Dissertation in partial fulfilment

for the degree of

MMus (Music Therapy)

A systematic review of arts therapies interventions for work-related stress in healthcare professionals

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July 2018

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Titel van proefskrif/verhandeling/mini-verhandeling: **'n Sistematiese oorsig van kunsterapieë-intervensies vir werkverwante spanning in gesondheids-spesialiste**

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“I must study politics and war, that my sons may have the liberty to study mathematics and philosophy, geography, natural history and naval architecture, in order to give their children a right to study painting, poetry, music, architecture, statuary, tapestry, and porcelain.”

Letter from John Adams to Abigail Adams, 12 May, 1780.

Acknowledgements

Andeline – my rock through this process, for your indefatigable patience, non-judgmental support, your wisdom, and your knowledge.

Mom – for believing in me, understanding me. Rest in peace, we miss you so much.

Ivan – for your unconditional love, your unwavering, ongoing support and your encouragement, your wisdom, your protection. Love you and your Noah-bear to Mars and back.

Antoinette – for your love of Ivan and Noah-bear, and your unconditional love of our family, love you.

Carol – for going out of your way to provide empathetic supervision, reprimands and moral support.

Isobel – for sorting out so many problems and always finding obscure articles when my attempts were inadequate.

Family – making sure I never neglected the fun side, nor forgot the work that was waiting.

Carol, Andeline, Kobie, Karen, Faith, Caley, Susan and Anri, thanks for the good times, for catching the tears, for encouragement and for exceptional work.

Abstract

The care, compassion and empathy that healthcare professionals exhibit towards their clients/patients can prove physically, psychically, mentally, and economically costly. Exposure to a client/patient's trauma or distress can negatively impact on the healthcare professional's mental and physical health and wellbeing, and can adversely affect their quality of life. This systematic review focussed on the role of the arts therapies to reduce burnout, compassion fatigue, secondary traumatic stress, and vicarious traumatisation. A total of 19 relevant studies were identified, of which eight were qualitative, eight were quantitative and three were mixed methods. Investigation showed that burnout, compassion fatigue, secondary traumatic stress, and vicarious traumatisation are prevalent in the field of healthcare work, and that South African healthcare workers are particularly susceptible to the development thereof. Studies reported mixed results of arts therapy interventions. Seventy-two percent of studies reported results supporting the use of the arts therapies as interventions for these conditions in the healthcare profession. Recommendations are made for longer term studies, and for follow-up information to be included in research.

Keywords

Burnout; compassion fatigue; secondary traumatic stress; vicarious traumatisation; arts therapies; art therapy; dance and movement therapy; drama therapy; music therapy; healthcare workers.

Abbreviations

AT	– Art therapy
BMGIM	– Bonny Method of Guided Imagery in Music
BO	– Burnout
CF	– Compassion Fatigue
CFS	– Compassion Fatigue Selftest for helpers
CS	– Compassion Satisfaction
CSFST	– Compassion Satisfaction/Fatigue Self-Test
DAP-R	– Death Attitude Profile-Revised
DMT	– Dance and movement therapy
DT	– Drama therapy
EAP	– Employee Assistance Programme
FACT-G	– Functional Assessment of Cancer Therapy – General Form
FB-OZ	– Fragebogen zum Burn-Out Zustand
FFMQ	– Five Facet Mindfulness Questionnaire
GCS	– Global Check Set
GIM	– Guided imagery and music
GMI	– Group music intervention
GMI-GR	– Group music intervention for grief resolution
HBI	– Hamburger Burnout Inventar
HCGI	– Hospice Clinician Grief Inventory
ISCO	– International Standard Classification of Occupations
JSS	– Job Satisfaction Survey
MBI	– Maslach Burnout Inventory
MBI-GS	– Maslach Burnout Inventory – General Survey
MHP	– Mental Health Professional
MT	– Music therapy
MTSG	– Music Therapy Support Group
MTSG-AF	– Music Therapy Support Group Assessment Form
MTSG-NRS	– Music Therapy Support Group Numerical Rating Scales
OBI	– Oldenburg Burnout Inventory
PMS	– Profile of Mood States
POMS	– Profile of Mood States

ProQoL – Professional Quality of Life
PRQ85-Part 2 – Personal Resource Questionnaire 85-part 2
PSM-9 – Psychological Stress Measure
PWES – Perception of Work Environment Scale
RCT – Randomised controlled trials
RMM – Recreational music making
ROI – Return on investment
SA – South Africa
SAWS – Support Appraisal for Work Stressors
SCS – Sense of Coherence Scale
SRS – Silencing Response Scale
ST – Secondary Trauma
STS – Secondary Traumatic Stress
STAI-S – State Trait Anxiety Inventory-State
STAI-T – State Trait Anxiety Inventory-Trait
SUDS – Subject Units of Discomfort Scale
TABS – Traumatic Attachment Belief Scale
TSI – Traumatic Stress Institute
TBQ – Team Building Questionnaire
TMD – Total Mood Disturbance
TRS – Trauma Recovery Scale
UK – United Kingdom
USA – United States of America
VT – Vicarious Trauma
WES – Work Environment Scale
WFRDS – World Federation of Right to Die Societies
WHO – World Health Organization

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Chapter 1

Orientation to the study

1.1 Introduction

This study entails a systematic literature review on the use of the arts therapies as intervention for burnout (BO), compassion fatigue (CF), secondary traumatic stress (STS), and vicarious traumatisation (VT) with affected healthcare workers. The search for literature included art therapy (AT), dance and movement therapy (DMT), drama therapy (DT) and music therapy (MT) utilised as intervention with healthcare workers with reported symptoms of burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation. A lack of awareness of the utilisation and efficacy of the arts therapies specifically for healthcare workers suffering from work related stress became evident during the process of the literature search, and Snow and D'Amico (2009) provided one possible underlying reason. They argued that standardised research approaches that attract research grants mitigate against the prospect of obtaining funding for research designs that employ unconventional treatment methods, the absence of standard measurement protocols, or applications to specialised populations.

The review will examine the identified literature in two ways: firstly, to investigate the extent that the arts therapies have been researched as an intervention for these conditions, and secondly, to review the findings of these studies. burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation may occur in healthcare professionals as a result of occupational stress arising from their

work with clients/patients and their circumstances. These conditions particularly affect healthcare workers and are known to increase debilitating conditions such a depression and anxiety, posttraumatic stress disorder (PTSD), absence from work due to sickness, medical aid claims, and job turnover. The quality of service offered by healthcare workers can also be negatively impacted (Cocker & Joss, 2016). Canfield (2008) further reminded us that repeated exposure to human suffering often encountered by healthcare professionals could result in emotional numbing, insomnia, hyper-arousal, intrusive dreams, social withdrawal, a more negative view of the world, reduced sense of respect and empathy for clients, as well as feelings of despair and hopelessness, which are clear indications of burnout developing.

While the terms used in this review will be discussed in greater detail in chapter two, the following serves as a brief introduction. Freudenberger (1974), was the first to have created awareness of burnout in 1973 when he detected negative changes in personality, mood, attitude, and motivation in clinic workers. Care for professional healthcare workers progressed increasingly from then on. Schaufeli and Bakker (2007) pointed out that burnout emerged as a social problem and not a scholarly construct, as it was associated with the work that was done with people in human services, including healthcare work. Van Mol, Kompanje, Benolt, Bakker, and Nijkamp (2015) viewed burnout as an emotional and behavioural impairment characterised by emotional exhaustion, depersonalisation, and a lack of personal accomplishment that results from exposure to high levels of occupational stress.

Slocum-Gori, Hemsworth, Chan, Carson and Kazanjian (2013), Showalter (2010), as well as Figley (1995) held that compassion fatigue is associated with the cost-of-

caring for and working with individuals who suffer from the consequences of traumatic events. These authors argued that compassion fatigue differs from, but can co-exist with burnout. Secondary traumatic stress is often conceptualised as reactions resembling posstraumatic stress syndrome and although the symptoms experienced by healthcare workers are parallel to those experienced by clients/patients in primary trauma events, the consequences for healthcare workers result from secondary or indirect exposure (Bride, Robinson, Yegidis, & Figley, 2004). According to Bride et al., there are three clusters of symptoms in secondary traumatic stress: intrusive re-experiencing of the traumatic material; avoidance of trauma triggers and emotions; and increased physical arousal. Baird (1999) described the response of counsellors to clients' traumatic material as either one of two extremes: over-identification or detachment. Bride et al. defined three clusters of symptoms of secondary traumatic stress (intrusion, re-experiencing and avoidance), while Baird and Kracen (2006) refered to vicarious traumatisation as harmful changes in the views that professionals have of themselves, others and the world. Baird and Kracen further found that this occurs as a result of exposure to graphic and traumatic recounts of the circumstances of their clients/patients.

Skovholt and Trotter-Mathison (2015) advocated that healthcare practitioners have an ethical responsibility to recognise the demanding nature of their helping role and to reinforce protective approaches and self-care strategies to ensure wellness and professional vitality. The arts therapies as discussed in this review—including art therapy, dance and movement therapy, drama therapy and music therapy—appear to be useful and appropriate interventions for the conditions mentioned above. This study aims to explore the effectiveness of such interventions in more detail as a

need exists for a review of evidence that could assist in the understanding of how best to manage the often incapacitating consequences of occupational related stress conditions.

Many more studies have been done on clients/patients who suffered adverse trauma first-hand. Fewer studies have been conducted on secondary trauma experienced by caregivers. Also, as opposed to other intervention modalities, fewer studies have been done using the arts therapies for healthcare practitioners with symptoms of occupational related stress. However, despite these limitations, the available studies afforded the opportunity for a meaningful systematic review.

1.2 Problem statement and purpose

A high degree of occupational distress exists among healthcare workers. This is apparent in a wide range of professional settings and in work done with a variety of client populations. Healthcare practitioners who are affected include psychologists, psychiatrists, social workers, marriage and family therapists, professional counsellors, and drug and alcohol counsellors (Adams, Boscarino, and Figley, 2006); psychotherapists, mental health workers, and case managers (Figley, 1989, 1995, 2002); mental health and family therapists (Figley & Stamm, 1996); mental health professionals (McCann & Pearlman 1990); clinicians, researchers and educators (Pearlman & Mac Ian, 1995); and also therapists with vicarious traumatisation and secondary traumatic stress (Pearlman & Saakvitne, 1995). It is evident from this research that many healthcare workers experience distress in conjunction with their clients/patients who were subjected to a form of primary trauma (stemming from, for example, medical concerns, natural disasters, domestic violence, sexual assault,

community violence, human trafficking, bullying in schools and the workplace, poverty, racism and homophobia). The repeated exposure to human suffering often encountered by healthcare professionals can result in emotional numbing, insomnia, hyper-arousal, intrusive dreams, social withdrawal, a more negative view of the world, reduced sense of respect and empathy for clients, as well as feelings of despair and hopelessness (Canfield, 2008). These factors can have a negative impact on the health and professional practice of healthcare workers (Laschinger, Finegan, & Wilk, 2009).

Although the arts have consistently been part of healing throughout the history of mankind, the arts as therapy only became formally recognised during the first half of the 20th century (Malchiodi, 2005). Developing collaborative relationships with practitioners in other helping professions can be difficult for arts therapists due to the view held by some that arts therapies are unconventional treatment methods (Snow & D'Amico, 2009). The purpose of this systematic review is, thus, not only to inform arts therapists, but also to provide a useful overview of the literature in this field for healthcare professionals who may not previously have considered collaborating with arts therapists or consulting an arts therapist in relation to their personal experiences of burnout, compassion fatigue, secondary traumatic stress, and vicarious traumatisation. This review consequently serves a dual purpose. It examines the literature in two ways for the benefit of arts therapists: firstly, it investigates to what extent arts therapies have been researched as an intervention for burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation as experienced by healthcare workers and, secondly, it reviews the findings of these studies in terms of the evidence for the efficacy of implementing the arts therapies as

an intervention for occupational psychosocial stress-related conditions. The study also makes recommendations for further research.

The findings may contribute to the improvement of professional healthcare. Findings of the study also have practical implications for the training, supervision and clinical practice of arts therapists who work with those who experience burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation to enhance the efficacy of their professional service delivery. Rosenbloom, Pratt, and Pearlman (1995) emphasised the importance of adequate training and supervision for every healthcare professional doing clinical work. Arts therapies could also form part of this supervision process. Ensuring that supervision is available and fosters an atmosphere of respect, safety, and control for the healthcare worker who is assisting others in their processesing of trauma is paramount. As seen in a statement with enduring relevance made by McCammon (1995, p.118):

> In training of medical professionals we address not only their technical skills but also their knowledge of the potential impact of their work, how to engage in self-care, and how to establish supportive interventions and systems.

1.3 Research questions

This study was, consequently, guided by the following two questions:

1. To what extent has the use of the arts therapies been researched as an intervention for burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation as experienced by health professionals, hospice caregivers and nursing staff?

2. What benefits in relation to symptoms of burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation, if any, have been recorded in research investigating instances of utilising the arts therapies as intervention for health professionals, hospice caregivers and nursing staff who have experienced these conditions?

1.4 Significance of a systematic literature review

Systematic literature reviews have been categorised as a fundamental scientific activity in that the process is objective, methodical, transparent and replicable (Siddaway, 2006). Although a systematic literature review can be arduous and time consuming, Mulrow (1994) held that it is usually less costly than new studies, and can prevent researchers from duplicating previous research. Since large quantities of research information are produced annually, a systematic review can efficiently integrate this information and provide data for rational decision-making. These reviews establish a number of essential factors in research, such as establishing consistency in scientific findings, generalisability across populations, settings and treatment variations, and detecting significant variance across particular subsets (Mulrow, 1994). Narrative reviews are informative, but can often be confusing and can include an element of selection bias. Systematic reviews, conversely, involve detailed and comprehensive plans and search strategies in order to reduce bias by identifying, appraising and synthesising all relevant studies on a particular topic (Uman, 2011).

As will be discussed further in chapter three, there are different stages to follow when conducting a systematic literature review. Stage one requires the definition of a

review question. Thereafter, stage two includes defining the types of studies to be included/excluded, such as qualitative, quantitative, mixed methods, published or unpublished theses and/or dissertations. Stage three entails the development of a search strategy and studies are located. Searches generally include a number of different electronic databases, library searches, requests and personal communication with experts or key researchers in the field relevant to the study (Uman, 2011). Studies meeting inclusion criteria are obtained and reviewed in full during the fourth stage. A log of all reviewed studies with reasons for inclusion or exclusion is made at this stage, and missing data is identified. Research data is extracted during the fifth stage. The sixth stage requires analysis and interpretation of results, by categorising studies according to duration, type and outcomes, as well as the dissemination of findings.

1.5 Summary of the chapters in this dissertation

This section provides a brief summary of the content of each of the chapters in the review.

Chapter 1

The first chapter provides an orientation to the study, and touches on the conditions of burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation. It then discusses the problem statement and purpose of the research and provides a brief history of the development of the arts therapies. Research questions are stated, and the significance of a systematic literature review as research tool is explained.

Chapter 2

This chapter relates to the review of literature for the study. Definitions for the conditions of burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation are provided and relationships between the concepts are explained. Key features of the healthcare professions focussed on in this study are described, and the prevalence of occupational stress-related conditions linked to these professions is discussed. Relevance to the South African context is explored. The arts therapies (art therapy, dance and movement therapy, drama therapy and music therapy) are also defined in this chapter.

Chapter 3

Chapter three introduces the research methodology, explains why a systematic literature review was used as research design, and describes the search strategy. It provides characteristics of qualitative, quantitative and mixed methods studies, and gives reasons for including the three different types of research in the review. The keywords used in the literature search are listed. Inclusion and exclusion criteria are summarised, and quality assessment principles are provided for qualitative, quantitative and mixed methods research studies.

Chapter 4

This chapter concerns the analysis process, and provides a breakdown of the key points of interest in the selected studies. The data extraction process is introduced with a list of studies included in the review, followed by tables providing breakdowns of study methodology, country of origin, gender, intervention, primary target

condition, occupational group per target condition and occupations included in studies are presented. A table providing the study objectives is presented, including stress conditions at the start of the study, intervention design and procedure, study results and author conclusions. The main findings are then summarised.

Chapter 5

In this chapter the research questions are restated and addressed in terms of the findings that emerged from the data analysis. The findings of the research are discussed.

Chapter 6

This concluding chapter summarises the findings of the research, discusses the limitations of the study, and offers recommendations for future research.

1.6 Conclusion

This chapter provided the orientation to the study, introduced the conditions of burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation and the arts therapies (art therapy, dance and movement therapy, drama therapy and music therapy) in the context of affected healthcare workers. The research problem was introduced, the research questions stated, and the value of systematic literature reviews was outlined. A summary of chapter content for the review was provided. The following chapter will offer a literature review in which the main topics encompassed in this research will be explored in further detail.

Chapter 2

Literature review

2.1 Introduction

This chapter reviews the operational definitions of burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation and the impact that these conditions can have on healthcare workers and their quality of life. Healthcare professions relevant to this study will be introduced, and the disciplines of art therapy, dance and movement therapy, drama therapy (and psychodrama) as well as music therapy, will be described. The relevance to the South African context will be explored.

2.2 Operational definitions

This section will examine the conditions of burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation, which all relate to contact with traumatised clients/patients. The conditions will be defined individually, and this will be followed by a discussion of the relationships between them to demonstrate the necessity for including all these conditions in the current review. The four arts therapies will be defined.

2.2.1 Targeted conditions

Definitions for the conditions targeted in this review are presented in this section. Burnout is discussed, followed by compassion fatigue, followed by secondary traumatic stress, and finally by vicarious traumatisation.

2.2.1.1 Burnout (BO)

Freudenberger is reported to have coined the word “burnout” during 1974 to describe the collection of feelings experienced by professional healthcare workers when their emotional resources became depleted (Baird, 1999). Confirming Freudenberger’s early observation, a definition by Maslach and Jackson (1981) which is still relevant today explained that burnout is typically characterised by emotional exhaustion (depletion of emotional resources and diminution of energy), depersonalisation (negative attitudes and feelings as well as insensitivity and an absence of compassion towards service recipients) and a lack of personal accomplishment (negative evaluation of one’s work related to feelings of reduced competence). These three characteristics emphasise the connection between burnout and working directly with people (Khamisa, Peltzer, & Oldenburg, 2013). Van Mol, Kompanje, Benolt, Bakker, and Nijkamp (2015) regarded burnout as an emotional and behavioural impairment that results from the exposure to high levels of occupational stress. Schaufeli, Leiter and Maslach (2009) explained burnout metaphorically by implying that once a fire is burning it requires resources to constantly replenish it and keep it burning. They argued that employees provide intense contributions in their field of practice, and that continuing to do so could cause smouldering rather than the bright burning of the fire, resulting in the loss of capacity to make an impact.

Montero-Marin, Prado-Abril, Demarzo, Gascon, and García-Campayo (2014) determined that instances when professionals use ineffective coping strategies to try and protect themselves from work-related stress could result in burnout. Their study typologically defined burnout as the dimensions of frenetic overload, lack of development from being under-challenged, and neglect as a result of feeling worn-out. The Maslach Burnout Inventory (MBI) that was designed to assess the three components (emotional exhaustion, depersonalisation and reduced personal accomplishment) was developed by Christina Maslach and Susan Jackson (1981). Another Burnout Measure was created by Pines and Aronson (1988) to measure physical, emotional and mental exhaustion. This remains a widely used self-report measure of burnout.

2.2.1.2 Compassion fatigue (CF)

Van Mol, Kompanje, Benoit, Bakker and Nijkamp (2015) reported that compassion fatigue was described for the first time in the early nineties as the loss of compassion as a consequence of repeated exposure to client/patient suffering during healthcare work. Progressing from that, compassion fatigue was thought to develop into secondary traumatic stress through deep involvement with a primary traumatised client/patient. Van Mol et al. held that compassion fatigue can be defined as a two-part construct, the first entailing exhaustion, frustration and depression (as associated with burnout) and the second involving negative feelings driven by concerns such as hyper-vigilance, avoidance, fear and intrusion. While empathy and emotional energy are driving forces for working with suffering patients, Figley (2002) explained that the ability to empathise is the essential component in both caring for the suffering patient as well as being vulnerable to the costs of caring. The

underpinning cause for work related stress and the eventual development of compassion fatigue was recognised by Lynch and Lobo (2012) to be the psychological response to these conflicting elements of empathy and suffering as explained by Figley. Perry, Dalton and Edwards (2010) established that caregivers working with patients suffering as a result of primary trauma, were often unable to disengage from their caregiving roles to seek relief from the accompanying stress.

Compassion fatigue in its simplest form, as described by Coetzee and Klopper (2009), implies a state of psychic exhaustion. According to Slocum-Gori, Hemsworth, Chan, Carson and Kazanjian (2013), compassion fatigue is a stress response that emerges suddenly and without warning and includes a sense of helplessness, isolation and confusion. If not attended to, it may lead to depression and stress-related illnesses. Systemic and organisational factors such as physically and emotionally demanding obligations and duties in addition to the normal workload appear to present risk factors for compassion fatigue (Lynch & Lobo, 2012). Figley (1995), Showalter (2010), as well as Slocum-Gori et al. concluded that compassion fatigue is associated with the cost-of-caring from strain and weariness that evolved over time, and is recognised as the emotional residue of exposure to working with individuals who suffer from the consequences of primary traumatic events. They argued that compassion fatigue differs from, but can co-exist with burnout.

Statistics surveying the work and health of nurses in Canada, as reported by Mathieu (2007), indicated that over 50% of nurses took time off work because of a physical illness during the year before the survey, 10% reported mental health reasons for absence, and 80% of nurses accessed the Employee Assistance Program (EAP)

seeking crisis counselling. This is 50% more than the average for other employees across Canada. Coetzee and Klopper (2009) determined that in South Africa, compassion fatigue no longer mainly occurs in the nursing profession, but evidence indicated that healthcare professionals in general are at risk of developing compassion fatigue. Although they were unable to identify a singular definition for compassion fatigue at the stage of writing their article, they collated a list of descriptors found in the research. These descriptors included: borrowed stress; compulsive sensitivity; disabled resiliency; emotional contagion; empathic distress; empathic strain; empathic fatigue; empathy overload; existential suffering; fatal availability; indirect trauma; secondary victimisation; soul pain; vicarious trauma; and the wounded healer.

According to Cozolino (2014), the fear and emotional distress reflected in the facial expressions of clients who have experienced primary trauma is often matched on the faces of those healthcare workers attempting to assist them. Neural circuits are automatically activated when carrying out actions, expressing emotions and experiencing sensations (Gallesse, Eagle, & Migone, 2007). It is through this mirror neuron system that therapists can experience stress from being vicariously exposed to too much trauma. Instruments to measure this type of stress in healthcare professionals are frequently utilised. For instance, compassion fatigue is often measured by using the Professional Quality of Life (ProQoL) scale. This measure comprises a compilation of characteristics of the work environment, the individual's characteristics, and exposure to primary and secondary trauma in the work setting. The scale is concerned with occupational aspects that are perceived to be positive

and negative. It also measures pre-cursors for compassion fatigue and for compassion satisfaction (CS).

2.2.1.3 Secondary traumatic stress (STS)

Healthcare professionals are familiar with the effects of PTSD suffered by primary victims of trauma. Simpson and Starkey (2006) outlined that it is important that healthcare professionals remain cognitive of the effects that working with primary victims of trauma can have on their own psychological well-being. These ancillary effects, frequently experienced by those not directly traumatised are often defined as secondary traumatic stress. Canfield (2008) reported that secondary traumatic stress is understood to be a direct result of therapists hearing emotionally shocking recounts of experiences by clients. Since this is considered a normal reaction to engagement with traumatic material, many therapists will experience secondary traumatic stress. According to Bride et al. (2004), there are three clusters of symptoms: intrusive re-experiencing of the traumatic material; avoidance of trauma triggers and emotions; and increased physical arousal. Baird (1999) described the response of counsellors to a client's traumatic material as either one of two extremes: over-identification or detachment. Secondary traumatic stress is most frequently measured by using the Secondary Traumatic Stress Scale (STSS) which is a 17-item self-report measure of secondary traumatic stress. The measure is reported to have high levels of internal consistency reliability and indicates evidence of convergent, discriminant, and factorial validity (Ting, Jacobson, Sanders, Bride & Harrington, 2005).

2.2.1.4 Vicarious traumatisation (VT)

Vicarious traumatisation, according to Baird and Kracen (2006), refers to harmful changes in the views that professionals have of themselves, others and the world. This is said to occur as a result of exposure to graphic and traumatic recounts of the circumstances of their clients/patients. Despite similarity in the characteristics of vicarious traumatisation and secondary traumatic stress, they remain two distinct conditions. Both vicarious traumatisation and secondary traumatic stress describe effects of working with primarily traumatised clients/patients on healthcare workers, however their emphases differ. Jenkins and Baird (2002) argued that both conditions are trauma-related constructs stemming from contact with trauma survivors, and both include residual PTSD-like symptoms. Secondary traumatic stress and vicarious traumatisation, according to Jenkins and Baird, differ in certain areas. Secondary traumatic stress displays a focus on the symptomatology that healthcare workers can have to trauma survivors versus vicarious traumatisation with a focus on theory where the verbal exposure to traumatic material theoretically changes cognitive schemas regarding self and other in the areas of trust, safety, control, esteem and intimacy. In the nature of the symptoms secondary traumatic stress exhibits immediately observable reactions versus the more hidden changes in thinking in vicarious traumatisation.

Chouliara, Hutchison, and Karatzias (2009), Phipps and Mitchell (2003), as well as Sprang, Clark, and Whitt-Woosley (2007) found that mental health professionals (MPHs) are known to be at risk of developing PTSD-like symptoms through exposure to their clients' traumatic narratives, despite not having been exposed to these events directly. This phenomenon has been characterised as vicarious

traumatisation (McCann & Pearlman, 1990), and can occur when mental health professionals engage empathetically with traumatised clients (Pearlman & Mac Ian, 1995). It was found that the more time mental health professionals spend with traumatised clients and the greater their caseload, the higher their risk of developing vicarious traumatisation. The onset of secondary traumatic stress can be sudden, often after only one session, while vicarious traumatisation is a response to the accumulation of exposure to the pain and trauma of others (Figley, 1995).

2.2.1.5 Relationships between the concepts

Burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation are responses to healthcare workers' interpersonal emotional engagement with traumatised clients/patients. Several researchers have found that certain other factors in the concepts overlap in specific instances. Van Mol, Kompanje, Benoit, Bakker and Nijkamp (2015) observed burnout to be closely related to compassion fatigue, although they held that the underlying mechanism probably differs, as burnout is believed to be related to occupational factors like workload, autonomy and reward rather than personal relationships. Compassion fatigue is deemed to be an inability to engage or enter into a caring relationship, and Elkonin and van der Vyver (2011) explained that burnout should be regarded as the end result of traumatic stress in an occupational stress situation and could be an extreme case of compassion fatigue. Contrary to this view, Sabo (2011) explained burnout as a pre-condition for compassion fatigue, and Aycock and Boyle (2009) proposed that compassion fatigue replaces the "outdated notion of burnout in describing this phenomenon" (p. 183). According to Cocker and Joss (2016), compassion fatigue is stress resulting from exposure to a traumatised individual, and

is the convergence of secondary traumatic stress and cumulative burnout, which could even lead to PTSD.

Although the research conducted by the following authors dates back to 1990-2002, the information is still relevant in the healthcare industry today and is, thus, included here. Schauben and Frazier (1995) as well as Jenkins and Baird (2002) pointed out that while burnout could be seen to be more related to chronic tedium in the workplace rather than being exposed primarily to specific kinds of traumatic problems experienced by clients/patients, secondary traumatic stress and vicarious traumatisation were not linked to workplace conditions. More accurately, secondary traumatic stress and vicarious traumatisation were directly linked to exposure to the traumatic experiences of clients/patients. The following was stated by Jenkins and Baird (2002, p 423):

> To support their construct validity, measures of secondary traumatic stress and vicarious trauma (VT) should be moderately correlated with burnout and general distress; to show discriminant (and potential incremental) validity, these correlations should not be so high as to indicate redundancy. Furthermore, concurrent validity supportive of construct validity requires the trauma-related measures to be correlated with each other more highly than either is with burnout or general distress, but not so highly as to indicate redundancy; unique variance should be adequate to support differential association with a criterion.

2.2.2 Healthcare professionals

This study is concerned with the effect of burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation of individuals who are professionally trained as health workers. The World Health Organization (WHO) provides a general definition of health workers:

> Health professionals study, advise on or provide preventive, curative, rehabilitative and promotional health services based on an extensive body of theoretical and factual knowledge in diagnosis and treatment of disease and other health problems. They may conduct research on human disorders and illnesses and ways of treating them, and supervise other workers. The knowledge and skills required are usually obtained as the result of study at a higher educational institution in a health-related field for a period of 3–6 years leading to the award of a first degree or higher qualification (WHO, 2008, p.1).

Healthcare professionals in this study involved the following disciplines: hospice caregivers (including social workers), medical health professionals, mental health professionals, and nursing staff. Such healthcare workers are occupied in direct and continuous client/patient care and are regularly exposed to suffering, trauma and negativity (Portnoy, 2011). The continuous contact with clients/patients, combined with the complex interaction of workplace and personal life factors increase the likelihood of developing symptoms of burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation for this specific population, hence the inclusion of these professions.

2.2.2.1 Hospice caregivers

According to the World Federation of Right to Die Societies (WFRDS), hospice is a concept and practice of care aimed at providing comfort and support to patients and their families when a life-limiting illness no longer responds to cure-oriented treatments. This type of care neither prolongs life nor hastens death. Caregivers have knowledge of medical care, including pain management. The aim of hospice care is to improve the quality of life of patients by offering comfort and dignity. This is done through collaboration between trained professionals (including social workers), volunteers and family members. Hospice care particularly addresses all symptoms of a disease, with a special emphasis on controlling a patient's pain and discomfort. It deals with the emotional, social and spiritual impact of the disease on the patient and the patient's family and friends. Hospice can offer bereavement and counselling services to families before and after a patient's death (World Federation of Right to Die Societies, n.d.).

Jones (2008) reflected on the symptoms of burnout in the case of a hospice professional who felt she had to take repeated showers to get rid of the smell of death after multiple deaths occurred in the hospice care unit. Keidel (2002) observed that dying with dignity may appear inspiring, but that it remains hard for hospice caregivers to watch when patients are emaciated, under poor pain control, and experiencing multiple medical complications. Work in oncology settings necessitates the development of intense professional relationships with patients and families, and oncology staff are often exposed to deteriorating health and death of their patients (Dean, 1998; Medland, Howard-Ruben, & Whitaker, 2004; Montgomery, 1999). In a study conducted in the USA by Kamal et al. (2016), the observed burnout rate in

hospice care workers was 62% with higher rates reported by non-physician clinicians (in other words, nurses, social workers, and hospice care givers). Most burnout stemmed from emotional exhaustion.

2.2.2.2 Medical doctors

Medical doctors may be found within a wide range of practice settings, including private practices, group practices, hospitals, health maintenance organisations, teaching facilities, and public health organisations.

Medical doctors (including specialists) are exposed to high levels of occupational-related stress and are particularly susceptible to experiencing stress-related conditions (Kumar, 2016). Developing burnout, compassion fatigue, secondary traumatic stress and/or vicarious traumatisation is a strong possibility, and these conditions increase the risk of depression, sleep disturbances, fatigue, alcohol and drug misuse, relational dysfunction, early retirement and in severe cases, even suicide. According to Kumar, sources of stress can range from emotions arising in the context of patient care, to the environment in which doctors practice. Kumar, as well as Umene-Nakano et al. (2013), found that doctors specialising in psychiatry are, as a group, more vulnerable to burnout than other physicians and surgeons. The doctor-patient relationship that develops is a highly personal one, and combines with negative spill-over effects and role conflicts for the psychiatrist between work and family. In addition, chronic exposure to work-related emotional and interpersonal stressors such as a desire to provide the best treatment, legal and ethical requirements, and dealing with personnel in the treatment setting can render psychiatrists particularly susceptible to burnout. Kumar (2016) asserted that the work

exposes doctors to multiple emotions, the need to rescue patients and the sense of failure when treatment is unsuccessful. This factor, the litigious environment in which they work, and trying to keep up with continually changing scientific information, can create circumstances where medical professionals often experience symptoms of burnout.

2.2.2.3 Mental health professionals

Literature in this review included studies conducted with the following mental health professionals: clinical psychologists (trained to make diagnoses and provide individual and group therapy); counselling psychologists (trained to counsel individuals and groups); educational psychologists (focus on schools and education); clinical social workers (counselling and case management, usually found in a hospital setting); pastoral counsellors (trained in clinical pastoral education); psychiatrists (medical doctors with specialised training in the diagnosis and treatment of mental and emotional illnesses. A psychiatrist can prescribe medication, but they often do not counsel patients. This category can include child/adolescent psychiatrists with special training in the diagnosis and treatment of emotional and behavioural problems in children) as well as psychiatric or mental health nurse practitioners (registered nurse practitioner with a degree and specialised training in the diagnosis and treatment of mental and emotional illness).

In a study on burnout in psychologists in South Africa, Roothman (2010) found that mind-body duality presented an element which include physical symptoms such as frequent headaches, chronic fatigue, backache, insomnia, loss of appetite or weight gain, cardiac symptoms as well as hypertension. Mind and body dualism, as

explained by Mehta (2011), has a basis in the biomedical model where disease is seen as a deviation from the biological norm. Its central claim is that the mind (seen as immaterial) and the body (material), while being ontologically distinct substances, causally interact. These physical symptoms may result in healthcare workers developing emotional exhaustion which could make them more susceptible to burnout. In a study by Sprang, Clark and Whitt-Woosley (2007), conducted among mental healthcare providers that explored the instances of burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation, it was found that females experienced higher levels of compassion fatigue, and therapists with specialised training in trauma work reported higher levels of compassion fatigue than non-specialists. Perseius, Kaver, Ekdahl, Asberg, and Samuelsson (2007) noted that psychiatric health professionals found the treatment of young women exhibiting symptoms of self-harm and borderline personality disorder particularly stressful. An increase in workload exacerbated the symptoms of stress and burnout in mental healthcare professionals.

2.2.2.4 Nursing professionals

According to the practice and standards of modern nursing (World Health Organization, 2006), nursing professionals provide treatment, support and care services for people who are in need of such care due to the effects of ageing, injury, illness or other physical or mental impairment, or potential risks to health. Nurses assume responsibility for the planning and management of the care of patients, including the supervision of other healthcare workers, working autonomously or in teams with medical doctors and others in the practical application of preventive and curative measures in clinical and community settings.

The prevalence of adverse consequences of healthcare work is particularly relevant to the experiences of nursing staff. Ribeiro et al. (2014) indicated that nurses had been the subject of several studies in this area. Nurses work in direct contact with both patients and medical professionals and subsequently experience stress when dealing with doctors and supervisors in the work environment, as well as when dealing with traumatised and un-well patients. This exposure to both patients and medical professionals ultimately contributes to their exhaustion and fatigue. Khamisa, Oldenburg, Peltzer, and Dragan (2015) found gaps in research in developing countries and consequently conducted a study on burnout in South Africa on a sample of 1,200 nurses from four different hospitals. Their findings confirmed that nurses experienced stress as a result of working with traumatised patients, in addition to experiencing managerial stressors. Nayeri, Negarandeh, Vaismoradi, Ahmadi, and Faghihzadeh (2009) observed that typical working conditions for nurses include long/irregular hours and that this factor, combined with work-related stress factors, has an impact on the experience of burnout for nurses. Work-related stress factors include high workload, diffused work demands, as well as traumatic experiences, all of which could culminate in burnout. Ribeiro et al. made reference to a British study that found that 42% of nurses investigated in England reported to be suffering from burnout, and 44% of nurses investigated in Greece experienced feelings of dissatisfaction with their work and indicated a desire to resign. Altun (2002) maintained that in an ideal working environment, nurses should not experience burnout, that their conditions of employment and their work environment should be regulated to minimise conditions that could lead to burnout. Altun (2002) explained that in stressful conditions, burnout impacts in several ways: “it destroys

creativity, decreases productivity, reduces quality in job performance, and increases opportunities for mistakes or acts of poor judgment". Nayeri et al. (2009) concluded that managers often underestimate the risks involved in nursing staff developing burnout, not only to the nurses themselves, but also for patient care.

2.2.2.5 Relevance of the study to healthcare in South Africa

While this review has international relevance for healthcare professionals in the various environments where they practice, the findings will also have particular relevance to the healthcare sector in South Africa. The legacy and aftermath of apartheid has produced indefinable stress, suffering and trauma among victims of that system (Jenkins & Baird, 2002). Although the country has left apartheid (as a legislated system) in the past, the burden of morbidity and mortality arising from the violence and injury still lingers in the memory of people who lived through it, and care workers exposed to this residual trauma remain at risk of developing symptoms of burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation (Spangenberg, 2003). The South African population is constantly exposed to violent crime, including child abuse and neglect, intimate partner violence, murder, physical assault and sexual violence (South African Police Services, 2016; World Health Organisation, 2013). Similarly to how family and gender roles may be transmitted through socialisation (Wareham, Boots, & Chavez, 2009), intergenerational trauma is transmitted through the mechanisms of socialisation and social learning. From a family systems perspective we learn from Gajdos (2002) that "when grief and trauma are not attended to with awareness and compassion in one generation, the deleterious effects of that trauma and grief cascade through the family tree, creating a domino effect of dysfunction" (p. 307).

Dealing with violent crime and the aftermath of apartheid has, therefore, increased the case load of healthcare workers. This kind of work often results in vicarious traumatisation which may be regarded as a normal response to ongoing challenges experienced by a professional whose beliefs and values may be affected. In turn this can lead to a decrease in the health professional's motivation, efficacy, and empathy (Jenkins & Baird, 2002). To provide effective interventions to traumatised clients, it is necessary to engage empathically (Maja, 2016). MacRitchie and Leibowitz (2010) focused their research in a South African context on the psychological impact of dealing with victims of trauma. The results of their study indicated significant interrelationships between high levels of exposure to traumatised clients and low levels of empathy, as well as between low levels of perceived social support and high levels of secondary traumatic stress. With reference to emotional stress among a stratified sample of 238 clinical and counselling psychologists in South Africa, Jordaan, Spangenberg, Watson and Fouché (2007) determined that over half of the participants reported above average levels of anxiety as well as mild depression.

Nolte, Downing, Temane, and Hastings-Tolsma (2017) conducted a qualitative study on the compassion fatigue experienced by nurses who endure extra-ordinary stress as a result of their work in overburdened healthcare systems. Nolte et al. highlighted four central themes that emerged in the research: physical symptoms, emotional symptoms of compassion fatigue, factors triggering compassion fatigue, and measures to overcome/prevent compassion fatigue. Of particular interest in the South African context, is the lack of support from managers and administrators, as well as colleagues. Nurses testified to finding this discouraging as they "felt the system was letting people down" (Nolte et al., 2017, p.10). Nursing staff reported that

although the need for support was great, they felt uncomfortable to seek the care they need. The research recommended that nurses be assisted to develop a planned approach for managing compassion fatigue, and that employers should also take responsibility to help deal with incidences of compassion fatigue (Nolte et al., 2017).

In a Master's dissertation that was conducted in Bophelong Community Healthcare Centre in Mamelodi, Pretoria by Maja (2016), findings were based on four relational themes associated with the experiences of compassion fatigue of palliative caregivers. These included emotional well-being; personal and work relationships; physical discomfort; and spiritual awareness. The findings of this study identified the common triggers for compassion fatigue to be a high workload, a lack of support, and ongoing exposure to the pain and suffering of patients. In explaining possible reasons behind caregivers' motives for the choice of profession, Maja found that one participant noted her lack of options in careers as a reason for being a palliative caregiver, and although some of the caregivers expressed the desire to stop working altogether, none would be able to do so because of the possibility of subsequent unemployment in the South African environment. The aim of Maja's study was to make recommendations for coping with the occurrence of compassion fatigue in hospice caregivers, and she found that it would be an important factor in training caregivers to recognise compassion fatigue as well as for increased care from management. A limitation to this particular study was that the first language of the participants was not the same as that of the researcher. Differences in language between service user and health professional should be borne in mind in South Africa (with 11 official languages and diverse cultures), as it could potentially

exacerbate the incidence of compassion fatigue and/or other occupational stress-related conditions as communication may be frustrated. The mental health profession in South Africa is gradually changing to include more counsellors of indigenous cultures, however, most still only speak one or two of the indigenous African languages. Although an interpreter is often available to be used, the situation is far from ideal and increases the potential for developing work related stress (Maja, 2016).

2.2.3 Arts therapies

Malchiodi (2012) described arts therapies as creative interventions that have been formalised through the disciplines of art therapy, dance and movement therapy, drama therapy (or psychodrama), and music therapy. Art therapy, dance and movement therapy, drama therapy and music therapy are referred to as creative arts therapies due to their bases in the arts and theories of creativity. Such therapies use self-expression as part of the therapeutic process (Malchiodi, 2005). An integrative approach was developed by Natalie Rogers, daughter of Carl Rogers, an American psychologist and one of the founders of the humanistic approach in psychology, and this became known as the expressive arts therapies (Dunphy, Mullane & Jacobsson, 2013). It involves the use of art, music, drama, and dance/movement, as well as poetry and play therapy within the context of psychotherapy, counselling, rehabilitation, and medicine.

2.2.3.1 Art therapy (AT)

Use of the term “Art therapy” and the profession of art therapy itself, emerged during the late 1940’s. In the UK, the artist Adrian Hill is generally accepted to be the first

person to have used the term “art therapy” to describe the therapeutic application of image making (Edwards, 2004). According to Edwards, Margaret Naumberg also began to use the term to describe her approach in the USA. This pioneering work laid the foundation for contemporary art therapy, of which the essence lies in the relationship established between art and therapy. Art therapy is used to help individuals and groups of all ages, and involves the purposeful use of visual arts materials and media in intervention, counselling, psychotherapy, and rehabilitation (Edwards, 2004; Malchiodi, 2012).

2.2.3.2 Dance and movement therapy (DMT)

Dance and movement therapy is based on the assumption that body and mind are interrelated and is defined as the psychotherapeutic use of movement as a process that furthers the emotional, cognitive, and physical integration of the individual (Loman, 2005). Dance and movement therapy effects changes in feelings, cognition, physical functioning, and behaviour.

2.2.3.3 Drama therapy (DT)

Drama therapy is the systematic and intentional use of drama and/or theatre to achieve psychological change, emotional and physical integration, and personal growth. The tools are derived from theatre and the goals are rooted in psychotherapy. The process could help clients tell their stories to solve a problem, achieve catharsis, widen inner experience, interpret the meaning of images, and develop the ability to observe and work with personal roles (Jones, 2007). Psychodrama involves action that takes place in a group as a way of looking at one’s life as it moves, acting out what did happen, and what did not happen in a given

situation (Karp, Holmes, Bradshaw-Tauvon,1998). Moreno, who is credited as founder of psychodrama during the 1900's saw it as a truly therapeutic procedure that allowed one to practice living without being punished for making mistakes.

2.2.3.4 Music therapy (MT)

Music therapy is the prescribed use of music to effect positive changes in the psychological, physical, cognitive, or social functioning of individuals with health or educational problems (Bumanis, 2014; Wheeler & Murphy, 2017). According to Wigram, Pederson and Bonde (2002) music therapy is the professional use of music and/or musical elements for therapeutic objectives. Musical elements include sound, rhythm, melody and harmony and the therapeutic process could facilitate communication and learning to meet physical, emotional, mental, social and cognitive needs (Wigram et al., 2002).

2.3 Conclusion

In this chapter, it is evident that burnout is typically characterised by emotional exhaustion, depersonalisation leading to insensitivity and an absence of compassion, as well as a lack of personal accomplishment in healthcare professionals. Compassion fatigue implies a state of psychic exhaustion and is associated with the cost-of-caring from strain and weariness that evolves over time. Secondary traumatic stress is a direct result of healthcare workers hearing emotionally shocking recounts of experiences by clients/patients, and vicarious traumatisation refers to harmful changes in the views that professionals have of themselves, others and the world. The arts therapies (art therapy, dance and

movement therapy, drama therapy & music therapy) are referred to as creative arts therapies and use self-expression in therapy. The legacy and aftermath of apartheid make burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation relevant to the experience of healthcare professionals in South Africa. The prevalence of occupational stress-related conditions can be found in the work done by hospice caregivers, medical professionals, mental health professionals, and nursing staff which are the healthcare disciplines examined in this review.

Chapter 3

Research methodology

3.1 Introduction

This chapter explains the rationale for the current study and the use of a systematic literature review as a research design. The integration of qualitative, quantitative and mixed methods studies is described. The search strategy and search process are discussed, and inclusion and exclusion criteria are noted.

3.2 Systematic literature review

Ten Ham-Baloyi and Jordan (2015) defined a systematic review as a “review of a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise relevant research, and to collect and analyse data from the studies that are included in the review” (p. 122). Typically, a systematic literature review is conducted in different stages. During the first stage, a research question is defined. The second stage includes delineating what types of studies will be included and excluded, for instance, qualitative, quantitative, mixed methods, published or unpublished theses and/or dissertations. During stage three a search strategy is developed and studies are located. Searches generally include several relevant electronic databases, library searches, and can even include personal communication with experts or key researchers in the field (Uman, 2011). During the fourth stage, studies meeting the inclusion criteria are obtained and reviewed in full. A log of all reviewed studies with reasons for inclusion or exclusion is made, and

missing data is pinpointed. Stage five involves the extraction of data. The next stage involves analysing and interpreting the results from the literature search, and then disseminating the findings.

A systematic review was conducted for the current study for various reasons. Firstly, systematic reviews offer reliable results as the methodology requires a well-defined procedure for searching and selecting studies included in the review. As this process is explicit and transparent, it greatly reduces chance effects and limits bias (Higgings & Green, 2008). Resultant judgments in the conclusions should enable healthcare decision makers to apply the information to answer their enquiries (Coleman, Talati, & White, 2009). Secondly, a systematic review assists with merging empirical data. Instead of healthcare professionals having to judge the strength of evidence for individual studies that they are able to access to answer a specific enquiry, they could then rely on a relevant systematic review. This well-defined process also allows for the review to be expanded upon by other researchers, or to be updated when new information becomes available.

3.2.1 Integrative reviews

Integrative reviews are the broadest type of research review and allow for the simultaneous inclusion of experimental and non-experimental research to present information needed to more fully understand the research question (Whittemore & Knafl, 2005). The use of the integrative research review, as explained by Russell (2005), ensures that a current knowledge base in a particular research area is maintained by summarising research and drawing overall conclusions from all available studies.

3.2.1.1 Characteristics of three methodologies included in integrative studies

As the current review is of an integrative nature, comprising qualitative, quantitative and mixed methods studies, the features of these methodologies and the reasons for their inclusion require consideration.

3.2.1.1.1 Qualitative studies

Qualitative studies aim to gain insight and understanding of phenomena through intensive collection and study of descriptive data, utilising an inductive, often subjective, holistic, and process-oriented approach. Data interpretation is tentative and speculative, and frequently reviewed on an ongoing basis. Qualitative research embodies a view of social reality as constantly changing as it is created by individuals (Bryman, 2008). The way that theory relates to qualitative research is inductive, as it could generate new theories. Qualitative methods and findings are frequently seen as specific to context and time, as explained by Thomas and Harden (2007), and are therefore not generalisable.

3.2.1.1.2 Quantitative studies

Quantitative research aims to explain, predict or control phenomena through focused collection and analysis of numerical data. It uses a deductive, outcome-oriented approach with specific testable hypotheses, uses the largest manageable randomised sample, and allows for generalisation of results to larger populations. It offers a means for testing hypotheses by examining relationships between certain variables that can be measured, so that the numbered data can be analysed using statistical calculations (Creswell, 2000). Quantitative researchers include protective

measures against bias and add controls for alternative explanations. This methodology entails the organisation of information to demonstrate the relationship between theory and research as deductive, and exhibits a predilection for the natural science approach, with an objectivist conception of social reality. (Bryman, 2008).

Systematic reviewers, as observed by Sandelowski, Barroso and Voils (2007), face the charge that they decontextualise findings and wrongly assume that these are measurable or comparable by a common standard. These authors explained that identifying findings in qualitative research can be complicated by varied reporting styles. Hoeck (2006), advocated that a sufficient explanation of the background, a succinct research question, a comprehensive description of methods used, a clear presentation and discussion of the main findings, as well as a statement of the relevance of the findings to policy or practice, are necessary for clarity and quality in presenting qualitative findings in a systematic review.

3.2.1.1.3 Mixed methods studies

Mixed methods studies can overcome the limitations of a single research design (either quantitative or qualitative). The term “mixed methods research” describes research that integrates quantitative and qualitative studies in a single project, and it is increasingly being used and accepted as a social research approach (Bryman, 2008).

3.2.1.1.4 Reason for inclusion of quantitative, qualitative and mixed methods studies

Qualitative research is included in this review to explore context-specific human behaviour holistically, in order gain insight and understanding for the use of the arts therapies as intervention for work-stress related conditions in healthcare professionals. Whereas qualitative research is primarily exploratory, quantitative research is used to quantify the problem by generating numerical data which can be transformed into usable statistics. It is used to quantify attitudes, opinions, behaviours and other defined variables. Quantitative research was therefore included in the current review to examine the quantified information in comparison to the qualitative information. Qualitative research is exploratory, and was included in order to examine the experience of participants and to gain insight and understanding of the phenomena under investigation. Mixed methods studies were included in order to investigate outcomes where a weakness in one method may have been overcome in using the strengths of the other.

3.2.1.2 Stages of an integrative review

Although the stages of a systematic review were mentioned earlier in this chapter, more detail is provided here with specific reference to integrative reviews. Whittemore and Knafl (2005) advocate five methodological stages that allow the integrative review method to use diverse data sources in order to develop a holistic understanding of the topic of interest. The five stages are:

i. **Problem identification stage**

This is the initial stage of any review method and it defines the problem the review is addressing and elucidates the purpose of the review. Subsequently, concepts, target population, health care problem etc. should be pursued, and the type of studies for inclusion considered to enable a clear problem identification and review purpose.

ii. **Literature search stage**

Developing well-defined strategies for identifying suitable literature are critical for enhancing the rigour of the review and, as noted by Whittemore and Knafl (2005), an incomplete and biased research effort runs the risk of inaccurate results. They recommend that various databases should be considered, and limitations associated with each method kept in mind. Recommended approaches to searching for literature include computerised searching, journal hand searching, networking, and searching research registries. In general, the maximum number of eligible primary sources should be identified using at least two to three search strategies.

iii. **Data evaluation stage**

Locating studies with the best overall quality to be incorporated into the review is recommended. However, the notion of quality is complex and there is no gold standard for calculating quality scores. Each type of design has different criteria that exemplify the quality of the particular study, and the process of evaluation is more conducive to reviews in which the sampling frame is relatively narrow and research designs included are similar, if not identical.

According to Whittemore and Knafl (2005) evaluating the quality of primary sources in an integrative review where the sources included are diverse becomes increasingly complicated. The questions to be answered are whether broader quality criteria (encompassing different research designs and literature) should be used, thereby losing specificity, or whether multiple design or literature-specific quality evaluations should be undertaken, thereby complicating analysis. Also, how does one define primary sources that are not empirical? Whittemore and Knafl suggested that, as no gold standard is available, the evaluation of quality in integrative reviews will vary depending on the sampling frame. In an integrative review with diverse empirical sources (as is the case with the current review) it may only be reasonable to evaluate quality in sources that represent outliers (for instance, is methodological quality a viable reason for the discrepant finding

iv. Data analysis stage

The aim of data analysis is to present a thorough and unbiased interpretation of primary sources, and an innovative summary of the evidence. This requires findings from primary sources to be ordered, coded, categorised, and summarised into an integrated conclusion about the research problem (Cooper, 1998). In order to achieve a meaningful interpretation in the current review, findings from the identified studies will be extracted into systematic categories, thereby facilitating the distinction of patterns, themes, variations and relationships. This approach to data analysis is compatible with the use of varied data from diverse methodologies when employing the integrative review method (Whittemore & Knafl, 2005). To achieve this, data reduction

should be performed by determining an overall classification system for managing the data from diverse methodologies. In the current study, primary sources were divided into subgroups that facilitated analysis. This meant first analysing qualitative studies, then quantitative studies and, lastly, mixed methods studies. Thereafter, predetermined and relevant findings from each subgroup classification were extracted from the primary sources, and compiled into a number of spreadsheets (Garrard, 2011). This approach provided the succinct organisation of the literature, and thereby facilitated the systematic comparison of the identified primary sources on specific factors, variables and the characteristics of the studies (Whittemore & Knafl, 2005). The review matrix was then compiled. This entailed developing the rows of the matrix by analysing one study at a time, based on the relevant information to be extracted for column topics (Garrard, 2011). A particular column of the review matrix could now be scanned in order to identify studies that contained or lacked information, under a specific heading.

The final phase of data analysis comprised drawing conclusions and verifying the abstracted information, isolating patterns and processes, and identifying commonalities and differences, thereby subsuming the particulars of the selected studies into the general for this report (Whittemore & Knafl, 2005).

v. Presentation stage

Finally, explicit details from primary sources and evidence to support conclusions will allow the reader of the review to be confident that conclusions did not exceed the evidence (Whittemore & Knafl, 2005).

3.3 Search strategy

A systematic and comprehensive search strategy was developed for the current study to identify and retrieve all available published and unpublished research studies meeting the specific inclusion criteria for the review. The search was conducted electronically across several databases. These included the American Arts Therapy Association Research Database; CIIS Library (Drama therapy research guide); Cinahl Nursing Journal Databases; Cochrane Library; Embase (Biomedical database), Elsevier; Medline/PubMed Resources Guide; Nordoff Robbins Academic and Research Review; ProQuest; PsychINFO (American Psychological Association); The International Art Therapy Research Database; Trip (Turning research into practice); and The American Dance Therapy Association. These were selected because they provided the most relevant articles to conduct a review into the use of arts therapies as interventions for burnout, compassion fatigue, vicarious traumatisation and secondary traumatic stress. The search was conducted through the University of Pretoria Library Website, Google Scholar and Google.

3.3.1 Search parameters

The following keywords were used during the search for relevant material:

Table 1: Keywords used in search strings

Interventions	and	Occupational stress condition	and	Participants
“Music therapy” or “Guided imagery and music” or “Guided imagery” or “Art therapy” or “Dance/movement therapy” or “Drama therapy” or “Dramatherapy” or “Psychodrama” or “Creative arts therapies” or “Creative arts therapies” or “Arts therapies”		“Burnout” or “Compassion fatigue” or “Compassion” or “Secondary traumatic stress” or “Vicarious trauma” or “Vicariously acquired trauma” or “Occupational related stress” or “Work stress” or “Stress conditions” or “Secondary trauma”		“Health workers” or “Health professionals or “Mental health professionals” or “Psychologists” or “Psychiatrists” or “Social workers” or “Art therapists” Or “Dance/movement therapists” or “Drama therapists” or “Dramatherapist” or “Psychodrama therapists” or “Medical health professionals” Or “Music therapists” or “Hospice caregivers” or “Nursing staff” or “Professional nurses” or “Palliative care”

Searches in databases included the above keywords individually, as well as different combinations thereof, for instance, music therapy AND burnout AND nursing staff, or drama therapy AND compassion fatigue AND hospice care givers. All possible combinations were utilised during the search, and the search was deemed to be exhausted when results extracted no additional studies to those already found. The pearl-growing technique (Barnet-Page & Thomas, 2009) was implemented to find additional appropriate research possibly not identified during the keyword search. This meant that through checking the bibliographies of relevant papers further studies could be identified.

3.4 Eligibility criteria

Elligibility criteria are liberally applied at the start of a search to ensure that relevant studies are included and no study will be excluded without thorough scrutiny (Meline, 2006). The focus of this review remained the involvement of healthcare professionals who worked with clients/patients who experienced primary trauma or suffering. A list of the studies considered but excluded from the review, and the reasons for the exclusion, are presented in Appendix A.

3.4.1 Inclusion criteria

- Literature relating to interventions employing any of the relevant arts therapies for burnout, compassion fatigue, secondary traumatic stress, and vicarious traumatisation as experienced by healthcare workers including arts therapists, hospice care workers, medical health professionals, nursing staff, psychiatrists, psychologists, and social workers were included.

- Published literature from 2000 onwards was included. “Published literature” in this review refers to texts such as articles, dissertations and theses from libraries and academic journals.
- Studies deemed justifiably (if not overtly) relevant to the research were included. This means that literature predating 2000 was included if it directly enriched the review or if it explored relevant ideas that could not be obtained post-2000. Higgins and Green (2008) found this practice to be acceptable for systematic reviews.

3.4.2 Exclusion criteria

- Literature, whether published or unpublished, which is deemed informal. This could include extracts from conference papers, notes that accompany presentations and lectures, and articles from popular magazines.
- Studies published before 2000 (unless they were justifiably relevant as clarified in the inclusion criteria).
- Studies that focused on work stress related conditions in a population other than the healthcare professions relevant to this study.
- Studies that focused primarily on arts-in-medicine or arts-in-therapy without evidence of arts-as-medicine or arts-as-therapy.
- Studies that focused on identifying work stress related conditions in healthcare professionals where the arts were practiced in a manner other than as a therapeutic intervention (for instance, listening to preferred music to relax, joining amateur drama companies as a hobby etc.).

3.5 Quality assessment

The goal of a systematic review is to collate studies that have focused on matters directly related to the research question to provide a more comprehensive understanding of the existing information (Harden, 2010). The process of doing a systematic review is, therefore, also research. As a result, quality assessment of studies included in the review is necessary and the review as a whole should demonstrate research quality.

Although a methodical systematic review follows a linear path (developing review question; defining inclusion criteria; searching exhaustively; selecting studies; assessing study qualities; synthesising data; analysing, presenting and interpreting results), Harden (2010) pointed out that, in reality, the process is more iterative and circular. In order to develop an understanding of how parts relate to the perception of the larger whole (and vice versa) the hermeneutic circle approach can be integrated into the linear approach described by Harden.This movement back and forth is what Harden referred to as iterative and circular. Using this hermeneutic process could assist in improving the quality of a systematic review by reassessing initial conclusions through comparing findings and considering reasons for possible contradictory outcomes in the selected studies.

The methodological quality of a study depends on the type of research design as well as how the research was conducted. In quantitative studies, randomised control trials (RCTs) are characteristically the strongest design for answering questions regarding causal connections between variables (Meline, 2006). Therefore, in order to answer questions about the effect of an intervention on occupational related stress

conditions in healthcare workers, randomised control trials are useful. However, not all randomised control trials are conducted with the same care and precision. They may differ as far as randomisation, blinding, attrition, and allocation concealment are concerned (Moher et al., 1998). According to Coleman, Talati and White (2009), in healthcare, it is not enough to only find the best evidence available, but also to consider the strength thereof. Coleman et al. advocated that relying on a hierarchical research design where randomised control trials are prioritised, followed by unblinded control trials, prospective cohort studies, retrospective cohort studies, case-control studies, observational studies with historical control group, case series or case reports, and finally expert opinion at the bottom, assumes a comparison of average randomised control studies with other studies, and does not take into account the internal validity of each particular study. The eight quantitative studies selected for inclusion in this study were selected as they adequately met the quality requirements for inclusion. Pre-post test designs, two or three group, experimental and quasi-experimental, randomised control trials as well as internal validity present in the studies added to the high quality of the quantitative studies.

Without quality standards for qualitative research, there is a danger that evidence will be misunderstood and judged inferior by those focusing on a hierarchy of evidence that favours randomised controlled trials (Hoeck, 2006). The minimum requirement for quality should include a sufficient explanation of the background, a succinct statement of the research question, a full description of the methods used, a clear presentation and discussion of the main findings, and some explanation of the relevance of the main findings to policy or practice. Popay, Rogers and Williams

(1998) advocated three criteria as foundation of good qualitative health research. Those are:

1. interpretation of subjective meaning
2. description of social context
3. attention to lay knowledge.

Terre Blanche, Durheim and Painter (2011) explained the “common-sense perspective on qualitative research” (p. 273) which is readily accepted in most social and medical research settings. They stated that qualitative research can be used to identify potentially important variables and could generate hypotheses about the possible relationships among variables. Mays and Pope (1995) held that there are no simple solutions to prevent errors in qualitative research, but that sound judgment about quality should be exercised. Included in this process of improvement is triangulation that compares results from two or more different methods of data collection (for example through interviews and observation, or interviews with members of two different groups) thereby ensuring a comprehensive and more reflexive analysis of data. Respondent validation includes techniques to compare the researcher’s account of the study to that of the research subjects. Study participants’ reactions to analyses are also incorporated into study findings. Clear description of methods of data collection and analysis with enough data to allow the reader to judge whether the interpretation submitted is supported by the data. Although these perspectives on judging the quality of qualitative studies lean towards being positivist, they could be useful when a large number of studies are to be examined for inclusion in a review. Reflexivity about personal and intellectual biases need to be made plain from the outset, and there should be a clear distance between the

researcher and those researched. Attention to negative cases and the exploration of alternative explanations for collected data could help refine the analysis. Fair dealing ensures that the viewpoint of one group is never represented as the sole truth about any situation. Mays and Pope offered some general points of quality for qualitative studies. These included clarity of the research question, appropriateness of the design to the question, adequate description of context or setting, whether data collection and analysis procedures were systematic so it could be repeated by another, whether the researcher exercised reflexivity. The qualitative studies included in this review was of high quality and met the criteria for inclusion. Reflexivity and biases were addressed where this was required, collection and analysis of data was done systematically and could be repeated in new studies, and research questions were comprehensively addressed.

When assessing quality of mixed methods studies in a systematic review, O'Cathain, Murphy and Nicholl (2008) provided some questions as guidelines. Has the use of mixed methods research been justified? Has the design for mixing the methods been described, for instance, priority, purpose, sequence and stage of integration? Has the design been clearly communicated and is the design appropriate for addressing the research questions. The quantitative component of the mixed methods studies had a clear application of method, sufficient descriptive detail, appropriate focus on the research question, and sampling and analysis suitable for its purpose as noted by O'Cathain et al. (2008). The qualitative component demonstrated a clear role of the method, sufficient description of the method, an appropriate question for addressing the research using this method, and appropriate sampling and analysis procedures. The included studies demonstrated the justification for using a mixed

methodologies approach, described the design in terms of purpose, priority and sequence of methods, described the terms of sampling, data collection and analysis for each methodology, indicated where, how and by whom integration had occurred, highlighted limitations of either methodology, and described insights gained from mixing or integrating the methodologies.

3.6 Conclusion

This chapter gave an overview of the rationale for using a systematic review as research design, defined qualitative, quantitative and mixed methodologies, explained the search strategy and process, and provided the search keywords. It also explained the inclusion and exclusion criteria and gave a step-by-step overview of the search and selection process. Finally, it discussed the quality assessment of studies using various methodologies.

Chapter 4

Analysis

4.1 Introduction

This chapter offers an overview of the process of analysis. It tables the studies identified for inclusion, provides a breakdown of study parameters, and explains the process of data extraction from the selected studies. It also provides a synopsis of the studies, and discusses the quality considerations for each study.

4.2 Data collection

One-hundred-and-ninety-seven studies were found when initially conducting the search. Of these, 52 were considered as they were more closely aligned to the specific requirements of the study, and eventually 19 studies were selected for inclusion in this review. Inclusion of studies was based on particular criteria that had to be met, as outlined in the previous chapter. The study had to include one or more of the arts therapies as intervention, the target population had to include healthcare workers, and the conditions targeted had to include any or all of burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation. Studies were excluded when one or more of the above criteria were not met, and a table of reviewed but excluded studies is presented in Appendix A. Studies using qualitative, quantitative and mixed methods were included in the review. Table 2 lists the studies included in the review.

Table 2. Studies included in the review

No	Title of study	Author/s
1	Case study of an art therapy-based group for work-related stress with hospice staff	Huet
2	Integrating art in psychodynamic-narrative group work to promote the resilience of caring professionals	Mosek & Gilboa
3	Creatively caring: effects of arts-based encounters on hospice caregivers in South Africa	Repar & Reid
4	Trauma therapists and their experience of Zentangle	Moore
5	The experiences of professional hospice workers attending creative arts workshops in Gauteng	van Westrhenen & Fritz
6	Art therapy-based organisational consultancy: a session at Tate Britain	Huet
7	Art therapy with an oncology care team	Nainis
8	The group takes care of itself: art therapy to prevent burnout	Belfiore
9	Art therapy-based groups for work-related stress with staff in health and social care: an exploratory study	Huet & Holtum
10	Social action art therapy as an intervention for compassion fatigue	Ifrach & Miller
11	The effect of art therapy on hospice and palliative caregivers	Gress
12	Can art therapy reduce death anxiety and burnout in end-of-life care workers? A quasi-experimental study	Potash, Ho, Chan, Wang & Cheng
13	The effectiveness of a collaborative art-making task on reducing stress in hospice caregivers	Salzano, Lindemann & Tronsky
14	Evaluation and arts therapy treatment of the burnout syndrome in oncology units	Italia, Favara-Scacco, Cataldo & Russo
15	The effect of music therapy sessions on compassion fatigue and team building of professional hospice caregivers	Hilliard
16	Recreational music-making: a cost-effective group interdisciplinary strategy for reducing burnout and improving mood states in long-term care workers	Bittman, Bruhn, Stevens, Westen-gard & Umbach
17	Mandalas as indicators of burnout among end-of-life care workers	Potash, Bardot, Wang, Chan, Ho & Cheng
18	The effect of a group music intervention for grief resolution on disenfranchised grief of hospice workers	Wlodar-czyk
19	Creative approaches for reducing burnout in medical personnel	Brooks, Bradt, Eyre, Hunt & Dileo

4.3 Data extraction

In this section, the extraction of the information from the selected studies will be presented. A general overview of studies included in the review is offered and then further details are provided on the specific aspects of the studies that were focused on in relation to the research questions.

4.3.1 General overview of the studies included in the review

Table 3 provides the general synopsis of the studies selected. Headings include the document title, author/s, year published, country of origin, research methodology, arts intervention employed, target health condition, occupational group, number of participants, age range, gender, study design, data collection methods, outcome of the study, and whether longer-term follow-up assessments were conducted after the interventions had been completed. The studies are arranged firstly according to research methodology (qualitative studies are listed first, followed by quantitative studies, and then by mixed methods studies). Within these three categories the studies are then sorted chronologically in date order (starting with the most recent studies at the top of the table).

Table 3: General overview of information abstracted from the selected studies

	Title	Author	Year	Country	Research Methodology	Intervention	Target	Occupational Group	Number of participants	Age range	Gender	Design	Data collection methods	Outcomes	Follow-up
1	Case study of an art therapy-based group for work-related stress with hospice staff	Huet	2017	UK	Quali-tative	AT	BO	Hospice workers 3 nurses 1 teacher 1 social worker 1 therapist	6	Adult	F 6	Semi-structured interviews on three occasions, before and after group sessions, audio-taped, data-driven inductive thematic analysis was used to transcribe content.	Interviews ProQol-5 was used before the process started only to determine whether stress was initially present, and not as an outcome measure of the study, and this is why it was included as a qualitative study.	Thirty-three codes were identified and organised in six overarching themes (contras-ting responses, new perspectives, differing expe-riences, serene front, mixing personal and professional role, empathy). Parti-cipants reported various degrees of impact on work-stress.	6-month report by researcher, participants found all processes helpful.
2	Integrating art in psychodynamic-narrative group work to promote the resilience of caring professionals	Mosek & Gilboa	2016	Israel	Quali-tative	AT	CF	Child & family counsel-lors	11	Adult	F 11	Qualitative single case study, phenomeno-logical, using reflective enquiry.	Interviews, and the collection of verbal and non-verbal cues of all workshop sessions by the researcher.	Central themes were CF, perso-nal exposure, integrating arts and psychodyna-mic conversation which showed the importance of emotions, and increased resilience.	None mentioned

	Title	Author	Year	Country	Research Methodology	Intervention	Target	Occupational Group	Number of participants	Age range	Gender	Design	Data collection methods	Outcomes	Follow-up
3	Creatively caring: Effects of arts-based encounters on hospice caregivers in South Africa	Repar & Reid	2014	RSA	Quali-tative	MT	BO	Hospice care-givers	22	Adult	F 22	Creative encounters with healthcare workers included music making, song writing, lyrics writing.	Interviews, researcher correspond-dence, field notes and transcribed recordings.	The arts were found to have a significantly beneficial effect on hospice workers and clinical engage-ment by workers can be enhanced through creative encounters.	Interviews with partici-pants after 3 months indicated no lasting effect other than slight change in worldview.
4	Trauma therapists and their experience of Zentangle	Moore	2013	USA	Quali-tative	AT	VT BO	Trauma thera-pists	8	25-65	F 8	Generic thematic qualitative analysis approach was used, meaning was derived by identifying themes and patterns that related to the research question.	Zentangle (a form of art-meditative therapeutic technique, patterns are drawn & repeated to predetermined rules) and inter-views about collective & individual expe-rience conducted. Interviews consisted of open-ended questions, structured yet flexible.	Patterns and themes (that emerged from the data supplied meaning to the experience of the participants, and informed the broader collective context). Themes included: Improved focus, stress reduction, relaxation, and creative expression.	None mentioned

	Title	Author	Year	Country	Research Methodology	Intervention	Target	Occupational Group	Number of participants	Age range	Gender	Design	Data collection methods	Outcomes	Follow-up
5	The experiences of professional hospice workers attending creative arts workshops in Gauteng	van Westr-henen & Fritz	2012	RSA	Quali-tative	MT	CF	Hospice workers	19	21-52	F 16 M 3	Qualitative case study design.	Interviews, observations and a researcher journal	Expressive arts facilitated communication and self-care and improved the wellbeing of the hospice workers. Themes were creativity, self-care, boundaries, massage, group support, trauma.	None mentioned
6	Art therapy-based organisational consultancy: a session at Tate Britain	Huet	2011	UK	Quali-tative	AT	ST S	Multi-disciplin-ary team mem-bers	2	Adult	F 2	The use of art as a tool for reflective practice and supervision. Visit to a public art gallery with discussion of art, followed by art making opportunity for partici-pants.	Interviews and art works	The thematic analysis showed that viewing art and the making of art in response to viewing yielded information regarding the experience of working as health-care worker. Findings showed that healthcare workers are not immune to fear and stress.	None mentioned

	Title	Author	Year	Country	Research Methodology	Intervention	Target	Occupational Group	Number of participants	Age range	Gender	Design	Data collection methods	Outcomes	Follow-up
7	Art therapy with an oncology care team	Nainis	2005	USA	Quali-tative	AT	BO	Nurses	107	Adult	-	Creation of a “healing quilt” through collaborative art making	Informal interviews and focus groups	Final quilt was assembled comprising the art of all participants in the project, reinforcing the “fabric” that holds the team together.	Regular, monthly art therapy sessions
8	The group takes care of itself: art therapy to prevent burnout	Belfiore	1994*	Italy	Quali-tative	AT	BO	Nurses & doctors	8	Adult	F 5 M 3	Art projects with different materials, an open structure. Art was linked to group themes and imagery which developed in the process.	A description of the process as it happened done by the researcher from interviews and discussions and stories told by participants.	The process portrayed the symbolic meaning of participants' and group's role in life, and through art therapy another “language” became available to express their deepest and hidden levels of personal experience in the fulfilment of duties.	None mentioned

	Title	Author	Year	Country	Research Methodology	Intervention	Target	Occupational Group	Number of participants	Age range	Gender	Design	Data collection methods	Outcomes	Follow-up
9	Art therapy-based groups for work-related stress with staff in health and social care: an exploratory study	Huet & Holtum	2016/3	UK	Quan-titative	AT	CF	Trauma profes-sionals	20	Adult	F 19 M 1	An exploratory embedded multiple case study two-group pre/post-test quantitative design.	ProQol-5	ProQol ratings indicated that STS remained low to average, and BO and CS scores average to high. Group discussions revealed a discrepancy between work-stress experiences and the ProQol scores.	Six and 12 months post intervention
10	Social action art therapy as an intervention for compassion fatigue	Ifrach & Miller	2016	USA	Quan-titative	AT	CF	Hospice care workers	30	22 - 55	F 30	Pre-test post-test, three-group design with a social action art therapy	Demographic questionnaire; CF Self-test for helpers; Psychological stress measure-9 (PSM-9)	Statistically significant reduction of stress following the peace pole intervention. Scores on CF, CS ad BO measures were normally distributed.	None mentioned

	Title	Author	Year	Country	Research Methodology	Intervention	Target	Occupational Group	Number of participants	Age range	Gender	Design	Data collection methods	Outcomes	Follow-up
11	The effect of art therapy on hospice and palliative caregivers	Gress	2015	USA	Quan-titative	AT	BO	Hospice workers Doctor 1 Admin 7 Nurses 11 Social workers 3 Thera-pists 3	25	24 - 79 (44.8)	F 25	Quasi-experimental one-group, pretest/ posttest study	ProQol-5 pre- and post-test	No significant difference found in CS; No positive significant difference found in BO scores; no significant difference found for STS. Minor informal qualitative data indicate temporary reduc-tion in stress.	None mentioned
12	Can art therapy reduce death anxiety and burnout in end-of-life care workers? A quasi-experimental study	Potash, Ho, Chan, Wang & Cheng	2015	Hong Kong	Quan-titative	AT	BO	Hospice care workers Nurses 49 Social workers 39 Other 44	132 = Gr 1 69 Gr 2 63	18 - 65	F 123 M 9	Quasi-experimental, pre- and post-test intervention measures, two groups	MBI-GS; Five Facet Mindfulness Questionnaire (FFMQ) Death Attitude Profile-revised (DAP-R)	Significant reductions in exhaustion and death anxiety and increased emotional awareness. Concluded that AT based supervision can reduce BO.	None mentioned

	Title	Author	Year	Country	Research Methodology	Intervention	Target	Occupational Group	Number of participants	Age range	Gender	Design	Data collection methods	Outcomes	Follow-up
13	The effectiveness of a collaborative art-making task on reducing stress in hospice caregivers	Salzano, Linde-mann & Tronsky	2012	USA	Quan-titative	AT	BO	Hospice care givers (Social workers and art thera-pists)	20 Gr 1 10 Gr 2 10	25 - 65	F 16 M 4	Pre- post-test design, control condition, experimental condition was art-making one month later	MBI-GS Support Appraisal for Work Stressors Inventory (SAWS)	Statistically significant pre- to post-test increase in work colleagues support score on SAWS. Statistically significant decrease in BO scores.	None mentioned
14	Evaluation and arts therapy treatment of the burnout syndrome in oncology units	Italia, Favara-Scacco, Cataldo & Russo	2007	Italy	Quan-titative	DT	BO	Doctors and nurses	65 Gr A 32 Gr B 33	28-60	F 34 M 29	Experimental two-group, pre- post-test design, no control group.	MBI (Italian version)	Results indicate that BO did exist, and that psychodrama and relaxation were effective in the treatment thereof.	None mentioned
15	The effect of music therapy sessions on compassion fatigue and team building of professional hospice caregivers	Hilliard	2006	USA	Quan-titative	MT	CF	Hospice workers	17	28 - 60	F 11 M 6	Controlled randomised study with a 6-session, two group pre/post-test experimental design.	Compassion satisfaction/ fatigue self-test for helpers (CFS) Team Building Questionnaire (TBQ)	No significant differences for CF, but TBQ indicated significant improvement in teambuilding in both groups.	None mentioned

	Title	Author	Year	Country	Research Methodology	Intervention	Target	Occupational Group	Number of participants	Age range	Gender	Design	Data collection methods	Outcomes	Follow-up
16	Recreational music-making: a cost-effective group interdisciplinary strategy for reducing burnout and improving mood states in long-term care workers	Bittman, Bruhn, Stevens, Westen-gard & Umbach	2003	USA	Quan-titative	MT	BO	Long term care-workers	112	19 - 78	F 88 M 24	Controlled, prospective, randomised study pre-post design, six sessions	MBI Profile of Mood States (PMS)	Statistically significant reduction of BO and mood dimensions, as well as total mood disturbances (TMD) scores were noted.	None mentioned
17	Mandalas as indicators of burnout among end-of-life care workers	Potash, Bardot, Wang, Chan, Ho & Cheng	2013	Hong Kong	Mixed metho-dology	AT	BO	Pallia-tive care workers	62	18-60	F 61 M 1	Mixed methods with art therapy-based super-vision groups Primarily qualitative with quantitative data to support findings.	Mandalas. Reflective writing and discussions; MBI-GS.	The creation of mandalas to assess burnout and increase self-awareness was found to poten-tially be effective, but further studies were recommended.	None mentioned

	Title	Author	Year	Country	Research Methodology	Intervention	Target	Occupational Group	Number of participants	Age range	Gender	Design	Data collection methods	Outcomes	Follow-up
18	The effect of a group music intervention for grief resolution on disenfranchised grief of hospice workers	Wlodar-czyk	2013	USA	Mixed metho-dology	MT	BO CF	Hospice care workers	68	Adult	F 57 M 11	Quasi-experi-mental single session experimental & control group random selection of participants (34/34). Thematic analyses of participant-written songs	Hospice clinician grief inventory (HCGI); CS & F test (CSF); Perception of work environ-ment scale (PWES). Participant produced songs and messages to their patients.	No significant differences for secondary measures of BO or CF. Thematic analysis of participant-written songs showed positive and negative aspects of hospice work.	Follow-up question-naire 30 days post-session indicated that 97% found the process helpful, and 100% would want GMT on a regular basis.
19	Creative approaches for reducing burnout in medical personnel	Brooks, Bradt, Eyre, Hunt & Dileo	2010	USA	Mixed met-hods	MT	BO	Medical personn el	52 Gr 1 26 Gr 2 26	18 +	F 43 M 9	Two-arm randomised controlled mixed-methods trial, experimental and control group (26/26).	MBI; Sense of coherence scale (SCS); Job satisfaction survey (JSS); BM-GIM; Mandala drawings.	No significant differences in change scores between control and experimental groups. Qualitative results show participants were able to relax, rejuvenate and re-focus.	None mentioned

4.3.2 Extractions by study methodology, country of origin, gender, intervention, and target condition

The review contains eight qualitative, eight quantitative, and three mixed methods studies. This is shown in table 4.

Table 4. Breakdown by study methodology

Qualitative	Quantitative	Mixed methods
8	8	3

Most of the research was conducted in the USA (nine studies) followed the UK with three studies, South Africa, Hong Kong and Italy with two studies each, and Israel with one study (as shown in table 5).

Table 5. Breakdown by country of origin

Hong Kong	Israel	Italy	RSA	UK	USA
2	1	2	2	3	9

Of a total of 786 participants, 73% were female (573), 13% were male (106), and one study with 107 participants (14% of the total number of participants) did not mention gender in the article. This is shown in table 6.

Table 6. Breakdown by Gender – (total number of participants = 786).

Female	Male	Not mentioned
573 **73%**	**106** **13%**	**107** **14%**

Art therapy was used (as the primary methodology of intervention) in 12 of the studies, music therapy (primary methodology) in six, and drama therapy in one of the studies. Art and music therapy studies sometimes included a session with segments of other arts therapies, although art (or music) therapy was the main focus of the intervention. This is shown in table 7.

Table 7. Breakdown by intervention

Art therapy	Dance/move-ment therapy	Drama therapy	Music therapy
12	**0**	**1**	**6**

The breakdown of stress-related conditions showed burnout as the most targeted condition as it was the primary focus of 13 studies (exclusively in 11 and combined with compassion fatigue and vicarious trauma respectively in two); compassion fatigue was the primary target in five studies; and secondary traumatic stress in one. One of studies equally targeted burnout and vicarious traumatisation and another burnout and compassion fatigue, while the majority of studies that targeted burnout mentioned the presence of one or more of the other conditions. This is summarised in table 8.

Table 8. Breakdown by primary target condition

Burnout	Compassion fatigue	Secondary traumatic stress	Vicarious traumatisation	Combined
11	5	1	0	BO & VT BO & CF

Nurses were participants in most of the selected studies researching burnout (12 studies), followed by doctors (who participated in eight studies) and mental health professionals (who participated in six studies). Nurses were shown to have participated in an intervention for compassion fatigue in two of the studies, for secondary traumatic stress in one study, and for vicarious traumatisation in one study. This is shown in table 9.

Table 9. Occupational group included per target condition

Occupational group	BO	CF	STS	VT	Total
Arts and other therapists	6		1	1	8
Doctors	8		1		9
Hospice & palliative care workers *	4	1	1		6
Mental health professionals	6	2	2	2	12
Nurses	12	2	2	1	17
Teachers, clerics, managers, admin	6	2	1	1	10
Social workers	6	3		1	10
Trauma psychologists & psychiatrists	3	2			5
Total inclusions per target condition	51	12	8	8	81

* Where a study referred to "hospice and palliative care workers" and did not specify the specific occupation of the care worker, these participants were included as a separate group in the table.

Nurses were included in 15 of the studies, mental health professionals in ten, the category “other” that included teaching staff, clergy, managers and admin staff in the healthcare field appeared eight times, social workers nine times, doctors eight times, arts and other therapists (including physiotherapy, massage therapy, yoga therapy, and aroma therapy) six times, trauma psychologists and psychiatrists five times, and hospice and palliative care workers (where a discipline breakdown was not provided) six times (as shown in table 10).

Table 10. Occupations included in studies

Study no.	Arts & other therapists	Doctors	Hospice palliative care	Mental health pro-fessionals	Nurses	Other *	Social workers	Trauma psycholo-gists & psychiatrist	Primary Targeted condition
1	x		x		x	x	x		BO
2				x			x	x	CF
3				x				x	VT/BO
4			x		x	x	x		CF
5	x			x	x				STS
7					x				BO
8		x			x				BO
11			x		x				BO
12				x				x	CF
13	x	x		x	x	x	x		BO
14					x	x	x		BO
15	x						x		BO
16		x			x				BO
17					x	x	x		CF
18	x	x	x	x	x	x	x	x	BO
19		x	x	x	x	x			STS
20		x	x	x	x				BO
21	x	x		x	x	x	x		BO
22		x		x	x			x	BO
Total	**6**	**8**	**6**	**10**	**15**	**8**	**9**	**5**	

* “Other” includes teaching staff, clergy, management and administrative personnel in the healthcare field.

4.3.3 Extraction by research objective, identified stressors prior to intervention, intervention design, intervention procedure, results and authors' conclusions

Table 11 summarises the studies by listing the respective research objectives, what the identified stressors were prior to the intervention, the design of the intervention, the procedure of the study, the results as reported in the studies, and summarises the studies' conclusions.

Table 11. Research objectives, identified stressors, intervention design and procedure, results, and authors' conclusions.

	Research objectives	Identified stressors prior to intervention	Intervention design	Intervention procedure	Results	Authors' conclusions
1	To examine the processes within art therapy-based groups with health and social care workers, and to identify which of these may actively address work-related stress.	Two participants experienced stress due to more fieldwork and less time at the hospice unit. Disruption had been caused by construction work to the unit resulting in increased workloads. Several participants felt that they did not have enough time between dealing with clients to recuperate emotionally. Employment conditions were changing causing uncertainty as they felt their autonomy to make decisions was threatened. Role changes were perceived as causing further stress, e.g. changing from purely palliative care work to being required to do training, moving away from nursing due to family members being in hospice, and moving from social work to physical nursing. High performance expectations and self-criticism was seen as stressful. A culture of chronic "niceness and caring" was identified as a societal expectation creating feelings of inadequacy when this was not met.	One of a four-part exploratory embedded multiple single-case design, that formed part of a PhD study. Critical realist epistemology.	Three 90-minute AT sessions at monthly intervals, with three equal segments of 30 minutes each. Segment one: view and discuss artworks exhibited in the workplace, Segment two: art-making in response to discussions during segment one, and Segment three: viewing and discussing artworks produced by participants. Artworks for discussion included figurative and abstract 2-dimensional works. Decorative art was excluded to prevent limited depth of interpretation. Sessions were group based, and viewing experiences were influenced by both individual constructs and knowledge of the participants as well as relational processes between participants. The sharing of thoughts, feelings and reactions to the works were encouraged, after which art making took place at a suitably private space. Following the artmaking segment, art was discussed within the group, photographed and stored, and each individual took part in a post-intervention interview three weeks after the session.	Results showed that combining art-viewing and art-making enhanced relational processes as well as personal insight. Some of the participants reported that they experienced the process as lessening their stress, and improving their creativity and communication.	The author was aware of subjectivity and her own feelings and reactions during the process. She adopted an approach of continued reflexivity since she was partaking as practitioner and researcher and felt that the integration of the two roles could be criticised as diluting the quality of each, in addition to being difficult to avoid bias. The author acknowledged some degree of bias towards art therapy, and remained mindful of the synergy between emotional and research processes. She felt that her continuous approach to reflexivity enabled her to maintain awareness of the issues and lessen the potential for bias during the process.

	Research objectives	Identified stressors prior to intervention	Intervention design	Intervention procedure	Results	Authors' conclusions
2	The aim of this study was to examine whether and how the arts could be combined with psychodynamic and social constructionist perspectives in group work to enhance the resilience of healthcare professionals who were coping with emotional stress due to work with children and families at risk	Work with children and families at risk made participants vulnerable to emotional stress. General stressors that the study focused on included the tension that develops when healthcare professionals experience the desire to help and provide support, pitched against the uncomfortable feelings of desperation, helplessness, anger and guilt at maybe not being able to help and support. They further made mention of prolonged exposure and proximity to primary traumatic pain which could become overwhelming. According to the authors, these experiences affect the thoughts, feelings, choices, relationships, and other areas of well-being of health-care workers, and could result in problematic reactions to clients' traumatic events.	Qualitative single-case phenomenological study, using reflective enquiry. Data collection was based on document-tation of verbal and non-verbal cues of sessions. Comprehensive notes were made (by the authors) of all meetings and sessions including those with administrators as attendance was required for all participants. (This created tension among participants and is deemed questionable from an ethics perspective).	Ethical approval was obtained and consent for the use of the artwork secured. Group work was chosen as intervention approach to enhance team and individual resilience for the 11 women whose work with children and families at risk made them vulnerable to emotional stress. The group met for 13 consecutive weeks where partially structured techniques to enhance resilience and provide opportunities for open dynamic discussion were facilitated. The researcher employed movement, drama, writing, and creative expression by means of plastic arts and the use of metaphors to initiate open discussion in the group.	Participation in the group interventions enabled individuals and the group as a whole to learn about and identify vulnerabilities associated with CF and emotional burden, and to recognise their own strengths and abilities. This awareness contributed to group members' understanding of the meaning and importance of their own emotional experiences. The central themes to have emerged from the data were: compassion fatigue, personal exposure, integrating arts and the psychodynamic conversation.	The authors felt that the facilitation of the group process involved moments of ambiguity and doubt concerning how best to continue to support the progression by responding appropriately to the needs of participants without disregarding the values and theoretical orientation underlying the whole process. The authors opined that the unique contribution of the study was the implementation of the psychodynamic-narrative group model where art in work was integrated with high-risk healthcare populations. The author warns that this particular use of art therapy should be implemented with caution, and that suitability regarding the unique characteristics of participants should always be considered. Flexibility and creativity should remain paramount during any intervention for this population.

	Research objectives	Identified stressors prior to intervention	Intervention design	Intervention procedure	Results	Authors' conclusions
3	Through indigenous knowledge systems already known to participants, the research team set out to explore the lived experience of professional hospice workers with symptoms of CF. The aim of the study was to release stress and strengthen their belief in their own skills which was previously in doubt.	Not only do caregivers at hospices provide care to their patients, but they also deal with their own challenges and psychosocial needs in the South African context. Continued exposure to the suffering and eventual passing of their patients leave professional hospice workers at risk of developing compassion fatigue. Nineteen care-givers known to have been confronted with their patients' suffering, the unpredictability of death, repeated losses and grieving were identified from nine different hospices to attend 11 creative arts therapy workshops.	A case study design was used, and data collection included individual interviews with 19 trainees at nine different hospices. The process included the use of creative arts therapies in order to facilitate self-healing and to develop skills that could be transferred to participants' respective communities, "training the trainers". Music and movement was used in the process.	Individual meetings with participants took place to gather information and get an understanding of their circumstances. Interpreters were used to assist in meetings where language barriers existed. After procedures were explained, participants were presented with soulcards (a card deck with evocative watercolour paintings that invite response). Following personal interpretations of the meaning of the pictures, participants were invited to explore their feelings and thoughts. At the end of each session, participants were asked to report whether they found the process helpful.	Comments from participants after each workshop indicated a greater understanding of boundaries, self-care, stress relief, relaxation, group support and courage. Music and movement resonated with participants due to indigenous knowledge systems.	Interventions in the South African context need to consider cultural diversity and practices. The author speculated that Western approaches to therapy should be considered critically as it is still regarded with suspicion in the African context as a result of the legacy of apartheid. The authors found that a need existed for interventions that are more culturally appropriate and more affordable than conventional psychotherapy. The findings of the study confirmed the potential of community creative expressive arts therapies to provide support to caregivers in contexts confronted with scarce supportive resource, as in hospice settings. Community psychology is also thought to be a viable alternative.

	Research objectives	Identified stressors prior to intervention	Intervention design	Intervention procedure	Results	Authors' conclusions
4	This study aimed to understand the lived experience of healthcare workers engaging in a specific methodology of creative art therapy (Zentangle).	The author noted that therapists can experience shared emotional trauma (with their clients) by dealing with primary trauma experienced and retold by the clients. She pointed out the apparent correlation between repeated exposure to trauma recounts and the likelihood of developing VT in settings where the participants were working at the time of the study being conducted	A generic qualitative approach, using thematic analysis, provided the framework for the study. The author wanted to understand the experience of engaging in this specific art/ meditation method without the need to validate it as a creative art therapy method or hypothesising that the method would affect VT and BO. The point was to identify themes and patterns based on participant response.	Each participant had the opportunity to experience Zentangle in an introductory two-hour lecture. The lectures were video-recorded and watched by participants in order to facilitate further discussion on the art form. The group was asked a general open-ended question to clarify understanding of the steps. Participants were asked to record their experience of practicing Zentangle in writing. After a four-week period where participants were required to practice Zentangle on their own for at least one hour a week, individual semi-structured interviews were conducted with all participants.	The researcher found that participants seemed to understand their clients' challenges and reluctance to adopt coping skills and would in future pay more attention to their own coping skills. Six of the participants felt that teaching Zentangle to their clients would be beneficial for the client. In general, Zentangle was found to be beneficial as a method of de-stressing.	The author mentioned that the data answered the research questions in a surprising way, and that a distinct parallel emerged between the participants' effort of learning and adapting to new skills and the obstacles their clients reported about integrating new coping strategies. This unexpected discovery further highlighted that, while participants remained aware of the value of self-care, very few practiced this, while they expected their clients to implement coping strategies and integrate the skills into daily life.

	Research objectives	Identified stressors prior to intervention	Intervention design	Intervention procedure	Results	Authors' conclusions
5	The study aimed to assess the impact of creative and arts-based encounters (music therapy) on the morale, motivation and productivity of nurses and community healthcare workers at a hospice in RSA. The programme was previously successfully implemented in the USA, and the researchers wanted to ascertain whether the programme would work in a different cultural context.	The main causes of stress identified by participants were the constant exposure to death and dying of patients, family and community members, the high unemployment, poverty starvation and the homeless children in surrounding areas. The lack of resources to help patients, poor wages and lack of support from hospice management exacerbated the stress experienced by the healthcare team.	The planned intervention design was to immediately engage in song-writing activities with participants, but the nature of the duties of participants resulted in the song-writing workshop to be postponed for three weeks while this time was spent building rapport with participants. Individual interviews were conducted at the start of the process, and again after the song-writing process concluded. The content of the interviews would be summarised in terms of four main themes, namely stress, affirmation, love and laughter, and the effects of the creative encounters.	The first three weeks of the process was spent building rapport with participants, which included setting up a community bulletin board, designing unique portraits of participants, early morning chair massages, recording morning prayers and hymns, general conversation about working and living conditions, poverty and unemployment, and contributing to patient care by singing, playing instruments of providing comfort touch. After three weeks the song-writing workshop was implemented, during which lyrics were written, melodies improvised, and songs were performed in multiple harmonies. A community concert was produced featuring new and existing songs and hymns.	The engagement appeared to be successful in terms of the original intent, (to develop creative, caring and trusting relationships) as caregivers became involved in joyful singing and in song writing. Ongoing release of stress, grief and other emotions stimulated a change in self-perception. This process was seen as cognitively and affectively transformational, and as applicable in a resource-limited African setting as it was in the USA.	Based on the positive experiences reported by participants and researchers, the authors are convinced that clinical engagement can be enhanced through the creative process in a different cultural setting. Daily routine work could be transformed through using creativity to foster hope, inspiration and rejuvenation. The arts provide means of seeing and being in complex situations, which allow new perspectives and solutions to be developed for old problems, and inspires workers to move ahead and find alternative solutions to existing problems. The intervention addressed problematic circumstances, and through music unlocked the potential in the healthcare workers to find harmony, beauty, and support.

	Research objectives	Identified stressors prior to intervention	Intervention design	Intervention procedure	Results	Authors' conclusions
6	To examine the use of art therapy-based organisational interventions and the use of art making in organisation consultancy including nurses, psychologists and occupational therapists with reported symptoms of STS in order to facilitate team-building events and ongoing staff development.	The team targeted for intervention was made up of qualified nurses, nursing assistants, an art therapist, occupational therapists and psychologists. The organisation was undergoing changes at the time, and stress had increased for personnel. New management had a brief to implement changes in personnel structure and to revitalise the organisational culture. Due to work pressure, only two staff members eventually participated in the process.	This was a qualitative study utilising art viewing in a public gallery, followed by art making in a studio. The intervention was audio-recorded, and art works produced were photo-graphed. Thematic analysis was done for the session's content. Themes were identified through the discussion that took place around the viewing of art works, and was then linked to the art produced by participants.	Although the author was expecting 10 participants, only two arrived. The session started with an explanation that art had to be viewed while participants would "think about work". Art viewed and discussed included "The vagrants" by Frederick Walker, "Francis Bacon on his way to paint" by van Gogh, and "Fallen leaves" by Gilbert and George. Personal feelings were expected to come up during the course of the session, but attention would be focused on work issues, articulating and understanding those. Two thirds of the time were spent viewing and discussing art in the gallery, and one third was spent creating art pieces. A painting and a clay sculpture were produced by participants.	Only two staff members participated. Findings contradicted the impression created by personnel in this setting that they were immune to fear and stress. The thematic analysis showed that both art viewing in the gallery and art making yielded information regarding the stressful experiences of working in this setting.	The author found that the discussion of art works enables the replication of the triangular space that exists between therapist, client and art work, and refocuses discussions on the image, which facilitates a "side-by-side" stance by therapist and client. This reduces the intimidation factor which may be experienced in a circular group setting where the therapist is the "expert". The author reflected that the process of arranging the session proved challenging and lasted six months (this research consisted of one session only, and the author experienced many obstacles while arranging the session).

	Research objectives	Identified stressors prior to intervention	Intervention design	Intervention procedure	Results	Authors' conclusions
7	The aim of this article was to describe how art therapy could be used in diverse ways to address staff issues of BO at an academic hospital. The author aimed to describe the nature of the oncology environment and its stresses, and to present an art therapy intervention that was successful.	Oncology nurses are particularly vulnerable to BO syndrome. High levels of stress were left untended which could result in emotional fatigue, loss of identity, and frustration with terminal disease. This situation often led to workers fleeing from psychologically draining situations to find less stressful jobs. Two areas found most neglected was grief processing and dealing with personal emotional reactions when caring for patients.	A psychosocial care team was established to deal with BO issues in an oncology centre. The team included social workers, a patient educator, a recreation therapist, and an art therapist. The proposed programme received funding for three years. Art programmes are made available for oncology personnel in order for them to break away from their stressful environment, albeit temporarily, and to unwind in a different setting with different décor. Various projects are designed for personnel to participate in. The current study explored the Caring Quilt as a project.	The entire oncology team was involved in producing hand painted artworks for the quilt. Twenty-seven pieces of art measuring 18" x 30" inches were produced by "artists" who included doctors, nurses, patient care technicians, unit managers, unit secretaries, social workers, occupational therapists, housekeeping staff members, food service staff members, and volunteers. Seven two-hour sessions were conducted with 15 – 25 participants. Small groups of participants worked together to create individual hand-painted canvasses to be added to the quilt. As a final activity of the process, staff members were afforded the opportunity to practice the skills they acquired through the creation of art. Teams were instructed to collaborate and create a picture that expressed what it meant to be part of the team.	At the end of the process, panels were sewn together, and the finished quilt was put on display. Many team members were surprised to see how powerful the art-piece was when sewn together. When testing the effectiveness of the process, participants were asked several questions. Out of 107 participants, 105 indicated that the process was helpful. Since inception of the programme there has been improvement in staff turnover and in patient satisfaction.	The author felt that nurses may take offence to being given traditional psycho-therapeutic support, as many believe that to be credible caregivers, they should not appear to be affected by stress themselves. She felt that it was important not to pathologise the reaction care workers have to patients' suffering so as not to cause embarrassment. Although staff reported ongoing multiple stresses and challenges, after the intervention they had another tool to help them cope more effectively. The authors argued that the strengthening of aspects that improve staff resilience through the use of creative processes can help staff members to deal with these challenges, and can result in a more rewarding patient care environment.

	Research objectives	Identified stressors prior to intervention	Intervention design	Intervention procedure	Results	Authors' conclusions
8	The author presented an art therapy time-limited project for homebased healthcare workers at risk of developing BO. The purpose of the project was to offer the group a chance to contain the usually hidden and painful aspects of palliative care work expressed by members in the group and to allow the group to undergo a mourning process following the death of patients.	The staff at the Oncology unit of an Italian hospital pioneered homebased care for terminally-ill patients who left the hospital. As these staff members were no longer protected by the work environment (where they could discuss their experiences and receive reciprocal support) they were at a much higher risk to develop BO.	A project of 20 art therapy sessions was implemented for a unit of home-based care workers for patients who were leaving public medical institutions. This meant that the workers no longer had the protection of working in a traditional medical setting and this resulted in a growing need to exchange experiences and reciprocal support.	The group met for a three-hour session every week for a period of six months. The art therapy sessions were conducted by the author and supervised by a mental health professional. As this was a time limited intervention, creative projects were proposed according to what the group needed at specific times. Projects had an open structure and focus and always linked to group themes and imagery.	As the group gradually became more familiar with the process, the use of imagery to access inner and emotional feelings helped to establish additional methodologies for participants to relate to others, to life and work experiences and to themselves. The use of guide images* resulted in defence mechanisms like denial and repression evolving into viable ways of self-protection.	The author reflected that each phase of the process took on a symbolic form as a leading theme, similar to a movement in a symphony. Throughout the process, she remained aware that symbolic and mythical meanings, as well as group dynamics, may require further exploration. The author emphasised that the choice of a chronological structure for the process highlighted a specific function of the art therapist, that of being a storyteller, the memory of the collective imaginary journey, the weaver of the narrative plot, and not that of therapist. The story portrayed the group's transformation, with the protagonists being the group's feelings.

* According to the author, the guide images opened the door of symbolic imagery and a deeper level of meaning became accessible. The project consisted of making a sculpture of an inner guide, which could be a person from their past or an animal with the same function and meaning as an inner representation. Guides included elephants, a listening father, Romeo, a witch, a snail, a baby in a crib, child climbing a tree, and even an empty chair.

	Research objectives	Identified stressors prior to intervention	Intervention design	Intervention procedure	Results	Authors' conclusions
9	The researchers found little evidence in studies of the efficacy of art therapy for STS in particular, and this study thus attempted an initial exploration of the potential therapeutic mechanisms within art therapy-based groups for STS with staff in health and social care.	The authors reported that the emotional labour when working with mental health service users could result in workers' resilience and empathy to clients decreasing over time. They found that the prevalence of work-related stress had become an international concern among health and social care staff. In this instance, they found heavy workloads, quality of management and shift work to be even more significant than client-related issues.	A critical realist stance with an exploratory embedded multiple single case design was employed. The first site was treated as pilot work for refining the approach for subsequent sites. Purposive sampling was used to recruit participants. Individual, semi-structured interviews were used for pre-intervention information, and post-report interviews were conducted 12 months later for two sites, and six months later for one site. The ProQOL-5 was used to assess BO, STS and CS.	Before each session, two or three artworks were selected from available collections. Artwork was included if it offered a potential for visual discovery (seeing more as one looks further) and a suggestion of different layers of meaning and interpretation. These were all two-dimensional figurative and abstract works in a variety of media. Pieces were introduced with biographical details of the artist, techniques and context. Participants were encouraged to develop playful associations from the artworks and to identify and reflect on potential links with work-related issues. Art-making was introduced subsequent to the viewing, and participants' art was subsequently discussed.	The perceived impact of the process differed, with 65% of participants reporting changes at work due to becoming more aware of emotional responses during art-making. Connecting with art as a resource for wellbeing seemed beneficial and lasting for 45% of the participants. ProQol indicated STS scores within low to average ranges, with BO and CS scores average to high. While no significant individual variations were found between ProQOLs, group discussions and interviews revealed that participants felt the ProQOL did not address tension and conflict with colleagues, within the organisation, and that their work with clients, albeit stressful at times, was nonetheless mostly a reliable source of job satisfaction.	In this study the authors attempted to identify processes at play with AT-based groups to address STS and to understand the mechanisms that support work-related stress. They speculated that the discrepancy between the ProQoL scores and the data from informal discussions following completion of the questionnaire needed exploration. They found that art-viewing supported relational processes and facilitated therapeutic engagement. They found it notable that all participants feared the process of art making.

	Research objectives	Identified stressors prior to intervention	Intervention design	Intervention procedure	Results	Authors' conclusions
10	The primary hypothesis of the study was that a social action art therapy interven-tion would reduce stress as a symptom of compassion fatigue. A secondary hypothesis was that participants who experienced a greater reduction in stress would be those who initially reported higher levels of compassion fatigue.	The authors explained that helping professionals who deal with domestic violence and sexual assault were particularly at risk of developing CF. This could also partly be attributed to under-training and being underpaid for the roles they engage in. When treating clients, counsellors often needed to navigate complex laws concerning issues of gender and domestic violence, rape, and sexual abuse, while also remaining cognisant of political funding and publicity issues. This increased the pressure and stress associated with an already difficult job.	Participants (30 female counsellors in a centre working with domestic violence and sexual assault) were divided into three groups based on their workplace. They were asked to create art for a group peace pole that would symbolise hope and safety. The Compassion Fatigue Self-Test would be used as a measure of compassion fatigue, and the Psychological Stress Measure 9 would provide information regarding pre- and post-measures of symptomology changes.	Participants (N = 30) were recruited from three shelters in Connecticut and New York, USA. Participants were required to complete a consent form, demographic question-naire, the Compassion Fatigue Self-Test for Helpers to measure for pre-intervention compassion fatigue, and the Psychological Stress Measure-9 pre-post-test to measure for change in stress levels. Participants were then provided with art materials to create a piece of art that could be added to a group peace pole. After this single group art therapy intervention, oriented to expression of personal and social action messages about domestic violence, the results of change in stress were compared with the results of a pre-test CF self-test in order to investigate the effectiveness of the social action group art therapy intervention.	Results were statistically significant in its support of the primary hypothesis that social action art therapy intervention would significantly reduce CF for healthcare workers. Results further indicated that the intervention was effective in reducing stress levels for all participants regardless of levels of or presence of compassion fatigue prior to the intervention.	The authors noted that there was a difference in the art between the groups. Consistent themes emerged when viewing completed Peace Poles. One group showed continuous themes of support, kindness and domestic violence awareness through the use of vibrant colours and symbols and words of support. The authors speculated that the groups in general expressed concern with creating the right image and message to represent their feelings and stance in social action. Multiple instances of blank space on the Peace Pole were contemplated, with the authors concluding that the particular group (staff at a sexual assault centre) was more emotionally depleted (as was seen through the measured scores of CF).

	Research objectives	Identified stressors prior to intervention	Intervention design	Intervention procedure	Results	Authors' conclusions
11	The aim of the study was to explore whether attending four one-hour art therapy interventions could help reduce work related BO and STS and increase compassion satisfaction in hospice/ palliative care workers with high levels of stress and burnout.	High levels of stress and BO were identified as the reason for high staff turnover in a hospice organisation. Some workers who initially indicated an interest in participating did not follow through, reporting that they could not pull themselves away from work. Participants often reflected how difficult it was to find time to attend the art therapy sessions.	This was a quasi-experimental, one-group, pre-test/ post-test study conducted with a group of 25 hospice workers in an organisation where rapid personnel turn-over was reported. The ProQOL-5 was used as pre-test and post-test measure for testing compassion satisfaction, BO and STS. A paired sample t-test was applied to each element. The treatment (four art therapy interventions) served as the independent variable.	Four one-hour art therapy sessions over a four- to six-week time period. At the start of each session a demographic questionnaire and the ProQol-5 was completed. During the six weeks, 54 one-hour art therapy sessions were offered. Any four sessions had to be attended. (Six different session formats were developed in order to prevent repeats). Art materials were available for mandalas. Emphasis was on the process rather than on the product. Relaxing music was played during sessions. Group discussions focussed on interpretations of the drawings. In session three play-dough was offered to create shapes. Session four included GIM with water and waves as inspiration. Session five saw participants draw their bodies after GIM. Session six presented colourful clay to create images of animals, and to find the symbology commonly attributed to specific animals. After four sessions, participants were asked to complete the ProQOL-5 for the post-test.	There was no notable difference between the pre- and post-test scores for CF. BO scores were higher in the post-test. Variables that may have led to this unexpected result could have included more stressful work conditions during the six-week intervention, higher patient count, and sudden patient deaths. Minor qualitative results indicated a temporary reduction of stress.	The author reflected that the largest aging population the USA has ever known was on the health care horizon, and that hospice and palliative care workers would carry the responsibility of dealing with service delivery. New skills would be needed. In addition, the author mentioned that none of the nurses working in the hospice homes chose to participate, while those working in patients' homes did. She speculated that it could be that nurses working in the home had the support of colleagues, while in patients' homes, nurses were on their own.

	Research objectives	Identified stressors prior to intervention	Intervention design	Intervention procedure	Results	Authors' conclusions
12	The aim of this two-group pre-post-test study was to examine whether art therapy super-vision for end-of-life care workers in Hong Kong would be effective in reducing death anxiety and reported symptoms of BO, increase feelings of competency and self-efficacy, affect emotional awareness and regulation, and decrease negative death attitudes.	Psychological, emotional and spiritual strain can result from the difficulties and need for empathy required from nurses, social workers and other professional caregivers who deal with mortality when caring for the dying in palliative care. This strain can lead to the condition of BO and can affect the caregiver's patients, colleagues, family and friends. End-of-life care workers in this study self-reported as experiencing symptoms of BO.	The study was quasi-experimental with pre- and post-intervention measurements to compare the effectiveness of art-therapy-based supervision and usual supervision practice. Measures used in the study included the Maslach Burnout Inventory – General Survey, (MBI-GS), the Five Facet Mindfulness Questionnaire (FFMQ) and the Death Attitude Profile–Revised (DAP-R). Paired sample t-tests were used to compare mean scores pre/post intervention.	Participants self-selected for inclusion in either the AT-supervision or the skills-based supervision groups. Each course was offered three times during a 12-month period. Session sizes were limited to 25 participants per session. AT group participants attended six weekly sessions, each lasting three hours. Sessions focused on specific themes such as self-care, case sharing, clinical skills etc., and included breathing, guided visualisation, art marking, reflective writing, and group discussions. The group was led by a certified art therapist. The skills-based supervision group attended three sessions, each lasting six hours. These sessions included opportunities to learn new skills, share case material, and engage in case analysis. The course was led by a counselling psychologist and nurse consultant.	Results indicated a decrease in exhaustion for both groups, but only the AT-based group had significant mean reductions from baseline post intervention in BO and death anxiety, and an increase in emotional awareness. Both groups had increases in cynicism, but the increase was only significant for the skills-based group. Both groups had similar non-significant de-creases in professional efficacy.	Despite the limitations of the study being quasi-experimental with a lack of random assignment, the authors feel that the study produced modest but promising findings. They mention that during interpretation of the findings of the study, it was important to avoid the assumption that one type of supervision is better than the other, as the research was not designed with a true control group. The study was mostly interested in understanding AT-based supervision.

	Research objectives	Identified stressors prior to intervention	Intervention design	Intervention procedure	Results	Authors' conclusions
13	The goal of the study was to use quantitative measures to determine the effectiveness of a collaborative art-making project in order to reduce BO and to increase social support for hospice workers made up of social workers and art therapists.	Palliative care workers provide support to terminally ill patients as well as bereaved family members daily, which is stressful and emotionally demanding. If not managed effectively, it can result in BO. Caregivers experiencing BO begin to think negatively about themselves and their jobs and feel less concern for patients, which results in a decrease in occupational functioning and the quality of care for patients. Caregivers self-reported the condition of BO.	This study used a pre-post design during which 20 caregivers experienced a control condition, followed by an experimental art-making condition a month later. The MBI-GS was used as a measure of BO. The Support Appraisal for Work Stressors (SAWS) inventory was used as a measure of perceived social support.	Participants were recruited during monthly staff meetings. Participation in the study was voluntary. Each department had separate intervention times that took place in a conference room around a large table. Monthly staff meetings were used as a control condition; each participant served as their own control. In the experimental group participants were randomly assigned to a dyad (with one triad because of numbers). Each dyad received a canvas panel, and art materials were spread out evenly on the table for easy reach. The researcher (art therapist) was available for technical assistance, to repeat directions, answer questions, and facilitate as necessary. After 25 minutes of art making participants were instructed to proceed to construct a quilt from all the canvas panels. Following the art experience, each participant completed the MBI-GS post-test and the SAWS post-test.	Results confirmed that the art-making intervention caused a statistically significant decrease in BO scores from pre- to post-test. BO reduction across the two departments (social workers and arts therapists) was more beneficial for the social workers, as their stress levels increased during the staff meeting, and decreased during art-making. A statistically significant increase in social support among colleagues was observed.	One possible reason for the results showing a more beneficial outcome for the social workers could be that the arts therapists are familiar with art making processes, and that the control condition for social workers was inherently more stressful than the control condition of the arts department. The authors recommended that in future studies sampling should be randomised and should be more diverse in terms of gender and racial background. It was felt that collaborative art-making activities will benefit staff members as well as allow them to provide better care to terminally ill patients in their care.

	Research objectives	Identified stressors prior to intervention	Intervention design	Intervention procedure	Results	Authors' conclusions
14	The objective was to undertake a pilot study to evaluate and potentially reduce the level of emotional exhaustion, cognitive and emotional distancing, as well as reduced personal achievement in BO for healthcare workers in two oncology centres, and those working with HIV positive individuals, and AIDS patients. There were two experimental groups, and no control group.	It was noted that the risk of BO was particularly high for healthcare workers, and specifically those working with patients diagnosed with HIV/AIDS and with cancer. The oncology care unit at two hospitals reported high levels of burnout among their personnel.	A two-group pilot study consisting of 33 and 34 members respectively. Group one was from an adult oncology unit, and group two from a child oncology unit. The initial diagnostic phase measured BO using the MBI. The intervention involved group meetings using creative techniques of art therapy as a form of supportive and not psycho-therapeutic action. The programme was delivered over four months. A post-test MBI was administered at the end of the period to assess changes in the level of BO.	Both groups were asked to complete a pre-intervention MBI to establish levels of BO. The second part of the study depended on the information gleaned from the MBI, and subsequent action decided upon was to provide support and increase relational dynamics between participants. Twenty participants from Group B joined the programme, while participants from Group A were unable to join due to commitments at work. The programme was delivered over four months. The first five encounters used psychodrama techniques to improve communication. Four encounters included play therapy to stimulate a sense of comfort. Three encounters used Ericksonian relaxation techniques to consciously reduce anxiety and negative emotions. One session was used to view and discuss a video that showed techniques used to support children during painful procedures, considered to be most stressful for this work-group. A post-intervention assessment of BO levels was done by again completing the MBI.	Initial diagnostic data indicated that some BO was present in both groups at base level. The level for Group A was medium-high, and for Group B medium-low. Results show that Group B (those who participated in the arts therapy intervention) gained some benefit. There was a statistically significant positive difference in the MBI results after the intervention compared to those prior to treatment. Confounding factors may have been participation in the group activity itself, as it could have been seen as recreational and not part of a workday.	According to the authors, the results of their study indicated that BO syndrome does exist among oncology unit personnel. They feel that attention should be devoted to this aspect in order the improve the well-being of healthcare workers, as this has a direct impact on the attention and dedication to patient care. The intervention was composed of different techniques, and the authors regret that they were unable to clearly identify what component of the treatment (psycho-drama, play-therapy, Ericksonian relaxation techniques, discussion of a viewed video) had what effect. They do believe that treatment by means of AT techniques are beneficial for the workers most at risk of BO.

	Research objectives	Identified stressors prior to intervention	Intervention design	Intervention procedure	Results	Authors' conclusions
15	This study evaluated the effects of two different types of MT (ecological and didactic) on CF and team building of professional hospice caregivers. The null hypotheses for the study were that there would be no significant differences for CF or team building scores between groups, nor any between pre-and post-test within groups.	Caring for the terminally ill can be challenging for professional caregivers. Burnout and compassion fatigue are conditions commonly diagnosed among physicians, nurses, social workers, chaplains, home health aides, volunteers, and allied therapists (such as arts therapists). These conditions were evident in the personnel in this organisation.	This two-group non-randomised experimental study made use of the Compassion Satisfaction/Fatigue Self-Test for Helpers (CFS) to measure CF, and the Team Building Questionnaire (TBQ) and to measure team building. These instruments were used to measure pre-intervention as well as post-intervention levels. The hospice agency in this study maintained two separate offices, and thus participation in groups could not be randomised as travelling distances were too large.	Participants were assigned to the group of the unit where they were working. Six one-hour sessions were conducted once a week for six weeks. During session one, administration matters were handled, and pre-intervention tests completed. In group one, sessions were unstructured, allowing for spontaneous musical and verbal expression. The therapist did not serve as group leader, but provided support and grounding. The format was improvisation to allow participants opportunity to address their own concerns. Group two adopted a structured format in a didactic approach. MT was utilised within a cognitive-behavioural and humanistic framework. This approach was chosen as literature on CF and BO suggest the use of concrete educational suggestion.	Both experimental MT conditions resulted in a significant improvement in team building as captured by the team building questionnaire. Participants in group two (didactic MT) showed more improvement than those in group one (ecological MT). No significant difference was recorded for CF, either between or within groups.	The author reflected that while there was a marked improvement in team building among participants, CF scores demonstrated no significant differences between or within groups. He speculated that it could possibly be that the level of CF was within a typical range, that the MT interventions did not treat issues related to CF, or that the measurement utilised was unable to capture MT's effects in the area. However, Hilliard argued that the use of MT in treating the needs of professional hospice caregivers has shown positive effects and can be a good way for workers to feel supported.

	Research objectives	Identified stressors prior to intervention	Intervention design	Intervention procedure	Results	Authors' conclusions
16	This controlled, prospective, randomised study examined the clinical and potential economic impact of a six-session recreational music making (RMM) protocol on burnout and mood dimension, as well as on Total Mood Disturbance (TMD) in an interdisciplinary group of long-term healthcare workers in order to reduce staff turnover.	The authors painted a bleak picture of reported staff turnover rates in the healthcare industry ranging between 40% and 100% annually. They further found that enrolment in the nursing profession had declined significantly over two decades, resulting in an aging workforce. Low wages, other work opportunities, the challenges of caring for severely ill and older clients, as well as heavy caseloads also contributed to staff BO.	Using a stratified sampling methodology, 125 participants were randomly selected, based on availability, and guided by the study design that mandated interdisciplinary representation for the participants which formed the group assigned to six sessions. Group A and group B was assigned a crossover intervention-non-intervention design and the MBI and POMS were completed on-site at three data points: immediately prior to the study, at the end of six weeks, and at the end of 12 weeks.	The project was presented to the group as an employee-enrichment activity. Participation was deemed mandatory by administration to exclude self-selection bias. Only one person refused to participate. Participants who worked the third shift were excluded and those on leave were excused. During non-intervention periods, normal work activities continued. Intervention groups met with a facilitator once a week for six one-hour sessions. A group empowerment drumming protocol was followed, and other instruments included hand drums, sound-shapes, bells, maracas, shakers, and a Clavinova keyboard. Sessions started with an ice-breaker, followed by a short guided imagery segment, and drumming and percussion for non-verbal expression.	Statistically significant reductions of multiple burnout and mood dimensions, as well as TMD scores were noted. Although economics was not a part of the current review, this study recorded a potential saving of 18,3% for the hospital where the study was conducted.	The authors commented that ensuring sustainability of long-term healthcare for UK citizens would be difficult and would depend on reducing BO and improving mood states of care workers. Developing meaningful and effective working relationships by offering opportunities to express emotions through music could be the catalyst for developing and strengthening support in challenging times. While various economic factors impact on the successful delivery of quality long-term healthcare, the use of the arts therapies to reduce BO and improve mood states in healthcare workers deserve further attention and research.

	Research objectives	Identified stressors prior to intervention	Intervention design	Intervention procedure	Results	Authors' conclusions
17	The aim of the study was to explore the existence of CF and BO in hospice workers and the effects of the use of mandalas and accompanying descriptive writings which was interpreted using the Great Round (Kellogg, 1984) * on the participants. The study's aim was not to reduce burnout scores, but to relate CF and BO to stages in the Great Round of the mandala drawings.	The authors reflected that, while working in the areas of hospice and palliative care could be greatly rewarding, it also carried great potential for developing CF and BO. They noted that beyond knowledge or practice competence, care workers emphasised self-competence and self-awareness as primary skills to be successful in this kind of care. The authors identified workers from the palliative care unit of a Hong Kong based hospice care unit who were diagnosed with CF and BO, and the study was conducted in this setting.	A mixed-methods approach was utilised to investigate mandalas created by palliative care workers during AT-based supervision groups. Research was primarily qualitative, but used quantitative measurement to support findings. Data collecting was done using mandalas and reflective writing, and researcher-recorded participant comments during group discussions were included. The MBI-GS measured CF and BO. Deductive coding procedures were used to analyse mandalas and reflective writing.	Participants were briefed on the purpose of the sessions and three major themes to be covered over the six sessions were introduced. These included self-care, case-sharing and grief expression. During the first session, participants were instructed in mandala making for the purpose of self-awareness. Sessions included a short guided-imagery segment, after which participants were given material to create a mandala for 45 minutes. This was followed by reflective writing about the images and process. Small group discussions followed to encourage connecting with each other in imaginative ways. Lastly, the participants regrouped for debriefing.	The use of mandalas to assess burnout and increase self-awareness appeared to be effective. Sixty-three percent of participants were categorised into one of four stage themes on the Great Round (Kellogg, 1984). Relevant themes included: Paradoxical Split with 26% of participants; Fragmentation with14%; Bliss with11% of participants; and Target – Defence/ Protection with 12%. * Higher than median (44.25) BO scores were found in four stages (47% of participants at base line). The study was included to illustrate the use of mandalas as assessment tool.	To the knowledge of the authors, this was the first study to use the structure of Kellogg's Great Round as themes for deductive coding of both image and text. Higher BO rates correlated with stages of the Great Round that portrayed conflict, fragmentation, and a need for balance and protection. Also reflected was bliss and the need for peace according to the Great Round. The authors found the use of mandalas to assess burnout and increase self-awareness to be effective. In addition, they considered that the archetypal component may aid connection of experiences to the general human condition and therefore provide validation as well as solutions for their emotions and stress.

* Please see Appendix 2 for an explanation of the Great Round.

	Research objectives	Identified stressors prior to intervention	Intervention design	Intervention procedure	Results	Authors' conclusions
18	The purpose of the study was to examine the effect of a single-session Group Music Intervention for Grief Resolution (GMI-GR) on feelings of disenfranchised grief * as experienced by hospice workers. A secondary purpose was to determine whether the GMI-GR would impact on hospice workers' risk for BO and CF, as well as perceptions of work environment, one-month post participation.	The author stated that unresolved disenfranchised grief was a contributing factor in occupational stress, BO and CF in hospice workers. She speculated that, even though hospice workers are aware from the beginning that patients they care for will die, they still develop an emotional attachment to the patient. Since hospice workers are not often recognised as grievers (although their work requires them to witness continual death without much time to process), their grief falls into the category of disenfranchised grief which is a leading cause for BO and CF.	A two-group quasi-experimental study with participants randomised by group. Perception of grief resolution was measured by the Hospice Clinician Grief Inventory (HCGI) at baseline and post-condition. The risk for BO and CF was measured by Compassion Satisfaction and Fatigue Test (CSF) and perception of work environment measured by the Work Environment Scale (WES) 30 days post-condition. Thematic content was analysed from participant-written songs and messages to patients.	Sixty-eight participants from a hospice in the USA working in direct contact with patients volunteered to be included in the study. Six experimental and five control sessions were offered over an 8-week period. A demographic questionnaire as well as the HCGI measure (pre-test) was completed immediately before receiving the GMI-GR intervention. The HCGI was also completed immediately after the intervention. Participants in the control sessions completed a demographic questionnaire and the HCGI post condition only. Follow-up questionnaires were distributed to mailboxes 30 days post-condition. Statistical and thematic analysis were done at the end of the process.	The study primarily found a significant pre- to post-condition decline for participants on the subscale for personal sacrifice burden, and a non-significant reduction for feelings of burden. No significant differences were measured for BO or CF, or perceived work environment after 30 days. Thematic analysis of songs and messages to patients revealed themes with both positive and negative aspects of hospice work. Themes included reflection of patients' deaths, pain or suffering, and then participant sadness or loneliness, weariness, positive coping strategies, shock/disbelief at loss, gratitude, fulfilling and meaningful work, anger, displays of love, and reflection on participants' personal losses.	The author mentioned that dis-enfranchised grief is a contributing factor in occupational stress, BO, and CF in hospice workers. She claimed at the time of doing the research, that no previous studies had investigated group music therapy as an intervention for grief resolution for this population. The results of the study suggest that GMI-GR may be an effective intervention for reducing personal sacrifice burden felt by hospice workers. She recommended that future research could explore the effect of music therapy sessions organised by discipline or by years of employment, levels of spirituality and other coping mechanisms employed by participants.

* Disenfranchised grief refers to experiencing a loss that cannot be openly acknowledged, publicly mourned, or socially accepted (Worden, 2009).

	Research objectives	Identified stressors prior to intervention	Intervention design	Intervention procedure	Results	Authors' conclusions
19	The study was conducted in order to investigate the effects of music imagery on self-reported BO, sense of coherence and job satisfaction in nursing personnel, and to examine the self-reported perceptions of nursing personnel with regards to the music imagery experiences.	The general shortage of trained nurses was noted as a critical reality in the USA healthcare industry. For nurses, this could lead to an increased work load and extended working hours. Nurses also need to care for the emotional needs of patients and families as part of their duties. In addition, they have to cope with the lack of support to deal with work related stress. All these factors could lead to the development of BO, which in turn could further exacerbate the shortage of personnel.	A two-arm randomised controlled mixed-methods trial with a music-guided imagery group and a wait-list control group was used. Participants were randomly assigned to groups. The Maslach Burnout Inventory (MBI), Sense of Coherence Scale (SCS), and the Job Satisfaction Scale (JSS) were used. Qualitatively, the lived experiences of participants were explored. Hermeneutic inquiry was engaged in to uncover meaning, and interpretations were made based on the relationship between mandala drawings and written responses. Kellogg's (1987) "Great Rounds" was used to interpret mandalas.	Participants were randomly assigned to either the experimental group (Group E, n = 34) or the control group (Group C, n = 31). Group E completed three assessments before and after the experimental condition (one 60-minute session per week for a three- to six-week period). Music therapy involved GIM experiences. Body relaxation was followed by directed-imagery experiences while listening to carefully selected pre-recorded music. Creative drawing of a mandala was done after the music-imagery experience, and written responses were documented by participants about their experiences.	There was a discrepancy between the quantitative and qualitative results of the study. Quantitative results revealed no significant differences between the control and experimental groups for self-reported BO, sense of coherence, or job satisfaction. The qualitative results on the participants' self-report of the interventions indicated that music-imagery helped them relax, rejuvenate, and re-focus, enabling them to complete shifts with renewed energy.	The authors investigated a need for support of medical personnel who experience BO as a result of the increased demands placed on healthcare workers does exist. In addition, they found that GIM could be a cost-effective, non-threatening, viable treatment alternative to reduce BO among medical professionals. Further research was recommended to determine the effectiveness of these creative approaches to BO among medical personnel. They speculated about interventions seemingly not having long-term effects, but found that qualitative reports indicated an immediate effect that was not evident in quantitative measures. The authors noted that participants expressed that they would use what they learned from the music-imagery experience to help them cope with matters at work and at home.

4.4 Research objectives

In general, the research objectives of all the studies (qualitative, quantitative as well as mixed methods) were to examine outcomes of the processes in the arts therapies for groups or individuals working in the healthcare professions who experienced at least one of the following: burnout, compassion fatigue, secondary traumatic stress, and vicarious traumatisation. Of those that stated objectives in addition to examining the outcomes of the arts therapy intervention, one study included meditative art making (study number 4) and three studies examined the outcomes of collaborative art making (studies 7, 10, and 13). Of those that included additional challenges that the healthcare professionals faced, one study also aimed to address disenfranchised grief (study number 18), and two studies (numbers 12 and 17) included the use of the arts therapies as part of regular supervision and a means of team building.

4.5 Identified stressors prior to intervention

Stressors that participants experienced prior to the interventions originated mostly as a result of the type of work engagement. Associated factors included environmental aspects (such as construction work in physical environments), organisational factors (unresolved matters with superiors and colleagues; uncertainty about tenure; inadequate resources to deal with work related stress), personal challenges (coping with demands from family), as well as economic matters. Some studies (numbers 7, 9, 11 and 16) reported that, in addition to a shortage of trained professionals in the industry, personnel turnover reached between 40% and 100% of the staff compliment annually. This resulted in increased demand on existing staff members, thereby further increasing stress levels.

4.6 Intervention designs

Intervention designs were varied and corresponded to the relevant research methodologies applied to the individual studies.

4.6.1 Qualitative studies

- Analysis: Inductive thematic analysis
- Designs: Single as well as multiple case studies were included; ethnographic, narrative, and phenomenological approaches were also used.
- Data collections methods: Researchers made use of participant observation, interviews, field notes, transcribed recordings, researcher journals, focus groups, art works, and participant stories.

Although qualitative, one of the studies (number 1) made use of a measuring instrument – Professional Quality of Life-Version 5 (ProQol-5) in order to determine whether stress existed pre-intervention, but not to measure the outcome of the study.

4.6.2 Quantitative studies

Researchers who conducted quantitative studies utilised various designs, approaches and clinical techniques in their studies. These are mentioned in the following list.

- Designs: Randomised controlled, non-randomised, correlational, pre/post-test, experimental and quasi experimental, and using one- two-, and three-groups.
- Approaches: Quasi experimental and experimental approaches.

- Clinical techniques: Discussing existing art, collaborative art making (peace pole and quilt making), mandala drawing, reflective writing, psychodrama, discussing a viewed video, musical improvisation, music making.
- Data collection methods: Standardised instruments, e.g. Compassion Fatigue Self-Test for helpers (CFS), Death Attitude Profile-Revised (DAP-R), Five Facet Mindfulness Questionnaire (FFMQ), Maslach Burnout Inventory–General Survey (MBI-GS), Profile of Mood States (PMS), Psychological Stress Measure-Version 9 (PSM-9), Professional Quality of Life-Version 5 (ProQol-5), Support Appraisal for Work Stressors (SAWS), and Team Building Questionnaire (TBQ).

4.6.3 Mixed methods studies

The authors of the three mixed methods studies included in the review conducted their research by utilising the various designs, techniques and data collection methods. These are mentioned in the following list.

- Designs: Concurrent triangulation
- Clinical techniques: Song writing, Bonny Method-Guided Imagery and Music (BM-GIM), art therapy utilising Kellogg's Great Round.
- Data collection methods: Mandalas, reflective writing, disucssions, and standardised instruments, e.g. Compassion Satisfaction/Fatigue Self-test (CSFST), Hospice Clinician Grief Inventory (HCGI), Job Satisfaction Survey (JSS), Maslach Burnout Inventory-General Survey (MBI-GS), Sense of Coherence Scale (SCS).

Researchers designed their interventions to combine interviews, observations, and measuring instruments in order to collect information, and used thematic analysis

and results from measuring instruments to distinguish similarities or differences in the outcomes of the procedures pre- and post-intervention. This practice of triangulation is used to strengthen the findings in mixed methods studies.

4.7 Sampling strategies

Sampling strategies used in the studies included probability and non-probability sampling in the qualitative, quantitative as well as the mixed methods studies. Probability sampling encompassed simple random, systematic random, and stratified random sampling, while non-probability sampling incorporated quota, self-selection, convenience, snowball and purposive sampling strategies. Care was exercised to conform to ethical practices in every study, and while participation in the research was voluntary, one of the studies (number 16) made participation mandatory, which was a source of tension for staff members in the institution.

4.8 Intervention procedures

The length of studies varied, some were concluded after one session, while others were done over a period of six months. From table 10, study numbers 1, 2, 4, 6, 7, 8, 9, 10, 11, 12, 13, and 17 employed art therapy in a number of distinct ways. Studies 1, 6, and 9 involved the viewing and discussing of existing art prior to art making. Study number 2 examined psychodynamics and social constructionism in group work from an art therapy perspective, while Zentangle was used in study number 4 to understand the lived experience of participants. Collaborative art making was the focus in the studies 7, 10, and 13, and study number 8 examined symbolism in the art produced by participants. Participants in studies 11 and 17 produced mandalas

which were discussed during group sessions, and study number 12 included art making, reflexive writing and group discussions.

Where music therapy was used as intervention (studies 3, 5, 15, 16, 18, and 19) study number 3 took special note of indigenous knowledge systems of participants, and studies 3 and 5 (conducted in South Africa) both aimed at community interventions. Study number 15 had a didactic component, while study number 16 was aimed at employee enrichment. Study number 18 targeted disenfranchised grief through the use of Group Music Intervention (GMI) in a group setting, and researchers in study 19 utilised Bonny Method – Guided Imagery and Music (BM-GIM) as intervention in their work.

Study number 14 from table 10 was a pilot study that used psychodrama during intervention, in combination with Ericksonian relaxation, play therapy and a discussion of a video that was viewed.

4.9 Results of the studies

Qualitatively, participants reported enjoying the interventions and experiencing stress release. Themes relating to their work environments that emerged regularly concerned stresses experienced as a result of work with clients/patients, as well as conflict involving colleagues and management in some of the organisations.

The greater majority of participants in the qualitative studies reported that they found the arts therapy interventions helpful and willingly participated in the activities offered. The process of art-viewing followed by art-making in studies 1 and 6 was

well received by participants who stated that viewing and discussing art side-by-side with colleagues and art therapists improved relational processes and reduced their perception that they need to be knowledgeable and capable under all circumstances. Study two, which aimed to enhance resilience and provide opportunities for open discussion, mentioned participants' ability to identify vulnerabilities, and recognise strengths and abilities post intervention. Music therapy interventions in studies 3 and 5, in cross cultural community settings, indicated a greater awareness of indigenous knowledge systems, greater understanding of boundaries, and ongoing release of stress during and post intervention. The use of meditative art therapy (Zentangle) indicated a perceived change in participants who reported not only developing additional coping skills, but also a greater understanding for the challenges their clients face when learning new coping skills. Participants in the study that used collaborative art making (assembling a quilt in study number 7) gave rise to participants realising the power of working together as a team. The use of guide images with mandala drawing (study number 8) assisted participants to evolve their defence mechanisms (like denial and repression) into viable ways of self-protection.

Seventy-five percent of quantitative studies reported a significant reduction in the constructs being measured. In study number 9, half the participants reported greater awareness of emotional responses and a reduction in stress. Study number 10 showed a statistically significant reduction in compassion fatigue for healthcare workers. While study number 12 indicated a decrease in exhaustion for both experimental groups, only one group had significant mean reductions from baseline post intervention in burnout. The study utilising psychodrama (14) resulted in a statistically significant positive difference in the Maslach Burnout Inventory (MBI)

results post intervention. Twenty-five percent of quantitive results reported no change, for instance, study number 11 showed no notable difference between pre- and posttest scores for compassion fatigue, while burnout scores were higher posttest.

Mixed method studies reflected some variation in results (between the qualitative and quantitative findings). Study number 19 showed a discrepancy between quantitative and qualitative results, with self-reported qualitative improvements in relaxation, rejuvenation and renewed energy of participants. Study number 17, utilising The Great Round (Kellogg, 1984) to interpret stress levels from the mandalas produced by participants, indicated a level of reduction of burnout in the four stages identified in participants (Paradoxical split; Fragmentation; Bliss; and Target-Defence/Protection). Grief Resolution was targeted in study 18 and, while qualitative measures showed a decline in the participants' experience of personal sacrifice burden, quantitative measures reflected a non-significant reduction in burnout and compassion fatigue.

The review of studies on burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation that were included in this research indicates the following. Healthcare workers in need of intervention, either to prevent or treat these conditions, have found the arts therapies particularly beneficial and helpful in providing additional coping strategies, and also tend to feel able to pass their experiences on to their clients where appropriate. Some key points regarding transfer of skills include the didactic application of the arts therapies where participants were taught methods of self care and coping skills which are

transferable to their clients and patients. Participants came to the realisation that it may be as challenging for their clients to adopt new coping strategies as it initially was for them to adopt the (at that stage unknown) arts therapy techniques as coping strategies. The arts offer the opportunity for acquiring skills in a non-threatening way.

Another key point is the adaptability of the arts therapy interventions. As could be seen in the studies included in this review, art therapy does not merely involve the use of art in the sense of producing a work acceptable to participants and their peers, nor does music therapy entail merely producing music in the common, socially accepted, sense of the word. Dramatherapy entailed much more than merely engaging in “good” acting. The essense of the arts therapies is that creativity (and a different mode of engagement) is triggered by the freedom that is experienced when participants realise that there are no expectations for them to be good at producing or performing. Although the clinical goal of the arts therapies is similar to other mental health professions (psychotherapy, for instance, which aims to facilitate the client’s growth and positive change) arts therapists strive to integrate their clients’ physical, emotional, cognitive, and social functioning to enhance their self-awareness (Rogers, 1993).

4.10 Authors’ conclusions

In study 1 (as listed in Table 11), the author professed to remain acutely aware of her subjectivity and personal feelings during the research process, and adopted an approach of continued reflexivity in an attempt to avoid bias. In a study with oncology personnel (study 7) a caveat was expressed regarding the perceived unfairness of labelling clients as being pathologised. These authors recommended continuous

reflexivity as they observed that many of the participants in the study was of the opinion that to be regarded as credible careworkers, they should not appear to be affected by stress themselves. In another study (number 2) the author became aware of personal feelings of ambiguity and doubt concerning the continuation of the intervention process. She cautioned other therapists who may combine psychodynamic-narrative group work with art therapy to maintain their reflexivity in considering the characteristics of participants as each individual's context and circumstances are unique.

Symbolism emerged as a matter of interest for the authors of studies 8, 10, and 17 as they reflected on symbolic meanings of group dynamics, and the meaning of blank spaces in art making. Study 17 used the given symbolism in the Great Round (Appendix 2) to interpret mandalas in their study. Symbolism is also relevant indigenous knowledge, and the authors involved in cross-cultural work in South Africa (studies 3 and 5), speculated about the appropriateness of Western approaches and interpretations in an African setting. Tapping into the existing indigenous knowledge of the participants enabled these authors to adopt a non-expert stance during the process of guiding and teaching (as well as learning) new techniques and coping mechanisms. On the subject of learning, the author of study 4 made a surprising discovery when she found a distinct parallel emerging between participants' effort of learning and adapting to new skills, and the obstacles their clients reported about integrating new coping strategies.The benefits of adopting a non-expert stance was also noteworthy in studies 6 and 9. The authors of these two studies found that through being allies (instead of experts) their clients felt less intimidated and could participate in the discussion of the artworks as equals.

The authors of studies 11, 16, and 19 were concerned about the increased demand on the services of healthcare workers and the attrition of personnel due to the adverse effects of stress in the workplace. In study 11, it was mentioned that the largest aging population the USA has ever known is on the horizon and that the demand for palliative and hospice work will increase rapidly. A similar concern was raised by the researchers of study 16 for the UK, while study 19 reflected a general concern for this development of increased demands on healthcare. Study number 12 highlighted the difference between conventional supervision (through meetings and lectures) and art therapy based supervision. The authors speculated that more research was needed before one could be deemed more beneficial than the other.

Authors from studies 13 and 14 felt that decisions they took during the research process may have affected the outcome of their studies. These decision included using a non-randomised sampling strategy (study 13), where the authors felt that the result between two groups could have been different if a randomised sampling strategy was used (group 1 consisted of all arts department personnel and group 2 of all social workers). The second decision that was questioned concerned study 14 which showed some benefit from the arts therapies intervention, but during the process of the intervention, the authors unfortunately did not ascertain which of the components (drama therapy, play therapy, relaxation techniques or discussion of a video that was viewed) was more/less beneficial.

The author of study 15 speculated that, while compassion fatigue scores indicated a non-significant result post-intervention with music therapy, the measurement utilised

in the study (Compassion Fatigue Scale) was incapable of capturing music therapy's effects in the area of music therapy. In study number 18, disenfranchised grief was the focus, and the author recommended that the music therapy sessions should be organised by discipline (hospice workers, doctors, social workers), years of employment, as well as levels of spirituality, rather than facilitating mixed groups.

4.11 Study population characteristics

The majority of the studies identified in the search for this review were generated in the USA (n = 9), and all but two of these studies included nurses as the occupational group of interest. The study in war-torn Israel with child and family counsellors particularly concentrated on building resilience in the care workers. Three of the studies were conducted in the UK targeting hospice workers, trauma professionals, and a multidisciplinary healthcare team. The two studies from Italy focused on nurses as the target population, and the two studies from Hong Kong concentrated their efforts on hospice and palliative care workers. Across all studies the gender distribution showed 73% female representation, 13% male representation, with 107 participants (14%) unspecified. This raises several questions. Is this an accurate representation of inclusion of female versus male participation in the health industry? Were more female than male members of staff in need of intervention for work-stress related conditions? Statistics released by the World Health Organisation in 2015 give a breakdown of density of health workers by country (physicians, nursing and midwifery, dentistry, pharmaceutical, and psychiatry), but no breakdown by gender. As the nursing fraternity was the population group most frequently represented in the studies (15 times) this can potentially limit the generalisability across all population groups. The mean age of participants throughout the studies reviewed was 44.9 yrs.

4.12 Methodological quality

Comparison between studies was difficult as a result of the heterogeneity of the interventions and the variety of research methodologies utilised. In this section, qualitative, quantitative and mixed methods studies are discussed in terms of methodological quality.

4.12.1 Qualitative studies

According to Mays and Pope (2000), the validity of a qualitative study can be improved by using triangulation to compare results from two or more methods of data collection to attain a more reflexive analysis of data. Participants' reaction to analyses could also be useful, where for instance, group discussions on the outcomes of studies are recorded post intervention. Hoeck (2006) advocated the sufficient explanation of background, a succinct statement of the research question, a full description of methods used, a clear discussion of main findings, and some explanation of relevance of findings to policy or practice. Keeping these broad principles in mind, the eight qualitative studies were investigated for quality. The design of the studies varied. Interviews were used to collect pre-intervention demographic information (studies 1, 2, 3, 5, and 6), as well to collect information during all the studies. One study (number 1) made use of a quantitative measure to ascertain whether stress-related conditions were present at the start of the study. Thematic analysis was used through all the studies and symbolism was examined in some studies. Sampling in qualitative studies varied between two and 22 participants, with one study (number 7) indicating a sample of 107 participants (the intervention entailed the creation of individual art pieces for a "healing quilt" that was

done in three separate oncology institutions, with the participants combining their art pieces to create a large quilt at the end of the process). One of the studies that was meant to have a minimum of 10 participants, only managed to include two participants (number 6). This study involved art viewing and consequent art making followed by a group discussion. As excplained in chapter 3, (3.5) the qualitative studies included in this report was of satisfactory quality to be included in this report.

4.12.2 Quantitative studies

In quantitative studies, Randomly Controlled Trials are the strongest design for investigating causal connections between variables (Meline, 2006). Of the eight quantitative studies in the review, two were randomly controlled trials. All the quantitative studies reviewed included pre-and post-test controls, one study had three groups, four studies had two groups, and one study had a single group. One study was explorative, and two studies were quasi-experimental. Quantitative data collection was done utilising a variety of measuring instruments. These included the Maslach Burnout Inventory/Maslach Burnout Inventory-General Survey (BMBI/MBI-GS) in four of the studies, Professional Quality of Life/Professional Quality of Life-Version 5 (ProQoL/ProQol-5) in two of the studies, Compassion Fatigue Scale (CFS) was included twice, Psychological Stress Measure-Version 9 (PSM-9) once, Profile of Mood States (PMS) once, the Five Facet Mindfulness Questionnaire (FFMQ) once, the Death Attitude Profile-Revised (DAP-R) once, and the Support Appraisal for Work Stressors (SAWS) also once. The quantitative studies varied in sample sizes. Three had fewer than 30 participants (25, 20 and 17). Although this potentially reduced statistical power and the ability for statistical tests to detect significant differences between values in these studies, the studies met the criteria for inclusion

and contributed to the knowledge for this study.The rest of the quantitative studies had from 30 to 132 participants. The duration of interventions varied considerably from a study with one pre-test session followed by a post-test session 30 days later, to six sessions over a three-week period. The rest of the studies were conducted over a period of up to three weeks. All the quantitative studies met the quality criteria for inclusion in the review.

4.12.3 Mixed method studies

O'Cathain, Murphy and Nicholl (2008) supported the view that assessing the quality of mixed methods studies should include investigation into whether the research design is justified, whether the design for mixing the methods has been described (including the priority, purpose, sequence and stage of integration), whether the design was clearly communicated, and whether the design is appropriate for addressing the research questions. Triangulation was used to establish validity in the mixed methods studies by analysing the research topics from qualitative and quantitative perspectives. The three mixed method studies included in this review met the quality requirements adequately.

4.13 Conclusion

This chapter provided particulars of the analysis process as well as tables to detail extractions from the studies, and discussed the quality considerations for inclusion. The following chapter will review the findings from the analysis.

Chapter 5

Discussion of results

5.1 Introduction

In this penultimate chapter, an attempt will be made to address the research questions. This will be accomplished by reviewing the findings that emerged from the data analysis.

5.2 The research questions

The research questions for this study were:

1. To what extent has the use of the arts therapies been researched as an intervention for burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation as experienced by health professionals, hospice caregivers and nursing staff?
2. What benefits in relation to symptoms of burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation, if any, have been recorded in research investigating instances of utilising the arts therapies as intervention for health professionals, hospice caregivers and nursing staff who have experienced these conditions?

Considering the first question, it is notable that only 19 relevant studies were identified for inclusion. While a large number of studies were found for stress related conditions in healthcare professionals by using a combination of the search keywords, the majority of interventions researched in these studies included non-arts

therapies. The number of studies found to address the arts therapies as an intervention for burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation as experienced by health professionals, hospice caregivers and nursing staff is therefore regarded to be low in comparison to other intervention methods for these conditions. This may partly be explained by the arts therapies being a relatively young field in healthcare (Dunphy, Mullane & Jacobsson, 2013), and partly by the relatively low number of arts therapies professionals who are currently operating in the field of healthcare (compared to other healthcare professionals in the field). For instance, the Masters programme for music therapy in South Africa was established as recently as 1999.

For the second question addressing the potential benefits in relation to symptoms of burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation recorded in research investigating instances of utilising the arts therapies as intervention for health professionals, hospice caregivers and nursing staff who have experienced these conditions, the results recorded in this literature review were encouraging. Although some findings were mixed, overall the review favourably indicated the use of the arts therapies as an intervention for the conditions under investigation. Eighty four percent of studies in this review supported the use of the arts therapies for the conditions of burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation in healthcare workers. Seventy-five percent of results from the quantitative studies reported a significant reduction in the constructs being measured, and the greater majority of participants in the qualitative studies reported finding arts therapy interventions helpful. The

mixed methods studies indicated a discrepancy between qualitative and quantitative findings, with the qualitative findings indicating more positive outcomes.

The following section is an attempt to explicate the answers to the research questions at the hand of the research findings summarised in chapter four, as well as some related theory and literature.

5.3 Main themes in the findings

This section addresses stressful work contexts as well as trends and key findings in the selected studies and offers considerations for arts therapist in practice. It also reflects on the way in which the research processes unfolded.

5.3.1 Understanding stressful work contexts

Granted that interaction in a healthcare environment with ill or traumatised individuals is by nature stressful, surroundings and managerial approaches could further contribute to work-related stress. Participants from study 1 experienced additional stress due to construction work and resultant managerial and workplace changes, and caregivers in palliative and hospice care (in studies 1, 3, 5, 10, 11, 12, 13, 15, 17, and 18) who deal with the trauma of their clients and patients were often confronted with the pain and despair of the families of those afflicted with life-threatening conditions. According to Nolte et al. (2017) nurses and other healthcare workers in South Africa experienced feelings of being let down by the system, and while their need for support was great, they felt uncomfortable seeking the care they needed. This need was evident in studies 3 and 5, where the unpredictability of the circumstances in the community, poor wages and the lack of resources available

exacerbated the stress experienced by the workers. Nolte et al. stated that triggering factors in the workplace, combined with physical and emotional symptoms could lead to compassion fatigue in healthcare workers.

The following factors were apparent in studies 2, 5, 9, 10, 15, and 18. Heavy workloads due to staff shortages, the quality of management, having to do shift work, and caring for the aged and the infirm. For field workers the issues were their prolonged exposure to especially the poverty, starvation and homelessness (especially children) gender violence, rape, and sexual abuse of their clients. All these factors could lead to physical and emotional exhaustion and, combined, could result in compassion fatigue. Study number 18 particularly addressed disenfranchised grief in hospice workers who experience the emotional effects of losing patients, but who cannot openly acknowledge, or publicly mourn such loss.

5.3.2 Trends and key findings across the studies reviewed

The scarcity of research in the arts therapies became evident during the search for appropriate literature to be included in this review. As mentioned by Slayton, D'Archer and Kaplan (2010), compared to a number of scientific fields being researched, the body of studies in the arts therapies since inception remain sparse. Kelly, Davies, Harrop, McClimens, Peplow and Pollard (2015) held that future research into the use of the arts therapies in healthcare can benefit from a combination of approaches that can retain the more robust aspects of randomly controlled quantitative trials with the insights that can be derived from qualitative methods. Three studies combining qualitative and quantitative measures were found to meet inclusion criteria in this review, (17, 18, and 19). Reynolds, Nabors, and

Quinlan (2000) noted that while the practice of art therapy had been in existence for many years, there was a sparsity of empirical evidence, suggesting as a possible reason the lack of arts therapists trained in experimental research methods. Replication of existing studies can enhance the validity of the research already available in the arts therapies by confirming or controverting findings from previous research. Makel, Plucker and Hegarty (2012) noted that researchers might be interested in determining whether results hold true in other settings or for other populations. In this review, two studies were replicated (3 and 5) in order to determine whether there would be a different outcome for the research first conducted in a Western context, and thereafter in a South African context.

A possible reason for arts therapists not engaging in quantitative research is the difficulties intrinsic in measuring outcome variables (Reynolds et al., 2000). Discussions by researchers from studies 9 and 11 in this review reflected on the uncertainty of whether the outcome of their study was as a result of the therapy not being effective, or whether the measuring instrument did not measure what was meant to be measured. In a review of literature by Dunphy, Mullane and Jacobsson (2013) the authors discussed the reasons for the lack of applicable research studies specifically from Australia for inclusion in their review. Similar reasons are thought to be applicable to the arts therapies research in South Africa. Dunphy et al. asserted that three factors could potentially provide insight into this phenomenon. The first was the relatively emergent nature of research in the international arena (according to Dunphy et al. the Cochrane Review listed dance and movement therapy for the first time in 2009). In their study, the USA and UK listed the strongest body of research where the arts therapy professions had been established for a longer

period than in other countries. As a second factor, the authors proposed that while music therapy had been available at university level since 1975 (in Australia), there was a lack of arts therapies programmes to provide a framework for a university research environment, and therefore the potential for developing research remains limited. A third factor the authors mentioned was the absence of controlled studies in the arts therapies, as researchers into the arts therapies tend to favour qualitative methods.

In studies that showed favourable outcomes from the arts therapies, there appeared to be the following common traits. Studies 1, 3, 5, 7, 8, 10, 11, 13, and 15 incorporated arts therapy intervention in a group setting. Of the above studies, numbers 1, 3, 5, 8, 11, and 13 included participants who worked with clients and patients in a home-based environment, and who did not have the benefit of working in a team environment. The positive outcome from all nine studies mentioned above emphasised the benefits of improved team work, and of building group support for healthcare workers through therapeutic intervention. In all these studies, the cohesiveness of and mutual support in the team was enhanced through their shared experiences during the various interventions.

Studies that utilised group therapy, but that indicated no significant improvement in the examined conditions, included numbers 18 and 19. Whereas both these studies involved group MT, the GIM interventions enhanced neither group support nor team building. While the process of GIM therapy involved group participation, each participant experienced the therapy as an individual, and the art making (mandala drawing) after the GIM experience, was also conducted as a personal experience

and not an interactive group activity. The difference in the above instances of the manner in which group arts therapy work is conducted and the resultant outcome, may be explained as follows. On the one hand group interventions indicated positive outcomes for participants who were able to engage with colleagues while sharing similar therapeutic experiences, and on the other hand, those who participated as a group but did not have the opportunity to share their therapeutic experiences, indicated no significant change.

Within the studies exploring art therapy, Huet (2016) found that combining art-viewing and art-making enhanced relational processes and personal insight and alleviated some of the additional stress that was experienced as a result of the construction work to their unit. The side-by-side viewing of existing artworks contributed to participants feeling less intimidated by a knowledgeable therapist (who may often assume a leading role in a conventional therapeutic setting). In this intervention existing works of art were viewed by participants and therapist, and individual opinions about the use of colour, images, textures, and the general meaning of the art were contemplated. Two of the studies included in this review were conducted on this basis (side by side stance) and received positive responses from participants.

The arts therapies can also provide opportunities for the healthcare workers to gain greater insight into and empathy for their patients' struggles. For example, in study number four the participants found the process of learning and practicing a new coping skill frustrating and difficult. They often felt unwilling to do the "homework" prescribed by their art therapist, claiming that they were too tired, did not have

enough time, had too many other commitments, or was not artistic. Through the intervention process, these mental healthcare workers came to realise that their clients exhibited similar resistance to learning new coping strategies and skills, and this realisation and understanding increased their empathy with clients who were seemingly uncooperative.

There is a growing interest in workplace disease prevention and wellness programmes as is reflected in a meta-analysis of literature conducted by Baicker, Cutler and Song (2010). Employers, policy makers and insurers has expressed a need to find methods to improve health while lowering costs. The researchers in study 16 in this review painted a bleak picture of staff turnover in the health professions in the USA (Bittman, Bruhn, Stevens, Westengard & Umbach, 2003). They found reported staff turnover in some institutions ranging between 40% and 100% annually. They further observed that enrolment in the nursing profession had declined significantly over two decades, resulting from low wages, more beneficial work opportunities in other sectors, as well as the emotional challenges of caring for severely ill and other clients. The intervention in this study comprised six sessions conducted on a weekly basis, and offered a group empowerment drumming protocol, GIM sessions, and other music therapy interventions. The study showed statistically significant reductions of burnout and an improvement in mood states. Although economic considerations were not part of this study, a potential saving in costs from stress-related illnesses and staff turnover of 18,3% was calculated for the hospital on the basis of saving on training costs for new staff members, hours lost due to illness, and hours lost while new members of staff had to familiarise themselves with the employment protocol. Baicker et al. mentioned that the average programme saving

across their meta-analysis studies was $394 per employee per year, while the average programme cost was $159 per employee per year. This calculated an average return on investment (ROI) for this study of 3.36. The reported interventions utilised in these studies included a combination of self-help materials, individual counselling, as well as group classes and seminars, and conditions targeted included stress management, back care, alcohol consumption, blood pressure, preventive care, as well as smoking and obesity. Although there was no particular mention of the arts therapies as intervention, it is conceivable that the arts therapies may have been used.

5.3.4 Considerations for arts therapists designing and conducting interventions

For an arts therapist intending to conduct an intervention with this population group the following may be important to bear in mind. Intervention through the arts therapies in a group setting where participants were able to interact and share experiences seemed to have a more beneficial outcome for group support and group cohesion (studies 1, 3, 5, 7, 8, 10, 11, 13, and 15) than where group work did not allow interaction and sharing of experiences (studies 18 and 19). Where the intervention was directed either didactically or ecologically, the more structured didactic approach (study 15) resulted in a more lasting improvement in stress related conditions. Cross cultural music therapy interventions (studies 3 and 5) was able to transcend cultural and language differences which may hamper the effectiveness of conventional therapy techniques through the use of music which was known and meaningful to the participants. Cost savings in healthcare for large institutions has gained increased attention as health spending soars, (Baicker et al., 2010) and there

is a growing interest in workplace wellness programmes to improve employee health at lower costs. Arts therapists could consider designing intervention programmes for potential corporate clients, demonstrating the benefits of the arts therapies interventions for stress reduction which could lead to lower absenteeism, lower staff turnover, and resultant reduced employee healthcare related cost.

5.3.5 Researching the arts therapies as interventions for burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation

Perusing the process and outcomes of the qualitative approach to research in the arts therapies for this review afforded me an opportunity to gain insight into the lived experiences of participants. Thematic analyses indicated similarities as well as differences between the studies. Themes which were common among studies included boundaries, contrasting responses, creative expression, creativity, differing experiences, empathy, group support, improved focus, mixing personal and professional roles, new perspectives, personal exposure, relaxation, self-care, serene front, stress reduction, and trauma. Themes which were unique to specific studies included integration of arts and psychodynamic conversation (study 2), boundaries and massage (study 5) and the fabric that holds the team together (study 7). Qualitative research for this review was limited in the design of the studies as participation was mostly voluntary making selection bias a major concern. In study two, the authors had moments of ambiguity and doubt concerning how to continue to support the intervention progression, as responding appropriately to the needs of participants would have compromised the theoretical orientation underlying the research process. This may have compromised a potentially different outcome for

this art therapy intervention. While studies three and five used music therapy in a cross-cultural application, the researchers remained unsure whether cultural diversity and practices were appropriately addressed, and this factor may also potentially have compromised the outcome of the music therapy intervention. Study six was intended for a larger number of participants, but eventually only two staff members took part in the intervention. While the outcome of the study simply confirmed that healthcare workers were not immune to stress and fear in the workplace (after pre-selection interviews indicated that personnel felt they had no stress or fear problems in the workplace), working with ten participants instead of two may have enhanced group cohesion and group support.

The exploration of the eight quantitative studies provided the following insight. Measuring instruments used for data collection was primarily the same measuring instruments used by conventional psychological research processes. These included the Maslach Burnout Inventory (MBI) which was used four times, the Professional Quality of Life Version 5 (ProQol-5) which was used twice, and then the Compassion Fatigue Self-Test for helpers, Death Attitude Profile–Revised (DAP-R), Five Facet Mindfulness Questionnaire (FFMQ), Profile of Mood States (PMS), Psychological Stress Measure Version 9 (PSM-9), Support Appraisal for Work Stressors (SAWS), and Team Building Questionnaire (TBQ) which were all used once in the studies. What was significant about this list of measuring instruments, is that it did not include an instrument particularly designed for measurement in the arts therapies. This may have limited or skewed the outcomes of the studies as the possibility exists that the measuring instruments that were used, did not measure what researchers intended to measure.

The mixed methodology studies combined the measuring instruments similar to those in the quantitative studies with qualitative methods such as thematic analysis, and analysis of mandala drawings. The outcomes in the mixed methodology studies confirmed what was found in the qualitative and quantitative studies respectively.

5.4 Conclusion

This chapter restated the research questions, identified the main themes in the findings, discussed stressful work contexts, explored key findings, pinpointed considerations for arts therapist in practice, and finally discussed the arts therapies in the context of research.

Chapter 6

Conclusion

6.1 Introduction

As discussed in chapter 5, outcomes in support of the use of the arts therapies for work stress-related conditions were recorded in all the qualitative studies, in seven of the eight quantitative studies, with one of the mixed method studies also reporting positive outcomes qualitatively. This translates into 84% of studies in this review supporting the use of the arts therapies for the conditions of burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation in healthcare workers.

6.2 Limitations of this study

The most notable limitation of the review was the relatively small number of studies (19) that were suitable for inclusion in the review. The author repeated the search strategies on three different platforms (University of Pretoria Library site, Google Scholar, as well as Google). The scope of the review was broadened to include the Arts Therapies in general, where originally only music therapy was included in the search. (Only six studies utilising music therapy as an intervention were eventually included in the review). Another notable limitation was the lack of follow-up for the majority of studies to ascertain long-term sustainability of positive outcomes. A number of studies identified through their titles were found to have been written in languages unfamiliar to the researcher and were, therefore, not included.

The majority of the studies included in the review did not do a long term follow up to verify results (2, 4, 5, 6, 8, 10, 11, 12, 13, 14, 15, 16, 17, and 19). This could be a limiting factor in the review as follow-up information would have increased the strength of the results. Four of the quantitative studies had fewer than 30 participants (9 = 20, 11 = 25, 13 = 20, and 15 = 17). Given population sizes investigated by these studies, larger samples would have been preferable.

6.3 Findings for arts therapists

As a student music therapist in South Africa, the findings in this review were most encouraging. Six of the included studies in the review utilised music therapy as intervention, while two of these studies (3 and 5) were aimed at community workers in South Africa. Music therapy was found to be effective as a cross cultural intervention in both studies. Music therapy can be deemed more appropriate than Western style forms of therapy in cross cultural interventions, as the music therapist can incorporate indigenous knowledge of participants into the structure of sessions with participants. Music therapy is a cost effective intervention for reducing burnout and improving mood disturbances (study 16), and can be used effectively to improve communication with clients as was seen in studies 18 and 19.

Twelve of the included studies used art therapy as an intervention. Ten of the twelve studies indicated positive results, with study number 11 indicating no significant change in compassion satisfaction or burnout scores, (although a slight improvement was recorded for secondary traumatic stress scores). Study number 17 (mixed methods) found an increase in self-awareness and potentially effective treatment of burnout in palliative care workers utilising the Great Round. Further research into the

use of mandalas was recommended in this study as the results were inconclusive. Particularly encouraging for art therapists who work with healthcare personnel was a surprising (for the researcher) result in study number 4. Participants were instructed in the use of Zentangle (a form of meditative art) and the discovery made by participants was the fact that the challenge of acquiring new coping skills was equally relevant to their own clients and patients. Another notable result identified in two studies (1 and 6) was that art viewing with clients could enhance relational processes as the side-by-side stance resulted in the therapist not being regarded as the expert, but rather as a member of the group sharing thoughts, feelings, and reactions to the artworks.

The only study utilising drama therapy as intervention (14) indicated positive change in burnout levels. Although there were no other drama therapy studies included in the review, the outcome of this study is encouraging for drama therapy. Unfortunately no studies focusing on dance and movement therapy were found for inclusion in the review.

6.4 Recommendations for future research

An important objective of a systematic literature review is to inform further research. As a result of this review, recommendations are as follows. Future research could include follow-up investigation as well as longer term studies into the efficacy of the arts therapies for burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisationin healthcare workers. This would address the gap in research for longer term results noted by a number of the authors of studies included in the review, as well as to support findings already recorded in research.

6.5 Conclusion

The literature reviewed is largely encouragingly in favour of the use of the arts therapies as intervention for burnout, compassion fatigue, secondary traumatic stress and vicarious traumatisation. Empirical research commissioned by the Department of Labour, South Africa (2008) indicated 33,220 medical practitioners registered with the Health Professionals Council of South Africa (HPCSA). That equates to roughly 1,690 potential patients per doctor in the South African population. In July 2016, there were 270,437 nurses registered with the HPCSA, a shortage of 44,780 for 2017, and only 3,595 student nurses had registered for nursing training during 2017. In light of the chronic shortage of healthcare workers in South Africa, cost effective and successful methods to help cope with the stressful emotional experiences healthcare workers endure as a consequence of the work they are doing could be beneficial.

Through the arts therapies individuals are able to communicate ideas and emotions that can be hard to verbalise, such as anger and stress experienced in their work environments. This review has shown that use of the arts can aide in work-related conflicts, self-awareness, managing behaviour, improving coping skills, and increasing empathy. The arts therapies do not require “artistic ability” or previous experience in the arts; all that is required is an openness to possibility.

7. References

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Appendix A

The following are studies that were identified through the search using search terms. These studies were reviewed for consideration as a result of the various keyword searches, but later excluded from the study. The reasons for exclusion are listed below.

No	Author	Title	Reason for exclusion from review
1	Abu-Ras, Gheith & Cournos	The Imam's role in mental health promotion: a study a 22 Mosques in NY City's Muslim community	The study examined the role of Imams in Muslim mental health promotion and attitudes toward mental health services prior to and post 9/11. No arts therapies were utilised in the study.
2	Alexandrova-Karamanova, Todorova, Montgomery, Panagopoulou, Costa, Baban, Davas, Milosevic, & Mijakoski	Burnout and health behaviours in health professionals from seven European countries	Investigated burnout and exhaustion in healthcare workers across the board, however, no arts therapies intervention was included in the study.
3	Anderson	Expressive arts: arts and the well-being of social workers	The study investigated the self-care of social workers and how they could use art to enhance their professional quality of service.
4	Aycock, Boyle.	Interventions to manage compassion fatigue in oncology nursing	The study surveyed what interventions were being used, if any, and did not focus on the outcomes of the interventions.
5	Baines	Music therapy as an Anti-Oppressive Practice	Music therapy is utilised in a community music therapy setting, no healthcare workers are involved.
6	Baird & Jenkins	Vicarious traumatisation, secodary tramatic stress and burnout in sexual assault and domestic violence agency staff	The study investigated VT, STS and BO in healthcare workers, but no arts therapies intervention was implemented
7	Baker	Front and center stage: participants performing songs created during music therapy	Study sough to understand the impact and role of self-composed songs for music therapists.
8	Barbosa, Raymond, Zlotnick, & Wilk	Mindfulness-based stress reduction training is associated with greater empathy and reduced anxiety for graduate healthcare students	Study concerned the efficacy of MBST. No arts therapies intervention was utilised in the study.
9	Barnet-Lopex, Perez-Testor, Cabedo-Sanroma, Oviedo, Guerra-Balic	Dance/Movement therapy and emotional well-being for adults with intellectual disabilities	The population for this study did not include healthcare workers.
10	Barclay	An exploration of my experience as a dance/movement therapy intern who worked with children who have experienced trauma: an artistic enquiry	Thesis concerned the experience of an arts therapist working with children. No healthcare workers were involved in the study.

11	Bell, Kulkarni & Dalton	Organisational prevention of vicarious trauma	Article concerned the prevention of VT in healthcare personnel, but none of the arts therapies are mentioned in the study.
12	Bercier	Interventions that help the helpers: a systematic review and meta-analysis of interventions targeting compassion fatigue, secondary traumatis stress and vicarious traumatisation in mental health workers	While this systematic survey addressed healthcare workers as well as the conditions of interest, the intervention investigated was cognitive behaviour therapy and stress debriefing sessions.
13	Berger & Gelkopf	An intervention for reducing secondary traumatisation and improving professional self-efficacy in well-baby clinic nurses following war and terror: a random control group trial	The study investigated secondary traumatic stress in nurses in Israel, but none of the arts therapies were utilised as intervention.
14	Berry	An analysis of burnout and music therapy methodologies	The Master's thesis investigated the extent of burnout experienced by music therapists measured by using the MBI.
15	Bittman, Snyder, Bruhn, Liefreid, Stevens, Westengard & Umbach	Recreational music-making: an integrative group intervention for reducing burnout and improving mood states in first year associate degree nursing students: insights and economic impact	While the study sought to address burnout, the target population (first year nursing students) is not included in the criteria for the review.
16	Blazek	Finding my feet: a dance/movement therapy intern's heuristic inquiry of clinician self-care	The study is an exploration of the internship experience of a student.
17	Boellinghaus, Jones & Hutton	The role of mindfulness and loving-kindness meditation in cultivating self-compassion and other-focused concern in health care professionals	The study addressed self-care and self-compassion of healthcare professionals through meditation and mindfullness-based interventions.
18	Boone	The impact of poetry therapy on symptoms of secondary posttraumatic stress disorder in domestic violence counselors	While the condition examined in this study is secondary posttraumatic stress that particular condition was not included as criteria for the review, neither was poetry therapy which was used here.
19	Boone & Castillo	The use of poetry therapy with domestic violence counselors experiencing secondary posttraumatic stress disorder symptoms (PTSD)	Study examined the effectiveness of poetry as intervention for the condition. Neither poetry therapy, nor PTSD formed part of the inclusion criteria for the review.
20	Boyle	Countering compassion fatigue: a requisite nursing agenda	The study discusses compassion fatigue in the nursing fraternity in depth, but as one of the means of intervention, art therapy is merely mentioned, and not investigated in any detail.
21	Branch & Klinkenberg	Compassion fatigue among pediatric healthcare providers	Investigated the prevalence of CF in pediatric wards using ProQoL-5. No arts therapies.
22	Brandes, Terris, Fischer, Schuessler, Ottowitz, Titscher, Fischer & Thayer	Music programs designed to remedy burnout symptoms shows significant effects after five weeks	The study did not specify the population group (150 participants), and upon enquiry via email to Ms Ver Brandes, it was established that no healthcare professionals were included.
23	Braüninger	Dance movement therapy group intervention in stress treatment: A randomized controlled triacl	This trial compared the effect of DMT between a treatment and waitlist group of individuals who self-identified as suffering from stress. No mention was made of healthcare workers.
24	Braüninger	The efficacy of dance movement therapy group on improvement of quality of life: A randomized controlled trial.	This study investigated the quality of life of dance and movement therapy clients and not healthcare professionals.
25	Braunschneider	Preventing and managing compassion fatigue and burnout in nursing	The article concerned burnout and fatigue in nursing staff but only considered intervention through

			counselling, support groups, employee assistance programmes, pastoral care, and relaxation techniques.
26	Bush	Music therapists behind locked doors: the role of trauma exposure and current music therapy practices in correctional and forensic psychiatry	Investigated the burnout of the music therapists but not interventions for the condition.
27	Byers, Gere.	Expression in the service of humanity: Trauma and temporality	Concerned expressive art techniques for self-care purposes.
28	Cagne	Do art therapists use the creative process as a means of self-care	The study explored whether art therapists used art as a buffer against burnout. As an inclusion requirements for this review preclude the effects of art therapy on themselves, the research was not included.
29	Cassedy, Enander, Robinson, Evans, Frank, Tucker, Miltenberger, Pitts & Stringer	Attachment theory as a model of doctor-patient interaction	Studied attachment styles in relation fo long-standing interpersonal patterns and self-care habits. No arts therapies featured in the study.
30	Castle	The use of sequential art in therapy	Unpublished master's thesis which investigated the use of sequential art (images deployed in a sequence to tell a story graphically or convey information - as in comic strips). The study was done to gather opinions from professional (including healthcare professionals) to evaluate the potential use of comic for therapeutic ends. No therapy was administered as part of the study.
31	Chang	An opportunity for positive change and growth: music therapists' experience of burnout	The article deals with music therapists in Canada and their working conditions and how they sometimes suffer with conditions of burnout.
32	Chapman	Enhancing and sustaining the personal wellness/self-efficacy cycle of a dance/movement therapy intern	The thesis concerned the experiences of the author as a student and using DMT and counselling to cope with the stresses and burnout during the years of studying.
33	Chaput-McGovern, Silverman	Effects of music therapy with patients on a post-surgical oncology unit: a pilot study determining maintenance of immediate gains	The study tried to determine what was required for maintenance of immediate MT with patients in oncology units, and not the healthcare staff working in the units.
34	Cheng	Cancer-induced bone pain management through Buddhist beliefs	Study investigates the usefulness of Buddhist beliefs and encourages service providers to equip themselves with a wider worldview to better serve clients. Art therapies were not utilised.
35	Choi	Organisation impacts on the STS of social workers assisting family violence or sexual assault survivors	The study concerned the STS of social workers with the emphasis on support from coworkers, supervisors and work teams. No utilisation of the arts therapies.
36	Choi	Secondary traumatic stress of service providers who practice with survivors of family or sexual violence: A national survey of social workers	Study examined the prevalence and severity of STS among social workers, no arts therapies were utilised in the study.
37	Circenis, Millere.	Compassion fatigue, burnout and contributory factors among nurses in Latvia	Factors contributing to the conditions of BO and CF were examined. No interventions were researched.
38	Chou, Chu, Yeh & Chen	Work stress and employee well-being: the critical role of Zhong-Yong	While this article investigated burnout in employees, healthcare workers were not mentioned, and intervention focused on an Asian philosophy.
39	Chou, Hecker & Martin	Predicting nurses'[well-being from job demands and resources: a cross-sectional study of emotional labour	While the study investigated burnout in healthcare professionals, none of the arts therapies were utilised as intervention.

40	Clements-Cortes	Burnout in music therapists: work individual and social factors.	Discusses the condition of BO in music therapists and not the music therapist's intervention with healthcare workers.
41	Cocker & Joss	Compassion fatigue among healthcare, emergency and community service workers: a systematic review	Systematic review from which the Hilliard and Wlodarczyk articles were used in this review.
42	Collins & Long	Too tired to care? The psychological effects of working with trauma	A mixed method study with 13 healthcare workers (recovery team after the Omagh bombing in 1998). No arts therapies were utilised as intervention for the symptoms of burnout.
43	Coultin, Clift, Skingley, & Rodriguez	Effectiveness and cost-effectiveness of community singing on mental health related quality of life of older people: randomised controlled trial	Examined music and singing with the elderly and not with healthcare professionals.
44	Crawford, Lewis, Brown & Manning	Creative practice as mutual recovery in mental health	Purpose of the study was to examine the valuye of approaches to mental health based on creative practice in the humanities and arts. Although mention is made of the use of arts therapies, it is in the context of caring for patients.
45	Cruz	Dance/movement therapy and developments in empirical research: the first 50 years	A survey of articles on the utilisation of interventions involving dance/ movement therapy, no specific details on BO, CF, STS or VT.
46	Curl, Forks.	Assessing stress reduction as a function of artistic creation and cognitive focus	The study concerned the reduction of stress for psychology students using art therapy as intervention..
47	Dorian & Killebrew	A study of mindfulness and self-care: a path to self-compassion for female therapists in training	The study investigated burnout and compassion fatigue in mental health professionals though mindfulness training. No arts therapies were used.
48	Du Plessis	The prevalence of burnout among therapy staff employed in life health care rehabilitation units	Although the study deals extensively with burnout in healthcare workers, the use of the arts therapies as intervention was not suggested or investigated.
49	Dvorak	Music therapy support groups for cancer patients and caregivers	The study investigated the effect of music therapy support groups on physical, psychological and social functioning of patients and caregivers. No conditions of BO, CF, STS nor VT was documented.
50	Eaton, Doherty, Widrick.	A review of research and methods used to establish art therapy as an effective treatment method for traumatised children.	While some work by the arts therapists are conducted in a hospital setting, interventions are aimed at the children who had primary trauma exposure.
51	Edmonds, Lockwood & Bezjak	Alleviating emotional exhaustion in oncology nurses: an evaluation of Wellspriong's "Care for the professional caregiver program"	The CPC program offers a day-long retreat, and includes didactic compo-nents and group discussion. The second half of the day includes relaxation, guided imagery, body movement and mindful breathing. Other than mentioning guided imagery (music not mentioned) no arts therapies were utilised.
52	Elkonin, van der Vyver	Positive and negative emotional responses to work-related trauma of intensive care nurses in private care facilities	South African study on burnout and compassion fatigue in nurses, yet no recommendation for arts therapies interventions.
53	Elliott	When words are not enough: a literature review for mindfulness based art therapy	This review looked for the combination of mindfulness based cognitive therapy and art therapy interventions for clients and not for healthcare workers.
54	Fillion, Duval, Dumont, Gagnon,	Impact of a meaning-centered intervention on job satisfaction and on	Although the study refers to guided reflections (which remind of guided imagery in music) the intervention was

	Tremblay, Bairati, & Breitbart	quality of life among palliative care nurses	based on the work of Viktor Frankl's logotherapy.
55	Flarity, Gentry, Mesnikoff	The effectiveness of an educational program on preventing and treating compassion fatigue in emergency nurses	Qualitative study to examine the treatment effectiveness of an education programme to decrease CF and BO symptoms and increase compassion satisfactio. No arts therapies utilised.
56	Fumis, Amarante, Nascimento, & Vieira	Moral distress and its contribution to the development of burnout syndrome among critical care providers	Investigated the correlation between moral distress and burnout in healthcare workers, no intervention was studied.
57	Gam, Kim & Jeon	Influences of art therapists' self-efficacy and stress coping strategies on burnout	The study investigated how the arts therapists themselves coped with burnout and stress, they did not receive arts therapies interventions
58	Gray & Kim	Direct care workers' experiences of grief and needs for support	This study did not include any of the arts therapies as intervention for care workers.
59	Gwinner	Arts, therapy and health: Three stakeholder viewpoints related to young people's mental health and wellbeing in Australia	Study examined the inter-relational intersections of art, therapy and health from artists, health workers and young people. No BO, CF, STS or VT was addressed.
60	Gwyther, Altilio, Blacker, Christ, Csikai, Hooyman, Kramer, Linton, Raymer & Howe	Social work competencies in palliative and end-of-life care	Study focused on a social work leadership summit for palliative and end-of-life care. Nine participants contributed their knowledge to this paper. No arts therapies were utilised.
61	Halstead & Roscoe	Music as an intervention for oncology nurses	Oncology nurses are instructed how to select music to improve the quality of life of their dying patients.
62	Handran	Trauma-informed organizational culture: the prevention, reduction, and treatment of compassion fatigue	Exploratory study into compassion fatigue, and the prevention, reduction and treatment thereof. No specific interventions are discussed.
63	Hardy, White	Promoting care giving interventions through the dance of caring persons	The programme included dance with an artist in residence and included mindfulness practice of self-care, followed by verbal interaction, it was not clear whether any qualified DMT therapist was involved in the process.
64	Harris	Embodied creative arts therapy intervention with trauma: a qualitative study	Studied arts therapies and its perceived efficacy in utilising it for trauma survivors. Healthcare workers were not addressed.
65	Harris & Griffin	Nursing on empty: compassion fatigue signs, symptoms, and system interventions	The article defines CF, diiferentiates it from BO, and offers system interventions for supporting nurses and reducing CF. No arts therapies.
66	Harrison & Westwood	Preventing vicarious traumatisation of mental health therapists: identifying protective practices	This qualitative study investigated self practice of therapists to counteract vicarious traumatisation. No arts therapies are referred to in the study.
67	Heckman	Stress is pediatric oncology nurses	A literature review of stress experienced in the pediatric oncology work environment and supportive interventions to decrease negative outcomes. Using the pearl growing technique, one reference was found that was already included in the review (Italia et al.)
68	Huet	Art therapy-based organisation consultancy: a session at Tate Britain	The study concerned organisational consultation to address insecurity, anxiety and stress at work, as well as the need for effective staff and organisation support through discussion of art works at the Tate Gallery in London.

69	Huet	Case study of an art therapy-based group for work-related stress with hospice staff	Study was conducted as part of a larger project towards PhD studies and attempted to develop knowledge of the processes at play within art therapy-based groups to identify which may actively address work-stress issues.
70	Huet & Holttum	Art therapy-based groups for work-related stress with staff in health and social care: an exploratory study	Study explored art-viewing and art-making to assess the impact on reported work-related stress of healthcare workers.
71	Huss & Sarid	Visually transforming artwork and guided imagery as a way to reduce work related stress: a quantitative pilot study	The research investigated healthcare professionals' experience of guided imagery. No conditions of BO, CF, STS nor VT was investigated.
72	Huss, Sarid & Cwikel	Using art as a self-regulating tool in a war situation. A model for social workers	Study participants were postgraduate students in Israel who did practical work in a war situation. This study was excluded as it concerned social workers as students and not as healthcare workers.
73	Injeyan, Shuman, Shugar & Chitayat	Personality traits associated with genetic counselor CF. the roles of dispositional optimism and locus of control	This study concerned compassion fatigue in mental health care workers, but utilised none of the arts therapies as intervention.
74	Isserow	Looking together: joint attention in art therapy	The study examines the phenomenon of primary and secondary subjectivity and triangular relationships between the client, therapist and the art.
75	Jacobson	Risk of compassion fatigue and burnout and potential for compassion satisfaction among employee assistance professionals: protecting the workforce	Professionals in the EAP were assessed for the risk of CF and BO. Recommendations were made for professional education and future research. No arts therapies.
76	Johnson	The role of the creative arts therapies in the diagnosis and treatment of psychological trauma	The study investigated the effects of physical and sexual abuse, rape, war, violence, natural disaster, terrorism etc. and whether creative arts therapies are suitable as intervention.
77	Jones	Trauma and dramatherapy: dreams, play and the social construction of culture	The study explored the ways in which drama could connect to individuals and groups who experienced trauma. It did not concern BO, CF, STS nor VT.
78	Julliard, Intilli, Ryan, Vollman & Seshadri	Stress in family practice residents: an exploratory study using art	Art is used to evaluate the stress of resident medical students, and is not used as an intervention to alleviate stress.
79	Junkin	The impact of a clinician's mourning on music therapy treatment	The study involved music therapists who have lost clients to death, and how they coped with the mourning process.
80	Kadmon-Telias	Psychodrama and helplessness in the helper of addicts	The research investigated transference, countertransference and the feeling of helplessness in psychotherapists treating addicts.
81	Kaimal, Ray, Muniz	Reduction of cortisol levels and participants' responses following art making	Population involved students and the chemical measurement of stress levels.
82	Kaiser	An exploration of creative arts-based self-care practices among music therapy students	The thesis involved the care for music therapy students during their studies at university.
83	Kanno & Giddings	Hidden trauma victims: understanding and preventing traumatic stress in mental health professionals	Article investigated burnout and traumatic stress in mental health professionals, but did not utilise any of the arts therapies as intervention.
84	Klein	Art therapy with staff groups: implications for countertransference and treatment	Art therapy was used with staff who had problems with countertransference issues in a psychiatric inpatient ward.

85	Koch	Dance/movement therapy with clergy in crisis: a (group) case study	The article describes intervention with RC clergy through the use of dance/ movement therapy. no healthcare workers were mentioned.
86	Korczak, Wastian, Schneider.	Therapy of the burnout syndrome	Study mentions that there is inconsistency for the efficacy of stress management and music therapy, but does not go into detail.
87	Kravits, McAllister-Black, Grant & Kirk	Self-care strategies for nurses: a psycho-educational intervention for stress reduction and the prevention of burnout	While the study concerned healthcare workers and burnout, no arts therapies were utilised as intervention.
88	Kumar	Burnout and doctors: prevalence, prevention and intervention	A systematic review where referenced articles did not concern the arts therapies except for one study which included music listening for relaxation.
89	Kumar	Burnout in psychiatrists	Study dealt with burnout in psychiatrists but did not include the arts therapies.
90	Landy	Drama therapy and distancing: reflections on theory and clinical application	This article by Dr Landy concerned the emotional distancing of 3 health care workers and how they reacted to drama therapy. No BO, CF, STS or VT was addressed.
91	Lee	A phenomenological study on music therapists treating trauma patients	The thesis investigated the treatment of patients of music therapists and not healthcare workers although it also mentioned the prevalence of stress related conditions in the music therapists.
92	Levy, Fried & Leventhal	Dance and other expressive art therapies: when words are not enough	This was a review written about the book with the same title.
93	Marriage & Marriage	Too many sad stories: clinician stress and coping	The study investigated mental health clinicians and their reports of BO, STS, and VT and their coping methods. None of the arts therapies were mentioned.
94	McGillis, Doran & Pink	Outcomes of interventions to improve hospital nursing work environments	While this study addressed burnout conditions in healthcare workers, none of the arts therapies were utilised.
95	Meadors, Lamson, Swanson, White, Sira.	Secondary traumatization in paediatric healthcare providers: compassion fatigue, burnout, and secondary traumatic stress.	The aim of the research was to explore the overlap and differences between PTSD, STS, CF and BO. No arts therapies interventions were utilised.
96	Medland, Howard-Ruben & Whittaker	Fostering psychosocial wellness in oncology nurses: addressing burnout and social support in the workplace	Study investigated how social support could be used to address burnout experienced by oncology nurses
97	Meilahn	The effect of art therapies on traumatic stress.	The study focused primarily on populations with PTSD.
98	Melo & Oliver	Can addressing death anxiety reduce healthcare workers' burnout and improve patient care?	Study aims to train healthcare workers regarding burnout. No arts therapies intervention was utilised in the study.
99	Melvin	Historical review in understanding burnout, professional fatigue, and secondary traumatic stress disorder from a palliative nursing perspective	An in-depth investigation in BO and STS in palliative nursing, recommendations are made for interventions, but none of the arts therapies are included.
100	Mercer, Warson, Zhao.	Visual journaling: an intervention to influence stress, anxiety and affect levels in medical students	Concerned stress conditions in medical students. Healthcare professionals were not included in the study.
101	McKeown, Weir, Berridge, Ellis & Kyratsis	Art engagement and mental health: experiences of service users of a community-based arts programme at Tate Modern, London	Study explored the understanding of the connection between art and mental health of healthcare workers.

102	Mendenhall & Berge	Family therapists in trauma-response teams: bringing sytstem thinking into interdisciplinary fieldwork	Study examines mental health facets of disaster-preparedness and trauma-response themes from a family therapy focus. No arts therapy interventions.
103	Menezes, Hodgson, Sahhar, & Metcalfe	"Taking its toll": The challenges of working in fetal medicine.	The study explored stress related effects on 40 healthcare professionals in Australia who reported symptoms of burnout, and suggested that a need for intervention exists.
104	Mimura & Griffiths	The effectiveness of current approaches to workplace stress management in the nursing profession: an evidence based literature review	A literature review for stress management in the nursing profession. The review included 11 studies. The study did not include arts therapies, but did mention music programmes.
105	Murillo	A survey of board-certified music therapists: perceptions of the profession: the impact of stress and burnout, and the need for self-care	This Master's thesis explored the self care practices of music therapists through online surveys. As self-care was not an inclusion criteria, this study was excluded.
106	Natarajan, Randel, Cameron, Frager.	The effect of Music Therapy on neo-natal intensive care nurses	Although this intervention was called "music therapy", it involved a session where a music therapist played the acoustic guitar for 30 minutes in the ward where the nurses worked, and was available in the form of a poster with insuffiicient information.
107	O'Callaghan & Magill	Effect of music therapy on oncologic staff bystanders: a substantive grounded theory	The research investigated the effect, as reported by staff members in oncology wards in Australia and the USA of their interpretation of the effect of music therapy in their oncology wards. The conditions of BO, CFR, STS and VT in staff members were not addressed.
108	O'Kelley	Saying it in a song: music therapy as a carer support intervention	This study concerned support for informal home-care givers, no healthcare professionals and no conditions of BO, CF, STS or VT was investigated.
109	O'Mahony, Gerhart, Gross, Abrams & Levy	Posttraumatic stress symptoms in palliative care professionals seeking mindfulness training: prevalence and vulnerability	Investigated healthcare workers in palliative care settings vicariously exposed to trauma. None of the arts therapies were used as intervention.
110	Orellana-Rios, Radcruch, Kern, Regel, Anton, Sinclair, & Schmidt	Mindfulness and compassion-oriented practices at work reduce distress and enhance self-care of palliative care teams: a mixed-method evaluation of an "on the job" program	The study investigated compassion oriented practices in healthcare workers, however, no arts therapies were discussed.
111	Papagianaki & Shinebourne	The contribution of creative art therapies to promoting mental health: using interpretative phenomenological analysis to study therapists' under-standings of working with self-stigmatisation	The study concerned the work of six art therapists of clients with mental disorders and how art therapists can address self-stigmatisation of these clients.
112	Parola, Coelho, Cardoso, Sandgren, & Apóstolo	Burnout in palliative care settings compared with other settings	Involved none of the arts therapies
113	Payne	Occupational stressors and coping as determinants of burnout in female hospice nurses	Examined what contributed to burnout but no interventions were discussed.
114	Pearlman & Saakvitne	[Book] Treating therapists with vicarious traumatisation and secondary traumatic stress disorders	Book providing information on VT and STS.
115	Peteet & Balboni	Spirituality and religion in oncology	Examined how spiritual and religious beliefs influence the practice of healthcare professionals.

116	Perez, Palacio & Fajardo	Complementary and alternative medicine: a new professional arena for clinical nurse specialists and health educators.	Study investigated which interventions were available for complementary and alternative healthcare. Music therapy is mentioned but not discussed in detail.
117	Pinzon-Perez, Palacio, Fajardo.	Complementary and alternative medicine: a new professional arena for clinical nurse specialists and health educators	Alternative therapy interventions included healing touch, aroma therapy, shiatsu massage and others.
118	Reynolds, Nabors, Quinlan.	The effectiveness of art therapy: Does it work.	No work was done with health professionals diagnosed with BO, CF, STS or VT.
119	Potter, Deschields & Rodriguez	Developing a systemic program for compassion fatigue	Involved the training of staff to recognise and prevent CF. No arts therapies were utilised as intervention.
120	Prati & Pietrantoni	The relation of perceived and received social support to mental health among first responders: a meta-analytic review	The review investigated the perception of support received by first responders and the effect of this perception.
121	Rafieyan & Ries	Music therapy in consultation-liaison psychiatry	The use of music in medical settings was investigated, and how music therapy could be implemented in hospitals.
122	Raab	Mindfulness, self-compassion and empathy among health care professionals: a review of the literature	The relationship between mindfulness and self-compassion is explored in the study, and mindfulness interventions with an added livingkindness component was found to have potential to increase self-compassion. No arts therapies.
123	Ray, Wong, White, Heaslip.	Compassion satisfaction, compassion fatigue, work life conditions, and burnout among frontline mental health care professionals	While this study investigated the linking of compassion satisfaction to compassion fatigue in healthcare professionals, no interventions were discussed.
124	Renshaw	The use of rap music in music therapy treatment with adolescents and young adults	The master's thesis dealt with stress related conditions of young people and using rap in music therapy to deal with the conditions.
125	Renzenbrink	[Book] Caregiver stress and staff support in illness, dying and bereavement	Reference guide for caregiver stress and staff support.
126	Repar & Patton	Stress reduction for nurses through arts-in-medicine at the university of New Mexico hospitals	Study implements arts in medicine (AIM) and not arts as medicine as intervention. The difference is that the arts is not used as a clinical intervention by an arts therapist, but offers participants to experience new feelings through participation in the arts.
127	Riley	An art psychotherapy stress reduction group: for therapists dealing with a severely abused client population	The study met the criteria of art therapy and healthcare professionals, but only dealt with stress reduction and counter-transference, not BO, CF, STS or VT.
128	Ringenbach	A comparison between counsellors who practice meditation and those who do not on compassion fatigue, compassion satisfaction, burnout and self-compassion.	The study investigated the difference in coping with burnout and work-stress between counsellors practicing meditation and counsellors not practicing meditation
129	Romani, Ashkar	Burnout among physicians	Focused on the prevalence of burnout and found that cognitive behavioural interventions were seen to be the most beneficial. No discussion of the arts therapies.
130	Roothman	Burnout and work engagement among South African psychologists	Study included two of the criteria for inclusion, but lacked the arts therapies.
131	Rosenberg	Creative healing for secondary trauma: needs assessment for a curriculum on resilience for trauma workers	While this study deals with trauma workers suffering from secondary trauma, arts therapies are not discussed as an intervention for ST.

132	Sabo	Reflecting on the concept of compassion fatigue	Study aimed to make predictions regarding the onset of compassion fatigue and to determine what interventions could be implemented.
133	Sabin-Farrell & Turpin	Vicarious traumatisation: implications for the mental health of health workers	The study examined the prevalence of VT and found limited research confirming the existence thereof. No arts therapies interventions were discussed.
134	Sanchez, Valdez & Johnson	Hoop dancing to prevent and decrease burnout and compassion fatigue	Included a description of playing (dancing) and meditating inside the circle of the Hula Hoop. As no arts therapist was involved in the intervention, this study was not included in the review.
135	Sanso, Galiana, Cebolla, Oliver, Benito & Ekman	Cultivating emotional balance in professional caregivers: a pilot intervention	Aim of the study was to run a CEB programme for professional caregivers of patients with intellectual disability. No arts therapies were utilised for intervention purposes.
136	Sanso, Galiana, Oliver, Pascual, Sionclair and Benito	Palliative care professionals' inner life: exploring the relationships among awareness, self-care, and compassion satisfaction and fatigue, burnout and coping with death	The study investigated the prevalence of stress related conditions in healthcare staff, and proposed a training programme to help professionals cope with the condition. No arts therapies.
137	Schrader & Wendland	Music therapy programming at an aftercare center in Cambodia for survivors of child sexual exploitation and rape and their caregivers	Study describes the work of two music therapists providing care to rescued children and training for caregivers to help the children.
138	Shapsa, Forman, Regev, Bauer, Litmanovitz et al.	Live music is beneficial to preterm infants in the neonatal intensive care unit environment	While the study concerned the arts therapies and healthcare, the population was not health care workers.
139	Shimabukuro-Vornhagen, Boll, Kochanek, Azoulay & von Bergwelt-Baildon	Critical care of patients with cancer	The study concerned the critical care for patients in an oncology unit, and provided an overview of state-of-the-art individualised management of critically ill paients. No arts therapies were utilised.
140	Showalter	Compassion fatigue: What is it? Why does it matter? Recognising the symptoms, acknowledging the impact, developing the tools to prevent compassion fatigue and strengthen the professional already suffering from the effects	Compassion fatigue and healthcare professionals with symptoms thereof are investigated. None of the arts therapies are mentioned as intervention.
141	Silberg	The utilisation of movement and dance to support children in the aftermath of community disaster	The objective of the research was to study whether the use of movement and dance on children who have experienced community level disasters was useful. The therapists of these children were interviewed to find answers.
142	Simon, Roff & Klemmack	Secondary traumatic stress and oncology social work: protecting compassion from fatigue and compromising the worker's worldview	Could not access this article and decided not to pursue it as the description of the article did not include any of the arts therapies.
143	Sinclair, Kondejewski, Raffin-Bouchal, King-Shier, & Singh	Can self-compassion promote healthcare provider well-being and compassionate care to others? Results of a systemic review	This study was conducted as a systematic review. The pearl-growing technique was then applied to search the articles included in the review to further expand the search for appropriate articles. Of the 111 references to the study, not one was appropriate, as none contained any mention of the arts therapies.
144	Slayton, D'Archer, Kaplan,	Outcome studies on the efficacy of art therapy: a review of findings	A literature review with one included study on the population of doctors and nurses, this study (Italia et al.) is included in this review.

145	Slocum-Gori, Hemsworth, Chan, Carson & Kazanjian	Understanding compassion satisfaction, compassion fatigue and burnout: a survey of the hospice palliative care workforce.	Aim of the study was to understand the interrelation between compassion satisfaction, compassion fatigue and burnout in hospice and palliative workers, and recommended policy and institutional level programmes to support healthcare workers.
146	Smit	The influence of coping and stressors on burnout and compassion fatigue among health care professionals	The doctoral thesis investigated BO and other stress related conditions in healthcare workers. None of the arts therapies were included in the work.
147	Smith	The influence of coping and stressors on burnout and compassion fatigue among health care professionals	Concerned the negative impact of occupational stress conditions on the medical care industry
148	Snir & Regev	A dialog with five art materials: Creators share their art making experiences	While the study concerned the arts in psychotherapy, the investigation was about the effect of the use of different art materials on the users of these materials.
149	Stamm	The concise ProQoL manual	Explains what CF is. No interventions for CF is discussed.
150	Stebnicki	[Book] Empathy fatigue: Healing the mind, body and spirit of professional counselors	A book which provides a variety of self-care approaches to counselors and clinicans to identify their own emotional physical and mental exhaustion.
151	Surya, Jaff, Stilwell, Schubert	The importance of mental well-being for health professionals during complex emergencies: it is time we take it seriously	The study concerned BO, CF, STS and VT in healthcare professionals, and while art therapy was mentioned as possible intervention, it was not implemented.
152	Swezey	What keeps us well? Professional quality of life and career sustaining behaviours of music therapy professionals	Concerned burnout and stress and self-care of music therapists, and not the clients of the therapists.
153	Todaro-Franceschi	[Book] Compassion fatigue and burnout in nursing: Enhancing professional quality of life	Reference book on CF and BO in nursing.
154	Thompson	Compassion fatigue, secondary trauma stress, and burnout among licensed mental health professionals	Examined the prevalence of CF, STS and BO in mental health professionals, no interventions for the conditions were investigated.
155	Thompson	How Schwartz rounds can be used to combat compassion fatigue	The aim of the study was to examine the effect of discussions on the non-clinical aspects of care in a multi-professional meeting. No arts therapies interventions were utilised in the discussions.
156	Thyme, Wiberg, Lundman & Hallgren-Graneheim	Qualitative content analysis in art psychotherapy research: concepts, procedures and measures to reveal the latent meaning in pictures and attached to the pictures	The study investigated the use of art psychotherapy for the patients of healthcare workers, and not for healthcare workers.
157	Traskos	Death in the nursing home: impact on direct care staff	A systematic review investigated the effect of death on nursing staff in a nursing home, no arts therapies interventions were addressed in the review.
158	Tremolada, Schiavo, Tison, Sormano, Silvestro, Marson & Pierelli	Stress, burnout, and job satisfaction in 470 health professionals in Q8 apheresis units in Italy: A SIdEM collaborative study	Study focused on stress, burnout indicators and job satisfaction in healthcare professionals working in apheresis units. No interventions were studied.
159	Trif	A dance/movement therapist's experience of vicarious trauma and burn-out: an autoethnography	Unpublished Master's thesis documenting the student experience of VT and BO during her practical work with an abused child.

160	Troje	The development of an On-Site art therapy studio	Unpublished Master's thesis about establishing a permanent for healthcare workers in order to research the effect of art therapy and Adlerian therapy on conditions of stress. While stress conditions are dealt with and possible benefits highlighted, the effects of art therapy is not investigated.
161	Turkel & Ray	Creating a caring practice environment through self-renewal	Nurse leaders facilitate renewal, selfcare, and healing in the organisational culture to foster caring and trusting relationships with staff.
162	Uebel, Nash & Avalos	Caring for the caregivers: models of HIV/AIDS care and treatment	This study highlighted the training of caregivers to cope with the demands of HIV/AIDS clients.
163	Van den Bossche	Work stress interventions and their effectiveness: a literature review	None of the art therapies were investigated although music was mentioned
164	Visnola, Sprudza, Bake & Pike	Effects of art therapy on stress and anxiety of employees	The study investigated 60 health care workers to determine whether art therapy had an effect on stress and anxiety levels. No BO, CF, STS nor VT was addressed in the study.
165	Vulcan	Crossing the somatic-semiotic divide: The troubled question of dance/movement therapists professional identity	Explores to what extent troubles experienced by therapists reside in a somatic-semiotic divide and whether the sources of the problem are related to ambivalence of their own approaches and practices. No BO, CF, STS nor ST was addressed in the study.
166	Wagner	The use of music and mandala to explore the client/therapist relationship in a therapeutic day school	Explored the work of therapists and their relationships with children at a school where they were working
167	White	Mindfulness in nursing: an evluationary concept analysis	Mindfulness was explored using Rodgers evolutionary method of concept analytsis. Arts therapies were not involved.
168	Williams, Richardson, Moor, Gambrel & Keeling	Perspectives on self-care	The research explored the used of mindfulness meditation, autohypnosis, music and spirituality with four mental health professionals as methods of self-care. No therapy was discussed for these professionals.
169	Wilson, Ganley, Mackereth & Rowswell	Subsidised complementary therapies for staff and volunteers at a regional cancer centre: a formative study	This formative study investigated workplace stress including burnout in UK health services, and providing alternative therapies for healthcare workers to deal with the conditions. While aroma therapy and massage therapy was recommended, none of the arts therapies were discussed.
170	Wineberg	Music therapy in mass trauma, the effect on the therapist.	The study is a literature review on the experience of music therapists dealing with traumatised clients.
171	Yoder	Compassion fatigue in nurses	Personal coping strategies were examined, and not professional intervention.

Appendix B

The Great Round

* The Great Round, Kellogg (1984).

A system for identifying archetypal themes was suggested by Kellogg's (1984) theory. This was called the Archetypal Stages of the Great Round of Mandalas, commonly referred to as The Great Round. Through clinical observation combined with Jungian ideas, world mythologies and symbols, thirteen archetypal states of consciousness were identified by Kellogg. Each stage is composed of complex interweaving patterns, subject matter and narrative. Stages are value neutral, but can be experienced positively or negatively. The arc of the stages parallels typical developmental theories, but removes the limited framework that ties the theory to particular stages. For instance, Erikson's stage of trust vs mistrust (Berk, 2013) is associated with infancy, while according to Kellogg this conflict could also occur at each new beginning encountered in life regardless of age. This study used mandalas to explore the existence and effects of CF and BO with hospice workers according to the Great Round.