MAJOR RESEARCH PROJECT

LITERATURE REVIEW: Self-Compassion and Burnout Amongst Those in Caring Professions: A Systematic Literature Review

EMPIRICAL PAPER: The Role of Self-Compassion as a Moderator in the Relationship Between Burnout and Psychological Wellbeing in Staff Working with People with Learning Disabilities

Submitted by **Dr Victoria Brooks**, to the University of Exeter

as a thesis for the degree of **Doctor of Clinical Psychology, 2nd May 2018**

I certify that all material in this thesis which is not my own work has been identified and that no material has previously been submitted and approved for the award of a degree by this or any other university.

Signature: 

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Author's Declaration

All work conducted on both the literature review and the empirical paper were completed by the author alone.

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SYSTEMATIC LITERATURE REVIEW

Self-compassion and burnout amongst those in caring professions: A systematic literature review

Trainee Name:	**Dr Victoria Brooks**
Primary Research Supervisor:	**Dr Anke Karl** Senior lecturer in clinical psychology, University of Exeter
Secondary Research Supervisor:	**Dr Anna Adlam** Senior lecturer and clinical psychologist, University of Exeter
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Systematic Literature Review

Abstract

Objective. Care staff commonly experience burnout during their careers. Self-compassion is demonstrated to be associated with positive psychological health. Mindfulness interventions are demonstrated to reduce rates of burnout and increase self-compassion across mixed samples. To date, no systematic review has studied the effects of psychological interventions on both self-compassion and burnout solely employing samples of care staff. This systematic review seeks to identify and evaluate studies which explore the impact of psychological interventions on levels of self-compassion and burnout in care staff. Specifically, the review question is: *How do psychological (mindfulness, burnout, and wellbeing) interventions affect levels of burnout and self-compassion in populations of care staff?*

Methods. Quantitative (or mixed-methods) studies operationalising burnout and self-compassion as outcome variables following a psychological intervention aiming to reduce burnout amongst care staff were selected from multi-disciplinary and subject-specific databases published prior to 1st March 2018. The systematic literature search yielded 385 records, with 235 non-duplicated results. Screening of the 37 full-text articles culminated in seven eligible studies synthesised in this review.

Results. Results confirmed that psychological interventions can impact all dimensions of burnout and self-compassion in samples of care staff. Overall results remain preliminary or inconclusive due to a small number of studies; the majority of studies employing small, underpowered samples; and where sufficiently powered and statistically significant, effect sizes were often small to medium.

Conclusions. Psychological interventions appear to effect rates of self-compassion and burnout; however, results are preliminary until further research with sufficiently powered samples demonstrate significant results and interventions demonstrate larger effect sizes.

Keywords: *Self-compassion; burnout; psychological interventions; mindfulness; Mindfulness-based stress reduction (MBSR); systematic review; care staff; healthcare staff*

Introduction

This systematic literature review explores the impact of psychological interventions on levels of self-compassion and burnout in staff working in the caring professions. Since the development of the construct of self-compassion (Neff, 2003), there have been a number of studies examining its relevance to psychological outcomes, including burnout. However, to date, no systematic review has evaluated the impact of interventions on self-compassion and burnout. To address this gap, this review will systematically review research which operationalises burnout and self-compassion as outcome variables in the context of a psychological – such as mindfulness, burnout, or resilience - intervention.

Burnout

'Burnout' is defined as a cumulative process of emotional exhaustion, depersonalisation (Epstein & Privitera, 2016) and withdrawal, which an individual can develop as a response to increased workload and institutional stress (The American Institute of Stress, 2011). The term was initially coined by American psychologist Herbert Freudenberger who used it to describe the consequences of severe stress and high ideals experienced by people working in the helping professions (Lloyd, 2014). Maslach and Jackson (1986) suggested that the consequences of burnout are dangerous for both staff and service-users and can lead to reduced quality of care. Burnout is a factor which influences low staff morale, 'absenteeism' (defined as habitual or wilful evasion of work), and high job turnover (Maslach, 1978). Mental health is the single largest cause of absenteeism due to work-related illness (Cooper & Dewe, 2008). All those involved in delivering care-services should be concerned about the possibility of burnout and how it can be prevented (Alexander & Hegarty,

2000). Overall, it is an area that deserves much more research than it has received so far (Orton & Gray, 2015).

Self-compassion

Researchers have sought to investigate factors which buffer against forms of psychological distress (Woo Kyeong, 2013), such as depression and burnout. Recently, interest has turned to the concept of self-compassion (Woo Kyeong, 2013) as a potential buffer mechanism. Neff (2015) defines self-compassion as: 1. A dynamic balance between the compassionate versus uncompassionate ways that individuals emotionally respond to pain and failure (that is, with kindness versus judgment); 2. A cognitive understanding of one's predicament (that is, as part of the human experience/common humanity, versus it being isolating); and 3. Paying particular attention to suffering (that is, in a mindful versus over-identified manner). When people fail, they may experience loss or rejection, feel humiliated, or confront other negative events; and they may perceive that their experience is personal and unique, rather than recognising that everyone experiences difficulties and suffering (Allen & Leary, 2010). This aspect of self-compassion may be particularly relevant to burnout, particularly when considering the link between high levels of depersonalisation and burnout (Dennis & Leary, 2007).

Self-compassion and Wellbeing

Psychological wellbeing (PWB) is considered by Ryff (1989) as a set of psychological features involved in positive human functioning (Keyes, Shmotkin, & Ryff, 2002; Ryff, 1989). Research on PWB suggests that it is only partly a function of

environmental circumstance, and there may be personality characteristics or resilient disposition toward experiencing high levels of wellbeing in adverse circumstances (Wei, Liao, Ku, & Shaffer, 2011). The importance of PWB as a construct of wellbeing is demonstrated by research that shows positive relationships between PWB (dimensions environmental mastery, personal growth, and self-acceptance) and levels of resilience (Sagone, & De Caroli, 2014). The American Psychological Association (2014) definition of resilience demonstrates its importance in the face of external stress, as follows “the process of adapting well in the face of adversity, trauma, tragedy, threats or even significant sources of stress (para. 4).” Specifically, research found that the more participants interpreted mastery over their environment, perceived themselves as growing and developing, and experienced self-acceptance, the greater levels of resilience they demonstrated (Sagone, & De Caroli, 2014).

There is growing evidence indicating that self-compassion can function as a buffer against negative states. Higher scores on the self-compassion scale (SCS; Neff, 2003) are shown to be related to lower scores on depression and anxiety self-report scales (e.g., Neff, 2003). Self-compassion is said to enhance wellbeing due to its inherent ability to help people feel connected (to others and humanity), cared for, and emotionally calm (Gilbert, 2005). The mechanism through which self-compassion positively impacts psychological health is through the promoting of adaptive emotion regulation in times of stress (Finlay-Jones, Rees, & Kane, 2015).

Research found that self-compassion buffered people against negative self-feelings when imagining distressing social events (Leary, Tate, Adams, Batts Allen,

& Hancock, 2007). Additionally, higher self-compassion has been correlated with lower levels of carer burden (Bluth, Roberson, & Gaylord, 2015). In undergraduates, self-compassion served to buffer against anxiety, and an increase in self-compassion led to increased PWB (Neff, Kirkpatrick, & Rude, 2007). The positive self-compassion subscales significantly moderated the relationship between the "self-coldness" dimension of the self-compassion subscale and depressive symptoms in the (German) general population (Körner et al., 2015).

Through moderation analyses in Korean psychology students, results showed that burnout was negatively associated with PWB and positively associated with depression (Woo Kyeong, 2013). Self-compassion was positively associated with PWB and negatively associated with depression (Woo Kyeong, 2013). After entering the interaction term (moderating effect of self-compassion), there was an 8.2% increase in the variance explained by this model. Furthermore, in the relationship between academic burnout and depression, there was a 4% increase in the variance explained in the PWB and depression model, following the moderating role of self-compassion (Woo Kyeong, 2013). These relationships may be particularly important in samples of caring staff where burnout may be high. The impact of this is detrimental to the employee, colleagues, and potentially also the people receiving care.

Interventions Increasing Levels of Self-compassion

A systematic review was conducted by researchers in 2014 (Boellinghaus, Jones, & Hutton, 2014). The authors specifically evaluated loving-kindness (LK) and

mindfulness-based (MB) interventions, specifying a sample of healthcare staff. However, the samples constituted three clinical psychology trainee cohorts; two nursing student cohorts; hospital employees including administrative staff; one diverse group (comprising social workers; therapists; psychologists and physicians); two counselling psychology masters student cohorts; medical and pre-medical students; and trainee family therapists. Outcomes evaluated within the review (Boellinghaus et al., 2014) were varied (including depression; cortisol; anxiety; mindfulness), sometimes also including self-compassion and burnout as outcome variables (in four and three studies respectively). The main conclusion from the review was that participants felt better able to empathise with their clients following the intervention. This was measured through various empathy scales and qualitative interviews with participants.

The authors highlight that their sample did not solely comprise healthcare occupations. Therefore, the authors included research involving other samples, on the grounds that it might be possible to tentatively generalise findings from these to healthcare samples. Several studies included clinical psychology trainees as their sample type, training which arguably introduces additional stressors (such as academic) perhaps not typical of general healthcare staff's' lives. Other samples mainly comprised students or trainees in other healthcare professions, which may make generalisability to non-student or trainee samples difficult - given the unique demands, lifestyle, and protective factors involved with being a student, as well as the potential for changes in career immediately following qualification. The authors call for future research to extend the evidence base to healthcare occupations (Boellinghaus et al., 2014).

It would be useful to build on this review by specifically examining the impact of an intervention on levels of burnout, and Neff's operationalisation of self-compassion. It would be prudent to extend criteria to the inclusion of care staff, with the specific exclusion of student and trainee samples, due to potentially extraneous variables associated with student and trainee status, and therefore the non-generalisability of, this sample.

In summary, previous research indicates a link between self-compassion and burnout; however, research conducted to-date employs mixed samples, often comprising students. The concept of burnout is relevant to those working in the caring professions and the concept should be examined with this group specifically. Therefore, the current review aims to identify interventions that have been conducted to modify levels of burnout and self-compassion in care staff. The review will address the question: *How do psychological (mindfulness, burnout and wellbeing) interventions affect levels of burnout and self-compassion in samples of care staff?*

Methods

A systematic review summarises the results of available carefully designed healthcare studies and provides a high level of evidence on the effectiveness of healthcare interventions (Higgins & Green, 2011). As such, judgments can be made about the available evidence, and can be used to inform recommendations for healthcare (Higgins & Green, 2011). Specifically, a systematic review is one that 'summarises the evidence on a clearly formulated review question, according to a predefined protocol, using systematic and explicit methods to identify, select and

appraise relevant studies, and to extract, analyse, collate and report their findings.' (National Institute for Clinical Excellence, webpage, 2018). This systematic review followed the Preferred Reporting Items for Systematic Review and Meta-analysis Protocol (PRISMA-P) to guide identification, screening, eligibility and synthesis of studies (Moher et al., 2015).

Eligibility Criteria

Methodological characteristics of studies included in this review are derived from PICOS (Population; Intervention/Exposure; Comparator; Outcome; Study characteristics) criteria, as outlined in Table 1. Study designs eligible for the review question include experimental, intervention, and pre-and-post design studies that examined both self-compassion and burnout as outcome variables and were selected from multi-disciplinary and subject-specific databases published prior to 1st March 2018.

Table 1. *Inclusion and exclusion criteria for systematic literature reviewing*

	Inclusion	Exclusion
Population/sample	-Care occupations – such as healthcare staff, social workers, teachers; -Studies conducted from 2003-2018 to limit search to only those utilising Neff's (2003) validated measure of self-compassion (SCS).	-Students (unless also working full-time clinically in a health or care role); -Non-care occupations, such as corporate/business participants; -People aged under 18; -Research involving participants conducted prior to 2003; -Ministers of religion or clergypersons; -Animal-based care/health workers.
Exposure/intervention	-Psychological (mindfulness, wellbeing, or burnout) interventions (i.e., pre and post) aiming to improve wellbeing; -Designs may be prospective; retrospective; longitudinal; cross-sectional; and experimental	-Simulation studies; -Entirely qualitative studies (i.e., not mixed-methods); -Questionnaire validation studies.
Comparator	-Pre and post comparisons -Wait list control; -Placebo-control	
Outcome	-Burnout (using the Maslow Burnout Inventory) and self-compassion (using the SCS)	-Other measures (i.e., not MBI and SCS) of burnout and compassion/self-compassion
Study characteristics	-Quantitative; mixed-methods	-Qualitative
Limitations		-Studies published in languages other than English; -Unpublished studies or theses.

Caring occupations. As outlined in the introduction, there is a body of research that investigates burnout in the context of caring occupations. For the purpose of the current review, caring occupations included health and care staff,

teachers, social workers, care workers, allied health staff, and therapists. Caring professions applied to those working with people, as opposed to veterinary medicine or care. Clergypersons and ministers of religion were also excluded on the basis of religious beliefs and faith possibly being an extraneous variable in regard to motivation to enter these roles. Staff could be based in any country in the world; however, articles needed to have been published in English.

Self-compassion. Articles needed to include the specific operationalisation of self-compassion, as defined by Neff (2003), by means of the Self-Compassion Scale (SCS) (Neff, 2003). As such, articles prior to 2003 were excluded from the search.

Burnout. There are an array of measures that operationalise burnout, including the Maslach Burnout Inventory (MBI) (Maslach, Jackson, & Leiter, 1997); the Professional Quality of Life Scale (PROQOL) (Stamm, 2010); World Health Organisation WHOQOL brief quality of life assessment (World Health Organisation (WHO), 1998); The Copenhagen burnout inventory (CBI) (Kristensen, Borritz, Villadsen, & Christensen, 2005); and the Oldenburg burnout inventory (OBI) (Demerouti & Bakker, 2007). Others have been created for specific sample or patient groups - such as the Individualised neuromuscular quality of life (INQoL) (Sadjadi et al., 2011) scale for muscle disease patients; and the Quality of Life Scale (QOLS) (Burckhardt & Anderson, 2003), for those with chronic health conditions.

However, the most commonly used instrument for the measurement of burnout is the Maslach Burnout Inventory (Poghosyan, Aiken, & Sloane, 2009) (MBI; Maslach & Jackson, 1981, 1986; Maslach et al., 1996). The original MBI was based on the following definition of burnout (Maslach & Jackson, 1986, p.1): “Burnout is a syndrome of emotional exhaustion, depersonalisation and reduced personal

accomplishment that can occur among individuals who do ‘people work’ of some kind”. On the basis of it being the most widely used measure of burnout; and hitherto fitting the purpose of the current review – samples of those in the caring professions – papers were selected only if they operationalised burnout by means of the MBI. The table below outlines the dimensions of both the MBI and SCS scale.

Table 2. *Self-compassion scale and Maslow burnout inventory scale items*

SCS (SCS) scale items	**Maslow Burnout Inventory scale items**
Self-kindness (SK)	Personal accomplishment (PA)
Self-judgement (SJ)	Emotional exhaustion (EE)
Common humanity (CH)	Depersonalisation (DP)
Isolation (IS)	
Mindfulness (MF)	
Overidentification (OI)	

Information Sources

An initial scoping review was undertaken to ensure there were sufficient articles available to constitute a full systematic literature review. Relevant literature was identified using a computerised search of multi-disciplinary and subject-specific databases within Web of Science; Medline; PsycINFO; and Ovid online portals. Additional searches were conducted of the Cochrane review database and hand-searches were conducted of identified articles’ reference lists (National Institute for Clinical Excellence, 2012). With reference to the Cochrane Library guidance (Higgins & Green, 2011) search terms were also tested to identify the most relevant and comprehensive search terms to be operationalised. It was clear that the majority of

the research was either undertaken with care staff, or student samples, and that since self-compassion was a relatively new construct, articles published prior to conception of self-compassion (Neff, 2003) in 2003 were filtered out of the search.

To this end, and to ensure that all possible articles were captured within the search, deliberately wide search-terms were operationalised, including: '*"self-compassion" AND "burnout"*'. Specifying particular sample types limited results generated, therefore this was not operationalised in the final search strategy.

Search Strategy

The titles and full abstracts of articles generated by the search terms were screened using the PICOS criteria (Higgins & Green, 2011) as outlined in Table 1. Abstracts were primarily reviewed for the keywords – self-compassion and burnout. In some cases, the methodology was scanned for the key outcome measures, if not apparent in the title or abstract. An independent reviewer additionally assessed 38 (10%) articles for reliability yielding 100% inter-rater reliability for inclusion and exclusion of identified studies. Identified articles were screened in full for inclusion/exclusion, and a final review was made of the remaining articles to ensure they completely fit the criteria.

Study Quality Evaluation

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses - The PRISMA Statement - (Liberati et al., 2009; Moher et al., 2015) was employed as best practice framework to the conduct of the systematic review. The NIH Quality Assessment Tool (QAT; National Heart, Lung and Blood Institute (NIH), 2018) to evaluate research studies was utilised. This included assessment of research

question; study population; eligibility criteria; sample size justification; exposure assessed prior to outcome measurement; time-frame specified to observe an effect; different levels of exposure of interest; exposure measures and assessment; repeated exposure assessment; outcome measures; blinding of outcome assessors; follow-up rate; and statistical analyses.

The researcher rated all eligible papers using QAT and the independent rater analysed two studies for reliability of quality criteria. No disagreement on component ratings or global QAT quality ratings emerged. PICOS criteria and study results on the two key variables (self-compassion and burnout) and their relationship were extracted, as reported in the results section.

Results

A total of 385 articles were derived from the search-terms across the identified databases and reference list searches. After removal of duplicates, 235 titles and abstracts were screened for inclusion or exclusion, and the other 150 did not meet the specified PICOS criteria, relating to specified outcome measures and sample type. 37 full-text records were assessed for eligibility based on specified inclusion and exclusion criteria (Table 1). Seven records met full eligibility criteria and data was extracted using QAT. The independent reviewer confirmed eligibility and data extraction of two records. Reference lists of all full-text papers were reviewed for relevant research articles; however, no additional publications or grey literature were identified.

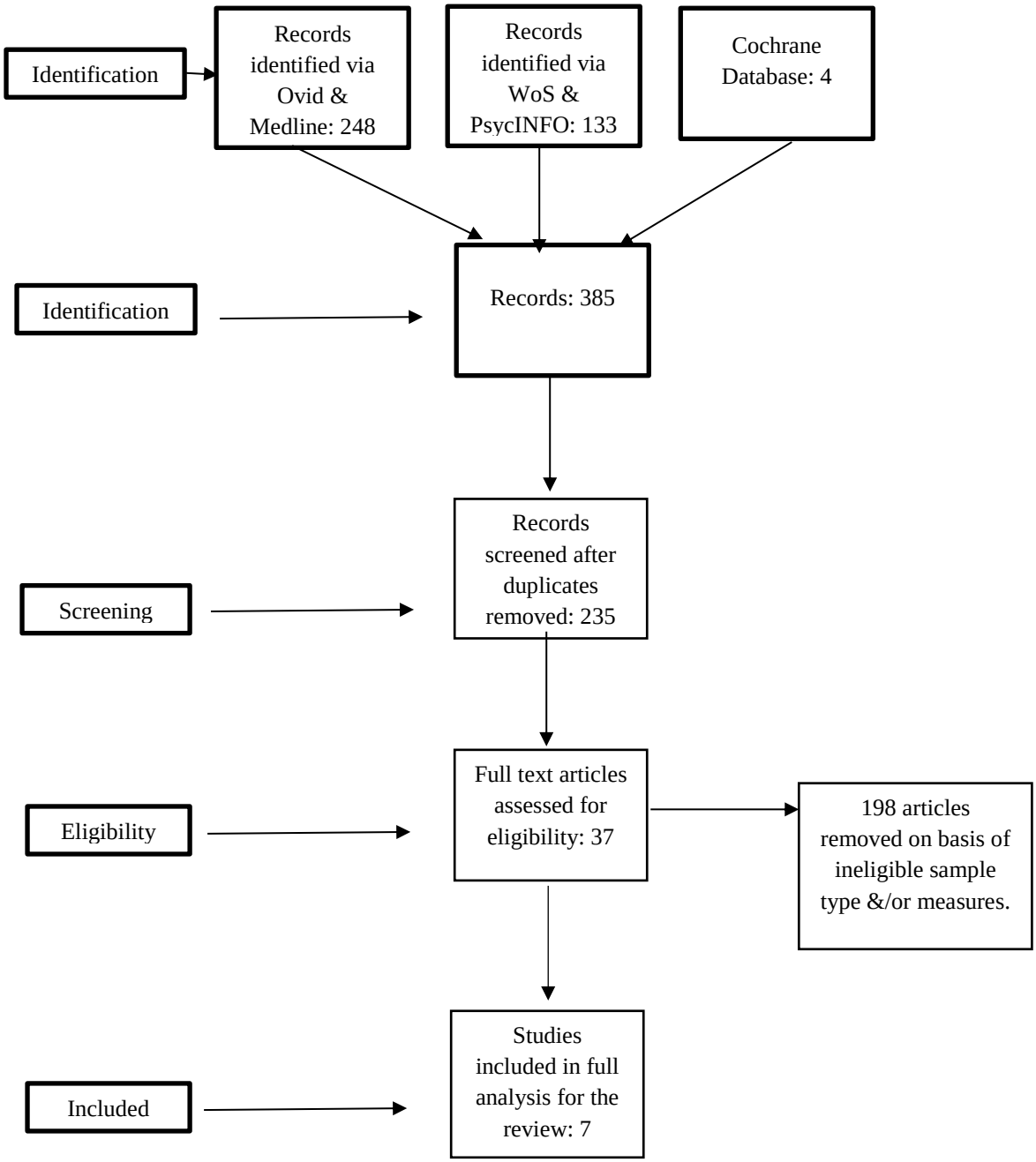

Figure 1. *Results of literature review screening and searching using Ovid; Medline; Web of Science; PsycINFO and Cochrane research databases.*

Population. Of the seven studies identified that met full criteria for inclusion in the review, all samples of participants comprised care occupations (including elementary school teachers (1); mental health workers (2); nurses (3 and 7); family medicine physicians (4); nursing staff – though also including technicians and assistants (5); and health and care occupations – including social, physical and mental health workers, respectively; 6 and 7).

Exposure/Intervention. All seven studies employed an intervention, including five mindfulness-based stress reduction (MBSR; or modified MBSR: studies 1, 2, 5, 6, 7) interventions; one burnout intervention (study 3); and one wellness intervention (study 4; incorporating leadership; mindfulness; and self-compassion) respectively.

Comparator. Of the seven intervention studies, three (1, 6, and 7) were randomised controlled trial (RCT) designs and the other four (2, 3, 4, and 5) were pre-and-post designs. Three (1, 6, 7) of the intervention studies employed waiting list control comparator groups; and four (2, 3, 4, 5) utilised repeated-measures pre-and-post intervention samples.

Outcome. Of the seven studies identified, all included the validated MBI and SCS outcome measures. All studies included additional (such as mindfulness; empathy; quality of life; depression; perceived stress, as well as biological measures – such as cortisol – measures of symptoms; and nurse/teacher behaviour) measures of symptoms and wellbeing. Studies 4, 5, and 6 were rated as poor; studies 1, 2, and 3 were rated as fair; and study 7 was rated as good (see table 3).

Study characteristics. Designs/analyses were primarily quantitative, with one that was mixed-methods (5).

Table 3. *Summary of eligible studies identified through systematic literature review*

#	Authors	*Sample*[1]	Country (region)	Study design	*Exposure*	*Comparator*	*Outcome*	Results[2]/ conclusions	Strength/Limitation/ QAT score
1	**Flook, Goldberg, Pinger, Bonus, & Davidson, 2013**	Public elementary school teachers	USA (Mid-West)	RCT – pilot trial	Modified Mindfulness based stress reduction (MBSR) course - the standard MBSR curriculum, adapted for teachers, to focus on integrating skills into the classroom.	10 Randomised to intervention; 8 randomised to waiting list control group	Symptom Checklist; 5 Factor Mindfulness Scale (FFMS); *SCS*; *MBI*; Teacher Classroom Behaviour; Cortisol; Cognitive function; Mindfulness compliance	Participants in intervention group showed significant reductions in psychological symptoms and burnout; Improvements in observer-rated classroom organisation and performance on a task of affective attentional bias; Increases in self-compassion. Control group showed declines in cortisol functioning over time and increases in burnout; Changes in mindfulness were correlated in the expected direction across several outcomes (psychological symptoms, burnout, sustained attention) in the intervention group.	**Score:** Fair **Strengths:** Small sample acknowledged – Cohen's *d* employed. Effect sizes included. Results of behavioural and self-report measures congruent. Intervention tailored to the sample (teachers). **Limitations:** Small sample size with limited power. Pilot study only. Long-term impact not assessed.

[1] Columns outlining PICOS criteria are illustrated with sub-heading titles in italics.
[2] Effect sizes are reported in specific results Tables 4 and 5 below.

2	**Raab, Sogge, Parker, & Flament, 2015**	Female mental health workers	Canada	Within-subjects' pre and post; pilot study / open-trial design	MBSR educational intervention	22 within-subjects' female mental health workers	*MBI; SCS*; Quality of Life Inventory (QOLI).	SCS score was significantly higher following the intervention; Specifically increases were observed on self-judgement; common humanity; Decreases were observed on isolation and over-identification subscales; burnout and QOL were not affected by the intervention.	**Score:** Fair **Strengths:** Interesting to focus on female healthcare occupations within the sample. Validated measures – only one additional outcome measure (QOL scale) to the SCS and MBI. **Limitations:** It would also be useful to conduct the study with male healthcare staff. Authors did not list effect sizes – later converted for this review. Open trial design. Low sample size.
3	**Rodrigues, Cohen, McQuarrie, & Reed-Knight, 2017**	Nurses in a paediatric in-patient unit (physical health diagnoses and chronic pain – including functional – conditions)	USA (South East)	Single-group pre-and-post within-subjects'	Burnout intervention comprising four modules: Helping patients view pain as multi-faceted/shift attention to functioning; Problem-solving & reflective	33 nurses pre-and-post intervention; No comparator within-subjects' cross-sectional.	Feasibility; acceptability; Nurse Behaviour Assessment (developed for this specific study); Negative pain beliefs; *SCS*; General health (GHQ); *MBI*.	Significant increases in reports of using the target behaviours ('educate on psychosocial influences'; 'self-care'; and 'vent to colleague'. Significant improvements in self-compassion; general health and emotional exhaustion (burnout). No significant improvements in	**Score:** Fair **Strengths:** Very specific/homogenous sample – nurses working with youth with chronic pain. Lists effect sizes (and they are large for SCS, MBI). Cost-effective – single intervention with large effect sizes. Included a 3-month follow-up evaluation.

					listening skills; Highlighting positives about patients when venting with colleagues; Improving nurses' self-care strategies.			other variables, including 'Empathise with patient'.	**Limitations:** Single-session intervention following which the authors argue for a more comprehensive approach to reduce burnout related to multiple individual, unit and system factors. Small sample/as such, preliminary findings. Ongoing burnout identified 3-months post-intervention. Lack of randomisation (nurses self-selected intervention groups).
4	**Runyan, Savageau, Potts, & Weinreb, 2016**	Second year family medicine physicians during residency period	USA (Massachusetts)	Pre-and post within-subjects' pilot study	New one-month wellness curriculum/ rotation for physicians, focusing on: leadership; mindfulness and self-compassion skills in order to enhance empathy and reduce stress.	9 within-subjects' participants completed the pre-measures, whilst 12 completed the post-measures.	*MBI; SCS*; Perceived Stress Scale (PSS) and Jefferson Empathy Scale.	Residency wellness scores improved from baseline to 3-months. Only the mindfulness sub-scale of the SCS was statistically significant however, due to small sample/insufficient power. Improvements in self-kindness & compassion (SCS); decreases in self-judgement (SCS); reduced perceived	**Score:** Poor **Strengths:** Validated measures and defined curriculum that could be replicated/modified. **Limitations:** Very low sample size/insufficient power leading to lack of inferential statistics and trends in results.

								stress at follow-up; trends towards significance in the expected direction on improved efficacy; decreased exhaustion; and empathy.	
5	**dos Santos et al., 2016**	Nursing staff (nurses; technicians; nursing assistants) working in a hospital	Brazil (Sao Paulo)	Pilot study, pre-and-post & follow-up, mixed methods (quantitative and qualitative); within-subjects'	6-week Loving-kindness (LK) and mindfulness meditation-based intervention (MBI).	13 nursing staff; No comparator – within-subjects'.	PSS; *MBI*; Beck Depression Inventory (BDI); State-Trait Anxiety Inventory (STAI); Satisfaction With Life Scale (SWLS); *SCS*, WHOQOL-quality of life assessment; Work Stress Scale (WSS).	Significant reduction in depression; perceived stress; burnout and trait anxiety; a significant increase in physical and psychological domains of the quality of life scale. At follow-up the psychological and physical domains of the QOL scale had significantly declined. No other long-term significant differences were found.	**Score:** Poor **Strengths:** Included 6-week follow-up analyses. **Limitations:** Very low sample size/lack of statistical power. Large number of possibly over-lapping outcome measures (such as stress; burnout; anxiety; satisfaction with life; quality of life; work stress). Wide sample of nursing staff, including technicians and assistants. No control group.
6	**Shapiro, Astin, Bishop, & Cordova, 2005**	Health and care professionals (e.g., physicians, nurses, social workers, physical	USA (Palo Alto)	Pilot study; RCT 2x2 between-subjects' design.	8-week MBSR intervention	18 experimental participants and 20 wait-list control participants.	Brief symptom inventory (BSI); *MBI*; PSS; SWLS; *SCS*	Compared with control participants, the intervention group demonstrated a significant mean reduction in perceived stress and increase in self-compassion.	**Score:** Poor **Strengths:** Ideas in the discussion about how to improve retention by incorporating the intervention into work schedules.

		therapists, and psychologists).						Intervention participants reported greater satisfaction with life; decreased job burnout; and decreased stress. Changes in self-compassion significantly predicted positive changes in perceived stress but did not have predicted power for satisfaction with life.	**Limitations:** Small sample size/lack of sufficient power. Insignificant results. Did not report SDs or effects sizes. 44% drop-out rate from the intervention.
7	**Verweij, Ravesteijn, Hooff, Lagro-Janssen, & Speckens, 2017**	Residents from all medical, surgical and primary care disciplines.	The Netherlands	RCT	8-week MBSR intervention	148 (71 intervention arm; 67 wait list control arm assigned ITT)	*MBI* (validated Dutch version – renamed Utrecht BO Scale (UBOS-C); Penn State Worry Measure; Five Factor Mindfulness Questionnaire (FFMQ); *SCS*; Mental Health Continuum-SF (MHC-SF); Jefferson Scale of Physician Empathy;	Post-intervention EE of the MBI (primary outcome measure) did not appear to be lower in the MBSR compared to control group. However, baseline levels of EE had a moderating effect on the outcome, indicating that residents with high baseline levels of emotional exhaustion did seem to benefit from the MBSR intervention. Secondary outcomes (including self-compassion and PA of the MBI) were significantly improved following the intervention.	**Score:** Good **Strengths:** Sufficiently powered RCT design. Utilised Intention to Treat (ITT) analysis. Reports Cohen's *d*. **Limitations:** Self-selecting participants. Did not examine potential changes across SCS scores; rather took the overall score, then reported on the 'positive' and 'negative' dimensions of the overall scale.

and medical errors.

Interventions Influencing Rates of Self-compassion and Burnout in Care Occupations

Seven studies examined psychological interventions (including mindfulness, wellbeing, and burnout interventions) which had an effect on levels of burnout and self-compassion in care occupations. Samples included teachers (1); nurses (3, 5); medics/physicians (4, 6, 7); mental health workers (2); nursing and health/care staff (5, 6, 7).

One study (7) included a larger - relative to the other smaller samples - sample size (N=148). Two studies had sample sizes with N ranging from 22 to 33; and four had small sample sizes with N ranging from 9 to 18. Only three studies (1, 6, and 7) employed an RCT-design, and four were pre-and-post designs (2-5). Studies 2, 5 and 6 were pilot studies. Only one study (7) achieved statistical power. Study 1 highlight the low sample size (N=10) for their study and that their employment of Cohen's *d* (Cohen, 1988) provides a metric for comparing effects that are not biased by sample size (Flook et al., 2013).

It is noteworthy that there were no UK-based samples and this finding is discussed in the discussion. Overall, study quality was mixed. Studies 1, 2, and 3 were given a QAT score rating of 'fair'; study 7 a score of 'good'; and studies 4, 5, and 6 were given a rating of 'poor'. Interventions involved four mindfulness-based stress reduction (MBSR) or adapted MBSR interventions. One intervention was modified for delivery to teachers; one delivered to mental health occupations; and two with medical and healthcare staff respectively.

Across studies, results showed that interventions increased the overall SCS in five cases (studies 1, 2, 3, 6 and 7). In two (4, 5) studies, however, overall SCS did not significantly change following the intervention. Across studies, five (of the six) dimensions of SCS improved following the intervention, as follows: self-judgement improved in study 2; common-humanity in studies 1 and 2; isolation in study 2; overidentification in study 2 and mindfulness in study 4. Interestingly, the self-kindness dimension of the SCS did not improve across any of the studies following the intervention.

Results showed that interventions improved overall MBI score in study 5. In studies 1 and 4, MBI score did not significantly improve following the intervention, and for study 6 there was only a trend towards significant improvement. Across studies, all three (emotional-exhaustion; personal accomplishment; depersonalisation) specific dimensions of burnout improved following the intervention. Specifically, emotional-exhaustion improved in studies 1 and 3 (but did not significantly improve in studies 2, and 7); personal accomplishment improved in studies 1 and 7; and depersonalisation improved in study 3, following the intervention. In terms of longer-term follow-up following the intervention, study 3 found significant improvements on both the SCS and MBI three months-post intervention, however, study 5 examined post-to-follow-up scores and found neither the MBI nor the SCS had significantly improved.

Table 4. *Interventions influencing levels of self-compassion and burnout by intervention type, addressing review research question.*

Intervention	Findings and statistics – BO		Findings and statistic – SC	
MBSR (Flook et al. 2003) #1	**Findings:** Intervention group had decreased EE (burnout) and increased PA (burnout) following intervention. Control group increased overall level of burnout (decrease on PA scale of burnout inventory).	**Statistics:** Burnout EE (intervention) *t*(9)=-2.42; p=.038); Cohen's *d* .25 (small effect size). Burnout MBI PA (intervention) *t*(9)=3.03; p=.014; Cohen's *d .99* (large). Burnout PA (control) *t*(7)=-2.35; p=.051; Cohen's *d* .99 (large).	**Findings:** Intervention group had higher SCS humanity scale score.	**Statistics:** Intervention SCS humanity (t(9)=3.43; p=.032); Cohen's *d* .97 (large effect size).
MBSR (Raab et al. 2015) #2	Changes in scores were in the expected direction, but statistically non-significant.		**Findings:** Sample increase in overall SCS score following intervention (and a decrease in self-judgement (SJ); improved common humanity (CH); decreased isolation and over-identification (OI) scales).	**Statistics:** Post intervention increase in overall SCS score *t*(21)=3.32; p=.003; Cohen's *d* 0.49 (medium). Post-intervention increase in SCS SJ *t*(21)=3.37; p=.003; Cohen's *d* 0.72 (med-large). Increase in SCS CH *t*(21)=2.26; p=.034; Cohen's *d* 0.39 (small).

				Decreased SCS isolation *t*(21)=2.24; p=.037; Cohen's *d* 0.34 (small). Decreased OI *t*(21)=2.57; p=.018; Cohen's *d* 0.45 (small-medium).
Burnout (Rodrigues et al., 2017) #3	**Findings:** Sample increase in burnout (DP and EE) following intervention Pre to 3-months post comparisons).	**Statistics:** EE – pre M=32.38; SD=11.29 vs. post M=29.47; SD=10.52; p=<.001; Cohen's *d* 1.09 (large). Depersonalisation – pre M=11.34; SD=4.66 vs. post M=9.25; SD=3.23; p=<.001; Cohen's *d* 1.13 (large).	**Findings:** Sample increase in overall SCS score following intervention.	**Statistics:** Pre M=38.58; SD=7.28 vs. post M=41.81; SD=6.46; p=<.001; Cohen's *d* 0.74 (medium to large).
Wellness (Runyan et al., 2016) #4	Changes in scores were statistically non-significant.		**Findings:** Increase in mindfulness dimension of the SCS following intervention.	**Statistics:** Pre M=6.67; SD=1.73 vs. 3-months post M=8.11; SD=1.69; p value not reported due to low sample (n=9)/no power Cohen's *d* 0.84 (large).
Stress-reduction programme based on MBSR (dos Santos et al., 2016) #5	**Findings:** Sample reduction in overall MBI burnout score when comparing baseline to post-	**Statistics:** Baseline M=50.23; SE=5.59 (though assumed to be SD; effect size not reported; total n=13) vs	Changes in scores were statistically non-significant.	

	intervention, though non-significant for post-intervention vs follow-up comparisons.	post-intervention M=38.23; SE=5.25; CI 12 (2.27-21.72); p=.020. Calculated Cohen's *d* 2.21; effect size *r* .74 (large)		
MBSR (Shapiro et al., 2005) #6	MBSR participants had decreased burnout (10% vs. 4%).	Changes in scores were statistically non-significant. Changes in burnout scores showed a trend towards significance only.	Significant between-group increase in SC 22% vs. 3%; MBSR group 90% of participants increased SCS scores.	Authors reported means (no SDs) and *F* values: MBSR pre-treatment SCS score (M=16.48) versus post-treatment (M=20.15); *F* (2,24)=9.85; *p*=.004; *d* = 1.48 (large)
MBSR (Verweij et al., 2017) #7	**Findings:** No significant reduction in EE dimension of MBI in intervention group. Though baseline levels of EE did moderate outcome – those with high levels of EE did seem to benefit from the intervention. PA was significantly more positive for the intervention group	**Statistics:** MBI PA score MBSR group pre-intervention M=15.2 (5.1); control M=15.1 (5); post intervention MBSR group M=13.9 (4.6); control M= 15.1 (4.5); p=.03; Cohen's *d* 0.24 (small).	**Findings:** SCS was significantly higher in the MBSR group following the intervention.	**Statistics:** MBSR group pre-intervention overall SCS M= 3.9 (1); control M=3.9 (1.1); post intervention MBSR group M=4.3 (1); control M=3.9 (1.1); p=.01; Cohen's *d* 0.35 (small-medium).

	following the intervention.

EE (burnout) – emotional exhaustion (burnout); PA (BO) – personal accomplishment (burnout); SCS – self-compassion scale; SJ – self-judgement; CH – common humanity; OI – overidentification; MBSR – mindfulness-based stress reduction.

In summary, there is evidence that all – with the exception of self-kindness - dimensions of self-compassion can be modified in care staff following a psychological intervention (including wellness, burnout and MBSR-based interventions). However, overall evidence obtained within the current review is based on very small sample sizes, across the majority of studies, with the exception of study 7 which constituted an adequately-powered RCT. The majority of other studies did not achieve statistical power for observations, and effect sizes varied across studies.

Discussion

The review question was: how do psychological interventions affect levels of burnout and self-compassion in care staff? Overall, the results of the studies included in this review indicate that psychological interventions have an impact on levels of burnout and self-compassion. There were no UK studies included in the sample and tentative suggestions can be made for why this may be the case and are discussed in this section.

It is interesting that none of the intervention studies tested the theoretical link between self-compassion and burnout in the particular sample in question before developing the intervention. Future research should first seek to test this theoretical model in a specific sample prior to developing interventions.

In studies 4 and 5, levels of self-compassion did not change following interventions, however sample sizes were very small at 9 (study 4) and 13 (study 5), therefore this may not be indicative of these interventions failing to have an impact on self-compassion. It is proposed in study 2 that the identified decrease in self-judgement may reflect reduced negative self-talk, and greater tolerance and patience for disliked aspects of personality following the intervention (Raab et al., 2015), which is positive and hopeful when considering longer-term interventions to support professional care staff and their wellbeing. Common-humanity also improved, and the authors (2) specifically propose that participants were better able to view their perceived failures as part of the common human experience. The isolation and overidentification subscales showed a significant decrease following the intervention, indicating that participants felt less cut-off from the world when considering their perceived inadequacies, and there was less of a tendency to become overwhelmed by their emotions. These findings highlight which specific aspects of self-compassion could be incorporated into future psychological interventions if this result is repeated in a given sample.

Unrelated to the review questions, yet interesting, in study 6 self-compassion was found to have predictive power as a mediator to positive changes in perceived stress. However, this potential mediation was not examined in relation to burnout. Additionally, in study 1 correlations between measures were examined on outcome measures in relation to the Five Facet Mindfulness Questionnaire (FFMQ) (Baer et al., 2008), rather than self-compassion in relation to burnout. It would be interesting to examine self-compassion’s predictive power as a mediator to positive change in burnout, in sufficiently powered, and specific, samples.

Levels of burnout were not affected by the intervention in study 2, when comparing pre-to-post intervention scores, indicating that for this sample, mindfulness training did not modify experiences of burnout (Raab et al., 2015). It may be that interventions that work to modify rates of self-compassion will indirectly modify burnout, rather than mindfulness to burnout directly, and this potential model should be further investigated.

It is interesting that none of the interventions had an impact on self-compassion dimension self-kindness, given that in previous research (Gracia-Gracia & Olivan-Blazquez, 2017) correlations were found between self-kindness and lower burnout dimensions emotional-exhaustion and depersonalisation. It is useful to know that these correlations are important, and future interventions may need to focus more specifically in increasing levels of self-kindness amongst participants.

Results from the review demonstrate a lack of methodological rigour and appropriate power and statistical reporting across a large percentage of the studies. Sample sizes were particularly small for a number of studies, which does not yet demonstrate a case for the development of potentially modifiable interventions in care settings, in what otherwise might be an important area of study amongst these populations. However, there is no benchmark for comparison, in terms of what can be considered a large enough sample size within this research field yet, given the small numbers of studies.

It is noteworthy that a relatively small number of studies fit the criteria for the review, perhaps because Neff's conceptualisation of self-compassion is still a relatively new construct. During the identification and screening stages of the review, research involving ministers/clergypersons or other staff in religious/spirituality

contexts, those who work in care roles with animals, as well as unpublished doctoral theses were also identified. It was decided that employees in religious/spiritual contexts and animal care workers may constitute a less homogenous sample, perhaps holding different motivating factors to enter this work.

A strength of the current review was homogeneity across the measures utilised within the review and the fact that all samples comprised care staff, rather than trainee or student samples. A previous review examining loving-kindness/mindfulness interventions specifically, comprised mainly student/trainee samples. Less homogenous within the current review, was cultural background, with studies taking place in the US and Canada, Spain, the Netherlands, and Brazil, where health provision differs dramatically across countries, and which may affect both level and conceptualisation/perception of burnout experienced.

It is noteworthy that no studies in the UK were identified with this population, using these specific measures; and it would be important for a UK study to be conducted, since the NHS is such a unique healthcare system, and burnout so relevant in its contemporary climate of underfunding and resource deficits. It may be the case that internal service-evaluations have been conducted on this area instead, which will not have been subjected to ethical scrutiny and peer-review and hence may either be unpublished or submitted to non-peer review journals which do not appear in literature review search engines. Additionally, since stress and burnout are a topic of focus, this may be viewed as a politically sensitive area in a UK-NHS population, and therefore less research which could potentially identify organisations experiencing stress and burnout may be available in a public domain.

Only one sufficiently powered RCT design utilising ITT analysis was identified from this review (7). Another study (Study 6) included in the review employed an RCT design, however it did not employ ITT analysis due to the small sample size. This RCT, along with three other studies (1, 2, 5), were pilot studies, highlighting the need for future research to go beyond the pilot stage of investigation and to integrate findings into theory and intervention.

Clinical Implications

It is positive that these very preliminary results indicate that interventions can go some way to modify levels of self-compassion and burnout experienced. It would be useful to further investigate if levels of self-compassion can moderate or mediate burnout, and particularly in care staff where burnout is so important to investigate and reduce. It would be important to examine – and publish - these relationships in a contemporary UK-NHS. Study 2 highlights the important role of common-humanity in levels of emotional-exhaustion and potential negative feelings towards patients, due to burnout symptoms, and interventions could particularly focus on this dimension, such as seeking to raise levels of common-humanity within staff teams.

Interventions could usefully be woven into medical and care occupations' training programmes, and/or staff away days, or even ongoing CPD programmes. If burnout is to be reduced, the ethos of a profession or organisation needs examination, with employee wellbeing and ways to prevent burnout as ongoing aspects of a career or even job description.

A strength of a number of the reviewed articles was that researchers went some way to tailor interventions (such as the MBSR interventions) to the professional group in question, and thus relevance was made to the context of the

work in the delivery of the intervention. This is arguably an important aspect of any future intervention. Preliminary studies should investigate levels of self-compassion and burnout in populations before interventions are designed, to focus on particular areas of need in a given population. Psychological (for example, compassion) interventions could be introduced early on in nursing or other care-work training, to potentially tackle the issue before it begins.

Related to this is an important epistemological point, that by examining individual traits and states (such as self-compassion, stress and wellbeing) we are implicitly locating the burnout problem within the individual rather than attempting to alter the systemic culture and resultant influence on individuals experiencing burnout. Specifically, Han (2015) argues that stress and exhaustion are not simply personal experiences, but social and historical phenomena.

Han (2015) argues that we are in an ‘achievement’ society, emphasising ‘positivity’ and ‘can’. Han (2015) argues that this societal orientation towards achievement and ‘can’ purports to increase productivity, but at the same time delineates those not functioning in the expected way as ‘depressives’ and ‘losers’. In this way, the role of a system or society is not appropriately considered, and an individual is held responsible for not performing at an externally determined level. Importantly, Han (2015) further argues that every against-the-grain response may lead to further disempowerment of the individual. Arguably, individuals may feel that they are going against the grain if they speak out about experiences of stress and burnout.

When individual levels of stress and wellbeing are measured or evaluated, individuals may understandably perceive that they are failing in some way when

levels are deemed or interpreted as high and low respectively. A culture shift may involve a process by which an individual is able to highlight the contribution of a demanding system, and organisations try to investigate what could be changed within a system to reduce demands and improve employee satisfaction and wellbeing. Additionally, if interventions are woven into curriculums or early on in a given career path, this may go some way to change the ethos and pressures that lead individuals to experience burnout, and potentially recognises the role of the system as a contributory factor to this experience.

Research by Gracia-Gracia & Olivan-Blazque (2017) usefully highlights that burnout dimension emotional-exhaustion was correlated with self-compassion, therefore, it may be prudent for this dimension to be targeted specifically in interventions focussing on self-compassion. Gracia-Gracia & Olivan-Blazque (2017) also find that personal accomplishment and depersonalisation were correlated with dimensions of self-compassion. It may be that interventions could be tailored for individuals, on the basis of which areas of burnout specifically affect them, instead of a generic intervention across whole samples of multi-disciplinary care workers.

Study 3 supports this with their conclusion that a more comprehensive approach should be conducted, to reduce burnout, that might be related to multiple individual, unit and system factors. The adequately-powered RCT (study 7) included a diverse sample of different medical staff, and studies and interventions may benefit from specific samples of care staff (for example, those who work in child learning disability, or paediatricians, etc.).

One way in which a comprehensive, systemic approach (as recommended in study 3) could be operationalised is through Schwartz Rounds. Schwartz Rounds are

a multidisciplinary forum in which healthcare staff within an organisation are encouraged to discuss the psychological, emotional and social challenges associated with their work in a confidential and safe environment (Robert, Philippou, Leamy, Reynolds, Ross, Bennett… Maben, 2017). Schwartz adopted the approach in 1995 upon observation of how important the emotional connection was between caregivers and patients (Robert et al, 2017). Research finds that Schwartz rounds can normalise emotions and create channels for more open, transparent modes of communication, which Baker, Cornwell, & Gishen (2016) further propose may be linked to colleagues treating their peers and patients with more compassion.

In a number of studies, potentially interrelated variables were utilised as outcome variables; such as empathy, emotional intelligence and self-compassion (Olson et al., 2015), and perceived stress as well as burnout (Runyan et al., 2016 and Shapiro et al., 2017). It may be that there is overlap between these variables, and outcome measures utilised in studies could thereby be reduced. In so doing, the methodological burden placed on participants may be reduced, as well as the required sample sizes required to achieve statistical power.

Future Directions

A more established understanding of the relationship between burnout and self-compassion in a given population should be identified prior to the development of interventions, in order to tailor interventions on the basis of the need of a given population. It would also be important to examine the longer-term impact of an intervention on burnout and self-compassion. Future research should additionally investigate if effects of an intervention are maintained over time, and for how long. Identification of this information could guide how, when, and how often, interventions

should be delivered to specific teams of care staff. Questions remain such as how important it is to repeat interventions, and whether this could constitute a periodic refresher training for participants. It would be useful to explore whether a periodic refresher training would continually improve self-compassion and burnout or whether rates would plateau over time.

Studies examined effects of interventions on self-compassion and burnout but did not always go further by investigating the implication of this, their relationship, and potential relationship with other important outcome variables, such as mental health – e.g., anxiety and depression. It may be that in care staff, self-compassion mediates the relationship between burnout and psychological health (such as development of anxiety and/or depression). Study 6 went some way to begin examination of potential relationships between these variables, and self-compassion's mediating role in mental health, finding that self-compassion was a mediator to positive changes in perceived stress. This mediation should be examined in relation to burnout, and other mental health dimensions. There is a question mark over the relevance of measuring and modifying self-compassion without examining its relationship with other important variables. In terms of clinical applicability, Schwartz rounds could be employed in teams for staff to explore their emotional responses and make sense of difficult situations in a safe, contained forum.

Conclusion

There is a need to further examine the relationship between self-compassion and burnout in care occupations and identify which factors are of relevance to particular samples pre-intervention. This data may be used to tailor interventions, emphasising pertinent aspects of self-compassion and burnout. Overall the impact of psychological interventions on burnout and self-compassion is an emerging area of research. There is sufficient evidence that the topic is of particular relevance to care staff, however future research should focus on methodological rigour and longer-term evaluations, as well as tailoring interventions to the specific work of the particular care professional group, and based on identified need within this group. Research should also identify whether, and how often, interventions should be repeated. There is need for specific models to be tested, and in a UK healthcare population.

References

Alexander, M., & Hegarty, J. R. (2000). Measuring staff burnout in a community home. *The British Journal of Developmental Disabilities*, *46*(90), 51–63.

Allen, A. B., & Leary, M. R. (2010). Self-compassion, stress, and coping. *Social and Personality Psychology Compass*, *4*(2), 107–118. https://doi.org/10.1111/j.1751-9004.2009.00246.x

American Psychological Association. The road to resilience. Washington, DC: American Psychological Association; 2014. Retrieved from http://www.apa.org/helpcenter/road-resilience.aspx.

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, *13*(1), 27–45. https://doi.org/10.1177/1073191105283504

Baer, R. A., Smith, G. T., Lykins, E., Button, D., Krietemeyer, J., Sauer, S., … Williams, J. M. G. (2008). Construct validity of the five facet mindfulness questionnaire in meditating and nonmeditating samples. *Assessment*, *15*(3), 329–342. https://doi.org/10.1177/1073191107313003

Barker, R., Cornwell, J., Gishen, F. (2016). Introducing compassion into the education of health care professionals; can Schwartz Rounds help? Journal of Compassionate Health Care, 3:3.

Bluth, K., Roberson, P. N. E., & Gaylord, S. A. (2015). A pilot study of a mindfulness intervention for adolescents and the potential role of self-compassion in reducing stress. *Explore (New York, N.Y.)*, *11*(4), 292–295. https://doi.org/10.1016/j.explore.2015.04.005

Boellinghaus, I., Jones, F. W., & Hutton, J. (2014). The role of mindfulness and loving-kindness meditation in cultivating self-compassion and other-focused concern in health care professionals. *Mindfulness*, *5*(2), 129–138. https://doi.org/10.1007/s12671-012-0158-6

Burckhardt, C. S., & Anderson, K. L. (2003). The quality of life scale (QOLS): Reliability, validity, and utilisation. *Health and Quality of Life Outcomes*, *1*, 60. https://doi.org/10.1186/1477-7525-1-60

Cohen, J. (1988). *Statistical power analysis for the behavioural sciences* (2nd ed). Hillsdale, N.J: L. Erlbaum Associates.

Cooper, C., & Dewe, P. (2008). Well-being - absenteeism, presenteeism, costs and challenges. *Occupational Medicine*, *58*(8), 522–524. https://doi.org/10.1093/occmed/kqn124

Demerouti, E., & Bakker, A. (2007). The Oldenburg burnout inventory: A good alternative to measure burnout and engagement. *Handbook of Stress and Burnout in Health Care. Hauppauge, NY: Nova Science*. Retrieved from http://www.academia.edu/2796247/The_Oldenburg_Burnout_Inventory_A_good_alternative_to_measure_burnout_and_engagement

dos Santos, T. M., Kozasa, E. H., Carmagnani, I. S., Tanaka, L. H., Lacerda, S. S., & Nogueira-Martins, L. A. (2016). Positive effects of a stress reduction program based on mindfulness meditation in Brazilian nursing professionals: Qualitative and quantitative evaluation. *Explore: The Journal of Science and Healing*, *12*(2), 90–99. https://doi.org/10.1016/j.explore.2015.12.005

Epstein, R. M., & Privitera, M. R. (2016). Doing something about physician burnout. *The Lancet*, *388*(10057), 2216–2217. https://doi.org/10.1016/S0140-6736(16)31332-0

Finlay-Jones, A. L., Rees, C. S., & Kane, R. T. (2015). Self-compassion, emotion regulation and stress among Australian psychologists: Testing an emotion regulation model of self-compassion using structural equation modelling. *PLoS ONE*, *10*(7). https://doi.org/10.1371/journal.pone.0133481

Flook, L., Goldberg, S. B., Pinger, L., Bonus, K., & Davidson, R. J. (2013). Mindfulness for teachers: A pilot study to assess effects on stress, burnout and teaching efficacy. *Mind, Brain and Education : The Official Journal of the International Mind, Brain, and Education Society*, *7*(3). https://doi.org/10.1111/mbe.12026

Gilbert, P. (2005). *Compassion: Conceptualisations, research and use in psychotherapy*. Routledge.

Gracia-Gracia, P., & Oliván-Blázquez, B. (2017). Burnout and mindfulness self-compassion in nurses of intensive care units: Cross-sectional study. *Holistic Nursing Practice*, *31*(4), 225–233. https://doi.org/10.1097/HNP.0000000000000215

Higgins, J. P., & Green, S. (2011). Cochrane handbook for systematic reviews of interventions. In *The Cochrane Collaboration*. Retrieved from http://handbook.cochrane.org

Keyes, C. L. M., Shmotkin, D., & Ryff, C. D. (2002). Optimising well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology*, *82*(6), 1007–1022. https://doi.org/10.1037//0022-3514.82.6.1007

Körner, A., Coroiu, A., Copeland, L., Gomez-Garibello, C., Albani, C., Zenger, M., & Brähler, E. (2015). The role of self-compassion in buffering symptoms of depression in the general population. *PLOS ONE*, *10*(10), e0136598. https://doi.org/10.1371/journal.pone.0136598

Kristensen, T. S., Borritz, M., Villadsen, E., & Christensen, K. B. (2005). The Copenhagen burnout inventory: A new tool for the assessment of burnout. *Work & Stress*, *19*(3), 192–207. https://doi.org/10.1080/02678370500297720

Leary, M. R., Tate, E. B., Adams, C. E., Batts Allen, A., & Hancock, J. (2007). Self-compassion and reactions to unpleasant self-relevant events: The implications of treating oneself kindly. *Journal of Personality and Social Psychology*, *92*(5), 887–904. https://doi.org/10.1037/0022-3514.92.5.887

Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P. A., … Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: explanation and elaboration. *BMJ*, *339*, b2700. https://doi.org/10.1136/bmj.b2700

Lipsey, M. W., & Wilson, D. B. (2001). Practical meta-analysis. Thousand Oaks, CA: Sage Publications.

Lloyd, J. (2014). *Caring for people with dementia: Positive aspects, self-compassion and coping* (dclinpsych thesis). University of Warwick. Retrieved from http://webcat.warwick.ac.uk/record=b2746995~S1

MacBeth, A. M. (2011). *The Narrative compassion scale: Development and validation of an interview measure of compassion and recovery in complex mental health difficulties* (DClinPsy thesis). University of Glasgow. Retrieved from http://encore.lib.gla.ac.uk/iii/encore/record/C__Rb2885285

Maslach, C. (1978). Job burnout - How people cope. *Public Welfare*, *36*(2), 56–58.

Maslach, C., Jackson, S. E., & Leiter, M. P. (1997). *Maslach Burnout Inventory* (Third edition). Consulting Psychologists Press.

Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., … Stewart, L. A. (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic Reviews*, *4*, 1. https://doi.org/10.1186/2046-4053-4-1

National Heart, Lung and Blood Institute (NIH). (2018). Quality assessment tool for observational cohort and cross-sectional studies and before-after (pre-post) studies with no control group. Retrieved 17 March 2018, from https://www.nhlbi.nih.gov/health-topics/study-quality-assessment-tools

National Institute for Clinical Excellence. (2012). *National Institute for Health and Clinical Excellence (November 2012) The guidelines manual*. London. Retrieved from https://www.nice.org.uk/process/pmg6/chapter/identifying-the-evidence-literature-searching-and-evidence-submission

National Institute for Clinical Excellence. (2018). NICE glossary - Systematic review. Retrieved 25 February 2018, from https://www.nice.org.uk/glossary?letter=s

Neff, K. D. (2003). The development and validation of a scale to measure self-compassion. *Self and Identity*, *2*(3), 223–250. https://doi.org/10.1080/15298860309027

Neff, K. D., Kirkpatrick, K., & Rude, S. (2007). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality*, *41*(1), 139–154.

Orton, P., & Gray, D. P. (2015). Burnout in NHS staff. *The Lancet*, *385*(9980), 1831. https://doi.org/10.1016/S0140-6736(15)60921-7

Poghosyan, L., Aiken, L. H., & Sloane, D. M. (2009). Factor structure of the Maslach Burnout Inventory: An analysis of data from large scale cross-sectional surveys of nurses from eight countries. *International Journal of Nursing Studies*, *46*(7), 894–902. https://doi.org/10.1016/j.ijnurstu.2009.03.004

Raab, K., Sogge, K., Parker, N., & Flament, M. F. (2015). Mindfulness-based stress reduction and self-compassion among mental healthcare professionals: A pilot study. *Mental Health, Religion & Culture*, *18*(6), 503–512. https://doi.org/10.1080/13674676.2015.1081588

Robert, G., Philippou, J., Leamy, M., Reynolds, E., Ross, S., Bennett, L., Taylor, C., Shuldham, C., & Maben, J. (2017). Exploring the adoption of Schwartz Center Rounds as an organisational innovation to improve staff wellbeing in England, 2009-2015. *BMJ Open, 7* (1).

Rodrigues, N. P., Cohen, L. L., McQuarrie, S. C., & Reed-Knight, B. (2017). Burnout in nurses working with youth with chronic pain: A pilot intervention. *Journal of Pediatric Psychology*. https://doi.org/10.1093/jpepsy/jsx132

Runyan, C., Savageau, J. A., Potts, S., & Weinreb, L. (2016). Impact of a family medicine resident wellness curriculum: A feasibility study. *Medical Education Online*, *21*, 30648.

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological wellbeing. *Journal of Personality and Social Psychology*, *57*, 1069–1081.

Sadjadi, R., Vincent, K. A., Carr, A. J., Walburn, J., Brooks, V. L., Pandya, S., … Muscle Study Group. (2011). Validation of the individualised neuromuscular quality of life for the USA with comparison of the impact of muscle disease on those living in USA versus UK. *Health and Quality of Life Outcomes*, *9*, 114. https://doi.org/10.1186/1477-7525-9-114

Sagone, E., & De Caroli, M.E. (2014). Relationships between psychological wellbeing and resilience in middle and late adolescents. *Procedia - Social and behavioral sciences, 141*, 881-887.

Shapiro, S. L., Astin, J. A., Bishop, S. R., & Cordova, M. (2005). Mindfulness-based stress reduction for health care professionals: Results from a randomised trial. *International Journal of Stress Management*, *12*(2), 164–176. https://doi.org/10.1037/1072-5245.12.2.164

Stamm, B. H. (2010). The ProQOL (professional quality of life scale: Compassion satisfaction and compassion fatigue). Retrieved from www.proqol.org

The American Institute of Stress. (2011). Compassion Fatigue. Retrieved 17 December 2016, from http://www.stress.org/military/for-practitionersleaders/compassion-fatigue/

Verweij, H., Ravesteijn, H. van, Hooff, M. L. M. van, Lagro-Janssen, A. L. M., & Speckens, A. E. M. (2017). Mindfulness-based stress reduction for residents: A randomised controlled trial. *Journal of General Internal Medicine*, 1–8. https://doi.org/10.1007/s11606-017-4249-x

Wei, M., Liao, K. Y.-H., Ku, T.-Y., & Shaffer, P. A. (2011). Attachment, self-compassion, empathy, and subjective wellbeing among college students and community adults. *Journal of Personality*, *79*(1), 191–221. https://doi.org/10.1111/j.1467-6494.2010.00677.x

Woo Kyeong, L. (2013). Self-compassion as a moderator of the relationship between academic burn-out and psychological health in Korean cyber university students. *Personality and Individual Differences*, *54*(8), 899–902. https://doi.org/10.1016/j.paid.2013.01.001

World Health Organisation (WHO). (1998). Development of the World Health Organization WHOQOL-BREF quality of life assessment. The WHOQOL Group. *Psychological Medicine*, *28*(3), 551–558.

SCHOOL OF PSYCHOLOGY

DOCTORATE IN CLINICAL PSYCHOLOGY

EMPIRICAL PAPER

The Role of Self-Compassion as a Moderator in the Relationship Between Burnout and Psychological Wellbeing in Staff Working with People with Learning Disabilities

Trainee Name:	**Dr Victoria Brooks**
Primary Research Supervisor:	**Dr Anke Karl** Senior lecturer in clinical psychology, University of Exeter
Secondary Research Supervisor:	**Dr Anna Adlam** Senior lecturer and clinical psychologist, University of Exeter
Field Collaborators:	**Dr Alexandra Dibley and Dr Sarah Samuels** Devon Partnership NHS Trust
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Abstract

Objective. Research demonstrates that self-compassion is linked to burnout and other psychological wellbeing outcome measures such as quality of life, stress, depression, and wellbeing. It is known that care occupations, and specifically those who work with individuals with learning disabilities, suffer with burnout and other psychological symptoms such as anxiety and depression. Several studies have examined these relationships in care staff. However, they have not been examined in a UK healthcare context, nor in a sample of learning disabilities staff for whom burnout is prevalent and relevant. With self-compassion as a moderator, this study investigated burnout's relationship to depression and psychological wellbeing respectively, in a UK learning disabilities staff sample.

Methods. 120 adult staff members (97 females and 23 males) aged between 18 and 64 years who work with adults with learning disabilities participated in the study. Participants completed an anonymised online questionnaire comprising the Self-Compassion Scale; the Maslow Burnout Inventory; the Beck Depression Inventory; and the Ryff Scale of Psychological Wellbeing.

Results. Self-compassion was at an average level for this sample and depression scores were low. Moderation analyses illustrated that self-compassion significantly moderated the relationship between burnout (personal accomplishment) and psychological wellbeing (positive relationships with others); and burnout (both emotional exhaustion and personal accomplishment) and depression.

Conclusions. The research paves the way for the development of burnout and self-compassion interventions amongst learning disabilities staff. It is proposed that interventions should be tailored based on identified need in a given population and are embedded into a systemic ethos of self-care and self-compassion.

Keywords

Self-compassion; mindfulness; learning disabilities; occupational survey; burnout; psychological wellbeing; depression

Introduction

Occupational Stress in Health and Caring Occupations

NHS sickness-related absence rates are high; 27 per cent higher than the UK public sector average, and 46 per cent higher than the average for all sectors (Royal College of Physicians, 2015). The unique challenges for staff in the NHS include the physically, emotionally and psychologically demanding nature of the work, and that it operates 24-hours of every day of the year (Royal College of Physicians, 2015). According to the World Health Organisation (WHO), “A healthy workplace is one in which workers and managers collaborate to use a continual improvement process to protect and promote the health, safety and wellbeing of all workers and the sustainability of the workplace” p2. (Burton & World Health Organisation, 2010).

Boorman (2009) conducted a detailed analysis of the current state of the NHS workforce’s health and wellbeing and made recommendations for investment in improving staff health and wellbeing services, to benefit individual staff members, patients, and employers. The Department of Health (2011) health and wellbeing strategy specify minimum recommendations for occupational health services for healthcare staff. These include the promotion of health and wellbeing at work (that is, to use work as a means to improve health and wellbeing, and to promote health) and teaching and training (through encouraging staff and managers to support staff health and well-being).

Findings from the British Psychological Society and New Savoy staff wellbeing survey (2015) illustrate that 46 percent of psychological professionals

surveyed reported depression, and 49.5 percent reported feeling they are a failure (British Psychological Society, 2016). One quarter consider they have a long-term, chronic condition and 70 percent say they find their job stressful (British Psychological Society, 2016).

The Mid-Staffordshire Inquiry into ‘extremely poor’ standards of care at Stafford Hospital (Mid-Staffordshire NHS Foundation Trust) in 2008, found that staff treated patients with ‘callousness’ and ‘indifference’ (Francis, 2013). Callousness and indifference are factors associated with, and perhaps indicative of, burnout and are captured by the ‘depersonalisation’ subscale of the Maslach Burnout Inventory (MBI: Maslach & Jackson, 1981). Conversely, good staff health, wellbeing and engagement can reap significant benefits for both patients and staff (Royal College of Physicians, 2015). Balancing self-care with other-care is known to be difficult for those in the helping professions (Skovholt, Grier, & Hanson, 2010). However, understanding burnout could be key to better understanding staff wellbeing in learning disabilities staff, and to-date there is minimal research in this area.

Occupational Burnout

Occupational burnout is a syndrome that is currently receiving much scientific interest (Golonka, Mojsa-Kaja, Gawlowska, & Popiel, 2017). The concept of burnout is characterised by: psychophysical or emotional exhaustion; depersonalisation; and reduced professional accomplishment (Maslach, 1978, 1981; Maslach & Leiter, 2003; Maslach, Schaufeli, & Leiter, 2001; Maslach, Jackson, & Leiter, 1997). Consequences of burnout are serious and overall quality of, and outcomes from,

medical and healthcare can be affected (Portoghese, Galletta, Coppola, Finco, & Campagna, 2014).

Stress and Burnout in Learning Disabilities Staff

A learning disability (LD) is a reduced intellectual ability and difficulty with everyday activities – for example household tasks, socialising or managing money – which affects the individual for their entire life (Mencap, 2018). Individuals with LD tend to take longer to learn and may need support to develop new skills, understand complicated information, and interact with others (Mencap, 2018). People with LD will share common characteristics, which if left unsupported may leave them particularly vulnerable (NHS England, 2015). Support requirements are individual. For example, someone with a mild LD may need support with obtaining employment (Mencap, 2018). However, someone with a severe or profound LD may need full-time care, support with every aspect of their life, and may have physical disabilities (Mencap, 2018). As the number of adults with LD continues to grow (Fujiura, 2003), staff for these groups play a crucial role in maintaining their health and wellbeing.

Considering the high level of support requirements - as detailed above - and research evidence as described below, demands are high for those working with individuals with LD, and staff are required to play a crucial role in maintaining clients' and their own wellbeing, as caregivers and role models respectively (Gray-Stanley et al., 2010). Undertaking a caregiving role can lead to conflicting emotions, from positive experiences - such as a sense of pride or mastery in the role - to negative outcomes such as increased physical and psychological stress (Lloyd, 2014). The pool of workers is sometimes inadequate relative to client demand, training is

insufficient, and work stress can diminish the effectiveness of care delivered (Bouras, 1999; Gray-Stanley et al., 2010).

Stress may be particularly pronounced amongst those who support individuals with LD; (Alexander & Hegarty, 2000). For example, unsurprisingly, research shows that the impact of serious events in an LD occupational setting results in a higher level of stress and burnout (Søndenaa, Whittington, Lauvrud, & Nonstad, 2015). Specifically, a combination of a low level of personal accomplishment, and high emotional exhaustion and depersonalisation were evident amongst LD staff (Dennis & Leach, 2007). Compassion for others was high in a Norwegian LD staff population, however high compassion was correlated with high burnout (Søndenaa et al., 2015; Dennis & Leach, 2007). This was identified through administration of the Professional Quality of Life Scale (Stamm, 2010), and specifically subscales 'compassion satisfaction' and 'burn-out' (Søndenaa et al., 2015). Interestingly, forensic LD staff tended to focus on the physical aspects of the caring role whilst community LD staff tended to focus on relational issues (Søndenaa et al., 2015). However, both are arguably unique aspects of care in this population, which may be linked to stress and burnout.

Through administration of the MBI (Maslach & Jackson, 1981) to staff supporting individuals with LD, all staff surveyed experienced 'moderate' burnout (Alexander & Hegarty, 2000). Direct care staff showed lower levels of burnout than managers, and both groups reported demands related to reduced autonomy (Alexander & Hegarty, 2000). Reduced autonomy may be a particular stressor for this population. Importantly, the experience of stress not only effects an individual's wellbeing, but also affects the quality of work the individual performs (Rose, 1997).

Systemic Factors Involved in Stress and Burnout Experiences in Learning Disabilities Staff

Han (2015) makes the important point that stress and exhaustion are not just personal experiences, but historical and social phenomena. Clients with LD may exhibit aggressive behaviour (Tyrer et al., 2006). 42% of people caring for individuals exhibiting aggressive behaviour reported being ‘unable to cope’, compared with 10% of those caring for those not exhibiting aggressive behaviour (Tyrer et al., 2006). There is an association between incidences of challenging behaviour amongst service-users with LD, and levels of staff stress and burnout (Mills, 2010).

Amongst those working with individuals with serious challenging behaviours, and using questionnaire data collection measures with staff, findings demonstrated a range of coexisting positive and negative feelings toward clients (Bell & Espie, 2002). Staff reported that they did not know if their work met their superiors’ satisfaction and were disappointed that they did not receive regular supervision and performance reviews (Bell & Espie, 2002). Overall, staff felt disappointed with support received from their seniors, however, satisfaction for working with clients was high, as were perceptions of practical support from immediate colleagues (Bell & Espie, 2002). Considering the above, there may be a range of potentially modifiable organisational and systemic factors linked to job satisfaction and vulnerability to burnout amongst staff working with individuals with learning disabilities, however individual factors also play a role.

Depression and its Relationship to Burnout

Amongst dentists, it has been demonstrated that job strain predisposes people to depression through burnout. (Ahola & Hakanen, 2007). Of burnout sufferers without depressive symptoms at baseline, 23% reported depressive symptoms at follow-up, compared with 10% of those who did not report burnout symptoms at baseline (Ahola & Hakanen, 2007).

Depression can involve feelings of guilt (Alexander, Brewin, Vearnals, Wolff, & Leff, 1999). Specifically, the DSM-5 (American Psychiatric Association, 2013) includes 'Feelings of worthlessness or excessive or inappropriate guilt' as a symptom of depression. Tilghman-Osborne, Cole, & Felton (2012) define the '*inappropriate'* aspect of guilt as negative cognitions associated with distorted interpretations of responsibility, and the '*excessive'* aspect as disproportionate negative affect in response to a situation for which one has assumed responsibility. Tilghman-Osborne et al. (2012) further clarify that guilt may become 'inappropriate' when it involves preoccupations or ruminations over minor failings.

This definition may be particularly relevant to individuals experiencing occupational burn out in high-pressured caring occupations, where they are in a position of responsibility for the wellbeing of vulnerable others. Guilt may be experienced by those who perceive they should be performing and coping - in systems that may not support them when they perceive they are not – and when conversely, they may be feeling depressed or a 'failure' (e.g., BPS, 2015). Research demonstrates that self-compassion could be one buffering factor in the link between burnout and psychological ill-health (Woo Kyeong, 2015) and this could be one

possible solution to the gap in understanding protective factors in a learning disabilities staff population.

Self-compassion

The concept of self-compassion as a research construct was defined and validated by Neff (2003). Self-compassion comprises three components: (i) self-kindness - being kind and understanding toward one's self when experiencing pain or failure, rather than being harsh or self-critical, (ii) common humanity - connecting one's experiences as part of the larger human experience, rather than perceiving them as isolating and separating, and (iii) mindfulness - holding painful thoughts and feelings in balanced awareness, rather than over-identifying with them (Neff, 2003).

Self-compassion is an emotionally positive self-attitude that may be protective against negative consequences of self-judgment, isolation, and rumination (aspects that can arise through depression) (Neff, 2003). Neff (2003) proposes that owing to its non-evaluative and interconnected nature, self-compassion may counter tendencies towards narcissism, self-centeredness, and downward social comparison that have been associated with attempts to maintain self-esteem (Neff, 2003). Since 2003, and using the self-compassion scale (SCS; Neff, 2003), a body of research has examined self-compassion's relationship to outcome variables such as empathy, resilience, and mindfulness (Gracia-Gracia & Oliván-Blázquez, 2017; Olson, Kemper, & Mahan, 2015) amongst care staff.

Self-compassion's Relationship to Psychological Wellbeing

Findings using Neff's SCS with students (Neff, Kirkpatrick, & Rude, 2007) suggest that self-compassion is a strong and unique predictor of wellbeing, negatively related to depression and anxiety, and positively related to wisdom, happiness, optimism, extraversion and conscientiousness. A systematic review illustrated a large effect size for the relationship between compassion and psychopathology; that is, higher levels of compassion were associated with lower levels of mental ill-health (MacBeth & Gumley, 2012). One key study examined the moderating effect of self-compassion on burnout and wellbeing (Woo Kyeong, 2013) and found that self-compassion moderated the relationship between academic burnout and psychological wellbeing (PWB). Additionally, self-compassion was found to moderate the relationship between academic burnout and depression (Woo Kyeong, 2013).

The importance of research examining levels of self-compassion and wellbeing variables is highlighted by studies that demonstrate the impact of psychological interventions on self-compassion and wellbeing. A systematic review (Boellinghaus, Jones, & Hutton, 2014) demonstrated that despite methodological limitations, such as the employment of predominantly student or trainee healthcare professional samples, and studies utilising inadequate sample sizes failing to achieve statistical power (Flook, Goldberg, Pinger, Bonus, & Davidson, 2013; Runyan, Savageau, Potts, & Weinreb, 2016), interventions (such as mindfulness, loving-kindness, burnout, and wellbeing) increased self-compassion and decreased burnout. Considering that previous research demonstrates that self-compassion moderates the relationship between burnout and PWB, interventions that may

improve levels of self-compassion, are beneficial for those in professions such as LD, where stress, depression, anxiety, and PWB can be affected by the nature of the work, as well as systemic and organisational factors.

Methodological and Theoretical Framework for the Current Study

Drawing on the above literature, the study incorporated burnout, self-compassion and PWB in its theoretical model. In line with the findings of Woo Kyeong's (2013) moderation analyses with a student sample, coupled with studies which demonstrate links between burnout and self-compassion in caring staff (Gracia-Gracia & Oliván-Blázquez, 2017; Olson et al., 2015), and the prevalence of burnout in learning disabilities staff, the study examined whether self-compassion moderates the relationship between burnout and psychological health in this population. In line with previous research, the widely used concepts of PWB and depression were utilised as indicators of psychological health.

Rationale for Choice of Sample

As highlighted, the field of LD involves work with a particularly vulnerable population. Individuals with LD may have underdeveloped social or verbal communication skills, and/or may communicate using challenging behaviour towards self and/or other (Mutkins, Brown & Thorsteinsson, 2011). Therefore, there may be particular pressure experienced by staff working with this group.

Contextually, closure of long-stay hospitals in the UK was accompanied by the development of community teams to support individuals with LD to live in community settings (Clare, Madden, Holland, Farrington, Whitson, Broughton, … Wagner, 2016). The self-reported experiences of staff working in such teams had

been neglected (Clare et al., 2016), and in response to this, investigated by Clare et al. (2016), who found that community LD team members perceived a strong focus on bureaucracy and process. The researchers concluded that this procedural bureaucracy may compromise the ability of staff to respond proactively to the needs of individuals with LD (Clare et al., 2016).

Community staff may also be balancing heavy caseloads and high levels of risk. Specifically, clients may present complex support needs and require expensive, restrictive and potentially risky out of area placements (Learning Disabilities Professional Senate, 2015) which need to be managed by community teams (Learning Disabilities Professional Senate, 2015). Much past research focusses on burnout in direct care staff generally (for example, Gray-Stanley and Muramatsu, 2011 in learning disabilities, and Duffy, Oleybode, & Allen, 2011 in dementia care). Interestingly, and as illustrated, research shows that rates of compassion were high for those working with people with LD, however self-compassion rates were low, thus additionally indicating the need for particularly focus on self-compassion research with this sample.

Aim, Hypotheses and Research Questions

Project aim. To describe a model that identifies the extent of the moderating effect of self-compassion in the relationship between burnout and PWB, and burnout and depression.

Research Questions

Table 1 illustrates the research questions.

Table 1. *Research questions*

Primary research questions	Does self-compassion moderate the relationship between burnout and PWB? Does self-compassion moderate the relationship between burnout and depression?

Specific Hypotheses

Table 2 illustrates the specific hypotheses.

Table 2. *Specific hypotheses*

Number	Hypothesis
1a	Burnout will be negatively related to PWB;
1b	Burnout will be positively related to depression;
2a	Self-compassion will moderate the relationship between burnout and PWB;
2b	Self-compassion will moderate the relationship between burnout and depression.

Methods

Setting, Sample and Participants

The sample comprises staff within adult LD services in England. There were 23 (19%) males and 97 (81%) females in the sample. The full age breakdown appears in Table A (Appendix E). N=84 (70%) participants worked full-time and 36 (30%) worked part-time. Staff in the study were multi-disciplinary. The breakdown by occupational group appears in Table F in the Appendix. Stratification by organisation type is in Table G in the Appendix.

Length of service – in current job, and in the LD profession in total – was collected. Stratification by number of years in current setting and in LD in total appear in Table D (Appendix H). Nearly 50% of participants had worked in the LD field for more than ten years. Eligibility criteria for participation in the study was adults aged 18-65, who worked either full-time or part-time in a LD team. Participants provided informed consent as outlined through fully approved protocol in application for ethical approval – full details follow below.

Design

The design is quantitative and correlational and uses a cross-sectional survey methodology. The outcome/dependent variables (DV) are PWB, and depression. The predictor variable is burnout and the moderator variable is self-compassion.

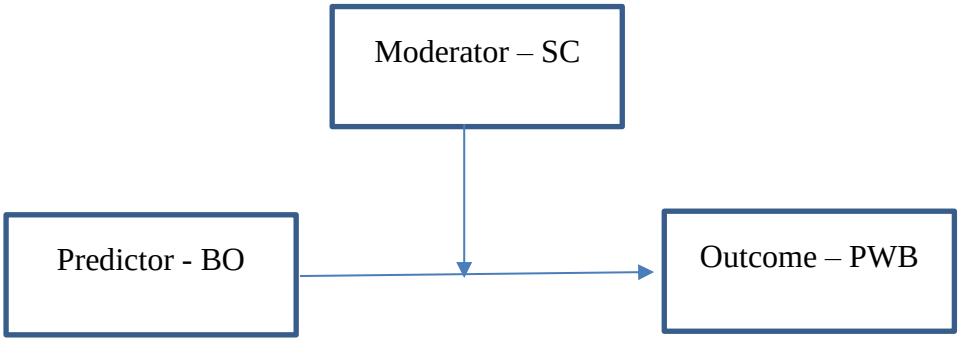


Figure 1. *Model 1 illustrating the hypothesised moderating effect of self-compassion in the relationship between burnout and PWB.*

Figure 1 illustrates hypotheses 1a and 2a; and Figure 2 hypotheses 1b and 2b, as outlined in Table 2.

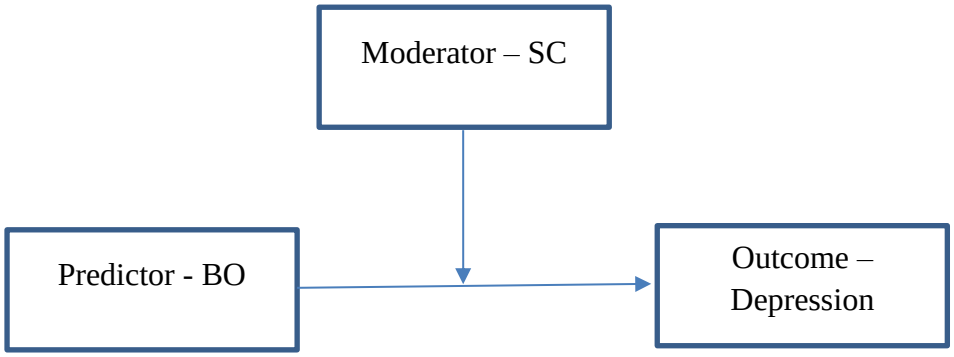


Figure 2. *Model 2 illustrating the hypothesised moderating effect of SC in the relationship between burnout and depression.*

Measures

Questionnaire. The online questionnaire was created using Lime Survey (LimeSurvey Project Team & Schmitz, 2015). Questionnaires included the SCS (Neff, 2003); Maslow Burnout Inventory (MBI; Maslow and Jackson, 1981); Beck Depression Inventory (BDI; Beck et al., 1961); and the PWB scale (Ryff and Keyes, 1995). Table 3 outlines in detail the questionnaire measures administered to participants, including demographic variables.

Table 3. *List of psychometric measures administered to research participants.*

Measure / data collected	Researchers/ Reference	Description	Reliability/validity information	Rationale for use
Self-compassion scale (SCS)	Neff (2003)	26-item measure of self-compassion with seven sub-scales: Self-Kindness; Self-Judgment Items; Common Humanity; Isolation; Mindfulness; and Over-identification. It has a 1-5 scale anchor delineating 'almost never' to 'almost always'.	SCS has demonstrated good internal consistency (Cronbach alpha = .77–.78) and test–retest reliability (r = .80–.93) (Neff, 2003a), as well as good concurrent validity, convergent validity, and discriminant validity (Neff et al., 2007).	The only (validated) measure of self-compassion, the principle construct of interest within the study.
Maslach Burnout Inventory (MBI)	Maslach & Jackson (1981)	22-item measure designed to assess various aspects of the burnout syndrome in healthcare workers (Maslach & Jackson, 1981). Encompasses statements, rated for frequency (from 0=never, to 6=every day). The measure consists of three subscales: emotional exhaustion; depersonalization; personal accomplishment. Subscale measures are expressed as the mean of relevant items.	High test–retest reliability (r = .53–.82) and internal consistency (Cronbach alpha = .57–.89), and the burnout construct was shown to be valid (Maslach & Jackson, 1981).	Most widely used measure of burnout (a central construct of interest within the study) in healthcare staff, with appropriate reliability and validity. Used in similar self-compassion research - Woo Kyeong (2013).
Beck Depression Inventory (BDI)	Beck, Ward, Mendelson, Mock, and	Self-rated scale to assess severity of depression. 21-items are rated on a 4-point scale with	Internal consistency 0.9; retest reliability 0.73-0.96; capacity to discriminate between depressed and	Widely used, validated measure of depression and utilised in Woo Kyeong (2013).

	Erbaugh (1961)	the total score obtained from the sum of all items.	non-depressed participants, and improved concurrent, content, and structural validity (Wang, Gorenstein, Wang, & Gorenstein, 2013).	
Psychological Wellbeing (PWB) scale	Ryff and Keyes (1995)	42-item self-report inventory measuring six dimensions of psychological wellbeing (Autonomy, Environmental Mastery, Personal Growth, Positive Relations with Others, Purpose in Life, Self-Acceptance).	High test retest reliability across six weeks (coefficients 0.81 to 0.88) and high internal consistency - reliability coefficients for each dimension were 0.86 to 0.93 (Ryff & Keyes, 1995).	Used in similar self-compassion and burn-out research - Woo Kyeong (2013).
Demographic variables		Age; gender; employment status (full time employed; part time employed; other); occupational grouping; organisation type (NHS and other); years in current job; total years' service in LD.		

Sample Type and Recruitment Strategy

The intended sample for the present study was adults who were employed to work in community learning disabilities services. The reasons for focusing on this population are outlined in the 'Rationale for choice of sample' section above. There were no a-priori inclusion criteria regarding job role, years of experience, qualifications. In the first instance, research and development teams were contacted and invited to take part in the study, if their Trust staffed community learning disabilities services. If they agreed to participate, they were asked to write to managers of community learning disabilities teams to disseminate the survey link to all members of the team. In some instances, individuals contacted the researcher to clarify whether recruitment only extended to community teams, or those working in residential care services also. It was emphasised that recruitment was of staff from community teams only. Additionally, posts were made on social media to the same effect, and individual inquiries through this means responded to accordingly. All occupations were included in the sample and information about amount of work experience, and qualifications, held, were not specified as inclusion criteria.

Recruitment Procedure

Favourable ethical opinion was granted to disseminate the survey link through facebook and twitter, and through direct contact with NHS Trusts research and development (R&D) teams, who would distribute the survey to LD service managers. A non-response rate of 20-40% is typical in questionnaire studies (Martikainen, Laaksonen, Piha, & Lallukka, 2007) therefore a total of 15 NHS Trusts identified to have LD services were approached, and agreed to disseminate the recruitment

invitation email to LD teams. A snowball recruitment approach was also approved. To ensure fullest anonymity and thereby increase participation rate, participants were not asked where they had heard about the research study nor what NHS Trust they worked for. Participants were invited to read the participant information sheet – and 'print screen' for a copy - and check relevant boxes of the consent form, before beginning the survey proper. Participants were invited to provide a confidentially-held email address so that they could be entered into the prize draw.

Ethical Approval and Considerations

Ethical approval was sought from the School of Psychology Ethics Committee at the University of Exeter. Research and Development (R&D) approval was applied for through the national Health Research Authority (HRA). Approval letters are in Appendix B. Individual sites agreeing to disseminate the survey to staff were sent copies of the trial master file including questionnaires. The anonymous data was retained in accordance with the Data Protection Act (1998) for a period of five years and has been stored on a computer that is password-protected and belongs to the researcher. The debrief page provided sources of help for participants who are concerned about their health, including advising participants to contact their GP, to visit the NHS Choices website, or the website of the mental health charity Mind. Ethical approval letters are in Appendix B, and consent forms, and study information in Appendix A.

Power Analyses

Target sample size of N=101 was determined using an a priori power calculation. Using GPower (Faul, Erdfelder, Buchner, & Lang, 2009), assuming 0.8

as statistical power and a medium effect size, $f^2 = 0.08$ - for the explained variance of the interaction term alone; with $p<0.05$, illustrated that N=101 participants were required to achieve adequate power. In the final analyses, with N=120, critical F = 3.9, the effect size was 0.7 (medium). The power calculation for all analyses is elaborated upon in Appendix D.

Statistical Analyses

Descriptive statistics were employed on demographic and outcome data. Correlational analyses were conducted on questionnaire variables (SCS; MBI; BDI; and PWP). Exploratory stepwise regression analyses were performed to identify variables of relevance to the moderation models. Multiple regression-based path analyses were conducted on the models in Figures 1 and 2, to examine the moderating effect of self-compassion on the relationship between burnout and PWB and burnout and depression. Moderation effects were analysed using Hayes' macro (Hayes, 2012) and interaction terms were calculated (Aiken, West, & Reno, 2010).

The Johnson-Neyman technique (Johnson & Neyman, 1936) was applied to the moderation to determine the region of significance. Assumptions of multiple regression were tested, including linearity and outliers (using scatter plots); multivariate normality (using histograms; reviewing Q-Q-plot; goodness of fit test and using log-transformation if required); multicollinearity (using mean-centering); auto-correlation and homoscedasticity (both using scatter plots) (Statistics Solutions, 2016). Outliers were transformed using the Winsorizing technique suggested by Tabachnick and Fidell (2001). Specifically, the outlying cases raw scores on the specific variable were changed so they were one unit smaller (or larger) than the

next most extreme (Tabachnick & Fidell, 2001). Means from moderation analyses were centred prior to computing the product term, to clarify regression coefficients, therefore the overall model fit R^2 remained undisturbed (Lacobucci, Schneider, Popovich, & Bakamitsos, 2017). Cronbach's alpha was computed to ascertain the reliability of the questionnaire constructs; >.70 indicating acceptable reliability (Field, 2013).

Results

Descriptive statistics for outcome variables are illustrated in Table 4. Descriptive statistics for outcome variables across the different occupational groupings are in Appendix J. Depression scores were examined across the sample, and sample classification frequencies are displayed in Appendix I.

Table 4. *Descriptive statistics for predictor, moderator and outcome variables*

Variable	Variable type	N	Mean	SD	Minimum	Maximum	Comparison mean (SD if provided)
BDI total	Outcome	120	8.8	6.9	0	28	10.71
BO EE	Predictor	120	16.1	9.7	0	42	13.7(6.4)2
BO DP	Predictor	120	7.1	5.3	0	24	4.7(3.5)2
BO PA	Predictor	120	37.5	6	20	48	22.6(3.6) 2
SCS total	Moderator	120	81	18.2	31	121	80.1(12.7)3
WB - PRO	Outcome	120	34	5.2	20	42	24 (3.4)4
WB – EM	Outcome	120	29.6	4.2	17	37	19.5 (28)4

NB. BO EE – Burnout Emotional exhaustion; BO DP – Depersonalisation; BO PA – Personal accomplishment; SCS – Self-Compassion Scale; WB – PRO – Wellbeing – Positive relationship with others; WB EM – Environmental master; BDI – Beck Depression Inventory.

[1] Based on population study involving females from Liverpool aged 41-65 (Veerman, Dowrick, Ayuso-Mateos, Dunn, & Barendregt, 2009).
[2] Based on burnout study amongst Turkish physicians (Ozyurt, Hayran, & Sur, 2006).
[3] Based on validation study with community-based sample in the Netherlands (López et al., 2015).
[4] Based on study of wellbeing amongst students (Winefield, Gill, Taylor, & Pilkington, 2012).

Zero Order Correlations Between Outcome and Predictor Variables

As predicted, BDI scores were positively correlated with emotional-exhaustion and depersonalisation, and negatively correlated with personal accomplishment and self-compassion (Table 5). Emotional-exhaustion was positively correlated with depersonalisation and negatively correlated with personal-accomplishment and self-compassion. Depersonalisation was also negatively correlated with both personal-accomplishment and self-compassion. Personal-accomplishment and self-compassion were positively correlated.

Table 5. *Sample correlations between depression, burnout and self-compassion*

Variables	BDI	EE	DP	PA	SCS	PRO	EM
BDI		.58*	.58*	-.48*	-.71*	-.46*	-.56*
EE			.76*	-.41*	-.37*	-.25*	-.44*
DP				-.56*	-.44*	-.34*	-.52*
PA					.39*	.48*	.47*
SCS						.53*	.54*
PRO							.52*
EM							

*$p < .001$

BDI – Beck Depression Inventory; EE – emotional exhaustion (burnout); DP – depersonalisation (burnout); PA – personal accomplishment (burnout); SCS – Self-compassion Scale; PRO – Positive relationships with others (wellbeing); Environmental mastery (wellbeing).

Exploratory Stepwise Regression Analyses to Identify Variables for Moderation Analyses Models

Exploratory regression analyses were initially conducted on the self-compassion, wellbeing, burnout model and the self-compassion, depression, burnout model, using stepwise regression methods in SPSS. This was to identify the most relevant variables to the outcome variable, to be included in the moderation analyses. This provided preliminary guidance in terms of which variables to include, and was also supported by previous research (e.g., Woo Kyeong et al., 2013), as well as according with theoretical factors of particular relevance to the structure and nature of the work conducted within UK LD teams (elaborated upon in the discussion). The statistically significant results of multiple regression analyses are in Table 8 below. Two wellbeing variables were identified as being most relevant to Model 1 – PWB dimensions 'environmental mastery' F (1, 117) = 27.3, p<.001, $R^2\Delta$

= .40, significant *F* change p=.03, and 'positive relationship with others' *F* (1, 117) = 34.5, p<.001, $R^2\Delta$ = .36, significant *F* change p<.001. The burnout variables identified in these analyses were depersonalisation and personal accomplishment with environmental mastery, and personal accomplishment with positive relationships with others, respectively.

Table 6. *Exploratory stepwise regression analyses to identify significant dependent (wellbeing) variables selected for moderation analyses*

Wellbeing outcome variable	Variables in model	N	DF	*F*	Sig.	$R^2\Delta$	*F* change	Sig. *F* change
Autonomy	1. BO (DE)	120	1, 118	23.1	<.001	.16	23.1	<.001
	2. DE, BO (PA)	*120*	*2, 117*	*14.6*	*<.001*	*.19*	*5.3*	*.02*
Environmental mastery	1. SCS, BO (DE)	120	1, 118	47.8	<.001	.38	19.6	<.001
	2. SCS, DE, PA	*120*	*2, 117*	*37.5*	*<.001*	*.40*	*4.6*	*.03*
Personal growth	1. SCS	120	1, 118	31.5	<.001	.20	31.5	<.001
	2. SCS, DE	*120*	*2, 117*	*24*	*<.001*	*.28*	*13.3*	*<.001*
Positive relationships with others	1. SCS	120	1, 118	45.7	<.001	.28	45.7	<.001
	2. SCS, PA	*120*	*2, 117*	*34.5*	*<.001*	*.36*	*17*	*<.001*
Purpose in life	1. SCS	120	1, 118	36.5	<.001	.23	36.5	<.001
	2. SCS, PA	*120*	*1, 117*	*28*	*<.001*	*.31*	*15.2*	*<.001*
Self-acceptance	1. SCS	120	1, 118	174.9	<.001	.60	174.9	<.001
	2. SCS, PA	*120*	*1, 117*	*112.4*	*<.001*	*.65*	*20.7*	*<.001*

NB. The final regression model for each variable is illustrated in italics.
Burnout (depersonalisation) – BO (DE); Burnout (personal accomplishment) – BO (PA); SC Scale (SCS).

For the depression model (Model 2), burnout variables emotional exhaustion and personal accomplishment were included, and depersonalisation was excluded. Statistics from the exploratory regression analyses are in Table 7.

Table 7. *Results of exploratory regression analysis for the depression outcome variable in the burnout/self-compassion model*

Variables	N	DF	*F*	Significance	$R^2\Delta$	F change	Sig. *F* change
EE	120	1, 117	94.9	<.001	.61	35	<.001
EE, PA	120	1, 116	66.8	<.001	.62	4.6	.03

EE – Emotional exhaustion; PA – personal accomplishment.

Moderation Multiple Regression Analyses

Using the Hayes (Hayes, 2012) process macro, a moderation regression analysis was conducted on the variables, as indicated in Figure 2 and outlined in the data analysis section above. Based on significant predictors identified in the stepwise multiple regression models, five models were tested. The first two analyses (illustrated as model A below) were to test hypothesis 2a (and illustrated in model/Figure 1 in methods section above) and the next three were to test hypothesis 2b (and illustrated in model/Figure 2 in methods section above).

Model A – Wellbeing as outcome variable. With regards to the wellbeing model, three moderation regression analyses were conducted:

Personal accomplishment (burnout dimension) was entered as the predictor variable, with SCS score as the moderator variable, and positive relationships with others (wellbeing dimension) as the outcome variable. The overall model, $R^2 = .40$, $F(3, 116) = 26.2$, $p<.001$ was significant, including both personal accomplishment (burnout), $b = .27$, $SE = .07$, $t = 4$, $p<.001$, and self-compassion, $b = .12$, $SE = .02$, t

= 5.2, p<.001. The interaction term accounted for an additional 3% of the variance, $R^2\Delta$ = 0.3, f (1, 116) = 6.39, p=.01, and was significant, b = -.01, SE = .00, 95%, t = 2.5, p = .01. The Johnson-Neyman analysis revealed that the interaction model was significant one SD below the mean (b = .43, SE = .09, 95% CI [.25 - .60], t = 4.8, p<.001), at the mean (b = .27, SE = .07, 95% CI [.14 - .40], t = 4, p<.001), but not one SD over the mean (b = .11, SE = .09, 95% CI [-.07 - .30], t = 1.2, p = .23). The conditional effect of the focal predictor at the value of the moderator was a self-compassion score of 93 or below, with 78% of the sample falling below this point and 22% falling above it.

Depersonalisation (burnout) was entered as a predictor variable, with self-compassion as the moderator and environmental mastery (wellbeing) as the outcome variable. The overall model was significant, R^2 (3, 116) = .39, p<.001. Depersonalisation, b = -.29, SE = .07, t = -4.33, p<.001 and SCS score, b = .09, SE = .02, t = 4.6, p<.001 were both significant. However, the interaction term was not significant in this model, b = .00, SE = .00, t = .56, p = .58.

Personal accomplishment was entered as a predictor variable, with SCS score as the moderator and environmental mastery as the outcome variable. The overall model was significant, R^2 = .37, F (3, 116) = 23, p<.001, for both personal accomplishment b = .21, SE = .06, t = 3.8, 95% CI [.10 - .32], p<.001, and SCS score, b = .10, SE = .02, t = 5.2, 95% CI [.06 - .13], p<.001. However, the interaction term was not significant for this model b = .00, SE = .00, t = -.73, p = .47.

The graph in Figure 3 depicts simple slope analysis of the significant interaction term within the wellbeing model, as indicated in the statistics above. The graph illustrates the region of significance for the exact values.

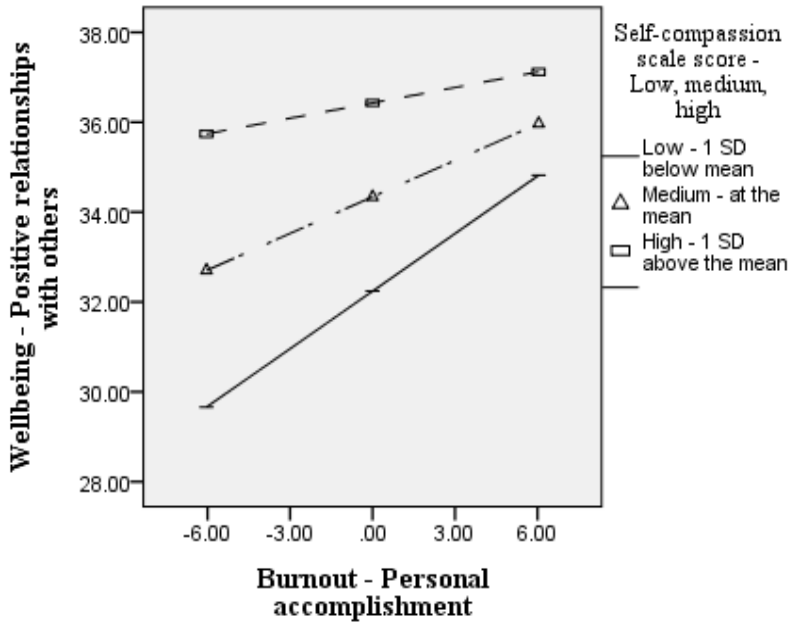


Figure 3 - Simple slope illustration of the interaction relationship between Burnout and Wellbeing

Figure 3 illustrates that for low and medium levels of self-compassion, self-compassion moderated the effect of the relationship more strongly than for high levels of self-compassion. Thereby, for those with self-compassion scores at the higher end of the range, the effect of self-compassion did not significantly moderate the relationship between burnout (personal accomplishment) and wellbeing (positive relationships with others). It should be noted that high levels of the personal accomplishment dimension of the PWB correspond to lower levels of burnout.

Model 2 – Depression as outcome variable. With regards to the depression model, two moderation analyses were conducted:

Emotional exhaustion (burnout) was entered as a predictor variable, with self-compassion score as the moderator, and depression as the outcome variable. The overall model was significant $R^2 = .64$, F (3, 116) = 68.8, p <.001. Both emotional

exhaustion *b* = .23, *SE* = .04, 95% CI [.14-.32], *t* = 5.3, *p*<.001 and self-compassion *b* = -.23, SE = .02, 95% CI [.14 - .32], *t* = -9.9, *p*<.01 were significant. The interaction term accounted for an additional 2% of the variance within the model, $R^2\Delta$ = .02, *f* (1, 116) = 6.9, *p* = .01 and the interaction term was significant, *b* = -.01, *SE* = .00, *t* = -2.6, *p* = .01. The Johnson-Neyman analysis revealed that the interaction model was significant one SD below the mean (*b* = .33, *SE* = .05, 95% CI [.23-.44], t =6.5, p<.001), at the mean (*b* = .23, *SE* = .04, 95% CI [.14-.32] t = 5.3, *t* = 5.3, *p*<.001, and one SD over the mean, *b* = .13, *SE* = .07, 95% CI [.00-.26], *t* = 2, *p* = .05. The conditional effect of the focal predictor at the value of the moderator was a self-compassion score of 93.5 or below, with 82.5% of the sample falling below this point and 17.5% falling above it.

Personal accomplishment (burnout) was entered as a predictor variable, with self-compassion as the moderator and depression as outcome variable. The overall model was significant R^2 = .56, *f* (3, 116) = 50, *p*<.001. Additionally, personal accomplishment was significant *b* = .26, *SE* = .08, *t* = -3.43, *p* <.001 as was self-compassion score, *b* = -.23, *SE* = .03, *t* = -9.30, *p* <.001. The interaction accounted for an additional 1% of the variance in the model, $R^2\Delta$ = .01, *SE* < .01, *f* (1, 116) = 3.1, *p* = .08, and whilst it was significant at the *p*<.10 level, it only approached significance at the *p*<.05 level, *b* = .01, *t* = 1.8, *p* = .08. The interaction was significant at one SD below the mean, *b* = -.38, *SE* = .10, 95% [CI -.58 - -.19], *t* = 3.9, *p*<.001, at the mean, *b* = .00, *SE* = .08, 95% CI [-.41 - .11], *t* = -3.4, *p*<.001, but not one SD above the mean, *b* = -.14, *SE* = .11, 95% CI [-.35 - .08], *t* = 1.3, *p* = .20. The conditional effect of the focal predictor at the value of the moderator was a self-

compassion score of 99.7 or below, with 75% falling below this score, and 25% falling above it.

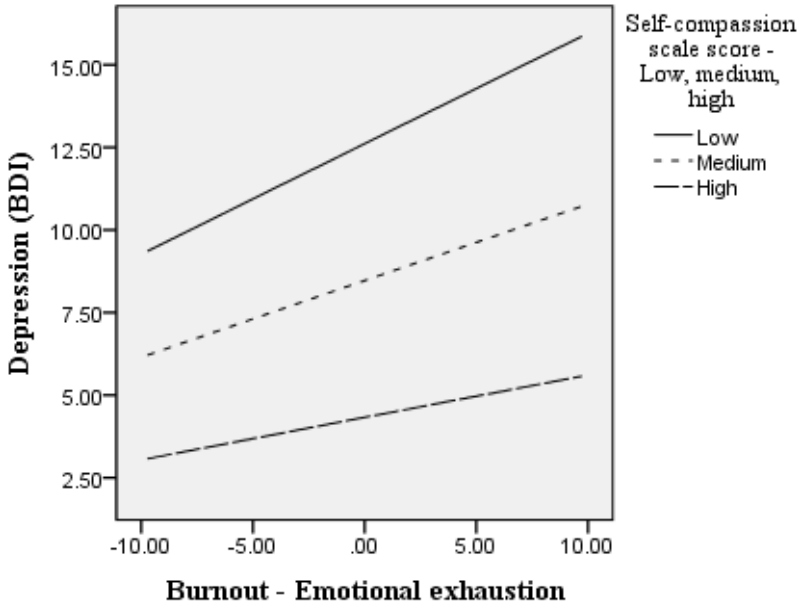


Figure 4 - Simple slope illustration of the interaction relationship between Burnout and Depression

As expected, and illustrated in Figure 4, high levels of depression were correlated with higher levels of emotional exhaustion. The interaction was significant at all levels of self-compassion.

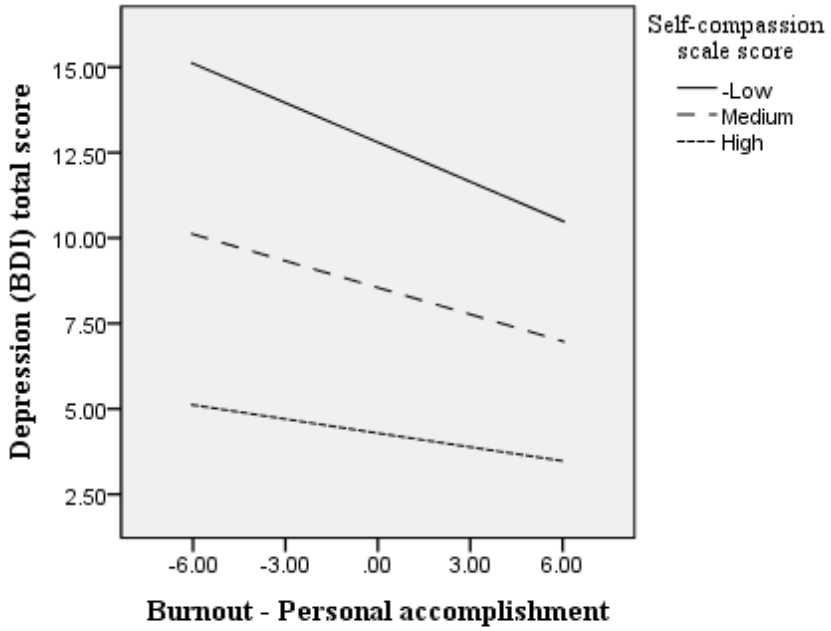


Figure 5 - Simple slope illustration of the interaction relationship between Burnout and Depresssion

Figure 5 illustrates that high levels of depression were correlated with lower levels of personal accomplishment (burnout dimension). In terms of the interaction, for low and medium levels of self-compassion, self-compassion moderated the effect of the relationship more strongly than for high levels of self-compassion. Thereby, for those with self-compassion scores at the higher end of the range, the effect of self-compassion did not significantly moderate the relationship between personal accomplishment (burnout) and depression.

Accounting for Multiple Testing

Since five models were tested for moderation analyses, the critical *p* value became 0.01, using the Bonferroni correction.

Discussion

This study examined the relationships between burnout and wellbeing, burnout and depression, and the moderating effect of self-compassion on these associations in learning disabilities staff. As hypothesised, the correlational findings of the study indicate that both PWB and depression are associated with burnout and these associations were moderated by self-compassion.

For medium and low levels of self-compassion, self-compassion moderated the positive relationship between personal accomplishment (burnout) and positive relationships with others (wellbeing). This moderation was not significant for those with high levels of self-compassion. Low levels of personal accomplishment were significantly related to high levels of depression, and self-compassion moderated this relationship amongst those with low and medium levels of self-compassion, though not high. The theoretical rationale for this may be that those with high levels of self-compassion would not question their own accomplishments in the same way as those with low levels of self-compassion. These findings illustrate the need to identify levels of self-compassion prior to interventions - which intervention research has not always demonstrated - and the specific benefit of these interventions for a sub-sample of those without protective personal resources, potentially linked to levels of self-compassion.

High emotional-exhaustion was related to depression, and self-compassion moderated this relationship at all levels of self-compassion. Figure 3 illustrates that whilst significant, the effect was less pronounced for those with higher levels of self-

compassion. It is positive that whilst self-compassion moderates this relationship for all levels of self-compassion, there may also be a ceiling effect in the level of benefit that can be achieved from this relationship, and thereby self-compassion intervention. These significant moderations are consistent with, and extend, previous research demonstrating a relationship between self-compassion and wellbeing (Woo Kyeong, 2013; Zessin, Dickhäuser, & Garbade, 2015) and wellbeing and depression (Woo Kyeong, 2013). This demonstrates the value of these moderation analyses, and the usefulness of them to guide tailored intervention research in particular populations.

Burnout dimensions depersonalisation and personal accomplishment were significantly related to the environmental mastery dimension of wellbeing; however, in both cases the interaction term (self-compassion) was not significant. Thereby self-compassion did not moderate the effects of these relationships, however, instead explained variance over and above that of burnout dimensions. Overall rates of depersonalisation across the sample were low (M=7.1; SD=5.3) yet higher than comparative samples (M=4.7; Table 4), and perhaps self-compassion is less relevant when levels of this variable are low. Self-compassion may be less relevant in the relationship between personal accomplishment and environmental mastery, possibly due to an overlap of constructs on these dimensions, when self-compassion is included specifically.

The results of the statistical data reduction method (stepwise regression to identify variables of relevance to the moderation analyses models) theoretically accord with the nature of the sample and structure of the work conducted within UK

LD teams for both ‘positive relationships with others’ and ‘environmental mastery’ as important dimensions of professional wellbeing for this sample. In LD teams, the multi-disciplinary team (MDT) is a prominent feature of the structure, and much of the work achieved depends on positive working relationships and team dynamics. This is due to multi-disciplinary staff (and families/carers) being involved in any one client’s care at a particular time, the high prevalence of co-working, and - particularly - in the context of this highly vulnerable population where no one person would be solely responsible for an individual’s care. Environmental mastery is arguably important in any work setting – for individuals to feel that they are capable and flourishing within their role.

It is further interesting that analyses of the wellbeing variable ‘autonomy’ led to the exclusion of self-compassion in its model – thereby autonomy was not identified as a variable of specific relevance to this sample, relative to other variables. Theoretically, this may be because the UK NHS operates within clear hierarchies, where staff are perceived and categorised according to their pay scale, and thereby the hierarchy may be normatively accepted rather than perceived as an area of job dissatisfaction.

Perhaps in this context, a reduced sense of autonomy amongst those on lower pay scales is assumed or the norm, and autonomy is more important to job satisfaction amongst staff on higher pay scales. It would be interesting to analyse the data according to occupational grouping or pay scale, to examine whether – and for whom - this factor plays a role in the importance of autonomy at work. An alternative hypothesis may be that the MDT-structure of teams allows individual staff to feel

sufficiently autonomous in their specifically-defined role and occupation, and therefore autonomy is not perceived as an area relevant to wellbeing and satisfaction. Theoretically these findings contrast to previous findings that found that autonomy played an important role in an LD sample (Alexander & Hegarty, 2000), however the situation may be different systemically or culturally, eighteen years later.

Personal accomplishment is a key component of burnout (Maslach & Jackson, 1981), and in LD teams it could be incorporated into burnout interventions or individual employee personal development plans. Since positive relationships with others is imperative for functioning teams, MDTs, and effective coworking, it would be prudent for this factor to remain on the agenda when considering organisational issues, personal development, and the prevention of burnout in learning disabilities staff.

Since self-compassion is interpreted as a stable cognitive and emotional orientation towards negative life experiences (Neff, 2003a, 2003b), it is beneficial to know that self-compassion can moderate the strength of these relationships, in an occupation where these dimensions of wellbeing and burnout are so relevant to effective working. Depression is a debilitating condition – for the individual, the healthcare system, colleagues, and clients - and is prevalent in healthcare staff (British Psychological Society, 2016). A simple, relatively low-cost approach for cultivating self-compassion is to provide time and space for staff loving-kindness meditation interventions, which are shown to increase positive, and decrease negative, affect (Hofmann, Grossman, & Hinton, 2011).

Levels of self-compassion were in the average range on the overall, and various dimensions, of the construct within this population. This is informative for the learning disabilities occupation, not least because it is the first study of its kind to examine self-compassion amongst those who work with learning disabilities. It is possible that learning disabilities staff have particularly high levels of compassion (for others) if considering the level of care, professional ethics, and empathy required to work with this vulnerable population. This may be illustrated by the importance of the impact of the 'positive relationship with others' variable, supporting the idea that care staff, particularly those in LD, are good at cultivating personal relationships and extending compassion to others, however they may not yet have equivalent levels of self-compassion. This is supported by past research that finds that LD staff have high levels of compassion, but that this is linked to high levels of burnout (Dennis & Leach, 2007; Søndenaa et al., 2015).

Almost 50% of the sample had worked in the field of LD for more than ten-years. This could be indicative of job satisfaction amongst the sample, however job satisfaction was not analysed. Additionally, there are other factors - such as financial and caring responsibilities in the lives of the individuals - that may also explain long-term employee retention. Furthermore, those in unqualified positions, for example, may find it particularly difficult to seek alternative employment. This further highlights the need for future research in this area to identify staff qualifications and roles, in order to control for these variables or to homogenise the sample to a greater extent, through study inclusion/exclusion criteria.

The decision not to collect information on specific Trust details was made with confidentiality as a priority and to potentially increase participation rates. However, these analyses may have been useful, as there may be particular teams or Trusts with higher or lower levels of burnout as compared to the mean. Future research may wish to collect and control for this variable in analyses. The findings - relating to length of service being relatively high, as well as the relevance of burnout and wellbeing factors personal accomplishment and positive relationships respectively – are consistent with findings by Bell and Espie (2002) relating to low staff satisfaction being improved by management support; satisfaction with client work being high; and a perception of practical support provided by immediate colleagues.

The research generated philosophical considerations about how much responsibility (or even blame) is potentially placed upon the individual experiencing burnout, rather than recognising the role of society (Han, 2015), work ethic within society, and systems, such as within a contemporary NHS. It is expected that individuals cope with excessive workloads, and when there is a problem with burnout or perhaps more debilitating symptoms such as depression or anxiety, the problem may be inadvertently located within the individual by the system.

Overall depression and wellbeing sample scores were not dramatically different to other samples, and it is positive that 85% of the sample had ‘normal’ or ‘minimal’ level scores on the BDI. However, the fact that 85% of the sample had depression scores falling within ‘normal’ to ‘minimal’ ranges (Table E; Appendix I) has implications for the study’s findings. Specifically, these results should be interpreted as applicable to a non-clinical occupational sample only. In clinical

occupational samples the correlations may be different, and self-compassion may not act as a moderator in the relationship between burnout and depression and wellbeing. It would be useful to examine the moderating effect of self-compassion in the relationship between burnout and depression in occupational samples where rates of depression may be higher (for example, in a population study – as illustrated in Table 4 – mean depression scores were 10.7 as compared to 8.8 in the current sample). Therefore, despite demands in the job being high, the staff in this sample had relatively low rates of depression. If baseline wellbeing outcome scores are low, the significance of the moderating effects of self-compassion on the wellbeing outcome variable in question – and thereby value of a self-compassion intervention - may be less useful to an organisation.

In future research, wellbeing outcome scores should be identified prior both to the examination of these moderation analyses, and development of subsequent intervention, to ensure relevance to a given population. The current study's theoretical rationale was derived from literature involving other care samples, as well as learning disabilities staff samples, demonstrating that staff experience depression and burnout (e.g., British Psychological Society, 2016; Ahola & Hakanen, 2007; and Dennis & Leach, 2007). However, a-priori examination of outcome variables in a sample under study (for example, English learning disabilities staff) could be a precursor to tailored interventions or ongoing organisational development initiatives relevant to particular teams.

Table J in the Appendix also provides interesting descriptive data on outcomes across occupational groups; however, it was outside the focus and scope

(e.g., due to resources and time available for recruitment in order to achieve appropriate power and sample stratification requirements) of the current study to control for this variable into moderation analyses.

It may be fair to propose that the healthcare profession responds to burnout and depression amongst staff in quite a reactive way to ever-growing levels of these symptoms, and the development of interventions to remedy the situation seems indicative of this. The results of this study to some degree illustrate the limitations of the focus on individual resilience, particularly since not all levels (i.e., low, medium and high) of self-compassion influenced the association between burnout and depression/wellbeing.

There may be systemic or organisational factors which need to be explored in learning disabilities staff samples. For example, the inconsistent importance of autonomy across this study compared to Alexander & Hegarty (2000), perhaps owing to time and place-based cultural differences. A qualitative methodology could explore organisational issues (which may account for a greater percentage of the variance) in specific teams in need. Job retention was relatively high in the current study and previous research outlines a sense of pride and mastery in one's work (Lloyd, 2014), thus an exploration (directly with employees) of what would reduce the 'high demands' (as described by Gray-Stanley et al., 2010), and thereby burnout, would be beneficial.

Depression - and likely burnout – may involve feelings of guilt (Alexander et al., 1999). This can become a vicious cycle of secrecy and stigma for individual sufferers, particularly when they are in roles where they are required to be strong

and capable to care for vulnerable others. This further emphasises the need for organisations to build an ethos and organisational structure that prioritises self-compassion and self-care for staff, in its delivery of healthcare services. The norm has become to work overtime and go above and beyond the call of duty, particularly in an NHS that flourishes as it does on the basis of employee compassion. Thereby individuals may feel that there is no time for self-care and that they have failed if they are not resilient enough – this is theoretically linked to research that finds that nearly 50% of psychologists reported depression and feeling they are a failure (British Psychological Society, 2016). Therefore, the recommendation is that the results should be interpreted and utilised in a way that emphasises systemic, rather than individual, change.

Strengths and Limitations of the Study

One area that was not examined within demographic data collected from the sample was the presence, and amount, of supervision received by learning disabilities staff. In larger samples, this may have been a significant factor in the level of burnout experienced by particular occupational groups. Preliminary data – Appendix J – illustrate that there are varied mean outcome scores across different occupational groups, and this dimension could be incorporated into future moderation analyses with larger samples.

It is notable - and introduces potentiality for a bias in sample findings - that over 40% of the sample were in the clinical psychology occupational category. This could relate to the fact that clinical psychologists were involved in the recruitment of

research participants within a number of NHS Trusts, and may reflect an increased motivation for this occupation to contribute to clinical research. This may introduce some degree of bias in the results, due to the very specific training and stipulated levels of supervision that must be provided to clinical psychologists in practice. To this end, levels of depression or burnout may be lower in this occupation, compared to staff who receive less support during their work. Future research should ensure a more balanced sample by occupational group.

Further limitations regarding sample and recruitment are that due to the questionnaire being web-based, participants were simply asked to check a box to say that they worked with individuals with learning disabilities, however this could not be validated, therefore it is possible that those who worked in different settings may have participated. Whilst community teams were targeted through R&D and social media, there was no method to validate that participants worked within these teams in place. An analysis of job titles demonstrates that staff members were likely employed within community learning disabilities services, and no residential care services were invited to participate. However, the sample does also potentially include trainee staff (such as trainee clinical psychologists) since whether participants held a professional qualification did not form part of the sampling inclusion/exclusion criteria. To further homogenise samples in future research, this could form part of the methodology for future research.

To further validate the homogeneity of the sample in future research, participants could be asked to indicate the name of the service they work for. This was not included in the present methodology due to an emphasis on confidentiality,

and concerns participants might have about revealing what service or Trust they worked for, given the sensitive subject matter. The item on the consent form relating to validation that the participant worked with individuals with learning disabilities included 'I am 18 years and above and confirm that I am employed to work with people with learning disabilities.' For greater clarity this item could have specified that the individual works within a 'community learning disabilities team.' In future research the sample inclusion/exclusion criteria should be more specific and stringent through collection of data on job role (with the exclusion of trainee and unqualified staff – or in the case of large enough samples, these factors controlled for in statistical analyses); years of service; level of qualification; and information regarding level of supervision received.

The gender balance across the sample was unequal, with 81% of the sample identifying as female. However, LD teams are likely to be disproportionately female. Researchers have identified age and gender differences in levels of self-compassion amongst adolescents (Bluth, Campo, Futch, & Gaylord, 2017). It was outside the remit and scope of the current study to adequately power analyses of demographic variables. However, future research could stratify more equally across occupational groups and gender. These factors could then be included in statistical analyses, through use of a larger sample and employment of structural equation modelling analyses.

Overall, 83% of participants were aged 25-54, with the largest majority of participants aged 25-34. Rather than this being indicative of the age group of those working in LD teams, it may suggest that younger people were more inclined to take

part in the research. This could be due to the electronic and online nature of the research procedure, which made use of social media. This was a productive way to recruit participants for this study, however a face-to-face recruitment procedure – including the researcher going to LD teams to recruit potential participants - may have resulted in a greater spread across age groupings. Using an online survey was an efficient resource time-wise, however, with data required for power obtained over a recruitment period of one month.

The research had a number of additional strengths. One being novelty – particularly as it was the first of its kind in a UK healthcare population, and the first to examine self-compassion amongst learning disabilities staff, where this variable and burnout are important. When communicating with staff in the field it was informally proposed that relatively little research is conducted in the field of LD, and therefore motivation and enthusiasm for the study was comparatively high. This may have affected ease of recruitment, and future research may benefit from this and be able to achieve greater statistical power for stratification of comparisons by demographics. Another strength was that the sample size was significantly larger than previous research examining self-compassion and burnout in care staff (for example, Flook et al., 2013, and Runyan et al., 2016). Further strengths were that there were no missing data across the dataset.

The research provides information for LD staff-specific interventions, such as burnout interventions, however it would be important to make use of the recommendations in the literature review that interventions should be tailored on the basis of need identified within particular teams and amongst individuals. For

example, in the current case, relationship-building and personal accomplishment could be capitalised upon when designing burnout interventions.

One factor which may be both a strength and limitation of the methodology was the fact that anonymity was particularly emphasised to participants, to increase motivation for participation, and potentially decrease biased responses. For this reason, it was decided that where participants had been recruited from, and which Trust they worked for would not be identified during data collection, since the survey elicited potentially sensitive issues. Additionally – and in line with NHS staff surveys - an age range question rather than asking for specific age in years was employed, to further decrease likelihood of participants in small teams being identifiable. This meant that mean age could not be calculated.

Participants may have been less inclined to participate, and importantly, less inclined to respond honestly if information about where they worked had been requested. However, this may have led to response bias in the form of particular Trusts or organisations with significantly different levels of burnout than others participating or not participating. Whilst it would be useful to the LD field to identify Trusts or organisations with potentially higher or lower levels of burnout and self-compassion, this is potentially threatening to individuals; teams; Trusts; and HR staff who were assisting with recruitment. If this had been identified, however, a small-scale research project or service evaluation could have followed-up on this research with particular Trusts, teams or organisations, to identify how issues could be improved or good practice learnt from.

Conclusion

Self-compassion was at an average level for this sample and depression scores were low, suggesting low levels of occupational ill-health. Moderation analyses illustrated that self-compassion significantly moderated the relationship between burnout (personal accomplishment) and psychological wellbeing (positive relationships with others); and burnout (both emotional exhaustion and personal accomplishment) and depression.

The research paves the way for the development of burnout and self-compassion interventions amongst learning disabilities staff. It is proposed that interventions should be tailored (through a-priori identification of rates of wellbeing and self-compassion) based on identified need in a given population and are embedded into a systemic ethos of self-care and self-compassion. A systemic or organisational ethos of self-care and self-compassion could help to reduce the likelihood of individuals feeling alone, responsible, or ‘a failure’ for experiencing psychological symptoms, such as depression and burnout, in an occupational setting. Linked to this is the need for further research on stress and burnout – both organisationally and individually - to identify what teams need or what systemic changes need to occur to reduce overall experiences of burnout.

References

Ahola, K., & Hakanen, J. (2007). Job strain, burnout, and depressive symptoms: A prospective study among dentists. *Journal of Affective Disorders*, *104*(1–3), 103–110. https://doi.org/10.1016/j.jad.2007.03.004

Aiken, L. S., West, S. G., & Reno, R. R. (2010). *Multiple regression: Testing and interpreting interactions* (Reprinted). Milton Keynes: Lightning Source.

Alexander, B., Brewin, C. R., Vearnals, S., Wolff, G., & Leff, J. (1999) An investigation of shame and guilt in a depressed sample. *British Journal of Medical Psychology, 72*: 323-338.

Alexander, M., & Hegarty, J. R. (2000). Measuring staff burnout in a community home. *The British Journal of Developmental Disabilities*, *46*(90), 51–63. American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.

Beck, A.T., Ward, C.H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry, 4*, 561-571.

Bell, D. M., & Espie, C. A. (2002). A preliminary investigation into staff satisfaction, and staff emotions and attitudes in a unit for men with learning disability and serious challenging behaviours. *British Journal of LD*, *30*(1), 19–27. https://doi.org/10.1046/j.1468-3156.2002.00097.x

Bluth, K., Campo, R. A., Futch, W. S., & Gaylord, S. A. (2017). Age and gender differences in the associations of SC and emotional wellbeing in a large adolescent sample. *Journal of Youth and Adolescence*, *46*(4), 840–853. https://doi.org/10.1007/s10964-016-0567-2

Boellinghaus, I., Jones, F. W., & Hutton, J. (2014). The role of mindfulness and loving-kindness meditation in cultivating self-compassion and other-focused concern in health care professionals. *Mindfulness*, *5*(2), 129–138. https://doi.org/10.1007/s12671-012-0158-6

Boorman, S. (2009). *NHS health and wellbeing review*. Leeds, UK: Department of Health: Health and Wellbeing Review Team.

Bouras, N. (Ed.). (1999). *Psychiatric and behavioural disorders in developmental disabilities and mental retardation*. Cambridge, UK; New York, NY, USA: Cambridge University Press.

British Psychological Society. (2016). *Survey reveals stress among psychological professionals.* Retrieved 30 May 2016, from http://www.bps.org.uk/news/survey-reveals-stress-among-psychological-professionals

Burton, J., & World Health Organisation (WHO). (2010). *WHO healthy workplace framework and model: Background and supporting literature and practices*. Retrieved from http://www.who.int/occupational_health/healthy_workplace_framework.pdf

Clare, I.C.H., Madden, E.M., Holland, A.J., Farrington, C.J.T., Whitson, S., Broughton, S., Lillywhite, A., Jones, E., Wade, K.A., Redley, M., Wagner, A.P. 'What vision?': Experiences of team members in a community service for adults with intellectual disabilities. *Journal of Intellectual Disability Research, 61* (3), 197-209.

Dennis, A. M., & Leach, C. (2007). Expressed emotion and burnout: The experience of staff caring for men with learning disability and psychosis in a medium

secure setting. *Journal of Psychiatric and Mental Health Nursing*, *14*(3), 267–276. https://doi.org/10.1111/j.1365-2850.2007.01073.x

Department of Health (2011). *DH Health and wellbeing strategy. Health staff, better care for patients: Realignment of occupational health services to the NHS in England.* UK: Department of Health and Social Care.

Devereux, J., Hastings, R., & Noone, S. (2009). Staff stress and burnout in intellectual disability services: Work stress theory and its application. *ResearchGate*, *22*(6), 561–573. https://doi.org/10.1111/j.1468-3148.2009.00509.x

Duffy, B., Oyebode, J.R., & Allen, J. (2009). Burnout among care staff for older adults with dementia - The role of reciprocity, self-efficacy and organisational factors. *Dementia, 8* (4).

Dyer, S., & Quine, L. (1998). Predictors of job satisfaction and burnout among the direct care staff of a community learning disability service. *Journal of Applied Research in Intellectual Disabilities*, *11*(4), 320–332. https://doi.org/10.1111/j.1468-3148.1998.tb00040.x

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behaviour Research Methods*, *41*, 1149–1160.

Field, A. P. (2013). *Discovering statistics using IBM SPSS statistics: And sex and drugs and rock 'n' roll* (4th edition). Los Angeles: Sage.

Flook, L., Goldberg, S. B., Pinger, L., Bonus, K., & Davidson, R. J. (2013). Mindfulness for teachers: A pilot study to assess effects on stress, burnout and teaching efficacy. *Mind, Brain and Education : The Official Journal of the*

International Mind, Brain, and Education Society, *7*(3). https://doi.org/10.1111/mbe.12026

Francis, R. (2013). *Report of the Mid Staffordshire NHS Foundation Trust*. London: The Stationery Office: House of Commons.

Fujiura, G. T. (2003). Continuum of intellectual disability: Demographic evidence for the 'forgotten generation'. *Mental Retardation*, *41*(6), 420–429.

Golonka, K., Mojsa-Kaja, J., Gawlowska, M., & Popiel, K. (2017). Cognitive impairments in occupational burnout – Error processing and its indices of reactive and proactive control. *Frontiers in Psychology*, *8*. https://doi.org/10.3389/fpsyg.2017.00676

Gracia-Gracia, P., & Oliván-Blázquez, B. (2017). Burnout and mindfulness self-compassion in nurses of intensive care units: Cross-sectional study. *Holistic Nursing Practice*, *31*(4), 225–233. https://doi.org/10.1097/HNP.0000000000000215

Gray-Stanley, J. A., Muramatsu, N., Heller, T., Hughes, S., Johnson, T. P., & Ramirez-Valles, J. (2010). Work stress and depression among direct support professionals: The role of work support and locus of control. *Journal of Intellectual Disability Research : JIDR*, *54*(8), 749–761. https://doi.org/10.1111/j.1365-2788.2010.01303.x

Gray-Stanley, J., & Muramatsu, N. (2011). Work stress, burnout, and social and personal resources among direct care workers. *Research on Developmental Disability, 32* (3) 1065-1074.

Han, B.-C. (2015). *The burnout society*. Stanford University Press.

Hayes, A. F. (2012). *Process: A versatile computational tool for observed variable mediation, moderation, and conditional process modelling.* Retrieved from http://www.afhayes.com/ public/process2012.pdf

Hofmann, S. G., Grossman, P., & Hinton, D. E. (2011). Loving-kindness and compassion meditation: Potential for psychological interventions. *Clinical Psychology Review*, *31*(7), 1126–1132. https://doi.org/10.1016/j.cpr.2011.07.003

Johnson, P. ., & Neyman, J. (1936). Tests of certain linear hypotheses and their application to some educational problems. *Statistical Research Memoirs*, *1*, 57–93.

Lacobucci, D., Schneider, M.J., Popovich, D.L., Bakamitsos, G.A. (2017). *Behavioural Research, 49*: 403.

Leeds and York Partnership NHS Foundation Trust. (2018). Leeds and York Partnership NHS Foundation Trust: Community learning disability teams in Leeds. Retrieved 23 April 2018, from https://www.leedsandyorkpft.nhs.uk/our-services/services-list/community-learning-disability-team-cldt/

LimeSurvey Project Team, & Schmitz, C. (2015). *LimeSurvey: An open source survey tool*. Hamburg, Germany: LimeSurvey Project. Retrieved from http://www.limesurvey.org

Lloyd, J. (2014). *Caring for people with dementia: Positive aspects, self-compassion and coping* (Unpublished thesis). University of Warwick. Retrieved from http://webcat.warwick.ac.uk/record=b2746995~S1

López, A., Sanderman, R., Smink, A., Zhang, Y., van Sonderen, E., Ranchor, A., & Schroevers, M. J. (2015). A reconsideration of the self-compassion scale's

total score: self-compassion versus self-criticism. *PLoS ONE*, *10*(7). https://doi.org/10.1371/journal.pone.0132940

MacBeth, A., & Gumley, A. (2012) Exploring compassion: A meta-analysis of the association between self-compassion and psychopathology. *Clinical Psychology Review, 32* (6). pp. 545-552.

Martikainen, P., Laaksonen, M., Piha, K., & Lallukka, T. (2007). Does survey non-response bias the association between occupational social class and health? *Scandinavian Journal of Public Health*, *35*(2), 212–215.

Maslach, C. (1978). Job burnout: How people cope. *Public Welfare*, *36*(2), 56–58.

Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organisational Behaviour*, *2*(2), 99–113. https://doi.org/10.1002/job.4030020205

Maslach, C., Jackson, S. E., & Leiter, M. P. (1997). *Maslach Burnout Inventory* (Third edition). Consulting Psychologists Press.

Maslach, C., & Leiter, M. P. (2003). Areas of work life: A structured approach to organisational predictors of burnout. In *Emotional and Physiological Processes and Positive Intervention Strategies* (Vol. 3, pp. 91–134). Emerald Group Publishing Limited. https://doi.org/10.1016/S1479-3555(03)03003-8

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job Burnout. *Annual Review of Psychology*, *52*(1), 397–422. https://doi.org/10.1146/annurev.psych.52.1.397

Mencap. (2018). What is a learning disability? Retrieved 1 April 2018, from /learning-disability-explained/what-learning-disability

Mills, S. (2010). *The relationship between challenging behaviour, burnout and cognitive variables in staff working with people who have intellectual disabilities* (Unpublished thesis). University of Birmingham.

Mutkins, E., Brown, R.F., Thorsteinsson, E.B. (2011). Stress, depression, workplace and social supports and burnout in intellectual disability support staff. *Journal of Intellectual Disability Research, 55*, (5), 500-510.

National Learning Disabilities Professional Senate (2015). *Delivering Effective Specialist Community Learning Disabilities Health Team Support to People with Learning Disabilities and their Families or Carers*. UK: National Learning Disabilities Professional Senate.

Neff, K. (2003). Self-compassion: An alternative conceptualisation of a healthy attitude toward oneself. *Self and Identity*, *2*(2), 85–101.

Neff, K. D. (2003). The development and validation of a scale to measure SC. *Self and Identity*, *2*(3), 223–250. https://doi.org/10.1080/15298860309027

Neff, K. D., Kirkpatrick, K., & Rude, S. (2007). SC and adaptive psychological functioning. *Journal of Research in Personality*, *41*(1), 139–154.

NHS England. (2015). *Liaison and diversion manager and practitioner resources - Learning disability*. NHS England.

Olson, K., Kemper, K. J., & Mahan, J. D. (2015). What factors promote resilience and protect against burnout in first-year paediatric and medicine-paediatric residents? *Journal of Evidence-Based Complementary & Alternative Medicine*, *20*(3), 192–198. https://doi.org/10.1177/2156587214568894

Ozyurt, A., Hayran, O., & Sur, H. (2006). Predictors of burnout and job satisfaction among Turkish Physicians. *QJM: Monthly Journal of the Association of Physicians*, *99*, 161–169. https://doi.org/10.1093/qjmed/hcl019

Portoghese, I., Galletta, M., Coppola, R. C., Finco, G., & Campagna, M. (2014). Burnout and workload among health care workers: The moderating role of job

control. *Safety and Health at Work*, *5*(3), 152–157. https://doi.org/10.1016/j.shaw.2014.05.004

Rose, J. (1997). Stress & stress management among residential care staff. *Tizard Learning Disability Review*, *2*(1), 8–15. https://doi.org/10.1108/13595474199700002

Royal College of Physicians. (2015). *Work and wellbeing in the NHS: Why staff health matters to patient care*. Royal College of Physicians. Retrieved from https://www.rcplondon.ac.uk/guidelines-policy/work-and-wellbeing-nhs-why-staff-health-matters-patient-care

Runyan, C., Savageau, J. A., Potts, S., & Weinreb, L. (2016). Impact of a family medicine resident wellness curriculum: A feasibility study. *Medical Education Online*, *21*, 30648.

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological wellbeing revisited. *Journal of Personality and Social Psychology*, *69*(4), 719–727. https://doi.org/10.1037/0022-3514.69.4.719

Skovholt, T. M., Grier, T. L., & Hanson, M. R. (2010). Career counselling for longevity: Self-care and burnout prevention strategies for counsellor resilience. *Journal of Career Development*, *27*(3), 167–176. https://doi.org/10.1023/A:1007830908587

Søndenaa, E., Whittington, R., Lauvrud, C., & Nonstad, K. (2015). Job stress, burnout and job satisfaction in staff working with people with intellectual disabilities: Community and criminal justice care. *Journal of Intellectual Disabilities and Offending Behaviour*, *6*(1), 44–52. https://doi.org/10.1108/JIDOB-04-2015-0007

Stamm, B.H. (2010). The Concise ProQOL manual. Available from: http://www.isu.edu/~bhstamm

Statistics Solutions. (2016). Assumptions of multiple linear regression. Retrieved 8 January 2017, from http://www.statisticssolutions.com/assumptions-of-multiple-linear-regression/

Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics*. Allyn and Bacon.

Tilghman-Osborne, C., Cole, D.A., & Felton, J.W. (2012). Inappropriate and excessive guilt: Instrument validation and developmental differences in relation to depression. *Journal of Abnormal Child Psychology, 40* (4), 607-620.

Tyrer, F., McGrother, C. W., Thorp, C. F., Donaldson, M., Bhaumik, S., Watson, J. M., & Hollin, C. (2006). Physical aggression towards others in adults with LD: Prevalence and associated factors. *Journal of Intellectual Disability Research: JIDR*, *50*(Pt 4), 295–304. https://doi.org/10.1111/j.1365-2788.2005.00774.x

Veerman, J. L., Dowrick, C., Ayuso-Mateos, J. L., Dunn, G., & Barendregt, J. J. (2009). Population prevalence of depression and mean Beck Depression Inventory score. *The British Journal of Psychiatry: The Journal of Mental Science*, *195*(6), 516–519. https://doi.org/10.1192/bjp.bp.109.066191

Wang, Y.-P., Gorenstein, C., Wang, Y.-P., & Gorenstein, C. (2013). Psychometric properties of the Beck Depression Inventory-II: A comprehensive review. *Revista Brasileira de Psiquiatria*, *35*(4), 416–431. https://doi.org/10.1590/1516-4446-2012-1048

Winefield, H., Gill, T., Taylor, A., & Pilkington, R. (2012). *Psychological wellbeing and psychological distress: Is it necessary to measure both? Http://Www.psywb.com/Content/2/1/3*. https://doi.org/10.1186/2211-1522-2-3

Woo Kyeong, L. (2013). Self-compassion as a moderator of the relationship between academic burn-out and psychological health in Korean cyber university students. *Personality and Individual Differences*, *54*(8), 899–902. https://doi.org/10.1016/j.paid.2013.01.001

Zessin, U., Dickhäuser, O., & Garbade, S. (2015). The relationship between self-compassion and wellbeing: A meta-analysis. *Applied Psychology. Health and Wellbeing*, *7*(3), 340–364. https://doi.org/10.1111/aphw.12051

Appendix

Appendix A. Information for Participants, Study Consent Form, Participant Debrief

Information for Participants

Title of study: The role of self-compassion in wellbeing and burnout amongst learning disabilities staff

Name and contact details of Principal Investigator:

Dr. Victoria Brooks
Doctoral Student in Clinical Psychology
University of Exeter
Project supervisors: Dr. Anke Karl and Dr. Anna Adlam (University of Exeter)
Field supervisor: Dr. Alexandra Dibley (Clinical Psychologist, Devon Partnership Trust)
Email: vb288@exeter.ac.uk / victoria.brooks3@nhs.net
Telephone: 07929 453116

Ethical approval granted by Exeter University psychology ethics committee – Chair of the committee: Lisa Leaver, l.a.leaver@ex.ac.uk.

Invitation

As part of my doctoral training in clinical psychology I am conducting research on the role of self-compassion in both burnout and wellbeing. I am examining these relationships through online questionnaire research with healthcare staff who work directly with service users in learning disabilities services.

Participation in this study is completely voluntary – it is up to you to decide whether or not you would like to take part in the study. If you change your mind or no longer wish to complete the questionnaires you can exit the survey (by closing your browser at any time) and your data will not be stored. It will not be possible to withdraw from the study once you have completed the study and submitted your responses, as at this point you will have been de-identified – all recorded responses will be anonymised and not linked back to individual participants.

Purpose of the study

The aim of the research is to investigate the potentially mediating role of self-compassion in burnout and wellbeing. Research and academic discourse indicates that care-staff – including learning disabilities staff - experience stress and burn-out, and that good health and wellbeing amongst care staff are of significant benefit to

both the individual and service-users they work with. If through the present research, a need is identified, then the proposed study could potentially be a precursor to the development and delivery of a self-compassion intervention in NHS (and other healthcare) staff.

Once the study is complete, the researcher will present the anonymised results in the form of tabulations and summaries in a report and submit this as part of her doctoral training to the University of Exeter. The report will also be submitted for publication in journals publishing research on self-compassion (such as mindfulness journals) or learning disabilities specific journals. If you wish to be kept updated about publication of articles from the research, please contact me, the researcher, using the contact details provided with this information.

Participation in the study

The research has been designed by me, (Dr. Victoria Brooks, Trainee Clinical Psychologist), under supervision from senior academics and a field clinician. I am employed by Taunton and Somerset NHS Foundation Trust, and I am completing my doctorate in clinical psychology at the University of Exeter.

You will be asked to complete four short questionnaires which should take up to 20 minutes to complete. The questionnaires will focus on burnout, wellbeing and self-compassion. The questionnaires are completed online, and following completion of them, there is an opportunity to enter your email address into a prize draw to win one of sixteen £25 Amazon vouchers. The odds of winning a voucher are 1 in 6. If you have any questions about the research before taking part in the research, then please contact me using the contact details included with this information.

If by completing the questionnaires you feel distressed in any way, at the end of the questionnaires there will be further information about the study in the form of a debrief, and contact details for organisations of potential relevance to the research material.

This study has been granted a favourable ethical opinion by the University of Exeter psychology ethics committee and NHS approval by the Health Research Authority (HRA).

Data collection and confidentiality

The questionnaire data is being collected using LimeSurvey open source software https://limesurvey.org/ and will be collected, stored and processed in accordance with the Data Protection Act 1998.

All the information obtained from you will remain confidential. Only the named researcher (and possibly her academic supervisors) will have access to the anonymised questionnaire data. The email addresses provided at the end of the study will be held confidentially rather than anonymously and only the named researcher will have access to this data. This data will be destroyed once the voucher prizes have been allocated. Questionnaire responses will be completely

anonymised and no questionnaire data will be linked to specific email addresses. Once all analyses and reports have been conducted and written, the email addresses will be deleted.

Contacts for questions or concerns about the research

If you have any questions, queries or concerns about any aspect of the research, you can contact me in the first instance.
(Email: vb288@exeter.ac.uk or victoria.brooks3@nhs.net and Mobile: 07929453116). If you wish to speak to somebody other than me about any issues or concerns you may have, you can also contact my academic supervisor. My primary university supervisor is Dr. Anke Karl (telephone: 01392 725271;
email: a.karl@exeter.ac.uk). You may also contact the chair of the University of Exeter ethics committee; Lisa Leaver on l.a.leaver@exeter.ac.uk.

Thank you for taking the time to read this information and for taking part in my research.

Dr. Victoria Brooks, Trainee Clinical Psychologist, University of Exeter.

Participant Consent Form

CONSENT FORM IRAS NO. 227764 6th September 2017 Version 0.1

Title of Project: The role of self-compassion in wellbeing and burnout amongst learning disabilities staff

Name of Researcher: Dr. Victoria Brooks

1. I confirm that I have read the information sheet (version number 0.1; dated 6th September 2017) ☐
   for the above study. I have had the opportunity to consider the information, and have access
   to the contact details for the researcher, should I have any questions about the research.

2. I understand that my participation is voluntary and that I am free to (anonymously) withdraw at any ☐

time without giving any reason, and without my employment or legal rights being affected.

3. I am 18 years and above and confirm that I am employed to work with people with learning disabilities. ☐

4. I understand that the anonymised information collected about me will be used for the purposes of a doctoral research thesis, and will be submitted for publication in a relevant academic journal. ☐

5. I understand that relevant sections of the anonymised data collected during the study, may be looked at by individuals from the University of Exeter, from regulatory authorities, or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records. ☐

6. By clicking the following box I agree to take part in the above study. I understand that if I wish to withdraw from the study at any time, I can do so by closing the browser window and exiting the survey, and that in this case my anonymous responses will be deleted from the database. ☐

7. Upon completion of the questionnaire, I wish to be entered into the prize drawer with a chance to win one of six available £25 Amazon vouchers and will enter my email address for this purpose. Email addresses will be requested upon completion of the study, and this information will be ☐

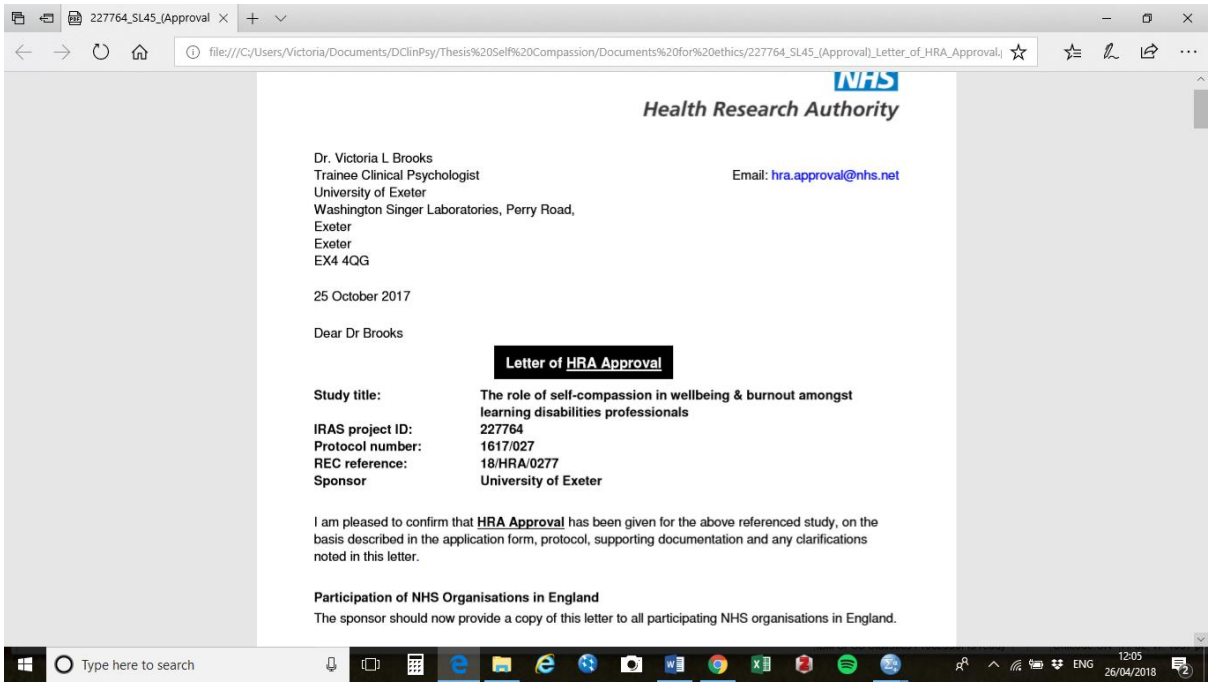
separated from anonymised questionnaire responses.

Participant End of Survey Debrief

The end. Thank you for taking part in this research! If you have any questions about the research, please get in touch with me the researcher Dr. Victoria Brooks - vb288@exeter.ac.uk or victoria.brooks3@nhs.net. If you wish to speak to somebody other than me about any issues or concerns, you may contact my academic supervisor: Dr. Anke Karl (email: a.karl@exeter.ac.uk) at the University of Exeter. You may also contact the chair of the University of Exeter ethics committee: Lisa Leaver l.a.leaver@exeter.ac.uk. If you have submitted your email address to be entered into the prize draw to win one of several Amazon vouchers, you will be contacted at the end of the research (before May 2018) if you have won. If you are concerned about any aspect of your mental health, please see your GP. If you wish to speak to somebody in confidence about difficulties you may be having, you can contact the Samaritans nationally on: 0845 790 9090. There are various meditation apps available if you are interested in mindfulness or meditation, such as the Headspace app, and the Insight meditation timer app (both available on Google Play and I-Tunes). Please now close your browser window to exit this survey.

Appendix B. Study Ethical Approval Letters

HRA Approval letter



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NHS
Health Research Authority

Dr. Victoria L Brooks
Trainee Clinical Psychologist
University of Exeter
Washington Singer Laboratories, Perry Road,
Exeter
Exeter
EX4 4QG

Email: hra.approval@nhs.net

25 October 2017

Dear Dr Brooks

Letter of HRA Approval

Study title:	**The role of self-compassion in wellbeing & burnout amongst learning disabilities professionals**
IRAS project ID:	**227764**
Protocol number:	**1617/027**
REC reference:	**18/HRA/0277**
Sponsor	**University of Exeter**

I am pleased to confirm that **HRA Approval** has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications noted in this letter.

Participation of NHS Organisations in England

The sponsor should now provide a copy of this letter to all participating NHS organisations in England.

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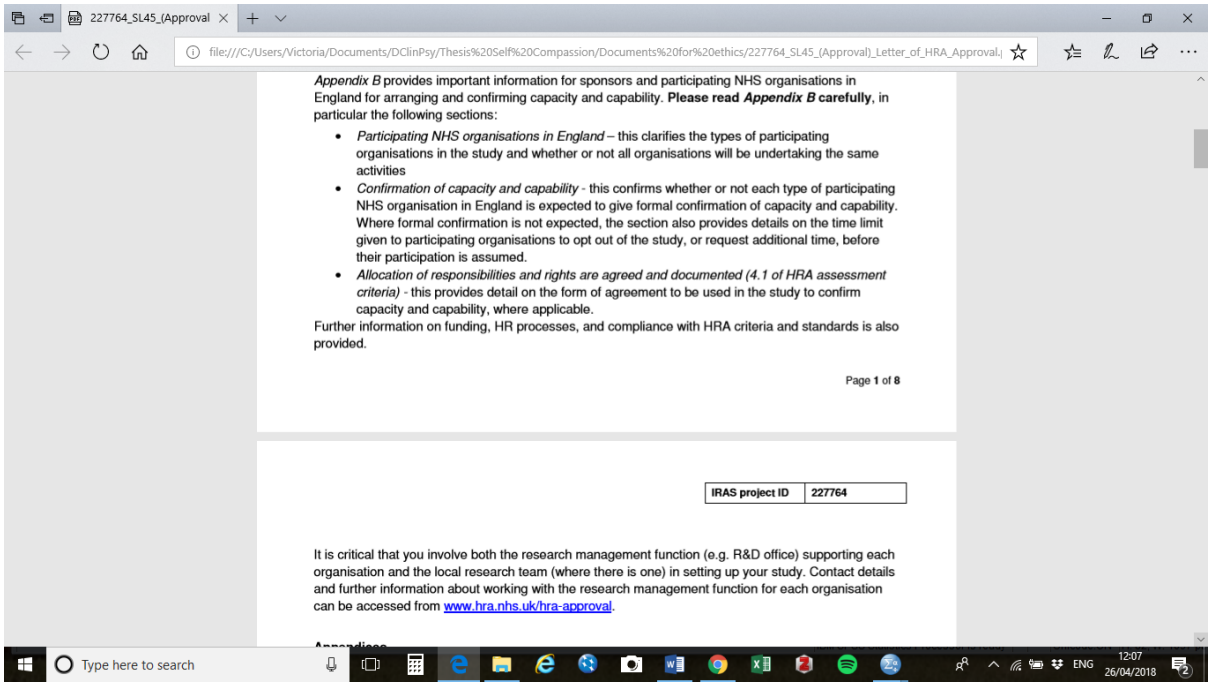

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Appendix B provides important information for sponsors and participating NHS organisations in England for arranging and confirming capacity and capability. **Please read *Appendix B* carefully**, in particular the following sections:

- *Participating NHS organisations in England* – this clarifies the types of participating organisations in the study and whether or not all organisations will be undertaking the same activities
- *Confirmation of capacity and capability* - this confirms whether or not each type of participating NHS organisation in England is expected to give formal confirmation of capacity and capability. Where formal confirmation is not expected, the section also provides details on the time limit given to participating organisations to opt out of the study, or request additional time, before their participation is assumed.
- *Allocation of responsibilities and rights are agreed and documented (4.1 of HRA assessment criteria)* - this provides detail on the form of agreement to be used in the study to confirm capacity and capability, where applicable.

Further information on funding, HR processes, and compliance with HRA criteria and standards is also provided.

Page **1** of **8**

IRAS project ID	**227764**

It is critical that you involve both the research management function (e.g. R&D office) supporting each organisation and the local research team (where there is one) in setting up your study. Contact details and further information about working with the research management function for each organisation can be accessed from www.hra.nhs.uk/hra-approval.

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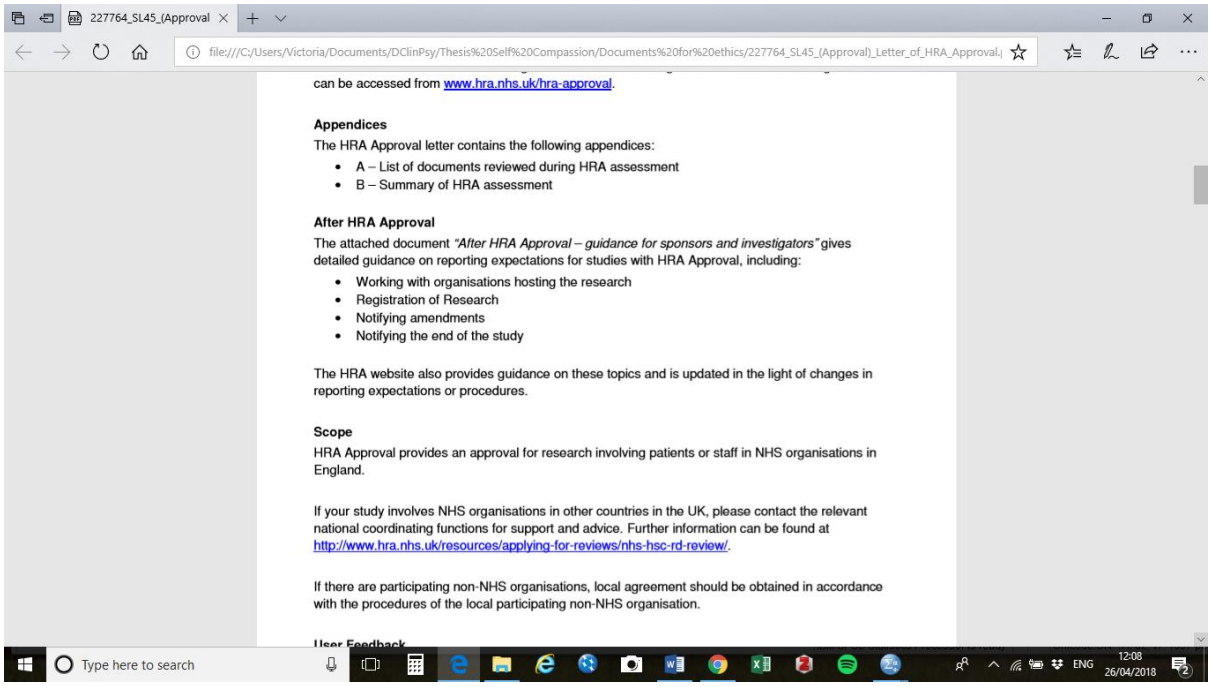


can be accessed from www.hra.nhs.uk/hra-approval.

Appendices

The HRA Approval letter contains the following appendices:

- A – List of documents reviewed during HRA assessment
- B – Summary of HRA assessment

After HRA Approval

The attached document *"After HRA Approval – guidance for sponsors and investigators"* gives detailed guidance on reporting expectations for studies with HRA Approval, including:

- Working with organisations hosting the research
- Registration of Research
- Notifying amendments
- Notifying the end of the study

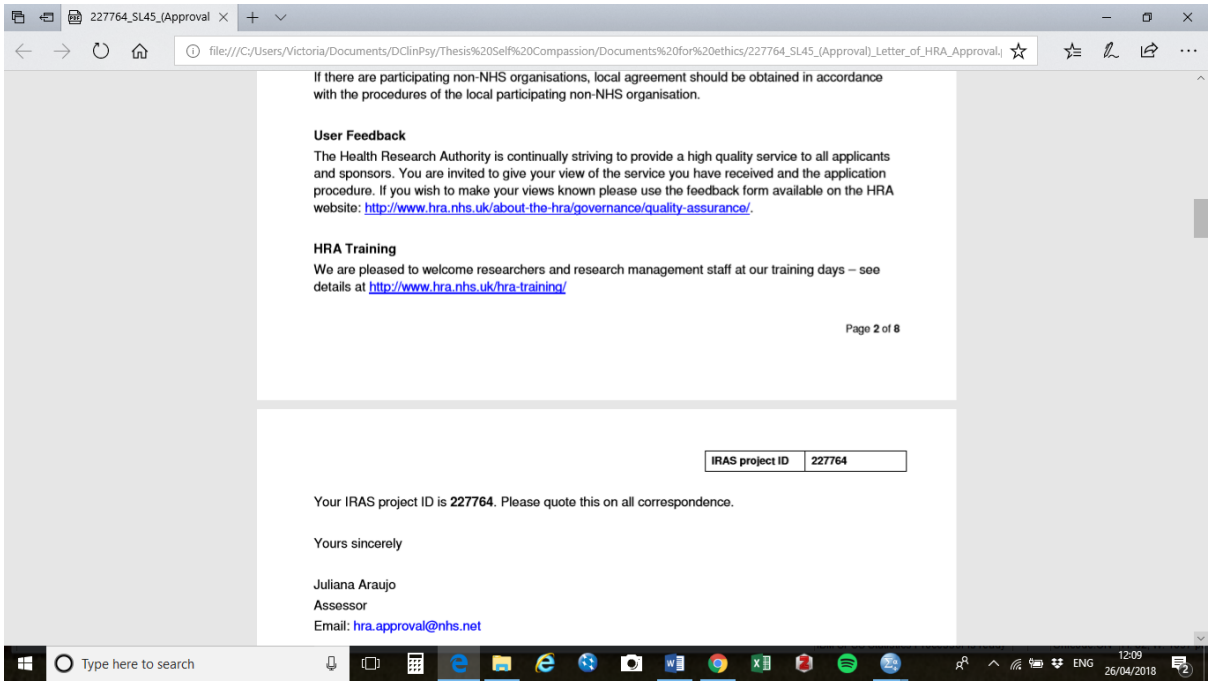
The HRA website also provides guidance on these topics and is updated in the light of changes in reporting expectations or procedures.

Scope

HRA Approval provides an approval for research involving patients or staff in NHS organisations in England.

If your study involves NHS organisations in other countries in the UK, please contact the relevant national coordinating functions for support and advice. Further information can be found at http://www.hra.nhs.uk/resources/applying-for-reviews/nhs-hsc-rd-review/.

If there are participating non-NHS organisations, local agreement should be obtained in accordance with the procedures of the local participating non-NHS organisation.



If there are participating non-NHS organisations, local agreement should be obtained in accordance with the procedures of the local participating non-NHS organisation.

User Feedback

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please use the feedback form available on the HRA website: http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/.

HRA Training

We are pleased to welcome researchers and research management staff at our training days – see details at http://www.hra.nhs.uk/hra-training/

Page **2** of **8**

IRAS project ID	227764

Your IRAS project ID is **227764**. Please quote this on all correspondence.

Yours sincerely

Juliana Araujo
Assessor
Email: hra.approval@nhs.net

University Ethical Approval Letter

Dear Victoria Brooks,

Application ID:	**eCLESPsy000126 v2.1**
Title:	**The role of self-compassion in wellbeing and burn out amongst NHS staff.**

Your e-Ethics application has been reviewed by the CLES Psychology Ethics Committee.

The outcome of the decision is: **Favourable with conditions**

Potential Outcomes

Favourable:	The application has been granted ethical approval by the Committee. The application will be flagged as Closed in the system. To view it again, please select the tick box: View completed
Favourable, with conditions:	The application has been granted ethical approval by the Committee under the provision of certain conditions. These conditions are detailed below.
Provisional:	You have **not** been granted ethical approval. The application needs to be amended in light of the Committee's comments and re-submitted for Ethical review.
Unfavourable:	You have **not** been granted ethical approval. The application has been **rejected** by the Committee. The application needs to be amended in light of the Committee's comments and resubmitted / or you need to complete a new application.

Please view your application here and respond to comments as required. You can download your outcome letter by clicking on the 'PDF' button on your eEthics Dashboard.

If you have any queries please contact the CLES Psychology Ethics Chair:

Lisa Leaver L.A.Leaver@exeter.ac.uk

Kind regards,

CLES Psychology Ethics Committee

NB. ‘Conditions’ were that I received HRA approval – which I already had, and just needed to clarify this to the Chair of the university ethics committee.

Appendix C: Copies of Questionnaires Administered to Participants

Beck Depression Inventory (BDI)

1

0 I do not feel sad.

1 I feel sad

2 I am sad all the time and I can't snap out of it.

3 I am so sad and unhappy that I can't stand it.

2

0 I am not particularly discouraged about the future.

1 I feel discouraged about the future.

2 I feel I have nothing to look forward to.

3 I feel the future is hopeless and that things cannot improve.

3

0 I do not feel like a failure.

1 I feel I have failed more than the average person.

2 As I look back on my life, all I can see is a lot of failures.

3 I feel I am a complete failure as a person.

4

0 I get as much satisfaction out of things as I used to.

1 I don't enjoy things the way I used to.

2 I don't get real satisfaction out of anything anymore.

3 I am dissatisfied or bored with everything.

5

0 I don't feel particularly guilty

1 I feel guilty a good part of the time.

2 I feel quite guilty most of the time.

3 I feel guilty all of the time.

6

0 I don't feel I am being punished.

1 I feel I may be punished.

2 I expect to be punished.

3 I feel I am being punished.

7

0 I don't feel disappointed in myself.

1 I am disappointed in myself.

2 I am disgusted with myself.

3 I hate myself.

8

0 I don't feel I am any worse than anybody else.

1 I am critical of myself for my weaknesses or mistakes.

2 I blame myself all the time for my faults.

3 I blame myself for everything bad that happens.

9

0 I don't have any thoughts of killing myself.

1 I have thoughts of killing myself, but I would not carry them out.

2 I would like to kill myself.

3 I would kill myself if I had the chance.

10

0 I don't cry any more than usual.

1 I cry more now than I used to.

2 I cry all the time now.

3 I used to be able to cry, but now I can't cry even though I want to.

11

0 I am no more irritated by things than I ever was.

1 I am slightly more irritated now than usual.

2 I am quite annoyed or irritated a good deal of the time.

3 I feel irritated all the time.

12

0 I have not lost interest in other people.

1 I am less interested in other people than I used to be.

2 I have lost most of my interest in other people.

3 I have lost all of my interest in other people.

13

0 I make decisions about as well as I ever could.

1 I put off making decisions more than I used to.

2 I have greater difficulty in making decisions more than I used to.

3 I can't make decisions at all anymore.

14

0 I don't feel that I look any worse than I used to.

1 I am worried that I am looking old or unattractive.

2 I feel there are permanent changes in my appearance that make me look unattractive

3 I believe that I look ugly.

15

0 I can work about as well as before.

1 It takes an extra effort to get started at doing something.

2 I have to push myself very hard to do anything.

3 I can't do any work at all.

16

0 I can sleep as well as usual.

1 I don't sleep as well as I used to.

2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.

3 I wake up several hours earlier than I used to and cannot get back to sleep.

17

0 I don't get more tired than usual.

1 I get tired more easily than I used to.

2 I get tired from doing almost anything.

3 I am too tired to do anything.

18

0 My appetite is no worse than usual.

1 My appetite is not as good as it used to be.

2 My appetite is much worse now.

3 I have no appetite at all anymore.

19

0 I haven't lost much weight, if any, lately.

1 I have lost more than five pounds.

2 I have lost more than ten pounds.

3 I have lost more than fifteen pounds.

20

0 I am no more worried about my health than usual.

1 I am worried about physical problems like aches, pains, upset stomach, or constipation.

2 I am very worried about physical problems and it's hard to think of much else.

3 I am so worried about my physical problems that I cannot think of anything else.

Ryff's Psychological Well-Being Scales (PWB), 42 Item version

Please indicate your degree of agreement (using a score ranging from 1-6) to the following sentences.

Strongly disagree - Strongly agree

1. I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people. 1 2 3 4 5 6

2. In general, I feel I am in charge of the situation in which I live. 1 2 3 4 5 6

3. I am not interested in activities that will expand my horizons. 1 2 3 4 5 6

4. Most people see me as loving and affectionate. 1 2 3 4 5 6

5. I live life one day at a time and don't really think about the future. 1 2 3 4 5 6

6. When I look at the story of my life, I am pleased with how things have turned out. 1 2 3 4 5 6

7. My decisions are not usually influenced by what everyone else is doing. 1 2 3 4 5 6

8. The demands of everyday life often get me down. 1 2 3 4 5 6

9. I think it is important to have new experiences that challenge how you think about yourself and the world. 1 2 3 4 5 6

10. Maintaining close relationships has been difficult and frustrating for me. 1 2 3 4 5 6

11. I have a sense of direction and purpose in life. 1 2 3 4 5 6

12. In general, I feel confident and positive about myself. 1 2 3 4 5 6

13. I tend to worry about what other people think of me. 1 2 3 4 5 6

14. I do not fit very well with the people and the community around me. 1 2 3 4 5 6

15. When I think about it, I haven't really improved much as a person over the years. 1 2 3 4 5 6

16. I often feel lonely because I have few close friends with whom to share my concerns. 1 2 3 4 5 6

17. My daily activities often seem trivial and unimportant to me. 1 2 3 4 5 6

18. I feel like many of the people I know have gotten more out of life than I have. 1 2 3 4 5 6

19. I tend to be influenced by people with strong opinions. 1 2 3 4 5 6

20. I am quite good at managing the many responsibilities of my daily life. 1 2 3 4 5 6

21. I have the sense that I have developed a lot as a person over time. 1 2 3 4 5 6.

Maslach Burnout Inventory (MBI)

Scale - *Never; Few times a year; Once a month; Few times a month; Once a week; Few times a week; Every day*

Section A: Burnout

I feel emotionally drained by my work. Working with people all day long requires a great deal of effort. I feel like my work is breaking me down.

I feel frustrated by my work. I feel I work too hard at my job. It stresses me too much to work in direct contact with people.

I feel like I'm at the end of my rope.

Section B: Depersonalisation

I feel I look after certain patients impersonally, as if they are objects.

I feel tired when I get up in the morning & must face another day at work.

I have the impression that my patients make me responsible for some of their problems.

I am at the end of my patience at the end of my work day.

I really don't care about what happens to some of my patients.

I have become more insensitive to people since I've been working.

I'm afraid that my job is making me uncaring.

Section C: Personal accomplishment

I accomplish many worthwhile things in my job.

I feel full of energy.

I am easily able to understand what my patients feel.

I look after my patients' problems very effectively.

In my work, I handle emotional problems very calmly.

Through my work, I feel that I have a positive influence on people.

I am easily able to create a relaxed atmosphere with my patients.

I feel refreshed when I have been close to my patients at work.

Self-Compassion Scale (SCS)

How I typically act towards myself in difficult times.

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

Almost always	1	2	3	4	Almost never 5

I’m disapproving and judgmental about my own flaws and inadequacies.

When I’m feeling down I tend to obsess and fixate on everything that’s wrong.

When things are going badly for me, I see the difficulties as part of life that everyone goes through.

When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.

I try to be loving towards myself when I’m feeling emotional pain.

When I fail at something important to me I become consumed by feelings of inadequacy.

When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.

When times are really difficult, I tend to be tough on myself.

When something upsets me I try to keep my emotions in balance.

When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.

I’m intolerant and impatient towards those aspects of my personality I don't like.

When I’m going through a very hard time, I give myself the caring and tenderness I need.

When I’m feeling down, I tend to feel like most other people are probably happier than I am.

When something painful happens I try to take a balanced view of the situation.

I try to see my failings as part of the human condition.

When I see aspects of myself that I don’t like, I get down on myself.

When I fail at something important to me I try to keep things in perspective.

When I’m really struggling, I tend to feel like other people must be having an easier time of it.

I’m kind to myself when I’m experiencing suffering.

When something upsets me I get carried away with my feelings.

I can be a bit cold-hearted towards myself when I'm experiencing suffering.

When I'm feeling down I try to approach my feelings with curiosity and openness.

I’m tolerant of my own flaws and inadequacies.

When something painful happens, I tend to blow the incident out of proportion.

When I fail at something that's important to me, I tend to feel alone in my failure.

I try to be understanding and patient towards those aspects of my personality I don't like.

Appendix D. Power Calculation for All Analyses in Detail

Power calculations using GPower (Faul, Erdfelder, Buchner, & Lang, 2009) identified that for hypotheses 1a and 1b, utilising correlation analyses, including burnout correlated with two separate variables of interest – PWB and depression – assuming 0.80 as statistical power and a medium effect size (ρ=0.30) with $p < 0.05$, revealed that N=64 participants were required to adequately power these analyses.

For hypotheses 2a and 2b, and utilising moderation analyses – by means of multiple regression - with three tested predictor variables (burnout; SC and the burnout/SC interaction), assuming 0.80 as statistical power and a small-medium effect size, f^2 = 0.08 - for the explained variance of the interaction term alone; based on the Woo Kyeong (2013) model - with $p<0.05$ revealed that N=101 participants were required to achieve adequate power. To address both hypotheses, the greater number of N=101 was applied, and achieved. In the final analyses, with an N of 120, critical F = 3.9, the effect size was 0.7 (medium).

Appendix E. Age Stratification Across the Sample

Table A. *Stratification of participants by age grouping*

Age group	Frequency	Percentage
18-24	3	2
25-34	42	35
35-44	32	27
45-54	36	30
55-64	7	6
Total	120	100

Appendix F. Stratification of Participants by Occupational Grouping

Table B. *Stratification of participants by occupational grouping*

Professional group	Frequency	Percentage
Clinical psychology*	50	42
Nursing	24	20
Occupational therapy	10	8
Physiotherapy	8	7
Speech & language therapy	8	7
Management	6	5
Creative therapies (music & art)	5	4
Psychiatry	4	3
Support worker/assistant	3	2
Dietician	1	1
Team lead	1	1
Total	120	100

*Clinical psychology comprised predominantly clinical psychologists and several assistant psychologists.

Appendix G. Stratification of Participants by Organisational Type

Table C. *Stratification of participants by organisation type*

Organisation type	Frequency	Percentage
NHS	97	81
Community interest company / social enterprise	11	9
Private/charity/non-statutory	11	9
Local authority	1	1
Total	120	100

Appendix H. Participant Stratification of Years in Current Job and Years of Service in Learning Disabilities

Table D. *Participant stratification of years in current job and years of service in learning disabilities*

Years in current job	**Frequency**	**Percentage**	**Years in learning disabilities**	**Frequency**	**Percentage**
Less than six months	15	12	Less than six months	7	6
6 months – 1 year	8	7	6 months – 1 year	3	2
1 – 2 years	25	21	1 – 2 years	12	10
2 – 5 years	38	32	2 – 5 years	23	19
5 – 10 years	19	16	5 – 10 years	18	15
More than 10 years	15	12	More than 10 years	57	47
Total	120	100	Total	120	100

Appendix I. Depression Classification Frequencies Across the Sample

Table E. *Depression classification frequencies across the sample*

Classification	Frequency	Percent
Normal	80	67
Minimal	22	18
Borderline clinical	8	7
Moderate	9	7
Extreme	1	1
Total	120	100

Appendix J. Outcome Variables by Occupational Group

Table F. *Outcome variables by occupational group.*

Outcome	Occupational group	N	Mean	SD	Range
Depression (BDI)	Clinical psychology	50	7.5	5.3	24
	Management	6	10.3	6.8	18
	Nursing	24	11.2	8.4	27
	Creative therapies	5	6	4.3	11
	Physiotherapy	8	9.1	8.9	27
	Speech & language therapy	8	13.6	8.5	25
	Support workers/assistants	3	5	7	13
	Psychiatry	4	5	5	11
	Occupational therapy	10	10.9	6.1	18
SCS	Clinical psychology	50	87	15.3	65
	Management	6	77	18	48
	Nursing	24	71	17.5	68
	Creative therapies	5	89.6	19.5	42
	Physiotherapy	8	79	23	64
	Speech & language therapy	8	67.9	16.3	42
	Support workers/assistants	3	93.7	24.4	47
	Psychiatry	4	88	18.3	38
	Occupational therapy	10	71.8	13.3	39
Burnout (PA)	Clinical psychology	50	37.4	5.7	26
	Management	6	37.3	7.6	22
	Nursing	24	36.5	6.5	24
	Creative therapies	5	39.2	8.2	19
	Physiotherapy	8	37.6	7.7	18
	Speech & language therapy	8	36.6	4.6	14
	Support workers/assistants	3	42.7	5.8	10
	Psychiatry	4	41	5.3	11
	Occupational therapy	10	36.9	5.7	20

Burnout (EE)	Clinical psychology	50	16.6	8.8	34
	Management	6	14.5	5.5	15
	Nursing (N)	24	16.8	10.8	41
	Creative therapies (CT)	5	12.2	8.3	21
	Physiotherapy (PT)	8	16.9	13.8	40
	Speech & language therapy (SALT)	8	13.9	7.1	21
	Support workers/assistants (SW)	3	13.7	14.2	26
	Psychiatry (PS)	4	15	10.9	23
	Occupational therapy (OT)	10	19	12.6	33
Burnout (DP)	Clinical psychology	50	7	4.1	11
	Management	6	7	4.1	11
	Nursing (N)	24	8.4	5.8	22
	Creative therapies (CT)	5	4.4	4.1	9
	Physiotherapy (PT)	8	7.8	8.1	23
	Speech & language therapy (SALT)	8	4.6	2.5	7
	Support workers/assistants (SW)	3	6.3	8.4	15
	Psychiatry (PS)	4	5.2	4.3	9
	Occupational therapy (OT)	10	8.7	6.3	23
Wellbeing (PRO)	Clinical psychology	50	34.7	4.4	17
	Management	6	31.7	5.6	15
	Nursing (N)	24	33.4	6.5	21
	Creative therapies (CT)	5	33	4.9	13
	Physiotherapy (PT)	8	36.2	4.4	12
	Speech & language therapy (SALT)	8	32.5	4.7	15
	Support workers/assistants (SW)	3	34.7	6.6	12

Psychiatry (PS)	4	35.2	10.2	22
Occupational therapy (OT)	10	31.8	4.3	13

NB. *Total N for dieticians and team leader was 1, therefore these data were excluded from descriptive analyses.*

Appendix K – Dissemination Statement

A revised version of the empirical paper will be submitted for publication in a peer-reviewed journal. We will revaluate the journal choices, however had initially planned to submit the empirical paper to The British Journal of Learning Disabilities. A summary of the results will be presented at a psychology meeting in Devon Partnership Trust and sent to field collaborators, and a lay summary sent to HR contacts for further dissemination to staff teams. Submission of the systematic literature review to Global Health Promotion has been considered and will be revaluated following ratification of doctoral thesis. The relevant ethics committees (i.e., the HRA and the university ethics committee) will be sent a summary of the findings and notified that the study has been completed.

Appendix L – Submission Guidelines for Chosen Journals

Global Health Promotion

ABOUT

Global Health Promotion (GHP) is an official publication of the International Union for Health Promotion and Education (IUHPE). It is a multilingual journal, which publishes authoritative peer-reviewed articles and practical information in English, French and Spanish for a world-wide audience of professionals interested in health promotion and health education.

The journal aims to:

 Publish academic content and commentaries of practical importance in English, French and Spanish

 Provide an international and interdisciplinary forum for the dissemination and exchange of theory, empirical research and evaluation about health promotion practice, health education and public health, with a particular emphasis on intervention research findings and innovative strategies for health promotion.

SUBMISSION INSTRUCTIONS FOR PEER REVIEWED MANUSCRIPTS GHP Editorial Office- IUHPE/UIPES Headquarters, c/o École de Santé Publique, Université de Montréal, 7101, avenue du Parc – 3ème étage - bureau 3239, Montréal QC H3N 1X9, Canada. Tel.: + 1 514 343-7940 Email: ghp@iuhpe.org

 Publish articles which ensure wide geographical coverage and are of general interest to an international readership

 Provide fair, supportive, efficient and high-quality peer review and editorial handling of all submissions.

MANUSCRIPT FORMAT

Global Health Promotion conducts blinded peer-review. When uploading your manuscript on SAGETrack you will need to upload a manuscript file with no identifying author information (designate as Main Document) and separate documents for tables/figures/image (designate as such).

All text style (including references) must be doubled spaced and in a 12 point type in Word format (.doc). Avoid special formatting and remain as simple as possible, since this complicates the editorial process (i.e. minimum formatting, no indentations, no carriage returns, no justification, no tabs, numbers, etc.).

All headings should be justified with the left margin. Main headings should be in capital letters, bold and not underlined. Secondary headings should be in lower-case and bold. Any other sub-headings should be indicated, either by numbers, letters or bullet points.

The reference list must be prepared using Vancouver style formatting as explained below

Tables, Figures and Images (only one per page) should be prepared on separate pages and numbered consecutively. Through SAGETrack you will be able to link particular words in your text file to your image file. You will also be able to type in a caption or legend for each one of the images or figures you upload in the "Caption/Legend" field.

For guidance on the preparation of illustrations, pictures and graphs in electronic format, please visit SAGE's Manuscript Submission Guidelines. Figures supplied in colour will appear in colour online regardless of whether or not these illustrations are reproduced in colour in the printed version. For specifically requested colour reproduction in print, you will receive information regarding the costs from SAGE after receipt of your accepted article.

This journal is able to host approved supplemental materials online, alongside the full-text of articles. Supplemental files will be subjected to peer-review alongside the article. For more information please refer to SAGE's Guidelines for Authors on Supplemental Files

Manuscript length Articles should be of a maximum length of 5,000 words, all parts of the paper included (abstract, main text and references). Each table, figure and illustration counts as 250 words.

SUBMISSION INSTRUCTIONS FOR PEER REVIEWED MANUSCRIPTS GHP

Editorial Office- IUHPE/UIPES Headquarters, c/o École de Santé Publique, Université de Montréal, 7101, avenue du Parc – 3ème étage - bureau 3239, Montréal QC H3N 1X9, Canada. Tel.: + 1 514 343-7940 Email: ghp@iuhpe.org

Abstract and Keywords Prepare a short (300 words maximum) summary outlining the content of the article and drawing attention to the main conclusions. DO NOT include the abstract with your main text, you will have to type it in the required field on the first step of the 'Submit Manuscript' process on SAGETrack.

The title, keywords and abstract are key to ensuring readers find your article online through online search engines such as Google. Please refer to the information and guidance on how best to title your article, write your abstract and select your

keywords by visiting SAGE's Journal Author Gateway Guidelines on How to Help Readers Find Your Article Online.

Language and style Submissions should be in English, French or Spanish. They may be in any of the formats supported by the word processor, and the same form should be used throughout the manuscript. The full capacity of the word processor to assist with spelling, grammar and style should be utilised. Short simple sentence structure is strongly encouraged. Define all terms that are not in common usage.

REFERENCES Global Health Promotion follows the Vancouver style of referencing.

1- In the text:

References are numbered consecutively in the order in which they appear in the text.

In the Vancouver Style, citations within the text of your article are identified by Arabic numbers in round brackets. This applies to references in text, tables and figures. e.g. (2) - this is the style used by the referencing software Endnote.

The Vancouver System assigns a number to each reference as it is cited. A number must be used even if the author(s) is named in the sentence/text.

Example: Smith (10) has argued that....

The original number assigned to the reference is reused each time the reference is cited in the text, regardless of its previous position in the text.

When multiple references are cited at a given place in the text, use a hyphen to join the first and last numbers that are inclusive. Use commas (without spaces) to separate non-inclusive numbers in a multiple citation e.g. 2,3,4,5,7,10 is abbreviated to (2-5,7,10) Do not use a hyphen if there are no citation numbers in between that support your statement e.g. 1-2.

The placement of citation numbers within text should be carefully considered, for example a particular reference may be relevant to only part of a sentence. As a general rule, reference numbers should be placed inside stops, commas, colons and semicolons

Examples: - The study evaluated the impact of different educational programmes on life style improvement (1).

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- There have been efforts to replace this testing with in vitro tests, such as enzyme linked immunosorbent assays (57,60) or polymerase chain reaction (20-22), but these remain experimental.

Detailed advice on using the Vancouver style, which was developed by the International Committee of Medical Journal Editors, is available at their website here.

2- List of References:

The references are listed at the end of the article in the same numerical order (with no parenthesis or brackets) as they appear in the body of the text, this section is titled "References".

The list should give full details of the publications referenced, including:

-authors' names and initials of all authors; -the title of the journal- abbreviate journal titles according to the style used in Medline. A list of abbreviations can be found at: http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=journals -the year of publication; -the volume number; and -the first and last page numbers.

British Journal of Learning Disabilities

Manuscript Format and Structure

All manuscripts submitted to British Journal of Learning Disabilities should include: Accessible Summary, Keywords, Abstract, Main Text (divided by appropriate sub headings) and References. Manuscripts should not be more than 5,000 words in length including references.

Title Page: This should include: a short title to indicate content with a sub-title if necessary; the full names of all the authors; the name(s) and address(es) of the institution(s) at which the work was carried out (the present addresses of the authors, if different from the above, should appear in a footnote); the name, address, telephone and fax numbers, and email addresses of the author to whom all correspondence and proofs should be sent; a suggested running title of not more than 50 characters, including spaces should be provided in the header of each page.

Accessible Summary: As well as an abstract, authors must include an easy-to-read summary of their papers. This was introduced in 2005, and was done so in the spirit of making research findings more accessible to people with learning disabilities. The editorial board also believe that this will make ‘scanning’ the Journal contents easier for all readers. Authors are required to:

- Summarise the content of their paper using bullet points (3 or 4 at most),
- Express their ideas in this summary using straightforward language, and

- State simply why the research is important, and should matter to people with learning disabilities.

Keywords: these are words which have relevance to the type of paper being submitted, this is for reviewing and citing purposes. You are asked by Manuscript Central to input keywords when submitting a paper, but up to 6 keywords must also be included within the 'main document' underneath the Accessible Summary.

Abstract: All papers should use a structured abstract incorporating the following headings: Background, Materials and Methods, Results, Conclusions. These should outline the questions investigated, the design, essential findings and main conclusions of the study.

Main Text: The text should then proceed through sections of Background/Introduction, Review of Literature, Research Questions/Hypotheses, Materials, Methods, Results and Discussion, and finally Tables. Figures should be submitted as a separate file.

Style

Abbreviations and symbols:

All symbols and abbreviations should be clearly explained. Abbreviations should not be used when they refer to people (e.g. learning disabilities, not LD; developmental disabilities, not DD; intellectual disabilities, not ID). Please also use “people with learning disabilities” wherever possible, not “learning disabled people”.

References: APA – American Psychological Association

References should be prepared according to the Publication Manual of the American Psychological Association (6th edition).