GSES, Jerusalem & Schwarzer, 1992); Social Support Questionnaire (SSQ6; Sarason, Sarason, Shearan & Pierce, 1987). Perceived Stress Scale (PSS-14; Cohen, Kamarck & Mermelstein, 1983); Idiosyncratic occupational stress scale created for this study.	volunteers were sig lower in perceived stress than professionals ,(t(31)=-3.20, p<.05); sig diff in perceived stress between settings (F(2,30)=7.216, p<.05); sig differences in occupation stress according to different roles (F(3,29)=10.59, p<.001), Self-Efficacy was sig higher in male ps (t(34)=2.16, p<.05) and in the NHS setting (F92,33)=3.68, p<.05);

Reference	Population	Setting	Design	Sample Size	Measures	Results
Kalicińska, Chylińska, & Wilczek-Różyczka, (2012)	Hospice nurses and midwives	Nursing wards and hospices in Poland	Cross-sectional questionnaire study,	N= 117 (midwives n=59, hospice nurses n = 58)	Maslach Burnout Inventory (MBI,; Maslach & Jackson, 1986); Psychosocial working conditions questionnaire(Cieślak & Widerszal-Bazyl, developed for this study)	Hospice nurses sig lower on EE (t (1,115)=-3.51, p<.0.01), and DP (t(1;104,29)=-3.07, p<.0.01). Hospice nurses also reported higher levels of support from co-workers (t(1;106,02=3.91,p<.001) and superiors (t(1,115)=3.91, p<0.05). Peer support seems more relevant in reducing EE for midwives than for hospice nurse.
Kulbe, (2001)	Hospice nurses	25 hospices, New Jersey	Cross-sectional questionnaire study,	N= 97, 100% female, age M=45.4	The Hospice Nursing Census Questionnaire - demographic questions, stressors, helpful coping measures	39.2% rated agency support as inadequate Managing physical complications and pain/symptom control ranked as the two most difficult items. 3 major stressors = paperwork, working with physicians who do not understand hospice philosophy, too many patients dying. 3 major coping strategies = Exercise and recreational activities, humour, taking time off. Ranked managing physical complications & pain/symptom control as highly difficult; Emotional support of the patient/family and coordinating community resources as less difficult.

Reference	Population	Setting	Design	Sample Size	Measures	Results
Martens, (2009)	Hospice nurses	14 hospice organisations - community and inpatient	cross-sectional survey design,	N= 130-142 (missing data). 47.7% = 50-59 years old 98.5% females, 55.6% home hospice, 44.4% inpatient	Nursing Stress Scale (adapted), (Grey-Toft & Anderson, 1981), Demographic questionnaire	Highest stressor = making a mistake when treating a patient, followed by insufficient personnel to handle workload. Home hospice nurses rated self-efficacy sig higher than inpatient nurses (t=3.39, p<.05). Sig diff between home hospice workers and inpatient hospice workers: Inpatient nurses rated higher on insufficient personnel to handle workload higher (t=-.53, p<.05), fellow workers not doing their job (t=-3.78, p<.05), caring for the emotional and spiritual needs of patient/family (t=-2.06, p<.05), communicating with patient & family (t=-2.46, p<.05). Sig negative correlations between general self-efficacy and assignment of new & unfamiliar duties, meeting emotional and spiritual need of patient/family and communicating with a patient & a family about death. Models = only modest fits.
Monroe & DeLoach, (2004)	Palliative care workers - social workers, nurses, spiritual care providers & home health aides.	4 hospice organisations in America. Community, long term care and hospital based	Cross-sectional survey administered during team meetings.	N=76, 89.5% females 60.5% nurses, 18.4% social workers, 21.1% home health aides or spiritual care providers.	Job satisfaction: index adapted by Price & Mueller from Brayfield & Rothe's index (1981), Distributive justice and Opportunity:indexes developed by Price & Mueller (1986), Autonomy: an index adapted by Iverson (1992),	All reported a high degree of job satisfaction. Further analysis = 3 job satisfaction variables were significant: Nurses reported being most satisfied with distributive justice (F(2,73) =7.41, p < .001), Nurses reported higher autonomy than other team members (F2,73)=8.43, p<.001), Social workers reported the least opportunity (F2,73)= 3.51, p<.35).

Reference	Population	Setting	Design	Sample Size	Measures	Results
Payne (2001)	Hospice nurses	9 hospices, UK	Cross-sectional questionnaire study,	N=89, 100% Females Age M=39 years	Demographic information; Maslach Burnout Inventory (MBI; Maslach & Jackson, 1986, Nursing Stress Scale (NSS; Gray-Toft & Anderson, 1981); Ways or Coping (Folkman & Lazarus, 1986)	Burnout: EE Mean =low (60% low, 24% mod, 16% high) DP Mean =Low (72% low, 18% mod, 10% high), PA Mean =Moderate (36% low, 33% mod, 31% high). Most freq problematic stressor = death & dying, Most freq coping strategy = planful problem solving, Regressions: EE: All variables together explained 47%; Death and dying = 13%, accepting responsibility = 11%. DP: All variables together explained 49% ; Conflict with other nurses = 21% of variance, escape, 10%. PA: All variables together explained 36% of variance. fewer professional qualifications explains 8%, escape explained 7%, inadequate time to deal with emotional needs of patients & families explained 6%

Reference	Population	Setting	Design	Sample Size	Measures	Results
Pierce et al., (2007)	Range of health personnel including nurses, physiotherapists, physicians;	Hospital based Palliative Care Unit and Radiation Oncology Inpatient Unit	Cross-sectional, survey based design.	N=60 PCU n= 25, Age: 52% = 25-39 years 88% Females OIU n=35; Age: 50% = 40-54 years 88% Females	Idiosyncratic likert questionnaire - self-care, coping methods, stress, satisfaction and team support	A 'Great deal of stress' was reported by 71% of OIU staff and 52% of PCU staff (p=.18). Both groups reported family, friends and colleagues in the same profession as significant sources of support PCU staff reported greater support from one other profession (p=.16) or numerous other professions (P=.12). 100% of PCU staff enjoy their role, 97% of OIU staff enjoy their role. 100% of PCU staff reported well supported by team compared to OIU staff which rated this as 80 % (P=.03)
Plante & Bouchard, (1995)	Palliative care nurses	4 palliative care and 3 oncology units in Montreal	cross-sectional questionnaires,	N=76 (palliative care, n=31; medical oncology, n=45); 83% females age m=36.47	Occupational Stress of Nurses Working with Dying Patients (Plante, 1993); Jones Staff Burmout Scale for Health Professionals (Jones, 1981); Professional Support Scale (adapted by Plante, 1993)	Occ stress & burnout sig pos corr (r=.43, p<.001), stressors linked to working environment highest corr (r=.47, p<.001). Occ stress neg corr with head nurses support (r=-.23, p<.05). Burnout and professional support sig neg corr (r=-.45, p<.001), inc cohesion between nurses (r=-.30, p<.01), head nurse's support (r=-.42, p<.001) & organisational support (r=-.38, p<.001). Palliative care nurses sig lower occ stress (p<.01) and burnout (p<.001) than medical oncology nurses. Palliative care nurses report higher levels of pro support than medical oncology nurses (p<.001).

Reference	Population	Setting	Design	Sample Size	Measures	Results
Sardiwalla, VandenBerg, & Esterhuyse, (2007)	Hospice workers	Hospices in South Africa	Non-experimental prospective design,	N=78, 92% Females Age M= 33.48,	Demographic Questionnaire; Maslach Burnout Inventory (MBI; Maslach & Jackson, 1986); Experience of Work and Life Circumstances Questionnaire (Van Zyl & Van der Walt, 1991); The Cope Scale (Carver, Scheier & Weintraub, 1989);	High levels of stress reported outside of work & in work for task characteristics, working conds and career matters. Higher average scores for EE & DP. Low levels of PA = high degree of burnout. EE: Pos corr with stressors outside work ($p<.05$); problem focussed ($p<.05$) and ineffective coping ($p<.01$); neg corr with work environment dissatisfaction $p<.01$); career aspects ($p<.05$); age ($p<.05$). All predictors together explain 33.4% of variance ($F(12,66)=2.26$, $p<.05$); Stressors make a sig contribution, 12.93% ($F(5,65)=2.52$, $p<.05$). Each coping strategy makes a sig contribution – prob foc (6.1%), emo foc (8.2%), ineffective (8.08%). DP: Pos corr with prob focussed ($p<.05$) and ineffective coping ($p<.05$). All stressors individually sig explain variance, organisational func = largest contribution (8.95%). Each coping strategy makes a sig contribution – prob foc (6.57%), emo foc (11.39%), ineffect (12.24%). PA: Pos corr with prob foc coping ($p<.05$). All predictor variables together explain 33.79% of variance ($F(12,26)=2.30$, $p<.05$), Stressors explain 20.05% of variance, ($F(5,65)=3.93$, $p<.01$), career matters makes largest contribution (20.04%). Sig contributions from emo foc (7.59%) and ineffective coping (8.15%)

Reference	Population	Setting	Design	Sample Size	Measures	Results
Slocum-Gori, Hemsworth, Chan, Carson, & Kazanjian, (2013)	Hospice workers	Hospice workers in Canada	Cross-sectional questionnaire,	N=503, 82.4% Females Age M=52.34,	Demographic questionnaire - demographics and practice characteristics; The Professional Quality of Life Scale (ProQOL; Stamm, 2005)	High levels of CS, slightly elevated CF, average levels of burnout. CS & burnout neg corr (r=-0.53, p<.001); CS&CF neg corr (r=-0.21, p<.001), CF& burnout pos corr (r=.53, p<.001). Services: assistance with relief from physical, emotional and/or spiritual pain/distress = sig higher CF (p=.03) & burnout (p<.001); Psychosocial support for patients and/or families = sig higher CF (P<.001) & burnout (P<.001); emo support to team = sig higher CF (P<.001) & burnout (P<.001). PT workers = higher CS than FT (t(459)=2.66, p=.008), lower CF (t(459)=4.74, p<.001), lower burnout (t(459)=10.35, p<.001)

Reference	Population	Setting	Design	Sample Size	Measures	Results
Whitebird, Asche, Thompson, Rossom, & Heinrich, (2013)	Hospice workers inc nurses, social workers, home health aides	Minnesota	cross-sectional survey	N=547, 92% Females Age M=48.5,	Demographic questionnaire, Short Form-12 Health Survey Version 2 (SF-12; Ware, Kosinski, Turner-Bowker & Gandek, 2008), General Anxiety Disorder Scale (GAD-7; Spitzer, Kroenke, Williams & Lowe, 2006); Patient Health Questionnaire 8 (PHQ-8, Kroenke et al, 2009); Professional Quality of Life Assessment R-III Scale (ProQOL-RIII; Stamm, 2005); Medical Outcomes Social Support Survey (MOS; Sherbourne & Stewart, 1991); Job satisfaction - single question Coping strategies - multiple choice of activities, support or resources to reduce stress.	78% = satisfied or extremely satisfied in their work. Mental health was slightly below average - none/minimal symptoms of depression, 15% = mild to mod depression, 3% of these in mod-severe range. 14.7% = mod anxiety, 4.4% of these = mod severe to severe anxiety. Lower than average burnout (M=13.9) and compassion fatigue scores (M=9.9). CF and anxiety = pos corr (r=.52), Burnout & anxiety = pos corr (r=.56); CF and depression = pos corr (r=.48), Burnout & depression = pos corr (r=.51). 60% reported mod to high levels of stress, 19.6% reporting very high stress. Levels of social support = high for 50%, very high for 25%. Activities to reduce stress: seeking social support (80%), physical activity (68%), saying 'no' more often (51%)

1.4.1 Design

All 24 studies had a cross-sectional questionnaire design and all administered questionnaires at one time point. All studies involved self-selection, with participants choosing to take part. Two studies involved further analysis and reporting of data previously collected. Dougherty et al. (2009), involved further analyses of data collected previously by Pierce et al. (2007). Monroe and DeLoach (2004) reported further on data collected by DeLoach (2003).

Population Characteristics and sample size

The mean age of participants across the studies, where reported, was 44.46 years old. Twenty-three of the studies included a majority of female participants. Across studies, where reported, an average of 82.17% of participants was female. Eight of the studies involved nursing staff, three involved physicians, twelve included a range of health personnel and one included nursing assistants only. Four of the studies involved a comparison between palliative care workers/hospice workers and workers from other specialities including midwives, clinical oncologists and staff from a radiation oncology unit. Sample sizes ranged from 41 to 8,495.

Measures

Compassion Fatigue and Compassion Satisfaction

Four studies used the Professional Quality of Life Scale (Pro-QOL, Stamm, 2010) which is a 30-item self-report questionnaire consisting of three sub-scales which measure Compassion Fatigue, Compassion Satisfaction and Burnout. The scale is thought to have good construct validity and Cronbach's alpha indicates good internal reliability with alpha reliabilities of .88 for Compassion Satisfaction, .81 for Compassion Fatigue and .75 for Burnout, (Stamm, 2010).

Burnout

Six of the studies which measured burnout used the Maslach Burnout Inventory (Maslach, Jackson, & Leiter, 1986). This scale consists of 22 items reflecting the three suggested dimensions of burnout – Emotional Exhaustion (EE), Depersonalisation (DP) and Personal Accomplishment (PA). Validity and reliability of this measure is thought to be satisfactory with Cronbach's alpha ranging from .70 to .90 (Maslach & Jackson, 1981). It is thought that high levels of EE and DP, together with high levels of PA are an indication of burnout (Payne, 2001).

Stress

A range of different measures were used to investigate work /life stress. These included the Hospice Nursing Census Questionnaire (Duffy & Jackson, 1996; Kulbe, 2001), the Nursing Stress Scale (Fillion et al., 2007; Hawkins, Howard, & Oyebode, 2007; Martens, 2009; Payne, 2001), and a variety of idiosyncratic questionnaires designed for individual studies (Dougherty et al., 2009; Graham, Ramirez, Cull, & Finlay, 1996; Hackett, Palmer, & Farrants, 2009; Pierce et al., 2007).

1.4.2 Results

For the purpose of the current review, the selected literature shall be discussed according to the factor being investigated – burnout, compassion fatigue, stress or satisfaction, together with the factors which may influence or impact upon these variables, for example, coping, support or individual factors. Due to studies often investigating several of these variables, research reports may feature across these sections. As the ProQOL (Stamm, 2010), was used by all studies investigating compassion fatigue, these studies shall be grouped together although this questionnaire also measures burnout and compassion satisfaction.

Compassion Fatigue, Compassion Satisfaction and Burnout

Slocum-Gori et al. (2013) investigated compassion fatigue, burnout and compassion satisfaction in 630 hospice and palliative care workers in Canada using a translated French version of the ProQOL. The researchers compared these results with those from other research studies and concluded that the participants reported slightly elevated compassion fatigue, average burnout and high compassion satisfaction. Those individuals who reported providing provision of relief from pain or distress or who provided psychosocial support for patients and their families reported higher levels of compassion fatigue and burnout. Higher levels of burnout and compassion fatigue were also reported by those providing emotional support to other team members. Part time workers reported higher levels of compassion satisfaction and lower compassion fatigue and burnout. A limitation of this study was the use of a translated version of the ProQOL which may affect the generalisability of these findings.

A similar study was conducted by Abendroth and Flannery (2006) who used the ProQOL-RIII to investigate compassion fatigue in 216 hospice nurses. Results indicated that nearly 80% of participants were reporting an average to high level of compassion fatigue and 61% were reporting an average to high level of burnout. Further investigation using demographic variables suggested that trauma, anxiety, life demands and excessive empathy were key predictors in the risk of compassion fatigue. It was also reported that 17% did not receive support following a patient's traumatic death and 83.3% of these individuals were reporting an average to high level of compassion fatigue, thus indicating the importance of debriefing.

Alkema et al. (2008) also investigated compassion fatigue, burnout and compassion satisfaction using the ProQOL, however an additional factor of self-care was measured using the Self-Care Assessment Worksheet (Saakvitne &

Perlmann, 1996 as cited by Alkema et al. 2008). This study involved 37 health care professionals working in hospices. Mean levels of compassion fatigue and compassion satisfaction were at the high end of the average range and burnout level was also average. It was suggested that, with the exception of compassion fatigue and physical care, burnout and compassion fatigue were negatively correlated with all aspects of self-care. Compassion satisfaction was positively associated with emotional care, spiritual care and work-life balance, thus indicating that use of self-care strategies is associated with higher compassion satisfaction and lower levels of burnout and compassion fatigue. Age was positively correlated with burnout but not compassion fatigue or compassion satisfaction. Number of months employed in the profession was also positively associated with self-care strategies, indicating that more self-care strategies were utilised by those who had been in the profession for longer, however the correlational design means that direction of causality cannot be inferred.

Whitebird et al. (2013) further investigated compassion fatigue in hospice workers. This research was again conducted in America and involved 547 participants who completed a range of questionnaires including a general health measure, anxiety and depression measures, a social support measure and job satisfaction as well as the ProQOL-III. Results indicated that levels of compassion fatigue and burnout were lower than average based on norms. Mental health appeared to be good although stress was reported to be moderate to very high in 60% of staff. It was reported that participants used physical activity and social support to manage their stress. The majority also reported high levels of satisfaction in their roles. Although the sample size was large for this study, the researchers did suggest that the hospices included were medium and large sized reducing the generalisability to smaller hospices.

Burnout

Although the ProQOL includes a sub-measure of burnout, several studies have measured burnout using a specific burnout questionnaire. Six of the seven studies which shall be discussed here used the Maslach Burnout Inventory, (MBI; Maslach & Jackson, 1986). Table 4 outlines the mean scores on each of the dimensions of the MBI and the alpha reliability coefficient in these studies when reported. Several studies compared MBI scores to other professions such as midwives or nurses from other specialities or from previous research (Graham et al., 1996; Kalicińska, Chylińska, & Wilczek-Różyczka, 2012; Sardiwalla et al., 2007), whereas others utilised normative data, (Asai et al., 2007). Two studies used translated versions of the MBI, (Asai et al., 2007; Kalicińska et al., 2012) and each of these reported alpha reliability scores.

Sardiwalla et al. (2007) investigated how stressors and coping strategies may predict burnout in 78 hospice workers in South Africa. The researchers compared the burnout levels with those obtained from previous research involving carers of patients with Alzheimer disease. This showed that average scores of emotional exhaustion and depersonalisation were higher and personal accomplishment was lower indicating that burnout was high amongst the participants. Results also suggested that stress levels were very high. There was a strong relationship between stressors outside of work and career matters and emotional exhaustion. Those individuals using 'ineffective' and problem-focussed coping strategies also reported higher levels of emotional exhaustion and depersonalisation. However it seemed that the use of problem-focussed coping strategies was also related to increased personal accomplishment.

In a similar study, Payne (2001) also investigated levels of burnout and coping strategies in 82 hospice workers. This study focussed on nurses and nursing assistants and all participants were female. Stressors were also measured

using the Nursing Stress Scale (NSS; Gray-Toft & Anderson, 1981). Results indicated that burnout levels were low to average and the researchers noted that this was comparable to levels reported in other hospice samples. Further analyses indicated that work stressors contributed most to burnout levels particularly 'conflict with other staff members', 'death and dying' and 'inadequate preparation.' With regards to coping strategies, 'escape' contributed to depersonalisation and reduced personal accomplishment whereas 'accepting responsibility' contributed to emotional exhaustion. Coping strategies related to reduced burnout were 'planful problem solving' and 'positive reappraisal' suggesting that both emotion-focussed and problem-focussed strategies can be helpful for coping. However, as the sample size was relatively small these results cannot be taken as representative of the hospice nurse population.

Kalicińska et al. (2012) investigated the relationship between burnout and social support amongst hospice nurses and midwives. A total of 117 participants took part, 58 of whom were hospice nurses. The MBI (Maslach & Jackson, 1986) and a working conditions questionnaire were administered. Results indicated that hospice nurses reported lower levels of burnout and higher levels of social support. Interaction analyses however, indicated that social support was more important for alleviating burnout in midwives and that other resources, not explored in the study, may be important in the lower levels of burnout reported by the hospice nurses.

Graham et al. (1996) also made a comparison between hospice workers and those in other clinical settings. This study investigated burnout in 126 palliative physicians and 882 consultants from other specialities. Psychiatric morbidity was measured using the General Health Questionnaire (GHQ; Goldberg & Williams, 1988 as cited by Graham et al, 1996) and stressful/satisfying aspects of the job were measured using questionnaires designed for the study. It was reported that

burnout was measured using the MBI, (Maslach & Jackson, 1986) however, the results of this measure are not explicitly stated. The researchers outline a conclusion in the discussion suggesting that burnout was lower in the palliative physicians than in the physicians from other specialities. Results from the other measures are more clearly reported and suggested that palliative physicians reported less stress and more satisfaction on many aspects of their work. The researchers also concluded that although levels of psychiatric morbidity were not high, a quarter of the palliative physicians still reported symptoms with a higher prevalence of psychiatric morbidity in female palliative physicians. However this may also be a reflection of the higher number of females working as physicians in palliative medicine compared to other specialities.

A nationwide survey into burnout was conducted in Japan by Asai et al. (2007). Again this focussed on physicians and involved a comparison amongst clinical oncologists and palliative care physicians. The MBI (Maslach & Jackson, 1986) was used to measure burnout, and psychiatric morbidity was again measured using the GHQ (Goldberg et al, 1987 as cited by Asai et al, 2007). An additional questionnaire was developed to measure individual factors including attitudes and beliefs. Results for all participants indicated that emotional exhaustion was high in 22% of participants, depersonalisation was high in 11%, and 62% had low personal accomplishment. This was compared to American normative data and suggested that the prevalence of high emotional exhaustion and high depersonalisation was lower than the normative data and that the proportion of low personal accomplishment was higher. Psychiatric morbidity and overall burnout was much lower in the palliative care physicians. Low confidence in having sufficient time to communicate with patients was most strongly associated with burnout.

Further investigation into burnout and psychiatric morbidity was conducted by Dunwoodie and Auret (2007). Again, the MBI and the GHQ were administered and participants consisted of 41 doctors who regularly provided palliative care. Mean MBI subscale scores indicated that emotional exhaustion and depersonalisation were low whilst personal accomplishment was reported as average. Burnout was predicted by length of practice in palliative care, with longer employment associated with higher burnout. The authors suggested that this may be due to a cumulative effect of burnout. The researchers also reported that mean GHQ scores were similar to those reported in comparable studies with 27% scoring four or above, thus indicating that they are at a high probability of psychiatric morbidity. However, a potentially significant confounding variable was reported during the course of the study as a large hospice in the same state was closed, which may have influenced results.

Plante and Bouchard (1995) investigated burnout using an alternative measure, a French version of the Jones Staff Burnout Scale for Health Professionals (Jones, 1981 as cited by Plante & Bouchard, 1995). The study also measured occupational stress and professional support using measures developed by the researchers and based on McAbee's theoretical model (McAbee, 1991) which outlines the links between burnout, occupational stress and professional support. Participants consisted of 31 palliative care nurses and 45 medical oncology nurses. The researchers suggested that mean burnout scores compared well with those obtained in similar studies and that the palliative care nurses reported significantly lower occupational stress and burnout and higher levels of professional support than the oncology nurses. Higher levels of professional support were seen to be significantly related to lower burnout and slightly related to lower occupational stress. The researchers suggested that this may demonstrate the important role head nurses play in maintaining morale and

good functioning whilst having colleagues who understand and respect each other may attenuate burnout levels. Burnout and occupational stress were significantly related. Limitations of this study include the questionnaire measures used which may require further tests for validation. It was also queried whether the term ‘support group’ was fully understood by all participants.

Table 4 *Means reported by studies using the Maslach Burnout Inventory (MBI)*

Reference	Country and sample size	Means of MBI dimensions			Comparisons of data	Results	Reliability alpha coefficients
		EE	DP	PA			
Asai et al., (2007)	Japan – Japanese version of MBI used. N= 697, (palliative care physicans N = 87)	Means not reported			Compared to American normative data	Higher prevalence of high EE & DP, Higher prevalence of low PA	EE α = .87, DP α = .68, PA α = .88
Dunwoodie & Auret (2007)	Western Australia N = 41	17.5	4.5	39	Compared to previous studies of medical professionals (Shanafelt, Bradley, Wipf & Back, 2002)	EE & DP = low, PA = average	Not reported
Graham, Ramirez, Cull, & Finlay (1996)	UK N= 1008, (Palliative physicians N=126)	Means not reported			Compared to physicians from other specialities		Not reported
Kalicińska, Chylińska, & Wilczek-Różyczka (2012)	Poland Polish Version of MBI used N= 117 (Hospice nurses N = 58)	16.83	4.29	21.64	Compared to midwives	Hospice nurses = sig lower levels of EE & DP	EE α = .85, DP α = .60, PA α = .76

Reference	Country and sample size	Means of MBI dimensions			Comparisons of data	Results	Reliability alpha coefficients
		EE	DP	PA			
Payne (2001)	UK N = 89	17.19	3.91	35.70	Compared to hospice nurses and nurses from a range of specialities	Mean EE & DP = low, Mean PA = average. Comparable EE & DP to other hospice nurses, Lower EE & DP than other nursing professions	EE α = .90, DP α= .79, PA α= .71
Sardiwalla, VandenBerg, & Esterhuyse (2007)	South Africa N=78	23.65	6.63	31.85	Compared with means of caregivers of patients with Alzheimers (Venter, 2000)	Higher average EE & DP, lower PA	EE α = .795, DP α= .672, PA α= .579

Occupational Stress

Of the 24 studies selected for this current review, 12 included a specific measure of stress.

Nursing stress scale. Fillion et al. (2007) aimed to investigate a combination of occupational stress models – the Job Demand-Control-Support model (JDCS; Johnson & Hall, 1988 as cited by Fillion et al, 2007) and the Effort-Reward Imbalance model (ERI; Siegrist, 1996 as cited by Fillion et al, 2007). The participants consisted of 209 palliative care nurses. A range of measures were used to explore job satisfaction, emotional distress, job content, effort and reward, perceived self-efficacy and organisational factors. The Nursing Stress Scale (NSS; Gray-Toft & Anderson, 1981) was adapted to include six additional items to further investigate emotional stressors. Results suggested that emotional distress was lower than a normative sample. Emotional distress was positively related to job demands and negatively related to job resources and was best predicted by low reward, more professional and emotional demands and lower self-efficacy. Limitations of the study include the fact that many of the participants did not exclusively work in palliative care which may reduce the generalisability of these findings to hospice populations.

Hawkins et al. (2007) also used the NSS to investigate sources of stress for 84 hospice nurses. In addition, the researchers measured attachment styles and coping strategies. The results indicated that the main sources of stress for participants were death and dying, high workload and feeling inadequately prepared to deal with the emotional needs of patients and relatives. The most common coping strategies consisted of a mixture of problem-focussed and emotion-focussed methods including seeking support, planning, positive

reinterpretation and acceptance. Results regarding attachment style were mixed but suggest that those with secure or preoccupied attachment styles may be more likely to seek emotional social support when experiencing stress. The researchers noted that the response rate of 39% was lower than expected and therefore queried how representative the results were.

Martens (2009) used the NSS to explore sources of stress in 142 inpatient and community hospice nurses. Self-efficacy was also explored as an additional factor. The NSS was slightly modified to only include two questions regarding each of eight variables and the likert scale was extended to offer a wider range of potential answers. Results indicated that stress factors vary between individuals and that work demands and conflicting expectations are two areas which cause stress. Making a mistake was rated as the highest stressor followed by insufficient personnel to handle workload and fellow workers not doing their job. Inadequate support from managers and personal insults from patients/relatives were also noted as stressors. Community hospice nurses rated higher on self-efficacy and inpatient nurses reported higher perceived stress scores. Three of the stressors were significantly associated with self-efficacy however these only suggested a weak to modest fit. Communicating with a patient/family about death had the strongest relationship but this was still only modest.

As discussed previously, in a similar study, Payne (2001) also used the NSS when exploring stressors, burnout and coping strategies in 82 hospice workers. The most frequently reported stressor was 'death and dying' followed by 'inadequate preparation and workload.' 'Conflict with doctors, nurses and a lack of support followed as the fourth, fifth and sixth stressors respectively. Work stressors were the most important determinant of burnout, particularly 'conflict with other staff members', 'death and dying' and 'inadequate preparation.'

Coping strategies were discussed in relation to burnout but not the stressors identified by the NSS.

Idiosyncratic measures. Pierce et al. (2007) compared levels of work stress, satisfaction and support reported by professionals working on a palliative care unit with those working on an oncology inpatient unit. A questionnaire was designed for the study to measure these factors using likert-like scales. In total there were 60 participants, 25 of which worked on the palliative care unit. Although stress was reported as high overall, those working in palliative care reported less stress in caring for dying patients. The palliative care workers rated 'dealing with patients in emotional and physical distress' as the most frequent source of stress. Palliative care workers also reported higher work satisfaction and felt more supported by their team. An additional finding was that those working on the palliative care unit were more likely to report that their work experience had 'positively altered their attitude to death.' The data from this study was further analysed by Dougherty et al. (2009) to explore the factors which contribute to occupational stress. The responses from the palliative care unit and the oncology unit were combined for this analysis. Workplace did not predict the degree of perceived distress. The results indicated that there was a negative correlation between perceived stress and satisfaction and that the stressors which most strongly predicted work stress were the perception that workload negatively impacted patient care, not having enough time to grieve for a patient and not having enough resources to cope with work stress. Having less work related stress was predicted by the perception of being well supported. Limitations of this study include the small sample size and the lack of validated measures which were not pilot tested.

Hackett et al. (2009) investigated stress levels in 91 hospice workers working across two hospices. The depression, anxiety and stress scale (DSS-21; Lovibond & Lovibond, 1995, as cited by Hackett et al, 2009) was used together with a management standards questionnaire. Results indicated that the participants did not report higher levels of stress than the general population with 29.8% of staff reporting mild to extremely severe stress. The management questionnaire indicated that clarification about roles was needed urgently and that other areas of stress included demands, management support and relationships. Control and peer support were reported to be good. Further analysis suggested that the stressor 'demand' was a significant predictor of stress and that the stressor 'change' was a significant predictor of depression.

Hulbert and Morrison (2006) also explored stress in palliative care workers involving both employees and volunteers from three palliative care settings. Perceived stress was measured using the Perceived Stress Scale (PSS-14; Cohen, Karmack & Mermelstein, 1983 as cited by Hulbert & Morrison, 2006) and occupational stress was measured using a survey created for this study. Optimism, self-efficacy and social support were also assessed. Volunteers reported less general perceived stress than the professionals. Those working in the community reported less general stress than both NHS hospital and hospice based individuals. Professional hospice employees were found to be the most stressed group, followed by NHS workers, with hospice volunteers reporting the least amount of stress. Occupational stress did not significantly differ according to job category but professionals did report higher demand, higher medical and decisional responsibility and more role ambiguity. Self- efficacy was higher in males and in NHS workers. High optimism and self-efficacy correlated with low perceived stress and high satisfaction with social support. The NHS workers and

professional workers generally used the most social support. Limitations of this research included the low response rate to questionnaires (27.3%) which resulted in a small sample size. More participants were recruited from the hospice and gender and age biases also existed.

Duffy and Jackson (1996) used The Hospice Nursing Census Questionnaire which was developed for their research investigating stressors and stress reducers perceived by 168 hospice workers working across 48 hospices in Michigan, USA. The participants included home care nurses, patient care coordinators and ward staff amongst other roles. Results indicated that the most stressful factors were 'physicians who do not understand hospice care', 'too many patients dying at the same time' and the 'high amount of paperwork.' The most difficult aspects of patient/family management were pain and symptom control and managing physical complications. Participants were also asked to select the three most effective stress reducing strategies from a selection of eight. The most commonly selected strategy was discussing work related concerns with colleagues. Exercise, religious/spiritual practices, part-time working, time off and humour were also seen as useful strategies. More than 70% reported that they received informal or formal support from their hospice organisation, however the remaining participants felt that the support was inadequate.

Kulbe (2001) also used a version of the Hospice Nursing Census Questionnaire (Duffy and Jackson, 1996), to investigate stressors and coping in 97 hospice nurses. Results were similar to those of Duffy and Jackson (1996) with the same three factors reported to be the most stressful, although they were reported in a slightly different order with paperwork ranked first followed by physicians who do not understand hospice work and thirdly, a high number of

patients dying. Managing physical complications and pain/symptom control were again rated at the most difficult aspects of patient/family management. The coping strategies rated as most helpful were slightly different than those reported in the Duffy and Jackson (1996) study. Exercise and recreational activities was ranked first followed by humour and taking time off. Unfortunately, Kulbe (2001) did not report the percentages of individuals choosing each stressor or coping measure therefore more accurate comparisons to the results from Duffy and Jackson (1996) cannot be made. It must also be considered that for both studies, responses on the question of stressors were grouped into 'stressful' if rated as strongly stressful or moderately stressful, and 'not stressful' if rated as neutral, low stress of not stressful. This high/low grouping may not be sensitive enough to accurately identify stressors.

Several other studies which have already been discussed in previous sections, also investigated stress in hospice. The results of these are outlined briefly here.

Sardiwalla et al. (2007) used the Experience of Work and Life Circumstances Questionnaire (Van Zyl & Van der Walt, 1991 as cited by Sardiwalla et al., 2007), to investigate stress factors in hospice workers. Results indicated that scores on the measure of stressors outside of work were very high. Work factors which suggested high levels of stress were task characteristics, physical working conditions and career matters such as job insecurity. These work-related stressors appeared to be a strong predictor of burnout levels.

Graham et al. (1996) used an idiosyncratic study specific measure, to explore stressful/satisfying aspects of work. This indicated that the palliative

physicians reported less stress than the other consultants in many aspects of their work. Palliative physicians rated the most stressful aspect as work overload and its disruptive effect on home life but reported less stress from patient care and the way they were managed.

Plante and Bouchard (1995) measured occupational stress in palliative care nurses and medical oncology nurses using measures developed by the researchers themselves. Results indicated that the palliative care nurses reported significantly lower occupational stress. Stressors related to the working environment such as time constraints and difficulties in communication between doctors and nurses, had the strongest relationship with burnout.

Job Satisfaction

Ten of the 24 selected studies investigated job satisfaction. A variety of different measures were used.

DeLoach (2003) aimed to explore job satisfaction amongst hospice staff using a questionnaire based on the Revised Causal Model of Job Satisfaction (RCMJS; Agho, Mueller & Price, 1993 as cited by DeLoach, 2003). Seventy-six participants from four hospices in Ohio, USA, completed the questionnaire. The majority reported a high level of satisfaction with their jobs. The researchers concluded that hospice workers are more likely to be satisfied in their jobs if they experience positive emotions, have clear roles and responsibilities, have control over their work and can be creative. The data was further analysed by Monroe and DeLoach (2004) to explore whether there were differences in satisfaction between the various job disciplines. Although all hospice workers reported being satisfied, social workers were the least satisfied. They reported being less satisfied with how they were rewarded, their level of autonomy, and the availability of

opportunities for employment outside of their current workplace. A small sample size meant that the researchers were unable to distinguish between home health aides and spiritual care providers due to low numbers of these participants.

Casarett, Spence, Haskins, and Teno (2011) used The Survey of Team Attitudes and Relationships (STAR, Qaseem, Shea, Connor & Casarett, 2007 as cited by Casarett et al, 2011) to measure job satisfaction in 8,495 hospice staff recruited from 177 hospices across 41 states in the USA. The results were gathered over three years and indicated that there were significant differences between levels of satisfaction reported by individuals working within different disciplines. Physicians reported the highest rates of satisfaction whilst nurses and social workers reported the lowest rates. Limitations of this research include the possibility of response bias. The number of physicians who took part was particularly small. The researchers also reported that the low number of for-profit hospices was not representative of the hospice population.

Head, Washington, and Myers (2013) investigated job satisfaction in 626 hospice and palliative care nursing assistants using the Better Jobs Better Care Survey of Direct Care Workers (Survey Research Centre, Penn State, 2008, as cited by Head et al, 2013). The majority indicated that they were satisfied in their jobs and intended to stay in their jobs. Satisfaction was associated with receiving team spirit rewards, high quality of supervision, and having few job problems. The researchers suggested several limitations with this study including lack of accessibility to the questionnaire for individuals without computer access or for whom English was not their first language.

Several studies which investigated job satisfaction have previously been discussed and therefore the results relating to job satisfaction will only be briefly outlined here.

Fillion et al. (2007) explored job satisfaction in palliative care nurses using the General Satisfaction subscale of the Job Diagnostic Survey (JDS; Hackman & Oldham, 1975 as cited by Fillion et al., 2007). Results suggested that job satisfaction was similar to that of other workers and was positively associated with job resources and negatively associated with job demands. Job satisfaction was best predicted by job demand, effort, reward and people-oriented culture.

Pierce et al. (2007) used a study-specific questionnaire to investigate several factors including job satisfaction in palliative care workers. Results indicated that the participants reported higher work satisfaction than individuals working on an oncology inpatient unit and felt more supported by their team.

Graham et al. (1996) measured job satisfaction using a study specific questionnaire. Results indicated that palliative physicians reported more satisfaction than consultants from other specialities on many aspects of their work with the most satisfying aspect being 'having good relationships with patients, relatives and staff'.

Whitebird et al. (2013) measured job satisfaction in 547 hospice workers using a single item question to ask how satisfied participants were with their work on a likert scale from extremely dissatisfied to extremely satisfied. Results indicated that the majority were satisfied with their work with 78% reporting that that they were extremely satisfied or satisfied with their work, although it should be considered that this one item question may not accurately capture participants' views, especially if there were any concerns about anonymity.

1.5 Discussion

1.5.1 Main Findings

It appears that across studies, levels of compassion fatigue vary amongst hospice workers but tend towards average. Burnout as rated on the ProQOL also appears to suggest average levels, however compassion satisfaction is generally rated as high. Working closely with patients to relieve distress and supporting colleagues and relatives of patients seems to be related to higher levels of compassion fatigue and burnout , whilst individual characteristics such as excessive empathy may also result in higher levels (Abendroth & Flannery, 2006; Slocum-Gori et al., 2013). Support following the death of a patient and effective self-care strategies may be important for managing compassion fatigue and burnout (Abendroth & Flannery, 2006; Alkema et al., 2008; Whitebird et al., 2013). Those who work part time and have a good work-life balance report more compassion satisfaction whilst age may be positively related to higher levels of burnout (Alkema et al., 2008).

Burnout in hospice workers, as rated using other measures, including the MBI (Maslach et al., 1986), tends to be at a low to average level. When compared to individuals working in other clinical settings such as midwives, clinical oncologists and oncology nurses, hospice nurses and palliative care physicians appear to score lower on burnout measures (Asai et al., 2007; Graham et al., 1996; Kalicińska et al., 2012; Plante & Bouchard, 1995). Although Plante and Bouchard (1995) did not use the MBI, (Maslach & Jackson, 1986), similar results were reported. Factors which seem to be related to burnout include coping strategies, although the evidence is mixed over which types of strategies are

most effective for reduced burnout levels. It also appears that occupational support and attitudes towards death play a role.

The studies reviewed indicate that stress levels seem to vary as some suggest stress levels in hospice workers are lower than normative samples (Fillion et al., 2007; Hackett et al., 2009) whilst others suggest that work related stressors are high, (Sardiwalla et al., 2007). Palliative care staff reported less stress in caring for dying patients although dealing with patients in distress was rated as a major stressor (Pierce et al., 2007). Other sources of stress were workload, feeling unprepared to cope, managing pain and physical complications, making a mistake, inadequate support and insufficient staff, (Duffy & Jackson, 1996; Graham et al., 1996; Hackett et al., 2009; Hawkins et al., 2007; Kulbe, 2001; Martens, 2009; Payne, 2001). Palliative care workers reported less stress than consultants from other specialities, oncology nurses and critical care nurses, (Graham et al., 1996; Plante & Bouchard, 1995). Volunteers and community palliative care staff report lower levels of stress (Hulbert & Morrison, 2006).

Research suggests that hospice workers report high levels of satisfaction with their jobs (DeLoach, 2003; Graham et al., 1996; Head et al., 2013; Monroe & DeLoach, 2004; Pierce et al., 2007; Whitebird et al., 2013). Satisfaction seems to be related to levels of support, supervision, and job resources (DeLoach, 2003; Fillion et al., 2007; Head et al., 2013). Personal characteristics such as -positive affectivity' - the extent to which an individual experiences positive emotions, also play a role, (DeLoach, 2003). Individuals in different job roles may experience differing levels of job satisfaction (Casarett et al., 2011; Monroe & DeLoach, 2004).

Coping Strategies.

Many of the studies which have been discussed have examined coping strategies alongside stress, burnout, satisfaction and compassion fatigue. It appears that problem-focussed and emotion-focussed strategies can be helpful such as planful problem-solving, positive reappraisal and acceptance (Hawkins et al., 2007; Payne, 2001; Sardiwalla et al., 2007). The use of 'ineffective' strategies, some problem-focussed coping strategies and 'escape' appear to be related to higher levels of burnout. A range of other coping strategies have been rated as helpful including 'discussing work related concerns with colleagues'. Exercise, religious/spiritual practices, part-time working, taking time off, social support and humour were also reported as useful strategies, (Duffy & Jackson, 1996; Kulbe, 2001; Whitebird et al., 2013). Self-care has also been associated with more compassion satisfaction and less burnout and compassion fatigue (Alkema et al., 2008).

The role of social support has also been investigated and when compared to other professionals, palliative care workers appear to report higher levels of social support at work (Kalicińska et al., 2012; Pierce et al., 2007; Plante & Bouchard, 1995). Results indicated that higher levels of support are related to less burnout and occupational stress, (Plante & Bouchard, 1995).

Mental health.

Several studies investigated mental health in relation to stress, burnout and compassion fatigue in palliative care workers. Results indicated that levels of psychiatric morbidity, depression, anxiety and stress were not higher than the general population (Dunwoodie & Auret, 2007; Graham et al., 1996; Hackett et

al., 2009; Whitebird et al., 2013). When compared to clinical oncologists, psychiatric morbidity was found to be much lower in palliative care physicians, (Asai et al., 2007). Although, levels of psychiatric morbidity were not high, Graham et al. (1996) did point out that a quarter of palliative physicians still reported symptoms and that there was indication of a higher prevalence of psychiatric morbidity in female palliative physicians.

Other factors.

Other individual factors which were examined were attachment styles, optimism and self-efficacy. Results concerning attachment styles were mixed but did suggest that hospice nurses with secure or preoccupied attachment styles may be more likely to seek emotional social support, (Hawkins et al., 2007). Palliative care workers with high optimism and self-efficacy reported lower stress, (Hulbert & Morrison, 2006).

Death anxiety which involves fear of dying for self and others, denial of death and avoidance of death, was also investigated. Those working on a palliative care unit were more likely to report that their work had 'positively altered their attitude to death,' (Pierce et al., 2007).

1.5.2 Critical Review

Limitations of previous research

It was observed that there were common limitations across the studies which have been summarised below.

All research studies included within the current review were cross-sectional in nature, using a correlational method to investigate findings. As described throughout the review, this means that although associations can be described, causality cannot be inferred. As many of the studies investigate coping strategies and individual characteristics alongside the main variables for compassion fatigue, burnout, stress and satisfaction, researchers are unable to conclude which factor precludes the other. For example, in the case of the finding that self-care is associated with less burnout and compassion fatigue, (Alkema et al., 2008), this may be due to self-care acting as a protective element against developing symptoms of compassion fatigue and burnout, or it may be that as a result of experiencing burnout and compassion fatigue, individuals are less able to engage in self-care. This in turn may impact on intervention strategies for reducing levels of burnout and compassion fatigue. Without longitudinal research a clear conclusion cannot be drawn.

Another limitation that has been briefly discussed is the gender bias that exists in all studies included in the current review. Twenty-three of the twenty-four had a majority of female participants therefore the findings are not easily generalisable to male hospice workers. However, the overwhelming gender bias is likely to be reflective of the real-life hospice worker population.

All studies used self-selection sampling methods which resulted in low response rates from many studies and may impact on the generalisability of the

data. It is understandable that with the pressures of hospice work and, as reported by many of the studies, the challenging workloads that staff members face, many felt unable to participate in the research studies. It should also be considered however, whether those who did not complete questionnaires felt unable to participate because they were experiencing very high levels of burnout, stress or fatigue. Alternatively, those who did not participate may represent individuals who were not experiencing any of these difficulties and therefore were less motivated to complete the questionnaires.

Another methodological limitation of the included studies that should be considered was the use of self-report measures. This may have resulted in response bias, particularly if participants had any concerns about anonymity. It may also reduce accuracy of responses if individuals find it difficult to self-reflect and articulate their experiences.

Limitations of literature review

The current literature review has several limitations. Only published articles were included meaning that publication bias may exist. This is when studies are not published if they do not demonstrate statistical significance or indicate the expected direction of findings, (Dickersin, 1990). The current review also included results of studies conducted in a wide range of countries and across various palliative care settings, under different medical providers including the NHS, and private hospices. This assumes that the experience of working in palliative care is similar across settings and results are comparable, but this may not be the case. The exclusion of qualitative studies may also limit the findings and the conclusions about the experience of working in palliative care.

1.5.3 Implications

The findings of this review may suggest ways that hospice managers can increase awareness of compassion fatigue, burnout and stress. It appears that although levels of these experiences may be low in palliative care workers, a proportion of staff do still suffer from these difficulties. It also seems that there are many work stressors which are reported by this workforce. Managers may find it beneficial to educate their staff about compassion fatigue and burnout so that early symptoms can be recognised.

Although parts of the role of a palliative care worker will be stressful, it would be helpful for managers to promote effective coping strategies to manage this stress so as to reduce the likelihood that burnout and compassion fatigue will develop. This could include promoting exercise or relaxation, and encouraging social activities to build team support levels. Many staff members reported that humour and team support is important for coping, therefore organising opportunities for this may be useful and could increase job satisfaction.

More structured staff support could include regular reflective practice groups, the use of debrief sessions following the death of a patient and ensuring that supervision is regularly scheduled. It has been suggested that the quality of this supervision is also important, therefore, managers should ensure that supervisors are provided with training in supervision.

Although this review only briefly mentions potential risk factors for palliative care staff, with more research, these factors could be considered by managers so that individuals who may be more at risk are provided with adequate support. For example, age, working hours and job role may all contribute to risk

of developing burnout and compassion fatigue. Other individual factors which could be investigated are self-efficacy and optimism. Assessing these factors so as to increase awareness of individuals who may require more support could form part of supervision sessions.

This review may only focus on palliative care workers but the results could be helpful for other healthcare workers. The levels of compassion fatigue, burnout and stress seem to be lower than those reported by individuals working in different specialities. Examining why this difference exists could offer other healthcare managers suggestions regarding how to better manage these difficulties and how to promote satisfaction.

1.6 Conclusions

The review objectives as outlined in the introduction shall now be examined to provide a conclusion for this literature review.

1. The research appears to indicate that amongst hospice workers, levels of compassion fatigue are average whilst burnout levels are low to average, as indicated using cut-off scores on validated measures. Stress levels seem to vary but many stressors are identified by hospice workers.
2. Compassion satisfaction and job satisfaction levels appear to be high in hospice workers overall.
3. Factors which appear to influence these experiences in hospice workers include social/supervisory support and coping strategies. Individual characteristics such as self-efficacy and optimism may play a role whilst age, work role, work environment and working hours may also contribute.
4. Social support, quality of supervision and effective coping strategies seem to be associated with lower levels of compassion fatigue, burnout and

stress. Exercise, recreational activities and humour are also regularly reported to be helpful. The use of emotion focussed coping strategies compared to problem focussed strategies remains unclear.

5. Throughout the review, the research methodology has been evaluated. Limitations include cross-sectional designs, self-selection methods and gender bias. This has an impact on the conclusions that can be draw regarding directions of causality and generalisability of results.
6. It seems that the level and quality of support offered to hospice workers is fundamental to levels of compassion fatigue, burnout and compassion satisfaction. Hospice organisations may also want to consider the further exploration of individual factors such as age, working hours and personal characteristics which may be risk factors for high levels of burnout and stress and compassion fatigue. Satisfaction may be increased by encouraging the use of self-care, coping strategies and emphasising the importance of team support.

1.6.1 Future Directions

Future research could further investigate the role of coping strategies on compassion fatigue, burnout and work stress. This could contribute to knowledge on this topic and further indicate the most beneficial coping strategies for palliative care workers. It would also be useful for further research to investigate potential risk factors for compassion fatigue and burnout. This could help to identify individuals who are most at risk of developing these difficulties and enable implementation of preventative measures and appropriate coping strategies.

Chapter 2: Empirical Paper

An Investigation of Compassion Fatigue, Compassion Satisfaction, Burnout and Coping Strategies in Hospice Workers

2.1 Introduction

According to the Labour Force Survey, work-related stress in Britain resulted in 11.3 million lost working days in 2013/2014 with the number of cases of work-related stress, depression or anxiety reaching 487,000 cases. Health professionals, particularly nurses, were amongst the three professions that reported the highest prevalence of work-related stress (The Health and Safety Executive; HSE, 2014). Due to the experience of working with high levels of death and dying, it is proposed that palliative care-givers are at particular risk of burnout and compassion fatigue, (Pereira et al., 2011). Despite this, it appears that satisfaction remains high in this workforce (DeLoach, 2003; Whitebird et al., 2013). It is suggested that further investigation of the predictors of these outcomes is required to assist with identifying those at risk of burnout and compassion fatigue whilst also learning more about how to promote job satisfaction.

2.1.1 Compassion Fatigue

The term 'Compassion Fatigue' was introduced by Joinson (1992) as a description of burnout experienced by nurses. It is considered to be a consequence of working in a caregiving profession with people that are suffering, combined with strong empathy, (Figley, 1995) which can result in a diminished

ability to respond empathically towards patients, (McGarry et al., 2013). The term 'Compassion Fatigue' is sometimes used interchangeably with 'Secondary Traumatic Stress' which refers to psychological symptoms modelled on Post Traumatic Stress Disorder (PTSD). These include re-experiencing of a traumatic event, having intrusive thoughts and avoiding reminders of an event, but are developed through witnessing individuals who are suffering the effects of a trauma rather than direct experiencing of the trauma itself, (Baird & Kracen, 2006).

Compassion Fatigue has been studied in a variety of health professionals including paediatric health care professionals, emergency nurses, oncology nurses, intensive care nurses and social workers (Bride, 2007; Hooper et al., 2010; McGarry et al., 2013). Abendroth and Flannery (2006) investigated compassion fatigue in 216 palliative care nurses in Florida using a cross-sectional survey method. Results indicated that nearly 80% were reporting average to high levels of compassion fatigue and found that an inability to debrief following a traumatic event appeared to diminish internal coping mechanisms. It was also noted that 35% of participants diagnosed with depression or PTSD were in the 'high' category of compassion fatigue compared to 24% who did not have depression or PTSD. The researchers concluded that it is important to find ways to prevent and treat compassion fatigue and that doing so could reduce the risk of employee sickness and increase patient satisfaction. Research by Whitebird et al. (2013) suggested that levels of compassion fatigue in hospice workers were lower than average although stress was reported as average to very high in 60% of staff. Participants in this study reported the use of exercise and social support to manage stress levels.

2.1.2 Burnout

Maslach and Jackson (1984) suggested that burnout comprises of three dimensions: emotional exhaustion from chronic stress; depersonalisation and detachment from the job; and a lack of personal accomplishment related to feelings of incompetency and a lack of achievement. Although not specific to caring professions, it is suggested that those working in such environments are susceptible to burnout due to the emotional intensity of working with patients and managing patients' distress, (Sardiwalla et al., 2007). Work related stressors may include organisational factors, role ambiguity, overload and social factors and it is exposure to such stressors over a prolonged period of time that may result in burnout, (Sardiwalla et al., 2007). Research by Abendroth and Flannery (2006) suggested that 61% of hospice nurses in a sample of 216, were reporting average to high levels of burnout.

Qualitative research conducted by Pearson (2013) investigating the experience of palliative care nurses identified several themes including lack of a plan, ability to manage symptoms, communication with family and level of experience including training. The researchers concluded that recognition of such themes should help to guide education and support of palliative care nurses to reduce burnout and stress.

Burnout and Compassion Fatigue, although likely to be related and to overlap, are thought to be distinct concepts in that burnout describes a general reaction to work-related stress and can be experienced by workers in any field, whereas compassion fatigue is specific to those who work in a caring role. (Alkema et al., 2008). It is also suggested that individuals who are experiencing compassion fatigue may still be able to care, whereas burnout may prevent individuals from being able to perform normally, (Pereira et al., 2011; Slocum-

Gori et al., 2013). It is indicated that that work stressors and particularly social interactions such as conflicts with other staff members and organisational stressors, are the most important predictors of burnout (Maslach & Jackson, 1981; Payne, 2001), and that burnout has a slow and is the result of long-term work-related stress, (Stamm, 2010).

2.1.3 Compassion Satisfaction

Stamm (1998 as cited in Collins & Long, 2003) suggested that as not all trauma workers suffer from compassion fatigue, there must be a protective mechanism to maintain wellbeing which counterbalances the risk of developing these difficulties. This was named compassion satisfaction and is now used to describe the empathy and compassion felt by those who work with individuals who are suffering and the emotional rewards of caring for others. Research by Graham et al. (1996) and Whitebird et al. (2013) indicated that hospice workers experience accomplishment and satisfaction despite the challenges of working in this environment. This was supported by research conducted by Slocum-Gori et al. (2013) who investigated compassion fatigue, burnout and compassion satisfaction in 503 hospice and palliative care workers working in Canada. They found that respondents had high levels of compassion satisfaction. Compassion satisfaction was negatively associated with both compassion fatigue and burnout and it was also found that part time workers had higher levels of compassion satisfaction compared to full time workers.

2.1.4 Coping Strategies

A range of coping strategies have been reported to be used by healthcare workers and these may be problem-focussed, emotionally-focussed or

'ineffective' in nature. Problem-focussed strategies include problem solving to prevent or change a stressor; planning to learn ways to manage stressors; gathering information and obtaining social support for instrumental reasons such as improving communication, (Sardiwalla et al., 2007). Emotionally-focussed strategies include seeking emotional support, acceptance, turning to religion and expressing feelings,(Carver, Scheier, & Weintraub, 1989). Other strategies are referred to as 'Ineffective' or less effective strategies. These strategies referred to as 'Ineffective' in previous literature include responses which may be less useful, such as avoidance of feelings by keeping busy, mental disengagement and behavioural disengagement, (Carver et al., 1989; Sardiwalla et al., 2007). Although these strategies may be less useful for effectively coping with stressors rather than wholly ineffective, for consistency with the previous literature, the term 'ineffective' will be used in this study. However, this should be treated with caution and the understanding of these strategies as 'less useful' should be remembered. Sardiwalla et al. (2007) investigated the relationship between burnout and coping strategies in 82 hospice workers in South Africa. Results indicated that the use of 'ineffective' coping strategies and problem-focussed coping strategies was associated with higher levels of emotional exhaustion and depersonalisation. This relationship was suggested to be due to the ineffectiveness of problem-focussed strategies when a situation is less alterable such as death or illness. It was suggested that emotionally-focussed strategies may be more effective for such situations. Research by McGarry et al. (2013) also investigated coping strategies in paediatric health care professionals and found that non-productive coping strategies were associated with secondary traumatic stress and burnout.

King et al (1998 as cited in Collins & Long, 2003) proposed that hardiness and social support is associated with fewer psychological problems and therefore these factors are protective when working with trauma. Galek, Flannelly, Greene, and Kudler (2011) investigated burnout, secondary traumatic stress and social support in 331 chaplains. Their findings indicated that social support was negatively associated with secondary traumatic stress and burnout. Research by Alkema et al. (2008) with 37 hospice care professionals found that compassion fatigue and burnout were both negatively correlated with self-care activities but that only certain aspects of self-care – emotional and spiritual, and personal-professional balance, were predictive of higher levels of Compassion Satisfaction.

2.1.5 Locus of Control

Locus of control refers to the way than an event is perceived. If an event is seen as due to luck, under the control of others or unpredictable this belief has been labelled external control. Whereas an event perceived as contingent upon one's own behaviour is labelled internal control, (Rotter, 1966). Previous research has suggested that individuals with an external locus of control are at highest risk of compassion fatigue, (Injeyan et al., 2011). The researchers suggested that this may be due to individuals with an internal locus of control perceiving that they have more control over outcomes and being more likely to use active coping strategies. It has also been proposed that those with an external locus of control are more likely to experience continuous stress and are therefore more vulnerable to burnout, (Engelbrecht, Bester, Van den Berg, & Van Rensburg, 2008; Maslach et al., 2001). Similar results were suggested by Gianakos (2002) who studied predictors of coping with work stress. It was found that those who attributed failure or success to chance events or others, showed more stress and exhaustion. An internal locus of control also predicted more help seeking

behaviour whereas an external locus of control predicted more avoidance behaviour.

2.1.6 Rationale of the Current Study

There appears to be much research into the presence of compassion fatigue, burnout and compassion satisfaction in a range of caring professions. However far fewer studies have looked at these issues in palliative care nurses, particularly in UK hospices, despite the evidently challenging nature of this work. It has been suggested that qualitative research would be useful to provide further information about the specific experiences of compassion fatigue, burnout and compassion satisfaction, together with coping strategies that people use (Alkema et al., 2008).

This proposed piece of research aims to investigate the prevalence of compassion fatigue, burnout and compassion satisfaction further, including the impact that coping strategies and locus of control may have on these experiences. The collection of qualitative information in parallel to quantitative methods will provide extra knowledge about these experiences, (Flick, Garms-Homolová, Herrmann, Kuck, & Röhnsch, 2012). Together, these two approaches may offer suggestions as to who is most vulnerable to compassion fatigue and burnout, thus aiding the development of preventative measures and look at increasing compassion satisfaction which could have a direct impact on service delivery.

2.1.7 Research Question

This research investigated the rates of compassion fatigue, burnout and compassion satisfaction in hospice nurses together with the coping strategies that hospice nurses use and the individual factor of Locus of Control.

Hypotheses

1) It was hypothesised that higher rates of compassion fatigue and burnout would be associated with lower levels of compassion satisfaction.

2) It was predicted that higher rates of compassion fatigue and burnout, and lower rates of compassion satisfaction would be associated with an external locus of control, the use of 'ineffective' coping strategies and problem-focussed strategies.

3) It was hypothesised that lower rates of Compassion Fatigue and burnout, and higher rates of compassion satisfaction would be associated with the use of emotionally-focussed coping strategies and an internal locus of control.

2.2 Method

2.2.1 Design

A cross-sectional, mixed methods questionnaire design was used employing a convenience sample.

2.2.2 Participants

Managers of nine hospices were contacted, informed about the study aims and asked whether they would like their staff to participate in the research. Four hospices declined to take part due to time commitments and recent changes in staffing. Five hospice managers agreed to invite their staff to participate. Paper questionnaire packs were distributed to the hospices for qualified nurses and unqualified nurses working within the hospice at home teams or on the hospice ward. It was decided that individuals from these two areas would be included in the study as the levels of patient contact are comparable across the job roles. The 'Hospice at Home' service provides care for patients with advanced illness in the community, enabling them to die in their own homes. Hospice wards provide in-patient care and day services for individuals with life-limiting illnesses

Participants were recruited between July 2014 and March 2015. The minimum sample size required for multiple regression with four predictors was calculated to be 85 using G Power (Faul, Erdfelder, Lang, & Buchner, 2007). This was with 0.8 power, 5% significance and an effect size of $f^2 = 0.15$ which is classed as a medium effect size. Seventy-two participants (70 female, 2 male), completed a minimum of one questionnaire, a further six participants completed less than one page of questions and these data sets were excluded from the analysis. It is estimated that the response rates to questionnaires from each hospice ranged from 13%-66% with an estimated response rate overall of 25%. With the actual sample size that was collected, an effect size of .15, four predictors and with 5% significance, power was calculated to be .72 for this study, (Faul et al., 2007). The vast majority of participants were female and aged predominantly in the 45-55 and 55-64 years categories. Demographic data can be seen in tables 5 and 6.

Table 5 *Demographic Variables – categorical*

	N	Frequency (%)
Gender		
Female	70	87.5
Male	2	2.5
Age		
Under 25	1	1.3
25-34	5	6.3
35-44	6	7.5
45-54	39	48.8
55-65	21	26.3
Job Role		
Nurse	45	56.3
Auxiliary Nurse	19	23.8
Nurse Specialist	5	6.3
Other	3	3.8
Work Location		
Ward	28	35
Hospice at Home	37	46.3
Both	5	6.3
Other	2	2.5
Supervision		
Yes	39	57.35
No	29	42.65

Table 6 *Demographic variables –continuous*

Variable	N	*M*	SD	Mdn	Range	
					Min	Max
Hours worked per week	71	28.14	8.97	30.00	5.25	40.00
Length of employment (years)	71	7.50	6.46	5.50	.25	25.00
Time qualified (years)	72	16.76	14.67	16.00	0	43.00

2.2.3 Materials

All variables were investigated using questionnaires. The three criterion variables were compassion fatigue, compassion satisfaction and burnout. There were four predictor variables: locus of control, problem-focussed coping strategies, emotionally-focussed coping strategies and 'ineffective' coping strategies.

Demographic information.

Demographic information collected included age, gender, job role, job location (ward or hospice at home), hours worked, length of employment, whether any qualification had been obtained and access to supervision (see Appendix D)

Compassion Fatigue, Burnout and Compassion Satisfaction.

The Professional Quality of Life (Pro-QOL; Stamm, 2010) is a 30-item self-report questionnaire which consists of three sub-scales which measure Compassion Fatigue, Compassion Satisfaction and Burnout. The scale is thought to have good construct validity and Cronbach's alpha indicates good internal

reliability with alpha reliabilities of .88 for Compassion Satisfaction, .81 for Compassion Fatigue and .75 for Burnout, (Stamm, 2010). Participants are told that compassion for those that they care for can affect them in positive and negative ways. They are then asked to consider each question in relation to themselves and their work environment, choosing the option which reflects how frequently they have experienced it in the last 30 days. A 5-item likert scale is provided for selection, rated from 'Never' to 'Very Often.' Cut-off scores are provided in the ProQol Manual (Stamm, 2010) . For each subscale a score of 22 or less indicates a low level, a score of 23-41 indicates an average level and a score of 42 or more indicates a high level.

Coping Strategies.

The Cope Scale (Carver et al., 1989) is a 60-item self-report measure which looks to assess the different ways that people respond to stress. The scale measures 13 different coping strategies which can be sub-divided into three groups of responses as by Sardiwalla et al., (2007): problem-focused coping, emotionally-focussed coping and less useful/'ineffective' coping strategies. Additional questions also investigate the use of humour and substance use for coping. Participants are asked to think about how they respond when confronted with difficult or stressful events. For each statement participants are required to choose one option from a 4-point likert scale ranging from 'I usually don't do this at all' to 'I usually do this a lot.' Examples for each of the subscales are: For problem-focussed coping – 'I concentrate my efforts on doing something about it.' Emotionally-focussed coping – 'I try to grow as a person as a result of the experience.' 'Ineffective' coping – 'I admit to myself that I can't deal with it, and quit trying.' Cronbach's alpha has been reported as good with alpha coefficients

ranging from .62 to .92 for each of the 13 subscales. Construct and content validity is also thought to be acceptable, (Carver et al., 1989).

Locus of Control.

Rotter's Locus of Control Scale (Rotter, 1966) was used to measure locus of control and consists of 29 pairs of statements, six of which are filler pairs. Participants are asked to select one statement from each pair and a score of one is given for each that represents an external locus of control. A maximum score of 23 can be gained and higher scores reflect external locus of control whereas lower scores suggest an internal locus of control. An example of a statement pair is: 'Many of the unhappy things in people's lives are partly due to bad luck' vs 'People's misfortunes result from the mistakes they make'. The scale is suggested to have a good internal consistency (.65-.79; Rotter, 1966) and test-retest reliability (.61, Lange & Tiggemann, 1981).

Questionnaire of job experience and coping strategies.

An additional questionnaire consisting of four open-ended questions was also administered. This was to collect qualitative data to provide richer descriptions of participants' personal experiences of their job role and their coping strategies. In this regard participants would not be confined to a selection of answers as provided in likert scales used in the other measures. Questions explored what participants found challenging in their job, what participants found enjoyable and what coping strategies participants tend to engage in, both in and outside of work, (see Appendix E). It has been suggested that qualitative research would be useful to provide further information about the specific experiences of compassion fatigue, burnout and compassion satisfaction, together with coping strategies that people use (Alkema et al., 2008).

2.2.4 Procedure

Following initial contact with hospices that consented to take part in the study, meetings were arranged with relevant nurse leads or managers to further explain what the study would involve. Paper copies of the questionnaire packs were then provided for the hospice to place in an accessible place for appropriate staff members to access. Each questionnaire pack contained the questionnaires and a participant information sheet (see Appendix A). This explained that by completing the questionnaires, participants would be consenting to their data being used for the purpose of the study. No explicit consent form was included. These materials were provided in an envelope which participants were instructed to seal once completed and to return back to a box which was placed in a location approved by individual hospices.

2.2.5 Ethical Considerations

Ethical approval was gained from the University of Southampton, School of Psychology Ethics Committee. As all hospices were funded by charities, NHS ethical approval was not required. Each individual hospice had their own protocol for research which was adhered to, for example, executive board meetings and clinical governance meetings. Following an executive board meeting with a hospice prior to data collection, it was requested that explicit consent sheets were not used so as to ensure that anonymity was protected. Participants were informed that their data would be stored on a password protected electronic database only accessible by the researcher. As consent forms were not used and names were not collected, participants were also informed that they would not be able to withdraw their data. Contact details for the researcher were provided on the participant information sheet together with details of any other support

mechanisms available to specific hospices. Examples of this included free counselling or employee assistance programmes.

2.2.6 Data analysis

Quantitative data analysis was conducted using SPSS version 22. Pearson correlations, independent t-tests and one-way anovas were used to investigate descriptive statistics. Person correlations and hierarchical multiple regressions were conducted to investigate the three hypotheses. The responses to the open-ended questions were collated and were organised into ideas and themes as in a thematic analysis approach, (Guest, MacQueen, & Namey, 2011). Thematic analysis had the advantage of being a flexible tool for identifying and reporting themes within data and can usefully summarise large amounts of data, (Braun & Clarke, 2006). These two approaches to data analysis were then combined and triangulated, (Flick et al., 2012).

2.3 Results

2.3.1 Data Preparation

Descriptive and demographic statistics for all variables are shown in Tables 5, 6 and 7. Missing data were replaced with respondent's mean for subscales as suggested by Tabachnick and Fidell (2007) and cases were excluded pairwise for missing demographic data. Variables were independent and criterion and predictor variables created interval data. Normal distribution for criterion variables was investigated using histograms and the Shapiro-Wilk test of skewness and kurtosis. This indicated that Compassion Satisfaction was

significantly not normal, $w(72) = .949$, $p<.05$, skewness ($z= -.86$) and kurtosis ($z=.892$). Burnout was also significantly non-normal, $w(72) = .949$, $p<.05$, skewness ($z=.93$) and kurtosis ($z= 2.35$), as was Compassion Fatigue, $w(72) = .939$, $p<.05$, skewness ($z= 1.03$) and kurtosis ($z= 2.71$). Bootstrapping was therefore employed in further statistical analysis where these assumptions were required.

A histogram indicated that age was negatively skewed with the majority of respondents aged over 45, therefore this variable was recoded to become a dichotomous variable consisting of an 'under 45' category and an 'over 45' category. Also due to wide variation in how individuals reported regularity of supervision, this was recoded into a dichotomous variable consisting of 'yes' and 'no' to receiving supervision. Due to the large majority of female participants (females= 87.5%), it was felt that further investigation of this demographic variable would not be meaningful.

Normal distribution for predictor variables was investigated using histograms and the Shapiro-Wilk test of normality. This indicated that the locus of control scale was normally distributed. The problem focussed subscale and the 'ineffective'/unhelpful coping subscale of the Cope Scale were also normally distributed. The emotion focussed coping subscale was skewed, $w(70)=.97$, $p=.05$, skewness ($z=.26$) and kurtosis ($z=-.87$), the humour subscale was also non-normally distributed, $w(70)=.96$, $p<.05$, skewness ($z=.17$) and kurtosis ($z=-.86$), as was the substance use subscale, $w(70)=.64$, $p<.001$, skewness ($z= 1.66$) and kurtosis ($z=1.56$). As the humour and substance use subscales each only consist of four items this is not surprising and results of these subscales were therefore interpreted with caution. Homogeneity of variance was assessed and verified using Levene's test and ZRESID and ZPRED plots for regression.

To enable multiple regression analysis and correlational analyses to be conducted, categorical variables with more than two groups were recoded into dummy variables. This was the case for job role, age and job location.

2.3.2 Descriptive Statistics

Compassion Fatigue.

Mean Compassion Fatigue scores (M=21.00, SD=5.11) met the cut off score for 'low' levels of compassion fatigue, (Stamm, 2010).

Staff under the age of 45 reported higher levels of compassion fatigue (under 45: M= 23.00, SD=7.39; over 45: M=20.6, SD=4.51). However, an independent t-test found this difference to be non-significant, t(70)= 1.15, p=.14. There was also no significant difference in compassion fatigue levels between individuals who reported that they received formal supervision and those who reported that they did not receive formal supervision, t(45.72)=-0.7, p=.95.

A one-way anova indicated that there were no significant differences in compassion fatigue levels between different work locations. As homogeneity of variance was not met, Welch's F was interpreted, Welch's F(3,4.88)=2.11, p=.220. There were also no significant differences in compassion fatigue between job roles, F(3, 68)=15.06, p=.64.

Burnout.

Mean burnout scores (M=21.61, SD=5.85) met the cut off score for 'low' levels of burnout, (Stamm, 2010).

Staff under the age of 45 reported higher levels of burnout (under 45: M= 23.93, SD=7.10; over 45: M=21.15, SD=5.52). An independent t-test found this

difference to be non-significant, t(70)= 1.52, p=.13. There was also no significant difference in burnout levels between individuals who reported that they received formal supervision and those that reported that they did not, t(43.89)=-.67, p=.51.

A one-way anova indicated a significant difference in burnout levels for staff working in different locations, F(3,68)=5.49, p<.05. Post hoc bonferroni correction indicated that staff working in Hospice at Home reported significantly lower levels of burnout than those staff working on the hospice ward, p<.05. No significant differences were found in burnout levels between different job roles.

Compassion Satisfaction.

Mean compassion satisfaction scores (M=41.09, SD=5.81) met the cut off score for 'average/high' levels of compassion satisfaction, (Stamm, 2010).

Staff over the age of 45 reported higher levels of compassion satisfaction, (under 45: M= 40.33, SD=6.42; over 45: M=41.24, SD=5.72). An independent t-test found this difference to be non-significant, t(70)= -.492, p=.63. There was also no significant difference in compassion satisfaction levels between individuals who reported that they received formal supervision and those that reported that they did not, t(45.13)=.53, p=.60.

A one-way anova indicated a significant difference in compassion satisfaction levels for staff working in different locations, F(3,68)=2.87, p<.05. Post hoc bonferroni correction indicated that staff working in Hospice at Home reported significantly higher levels of compassion satisfaction than those staff working on the hospice ward, p<.05. No significant differences were found in compassion satisfaction levels between different job roles.

Predictor Variables

Coping Strategies.

As the subscales of emotion focussed, problem focussed, 'ineffective'/ unhelpful coping, substance use and humour were used as in Sardiwalla et al. (2007), normative scores suggested by Carver et al. (1989) could not be utilised. Instead the continuous scores were used and higher scores indicated the more frequent use of a particular strategy.

Emotion-Focussed and Problem-Focussed Strategies. For emotion-focussed and problem-focussed strategies, the maximum score possible score is 80. In this study, emotion-focussed strategies had a mean of 46.46 (SD=7.69) and problem-focussed strategies had a mean of 52.03 (SD=9.06). These were both lower than means indicated in a comparable study (Sardiwalla et al., 2007).

'Ineffective'/Unhelpful coping strategies. The 'ineffective' coping subscale has a maximum score of 48. In this current study 'ineffective' coping strategies had a mean of 22.72 (SD=4.67). In a comparable study by Sardiwalla et al. (2007), the mean score on this subscale was higher.

Humour and Substance Use. On each of these two subscales, there is a maximum score of 16. In the present study, the mean score on the humour subscale was 8.69 (SD=3.07) and on the substance use subscale the mean score was 5.41 (SD=2.42). These subscales were not used in a comparable study, (Sardiwalla et al., 2007), therefore comparisons cannot be made. However due to the low number of items on these subscales, results should be interpreted with caution.

Locus of Control.

The maximum score possible on this scale is 23. Higher scores indicate an external locus of control whereas lower scores indicate an internal locus of control. In the present study, the mean score was 11.34 (SD= 3.29) with scores ranging from five to 19. This mean reflects a higher score than that reported by Rotter (1966) following a large scale study (M= 8.42, SD=4.06).

Table 7 *Descriptive statistics for criterion variables and predictors*

Variable	N	*M*	SD	Mdn	α	Range	
						Min	Max
ProQol							
Compassion Fatigue	72	21.00	5.11	20.50	.82	13.00	42.00
Burnout	72	21.61	5.85	21.56	.84	11.00	45.00
Compassion Satisfaction	72	41.09	5.81	42.10	.91	23.00	50.00
Cope Scale							
Emotion focussed coping	70	46.46	7.69	45.00	.80	30.00	62.00
Problem focussed coping	70	52.03	9.06	51.50	.89	30.00	75.00
'Ineffective' coping	70	22.72	4.67	22.00	.69	15.00	35.70
Humour	70	8.69	3.07	8.00	.85	4.00	16.00
Substance use	70	5.41	2.42	4.00	.93	4.00	12.00
Locus of Control	59	11.34	3.29	11.00	-	5.00	19.00

2.3.3 Reliability

Internal reliability was assessed using Cronbach's alpha for criterion and predictor variables. As reported in Table 7 adequate consistency was seen in the majority of the variables with 'ineffective' coping showing just below the recommended .7 for adequacy to be met.

2.3.4 Hypothesis 1: Relationship between Criterion Variables.

Correlations.

Pearson correlations were derived to explore the relationship between compassion fatigue, burnout and compassion satisfaction (see table 8). Compassion fatigue and burnout showed a significant, large, positive correlation, r=.714, 95% BCa CI [.50, .85] p<.001 with a large effect size and accounting for 50.97% of the variance. Compassion fatigue and compassion satisfaction showed a significant, negative correlation, r=-.330, BCa CI [-.62, .04] p<.05 with a medium effect size and 10.89% of the variance accounted for. Burnout and compassion satisfaction were also significantly negatively correlated, r=-.689, BCa CI [-.84, -.45] p<.001 with a large effect size and accounting for 47.47% of the variance.

Regressions.

A multiple regression was also conducted for each criterion variable. For each, the assumptions of linearity, independence of errors, homoscedasticity, unusual points and normality of residuals were met.

Compassion fatigue was significantly predicted by compassion satisfaction and burnout, $F(2, 69) = 44.02$, $p < .001$, adj. $R^2 = .55$. Both variables added statistically significantly to the prediction, p<.01 (see Table 9).

Compassion satisfaction was significantly predicted by compassion fatigue and burnout, $F(2, 69) = 36.07$, $p < .001$, adj. $R^2 = .50$. Both variables added statistically significantly to the prediction, $p<.01$ (see Table 10).

Burnout was significantly predicted by compassion satisfaction and compassion fatigue, $F(2, 69) = 95.12$, $p < .001$, adj. $R^2 = .73$. Both compassion satisfaction and compassion fatigue added statistically significantly to the prediction, $p<.001$ (see Table 11).

Table 8 *Pearson's correlation matrix for criterion and predictor variables*

	1	2	3	4	5	6	7	8	9
1. Compassion Satisfaction	-								
2. Burnout	-.689**	-							
3. Compassion Fatigue	-.330*	.714**	-						
4. Emotion Focussed coping	.340**	-.358**	-.143	-					
5. Problem Focussed Coping	.317*	-.250	-.131	.603**	-				
6. Ineffective Coping	-.073	.236	.515**	.219	.213	-			
7. Humour	.202	-.074	.002	.279*	.253	.211	-		
8. Substance use	.106	.082	.191	-.007	-.076	.305*	.150	--	
9. Locus of Control	-.012	.082	.101	-.161	-.066	.002	.063	.114	-

**.p< 0.01 level (2-tailed) *. P< 0.05 level (2-tailed).

Table 9 *Multiple regression to investigate the effect of compassion satisfaction and burnout on compassion fatigue*

Variable	B	SE	95% CI	β
Constant	-7.98	5.48	-18.91 – 2.95	
Compassion Satisfaction	.28	.10	.09 – .47	.32**
Burnout	.81	.09	.62 – .10	.92***

Dependent Variable: Compassion Fatigue ***p<.001 ** p<.01 *p<.05
Total R^2= .56, F(2, 69) = 44.02, p<.001

Table 10 *Multiple regression to investigate the effect of compassion fatigue and burnout on compassion satisfaction*

Variable	B	SE	95% CI	β
Constant	52.42	2.13	48. 16 – 55.68	
Burnout	-.915	.12	-1.15 – -.67	-.92***
Compassion Fatigue	.40	.14	.13 – .67	.35**

Dependent variable: Compassion Satisfaction ***p<.001 ** p<.01 *p<.05
Total R^2= .511, F(2, 69) = 36.07, p<.001

Table 11 *Multiple regression to investigate the effect of compassion fatigue and compassion satisfaction on burnout*

Variable	B	SE	95% CI	β
Constant	23.94	3.52	21.92 – 35.95	
Compassion Fatigue	.64	.07	.49 – .79	.56***
Compassion Satisfaction	-.51	.07	.63 – -.38	.50***

Dependent variable: Burnout ***p<.001 ** p<.01 *p<.05
Total R^2= .73, F(2,69) = 95.12, p<.001

2.3.5 Hypotheses 2 and 3: Predictors of Burnout, Compassion Fatigue and Compassion Satisfaction

Correlations.

Pearson correlations were computed to investigate relationships between criterion and predictor variables (see table 8).

Emotion-Focussed Coping

Compassion Satisfaction was significantly, positively correlated, with a medium effect size, with emotion-focussed coping, r= .340, 95% BCa CI [.13, .54] p<.01, accounting for 11.56% of the variance. Burnout was significantly, negatively correlated with a medium effect size with emotion-focussed coping, r= - .358, 95% BCa CI [-.51, -.21] p<.01, accounting for 12.82% of the variance. Compassion fatigue was not significantly correlated with emotion-focussed coping strategies, r= -.143, 95% BCa CI [-.34, .06] p>.05. This indicates that more use of emotion-focussed coping strategies is associated with higher compassion satisfaction and lower burnout but not compassion fatigue.

Emotion focussed coping was significantly positively associated with problem-focussed coping with a large effect size, r=.603, 95% BCa CI [.45, .73] p<.01, accounting for 36.36% of variance. Humour was also significantly positively associated with emotion-focussed coping strategies, r=.279, 95% BCa CI [.04, .48] p<.05, accounting for 7.78% of variance. Emotion focussed coping was not significantly associated with use of 'ineffective' coping strategies (r=.219, p>.05), substance use (r=-.007, p>.05) or locus of control (r=-.161, p>.05). This indicates that use of emotion-focussed strategies is associated with more use of problem-focussed strategies and humour but not ineffective coping strategies, substance use or locus of control.

Problem-Focussed Coping

Problem-focussed coping was significantly, positively associated with compassion satisfaction with a medium effect size, r=.317, 95% BCa CI [.05, .54] p<.05, accounting for 10.05% of variance. Problem focussed coping was not significantly associated with burnout (r=-.250, p>.05) or compassion fatigue (r= -.131, p>.05). This suggests that higher use of problem focussed coping is associated with compassion satisfaction but not with burnout or compassion fatigue.

As previously mentioned, problem focussed coping was significantly positively associated with emotion focussed coping r=.603, 95% BCa CI [.45, .73] p<.01, accounting for 36.36% of variance. Problem focussed coping was not significantly associated with 'ineffective' coping (r=.213, p>.05), humour (r=.253, p>.05), substance use (-.076, p>.05) or locus of control.

'Ineffective' Coping Strategies

'Ineffective' coping was not significantly associated with compassion satisfaction (r= -.073, p>.05) or burnout (r=.236, p>.05) but was significantly

positively related to compassion fatigue with a large effect size, r=.515, 95% BCa CI [.24, .69] p<.01, accounting for 26.52% of variance. This suggests that the use of unhelpful/'ineffective' coping strategies is associated with higher levels of compassion fatigue but not burnout or compassion satisfaction.

'Ineffective' coping was not significantly associated with emotion focussed coping (r=.219, p>.05), problem-focussed coping (r=.213, p>.05), or humour (r=.211, p>.05) but was significantly, positively associated with substance use with a medium effect size, r= .305, 95% BCa CI [.04, .55] p<.05, accounting for 9.30% of variance. 'Ineffective' coping was not associated with locus of control (r=.002, p>.05). This suggests that use of 'ineffective' coping strategies is associated with more substance use.

Humour

Humour was not significantly associated with compassion satisfaction (r=.202, p>.05), burnout (r= -.074, p>.05) or compassion fatigue (r=.002, p>.05).

Humour was significantly, positively associated with emotion-focussed coping strategies with a small effect size, r= .279, 95% BCa CI [.04, .48] p<.05, accounting for 7.78% of variance, but was not significantly associated with problem-focussed coping (r=.253, p>.05), 'ineffective' coping (r=.211, p>.05), substance use (r=.150, p>.05) or locus of control (r=.063, p>.05). This suggests that the use of humour as a coping strategy is associated with higher use of emotion-focussed coping strategies.

Substance Use

Substance use was not significantly associated with compassion satisfaction (r=.106, p>.05), burnout (r=.082, p>,05) or compassion fatigue (r=.191, p>.05). It was also not significantly associated with emotion-focussed coping (r=-.007,

p>.05) or problem-focussed coping (r= -.076, p>.05), but was significantly, positively associated with 'ineffective' coping strategies, with a medium effect size, r=.305, 95% BCa CI [.04, .55] p<.05, accounting for 9.3% of variance. Substance use was also not significantly associated with locus of control (r=.114, p>.05).

Locus of Control

Locus of control was not significantly associated with compassion satisfaction (r= -.012, p>.05), burnout (r=.082, p>.05) or compassion fatigue (r= .101, p>.05). Locus of control was also not significantly associated with any of the coping strategies investigated as detailed previously, emotion-focussed coping (r= -.161, p>.05), problem-focussed coping (r= -.066, p>.05), 'ineffective' coping (r= .002, p>.05), humour (r=.063, p>.05) or substance use (r=.114, p>.05)

Regressions.

Assumptions of linearity, independence of errors, homoscedasticity, unusual points and normality of residuals were met. Three multiple regression analyses were conducted, one for each dependent variable: compassion fatigue, burnout and compassion satisfaction. A data reduction technique was used to decide which demographic and predictor variables to enter into each regression model and it was decided that locus of control would not be entered as a predictor due to lack of significant association with the criterion factors and small effect sizes. Demographic variables were entered into the first block of each regression as control variable and predictor variables were entered into the second block. The Durbin Watson test indicated that residual terms were independent for each regression.

Compassion Fatigue

Emotion-focussed coping, problem-focussed coping and 'ineffective' coping were all entered into the regression model using the enter method. As no demographic variables were significantly associated with compassion fatigue, no demographic variables were entered as controls. The overall model was statistically significant $F(3,66) = 12.56$, $p<.001$, adj.$R^2 = .33$. The regression model suggested that use of 'ineffective' coping strategies independently predicts higher levels of compassion fatigue, however, neither emotion-focussed coping nor problem-focussed coping were significant predictors, (see table 12).

Burnout

A hierarchical multiple regression model was used with the dummy variable Hospice at Home work location entered into block one as a control as this variable was associated with burnout ($r=-.35$, $p<.05$). Emotion-focussed coping, problem-focussed coping and 'ineffective' coping were all entered into block two. Results suggested that the full model of work location, emotion-focussed coping, problem-focussed coping and 'ineffective' coping to predict burnout was statistically significant, $F(4,65) = 9.71$, $p<.001$, adj. $R^2 = .34$. The addition of coping strategies to the model (model 2) led to a statistically significant increase in R^2 of .254, $F(3,65)=8.80$, $p<.001$. Looking at the variables, work location, emotion-focussed coping and 'ineffective' coping each individually predicted burnout but problem-focussed coping was not statistically significant (see table 13).

Compassion Satisfaction

A hierarchical multiple regression model was used with the dummy variable Hospice at Home work location entered into block one as a control as this variable was associated with compassion satisfaction ($r=.30$, $p<.05$). Emotion-

focussed coping, problem-focussed coping and 'ineffective' coping were all entered into block two.

Results suggested that the full model of work location, emotion-focussed coping, problem-focussed coping and 'ineffective' coping to predict compassion satisfaction was statistically significant, $F(4,65) = 5.84$, $p<.001$, adj. $R^2 = .22$. The addition of coping strategies to the model, (model 2), led to a statistically significant increase in R^2 of .17, $F(3,65)=5.14$, $p<.01$. Looking at the variables, work location and emotion-focussed coping strategies each significantly predicted compassion satisfaction. Problem-focussed coping was not statistically significant (see table 14).

Table 12 *Regression to investigate the effect of predictors on compassion fatigue*

Variable	B	SE	95% CI	β
Constant	16.61	3.66	9.31 - 23.92	
Emotion-focussed coping	-.11	.09	-.28 - .07	-.158
Problem-focussed coping	-.11	.08	-.26 - 0.4	-.19
'Ineffective' coping	.66	.11	.441 - .89	.61***

Dependent variable: compassion fatigue *** p<.001 ** p<.01 *p<.05
Total $R^2 = .36$, $F(3,66) = 12.56$, $p<.001$

Table 13 *Regression to investigate the effect of predictors on burnout*

Variable	B	SE	95% CI	β
Step 1				
Demographic characteristics				
Constant	23.68	.95	21.79 – 25.57	
Work location (HAH)	-4.02	1.32	-6.66 – -1.39	-.35**
Step 2				
Demographic characteristics				
Constant	29.64	4.19	21.27 – 38.01	
Work location (HAH)	-4.57	1.23	-7.02 – -2.12	-.39***
Emotion-focussed coping	-.34	.10	-.55 – -.14	-.45**
Problem-focussed coping	-.004	.09	-.19 – .18	-.007
'Ineffective' coping	.46	.13	.19 – .72	.37**

Dependent variable: burnout ***p<.001 ** p<.01 *p<.05

Total R^2= .61, F(4,65) = 9.71, p<.001 Note: HAH = Hospice at Home

Table 14 *Regression to investigate the effect of predictors on compassion satisfaction*

Variable	B	SE	95% CI	β
Step 1				
Demographic characteristics				
Constant	39.31	.96	37.40 – 41.22	
Work location (HAH)	3.46	1.33	.801 – 6.13	.30*
Step 2				
Demographic characteristics				
Constant	28.01	4.51	19.00 – 37.01	
Work location (HAH)	3.24	1.32	.60 – 5.87	.28*
Emotion-focussed coping	.25	.11	.03 – .47	.34*
Problem-focussed coping	.08	.10	-.11 – .28	.13
'Ineffective' coping	-.20	.14	-.48 – .08	-.16

Dependent variable: compassion satisfaction ** p<.01 *p<.05

Total R^2= .27 F(4,65) = 5.84, p<.001 Note: HAH = Hospice at Home

2.3.6 Thematic Analysis

An exploratory approach was taken by deriving codes from the data produced from the questionnaire consisting of four open questions (see Appendix E). Out of the 72 participants, 62 individuals chose to complete these questions. Participants generally wrote several sentences or bullet points in response to each question (see Appendix F for examples of responses). These

were all entered into a database and thematic analysis was used to focus on identifying ideas and themes within the data, (Guest et al., 2011). Within the current data set, themes were identified in an inductive way to identify underlying ideas and patterns. Codes were generated so as to organise the data in a meaningful way and these codes were then combined into themes, reviewed and reported, (Braun & Clarke, 2006). Through this process, several themes for each open ended question appeared to be salient. See Appendix G for an example of a thematic map.

Question1: What do you find most challenging about your job?

Several themes emerged from responses to this question.

Dealing with distress

Participants discussed the difficulties of seeing death so frequently and seeing people in distress. Several mentioned finding it particularly challenging when younger people are dying. This also included seeing families in distress and working with families who are upset or angry.

Expectations

Participants mentioned the pressures of paperwork and record keeping together with time pressures and time management. This also included dealing with expectations of other people – staff, patients and families, as well as conflicts amongst team members. Several participants also discussed the practical aspects of the job such as travelling to people's homes and attending meetings.

Resources

A key theme concerned a lack of external and internal resources. Examples of external resources included a lack of other services, lack of funding, staff

shortages and inadequate equipment. Internal resources included a lack of confidence, needing to work outside one's comfort zone and dealing with uncertainty about new situations, changes and what may happen on a shift.

Impact on self

Several participants reported the impact on their own wellbeing such as difficulties sleeping, lack of energy and finding it hard to stay positive.

Question 2: What do you enjoy most about your job?

A range of themes emerged with regards to what participants enjoyed about their job.

Working with people.

Many participants reported that they enjoyed meeting new people, talking to people, getting to know patients and families and having contact with patients. This also extended to teamwork, working alongside 'like-minded colleagues'.

Caring/Making a difference

The majority of participants reported their enjoyment of caring for people – patients, families and colleagues, helping to support and reassure families and helping to manage symptoms. There was also a predominant code concerning providing high standards of care and 'doing a good/thorough job.' A phrase which was used by many was 'making a difference' and helping patients to achieve their wishes such as dying at home.

Feeling valued

Participants also commonly discussed feeling valued and finding the job rewarding as well as being appreciated by patients and families, for example 'when people say thank you'.

Question 3: How do you cope with stress at work?

Several themes appeared relevant to this question.

Communication

This was very widely reported and included talking to colleagues, talking to family or friends, talking to managers, using humour and laughter to cope.

Problem solve

Problem solving, being methodical, delegating duties and prioritising talks were all widely reported. Others described taking time out, having a break or walking away as a way to manage stress.

Acceptance

Participants reported using prayer, meditation, self-reflection and leaving situations to the universe as ways of coping. Putting trust in God, nature or other belief systems was also noted.

Home environment

Trying to switch off when at home, engaging in hobbies/interest outside of work and maintaining a 'good work/life balance' were all reported as ways of coping with stress.

Question 4: How do you cope with stress outside of work?

Communication

Participants reported talking to friends and family, socialising, going out for meals and laughter as ways of coping with stress outside of work.

Taking breaks

Participants reported going on holidays, removing self from situations, and taking a few minutes out as ways to manage stress. Others identified that trying to forget about work and 'switch off' were ways of coping.

Interests/self-care

Hobbies, reading, gardening, dancing, yoga and music were all mentioned as were forms of exercise such as walking, swimming, cycling, running and attending the gym. Engaging with belief systems/faith/prayer as forms of self-care were also reported.

Problem solve

Using problem solving such as writing things down, trying to have a 'sense of perspective' and 'appreciating good fortune' were all reported as ways of managing stress

Isolation

Other strategies that people described included comfort eating, distraction, worrying and closing oneself off whilst 'getting on with things'.

2.4 Discussion

The aim of this study was to investigate the rates of compassion fatigue, burnout and compassion satisfaction, together with coping strategies and locus of control as predictors, in hospice nurses.

2.4.1 Prevalence of Compassion Fatigue, Burnout and Compassion Satisfaction.

Compassion fatigue levels were found to be within the low range, with the average score slightly below the 'average' cut-offs proposed by Stamm (2010). This differs from research by Abendroth and Flannery (2006) who found that compassion fatigue levels in palliative care nurses were average to high. It does however correspond with research by Whitebird et al. (2013) which suggested low levels of compassion fatigue in hospice workers. Levels of compassion fatigue did not appear to significantly differ between age groups, absence/provision of supervision or job roles.

Similarly, burnout levels were also within the low range as suggested by Stamm (2010), and were just below the cut-off for the 'average' range. Again, this prevalence corresponds with research conducted by Whitebird et al. (2013). Burnout levels appeared to be significantly higher in ward staff than those working in hospice at home but were not significantly associated with any other demographic variables. Mean compassion satisfaction levels were at the high end of the average range suggested by Stamm (2010). These levels of compassion satisfaction corresponded with findings by Graham et al. (1996); Whitebird et al. (2013) and Slocum-Gori et al. (2013). Staff working in hospice at home reported significantly higher levels of compassion satisfaction than ward staff.

As described, work location appeared to be related to burnout and compassion satisfaction but no other demographic variables were significantly related to these factors or to compassion fatigue. This was in contrast to other studies which indicated that demographic variables including age, time since qualification and years in a job role impact on these experiences, (Galek et al., 2011; McGarry et al., 2013; Sardiwalla et al., 2007; Slocum-Gori et al., 2013). It is also worth considering that the majority of participants were female and were aged over 45 years old. Although age was not associated with burnout. compassion fatigue or compassion satisfaction; low burnout and low compassion fatigue could be related to being older, having more experience and being female. Due to the skew in age and gender, an effect of these demographics may not have been identified.

2.4.2 Hypothesis 1

The first hypothesis, that there would be significant associations between compassion fatigue, burnout and compassion satisfaction was supported. A high positive correlation was found between compassion fatigue and burnout though not high enough to suggest that they are measuring the same variable (Field, 2009). Significant negative correlations were found between compassion satisfaction and both compassion fatigue and burnout. The association between compassion satisfaction and burnout demonstrated a large effect size. This suggests that as levels of burnout and compassion fatigue decrease, compassion satisfaction increases, though causality cannot be inferred from this correlation. Regressions indicated that for each of these criterion variables the other two factors accounted for 50-73% of the variance.

This suggests that through addressing and reducing levels of compassion fatigue, the likelihood of developing burnout may also be reduced and vice versa.

It also suggests that promoting compassion satisfaction may reduce levels of compassion fatigue and burnout, and through reducing levels of compassion fatigue and burnout, satisfaction may be increased.

Qualitative data suggested that participants experience many different challenges in the workplace which may contribute to compassion fatigue and burnout. A lack of resources, expectations from others and working alongside individuals in distress were all reported as were the impact on self. Participants reported enjoyment related to working with people, caring for others and feeling valued.

2.4.3 Hypothesis 2

The hypothesis that higher rates of compassion fatigue and burnout, and lower rates of compassion satisfaction, would be significantly associated with an external locus of control, 'ineffective' coping strategies and problem-focussed strategies, was partly supported.

The use of 'ineffective' coping strategies was significantly positively correlated with compassion fatigue but was not significantly associated with burnout or compassion satisfaction. Locus of control was not associated with compassion fatigue, burnout or compassion satisfaction. The use of problem-focussed coping strategies was not significantly associated with either compassion fatigue or burnout but was significantly positively associated with compassion satisfaction which was in the opposite direction than predicted.

Regression analyses indicated that compassion fatigue was significantly predicted by the use of 'ineffective' coping strategies. A further regression analysis suggested that the use of 'ineffective' coping also predicted burnout. Problem-focussed coping did not significantly contribute to this model, however work location did with working on the hospice ward significantly predicting

higher rates of burnout. This suggests that using 'ineffective' coping strategies is related to higher levels of burnout and compassion fatigue, therefore use of such strategies, for example, mental and behavioural disengagement, are likely to be less helpful for coping with the stress experienced in a hospice setting.

A regression analysis of compassion satisfaction suggested that it was not predicted by the use of problem-focussed coping strategies or 'ineffective' coping strategies. However work location did significantly contribute to this model, with working in the hospice at home team predicting higher levels of compassion satisfaction.

2.4.4 Hypothesis 3

The hypothesis that lower rates of compassion fatigue and burnout, and higher rates of compassion satisfaction would be associated with the use of emotionally-focussed coping strategies and an internal locus of control was partly supported.

The use of emotion-focussed coping was significantly positively correlated with compassion satisfaction whilst this coping style was significantly negatively correlated with burnout. No significant association was seen between emotion-focussed coping and compassion fatigue and as detailed previously, locus of control was not significantly associated with compassion fatigue, burnout or compassion satisfaction.

Regression analyses indicated that compassion satisfaction was significantly predicted by the use of emotion-focussed strategies. In a regression model of burnout, again, emotion-focussed strategies significantly contributed. This coping style however did not significantly contribute to a model of compassion fatigue.

In summary, it appears that compassion fatigue and burnout are predicted by the use of 'ineffective' coping strategies whereas compassion satisfaction is predicted by the use of emotion-focussed strategies. It also seems that the use of emotion-focussed strategies predicts lower levels of burnout. The qualitative analysis suggested that participants are using emotion-focussed strategies such as social support and acceptance, and problem-solving strategies as a way of coping with stress at work and at home. The use of problem-focussed strategies may also be associated with higher compassion satisfaction although this association was not significant in a regression model.

This partly corresponds with findings by Whitebird et al. (2013) who found that the use of 'ineffective' copings strategies was associated with higher burnout whereas the use of emotionally-focussed strategies may be more helpful. McGarry et al. (2013) similarly found that the use of non-productive coping strategies were associated with secondary traumatic stress and burnout. Emotionally-focussed coping includes such strategies as seeking emotional social support, religious coping and positive reinterpretation. These findings therefore also correspond with findings by Alkema et al. (2008) who suggested that emotional and spiritual balance was predictive of compassion satisfaction and research by Galek et al. (2011) who suggested that use of social support is associated with higher compassion satisfaction and lower burnout and compassion fatigue.

2.4.5 Clinical Implications

Although levels of burnout and compassion fatigue were low in this hospice nurse sample, the findings still suggest some important clinical implications concerning the types of coping strategies that individuals are using. It is likely to be beneficial to educate staff about compassion fatigue and burnout as

awareness of these experiences may enable staff teams to seek early support and use appropriate coping strategies. This could take the form of education sessions. This prevention strategy could also be a cost-effective way to prevent the loss of working days due to work-related stress (HSE, 2014).

As discussed previously, although age was not significantly associated with burnout. compassion fatigue or compassion satisfaction, the skew in age and gender in the current study may mean that the impact of these variables were not identified. It is possible that if individuals are older and have more experience, they may have developed more helpful coping strategies which may protect against burnout and compassion fatigue whilst increasing compassion satisfaction. It is also possible that women may be more likely to engage in the emotion-focussed coping strategies which are linked to lower levels of burnout and more satisfaction, such as seeking support from peers. Further investigation into these factors and the use of coping strategies for individuals of different ages and genders could have clinical implications for identifying those most at risk of developing burnout and compassion fatigue. This may indicate who would benefit from training in the use of helpful coping strategies.

Although the provision of supervision sessions did not appear to be related to burnout, compassion fatigue or compassion satisfaction in the current study, this may be due to the wide variation that participants reported in receiving scheduled supervision. Many also reported that supervision was only recently introduced and therefore they may not have had the opportunity to experience the benefits of supervision. These sessions may be a useful opportunity for supervisors to assess for ongoing stress and signs of compassion fatigue and burnout so as to allow earlier intervention or support for staff members. Regular supervision could be a chance to monitor stress and to discuss coping strategies, promoting those which appear to be more beneficial whilst also increasing

awareness of those strategies which are less useful. For example, 'ineffective' coping strategies include distracting self from the problem and giving up trying to deal with the problem. It may also be an opportunity for supervisors to ensure that workers feel valued and that positive feedback from families is explicitly discussed as appreciation was reported to be an enjoyable part of the job.

As it seems that higher compassion satisfaction is related to lower levels of compassion fatigue and burnout, it would be useful for hospices to address ways to promote compassion satisfaction. It seems that emotion-focussed coping is particularly predictive of compassion satisfaction therefore promotion of these strategies would be encouraged. Such strategies include reframing the stressor in positive terms, learning to accept the problem, using faith and seeking emotional support from others. This corresponds with findings from the thematic analysis which indicated that participants found the use of social support and acceptance beneficial whilst valuing the opportunity to care for people. The use of problem-focussed strategies may also be useful for promoting compassion satisfaction, such as taking steps to deal with a problem and seeking advice from others.

In regression models of compassion satisfaction and burnout, work location was important with those working on the ward reporting higher burnout and lower satisfaction. This is important for managers and supervisors to be aware of as it indicates that those working on the ward may require increased support at times and that promotion of effective coping strategies in this setting should be a priority. Further investigation into how these work environments differ could provide valuable information for how to increase satisfaction and reduce burnout in ward settings. As burnout is thought to be related to social interactions and organisational stressors (Maslach & Jackson, 1981; Payne, 2001), this may indicate that there are differences in these aspects between working on the ward and the hospice at home. As work location did not seem to be related to

compassion fatigue, this finding also supports the suggestion that burnout and compassion fatigue, although related, are distinct concepts.

The thematic analysis identified several areas which participants find particularly challenging at work. These may represent situations which contribute to burnout and compassion fatigue, therefore it would be important for managers and supervisors to acknowledge these difficulties and the impact that these can have on staff teams. Through opportunities to address these issues and to consider how staff may effectively cope with these, there may be an impact on stress levels. This also applies to the many factors that participants enjoy about their job in hospice nursing. By ensuring that staff teams feel valued and are able to continue to spend time getting to know patients and families it is likely that the high satisfaction levels reported in this study will continue.

Finally, although this research is with a hospice nurse population, the results are likely to be relevant to other healthcare settings. Therefore the high rates of compassion satisfaction and low rates of compassion fatigue and burnout may suggest that other healthcare settings could benefit from using similar coping strategies implemented by individuals working in hospices. It could be useful to explore what conditions exist in a hospice setting, compared to other healthcare settings, which may protect against burnout and compassion fatigue whilst promoting compassion satisfaction. For example, whether talking about emotions and seeking support is more widely promoted in a hospice setting and therefore could be encouraged in other settings.

2.4.6 Strengths and Limitations

A strength of this study is the use of validated measures and qualitative information to provide a richer description of the stressors and coping strategies

experienced by hospice workers. By concentrating on nurses, and assuming that clinical contact is comparable, the sample was relatively homogenous.

Limitations of the study include the relatively small sample size. Despite approaching nine hospices, only five consented to take part and from those participating hospices response rate was low. This may mean that the data gathered are not truly representative of the experiences of the staff teams. It is possible that those who did not participate perceived the questionnaire completion as an additional task and were feeling too stressed or time-pressured to respond. Equally, those that did participate may have been experiencing higher levels of burnout or compassion fatigue and therefore identified with the study.

The use of self-report measures does also risk social desirability bias, with participants potentially wishing to portray themselves in a positive light, (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Although questionnaires were anonymous and data across hospices was collated, participants were aware that managers and colleagues would be notified of the results.

Locus of control did not appear to be associated with any of the criterion variables. This may be due to the measure selected for this construct. The rate of completion for this measure was much lower than for the others with only 59 participants completing this questionnaire. Comments from participants included finding the options too extreme and therefore not agreeing enough with either to select an answer.

The use of a cross-sectional design and correlational statistical analysis means that causality cannot be inferred from this study. It should be considered that although the use of regression provided proposed predictor variables, it is possible that as individuals experience more burnout, compassion fatigue or

satisfaction, they feel more able to use particular coping strategies rather than the coping strategies contributing to these experiences.

2.4.7 Directions for future research

Research with a larger sample size would increase generalisability of these results. It would also be interesting to extend the research to NHS hospices as those hospices participated were funded by charities and therefore, experiences of working in this setting may differ from those working in NHS settings.

The use of open-ended questions identified that many participants use exercise as a coping strategy, however this was not explored in the validated measure of coping used in this study. Further investigation of this and other specific ways of coping may indicate more explicit strategies that hospices could promote.

Intervention studies could explore the impact of stress management or other interventions on compassion fatigue, burnout and compassion satisfaction. Measurement of sickness absences is also worth exploration in future research. There was anecdotal feedback from several of the participating hospices who felt that some staff may use sick leave as way to cope with symptoms of compassion fatigue and burnout.

Finally, as previously discussed, it could be useful to explore how the ward setting and the hospice at home setting differ, particularly with regards to organisational structure and employees' experience of this. This may have implications for further understanding of the mechanisms underlying burnout, compassion fatigue and compassion satisfaction and the factors which influence these. It would also be interesting to investigate the role of age and gender

further and whether these factors are related to levels of burnout, compassion fatigue or compassion satisfaction and the various different coping strategies.

2.4.8 Conclusions

These findings contribute to the literature concerning compassion fatigue, burnout and compassion satisfaction in hospice nurses. Although rates of compassion fatigue and burnout were low in this particular study, the use of particular coping strategies were seen to be predictors for these experiences and therefore preventative and supportive interventions are recommended. Further investigation into the predictors of compassion fatigue, burnout and compassion satisfaction is important to identify risk factors and to identify effective ways to manage burnout and compassion fatigue whilst promoting compassion satisfaction. This could have implications for service costs and for quality of working life for hospice workers.

Appendices

Appendix A Participant Information Sheet

Study Title: An Investigation of Compassion Fatigue, Compassion Satisfaction, Burnout and Coping Strategies in Hospice Workers

Researcher: Laura Davis, Trainee Clinical Psychologist

Ethics number: 9428

Please read this information carefully before deciding to take part in this research. If you are happy to participate you will be asked to complete several questionnaires.

What is the research about?

I am a Trainee Clinical Psychologist, in my second year of the doctoral programme at the University of Southampton. Data collected will be used in a doctoral thesis that will be produced as part of my programme of study.

This investigation aims to look at the stress that people working in a caring profession may experience. This includes Compassion Fatigue and Burnout. It also looks to investigate the protective mechanisms against these including Compassion Satisfaction and coping strategies.

The results of this investigation will be used as evidence of the presence or absence of compassion fatigue, compassion satisfaction and burnout in hospice workers. It will provide important information about how we cope with stressful situations and what might impact on the way that we cope.

This research will involve collecting questionnaire data from several measures that have been tested for reliability and validity. You will be asked to only fill in these questionnaires once and they will be collected and analysed by me.

Why have I been chosen?

You have been chosen to take part because you work in a hospice or as part of a hospice team. Much research has been conducted in various healthcare settings but unfortunately hospice workers have been under-represented in these investigations. I believe that it is important to investigate these mechanisms in hospice workers like you. I want to hear your views and find out more about how you may manage the stress that you are likely to experience during your work. All clinicians working on the ward at the hospice or as part of the hospice at home team will be invited to take part in this research.

What will happen to me if I take part?

If you choose to take part you will be asked to fill in several questionnaires. By filling in these questionnaires you will be consenting to your data being used as part of this project. The questionnaires are provided in a paper format as 'questionnaire packs' so that you are able to fill them in whenever is convenient for you and it is suggested that you complete these in your own time. It is hoped that it should not take longer than 45 minutes for you complete all of the questionnaires. When you have filled in the questionnaires, they should be placed in an envelope and sealed before posting into the post box at reception. The packs will then be collected by the researcher. As you will not provide your names on the questionnaires, your data will be anonymous and will not be linked to you. All data will be entered into an electronic database for analysis.

Are there any benefits in my taking part?

By taking part in this research you will be adding to the current knowledge about the experience of stress and the use of coping strategies in hospice workers. This is important information and will contribute to literature investigating preventative measures for Compassion Fatigue and Burnout and strategies for the promotion of Compassion Satisfaction. This could help in improving and maintaining the wellbeing of individuals like you.

Are there any risks involved?

We do not envision that there will be any risk to you if you choose to take part in this study, however the questionnaires do require you to reflect on how your work affects you and therefore this may be upsetting. If you do become upset at any point during the study and feel that you would like support, you are able to contact a member of the Clinical Psychology team at the …….. Hospice or you can speak to your line manager/supervisor or contact your GP. Ward staff can also access …… employee assistance program for free and confidential counselling on: ……..

Will my participation be confidential?

The Data Protection Act and Southampton University policy will be adhered to throughout the service evaluation. The questionnaire data will be anonymous so that you are not linked to it. It will then be stored on a password protected computer for analysis. Paper copies of questionnaires will also be stored securely.

How do I consent to take part?

When you fill in the questionnaires, you are confirming that you have read this information sheet and are consenting to take part in the study. You are also agreeing for your questionnaire data to be used for the purpose of this study.

What happens if something goes wrong?

This study has been approved by the ethics committee at the University of Southampton. In the case of concern or complaint you are able to contact the individual named below:

Chair of the Ethics Committee, Psychology, University of Southampton, Southampton, SO17 1BJ. Phone: +44 (0)23 8059 4663, email slb1n10@soton.ac.uk

Where can I get more information?

For further information about this study, either before deciding whether to take part, during the research or following, you are welcome to contact me:

Laura Davis, Trainee Clinical Psychologist

Email: ld7g12@soton.ac.uk

Appendix B Letter of hospice approval

[redacted]

9th April 201

[redacted]

Dear Laura

Thank you for attending the Ethics Executive Group Meeting on 8th April 2014 to present your research proposal:-

"An Investigation of Compassion Fatigue, Compassion Satisfaction, Burnout and Coping Strategies in Hospice Workers."

The Members of the EEG support the proposal and offer their full permission to conduct the research following consideration of these aspects.

- There be an addition to the information leaflet stating that it is preferable that completion of the questionnaires be done in staff own time.
- That any demographic data collected is relevant to the research.
- Consideration is given to implied consent through the completion of the questionnaires.

We all very much look forward to the research being undertaken at [redacted] and the EEG were very impressed by the quality of your proposal.

Yours sincerely

[redacted]

Honorary Chairman Ethics Executive Group

Appendix C Southampton University School of Psychology Ethics Committee and Research Governance approval

Your Ethics Submission (Ethics ID:9428) has been reviewed and approved

ERGO [ergo@soton.ac.uk]

Sent: Wednesday, June 18, 2014 2:44 PM

To: Davis L.

Submission Number: 9428
Submission Name: An Investigation of Compassion Fatigue, Compassion Satisfaction, Burnout and Coping Strategies in Hospice Workers
This is email is to let you know your submission was approved by the Ethics Committee.

You can begin your research unless you are still awaiting specific Health and Safety approval (e.g. for a Genetic or Biological Materials Risk Assessment)

Comments
None

Click here to view your submission

ERGO : Ethics and Research Governance Online
http://www.ergo.soton.ac.uk

Appendix D Demographic Information Sheet

Gender: Female Male Unspecified (Please circle an option)

Age: under 25 25-34 35-44 45-54 55-65 65+ (Please circle an option)

Job Role: …….

Do you work on: The Hospice Ward Hospice at Home Team Other (Please circle an option)

Number of Hours worked each week: …….

Approximate length of employment at this hospice:…….

If you have completed a nursing qualification, how long ago did you finish this?
……

How often do you have supervision? .....

How long do supervision sessions last? .....

Appendix E Additional, Open-Ended Questions

Below are some additional questions and some space to answer them. This is to ensure that we capture any information that the other questionnaires have not covered. Please feel free to continue your answers on additional paper.

What do you find most challenging about your job?

What do you enjoy most about your job?

How do you cope with stress at work?

How do you cope with stress outside of work?

Appendix F Examples of responses to open/additional questions

What do you find most challenging about your job?

"keeping on top of workload"
"different changes"
"limited services in community, high expectations from others, reduction in resources"
"people management - communication problems between teams, 'difficult' families, getting job done in time- paperwork"
"watching patients die, upset family & friends"
"dealing with people's grief"
"pressure from management, misunderstandings between colleagues, challenging relatives"

What do you enjoy most about your job?

"caring for patients and staff, communication, improving standards of practise"
"teamwork, making patients comfortable, making a difference"
"providing the best care and support for patients and their relatives"
"caring for patients"
"talking to patients and their families, work colleagues are supportive"
"caring for people, getting to know patients and families, colleagues, being the best I can be"
"having empathy with patients, seeing patients becoming accepting death, promoting quality of life, see peace on their faces"
"managing caseload, working autonomously, getting a job done, helping/making a difference in improving quality of life, working with people with similar passions"
"patient contact, supporting colleagues"
"supportive team"

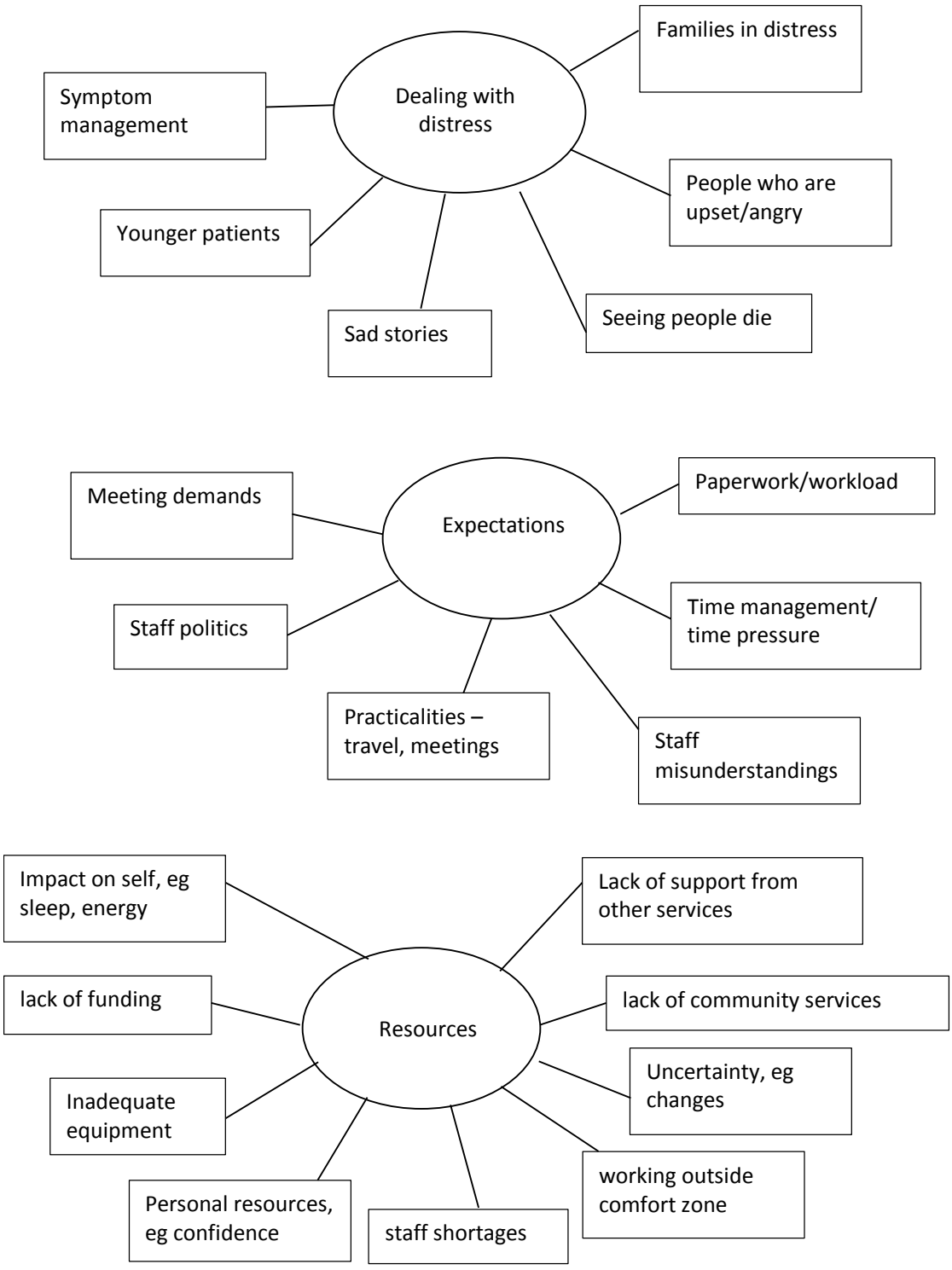
How do you cope with stress at work?

"supervision, talk with colleagues"
"family & friends, caring team, supervision, supportive work environment"
"cycling, walking, clinical supervision, socialising, having fun, self-reflection"
"socialising, exercising, supervision"
"laughter, team support"
"talk to colleagues"
"friends, meditation"
"talk to colleagues"
"talking to colleagues, supervision, taking time out"

How do you cope with stress outside of work?

"Talk to friends, family, colleagues, distraction, hobbies, write things down, appreciate good fortune"
"glass of wine, laugh, chat"
"supportive partner, looking at things in perspective"
"friends and family, walks, yoga, talk to my cat, soul search, read books, talk"
"faith, exercise, socialising, time with family"
"problem solve, friends, pray, comfort eat, shout, distraction, worry"
"talking to friends, family, distraction, swimming, walking, eating out, TV"

Appendix G An example of a thematic map for qualitative analysis (Question 1).



List of References

Abendroth, M., & Flannery, J. (2006). Predicting the risk of compassion fatigue: A study of hospice nurses. *Journal of Hospice & Palliative Nursing, 8*, 346-356.

Alkema, K., Linton, J. M., & Davies, R. (2008). A study of the relationship between self-care, compassion satisfaction, compassion fatigue, and burnout among hospice professionals. *Journal of social work in end-of-life & palliative care, 4*, 101-119.

Asai, M., Morita, T., Akechi, T., Sugawara, Y., Fujimori, M., Akizuki, N., Nakano, T., & Uchitomi, Y. (2007). Burnout and psychiatric morbidity among physicians engaged in end-of-life care for cancer patients: A cross-sectional nationwide survey in japan. *Psycho-Oncology, 16*, 421-428.

Baird, K., & Kracen, A. C. (2006). Vicarious traumatization and secondary traumatic stress: A research synthesis∗. *Counselling Psychology Quarterly, 19*, 181-188.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology, 3*, 77-101.

Bride, B. E. (2007). Prevalence of secondary traumatic stress among social workers. *Social work, 52*, 63-70.

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of personality and social psychology, 56*, 267.

List of References

Casarett, D. J., Spence, C., Haskins, M., & Teno, J. (2011). One big happy family? Interdisciplinary variation in job satisfaction among hospice providers. *Journal of palliative medicine, 14*, 913-917.

Clark, L., Leedy, S., McDonald, L., Muller, B., Lamb, C., Mendez, T., Kim, S., & Schonwetter, R. (2007). Spirituality and job satisfaction among hospice interdisciplinary team members. *Journal of palliative medicine, 10*, 1321-1328.

Coetzee, S. K., & Klopper, H. C. (2010). Compassion fatigue within nursing practice: A concept analysis. *Nursing & Health Sciences, 12*, 235-243.

Collins, S., & Long, A. (2003). Working with the psychological effects of trauma: Consequences for mental health-care workers-a literature review. *Journal of Psychiatric and Mental Health Nursing, 10*, 417-424.

DeLoach, R. (2003). Job satisfaction among hospice interdisciplinary team members. *American Journal of Hospice & Palliative Care, 20*, 434-440.

Dickersin, K. (1990). The existence of publication bias and risk factors for its occurrence. *Jama, 263*, 1385-1389.

Dougherty, E., Pierce, B., Ma, C., Panzarella, T., Rodin, G., & Zimmermann, C. (2009). Factors associated with work stress and professional satisfaction in oncology staff. *American Journal of Hospice & Palliative Medicine, 26*, 105-111.

Duffy, S. A., & Jackson, F. (1996). Stressors affecting hospice nurses. *Home Healthcare Nurse, 14*, 54-59.

Dunwoodie, D. A., & Auret, K. (2007). Psychological morbidity and burnout in palliative care doctors in western australia. *Internal Medicine Journal, 37*, 693-698.

Engelbrecht, M., Bester, C., Van den Berg, H., & Van Rensburg, H. (2008). A study of predictors and levels of burnout: The case of professional nurses in primary health care facilities in the free state1. *South African Journal of Economics, 76*, S15-S27.

Estryn-Behar, M., Van der Heijden, B. I., Fry, C., & Hasselhorn, H.-M. (2010). Longitudinal analysis of personal and work-related factors associated with turnover among nurses. *Nursing research, 59*, 166-177.

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G* power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior research methods, 39*, 175-191.

Field, A. (2009). *Discovering statistics using spss statistics. Third edition*. London: Sage.

Figley, C. R. (1995). *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized*. New York: Brunner/Mazler.

Fillion, L., Tremblay, I., Truchon, M., Côté, D., Struthers, C. W., & Dupuis, R. (2007). Job satisfaction and emotional distress among nurses providing palliative care: Empirical evidence for an integrative occupational stress-model. *International Journal of Stress Management, 14*, 1-25.

Flick, U., Garms-Homolová, V., Herrmann, W. J., Kuck, J., & Röhnsch, G. (2012). ‘‘I can’t prescribe something just because someone asks for it...’’: Using mixed methods in the framework of triangulation. *Journal of Mixed Methods Research*, 1558689812437183.

Galek, K., Flannelly, K. J., Greene, P. B., & Kudler, T. (2011). Burnout, secondary traumatic stress, and social support. *Pastoral Psychology, 60*, 633-649.

List of References

Gianakos, I. (2002). Predictors of coping with work stress: The influences of sex, gender role, social desirability, and locus of control. *Sex Roles, 46*, 149-158.

Graham, J., Ramirez, A. J., Cull, A., & Finlay, I. (1996). Job stress and satisfaction among palliative physicians. *Palliative Medicine, 10*, 185-194.

Gray-Toft, P., & Anderson, J. G. (1981). The nursing stress scale: Development of an instrument. *Journal of Behavioral Assessment, 3*, 11-23.

Guest, G., MacQueen, K. M., & Namey, E. E. (2011). *Applied thematic analysis*: Sage.

Hackett, A., Palmer, S., & Farrants, J. (2009). Phase 1 of an investigation into the levels of stress in united kingdom hospice services. *International Journal of Palliative Nursing, 15*, 66-72.

Hawkins, A. C., Howard, R. A., & Oyebode, J. R. (2007). Stress and coping in hospice nursing staff. The impact of attachment styles. *Psycho-Oncology, 16*, 563-572.

Head, B. A., Washington, K. T., & Myers, J. (2013). Job satisfaction, intent to stay, and recommended job improvements: The palliative nursing assistant speaks. *Journal of palliative medicine, 16*, 1356-1361.

Health and Safety Executive (2014) *Stress-related and psychological disorders in Great Britain 2014.* Available at http://www.hse.gov.uk/statistics/causdis/stress/stress.pdf (last accessed 14 January 2015)

Hooper, C., Craig, J., Janvrin, D. R., Wetsel, M. A., & Reimels, E. (2010). Compassion satisfaction, burnout, and compassion fatigue among

emergency nurses compared with nurses in other selected inpatient specialties. *Journal of emergency nursing, 36*, 420-427.

Hulbert, N. J., & Morrison, V. L. (2006). A preliminary study into stress in palliative care: Optimism, self-efficacy and social support. *Psychology, Health & Medicine, 11*, 246-254.

Injeyan, M. C., Shuman, C., Shugar, A., Chitayat, D., Atenafu, E. G., & Kaiser, A. (2011). Personality traits associated with genetic counselor compassion fatigue: The roles of dispositional optimism and locus of control. *Journal of genetic counseling, 20*, 526-540.

Joinson, C. (1992). Coping with compassion fatigue. *Nursing, 22*, 116, 118-119, 120.

Kalicińska, M., Chylińska, J., & Wilczek-Różyczka, E. (2012). Professional burnout and social support in the workplace among hospice nurses and midwives in poland. *International Journal of Nursing Practice, 18*, 595-603.

Keidel, G. C. (2002). Burnout and compassion fatigue among hospice caregivers. *American Journal of Hospice & Palliative Care, 19*, 200-205, 216, 201p.

Kulbe, J. (2001). Stressors and coping measures of hospice nurses. *Home Healthcare Nurse, 19*, 707-711.

Lange, R. V., & Tiggemann, M. (1981). Dimensionality and reliability of the rotter ie locus of control scale. *Journal of Personality Assessment, 45*, 398-406.

Mallett, K., Price, J. H., Jurs, S. G., & Slenker, S. (1991). Relationships among burnout, death anxiety, and social support in hospice and critical care nurses. *Psychol Rep, 68*, 1347-1359. doi: 10.2466/pr0.1991.68.3c.1347

Martens, M. L. (2009). A comparison of stress factors in home and inpatient hospice nurses. *Journal of Hospice & Palliative Nursing, 11*, 144-153.

List of References

Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organizational Behavior, 2*, 99-113.

Maslach, C., & Jackson, S. E. (1984). Burnout in organizational settings. *Applied social psychology annual*.

Maslach, C., Jackson, S. E., & Leiter, M. P. (1986). Maslach burnout inventory.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual review of psychology, 52*, 397-422.

McAbee, R. (1991). Occupational stress and burnout in the nursing profession. A model for prevention. *AAOHN journal: official journal of the American Association of Occupational Health Nurses, 39*, 568-575.

McGarry, S., Girdler, S., McDonald, A., Valentine, J., Lee, S. L., Blair, E., Wood, F., & Elliott, C. (2013). Paediatric health-care professionals: Relationships between psychological distress, resilience and coping skills. *Journal of paediatrics and child health, 49*, 725-732.

Monroe, J., & DeLoach, R. J. (2004). Job satisfaction: How do social workers fare with other interdisciplinary team members in hospice settings? *OMEGA--Journal of Death and Dying, 49*, 327-346.

Najjar, N., Davis, L. W., Beck-Coon, K., & Doebbeling, C. C. (2009). Compassion fatigue a review of the research to date and relevance to cancer-care providers. *Journal of Health Psychology, 14*, 267-277.

Payne, N. (2001). Occupational stressors and coping as determinants of burnout in female hospice nurses. *Journal of Advanced Nursing, 33*, 396-405. doi: 10.1046/j.1365-2648.2001.01677.x

Pearson, H. N. (2013). “You've only got one chance to get it right”: Children's cancer nurses' experiences of providing palliative care in the acute hospital setting. *Issues in Comprehensive Pediatric Nursing*, 1-24.

Pereira, S. M., Fonseca, A. M., & Carvalho, A. S. (2011). Burnout in palliative care: A systematic review. *Nursing Ethics, 18*, 317-326.

Pierce, B., Dougherty, E., Panzarella, T., Le, L. W., Rodin, G., & Zimmermann, C. (2007). Staff stress, work satisfaction, and death attitudes on an oncology palliative care unit, and on a medical and radiation oncology inpatient unit. *Journal of Palliative Care, 23*, 32-39.

Plante, A., & Bouchard, L. (1995). Occupational stress, burnout, and professional support in nurses working with dying patients. *Omega: Journal of Death & Dying, 32*, 93-109.

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of applied psychology, 88*, 879.

Rössler, W. (2012). Stress, burnout, and job dissatisfaction in mental health workers. *European Archives of Psychiatry and Clinical Neuroscience, 262*, 65-69.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological monographs: General and applied, 80*, 1.

Sardiwalla, N., VandenBerg, H., & Esterhuyse, K. (2007). The role of stressors and coping strategies in the burnout experienced by hospice workers. *Cancer Nursing, 30*, 488-497.

Slocum-Gori, S., Hemsworth, D., Chan, W. W., Carson, A., & Kazanjian, A. (2013). Understanding compassion satisfaction, compassion fatigue and burnout:

A survey of the hospice palliative care workforce. *Palliative Medicine, 27*, 172-178.

Stamm, B. H. (2010). The concise proqol manual, 2nd ed. Pocatello, ID: ProQOL.org.

Whitebird, R. R., Asche, S. E., Thompson, G. L., Rossom, R., & Heinrich, R. (2013). Stress, burnout, compassion fatigue, and mental health in hospice workers in minnesota. *Journal of Palliative Medicine, 16*, 1534-1539. doi: 10.1089/jpm.2013.0202