THE UNIVERSITY OF HULL

The relationship between compassion, burnout and well-being in teachers and other professionals.

being a thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Clinical Psychology in the University of Hull.

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Overview

This portfolio thesis is comprised of three parts, a systematic literature review, an empirical report and supporting appendices.

Part one is a systematic literature review which quantifies the relationship between self-compassion and burnout in a range of professionals. The review additionally aimed to analyse the moderating effect of age and gender on this relationship. A systematic search identified seventeen papers for inclusion and a meta-analysis determined an overall effect size for the relationship between self-compassion and burnout. Three random effect meta-regressions were also carried out to test moderating effects. A review of methodological quality is also provided. Findings are discussed within the context of implications for the field of research and for clinical practice, with consideration of areas for further research.

Part two is an empirical report, which uses quantitative methodology to explore the role of self-compassion, compassion to others and compassion from others in predicting levels of well-being and burnout in teachers. The research also aimed to determine if the fear of receiving compassion from others had a moderating effect on the relationship between compassion from others, burnout and well-being. The findings of the study are also outlined and discussed in relation to relevant theory, implications in the context of future research and interventions aimed at reducing burnout and increasing well-being in teachers and in educational settings.

Part three consists of appendices relating to the systematic literature review and the empirical report. It additionally includes epistemological and reflective statements.

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Part One

Systematic Literature Review

The Relationship between Self-Compassion and Burnout: A Systematic and Meta-Analytic Review.

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Abstract

Background: Burnout is understood to be a result of high workload and prolonged stress and describes feelings of fatigue, exhaustion, incompetence and reduced accomplishment at work. Self-compassion has been identified as a factor related to burnout. The present systematic review aims to examine and quantify the relationship between self-compassion and burnout across a range of professions and to analyse the moderating effect of age and gender on this relationship.

Methods: Correlation coefficients for the relationship between self-compassion and burnout were combined from seventeen samples, with an overall sample size of N = 3594. A meta-analysis was conducted and an overall effect size based on a random-effects model was estimated. To test the moderating effect of age and gender, random-effect meta-regressions were performed. A quality assessment of the included studies was also included.

Results: An overall medium effect size of r= -0.44, 95% CI [-0.51,-0.35] was found for the relationship between self-compassion and burnout. Gender and age did not have a significant moderating effect on the relationship.

Conclusions: Results demonstrate those reporting higher levels of burnout, also report lower levels of self-compassion. The findings were consistent across studies. Findings were considered in relation to implications and it is highlighted that future research should examine this relationship further in non-healthcare professionals.

Key words: Self-Compassion, Compassion, Burnout, Meta-Analysis

1. Introduction

1.1 Background

With increasing pressures, demands and challenges encountered in the workplace, work-related stress is becoming a growing concern across many professions. Within the United Kingdom, according to the Health and Safety Executive report (2018), between 2017 and 2018, stress, anxiety and depression accounted for 44% of time taken off work. As such, tackling work-related stress has been identified as a priority for Public Health England (Public Health England, 2016). Prolonged exposure to high levels of job stress is thought to contribute to the development of 'burnout' (Brill, 1984; Schaufeli & Maslach, 2017), a phenomenon that has been extensively researched since its conceptualisation in the 1970's.

Burnout has been described as consisting of feelings of being depleted of emotional and physical resources, developing negative, cynical attitudes about work and negatively evaluating job performance (Maslach, Jackson & Leiter, 1986). Staff burnout has been found to result in widespread negative consequences, such as absenteeism, intention to leave the role and lack of productivity at work (Burke & Greenglass, 2001). More specifically, in healthcare settings, staff burnout has been associated with poor patient safety and increased medical errors, whilst high levels of burnout amongst staff teams has been found to predict patient satisfaction with aspects of their care (Garman, Corrigan & Morris, 2002; Hall, Johnson, Watt, Tsipa & O'Connor, 2016; Leiter & Harvie, 1996). A recent review summarised the physical, psychological and occupational consequences of burnout across several occupations, including dentists, teachers, nurses, financial service employees and human service workers (Salvagioni et al, 2017). The review concluded that burnout significantly predicts physical health

difficulties, such as type 2 diabetes, coronary heart disease, headaches and gastrointestinal problems. It also highlighted that higher levels of burnout were associated with an increase in psychotropic and antidepressant medications and a decrease in well-being. Given these extensive negative consequences, research has developed exploring possible ways to address burnout and its related difficulties. In recent years, literature has focused on the relationship between self-compassion and burnout.

1.2 Self-Compassion and Burnout

Self-compassion has been defined by Neff (2003a) as comprising of three components: self-kindness, common humanity and mindfulness. Self-kindness refers to the tendency to be understanding of your own flaws and mistakes, rather than being critical or judgmental (Neff & Germer, 2013). Neff and Germer (2013) also identify that during stressful life circumstances, a self-compassionate response would be that which is soothing and comforting, rather than an overly critical, harsh response. Common humanity in self-compassion involves recognising that experiences such as making mistakes and failures are experienced by all humans. Finally, self-compassionate mindfulness refers to a balanced awareness of painful thoughts and experiences, to prevent being “carried away” in the form of ruminations (Neff & Germer, 2013).

The relationship between self-compassion and burnout can be understood in reference to Gilbert’s heuristic model of affect regulation (Gilbert, 2009). The model posits three systems that, when balanced can work to regulate emotions. The three systems include the ‘Threat and Protection System’, which notices and reacts quickly to threat, giving rise to a burst of feelings such as anxiety, disgust, fear and anger. The second major

system, the ‘Drive and Excitement System’ drives us to find resources needed to survive and is linked to striving, doing and wanting, producing feelings of excitement and pleasure. Finally, the ‘Soothing and Contentment System’ is thought to bring about an inner contentment and increase feelings of well-being. This is theorised to be mediated by the release of opiates, giving rise to feelings associated with safety and connectedness to others. The high number of stressors, lack of support and feelings of exhaustion and hopelessness associated with burnout may result in the ‘Threat and Protection System’ being much more prominent than other two systems. This understanding has been explained in relation to burnout in student nurses. Beaumont and Martin (2016) propose that factors such as competing demands, client work and organisational stresses can result in the activation of the threat system. This in turn is proposed to lead to an increase in cognitive, emotional and behavioural symptoms such as self-criticism, blame, exhaustion, feeling overworked, reduced empathy, social withdrawal and emotional numbing. This is believed to contribute to increased levels of stress, compassion fatigue and burnout. Gilbert (2009) suggests that increasing self-compassion in the form of generating compassionate thoughts, images and attention for oneself, stimulates the ‘Soothing and Contentment System’ which in turn regulates the ‘Threat and Protection System’, therefore reducing stress and increasing feelings of well-being. This understanding could also be applied to reducing high levels of burnout.

1.3 Previous Reviews

It is important to note that whilst well-being and burnout are understood to be related concepts, the two are independent constructs (Milfont, Denny, Ameratunga, Robinson & Merry, 2008). However, burnout has also been described as a context-specific type of well-being related to work, known as “job-related affective well-being” (Warr, 1990).

Previous systematic reviews have examined the relationship between self-compassion and well-being. MacBeth and Gumley (2012) carried out a meta-analytic review and observed a large effect size for the relationship between self-compassion and psychological distress. They found increased self-compassion correlated significantly with lower levels of depression in participant samples consisting of students, therapists and adults in the community. In a more recent review, similar results were observed by Marsh, Chan and MacBeth (2018), who examined this relationship in adolescents. Furthermore, in a large meta-analytic review, Zessin, Dickhauser and Garbade (2015) considered the link between self-compassion and various conceptualisations of well-being. In addition to results demonstrating statistically significant correlations between self-compassion and each aspect of well-being, some relationships were also found to be moderated by gender and age. For example, stronger relationships were found between self-compassion and psychological well-being in studies with higher proportions of females and with an older mean age. However, for other types of well-being, the same relationship was not identified, a finding also replicated by MacBeth and Gumley (2012).

These reviews contribute to the current understanding of the relationship between self-compassion and aspects of well-being. Given the overlapping nature of the two concepts, the findings from the aforementioned reviews may highlight the possible relationship between self-compassion and burnout. However, at the time of the present review, there are no systematic reviews considering the relationship between self-compassion and burnout in employees or staff groups.

1.4 The Present Review

In light of the importance placed on tackling work-related stress by Public Health England (2016), recent government guidance highlighting the need for "work place well-being schemes" (Public Health England, 2019) and the priority set out in the National Health Service (NHS) Long Term Plan to improve the health and well-being of NHS staff (National Health Service England, 2019), research understanding the relationship between self-compassion, burnout and staff well-being is of particular importance, especially to determine options for interventions or workforce strategy. Therefore, to establish a firm empirical evidence base and to further ground proposals calling for compassion focussed interventions to be used in the workplace (Beaumont & Martin, 2016; Henshall, Alexander, Molyneux, Gardiner & McLellan, 2018; Welford & Langmead, 2015), the present review aimed is to evaluate evidence and quantify the relationship between self-compassion and burnout.

Previous research has identified age and gender as potential moderators of well-being, although results reporting the moderating effect of age and gender has on the relationship between self-compassion and well-being has varied (MacBeth & Gumley, 2012; Zessin et al, 2015). More specifically, previous research has highlighted higher levels of burnout amongst the youngest and oldest employees (Ahola, Honkonen, Virtanen, Aromaa & Lönnqvist, 2008), with higher levels of burnout amongst the older working population thought to be attributed to the accumulation of the negative impact of prolonged work stress (Ahola et al, 2008; Brewer & Shapard, 2004). Innstrang, Langballe, Falkum and Aasland (2011) also identified that females report slightly higher levels of burnout compared with males. However, a meta-analysis reviewing gender differences in burnout recognised the inconsistencies in findings in this area

(Purvanova & Muros, 2010). Considering the research noted, this review also considered the role age and gender may have in moderating the relationship between self-compassion and burnout.

The main questions underpinning the review were:

1) Is there a relationship between self-compassion and burnout?
2) Does age moderate any relationship between self-compassion and burnout?
3) Does gender moderate any relationship between self-compassion and burnout?

2. Method

2.1 Concept Definitions

2.1.1 Burnout

A well-established theory of burnout highlights the multi-dimensionality of the concept and identifies three dimensions in which an employee might feel burnt-out (Maslach & Jackson, 1982). These dimensions consist of emotional exhaustion, depersonalisation and a lack of personal accomplishment. Emotional exhaustion represents the individual stress aspect of burnout (Maslach, Schaufeli & Leiter, 2001). It specifically refers to feelings of being overstretched, fatigued and depleted of emotional and physical resources, which is believed to be a result of high workload and high levels of work-related stress, (Maslach et al, 2001). The two remaining dimensions of burnout describe the relationship an individual has with their work. Depersonalisation is thought to occur as individuals try to create distance between themselves and their work, by developing feelings of negativity, cynicism and detachment to aspects of their job. The third aspect of burnout, reduced personal accomplishment, is understood as reflecting the self-evaluation dimension of burnout, in the form of feelings of incompetence, low self-

efficacy and reduced achievement at work (Maslach et al, 2001). Emotional exhaustion has emerged to be a core aspect of burnout with many definitions relating to this understanding (Baba, Jamal & Tourigny, 1998; Cordes & Dougherty, 1993; Maslach et al, 2001; Pines & Aronson, 1988). As this understanding remains a predominant definition in current research, the premise of this definition was used in the current review and measures relating to this conceptualisation of burnout were included.

2.1.2 Self-Compassion

Although conceptualisations of self-compassion vary, a widely used definition and the definition used for the purpose of the current review is that by Neff (2003a). Neff (2003a, p. 87) defines self-compassion as being *"touched by and open to one's own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one's suffering and to heal oneself with kindness. Self-compassion also involves offering non-judgmental understanding to one's pain, inadequacies and failures, so that one's experience is seen as part of the larger human experience".* The definition also includes the three components of self-compassion: self-compassion, common humanity and mindfulness (Neff, 2003a). Measures consistent with this definition were included.

2.2 Search Strategy

The search process was conducted following recommendations from the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines (Moher, Liberati, Tetzlaff & Altman, 2009). Between January and March 2019, the following databases were searched for relevant literature: Academic Search Premier, CINAHL Complete, ERIC, Education Research Complete, MEDLINE, PsycARTICLES, PsycINFO and Scopus. These were selected to include both broad and

specific databases, covering literature from a variety of professional domains. Additionally, lists of publications were manually searched on one relevant website: ‘self-compassion.org’. The included articles were also searched by hand for further appropriate references. In the preliminary stage, a scoping search was conducted to allow the researcher to become accustomed with literature and to determine key search terms for the final literature search.

The following search terms were finalised and applied to databases:

(burnout OR burn-out OR “burn out” OR “occupation* stress” OR “occupation* health” OR stress OR “professional quality of life” OR PROQOL OR “job burnout”)
AND
(self-compassion OR “self compassion” OR “compassion for self” OR “compassion to* self”).

2.3 Eligibility Criteria

Articles were eligible for inclusion if the sample consisted of participants in employment, including students or trainees who as part of their course spent time in the workplace, for example to complete a placement. To ensure consistency of concept definitions and to enable valid comparisons across studies to be drawn, included studies needed to utilise a standardised measure of self-compassion and a standardised measure of burnout, consistent with the definitions outlined in section 2.1. To allow for the determination of the relationship between self-compassion and burnout, included studies needed to conduct sufficient data analysis for the purpose of the current review; a correlation between self-compassion and burnout must have been reported.

To increase the likelihood of studies being of high quality, unpublished papers, dissertations or theses, case studies, discussion papers or literature reviews were excluded. Intervention studies were also excluded, to reduce the possibility of relationships between variables being manipulated.

2.4 Selection Strategy

The selection strategy consisted of four main stages. Firstly, all titles were reviewed for relevance to the review questions. Duplicate articles were removed and dissertations, theses, case studies, discussion papers, literature reviews and unpublished papers were excluded. The abstracts of the articles were then read and considered for relevance as per the inclusion criteria and further duplicates were removed. Full texts were then reviewed and papers that did not meet the inclusion criteria or that met the exclusion criteria were excluded. Finally, the reference lists of included studies were hand-searched for further appropriate papers, which were then screened using the same strategy. Seventeen papers were identified for the purpose of this review. The number of papers retrieved and excluded during each stage of screening is demonstrated in the PRISMA flow diagram in Figure 1.

2.5 Data Extraction and Quality Assessment

Information relating to the study aims, sample characteristics, methodology, measures and key findings, specifically correlations relevant for the analysis, were extracted using a data extraction form, developed for the purpose of this review (Appendix D). In accordance with PRISMA guidelines (Moher et al, 2009), included studies were assessed to identify sources of potential bias using the National Institute of Health and Clinical Excellence (2012) checklist for quantitative studies reporting correlations and associations (Appendix E). The checklist was used to appraise the included studies

internal and external validity by assessing significant aspects of study design (Appendix F). Aspects of the checklist applicable for studies with experimental manipulation or comparison groups, were not included in the quality assessment, as included studies had not utilised these methods. Quality ratings were checked for consistency by an independent rater, who reviewed five studies. Where differences in quality scores were noted, this was deliberated and agreements were reached.

2.6 Data Analysis

To analyse the relationships between self-compassion and burnout, relevant correlations were extracted from included studies. For studies that reported several relevant correlations, means of the correlations were calculated. Generally, studies utilised a measure of burnout, where higher scores demonstrated higher levels of burnout. However, for measures or subscales that incorporated a measure whereby lower scores represent higher levels of burnout, such as the 'Personal Accomplishment' subscale in Maslach's Burnout Inventory, the sign of the correlations were reversed. The data were then used to carry out a meta-analysis, computed using the "R" and "meta" statistical packages (R Core Team, 2018; Schwarzer, 2007). To determine the effects of age and gender on effect size, mean age and % female were also extracted from studies. For studies that did not report participants' mean age, the mean age was estimated where sufficient age demographics were reported. To test the moderating effect of age, gender and age and gender combined on the relationship between self-compassion and burnout, three random-effect meta-regressions were performed, using the "metafor" package for use in "R" (Viechtbauer, 2010). The number of participants, correlation coefficients and 95% confidence intervals were reported. An overall effect size was reported based on a random-effects model, as this does not assume the true effect is the same in all study populations.

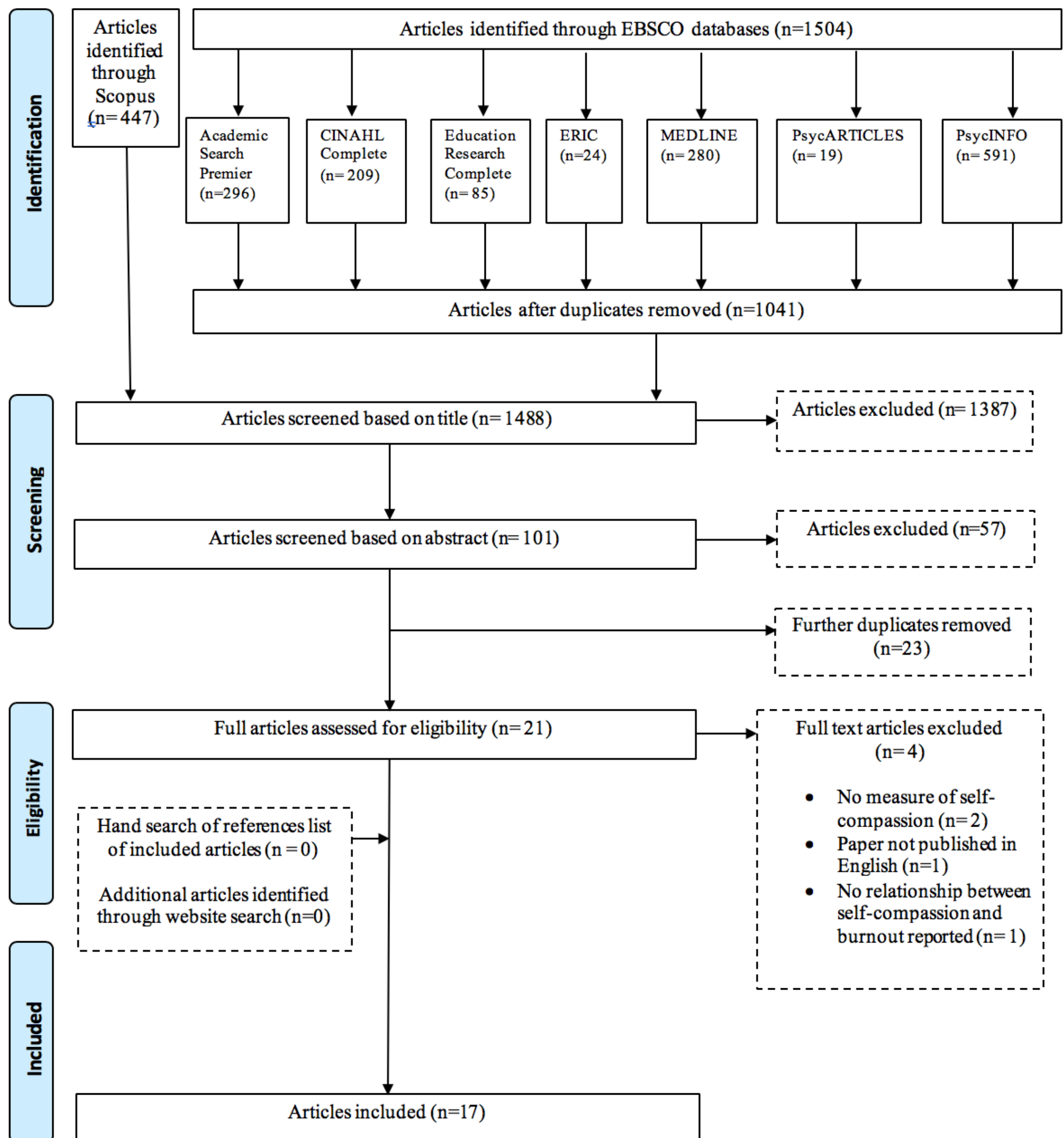

Figure 1: PRISMA diagram showing article selection process

3. Results

3.1 Participant Characteristics

Table 1 illustrates the characteristics of the 17 studies reviewing the relationship between self-compassion and burnout, which in total, included 3594 participants. On average 211.41 participants (SD= 203.4) were sampled in each study. However, sample sizes varied, with 534 (Hotchkiss & Lesher, 2018b) participants in the largest sample

and 37 (Beaumont, Martin, Durkin and Carson, 2016b) participants comprising the smallest. The average age of participants was 45.12 (SD = 13.99) and more women were sampled, with an average of 69.23% of participants being women.

Most of the studies sampled employees working in a healthcare setting (*k*=14), although studies also included clergy/chaplains (*k*=2) and social workers (*k*=1). Of the employees working in healthcare, fives studies included healthcare students, who were on placements in a workplace environment as a requirement for their course, which represented 29.41% of the overall sample. Data were collected from a range of countries, with some studies collecting data from multiple countries. The sample consisted of participants from the USA (*k*=8), UK (*k*=2), Portugal (*k*=2), Spain (*k*=2), Hong Kong, China (*k*=2), Australia (*k*=1), Canada (*k*=1), Netherlands (*k*=1) and New Zealand (*k*=1).

3.2 Aims and Methodology

All studies utilised a cross-sectional method and disseminated online surveys or surveys were completed by hand. However, the aims of the studies varied. Seven studies (41.18%) aimed to examine the relationship between self-compassion and burnout (Atkinson, Rodman, Thuras, Shiroma & Lim, 2017; Beaumont, Durkin, Martin & Carson, 2016a; Beaumont, Durkin, Martin & Carson, 2016b; Duarte & Pinto-Gouveia, 2016; Duarte & Pinto-Gouveia, 2017; Durkin et al 2016; Olson, Kemper & Mahan, 2015). These studies also aimed to investigate the relationship between self-compassion and additional factors, including depression, well-being, compassion fatigue, compassion for others and mindfulness.

A further 41.18% of studies (*k*=7), aimed to establish predictive models of burnout and included self-compassion as a variable in the analyses, (Barnard & Curry, 2011; Gracia-Gracia & Oliván-Blázquez, 2017; Hotchkiss & Lesher, 2018a; Hotchkiss & Lesher, 2018b; Montero-Marin et al, 2016; Richardson, Trusty & George, 2018; Kwong et al, 2018). Two studies (11.76%) aimed to examine the mediating role of self-compassion in the relationship between burnout and other factors (Richardson et al, 2016; Yip, Mak, Chio & Law, 2017) and one study (5.88%) aimed to establish barriers to compassion in nurses (Dev, Fernando, Lim, & Consedine, 2018).

3.3 Measures

The included studies used three measures of self-compassion and six measures of burnout. The measures are further detailed in Appendix G.

3.3.1 Measures of Self-Compassion

Neff's Self-Compassion Scale (SCS; Neff, 2003b) is a widely used measure of self-compassion and was utilised in the majority of included studies, with 76.47% (*k*=13) utilising the full scale and 11.76% (*k*=2) administering the short form (SCS-SF; Raes, Pommier, Neff & Van Gucht, 2011). In the SCS full scale, the questionnaire consists of 26 items and comprises 6 subscales: self-kindness, self-judgment, common humanity, isolation, mindfulness and over-identification. The SCS-SF consists of 12- items and comprises corresponding subscales. For both the SCS and SCS-SF, high scores demonstrated higher levels of self-compassion.

A small number of studies (11.76%, *k*=2) included the Mindful Self-Care Scale (MSCS; Cook-Cottone & Guyker, 2018). This scale consists of 33 items which divide into 6

subscales. The self-compassion and purpose subscale consists of 6-items relating to experiences of self-compassion, with higher scores representing higher levels of self-compassion.

3.3.2 Measures of Burnout

There were six measures of burnout used in the included studies. The burnout subscale of the Professional Quality of Life scale (Stamm, 2010) was used in 58.82% of the included studies (*k*=10). Remaining studies included the Copenhagen Burnout Inventory (*k*=3), Maslach Burnout Inventory- Human Services Survey (*k*=2), Maslach Burnout Inventory- General Survey validated Spanish version (*k*=1), the Francis Burnout Inventory (*k*=1) and the Burnout Clinical Subtypes Questionnaire-36 (*k*=1) (Kristensen, Borritz, Villadsen & Christensen, 2005; Maslach, Jackson & Leiter, 1996; Seisdedos, 1997; Bresó, Salanova & Schaufeli, 2007; Francis, Wulff & Robbins, 2008; Montero-Marin & Garcia-Campayo, 2010, respectively).

3.4 Quality Assessment

The majority of studies were assessed to have high external validity (82.35%, *k*=14), where most of the criteria were fulfilled. Overall, demographics, including age, gender, country and setting were well described. However, many studies did not detail inclusion or exclusion criteria and one study did not report participant demographics or recruitment method (Beaumont et al, 2016b). With regard to internal validity, 76.47% (k=13) were of high quality, where all or most of the criteria were fulfilled. The remaining studies were of good quality (23.53%, k=4), where some of the criteria were

fulfilled or not adequately described. Many studies were founded upon sound theoretical knowledge and are applicable to the United Kingdom. However, only one study reported sample size calculations (Montero-Marin, 2016).

Table 1

Characteristics of studies included in the meta-analysis

First author (year)	Aim(s) of study	Sample size and location	Employment	Mean Age (% female)	Measure of self-compassion	Measure of burnout	Key findings	Quality analysis	
								EV	IV
Atkinson et al. (2017)	To examine relationships between self-compassion, burnout and depression.	N=128 USA	Veterans Affairs Mental Health Staff	48.4 (75%)	SCS (Neff, 2003)	CBI (Kristen et al, 2005)	Self-compassion was negatively correlated with total burnout (r= -.41, p<.001).	++	++
Barnard et al. (2011)	To investigate the predictive power of personality dimensions on clergy burnout.	N= 69 USA	Clergy	50.6 (36%)	SCS (Neff, 2003)	FBI (Francis et al, 2008)	Self-compassion negatively significantly correlation to Emotional Exhaustion (r= -.60, p<.001).	++	+
Beaumont et al. (2016a)	To look at the effects of self-compassion, self-kindness and self-judgements	N=103 England	Student midwives	NR (100%)	SCS (Neff, 2003)	ProQOL (Stamm, 2010)	Self-compassion scores were significantly negatively correlated with burnout (r= -.312, p<.001).	+	++

	upon burnout, well-being and compassion for others.								
Beaumont et al. (2016b)	To explore relationships between self-compassion, compassion fatigue, well-being and burnout.	N=54 Location: NR	Student Cognitive Behavioural therapists and Person-Centred Counsellors in their final year study.	NR	SCS (Neff, 2003)	ProQOL (Stamm, 2010)	Self-compassion and burnout were significantly negatively correlated (r = -.486 p<.01).	NR	+
Dev et al. (2018)	To examine associations between burnout and barriers to compassion among nurses. To evaluate if personality factors in nurses, buffer or attenuate	N=799 New Zealand	Nurses	45.47 (93.9%)	SCS-SF (Raes et al, 2011)	CBI (Kristen et al, 2005)	Burnout scores were significantly negatively correlated to levels of self-compassion (r= -.35, p<.01)	++	++

	the relationship between burnout and barriers to compassion.								
Duarte et al. (2016)	To explore the relationships between self-compassion, empathy and quality of life.	N=280 Portugal	Nurses	37.66 (81.1%)	SCS (Neff, 2003)	ProQOL (Stamm, 2010)	Self-compassion was significantly negatively correlated with burnout (r= -.44, p<.01).	++	++
Duarte et al. (2017)	To explore relationships between empathy, self-compassion, psychological inflexibility, compassion fatigue, burnout and compassion satisfaction.	N=221 Portugal	Oncology nurses	39.06 (91.2%)	SCS (Neff, 2003)	ProQOL (Stamm, 2010)	Burnout significantly negatively correlated with self-compassion (r= -.51, p<.01).	++	++
Durkin et al. (2016)	To measure associations	N=37	Community nurses	NR (91.89%)	SCS (Neff, 2003)	ProQOL (Stamm,	Self-compassion and burnout were	+	+

	between self-compassion, compassion fatigue, well-being and burnout.	England				2010)	significantly negatively correlated (r = -.369, p<.05).		
Gracia-Gracia et al. (2017)	To establish a predictive model for the occurrence of burnout in nursing staff in Intensive Care Units.	N= 68 Spain	Intensive Care Unit nurses	38.49 (79.6%)	SCS (Neff, 2003)	MBI- HS (Maslach et al, 1996; Seisdedos, 1997)	Emotional exhaustion significantly negatively correlated with subscales of SCS: self-kindness/self-judgment (r= -.341, p= .004), humanity/isolation (r= -.410, p<.001) and mindfulness/over-identification (r= -.292, p= .016). Depersonalisation significantly negatively correlated with self-kindness/self-judgment (r= -.325, p= .007) and humanity/isolation	++	++

							(r= -.295, p= .015). However, Depersonalisation was not significantly correlated with mindfulness/over-identification (r= -.143, p= ns). Personal Accomplishment was significantly positively correlated with self-kindness/self-judgment (r= .245, p= .044) and humanity/isolation (r=.309, p= .010). However, Personal Accomplishment was not significantly correlated with mindfulness/over-identification (r=.194, p= ns).		
Hotchkiss et al. (2018a)	To establish a model for	N= 324	Hospice Care Providers,	50.2 (91.2%)	MSCS (Cook-Cottone &	ProQOL (Stamm,	Burnout and self-compassion were	++	++

	predicting the risk of burnout.	United States	including nurses, chaplains, social workers, home health aides, administrative, management and therapists.		Guyker, 2018)	2010)	significantly negatively correlated (r=-.673, p<.01).		
Hotchkiss et al. (2018b)	To examine the relationship between self-care and professional quality of life.	N= 534 United States, Australia, Canada, China (Hong Kong) and the Netherlands.	Chaplains	56.6 (56.7%)	MSCS (Cook-Cottone & Guyker, 2018)	ProQOL (Stamm, 2010)	Burnout and self-compassion were significantly negatively correlated (r= -.56, p<.001).	++	++
Kwong et al. (2018)	To determine predictors of work-related stress. To understand if	N=208 United States	Social workers	37 (92%)	SCS (Neff, 2003)	ProQOL (Stamm, 2010)	Self-compassion was significantly negatively correlated with burnout (r= -0.51, p<.01).	++	++

	personal attributes, beliefs, idealism and work-related stressors result in job-related health problems.								
Montero-Marin et al. (2016)	To assess the explanatory power of self-compassion as a possible protective factor in burnout. To confirm validity and reliability of BCSQ burnout model in healthcare staff.	N=440 Spain	Healthcare professionals including physicians, nurses and residents.	28.3 (73%)	SCS (Neff, 2003)	BCSQ-36 (Montero-Marin & Garcia-Campayo, 2010) MBI-GS – Spanish version (Maslach, et al, 1996; Bresó et al, 2007)	Burnout correlated both positively and negatively with subtypes of self-compassion. The mean of 18 correlations demonstrated a small negative correlation (r= -0.134).	++	++
Olson et al. (2015)	To understand	N=45	First year paediatric and	28.4 (64%)	SCS (Neff, 2003)	MBI- HS (Maslach	Self-compassion significantly	++	+

	factors related to burnout.	United States	medicine-paediatric residents.			et al, 1996)	negatively correlated with Emotional Exhaustion (r= -0.35, p<.05), but was not significantly correlated with Depersonalisation (r= -0.27, p= ns) or Personal Achievement (r= 0.24, p= ns).		
Richardson et al. (2016)	To examine how empathy and self-compassion influences the relationships between burnout, secondary traumatic stress and compassion satisfaction.	N=88 United States	Medical students and residents	28.48 (48.9%)	SCS-SF (Raes et al, 2011)	ProQOL (Stamm, 2010)	There was a significant negative relationship between self-compassion and burnout (r= -0.405, p <.001).	++	++
Richardson et al. (2018)	To examine associations between self-	N=119 United	Doctoral trainees in Psychology	27.11 (86%)	SCS (Neff, 2003)	CBI (Kristen et al, 2005)	Self–compassion was significantly negatively	++	++

	critical perfectionism and burnout. To investigate the mediating role of self-compassion.	States					correlated with burnout (r= -.53, p <.01).		
Yip et al. (2017)	To test the mediating role of self-compassion in mindfulness effects in therapists.	N=77 Hong Kong, China	Clinical Psychologists and Trainee Clinical Psychologists	35.5 (88%)	SCS (Neff, 2003)	ProQOL (Stamm, 2010)	Results demonstrated self-warmth (SCS) was significantly negatively correlated with burnout (r = -0.24, p<.05) and self-coldness was significantly correlated with burnout (r = 0.36, p<.01).	++	++

Key
NR= Not reported, EV= External Validity, IV= Internal Validity, CS= Cross-sectional, ns= non-significant
Measures: SCS = Self-compassion scale, SCS-SF= Self-compassion scale- short form, MSCS= Mindful Self-Care Scale, CBI= Copenhagen Burnout Inventory, FBI= Francis Burnout Inventory, ProQOL= Professional Quality of Life, MBI-HS= Maslach Burnout Inventory, Human Services, MBI-GS= Maslach Burnout Inventory- General Survey; BCSQ-36= Burnout Clinical Subtypes Questionaire-36
Quality Ratings: ++ All or most of the checklist criteria have been fulfilled, where they have not been fulfilled the conclusions are unlikely to alter, + = Some of the checklist criteria have been fulfilled, or not adequately described, the conclusions are unlikely to alter, -= Few or no checklist criteria have been fulfilled and the conclusions are likely or very likely to alter.

3.5 Meta-Analytic Results

The combined random effects model estimate for the relationship between self-compassion and burnout was r = -0.44 (95% CI [-0.51,-0.35], Z=9.08, p <.001). This corresponds to a medium effect size (Cohen, 1992) and suggests that as self-compassion increases, burnout decreases.

Figure 2 presents a forest plot demonstrating effect sizes and confidence intervals of independent samples and the effect size distribution of the random effects model. A substantial part of the variation in effect sizes is due to study heterogeneity rather than chance (I^2 statistic =88%). The forest plot also highlights large confidence intervals for five of the studies (Beaumont et al, 2016b; Durkin et al, 2016; Gracia-Gracia et al, 2017; Olson et al, 2015; Yip et al, 2017) indicating their results were less precise, which could possibly reduce the overall effect size.

The forest plot demonstrates correlations that were outliers in the meta-analysis which could potentially be explained by measurement validity issues. One study reported a smaller effect size in comparison with other studies using a relatively large sample size, which should be considered (Montero-Marin et al, 2016). This may be explained by the origin of the correlation used in the meta-analysis; the correlation was calculated by computing the average of 18 correlations, taken from two measures of burnout, one of which is less well-validated. Another study found a stronger correlation than the overall correlation from the random effects model, which also had a large sample size (Hotchkiss & Lesher, 2018a). This study used the 'self-compassion and purpose' subscale of the MSCS, which was also used in another study reporting correlations stronger than the overall correlation from the random effects model (Hotchkiss & Lesher, 2018b). Despite reports of good internal consistency reliability for the subscale

(Cook-Cottone & Guyker, 2018), the MSCS is only utilised in these two studies, which is a different measure of self-compassion when compared to the majority of studies included in the meta-analysis.

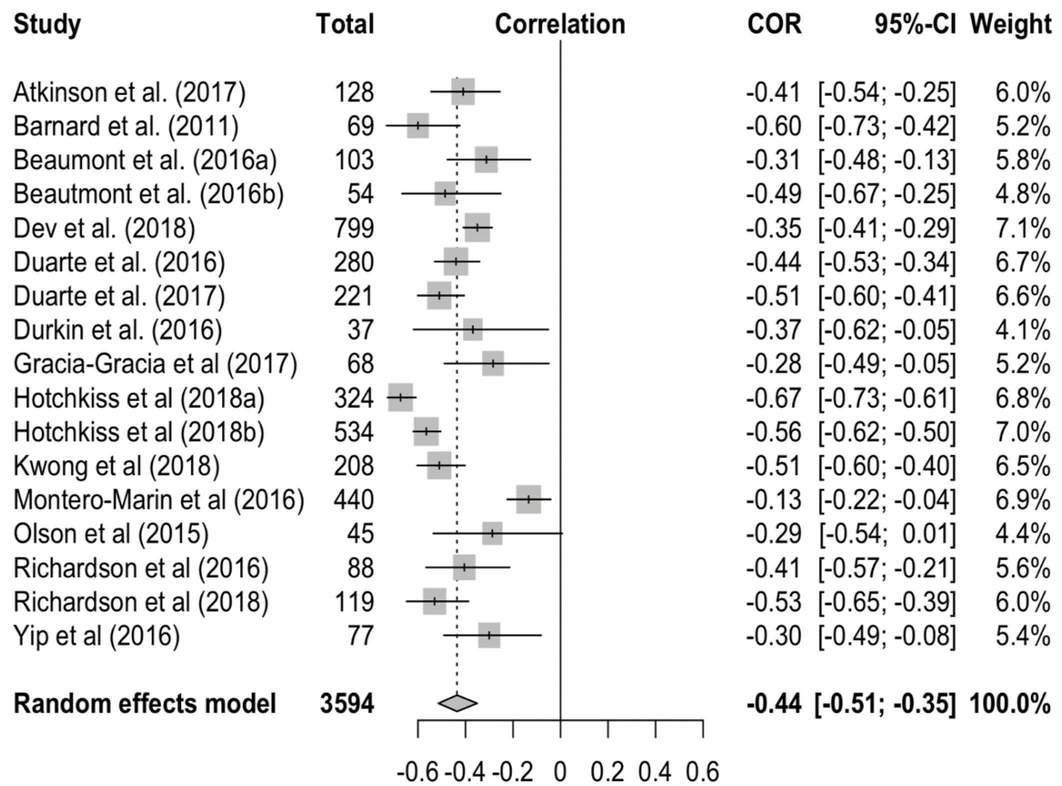

Figure 2. Forest Plot

3.6 Moderation Analyses

There were 14 studies included in the meta-regression testing the effect of age and gender on the relationship between self-compassion and burnout. There was no significant effect of age or gender on the relationship between self-compassion and burnout (χ^2=1.16(1), p=.282; χ^2=.79(1), p= .375, respectively). The analyses also demonstrated that combined effects of age and gender did not moderate the relationship between self-compassion and burnout (χ^2=1.17(2), p= .557).

3.7 Publication Bias

The effect of publication bias was assessed by using a funnel plot (Figure 3). The analysis showed no evidence of publication bias.

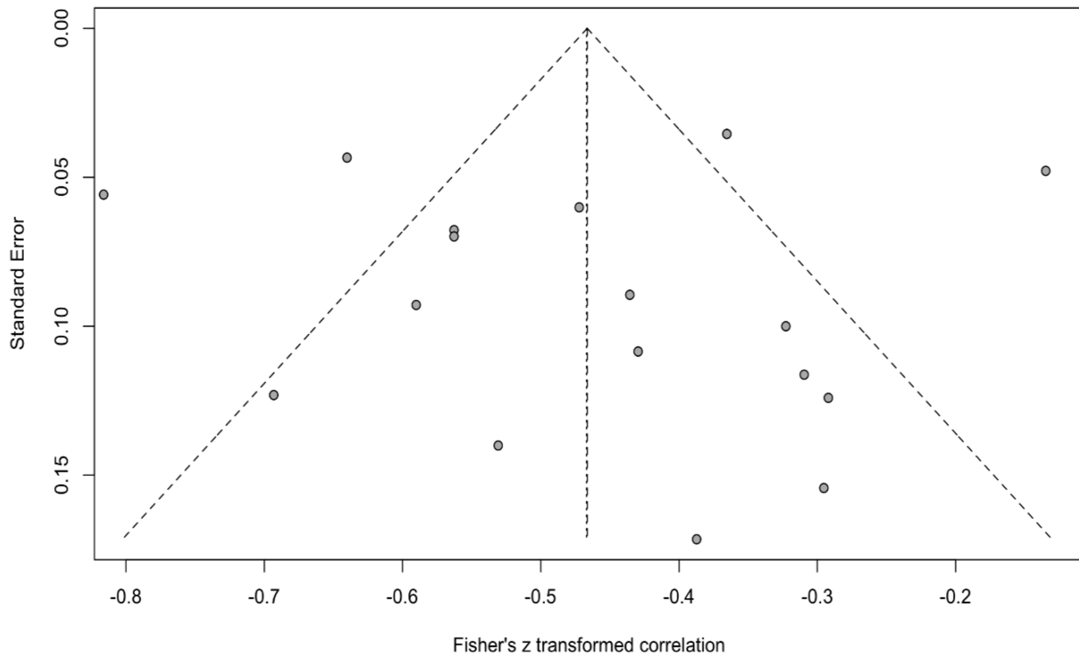

Figure 3. Funnel Plot

4. Discussion

4.1 Overall Summary

The current review primarily aimed to answer the question "what is the relationship between self-compassion and burnout?". To examine this, results from previous research were combined and a medium effect size for a significant negative relationship between self-compassion and burnout was established, demonstrating that staff members reporting lower levels of self-compassion, also report higher levels of burnout. This resembles findings from previous meta-analytic reviews which have investigated the relationship between self-compassion and well-being (MacBeth & Gumley, 2012; Marsh et al, 2018; Zessin et al, 2015). The current review also found age and gender did not moderate the relationship between self-compassion and burnout. This may be explained by the population of the included studies having a similar mean age. Additionally, the distribution of gender is also skewed, with female participants representing nearly 70% of the sample.

These results could be explained by Gilbert's heuristic model of affect regulation (Gilbert, 2009), whereby self-compassion is thought to activate the 'Soothing and Contentment System' and also regulate threat responses during periods of prolonged and extensive stress at work. The results could also be understood in relation to Neff's (2003a) definition of self-compassion. For example, members of staff are likely to feel less burnout if they evaluate themselves and their ability to do their job less harshly, whilst having an understanding that difficult feelings and experiences in relation to their job are not isolated but are shared by others. They may also feel less burnout by holding a balanced awareness and bringing attention to their thoughts, feelings and experiences, without getting caught up with more difficult or negative experiences.

4.2 Implications and Future Research

To the authors' knowledge, this is the first systematic meta-analytic review examining the relationship between self-compassion and burnout. Although there were no publication date limiters included in the search strategy, the papers included in this review were all published within the past decade, with the majority of papers published in the three years prior to this review. This reflects the recent, growing interest in this area of research, which possibly stems from the upsurge in research around compassion and its distinguished relationship with mental health and well-being, (Gilbert, 2009; MacBeth & Gumley, 2012).

The findings contribute to the current understanding of the relationship between self-compassion and burnout by providing evidence of the relationship across different professions, in a range of countries. The results also offer support for proposals for interventions aimed at increasing staff levels of self-compassion in the workplace, (Beaumont & Martin, 2016; Crawford, Brown, Kyangarnes & Gilbert, 2014; Henshall et al, 2018; Welford & Langmead, 2015). Such interventions include Compassion Focussed Therapy (Gilbert, 2010) Compassionate Mind Training (Gilbert, 2009), Compassion Cultivation Training (Jazaieri et al, 2013) and the Mindful Self Compassion Programme (Neff & Germer, 2013).

Furthermore, given the cross-sectional design of the included studies, a causal relationship cannot be established. However, it is quite possible that the relationship between self-compassion and burnout is bi-directional. Therefore, individuals with lower levels of self-compassion may be more at risk of developing burnout, but levels of self-compassion may also decrease as a consequence of burnout. This suggests that

increasing staff levels of self-compassion could be utilised both as a strategy to prevent the development of burnout and as an intervention for staff members already feeling burnt-out. To understand the direction of the relationship between self-compassion and burnout, future research should employ longitudinal designs, measuring levels of self-compassion and burnout at different timepoints throughout an individual's career. Moreover, for interventions aimed at increasing levels of self-compassion to be used as a preventative strategy, such interventions should be implemented within staff training courses. This could act to equip staff members at the beginning of their career with the skills needed to protect against the development of burnout in the future. The implementation of such interventions in training courses should also be evaluated longitudinally, to understand long-term effectiveness and implications. It would also be beneficial for effects of interventions to be compared with a control group, who have not received the intervention during their training course. This would allow for the effectiveness of interventions to be more rigorously evaluated and an evidence base to be established to provide the foundations for more widely used provisions.

It is also essential to note, that whilst the results suggest self-compassion is important when considering strategies or interventions to prevent or address burnout in the workplace, it is likely there are additional ways in which this phenomenon could be tackled. It seems imperative that changing workplace cultures by implementing strategies at both an individual and organisational level, is essential to fully address burnout, a notion recently also emphasised by several researchers (Crawford et al 2014; Henshall et al 2018; Welford & Langmead, 2015). This can be thought about by considering the different 'flows of compassion', which suggest that in addition to having self-compassion, individuals can experience compassion for others and

compassion from others (Gilbert et al, 2017). There is limited research exploring the relationships between different flows of compassion, specifically compassion from others and burnout. Therefore, future research should aim to consider the role of compassion from others, particularly compassion from other colleagues, managers or organisations on burnout and staff well-being, for example, by utilising similar, cross-sectional methodologies used in the studies included in the current review.

4.3 Limitations

There are a number of limitations that should be considered in this review. Firstly, the studies included in the analysis varied in sample size. There were a number of studies with smaller sample sizes and the quality analysis revealed the lack of sample size calculations or power analyses included. These factors could influence the reliability and validity of the studies and could therefore have an impact on the overall effect size observed.

Secondly, many of the included studies sampled participants with a professional background in healthcare. This may reflect the core values and priorities emphasised within a healthcare setting. For example, 'Compassion in Practice' was highlighted as a core strategy for nursing, midwifery and care staff in the NHS (Department of Health, 2012). Although this progress within the UK healthcare system is positive, the lack of similar research with other professional groups could impact upon how the results can be generalised across other, non-healthcare professions. Therefore, this limitation highlights the need for research to be extended to different professions, as the high prevalence rate of burnout has been noted internationally in professionals including teachers (Al-Asadi, Khalaf, Al-Waaly, Abed & Shami, 2018; Shaheen & Mahmood,

2016), social workers (Abdallah, 2009; Kim, Ji & Kao, 2011) and police officers (Backteman-Erlanson, Padyab & Brulin, 2013; Burke & Mikkelsen, 2005).

Finally, the measures of self-compassion and burnout were not consistent across studies. For self-compassion, the majority of studies used versions of the SCS, however some studies used less established measures of self-compassion. On the other hand, burnout was measured using six different measures. Whilst all the measures used were checked for consistency with the definitions highlighted in section 2.1, the scales have not been directly compared. Therefore, the extent to which the scales measure the same concept is not known, which could impact upon the validity of the findings. Additionally, due to the range of measures used and thus the number of different subscales included in the analyses, the current review does not consider the individual relationships between the different aspects of self-compassion and burnout.

4.4 Conclusions

The current review has focussed research questions, specifically aiming to quantify the relationship between self-compassion and burnout and to test age and gender as moderators of this relationship. Results demonstrated a medium effect size for the relationship between self-compassion and burnout, although age and gender were not found to moderate this relationship. The recency of publication of included studies is a particular strength of the review, as it presents current findings and also highlights the increase in research interest in this area. Whilst results offer support for interventions aimed at increasing employees' self-compassion to be implemented within the workplace, future research should aim to establish the effectiveness of such interventions. Moreover, future research should also utilise longitudinal methodologies

to clarify the direction of the relationship between self-compassion and burnout. The results of such research could be used to consider the appropriateness of interventions for use as preventative measures and reactive strategies. Additionally, to allow for conclusions supporting the use of interventions to be extended and generalised across professions, the relationship between self-compassion and burnout needs to be further explored amongst non-healthcare professionals.

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Part Two

Empirical Report

Exploring the role of compassion in teacher burnout and well-being

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Abstract

The study aimed to explore the role of self-compassion, compassion to others and compassion from others in predicting levels of burnout and well-being in teachers. It also aimed to determine if the fear of receiving compassion from others had a moderating effect on the relationship between compassion from others, burnout and well-being. One hundred and seventy-one teachers from the United Kingdom completed an online survey, consisting of quantitative, self-report measures of compassion, burnout and well-being. Hypotheses of prediction and moderation were tested using hierarchical multiple regression analyses. Regression models for emotional exhaustion, depersonalisation, personal accomplishment and well-being demonstrated the inclusion of compassion variables created models that were significantly better fit than socio-demographic and occupational variables. Higher self-compassion was found to predict lower levels of emotional exhaustion and higher well-being. Additionally, increased levels of compassion for others were found to predict lower levels of depersonalisation and higher personal accomplishment, whilst greater compassion from others was found to predict higher levels of well-being. The statistical analyses did not show any moderating effects for the fear of receiving compassion. The findings offer support for previous proposals for compassion-based initiatives and interventions to be implemented within educational settings. Implications for future research and interventions were highlighted.

Keywords: Compassion; Burnout; Well-being; Teacher; Regression

1.1 Background

Teachers continue to encounter increasing challenges within their profession. Work-related stress is one of the most widely reported difficulties amongst teachers, with a high prevalence of stress and mental health difficulties demonstrated globally (Education Support Partnership, 2018; García-Carmona, Marín & Aguayo, 2018; Kidger et al, 2016; Kyriacou, 1987). Research shows that teachers are at an increased risk of common mental health difficulties and lower levels of well-being, compared to those in other occupations (Johnson et al, 2005; Kidger et al, 2016; Stansfeld, Radul, Head & Singleton, 2011). A recent survey of UK teachers found that 67% of education professionals would describe themselves as stressed and 76% have experienced behavioural, psychological or physical symptoms due to their work; a figure higher than other employees from the general population, with 60% reporting this (Education Support Partnership, 2018).

A number of factors have been highlighted to contribute to significant levels of stress in teachers. These factors include the school system, “pressure from above”, high workload, the number of students, student misbehaviour, classroom discipline, time pressures, difficult interactions with parents and exposure to constant changes (Education Support Partnership, 2018; Griffith, Steptoe & Cropley, 1999; Hanif, Tariq & Nadeem, 2011; Hastings & Bham, 2003; Kyriacou, 2001; Lynch, Worth, Bamford & Wespieser, 2016; Skaalvik & Skaalvik, 2017). The challenges described are likely to be reflected by the rising number of teachers leaving the profession for non-retirement reasons. This is resulting in a growing concern regarding shortages of teachers in British classrooms (Lynch et al, 2016). The Department for Education (2019) has recently

released a strategy for recruiting and retaining teachers and to tackle some of these issues.

From the research outlined, it seems undeniable that teachers are exposed to a large number of stressors and as such, are reporting high levels of stress and lower levels of well-being. Therefore, it is perhaps unsurprising that 'burnout' is another significant and developing challenge reported by many working within the education sector.

1.2 Burnout and well-being

1.2.1 Defining well-being

Conceptualising well-being can be a challenge within research, as it is a complex construct with varying definitions. The term 'mental health' can often be used interchangeably with 'well-being', which appears to contribute to the complexity of the construct. Well-being is conceptualised in this research as 'mental well-being' (Tennant et al, 2007), which covers two well-explored perspectives of well-being; the eudaimonic perspective and the hedonic perspective. 'Psychological well-being' emerges from the eudaimonic perspective and relates to an individual's psychological functioning, such as their ability to develop and maintain relationships, their capacity for self-development, autonomy and self-acceptance (Huta, 2016; Ryan, 2001; Ryff, 1989; Ryff & Singer, 2008). However, the hedonic perspective focuses on 'subjective well-being' and relates to subjective experiences of life satisfaction, including cognitive evaluations and the presence of positive and negative feelings, self-esteem, quality of life and life satisfaction (Diener, 1984; Ryan, 2001; Zessin, Dickhauser and Garbade, 2015).

1.2.2 Defining Burnout

Burnout was originally conceptualised in the 1970's, with initial literature on the topic published by Freudenberger (1975) and Maslach (1976). Maslach's early research primarily focused on those working in a care-giving profession, particularly considering emotional responses within the interpersonal, relational context of the workplace. Subsequent research led to the of development of a multi-dimensional theory of burnout (Maslach & Jackson, 1982). This theory that remains predominant within the field and postulates three dimensions of which an employee may feel burnt-out; emotional exhaustion, depersonalisation and reduced personal accomplishment.

Emotional exhaustion refers to feelings of being "overextended and depleted of one's emotional and physical resources" (Maslach, Schaufeli & Leiter, 2001, p. 399) and is believed to be a result of high workload and high levels of work-related stress. Schwab (1986) defined emotional exhaustion as a tired and fatigued feeling that develops as emotional energies are drained. The second dimension of burnout, depersonalisation, is thought to occur as an individual attempts to put distance between themselves and their job, by developing feelings of cynicism and detachment. Teachers who enter this stage are described as no longer having positive feelings about their students and may also show "indifferent, negative attitudes" towards them (Maslach, Jackson, Leiter, Schaufeli, & Schwab, 1986, p. 206). The third aspect of burnout, reduced personal accomplishment, is understood as reflecting the self-evaluation dimension of burnout, with lower levels of personal accomplishment echoing feelings of incompetence, low self-efficacy and a lack of achievement at work (Maslach et al, 2001).

1.2.3 Burnout in Teachers

Burnout is not a newly reported phenomenon amongst teachers; teachers have been identified as experiencing high levels of burnout since its conceptualisation (Cunningham, 1983; Kyriacou, 1987). A recent meta-analysis of 45 studies measuring burnout in secondary school teachers, indicated a large proportion of teachers experience high levels of burnout, with 28.1% suffering from severe emotional exhaustion, 37.9% reporting high levels of depersonalisation and 40.3% experiencing low levels of personal accomplishment (García-Carmona et al, 2018). The researchers highlighted that levels of depersonalisation and low personal accomplishment were much higher than burnout levels documented for other professional groups.

Research has highlighted the consequences of teacher burnout, both at an individual level and more systemically. For instance, teachers who experience high levels of burnout are at an increased risk of experiencing physical and mental health problems, (Huberman, 1993). Further to this, Harding et al (2019) found higher levels of well-being in teachers to be associated with better student well-being and lower levels of student psychological distress, whilst higher levels of depression were associated with poorer student well-being and psychological distress, thought to be a result of difficulties developing and modelling “good quality relationships” with students (Harding et al, 2019). Previous research has also shown that burnout can negatively impact on a teacher’s perceived ability to effectively manage a classroom (Aloe, Amo & Shanahan, 2014; Brouwers & Tomic, 2000). Moreover, higher levels of teacher burnout have been associated with increased student misbehaviour and poorer student achievement (Aloe, Shislet, Norris, Nickerson & Rinker, 2014; Jennings and Greenberg, 2009; Whitaker, Dearth-Wesley & Gooze, 2015).

Given the widespread, negative consequences of teacher burnout, various interventions aimed at reducing teacher burnout have been trialled. Iancu, Rusu, Măroiu, Păcurar and Maricuțoiu (2018) conducted a meta-analysis of the effectiveness of interventions aimed at decreasing levels of burnout. The review identified CBT, mindfulness and relaxation, social-emotional skill learning, psychoeducation, social support groups and professional development strategies as interventions to decrease experiences of burnout in teachers. The researchers found only small effect sizes for interventions and proposed that the causes of teacher burnout are not addressed by these more generic interventions, as they did not address stressors specific to teachers. This suggests that a more effective intervention, tailored specifically to the unique working environment of teachers, is needed. Welford and Langmead (2015) recognise the need for a systemic and universal intervention in education settings, which offers the means of enhancing psychological well-being, not only for teachers, but for students, parents and the wider community. The researchers suggest that compassion-based initiatives could offer this potential.

1.3 Compassion

The foundations underpinning compassion originate within early Buddhist teachings. Over the past 10 years, there has been a growth in research into the origins, attributes and purposes of compassion and with this, contemporary definitions have emerged. The Compassionate Mind Foundation (2019) defines compassion as "a sensitivity to suffering in self and others with a commitment to try to alleviate and prevent it". Further to this, Gilbert (2005) defined compassion as a quality that aims to nurture, look after, sooth, protect oneself and others and offer feelings of acceptance. Individuals can experience compassion for others, from others and for themselves, which is

conceptualised as the flow of compassion (Gilbert, McEwan, Matos, & Rivis, 2011). Gilbert et al (2017) identified the importance of distinguishing these separate flows of compassion, given the variation in which the flows can be manifested across individuals. Each flow of compassion can have two separate dimensions; motivation to *engage* with suffering and motivation to take *action* and try to alleviate suffering (Gilbert et al, 2017).

Gilbert's working model of affect regulation (Gilbert, 2009) can be used to understand the relationship between the flow of compassion and burnout. The model more commonly termed the "three systems model", suggests that there are three systems that regulate emotions. The 'Threat and Protection System' is thought to be the brain's 'default setting' and rapidly notices threat, resulting in bursts of feelings such as anxiety, fear, shame or disgust. These feelings alert the body to respond in the form of fight, flight or submission, (Gilbert, 2001). The second major emotional system, the 'Drive and Excitement System' is suggested to be linked to doing, aspiring, wanting and motivation to obtain resources needed, such as friendships, food and sex. The function of the drive system is to provide positive feelings to engergise and encourage an individual to seek out things, providing a source of anticipation and pleasurable feelings (Gilbert, 2009). The third system, the 'Contentment and Safety system', is related to the release of opiates that mediate feelings of well-being and contentment. This system is thought to have soothing qualities that activate positive feelings linked to well-being, safeness and social-connectedness. The model suggests that good well-being is associated with a balance between the systems, whilst mental health difficulties are associated with over or underactivity within any of the systems. Henshall, Alexander, Molyneux, Gardiner and McLellan (2018) suggest that feelings of burnout

may result from over-activation of both the 'Drive and Excitement System' and the 'Threat and Protection System'. Further to this, Beaumont and Martin (2016) hypothesise that amongst educators and health-care professionals, high job demands and personal demands, as well as other stressors, can result in over-activation of the threat system. They suggest that this over-activation can result in the development of associated cognitive, behavioural, emotional and physical symptoms, which can thus lead to a poor professional quality of life in the form of stress, compassion fatigue and burnout. Although the flow of compassion has been identified as a regulator of these three systems (Gilbert, 2009), for some people, experiences of compassion can result in avoidance or fear responses, whereby positive emotions can be conditioned to produce more negative reactions (Gilbert et al, 2011). This is thought to occur when experiences of compassion reactivate the attachment system and so more difficult, traumatic and possibly unresolved feelings within the attachment system may arise (Gilbert, 2009). Gilbert et al (2011) conceptualised these responses as "fears of compassion" and identified that individuals can experience pleasant and affiliative emotions as more threatening than pleasant, as such emotions can produce feelings of sadness and grief. It is therefore important to consider whether fear of compassion plays a role in how compassion from others is experienced.

There is limited literature examining the relationship between the three flows of compassion and burnout, with current research mainly focussing on health care professionals. For instance, student midwives, student counsellors, CBT psychotherapists and nurses who are less compassionate towards themselves and towards others, have been found to report lower levels of psychological well-being and greater burnout (Beaumont, Martin, Durkin and Carson, 2016a, 2016b, 2016c). Research within this field has predominantly explored the relationship between self-

compassion and burnout, with only one paper investigating this relationship in teachers, (Jennings, 2015). The proposal by Welford and Langmead (2015) to cultivate compassion focussed interventions in schools, could be further grounded by exploring the unique relationship between the three aspects of compassion, burnout and well-being levels in teachers.

1.4 The Present Study

The relationship between compassion and burnout has previously been highlighted, particularly within the healthcare sector. However, there is currently a lack of research exploring the relationship between compassion, burnout and well-being in teachers. Therefore, the present study aimed to explore each flow of compassion and its unique relationship with burnout and well-being in teachers. This is important given the pertinent issue of teacher burnout and its widespread consequences. The research will also establish theoretical underpinnings to guide implementation of appropriate and effective interventions to reduce teacher burnout and also increase well-being. This includes considering how the fear of compassion interacts with compassion from others. Therefore, the present study aimed to address the following research questions: Does self- compassion, compassion from others and compassion for others relate to burnout and/or well-being in teachers? Does the fear of compassion have a moderating effect on the relationship between compassion from others and burnout and/or well-being? In line with these, the following hypotheses were formulated:

Hypotheses 1-3 predict that self-compassion, compassion to others and compassion from others will predict levels of burnout in teachers, respectively. The following sub-hypotheses provide the opportunity to test each component of burnout independently:

1a) Higher levels of self-compassion will predict lower levels of emotional exhaustion in teachers.

1b) Higher levels of self-compassion will predict lower levels of depersonalisation in teachers.

1c) Higher levels of self-compassion will predict higher levels of personal accomplishment in teachers.

2a) Higher levels of compassion to others will predict lower levels of emotional exhaustion in teachers.

2b) Higher levels of compassion to others will predict lower levels of depersonalisation in teachers.

2c) Higher levels of compassion to others will predict higher levels of personal accomplishment in teachers.

3a) Higher levels of compassion from others will predict lower levels of emotional exhaustion in teachers.

3b) Higher levels of compassion from others will predict lower levels of depersonalisation in teachers.

3c) Higher levels of compassion from others will predict higher levels of personal accomplishment in teachers.

Hypotheses 4-6 state that self-compassion, compassion to others and compassion from others will positively predict levels of well-being in teachers. Hypotheses 7 and 8 state that as the fear of compassion from others increases, emotional exhaustion and depersonalisation will increase, despite higher levels of compassion from others. Finally, hypotheses 9 and 10 state that as fear of compassion from others increases, personal accomplishment and well-being will decrease, despite higher levels of compassion from others.

2. Method

2.1 Participants

A volunteer sample of 171 participants were recruited via social media posts, through emails circulated by headteachers of primary and secondary schools known to the researchers and through advertisements in the quarterly newsletters of a large teachers' union. As per the inclusion criteria for the survey, all participants were teaching pupils from Reception to Year 13 in a school in the United Kingdom and were able to understand English.

The sample size was based on calculations established by a power analysis, performed using G*Power Version 3.1.9.2 (Faul, Erdfelder, Buchner & Lang, 2009). The statistical analyses testing the interaction effects were likely to have the smallest effect size and it was anticipated that the variables included in the statistical model to test the interaction effect would use 13 degrees of freedom. A sample size of 160 participants was calculated to give good power of 80%, for a small effect size of .05, using a 5% significance levels.

2.2 Procedure

Ethical approval was sought and granted through the Faculty of Health and Social Work at the University of Hull (Appendix I) and licences were acquired for the online use of The Compassionate Engagement and Action Scales (Gilbert et al, 2017), the Fear of Compassion Scales (Gilbert et al, 2011), Maslach Burnout Inventory-Educators Survey (Maslach et al,1996) and Warwick-Edinburgh-Mental-Wellbeing-Scale (Tennant et al, 2007) (See appendices J, K and L). Advertisements distributed through social media, schools and a teachers' union, comprised a brief, written summary of the research and a link to a website containing further information and access to the online questionnaire (Appendix M). Participants were able to read the inclusion criteria and information sheet (Appendix N) prior to completing the consent form (Appendix O). Participants anonymously completed the online survey, which took approximately 25 minutes to complete. Upon completion, participants were given information detailing relevant sources of support that could be accessed if desired (Appendix P).

2.3 Measures

2.3.1 Socio-demographic and occupational characteristics

Demographic items asked participants to indicate their age, gender and the type of school participants worked in (primary, secondary or sixth form/college; state or independent; academy or non-academy; religious or non-religious) (Appendix Q). As a measure of socio-economic status, the school post code was also collected to identify the proportion of young people in geographic area of the school that entered into higher education aged 18 or 19 years old between 2009 and 2014, using POLAR 4 quintiles

(Office for Students, 2019). Participants' level of responsibility within the school was measured by the pay-scale for teachers across the UK and participants' were asked how they would best describe their role (Teacher, Middle Management or Senior Leader).

2.3.2 Burnout

The Maslach Burnout Inventory- Educatory Survey (MBI-ES; Maslach et al, 1996; Appendix R) was used to measure levels of burnout. It consists of 22 items and three subscales (emotional exhaustion, depersonalisation and personal accomplishment). Respondents are asked to indicate, using a 7-point Likert scale, where 0 represents never and 6 represents every day, how often they have experienced the situation described in the item over the past year. Example items include; "I don't really care what happens to some students". High scores on emotional exhaustion and depersonalisation and low scores on personal accomplishment would demonstrate a burnout profile. In the MBI Manual 4th edition, cut-offs for scoring were removed due to having no diagnostic validity (Mindgarden, 2018). In regard to reliability, Cronbach's alpha estimates range from .71-.90 for each of the subscales (Maslach et al, 1986).

2.3.3 Well-being

The Warwick-and-Edinburgh-Mental-Well-Being-Scale (WEMWBS; Tennant et al, 2007; Appendix S) was used to assess subjective well-being and psychological functioning. The scale consists of 14 items and individuals are asked to rate their experiences of a situation over the last two weeks. Answers are measured on a 5-point

Likert scale (where 1 represents 'none of the time' and 5 represents 'all of the time'. All items are positively worded and address aspects of positive mental health, for example "I've been dealing with problems well". The items can be summed to provide a single score ranging from 14-70, where a higher score demonstrates increased feelings of positive well-being. The scale was not designed to assess high or low mental health and as such, no cut-offs were developed (Tennant et al, 2007). The WEMWBS has acceptable internal consistency (Cronbach's α =0.89).

2.3.4 Compassion

'The Compassionate Engagement and Action Scales' (TCEAS; Gilbert et al, 2017; see Appendix T) were used to measure levels of self-compassion, compassion towards others and compassion from others. Each of the three scales are comprised of two subscales relating to compassionate engagement and compassionate action. Each subscale measuring compassionate engagement comprises of eight items reflecting six attributes of compassion as defined by Gilbert (2009) i.e. empathy, sympathy, distress tolerance, non- judgement, sensitivity, care for well-being. Five items are included in each subscale relating to compassionate actions. Using a 10-point Likert scale, respondents are asked to rate the extent to which they agree with statements (where 1 represents 'never' and 10 represents 'always'). Example items include; "I *tolerate* the feelings that are part of my distress" (compassion to self, engagement subscale), "I *think about and come up* with helpful ways for them to cope with their distress" (compassion to others, action subscale) and "Other people are actively *motivated* to engage and work with my distress when it arises" (compassion from others, engagement subscale). Each aspect of compassion comprises 13 items, of which 10 are included in the scoring.

Scores on the TCEAS can range from 10- 100, where a score of 100 represents high compassion. Preliminary analysis of the psychometric properties of the TCEAS reported the scales as having high internal reliability (α = .83 - .90) and weak-modest concurrent validity (.28 - .53; Kleissen, 2016).

2.3.5 Fear of compassion from others

The Fears of Compassion Scale (FOCS; Gilbert et al, 2011; Appendix U) is made up of three subscales and the extent to which a respondent agrees with statements is rated on a 0-4 Likert Scale (where 0 represents 'Don't agree at all' and 4 represents 'Completely agree'). The subscale 'Responding to the expression of compassion from others' was utilised in the present study to measure participants' response to receiving compassion from others. The scale comprises 13 items, such as "Wanting others to be kind to oneself is a weakness". The measure is scored by summing up the items for each of the three subscales, with a higher score representing greater fears of compassion. The Cronbach's alpha was recorded in a student sample to be $\alpha = 0.78$ (Gilbert et al, 2011).

2.4 Data Analyses

Statistical analyses were conducted using SPSS for Mac OS X 10.11 Version 25 (IBM Corp., 2017). Coded response data were imported into SPSS and dummy variables were created. Overall scores for key variables were calculated following the scale guidelines; for the MBI-ES, the mean and total scores were computed, total scores were calculated for the WEMWBS and total scores analysed for each subscale of the TCEAS and FOCS, (Maslach et al, 1996; Tennant et al, 2007; Gilbert et al, 2017; Gilbert et al, 2011).

Preceding data analysis, basic checks were conducted to check for outliers and missing data and descriptive statistics were computed for all variables. Preliminary analyses were also conducted to establish whether any strong correlations exist between variables by the calculation of Pearson correlations for all overall scores. Prior to regression analyses, the TCEAS 'Compassion from others' and FOCS 'Responding to the expression of compassion from others' were mean centred to allow for the creation of an interaction between these variables and to facilitate the interpretation of parameter estimates.

Hierarchical linear regression analyses were then conducted to test hypotheses 1-8. Four regression models were analysed with the three subscales of burnout and well-being used as outcome variables. The same predictor variables were used in each model and entered in three blocks. Age, gender, type of school (primary, secondary or sixth form; state or independent; academy or non-academy; religious or non-religious) and level of responsibility (teacher, middle management or senior lead) were entered into the first block. Self-compassion, compassion for others, compassion from others and FOCS 'Responding to the expression of compassion from others' were entered as predictor variables in the second block. The interaction between FOCS 'Responding to the expression of compassion from others' and compassion from others was entered in the third block. Evidence of moderation was concluded if the interaction term was statistically significant at $p < .05$.

3. Results

3.1 Descriptive Statistics

One hundred and seventy-one participants completed the survey. After examining the data set for missing data, 12 participants were excluded from the analysis as participants selected “prefer not to say” to identify their gender. The final sample consisted of 159 participants aged 21-65 and the sample was skewed towards younger people, with 48.4% of participants aged between 21 and 30. Thirty- three participants were male and 126 were female (20.8% and 79.2%, respectively).

Descriptive statistics for sociodemographic and occupational variables are presented in Table 1, showing the frequency of participants in each category for gender, age, years worked in teaching, level of responsibility, age group worked with and type of school (Academy/non-academy; religious/non-religious; state/independent sector). The modal age category was 21 to 30 years old, with 48.4% of participants in this category. The majority of participants identified their role as a ‘teacher’, representing 66.7% of the sample and 59.7% of participants reported working in education for 0-10 years. School-level variables demonstrated participants mainly worked within the state sector, in secondary schools or sixth forms that were not academies or religious schools. Due to a large amount of missing data for postcodes, a measure of socio-economic status could not be included in the analyses.

Table 1. Descriptive statistics for sociodemographic and occupational variables.

Variable		Frequency of participants
Gender	Male	33 (20.8%)
	Female	126 (79.2%)
Age	21-30	77 (48.4%)
	31-40	34 (21.4%)
	41-50	23 (14.5%)
	51-60	23 (14.5%)
	61-65	2 (1.3%)
	65+	0 (0%)
Years worked in teaching	0-10	95 (59.7%)
	11-20	33 (20.8%)
	21-30	20 (12.6%)
	31+	11 (6.9%)
Level of responsibility	Teacher	106 (66.7%)
	Middle Management	36 (22.6%)
	Senior Leader	17 (10.7%)
Age group worked with	Primary only	66 (41.5%)

	Primary and secondary	5 (3.1%)
	Secondary and/or sixth form	88 (55.3%)
Type of school worked in (Academy/non-academy)	Academy	69 (43.4%)
	Non-academy	90 (56.6%)
Type of school worked in (Religious/non-religious)	Religious	22 (13.8%)
	Non-religious	137 (86.2%)
Sector worked in	State	151 (95%)
	Independent	8 (5%)

Descriptive statistics for the overall scores of key predictor variables are presented in Table 2. Mean scores for 'self-compassion' and 'compassion from others' were similar to norms reported by Gilbert et al (2017), where means for self-compassion and compassion from others were 58.18 and 60.93, respectively for females in the U.K. The mean for compassion for others in the present study was 5.12 scale points higher than the mean of 72.51 for females in the U.K and 16.7 scale points higher than the mean of 60.93 for males in the U.K, reported by Gilbert et al (2017).

Table 2. Descriptive statistics for key predictor variables.

Variable	Mean	Standard deviation	Sample range	Cronbach's α
Self-compassion	59.07	16.68	12-100	.88

Compassion to others	77.63	15.71	29-100	.90
Compassion from others	55.96	20.83	10-100	.96
FOC- Compassion from others	10.65	9.84	0-40	.95

Descriptive statistics for key outcome variables are presented in Table 3. Relative to scale norms, the mean score for emotional exhaustion was 6.79 scale points higher than the mean score of 21.25 reported by Maslach et al (1996). Personal accomplishment means in the present sample were slightly higher than the normed population means (difference +1.68) and depersonalisation was slightly lower than the normed population means (difference -4.88). The mean score for well-being in the present study (mean =45.30) was lower than the mean of 51.62 of the general population in England (Department of Health and Social Care, 2012).

Table 3. Descriptive statistics for key outcome variables.

Variable	Mean	Standard deviation	Sample range	Cronbach's α
Emotional Exhaustion	28.04	10.73	0-49	.92
Depersonalisation	6.12	5.02	0-21	.67
Personal Accomplishment	35.22	7.34	5-48	.84
Well-being (WEMWBS)	45.30	10.33	17-70	.96

3.2 Correlational Analyses

Preliminary analyses were carried out to check correlations between variables. The correlational analyses between socio-demographic and occupational variables

established that the amount of years spent in the profession and age were highly correlated (r=.908, p<.01), demonstrating multicollinearity. Therefore, data from years in the profession were removed from the regression models.

The relationships between key predictor variables and outcome variables are demonstrated in Table 4. All aspects of compassion were moderately positively correlated to each other. The largest correlation between predictor and outcome variables was the relationship between well-being and self-compassion (r= .612, p<.01). There was a strong negative correlation between emotional exhaustion and well-being (r= -.719, p<.01), demonstrating individuals with higher levels of well-being also report lower levels of emotional exhaustion. The analysis also showed that higher levels of self-compassion were significantly associated with lower levels of emotional exhaustion (r= -.453, p<.01), depersonalisation (r= -.285, p<.01) and higher levels of personal accomplishment (r= .481, p<.01). Similarly, higher levels of compassion from others were significantly associated with lower levels of emotional exhaustion (r= -.356, p<.01) and depersonalisation (r= -.242, p<.01) and higher levels of personal accomplishment (r=.413, p<.01). This indicates that teachers with higher levels of compassion towards themselves and who receive more compassion from others, experience lower levels of emotional exhaustion and depersonalisation and have higher feelings of well-being and personal accomplishment. The correlations further suggest that those with higher levels of compassion for others, had greater feelings of well-being (r= .272, p<.01) and personal accomplishment (r= .515, p<.01) within the teaching profession and less feelings of depersonalisation towards their students, (r= -.235, p<.01).

Table 4. Summary of Pearson's correlations for key predictor and outcome variables. *(N=159)*

Variable	1	2	3	4	5	6	7
1.Self-compassion							
2.Compassion for others	.535**						
3.Compassion from others	.518**	.402**					
4.Well-being	.612**	.272**	.506**				
5.Emotional Exhaustion	-.453**	-.121	-.356**	-.719**			
6.Depersonalisation	-.285**	-.235**	-.242**	-.425**	.502**		
7.Personal Accomplishment	.481**	.515**	.413**	.466**	-.306**	-.331**	
8.FOC-Responding to compassion	-.422**	-.095	-.460**	-.552	.425**	.460**	-.255**

** Correlation is significant at the .01 level.

3.3 Regression Analyses

3.3.1 Regression Model 1- Emotional Exhaustion

Table 5 shows that the inclusion of the variables at block 2 created a model that was a significantly better fit (p<.001) than socio-demographic and occupational variables entered in block 1, with block 2 explaining 25.3% more of the variance in emotional exhaustion. The inclusion of the interaction in block 3, did not significantly improve the fit and therefore does not support hypothesis 7, which states the fear of compassion from others moderates the relationship between compassion from others and emotional exhaustion. Histograms did not show any evidence of non-normality.

Table 5. Emotional Exhaustion: Regression and F change statistics for block 1, 2 and 3.

			Change statistics				
Block	R Square	Std. Error	R Square change	F change	df1	df2	*p*-value
1	.318	10.579	-	1.372	12	146	.185
2	.595	9.094	.253	13.893	4	142	.000
3	.606	9.030	.014	3.018	1	141	.085

Outcome variable – Emotional Exhaustion

Table 6 displays the regression coefficients and demonstrates that self-compassion made a significant contribution to the model in block 2 (p<.001) and is a significant predictor of emotional exhaustion. However, compassion for others and compassion from others did not significantly contribute to the model in block 2 (p=.180; p=.296, respectively). Therefore, the results support hypothesis 1a, which states higher levels of

self-compassion significantly predict lower levels of emotional exhaustion, however does not demonstrate compassion from others or compassion for others predict levels of emotional exhaustion (hypotheses 2a and 3a).

Table 6. Emotional Exhaustion: Hierarchical multiple regression coefficients for predictor variables in model 1, 2 and 3.

	Standardised coefficients			
Included variables	Beta	*T*	*p*-value	95% CIs
Block 1				
Aged 31-40	-.151	-1.701	.091	[-8.519, .637]
Aged 41-50	-.037	-.409	.683	[-6.597, 4.335]
Aged 51-60	.060	.650	.517	[-3.697, 7.324]
Aged 61-65	-.101	-1.097	.275	[-27.188, 7.781]
Gender	.100	1.197	.233	[-1.720, 7.007]
Primary and secondary	.027	.291	.771	[-9.490, 12.768]
Secondary only	-.098	-1.074	.285	[-5.962, 1.763]
Sector worked in	-.053	-.639	.524	[-10.559, 5.401]
Academy / non-academy	-.119	-1.463	.145	[-6.013, .897]
Religious/ non-religious	-.111	-1.348	.180	[-8.506,1.607]
Middle Management	-.027	-.316	.753	[-4.945, 3.583]
Senior Lead	.094	1.040	.300	[-2.919, 9.403]

Block 2				
Aged 31-40	-.082	-1.062	.290	[-6.097, 1.836]
Aged 41-50	.010	.131	.896	[-4.437, 5.066]
Aged 51-60	.070	.879	.381	[-2.659, 6.916]
Aged 61-65	-.051	-.635	.526	[-19.943,10.243]
Gender	.098	1.337	.183	[-1.236, 6.40]
Primary and secondary	.062	.782	.435	[-5.795, 13.387]
Secondary only	-.103	-1.318	.190	[-5.549, 1.110]
Sector worked in	-.057	-.796	.428	[-9.718, 4.14]
Academy / non-academy	-.083	-1.179	.241	[-4.812, 1.217]
Religious/ non-religious	-.060	-.832	.407	[-6.239, 2.543]
Middle Management	-.007	-.093	.926	[-3.853, 3.506]
Senior Lead	.079	.999	.319	[-2.663, 8.104]
Self-compassion	-.327	-3.439	.001	[-.331, -.089]
Compassion for others	.116	1.347	.180	[-.037, .196]
Compassion from others	-.092	-1.048	.296	[-.137, .042]
FOC from others	.261	3.118	.002	[.105, .469]
Block 3				
Aged 31-40	-.074	-.968	.335	[-5.876, 2.014]
Aged 41-50	.024	.309	.758	[-4.003, 5.484]
Aged 51-60	.087	1.095	.275	[-2.137, 7.446]

Aged 61-65	-.048	-.609	.543	[-19.612, 10.369]
Gender	.101	1.383	.169	[-1.140, 6.445]
Primary and secondary	.070	.886	.377	[-5.266, 13.813]
Secondary only	-.095	-1.225	.223	[-5.364, 1.260]
Sector worked in	-.058	-.810	.420	[-9.699, 4.063]
Academy / non-academy	-.091	-1.293	.198	[-4.961, 1.038]
Religious/ non-religious	-.065	-.918	.360	[-6.391, 2.339]
Middle Management	-.009	-.126	.900	[-3.887, 3.422]
Senior Lead	.075	.959	.339	[-2.752, 7.943]
Self-compassion	-.323	-3.423	.001	[-.328, -.088]
Compassion to others	.130	1.505	.135	[-.028, .205]
Compassion from others	-.075	-.855	.394	[-.128, .051]
FOC from others	.307	3.519	.001	[.148, .528]
FOC from others x compassion from others	.125	1.737	.085	[-.001, .014]

Outcome variable – Emotional Exhaustion

For categorical variables, reference variables included: Age= 21-30; School type = Primary only; Position = Teacher.

3.3.2 Regression Model 2- Depersonalisation

Table 7 shows that the inclusion of the compassion variables at block 2 created a model that was a significantly better fit ($p < .001$) than socio-demographic and occupational

variables entered in block 1, with block 2 explaining 22.9% more of the variance in depersonalisation. The inclusion of the interaction in block 3 did not create a model of significantly better fit than block 2 and therefore does not offer support for hypothesis 8, which states the fear of compassion from others moderates the relationship between compassion from others and depersonalisation. Histograms did not show any evidence of non-normality.

Table 7. Depersonalisation: Regression and F change statistics for block 1, 2 and 3.

			Change statistics				
Block	R Square	Std. Error	R Square change	F change	df1	df2	*p*-value
1	.240	5.072	-	.742	12	146	.709
2	.535	4.474	.229	11.400	4	142	.000
3	.538	4.482	.003	.546	1	141	.461

Outcome variable – Depersonalisation

Table 8 demonstrates that compassion for others made a significant contribution to the model in block 2 (p=.029) and is a significant predictor of depersonalisation. However, self-compassion and compassion from others did not significantly contribute to the model in block 2 (p= .829; p=.385, respectively) and so are not significant predictors of depersonalisation. Therefore, the results support hypothesis 2b, which states higher levels of compassion for others predicts lower levels of depersonalisation. However, it does not support hypotheses 1b and 3b, which state self-compassion and compassion from others negatively predict levels of depersonalisation.

Table 8. Depersonalisation: Hierarchical multiple regression coefficients for predictor variables in model 1, 2 and 3.

Included variables	Standardised coefficients Beta	T	p-value	95% CIs
Block 1				
Aged 31-40	-.100	-1.102	.272	[4.276, 20.052]
Aged 41-50	-.089	-.953	.342	[-3.418, .971]
Aged 51-60	-.106	-1.123	.263	[-3.884, 1.357]
Aged 61-65	-.155	-1.646	.102	[-4.144, 1.140]
Gender	-.068	-.795	.428	[-15.364, 1.401]
Primary and secondary	.114	1.215	.226	[-2.933, 1.250]
Secondary only	.102	1.098	.274	[-2.056, 8.615]
Sector worked in	-.087	-1.035	.303	[-.823, 2.881]
Academy / non-academy	-.030	-.365	.716	[-5.829, 1.823]
Religious/ non-religious	-.066	-.779	.437	[-1.962, 1.351]
Middle Management	-.005	-.062	.951	[-3.379, 1.469]
Senior Lead	-.048	-.523	.602	[-2.108, 1.980]
Block 2				
Aged 31-40	-.044	-.539	.590	[-2.484, 1.419]
Aged 41-50	-.014	-.166	.868	[-2.534, 2.142]
Aged 51-60	-.064	-.761	.448	[-3.262, 1.449]

Aged 61-65	-.119	-1.423	.157	[-12.773, 2.079]
Gender	-.032	-.421	.675	[-2.279, 1.479]
Primary and secondary	.135	1.619	.108	[-.854, 8.583]
Secondary only	.120	1.463	.146	[-.425, 2.851]
Sector worked in	-.097	-1.290	.199	[-5.634, 1.185]
Academy / non-academy	-.011	-.143	.886	[-1.591, 1.376]
Religious/ non-religious	-.051	-.671	.503	[-2.894, 1.427]
Middle Management	-.012	-.156	.876	[-1.953, 1.667]
Senior Lead	-.003	-.037	.970	[-2.698, 2.599]
Self-compassion	-.022	-.216	.829	[-.066, .053]
Compassion for others	-.201	-2.211	.029	[-.121, -.007]
Compassion from others	.081	.871	.385	[-.025, .063]
FOC from others	.464	5.277	.000	[.150, .329]
Block 3				
Aged 31-40	-.040	-.495	.621	[-2.448, 1.468]
Aged 41-50	-.007	-.089	.929	[-2.460, 2.248]
Aged 51-60	-.056	-.661	.510	[-3.173, 1.583]
Aged 61-65	-.118	-1.408	.161	[-12.738, 2.140]
Gender	-.031	-.404	.686	[-2.267, 1.497]
Primary and secondary	.138	1.656	.100	[-.769, 8.700]
Secondary only	.124	1.501	.136	[-.396, 2.892]
Sector worked in	-.097	-1.291	.199	[-5.646, 1.184]

Academy / non-academy	-.014	-.189	.851	[-1.631, 1.347]
Religious/ non-religious	-.053	-.704	.483	[-2.937, 1.395]
Middle Management	-.013	-.169	.866	[-1.969, 1.658]
Senior Lead	-.005	-.057	.955	[-2.730, 2.578]
Self-compassion	-.020	-.198	.843	[-.066, .054]
Compassion for others	-.195	-2.133	.035	[-.120, -.005]
Compassion from others	.088	.947	.345	[-.023, .066]
FOC from others	.485	5.244	.000	[.156, .344]
FOC from others x compassion from others	.056	.739	.461	[-.002, .005]

Outcome variable – Depersonalisation

For categorical variables, reference variables included: Age= 21-30; School type = Primary only; Position = Teacher.

3.3.3 Regression Model 3- Personal Accomplishment

Table 9 shows that the inclusion of the compassion variables at block 2 created a model that was a significantly better fit (p= <.001) than socio-demographic and occupational variables entered in block 1, with block 2 explaining 32.5% more of the variance in personal accomplishment. The inclusion of the interaction in block 3, did not create a model of significantly better fit than block 2 and therefore does not offer support for hypothesis 9 and demonstrates the fear of compassion from others did not moderate the relationship between compassion from others and personal accomplishment. Histograms did not show any evidence of non-normality.

Table 9. Personal Accomplishment: Regression and F change statistics for block 1, 2 and 3.

Change statistics

Block	R Square	Std. Error	R Square change	F Change	df1	df2	*p*-value
1	.086	7.303	-	1.149	12	146	.326
2	.411	5.945	.325	19.583	4	142	.000
3	.415	5.947	.004	.873	1	141	.352

Outcome variable – Personal Accomplishment

Table 10 shows that compassion for others made a significant contribution to the model in block 2 (p <.001) and therefore is a significant predictor of personal accomplishment. However, self-compassion and compassion from others did not significantly contribute to the model in block 2 (p=.069; p=.120, respectively). Therefore, the regression analysis shows support for hypothesis 2c, which states higher levels of compassion for others predict higher levels of personal accomplishment, but does not offer support hypotheses 1c and 3c, which state self-compassion and compassion from others would significantly positively predict personal accomplishment.

Table 10. Personal Accomplishment: Hierarchical multiple regression coefficients for predictor variables in model 1, 2 and 3.

	Standardised coefficients			
Included variables	Beta	*t*	*p*-value	95% CIs
Block 1				

Aged 31-40	-.019	-.216	.829	[-3.506, 2.814]
Aged 41-50	-.071	-.770	.443	[-5.242, 2.303]
Aged 51-60	-.137	-1.486	.140	[-6.663, .945]
Aged 61-65	-.050	-.538	.591	[-15.356, 8.782]
Gender	.019	.224	.823	[-2.671, 3.353]
Primary and secondary	.200	2.155	.033	[.693, 16.057]
Secondary only	.002	.024	.980	[-2.633, 2.699]
Sector worked in	.103	1.234	.219	[-2.068, 8.949]
Academy / non-academy	.081	.986	.326	[-1.196, 3.574]
Religious/ non-religious	.054	.652	.515	[-2.339, 4.642]
Middle Management	.119	1.397	.165	[-.863, 5.024]
Senior Lead	.160	1.767	.079	[-.451, 8.055]
Block 2				
Aged 31-40	-.072	-.984	.327	[-3.883, 1.303]
Aged 41-50	-.133	-1.763	.080	[-5.876, .336]
Aged 51-60	-.142	-1.873	.063	[-6.093, .165]
Aged 61-65	-.078	-1.033	.303	[-15.021, 4.710]
Gender	-.033	-.473	.637	[-3.093, 1.899]
Primary and secondary	.169	2.237	.027	[.826, 13.364]
Secondary only	-.006	-.084	.933	[-2.269, 2.084]

Sector worked in	.067	.974	.332	[-2.297, 6.762]
Academy / non-academy	-.006	-.085	.932	[-2.055, 1.886]
Religious/ non-religious	.009	.134	.893	[-2.675, 3.065]
Middle Management	.112	1.617	.108	[-.437, 4.373]
Senior Lead	.142	1.885	.061	[-.164, 6.874]
Self-compassion	.166	1.830	.069	[-.006, .152]
Compassion for others	.364	4.418	.000	[.094, .246]
Compassion from others	.131	1.564	.120	[-.012, .105]
FOC from others	-.098	-1.221	.224	[-.193, .046]
Block 3				
Aged 31-40	-.068	-.928	.355	[-3.817, 1.379]
Aged 41-50	-.126	-1.657	.100	[-5.743, .505]
Aged 51-60	-.133	-1.740	.084	[-5.933, .378]
Aged 61-65	-.077	-1.016	.311	[-14.946, 4.798]
Gender	-.032	-.453	.652	[-3.070, 1.926]
Primary and secondary	.173	2.286	.024	[.982, 13.547]
Secondary only	-.002	-.030	.976	[-2.214, 2.148]
Sector worked in	.066	.969	.334	[-2.310, 6.754]
Academy / non-academy	-.010	-.143	.887	[-2.118, 1.833]
Religious/ non-religious	.006	.091	.928	[-2.743, 3.006]

Middle Management	.111	1.599	.112	[-.460, 4.353]
Senior Lead	.140	1.859	.065	[-.211, 6.833]
Self-compassion	.168	1.850	.069	[-.005, .153]
Compassion for others	.371	4.481	.000	[.097, .250]
Compassion from others	.140	1.658	.099	[-.009, .108]
FOC from others	-.074	-.879	.381	[-.181, .069]
FOC from others x compassion from Others	.065	.935	.352	[-.003, .007]

Outcome variable – Personal Accomplishment

For categorical variables, reference variables included: Age= 21-30; School type = Primary only; Position = Teacher.

3.3.4 Regression Model 4 – Well-being

Table 11 shows that the inclusion of the compassion variables at block 2 created a model that was a significantly better fit ($p<.001$) than socio-demographic and occupational variables entered in block 1, with block 2 explaining 43.3% more of the variance in well-being. The inclusion of the interaction in block 3, did not create a model of significantly better fit than block 2 and therefore does not offer support for hypothesis 10 and demonstrates that the fear of compassion from others did not moderate the relationship between compassion from others and well-being. Histograms did not show any evidence of non-normality.

Table 11. Well-being: Regression and F change statistics for block 1, 2 and 3.

Block	R Square	Std. Error	Change statistics R Square change	F Change	df1	df2	*p*-value
1	.134	9.998	-	1.864	12	146	.044
2	.568	7.167	.433	35.062	4	142	.000
3	.569	7.185	.001	.294	1	141	.589

Dependent variable – Well-being

Table 12 shows that self-compassion and compassion from others made a significant contribution to the model when added in block 2 (p <.001; p<.021, respectively) and are significant predictors of well-being. The model shows support for hypotheses 4 and 6, which state self-compassion and compassion from others will positively predict well-being. However, the model does not offer support for hypothesis 5, which states that compassion to others would positively predict well-being.

Table 12. Well-being: Hierarchical multiple regression coefficients for predictor variables in model 1, 2 and 3.

Included variables	Standardised coefficients Beta	*t*	*p*-value	95% CIs
Block 1				
Aged 31-40	.115	1.308	.193	[-1.480, 7.269]

Aged 41-50	.124	1.395	.165	[-1.538, 8.920]
Aged 51-60	-.095	-1.051	.295	[-7.981, 2.438]
Aged 61-65	.002	.022	.983	[-16.363, 16.727]
Gender	-.073	-.882	.379	[-6.107, 2.338]
Primary and secondary	.152	1.670	.097	[-1.635, 19.448]
Secondary only	.084	.943	.347	[-1.910, 5.394]
Sector worked in	-.025	-.304	.761	[-8.704, 6.383]
Academy / non-academy	.160	1.998	.048	[.036, 6.602]
Religious/ non-religious	.037	.451	.652	[-3.689, 5.872]
Middle Management	.139	1.662	.099	[-.648, 7.498]
Senior Lead	.115	1.308	.193	[-1.480, 7.269]
Block 2				
Aged 31-40	.026	.416	.678	[-2.494, 3.824]
Aged 41-50	.056	.873	.384	[-2.116, 5.465]
Aged 51-60	-.112	-1.712	.089	[-7.043, .507]
Aged 61-65	-.061	-.931	.353	[-17.519, 6.298]
Gender	-.086	-1.428	.156	[-5.292, .853]
Primary and secondary	.107	1.643	.103	[-1.281, 13.867]
Secondary only	.088	1.367	.174	[-.810, 4.442]
Sector worked in	-.031	-.531	.596	[-6.928, 3.995]
Academy / non-academy	.101	1.725	.087	[-.306, 4.486]
Religious/ non-religious	-.032	-.536	.593	[-4.399, 2.523]
Middle Management	.114	1.894	.060	[-.124, 5.742]

Senior Lead	-.029	-.447	.655	[-5.211, 3.289]
Self-compassion	.367	4.671	.000	[.130, .321]
Compassion to others	-.045	-.632	.528	[-.123, .063]
Compassion from others	.169	2.333	.021	[.013, .154]
FOC from others	-.324	-4.700	.000	[-.486, -.198]
Block 3				
Aged 31-40	.028	.446	.656	[-2.457, 3.888]
Aged 41-50	.060	.924	.357	[-2.036, 5.608]
Aged 51-60	-.108	-1.627	.106	[-6.953, .676]
Aged 61-65	-.060	-.919	.360	[-17.490, 6.393]
Gender	-.085	-1.417	.159	[-5.289, .874]
Primary and secondary	.109	1.666	.098	[-1.198, 14.012]
Secondary only	.090	1.393	.166	[-.779, 4.494]
Sector worked in	-.031	-.532	.596	[-6.949, 4.002]
Academy / non-academy	.099	1.686	.094	[-.354, 4.458]
Religious/ non-religious	-.033	-.559	.577	[-4.456, 2.492]
Middle Management	.113	1.880	.062	[-.144, 5.738]
Senior Lead	-.030	-.461	.645	[-5.257, 3.269]
Self-compassion	.368	4.670	.000	[.130, .322]
Compassion to others	-.042	-.582	.561	[-.121, .066]
Compassion from others	.173	2.373	.019	[.014, .157]
FOC from others	-.312	-4.308	.000	[-.481, -.178]
FOC from others X compassion from	.032	.542	.589	[-.004, .007]

Others

Outcome variable – Well-being

For categorical variables, reference variables included: Age= 21-30, School type = Primary only, Position = Teacher.

4. Discussion

4.1 Summary of Findings

The present study aimed to determine if compassion, specifically self-compassion, compassion for others and compassion from others, predicts levels of burnout and well-being in teachers. It also aimed to explore the role of fear of compassion from others in moderating the relationship between compassion from others and well-being and burnout. Descriptive analyses demonstrated that the sample mean for emotional exhaustion of teachers was higher than the normed population mean and higher than the mean of those working in a medical setting (Maslach et al, 1996). It was also found that well-being was lower than the levels of well-being reported in the general population (Department of Health and Social Care, 2012). For all outcome variables (emotional exhaustion, depersonalisation, personal accomplishment and well-being), inclusion of compassion variables in regression analyses led to models that fitted the outcomes significantly better than socio-demographic and occupational variables alone. However, the statistical analyses did not show any moderating effects. This may, in-part, be explained by the correlation identified between the TCEAS Compassion from Others measure and the FOC scale 'Responding to the expression of compassion from others' measure, which is perhaps indicative of both scales measuring similar concepts. If so, it

is understandable that the inclusion of the FOC scale as a moderator had no further effect in the regression models.

The results highlighted the direction of the flow of compassion had differing effects on each dimension of burnout and well-being. Regression analyses showed that self-compassion was the only significant negative predictor of emotional exhaustion and was also a significant positive predictor of well-being. However, interestingly, self-compassion did not predict depersonalisation or personal accomplishment. This suggests that teachers who have lower levels of self-compassion, experience more feelings of exhaustion and emotional overextension, whilst teachers who have higher levels of self-compassion, experience increased feelings of general well-being. These findings can be understood further when considering the strong negative relationship between emotional exhaustion and well-being, which was identified in this study; whilst emotional exhaustion and well-being are different constructs, it is likely that there is overlap between the two concepts. Trompetter, De Kleine and Bohlmeijer, (2017) propose that self-compassion is used as an adaptive emotion regulation strategy, by which skills associated with self-compassion are utilised during stressful circumstances, which can buffer against the development of mental health difficulties. This could result in stimulation and development of the 'contentment and safety system' and create balance between the three systems, as proposed by Gilbert's working model of affect regulation (Gilbert, 2009). Therefore, teachers with higher levels of self-compassion, may be able to apply skills associated with self-compassion to regulate difficult emotions, tolerate distress and manage stressful experiences. This could stimulate the contentment and safety system, offering protection against the impact of over-activation

of the threat and protection system and prevent the development of emotional exhaustion, whilst maintaining feelings of well-being.

Compassion for others was the only variable found to significantly predict depersonalisation and personal accomplishment. However, compassion for others did not significantly predict levels of well-being or emotional exhaustion. Therefore, teachers who experience less compassion for others were found to feel more detached from their students, have more indifferent or negative attitudes towards them and also experienced more feelings of incompetence and reduced accomplishment at work.

Results also showed that although levels of compassion from others did not significantly predict any of the three burnout variables, it did positively predict well-being. Teachers who felt others pay attention, tolerate and accept their distress and find other people supportive and helpful in times of distress, had significantly higher levels of well-being. This appears to be a new finding, as existing literature in healthcare staff has focused on relationships between self-compassion and compassion for others. However, earlier research highlighted the importance of social support in protecting against the negative impacts of stress (Cohen and Wills, 1985) and it has also been shown that irrespective of stress, support from others and support from supervisors at work has a positive effect on well-being (Terry, Nielsen & Perchard, 1983).

The present study included a large amount of socio-demographic and occupational variables within the regression models, however it is likely there are remaining factors that predict both burnout and well-being in teachers. Previous research has found that specific occupational factors such as student behaviour, time constraints, role ambiguity and self-efficacy and also personality factors, including openness, conscientiousness, extroversion and neuroticism are significant predictors of burnout in teachers

(Kokkinos, 2007). These factors should also be considered in future research aimed at understanding predictors of teacher burnout.

4.2 Clinical Implications

The results demonstrated each direction of compassion contributed differently to each dimension of burnout and well-being. Therefore, interventions with differing aims could be implemented to address teacher well-being and each dimension of burnout. For example, to improve teacher well-being and reduce experiences of emotional exhaustion, interventions should aim to increase self-compassion. However, to reduce feelings of depersonalisation and increase feelings of personal accomplishment, interventions should aim to cultivate teachers' compassion for others. On the other hand, increasing experiences of compassion from others could be a way in which the well-being of teachers could be increased. These findings offer support for the proposal by Welford and Langmead (2015) for compassion-based initiatives to be used as a systemic intervention in education settings, working with not only teachers, but management and parents, which could effectively increase the flow of compassion to the self, for others and from others. However, there is no current literature examining such interventions in teachers, although there has been a recent surge in popularity for mindfulness-based interventions within schools. These interventions aim at reducing teacher stress by enhancing emotion regulation and increasing self-compassion. For example, a study evaluating the effectiveness of mindfulness in reducing stress and increasing well-being in teachers, found significant reductions in stress and significant increases in well-being (Beshai, McAlpine, Weare & Kuyken, 2016). Similarly, Flook, Goldberg, Pinger, Bonus and Davidson (2013) found a mindfulness intervention,

adapted for educators, increased aspects of teacher's self-compassion and reduced feelings of burnout. However, mindfulness-based interventions have a focus on enhancing self-compassion and may not impact on other important factors necessary for reducing teacher burnout, particularly to reduce depersonalisation and increase levels of personal accomplishment. Gilbert (2009) has developed Compassion Focused Therapy and Compassionate Mind Training (CMT), that aims to foster the ability to respond to distress with self-compassion, show compassion to others and ability to receive compassion from others. Whilst these interventions have recently been evaluated using small numbers of healthcare professionals (Beaumont, Rayner, Durkin & Bowling, 2017), there has been no literature published evaluating the effectiveness of Compassionate Mind Training or similar interventions, such as Compassion Cultivation Training (Jazaieri et al, 2013) and the Mindful Self Compassion Programme (Neff & Germer, 2013) of reducing levels of burnout and increasing well-being in teachers. Following the results of the present study, this is emphasised as an important area for future research.

The results also suggest that interventions and strategies could be implemented in teacher training courses, such as the Post Graduate Certificate in Education (PGCE). Interventions during training could provide the skills for increasing the flow of compassion for individuals new in the teaching profession and protect against burnout in their career. The effects of such interventions should be evaluated longitudinally and compared over time with teachers who did not receive interventions during training. This would allow for the preventative aspect of compassionate interventions to be evaluated.

4.3 Limitations

This study offers a number of valuable insights; however, several limitations should be considered. Firstly, although regression analyses allow for the predictive power of variables to be explored, the cross-sectional nature of this study does not allow to draw causality inferences between compassion, burnout and well-being. The measurements were taken at a single time point and so cannot capture how compassion may change over time, for example during different times during the school year. Data collection for the current study occurred between June 2018 and January 2019, meaning participants completed the survey at different times in the academic year and may therefore be exposed to different stressors. For example, teachers completing the survey during exam periods or before holidays may report higher levels of burnout and lower levels of well-being than following a holiday period. In the future, longitudinal studies could be utilised to understand how compassion, burnout and well-being might differ at different times during the academic year and also examine these relationships over time.

Additionally, the present study recruited through teachers' unions and also through social media, resulting in participants from varying geographic locations in the United Kingdom. This method of recruitment may have resulted in a bias in the sample towards younger adults, as they are identified as being more likely to use social media (Greenwood, Perrin & Duggan, 2016). Additionally, individuals who have a particular interest in the topic could have also been more likely to participate in the survey. Moreover, teachers experiencing higher levels of burnout may have been less likely to participate, whilst some members of staff may not have received information about the survey sent via email, due to absence from work, for example due to sickness. Therefore, the results may have differed if participants were randomly selected and

these factors may impact upon the generalisability of the results. Finally, the data were collected entirely through quantitative self-report measures, and so is subject to the limitations associated with this methodology, such as social desirability bias. Therefore, implications identified from the results should be understood with consideration of this.

4.4 Conclusion

Despite its limitations, the present study appears to be the first of its kind to explore the relationships between compassion, burnout and well-being in teachers. The findings indicate that self-compassion, compassion to others and compassion from others have different effects upon reported levels of emotional exhaustion, depersonalisation, personal accomplishment and well-being. The results support previous proposals for compassion-based initiatives to be embedded within school systems and have highlighted avenues for future research. In light of the recent 'Teacher Recruitment and Retention Strategy', which emphasises that "greater attention must be given to ensuring that teaching is a profession where people are supported to stay and thrive" (Department for Education, 2019, p. 6) and given the relationship between increasing levels of burnout and declining teacher retention rates, it is essential to consider the role of compassion-based initiatives in education. It is important for future research to not only evaluate the effectiveness of compassionate interventions in reducing levels of burnout and increasing well-being in teachers, but to gain a deeper insight into the implications and consequences of these interventions for pupils, staff members and the whole school environment.

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Part Three

Appendices

Appendix A: Epistemological Stance

To understand the assumptions underpinning any research, it is important to consider the epistemological and ontological perspectives taken by the researcher. The epistemology of the researcher guides methodological choices, which shape and are shaped by research aims (Carter & Little, 2007). This statement will highlight the definitions of epistemology and ontology and make clear the ontological assumptions and epistemological stance that support this thesis.

Ontology is the study of being (Crotty, 1998) and strives to establish what constitutes a reality and questions what things exist. Epistemology is a theory of knowledge, referring to how knowledge can be acquired and how it is created (Carter & Little, 2007). The researcher's choice in methodological approach are favoured by different schools of thought, which could be considered to be on a spectrum of epistemology (Henderson & Horgan, 2011). Quantitative methodology aims to quantify constructs through measurement, for example through the dissemination of questionnaires or checklists (Barker, Pistrang & Elliott, 2015). Quantitative methodology usually produces numerical data, which is objective, can be compared and can often be analysed using statistical measures (Barker et al, 2015). Conversely, qualitative methodology aims to explore thoughts, feelings and understand experiences of individuals, through methods including interviews and observations. This gives rise to rich data, which is less quantifiable than data gathered through quantitative methods (Percy, Kostere & Kostere, 2015), although qualitative data does allow a researcher to explore questions that are not as easily explored through quantitative research, such as an individual's experience of something (Barker et al, 2015).

There are fundamental distinctions between the ontological and epistemological perspectives of researchers using qualitative or quantitative measures. The epistemological stance underpinning quantitative methodology is usually positivism, which holds the view that scientific research should be restricted to observable facts and that there is an objective reality or truth which can be distinguished and understood (Barker et al, 2015). The positivist stance is rooted within a realist ontology, which is the belief system that there is a reality, driven by natural laws (Guba, 1990). On the other hand, qualitative research can be underpinned by interpretivist or constructionist stances, which suggest the knowledge of the world is constituted through lived experiences and reflects an individual's culture, lived experience and history (Weber, 2004). For example, the social constructionist stance emphasises the contributions of a researchers own assumptions in interpreting and making sense of data (Barker et al, 2015). However, critical realism is a postpositivist position that assumes that there is an objective reality which has patterns and regularities, although believes reality cannot be known with certainty and conclusions drawn should only be tentative, as results are "imperfectly apprehendable" (Barker et al, 2015; Guba, 1990; Lincoln, Lynham & Guba, 2011). The stance also posits that the same questions should be researched utilising different research methods with complementary strengths and weaknesses (Barker et al, 2015; Teddlie & Tashakkori, 2009).

The systematic literature review and the empirical paper in this thesis portfolio are underpinned by a realist ontology and positivist epistemology, a position driven by the research questions and aims. Burnout, well-being, self-compassion, compassion to others and compassion from others were understood as phenomena that can conceptualised and measured. As such, particularly well-established concept definitions

guided the use of validated measures in the empirical report. For both the systematic literature review and the empirical paper, research questions and hypotheses were developed from patterns in relationships which have previously been tested. Given a key aim for carrying out this research was to identify and highlight interventions and strategies that may be useful to prevent experiences of burnout and increase well-being in employees, quantitative methodology was considered the most appropriate way in which the existence of relationships could be tested and quantified, allowing for conclusions relating to the extent of relationships and clinical implications of the research to be drawn.

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Appendix B: Reflective Statement

Writing my reflective statement is something I have being both looking forward to completing, but also avoiding. I have told myself throughout my thesis journey, that this statement would be the "last thing I do", to truly help signify an "ending"; perhaps my avoidance of writing it actually represents my sadness that this process is coming to an end. I have thought about finding the right time to sit down and finish this in one sitting, however as with the rest of my thesis, I have realised that is not a way of working I find useful or productive. Instead, I have learnt that giving myself time to consider my own thoughts, allows my ideas to develop and results in what is hopefully more logical writing. Therefore, to assist the writing of my reflective statement, I have read through reflections jotted down in the several research diaries I have attempted to keep over the duration of my research and tried to collate them into this statement. Upon immediate reflection, I wish I had been more committed to keeping just one research diary, as bringing together reflections is something I have found quite challenging. In any research I embark upon in the future, I hope to keep one research diary which would allow me to carefully keep track of the process and any reflections. I hope this statement gives the opportunity for the reader to understand more about this process, as I reflect upon the positives and negatives of carrying out this research and highlight what I have learnt from the process.

Empirical paper

Designing the research

After completing my dissertation project during my undergraduate degree, I was aware that planning, undertaking and writing up research was something that I enjoyed. However, I was also aware that to maintain interest and motivation throughout the two-

and-a-half-year process of completing a thesis, I knew I needed to choose an area I was completely passionate about. As I was brainstorming various ideas for my empirical study, I was constantly drawn back to wanting to understand more about the well-being of teachers. This is something that felt close to my heart; both of my parents were teachers and throughout my childhood and adolescence I observed how stressful and emotionally draining the profession could be. As I entered into the world of Clinical Psychology, I soon realised the importance of clinical supervision, particularly when considering and reflecting upon the emotional impact of the work. After hearing from my parents and teacher friends about some of the difficulties experienced each day within a school environment, it baffled me that often, teachers do not have access to some form of supervision or support. It was at this point that I knew I wanted my research to make a difference for teachers, who often commit their lives to educating generations of young people. I attended the department's Research Fair with this in mind. During a conversation with Philip and Tim, I was introduced to the concept of compassion, particularly Gilbert's three systems model and how this could be applied to improving mental health and well-being. After exploring the literature base, I found there was research examining the relationship between compassion and burnout in healthcare professionals, but a clear gap in literature relating to teachers. I spoke to a professional who was researching the effects of implementing a compassionate intervention within an educational setting and was even more drawn to the idea, although felt the evidence base for implementing such strategies needed to be more well-established. After mentioning my ideas to friends and colleagues working in education, their enthusiasm consolidated my interest in the area and confirmed my rationale for the research. I think that my excitement and motivation to get started allowed me to complete the process of gaining ethical approval and begin recruitment

early on. In the future, I would again aim to obtain ethical approval as early as possible, particularly when working to research deadlines and having more inflexible time constraints. However, I would not want this to prevent me from considering research areas that may be more difficult to gain ethical approval, such as more direct or face-to-face research.

When planning the methods for my empirical research, it appeared my research questions lent themselves directly to quantitative research. At the time, this is something that I was more than happy to work with, as I had more experience in quantitative methodology and to some colleagues' surprise, found statistics interesting. I enjoyed designing and creating the survey and still feel this was the most appropriate way in which my research questions could be answered. However, during the data collection period, I became aware of the impersonal nature of surveys and questioned the likelihood of busy teachers completing them. Whilst this method of data collection proved to be effective, I feel that during my time on the course my beliefs have developed and caused some internal conflict in relation to my research, which became particularly evident when writing up my epistemological stance. This may be due to an emphasis placed on a social constructionist approach in some of my most enjoyable placements. Although, I may have also been influenced by many of my close peers who were using, what I thought to be, interesting qualitive methodology. I do not want to underestimate the importance of quantitative methodology, but also feel that qualitive research can provide further insight about personal experiences which is something I value. As such, in the future, I would definitely consider utilising a mixed methods approach.

Data collection and analysis

After an initial positive response from the distribution of my survey, I struggled to recruit the remaining participants to bring my total to 160. This may be due to the summer holidays, during which time my survey might have been less likely to reach teachers. I would like to be more aware of timings of data collection during future research, but I also realise this is something that can be impacted by deadlines and time constraints.

Upon completing the data collection, I was excited to start the statistical analyses. I perhaps underestimated the amount of time it takes to prepare the data for analysis; again, this is something I will be aware of in future research. During this process, it was identified that for statistical reasons, I needed to remove twelve participants from the data analysis who did not disclose their gender. At the time this made me feel frustrated, after the twelve participants had given their time to complete the survey. This also meant that I needed to continue with disseminating the survey to ensure I had enough responses for data analysis, which took approximately three more months. Upon reflection, these feelings are likely to have also mirrored my shift in beliefs, something I feel I understood less at the time. I did not immediately share my thoughts about removing the twelve participants from the data analysis with my research supervisors, but I would hope that when carrying out research in the future, I would share any similar feelings with research colleagues sooner.

Writing

When beginning to write my empirical report, I felt completely overwhelmed and wondered how I would be able to make sense of the results. I spent hours writing and

rewriting the same paragraph, although did learn from the ineffectiveness of this prior to writing up my systematic literature review. Upon reflection, I feel my anxiety towards writing stems from primary school days, where I obtained the same result for writing in my year 6 SATs as I had four years previously, in my year 2 SATs. Whilst the upset caused at the time seems completely ridiculous now, particularly with hindsight and perspective, I feel that this experience lay the foundation for the belief that “I can’t write”. I would hope that after completion of my thesis, I would feel less worried about my ability to write, particularly when carrying out research in the future.

When reading through the literature for both my empirical and systematic literature review, I felt many of the papers within the research area were written compassionately, in that they lent themselves to be easily read with an internal compassionate voice. This is something I found more difficult to incorporate in my writing, although hope that some aspects will be perceived in this way. Finding this more challenging perhaps reflects some irony within my research; as I acquired more knowledge about compassion, I became aware of the prevalence my own self-critic. I would become annoyed with myself for “not writing compassionately enough” and then became more frustrated for being so critical, which transpired to be a circular argument with myself, a cycle that was difficult to break out of. However, upon reflection and with more of a compassionate mind, I am able to understand this is normal human experience, shared by many researchers and trainees. I would hope in the future, I would be able to practise acceptance of difficult thoughts that arise at any point throughout the research process and not get caught up with them, but instead show myself compassion during stressful times.

Systematic Literature Review

We were told at the beginning of the research processes not to underestimate the size of the SLR, but this, I did. I particularly underestimated the time it would take to find an appropriate research question. I had originally considered undertaking a review of interventions in schools. However, I found an abundance of literature on mindfulness in schools, which had already been reviewed, but on the other hand, found a lack of research evaluating other types of intervention. After many hours searching literature, I established my research questions.

The systematic literature review also offered new challenges and has enabled me to learn many new skills; the unfamiliarity of the methods in comparison to my empirical report perhaps contributed to the feelings of anxiety I had when embarking upon my SLR and as such, I found I had many more "ups and downs" with this piece of research. However, on the whole, the process transpired to fit well with my pragmatic approach and I found the structure of carrying out a systematic literature review quite helpful. I would hope that in the future, when faced with new challenges, I will be able to remind myself of the benefits of persistence, self-discipline and effort required to understand new methods and produce high-quality research.

Choosing journals

When choosing a journal for my empirical paper, I was instantly drawn to education journals, which focused on research in schools and with teachers. However, I asked myself "who do I want this paper to reach?". I realised that I wanted my target audience to be readers specifically interested in improving occupational health and the quality of work-life and employee well-being, which appeared to fit well the ethos of the *'Journal*

of Occupation Health Psychology'. The impact factor of this journal is relatively high (3.766) and would allow for good distribution of results. I had also considered publishing my SLR in the same journal, as it also had a strong focus on occupational health. However, I wanted to ensure that the chosen journal would publish systematic literature reviews. I came across the journal 'Burnout Research' which I believe sat well with well with my SLR aims, but I was disappointed to find out that this journal had recently been discontinued. I continued to search for an appropriate journal and found the 'Applied Psychology: Health and Well-Being', which with an impact factor of 2.21 would ensure results would be effectively disseminated, but publication would not be impossible. This journal also highlighted a particular interest in meta-analytic reviews. Overall, I enjoyed the process of finding a suitable journal. Perhaps being new to research, I was surprised by the number and scope of journals there were to choose from and feel I have learnt the importance of choosing a journal that relates well with the aims and methodology of the research being carried out.

Summary

In summary, I have found the whole research process incredibly rewarding. Whilst there were times when I felt stressed, particularly during write up, I feel lucky that the process has, so far, gone relatively smoothly. Although, I write that statement tentatively, as I am also aware that the process is not yet complete.

I am happy with the research area I chose and have found my interest has not diminished, but increased, particularly as I am able to appreciate the practical implications of the conclusions for both my SLR and empirical paper. I also feel the

process has enabled me to become more aware of my own beliefs in relation to research, which I hope to build upon and understand more in the future.

Throughout this journey, I have learnt how important it is to take some time away from research and come back with “fresh eyes”, particularly when the task feels overwhelming. I also hope that I can take forward lessons I have learnt throughout the process, such as the importance of planning when working within a fixed timescale, giving myself time to let my ideas develop and ensuring I work in an environment that I personally find conducive to writing. I anticipate that the skills I have developed during this process will inevitably be useful in my future work, whether that is within a clinical or research setting. Finally, I hope I am able to continue practising being more compassionate to myself, whilst encouraging this in others too.

Appendix C- Author guidelines for submission to *Applied Psychology: Health and Well-Being*

Applied Psychology: Health and Well-Being is one of the two official journals of the International Association of Applied Psychology (IAAP), the oldest worldwide association of scholars and practitioners of the discipline of psychology (founded in 1920).

Applied Psychology: Health and Well-Being is a peer-reviewed outlet for the scholarly dissemination of scientific findings and practical applications in the domains of health and well-being. Articles are encouraged from all areas of applied psychology including clinical, health, counseling educational, sport, cross-cultural and environmental psychology. The mission of the journal is to provide readers with outstanding articles that present the latest data and best practices in the application of psychology to the promotion of well-being and optimal functioning.

Applied Psychology: Health and Well-Being publishes empirical work, theoretical papers, model intervention programs, case studies, debates, and reviews. Of particular interest are intervention studies (e.g., randomized controlled trials) and meta-analytic reviews.

Special Sections are occasionally published. These are composed by guest editors who invite contributions with a particular thematic or regional focus for the section.

Online production tracking is now available for your article through Wiley Blackwell's Author Services. Author Services enables authors to track their article – once it has been accepted – through the production process to publication online and in print. Authors can check the status of their articles online and choose to receive automated e-mails at key stages of production. The author will receive an e-mail with a unique link that enables them to register and have their article automatically added to the system. Please ensure that a complete e-mail address is provided when submitting the manuscript. Visit **Author Services** for more details on online production tracking and for a wealth of resources including FAQs and tips on article preparation, submission and more.

All papers published in *Applied Psychology: Health and Well-Being* are eligible for Panel A: Psychology, Psychiatry and Neuroscience in the Research Excellence Framework (REF).

All articles should comply with the following guidelines:

Submission: *Applied Psychology: Health and Well-Being* has now adopted ScholarOne Manuscripts, for online manuscript submission and peer review. The new system brings with it a whole host of benefits including:

• Quick and easy submission
• Administration centralised and reduced
• Significant decrease in peer review times

From now on all submissions to the journal must be submitted online at **http://mc.manuscriptcentral.com/aphw**. Full instructions and support are available on the site and a user ID and password can be obtained on the first visit. If you require assistance, then click the Get Help Now link which appears at the top right of every ScholarOne Manuscripts page. If you cannot submit online, please contact

Ralf Schwarzer health@zedat.fu-berlin.de

Manuscripts should not ordinarily exceed 30 double-spaced pages. Manuscripts should be prepared in accordance with the format prescribed by the American Psychological Association. For details see the Publication Manual of the APA.

The journal to which you are submitting your manuscript employs a plagiarism detection system. By submitting your manuscript to this journal you accept that your manuscript may be screened for plagiarism against previously published works.

By submitting a manuscript to or reviewing for this publication, your name, email address, and affiliation, and other contact details the publication might require, will be used for the regular operations of the publication, including, when necessary, sharing with the publisher (Wiley) and partners for production and publication. The publication and the publisher recognize the importance of protecting the personal information collected from users in the operation of these services and have practices in place to ensure that steps are taken to maintain the security, integrity, and privacy of the personal data collected and processed. You can learn more **here**.

Applied Psychology: Health and Well-Being requires the submitting author (only) to provide an ORCID iD when submitting a manuscript.

Anonymous reviews: All manuscripts will be refereed anonymously.

Authors' professional and ethical responsibilities

Submission of a paper to APHW will be held to imply that it represents an original contribution not previously published (except in the form of an abstract or preliminary report); that it is not being considered for publication elsewhere; and that, if accepted by the Journal, it will not be published elsewhere in the same form, in any language, without the consent of the Editors.

Ethics Authors are reminded that the Journal adheres to the ethics of scientific publication as detailed in the *Ethical principles of psychologists and code of conduct* (American Psychological Association, 2002, http://www.apa.org/ethics?). These principles also imply that the piecemeal, or fragmented publication of small amounts of data from the same study is not acceptable.

Note to NIH Grantees Pursuant to NIH mandate, Wiley Blackwell will post the accepted version of contributions authored by NIH grant-holders to PubMed Central upon acceptance. This accepted version will be made publicly available 12 months after publication. For further information, please click here.

Informed consent Authors must ensure that all research meets the ethical guidelines,

including adherence to the legal requirements of the study country. Within the Methods section, authors should indicate that 'informed consent' has been appropriately obtained. When submitting a manuscript, the manuscript page number where the statement appears should be given.

Conflict of interest All submissions to APHW require a declaration of interest. This should list fees and grants from, employment by, consultancy for, shared ownership in, or any close relationship with, an organisation whose interests, financial or otherwise, may be affected by the publication of the paper. This pertains to all authors, and all conflict of interest should be noted on page 1 of the submitted manuscript. Where there is no conflict of interest, this should also be stated.

Title: The title should be concise and should be supplied on a separate sheet together with the author's name(s), title, current address, telephone and fax numbers and email address. A short title of no more than 40 characters (including spaces) should also be supplied.

Abstract: The title must be included again, on the same page and immediately before the abstract. An abstract of 150-200 words in English should precede the article. The abstract should be structured in the following way with bold marked heading: Background; Methods; Results; Conclusions; Keywords; Abbreviations (for example, for test).

If appropriate, you may also include a further 3 bullet points, in addition to the abstract, with the heading 'practitioner points'. These should very briefly outline the relevance of your research to professional practice.

Headings: There should be no more than three (clearly marked) levels of subheadings used in the text of the article.

Acknowledgements: These should be supplied, as briefly as possible, on a separate page.

Statistics: Results of statistical tests should be given in the following form: $F(1,9) = 23.35$, p

Keywords: All articles should contain keywords. No more than 6 keywords should be submitted.

References: The APA style of referencing is used (author's name and date of publication parenthesised in the text) and all works cited should be listed alphabetically by author after the main body of the text, to the journal style as follows:

Authored Book: Bandura, A. J. (1977). Social learning theory. Englewood Cliffs, NF: Prentice Hall.

Chapter in edited book: Baker, F. M., & Lightfoot, O. B. (1993). Psychiatric care of ethnic elders. In A. C. Gaw (Ed.), Culture ethnicity, and mental illness (pp. 517-552). Washington, DC: American Psychiatric Press.

Journal article: Klimoski, R., & Palmer, S. (1993). The ADA and the hiring process in organizations. Consulting Psychology Journal: Practice and Research, 45(2), 10-36.

References in Articles
We recommend the use of a tool such as EndNote or Reference Manager for reference management and formatting. EndNote reference styles can be searched for **here**.

Reference Manager reference styles can be searched for **here**.

Tables and artwork: All tables and artwork should be supplied on separate sheets, not included within the text, but have their intended position clearly indicated in the manuscript. Figures should be supplied as high quality, original artwork and any lettering or line work should be able to sustain reduction to the final size of reproduction. Tints or complex shading should be avoided and color should not be used.

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Appendix D – Data extraction form

Study information	
Study Title	
Author(s)	
Year published	
General	
Research aims	
Participant information	
Sample size	
Location	
Employment	
Mean age	
Gender (%female)	
Methodology	
Design	
Method	
Measurements	
Measure of self-compassion	
Measure of burnout	
Measure of well-being	
Outcomes	
Key findings - correlations	

Quality appraisal	
Internal validity	
External validity	

Appendix E – Quality assessment checklist

NICE (2012) Quality appraisal checklist – quantitative studies reporting correlations and associations

++	Indicates that for that particular aspect of study design, the study has been designed or conducted in such a way as to minimise the risk of bias.
+	Indicates that either the answer to the checklist question is not clear from the way the study is reported, or that the study may not have addressed all potential sources of bias for that particular aspect of study design.
–	Should be reserved for those aspects of the study design in which significant sources of bias may persist.
Not reported (NR)	Should be reserved for those aspects in which the study under review fails to report how they have (or might have) been considered.
Not applicable (NA)	Should be reserved for those study design aspects that are not applicable given the study design under review (for example, allocation concealment would not be applicable for case–control studies).

In addition, the reviewer is requested to complete in detail the comments section of the quality appraisal form so that the grade awarded for each study aspect is as transparent as possible.

Each study is then awarded an overall study quality grading for internal validity (IV) and a separate one for external validity (EV):

- ++ All or most of the checklist criteria have been fulfilled, where they have not been fulfilled the conclusions are very unlikely to alter.
- + Some of the checklist criteria have been fulfilled, where they have not been fulfilled, or not adequately described, the conclusions are unlikely to alter.
- – Few or no checklist criteria have been fulfilled and the conclusions are likely or very likely to alter.

Checklist

<table>
<tr><td colspan="1">Study identification: Include full citation details</td><td colspan="2"></td></tr>
<tr><td>Study design:
• Refer to the glossary of study designs (appendix D) and the algorithm for classifying experimental and observational study designs (appendix E) to best describe the paper's underpinning study design</td><td colspan="2"></td></tr>
<tr><td>Guidance topic:</td><td colspan="2"></td></tr>
<tr><td>Assessed by:</td><td colspan="2"></td></tr>
<tr><td colspan="3">Section 1: Population</td></tr>
<tr><td>1.1 Is the source population or source area well described?
• Was the country (e.g. developed or non-developed, type of health care</td><td>++
+
–</td><td>Comments:</td></tr>
</table>

system), setting (primary schools, community centres etc), location (urban, rural), population demographics etc adequately described?	NR NA	
1.2 Is the eligible population or area representative of the source population or area? • Was the recruitment of individuals, clusters or areas well defined (e.g. advertisement, birth register)? • Was the eligible population representative of the source? Were important groups underrepresented?	++ + – NR NA	Comments:
1.3 Do the selected participants or areas represent the eligible population or area? • Was the method of selection of participants from the eligible population well described? • What % of selected individuals or clusters agreed to participate? Were there any sources of bias? • Were the inclusion or exclusion criteria explicit and appropriate?	++ + – NR NA	Comments:
Section 2: Method of selection of exposure (or comparison) group		
2.1 Selection of exposure (and	++	Comments:

comparison) group. How was selection bias minimised? • How was selection bias minimised?	+ – NR NA	
2.2 Was the selection of explanatory variables based on a sound theoretical basis? • How sound was the theoretical basis for selecting the explanatory variables?	++ + – NR NA	Comments:
2.3 Was the contamination acceptably low? • Did any in the comparison group receive the exposure? • If so, was it sufficient to cause important bias?	++ + – NR NA	Comments:
2.4 How well were likely conewfounding factors identified and controlled? • Were there likely to be other confounding factors not considered or appropriately adjusted for? • Was this sufficient to cause important bias?	++ + – NR NA	Comments:
2.5 Is the setting applicable to the UK?	++	Comments:

• Did the setting differ significantly from the UK?	+ – NR NA	
Section 3: Outcomes		
3.1 Were the outcome measures and procedures reliable? • Were outcome measures subjective or objective (e.g. biochemically validated nicotine levels ++ vs self-reported smoking −)? • How reliable were outcome measures (e.g. inter- or intra-rater reliability scores)? • Was there any indication that measures had been validated (e.g. validated against a gold standard measure or assessed for content validity)?	++ + – NR NA	Comments:
3.2 Were the outcome measurements complete? • Were all or most of the study participants who met the defined study outcome definitions likely to have been identified?	++ + – NR NA	Comments:
3.3 Were all the important outcomes	++	Comments:

assessed? • Were all the important benefits and harms assessed? • Was it possible to determine the overall balance of benefits and harms of the intervention versus comparison?	+ – NR NA	
3.4 Was there a similar follow-up time in exposure and comparison groups? • If groups are followed for different lengths of time, then more events are likely to occur in the group followed-up for longer distorting the comparison. • Analyses can be adjusted to allow for differences in length of follow-up (e.g. using person-years).	++ + – NR NA	Comments:
3.5 Was follow-up time meaningful? • Was follow-up long enough to assess long-term benefits and harms? • Was it too long, e.g. participants lost to follow-up?	++ + – NR NA	Comments:
Section 4: Analyses		
4.1 Was the study sufficiently powered to detect an intervention	++ +	Comments:

effect (if one exists)? • A power of 0.8 (i.e. it is likely to see an effect of a given size if one exists, 80% of the time) is the conventionally accepted standard. • Is a power calculation presented? If not, what is the expected effect size? Is the sample size adequate?	– NR NA	
4.2 Were multiple explanatory variables considered in the analyses? • Were there sufficient explanatory variables considered in the analysis?	++ + – NR NA	Comments:
4.3 Were the analytical methods appropriate? • Were important differences in follow-up time and likely confounders adjusted for?	++ + – NR NA	Comments:
4.6 Was the precision of association given or calculable? Is association meaningful? • Were confidence intervals or p values for effect estimates given or possible to calculate? • Were CIs wide or were they sufficiently precise to aid decision-	++ + – NR NA	Comments:

making? If precision is lacking, is this because the study is under-powered?		
Section 5: Summary		
5.1 Are the study results internally valid (i.e. unbiased)? • How well did the study minimise sources of bias (i.e. adjusting for potential confounders)? • Were there significant flaws in the study design?	++ + –	Comments:
5.2 Are the findings generalisable to the source population (i.e. externally valid)? • Are there sufficient details given about the study to determine if the findings are generalisable to the source population? • Consider: participants, interventions and comparisons, outcomes, resource and policy implications.	++ + –	Comments:

Appendix F- Quality assessment summary table

Study	1.1	1.2	1.3	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	5.1	5.2	EV	IV
Atkinson et al. (2017)	++	++	+	NA	++	NA	++	++	++	++	NA	NA	NA	NR	++	++	++	++	++	++	++
Barnard et al. (2011)	++	++	+	NA	++	NA	++	++	++	++	NA	NA	NA	NR	+	++	++	++	+	++	+
Beaumont et al. (2016a)	+	+	+	NA	++	NA	+	++	++	++	NA	NA	NA	NR	+	++	++	++	++	+	++
Beaumont et al. (2016b)	NR	NR	NR	NA	++	NA	-	++	+	++	NA	NA	NA	NR	+	++	+	-	-	NR	+
Dev et al. (2018)	++	++	+	NA	++	NA	++	++	++	++	NA	NA	NA	NR	++	++	++	++	++	++	++
Duarte et al. (2016)	++	++	++	NA	++	NA	+	++	++	++	NA	NA	NA	NR	++	++	++	++	++	++	++
Duarte et al. (2017)	++	++	+	NA	+	NA	++	++	+	++	NA	NA	NA	NR	+	++	++	++	++	++	++
Durkin et al. (2016)	+	-	NR	NA	++	NA	+	++	++	++	NA	NA	NA	NR	+	+	+	+	+	+	+
Gracia-Gracia et al. (2017)	++	++	++	NA	++	NA	++	++	++	++	NA	NA	NA	NR	+	++	++	++	++	++	++

Hotchkiss et al. (2018a)	++	++	++	NA	++	NA	++	++	++	++	NA	NA	NA	NR	++	++	++	++	++	++	++
Hotchkiss et al. (2018b)	++	++	++	NA	++	NA	++	++	++	++	NA	NA	NA	NR	++	++	++	++	++	++	++
***Kwong et al.* (2018)**	++	++	++	NA	++	NA	++	++	++	++	NA	NA	NA	NR	++	++	++	++	++	++	++
Montero-Marin et al. (2016)	++	++	++	NA	++	NA	++	++	++	++	NA	NA	NA	+	+	++	++	++	++	++	++
Olson et al. (2015)	++	+	++	NA	++	NA	+	++	++	++	NA	NA	NA	NR	++	++	++	++	+	++	+
Richardson et al. (2016)	++	++	++	NA	++	NA	++	++	+	++	NA	NA	NA	NR	++	++	++	++	++	++	++
Richardson et al (2018)	++	++	+	NA	++	NA	++	++	++	++	NA	NA	NA	NR	NR	++	++	++	++	++	++
Yip et al (2017)	++	++	+	NA	++	NA	++	+	++	++	NA	NA	NA	NR	NR	++	++	++	++	++	++

Appendix G- Summary table of measures used in included studies

Measures of self-compassion		
Measure	**Number of studies**	**Summary**
Self-Compassion Scale (SCS)	*K*=13	The SCS questionnaire consists of 26 items and comprises 6 subscales: self-kindness, self-judgment, common humanity, isolation, mindfulness and over-identification.
Self-Compassion Scale – Short Form (SCS-SF)	*K=2*	The SCS-SF consists of 12- items and comprises corresponding subscales to the 26-item scale.
Mindful Self-Care Scale (MSCS)	*K=2*	The scale consists of 33-items, measuring frequencies of self-care behaviours which divide into 6 subscales: mindful relaxation, physical care, self-compassion and purpose, supportive relationships, supportive structure, and mindful awareness. The self-compassion and purpose subscale consists of 6 items relating to experiences of self-compassion.
Measures of burnout		
Measure	**Number of studies**	**Summary**
Professional Quality of Life scale (ProQOL)	*K=10*	The scale consists of three discrete scales; compassion satisfaction, compassion fatigue and burnout. There are 30-items, with 10 corresponding to the burnout scale. Questions identify feelings of hopelessness, difficulties dealing with work and doing the job effectively. Higher scores on the scale reflect a higher risk for burnout.
Copenhagen Burnout Inventory (CBI)	*K=3*	The CBI is a 19-item scale which consists of 3 scales measuring personal burnout, work-related burnout and client-related burnout. The scale captures elements of exhaustion, negative job attitudes and loss of feelings for patients.
Maslach Burnout Inventory Human Services survey (MBI-HS)	*K=2*	It is a 22-item scale developed to assess burnout, particularly among those who work in a health care setting. The MBI-HS address three scales; emotional exhaustion, depersonalisation or cynicism and personal accomplishment.

Burnout Clinical Subtypes Questionaire-36 (BCSQ-36)	*K=2*	It consists of 36 items that make up 3 scales and 9 subscales. The ‘frentic’ scale assesses ‘involvement’ in work, ‘ambition’ and ‘overload’. The ‘underchallenged’ scale measures ‘indifference’ towards work, ‘boredom’ and ‘lack of development’. Finally, the ‘worn-out’ scale measures aspects of ‘neglect’, ‘lack of acknowledgement’ and ‘lack of control’ at work.
The Maslach Burnout Inventory General Survey-validated Spanish version (MBI-GS)	*K=1*	The adapted Spanish version of the MBI-HS survey was administered in 1 study and consists of 15 items, grouped into subscales that correspond to those in the MBI-HS survey, namely ‘exhaustion’, ‘cynicism’ and ‘efficacy’.
Francis Burnout Inventory (FBI)	*K=1*	It is a 22-item measure designed specifically for measuring burnout in religious leaders. The measure consists of two subscales; Scale of Emotional Exhaustion in Ministry and the Satisfaction in Ministry Scale. The Scale of Emotional Exhaustion reflects experiences of exhaustion, cynicism and negative attitudes towards others, whilst the Satisfaction in Ministry Scale measures feelings related to accomplishment and attitudes about work.

Appendix H: Author guidelines for submission to the *Journal of Occupational Health Psychology.*

The *Journal of Occupational Health Psychology*® publishes theory, research, and public policy articles in occupational health psychology, an interdisciplinary field representing a broad range of backgrounds, interests, and specializations. Occupational health psychology concerns the application of psychology to improving the quality of work life and to protecting and promoting the safety, health, and well-being of workers.

The journal has a threefold focus, including organization of work, individual psychological attributes, and work–nonwork interface in relation to employee health, safety, or well-being.

The journal seeks scholarly articles, from both researchers and practitioners, concerning psychological factors in relationship to all aspects of occupational safety, health, and well-being.

Included in this broad domain of interest are

- articles in which work-related and nonwork-related psychological factors play a role in the etiology of occupational safety, health, and well-being
- articles examining the dynamics of occupational safety, health, and well-being
- articles concerned with the use of psychological approaches to improve occupational safety, health, and well-being

Special attention is given to articles with a prevention and a promotion emphasis. Authors should consider the financial costs and economic benefits of prevention and promotion programs they evaluate.

Manuscripts dealing with issues of contemporary relevance to the workplace, especially regarding the unique challenges of occupational safety, health, and well-being experienced by minority, cultural, or occupationally underrepresented groups, or topics at the interface of work and nonwork, are encouraged.

Each article should represent an addition to knowledge and understanding of occupational health psychology.

Prior to submission, please carefully read and follow the submission guidelines detailed below. Manuscripts that do not conform to the submission guidelines may be returned without review.

Submission

To submit to the Editorial Office of Peter Y. Chen, please submit manuscripts electronically through the Manuscript Submission Portal in Microsoft Word (.doc) format.

Peter Y. Chen, PhD
Department of Psychology
226 Thach Hall
Auburn University

Auburn, AL 36849 USA

Manuscripts submitted for publication consideration in the *Journal of Occupational Health Psychology* are evaluated according to the following general criteria:

- Mastery of the relevant literature
- Theoretical/conceptual framework
- Measures of key constructs
- Research design
- Data analysis
- Interpretations and conclusions
- Writing style (clarity)
- Appropriateness of topic for *Journal of Occupational Health Psychology*
- Theoretical contribution to occupational health psychology
- Practical implications for occupational health psychology

Length of Submission
Standard manuscripts may not exceed 40 double-spaced pages (excluding figures, tables, references, and appendices). Research Note (also known as Kevin's Corner) manuscripts may not exceed 20 double-spaced pages (excluding figures, tables, references, and appendices).

Additional materials, if needed, can be placed in a supplemental materials file. Submission letters should include a statement regarding any possible conflict of interest in conducting or reporting of the research and a statement of compliance with APA ethical standards. Authors can (but are not required to) suggest up to five reviewers who are especially qualified to review their work and who would not have a conflict of interest in serving as a reviewer.

Masked Review Policy
The journal accepts submissions in masked review format only.

Each copy of a manuscript should include a separate title page with author names and affiliations, and these should not appear anywhere else on the manuscript. Furthermore, author identification notes should be typed on the title page. Authors should make every effort to see that the manuscript itself contains no clues to their identities.

Manuscripts not in masked format will not be reviewed.

Please ensure that the final version for production includes a byline and full author note for typesetting.

Manuscript Preparation
Prepare manuscripts according to the *Publication Manual of the American Psychological Association* (6thedition). Manuscripts may be copyedited for bias-free language (see Chapter 3 of the *Publication Manual*). Review APA's Journal Manuscript Preparation Guidelines before submitting your article.

Double-space all copy. Other formatting instructions, as well as instructions on preparing tables, figures, references, metrics, and abstracts, appear in the *Manual*.

Additional guidance on APA Style is available on the APA Style website.

Below are additional instructions regarding the preparation of display equations, computer code, and tables.

Display Equations

We strongly encourage you to use MathType (third-party software) or Equation Editor 3.0 (built into pre-2007 versions of Word) to construct your equations, rather than the equation support that is built into Word 2007 and Word 2010. Equations composed with the built-in Word 2007/Word 2010 equation support are converted to low-resolution graphics when they enter the production process and must be rekeyed by the typesetter, which may introduce errors.

To construct your equations with MathType or Equation Editor 3.0:

- Go to the Text section of the Insert tab and select Object.
- Select MathType or Equation Editor 3.0 in the drop-down menu.
- If you have an equation that has already been produced using Microsoft Word 2007 or 2010 and you have access to the full version of MathType 6.5 or later, you can convert this equation to MathType by clicking on MathType Insert Equation. Copy the equation from Microsoft Word and paste it into the MathType box. Verify that your equation is correct, click File, and then click Update. Your equation has now been inserted into your Word file as a MathType Equation.
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Use Word's Insert Table function when you create tables. Using spaces or tabs in your table will create problems when the table is typeset and may result in errors.

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- **Authored Book:**
  Rogers, T. T., & McClelland, J. L. (2004). *Semantic cognition: A parallel distributed processing approach.*Cambridge, MA: MIT Press.

- **Chapter in an Edited Book:**
  Gill, M. J., & Sypher, B. D. (2009). Workplace incivility and organizational trust. In P. Lutgen-Sandvik & B. D. Sypher (Eds.), *Destructive organizational communication: Processes, consequences, and constructive ways of organizing* (pp. 53–73). New York, NY: Taylor & Francis.

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Other Information

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Appendix I: Confirmation of Ethical Approval

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Appendix J: Permission to use The Compassionate Engagement and Action Scales and The Fear of Compassion Scales

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Appendix K: Licence to use Maslach burnout inventory

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Appendix L: Licence to use WEMWBS

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Appendix M: Recruitment advertisements

Facebook post

Complete a short online survey to help new research into burnout in teachers.

As part of my doctoral research project, I am researching the predictors of wellbeing in teachers in schools in the United Kingdom. Below there is a link to a website that provides more information about the research and the link to the survey. Please take a look at website and consider completing the survey if you are currently a teacher in the UK, teaching children and young people from Reception to Year 13.

If you are unable to take part in the research yourself, feel free to share this post with any of your teacher friends! Thank you.

Email to be circulated by Head Teachers and by the NUT

I am currently studying a Doctorate in Clinical Psychology at the University of Hull. I am looking for teachers to take part in my doctoral research project. I am researching factors that may contribute predict levels of well-being in teachers. It is hoped that results from this research could guide implementation of appropriate interventions in schools to improve teacher well-being.

I have included a link to my website that provides more information about the research and the link to the survey. Please take a look at website and consider completing the short online survey. The survey will take around 30 minutes and can be saved and returned to at a later date if you don't have time to complete it in one sitting.

Information for the NUT's termly newsletter

My name is Laura Hadgett and I am currently studying a Doctorate in Clinical Psychology at the University of Hull. I am looking for teachers to take part in my doctoral research project.

There are many challenges working within the education sector. Difficulties have been found to have widespread impacts on teachers such as a poor work/life balance, not having enough time to spend with partners and family members, feeling undervalued and poor physical health.

There has been an increase in research into wellbeing and its relationship with compassion in the healthcare sector; however, no current research has been completed in the education sector. This research project will explore the relationship between wellbeing and compassion in teachers. It is hoped that results from this research could guide implementation of appropriate interventions in schools.

Below there is a link to a website that provides more information about the research and the link to the survey. Please take a look at website and consider completing the survey if you are currently a teacher in the UK, teaching children and young people from Reception to Year 13.

Appendix N: Information Sheet

Predictors of teacher well-being Page 1: Background and information

Background

There can be many challenges working within the education sector. Difficulties have been found to have widespread impacts on teachers such as a poor work/life balance, not having enough time to spend with partners and family members, feeling undervalued and poor physical health.

There has been an increase in research into wellbeing and its relationship with compassion in the healthcare sector; however, no research about this has been undertaken in the education sector. This research project will explore the relationship between wellbeing and compassion in teachers. It is hoped that results from this research could guide implementation of appropriate interventions in schools.

What will it involve?
It will involve you taking part in an anonymous online questionnaire. **It will take around 25 minutes to complete.** You will be

able to save your responses and return to the questionnaire to complete it at a later time.

Do I have to take part?

It is your choice to take part. You do not have to take part.

What if I change my mind?

You can change your mind at any point whilst completing the survey by closing down the tab. Once you have submitted your responses at the end of the survey you will not be able to withdraw your data as the survey is anonymous.

Will my details be kept confidential?

The survey is anonymous and will not ask for any of your personal details. All of the information you provide will be kept confidential. The results of the study will be written up and may be published in academic reports or journals and presented at conferences. You will not be identified in these.

Who is organising the study?

The researcher is a Clinical Psychology Doctorate student at the University of Hull and this project is being undertaken as part of this qualification. The project is overseen by research supervisors at the university. The study has been reviewed by the Faculty of Health Sciences research ethics committee at the University of Hull and been given a favourable opinion.

For any further information, or for any questions you may have about this research study, please do not hesitate to contact the researcher or her supervisors at:

l.hadgett@2016.hull.ac.uk

T.alexander@hull.ac.uk

P.molyneux@hull.ac.uk

Appendix O: Consent Form

Page 2: Consent

Consent Form

1. I confirm that I have read and understand the information regarding this study and have had the opportunity to consider the information. * Required

2. I understand that taking part is voluntary and that I am free to withdraw at any time by closing the survey tab. I would not need to give any reason for withdrawal. * Required

3. I understand that all information I provide will be anonymous. The data collected during the research will be looked at by individuals from the University of Hull for data analysis purposes. I give permission for these individuals to have access to my data. * Required

Appendix P: Sources of Support

Further support

If you feel you have been affected in any way by the content of this study, support can be found by seeing your GP, or at the following sources:

Mind - https://www.mind.org.uk/
Samaritans - https://www.samaritans.org/
Education Support Partnership -
https://www.educationsupportpartnership.org.uk/

Appendix Q: Demographic Questionnaire Items

Page 3: Demographic Information

4. **How old are you?** * Required

- Aged 21-30
- Aged 31-40
- Aged 41-50
- Aged 51-60
- Aged 61-65
- Aged 65+

5. **What is your gender?** * Required

- Male
- Female
- Transgender
- Prefer not to say
- Other

5.a. If you selected Other, please specify:

6. **Which description best describes the school you currently work in?** * Required

Please select between 1 and 3 answers.

- Primary School
- Secondary School
- Sixth Form/ College

7. **Which description best describes the school you currently work in?** * Required

Please select exactly 1 answer(s).

- State Sector
- Independent Sector

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8. Which description best describes the school you currently work in? *
Required

- Academy
- Non- Academy

9. Which description best describes the school you currently work in? *
Required

- Religous
- Non- Religous

10. What is the post code of your school? ***Please note that this information will not be used to identify you or your school. It will be used to determine the Socio Economic Status of the post code.*** Optional

11. How many years have you been working in the profession? * *Required*

- 0-5 years
- 6-10 years
- 11-15 years
- 16-20 years
- 21- 25 years
- 26-30 years
- 31-35 years
- 36+ years

12. Which option best describes your level of responsibiltiy in your role? *
Required

- Teacher
- Middle Management
- Senior Leader

Appendix R: Maslach Burnout Inventory- Educators Survey sample items

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Appendix S: Warwick Edinburgh Mental Well-being Scale

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Appendix T: The Compassionate Engagement and Action Scales

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Appendix U: Fears of Compassion Scales – Responding to compassion from others

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