UNIVERSITY OF Southampton

University of Southampton Research Repository
ePrints Soton

Copyright © and Moral Rights for this thesis are retained by the author and/or other copyright owners. A copy can be downloaded for personal non-commercial research or study, without prior permission or charge. This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the copyright holder/s. The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the copyright holders.

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given e.g.

AUTHOR (year of submission) "Full thesis title", University of Southampton, name of the University School or Department, PhD Thesis, pagination

http://eprints.soton.ac.uk

UNIVERSITY OF SOUTHAMPTON

FACULTY OF SOCIAL AND HUMAN SCIENCES

Psychology

Volume 1 of 1

CORRELATES AND PREDICTORS OF BURNOUT AND SECONDARY TRAUMATIC STRESS IN MENTAL HEALTH PROFESSIONALS

by

Mary Halsey, BSc

Thesis for the degree of Doctor of Clinical Psychology

May 2014

UNIVERSITY OF SOUTHAMPTON

ABSTRACT

FACULTY OF SOCIAL AND HUMAN SCIENCES

Psychology

Thesis for the degree of Doctor of Clinical Psychology

CORRELATES AND PREDICTORS OF BURNOUT AND SECONDARY TRAUMATIC STRESS IN MENTAL HEALTH PROFESSIONALS

Mary Elizabeth Halsey

Firstly, the literature exploring the association between workplace support and burnout in mental health professionals was reviewed, identifying twenty-six empirical studies. Evidence was found for the relationship between high emotional exhaustion and low workplace support, suggesting that workplace support has the potential to protect from or reduce burnout. There is tentative evidence to suggest that supervisory support is most helpful in community settings and co-worker support is beneficial in acute settings. A main caveat of empirical studies in this area is the use of correlational rather than regression analyses to identify predictors of burnout.

The empirical paper investigated prevalence and predictors of burnout and secondary traumatic stress (STS) in Child and Adolescent Mental Health Service (CAMHS) staff. This population has been neglected in the literature (Lizano & Mor Barak, 2012). Similar emotional exhaustion rates, lower depersonalisation rates and higher personal accomplishment rates were found when compared to studies with adult mental health workers. Regression analyses revealed perceived stress, lack of perceived organisational support, experiential avoidance and lack of valued living were predictors of burnout. STS was predicted by perceived stress. Recommendations to CAMHS staff include education about burnout and STS, increased communication, stress management and Acceptance and Commitment Therapy interventions. Empirical study of the usefulness of such interventions is recommended for future research.

Table of Contents

ABSTRACT ..... **i**

Table of Contents ..... **i**

List of tables ..... **v**

List of figures ..... **vii**

DECLARATION OF AUTHORSHIP ..... **ix**

Acknowledgements ..... **xi**

Chapter 1: LITERATURE REVIEW **1**

1.1 Introduction 1

1.1.1 Burnout 1

1.1.2 Workplace Support 4

1.1.3 Relationship between Workplace Support and Burnout 6

1.1.4 Workplace Support, Burnout and Mental Health Professionals 8

1.2 Aims and Scope of Literature Review 9

1.2.1 Review Objectives 9

1.2.2 Search Strategy 9

1.3 Data Extraction and Synthesis 12

1.3.1 Design 26

1.3.2 Results 28

1.4 Discussion 38

1.4.1 Main Findings 38

1.4.2 Critical Review 39

1.4.3 Theoretical Implications 42

1.4.4 Clinical Implications 44

1.5 Conclusions 46

1.5.1 Review Objectives 46

1.5.2 Recommendations for Future Research 47

Chapter 2: Empirical Paper 49

2.1 Introduction 49

2.1.1 Burnout 49

2.1.2 Secondary Traumatic Stress 50

2.1.3 Sickness Absence 50

2.1.4 Predictors of Burnout and STS 51

2.1.5 Rationale of the Current Study 54

2.1.6 Research Question 55

2.2 Method 56

2.2.1 Design 56

2.2.2 Participants 56

2.2.3 Materials 60

2.2.4 Procedure 64

2.2.5 Ethical Considerations 64

2.2.6 Data Analysis 65

2.3 Results 65

2.3.1 Data Preparation 65

2.3.2 Descriptive Statistics 66

2.3.3 Reliability 70

2.3.4 Correlations 70

2.3.5 Regressions 76

2.4 Discussion 80

2.4.1 Prevalence of Burnout, STS and Sickness Absence 80

2.4.2 Hypothesis 1 80

2.4.3 Hypothesis 2 81

2.4.4 Hypothesis 3 83

2.4.5 Clinical Implications 84

2.4.6 Strengths and Limitations 85

2.4.7 Directions for Future Research 86
2.5 Conclusions 87
Appendices **89**
Appendix A Study Poster **91**
Appendix B Demographic Information **92**
Appendix C Email to Staff **94**
Appendix D Participant Information Sheet **95**
Appendix E Consent Form **97**
Appendix F Debrief Sheet **98**
Appendix G Southampton University School of Psychology Ethics Committee and Research Governance approval **100**
Appendix H NHS Trust Research and Development Team approval (1) **101**
Appendix I NHS Trust Research and Development Team approval (2) **103**
List of References **105**

List of tables

Table 1 *Search terms used to identify studies investigating the relationship between burnout and workplace support in mental health professionals* 10
Table 2 *Quantitative empirical studies investigating the relationship between workplace support and burnout in mental health professionals (1988 - 2013).* 13
Table 3 *Burnout rates and range of experienced burnout for MBI subscales (Maslach and Jackson, 1981; 1986) and Maslach et al. (1996)* 29
Table 4 *Demographic Characteristics* 58
Table 5 *Clinical ranges for Secondary Traumatic Stress Scale (STSS) scores (Bride, 2007)* 61
Table 6 *Descriptive Statistics and Psychometric Properties of Major Study Variables* 69
Table 7 *Pearson's Correlation Matrix for Criterion and Predictor Variables* ... 71
Table 8 *Multiple Regression Analyses to test the effect of burnout variables on secondary traumatic stress* 73
Table 9 *Multiple Regression Analyses to test the effect of secondary traumatic stress on burnout variables* 73
Table 10 *Regression to test the effect of predictor variables on emotional exhaustion* 78
Table 11 *Regression to test the effect of predictor variables on depersonalisation* 78
Table 12 *Hierarchical multiple regression to test the effect of demographic and predictor variables on personal accomplishment* 79
Table 13 *Regression to test the effect of predictor variables on secondary traumatic stress* 79

List of figures

Figure 1 Flow chart of study selection process..... 12

DECLARATION OF AUTHORSHIP

I, Mary Halsey

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

Correlates and predictors of burnout and secondary traumatic stress in mental health professionals

I confirm that:

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

Signed:.....

Date:.....

Acknowledgements

I would like to thank everyone who has helped and supported me through the process of writing my thesis.

Firstly, thank you to all CAMHS staff who took the time to complete the questionnaires. This thesis would not have been written without you. Thank you to the teams that welcomed me into your meetings, so that I could share with you my rationale for the study. I took great pleasure in the conversations we engaged in, and I learnt a lot from the time we spent reflecting on your views of the reasons for burnout and low morale. This was a welcome reminder of the reason I chose this topic of study all those months ago.

Thank you to my supervisors, George and Xav, for your support and guidance in this process. You helped me to remember the importance of this area of study, which kept me going through my research block. Thank you also to Sarah Kirby, who offered invaluable support through the minefield of statistics.

Thank you to my friends and coursemates for supporting me through the ups and downs of the past two years. Thank you for listening to my ramblings about statistics, for offering welcome distractions and for celebrating little milestones along the way. Thank you to those who painstakingly proof read for me - you may not realise just how much I appreciated that!

Thank you God, for the peace that you gave me throughout this process. I wouldn't have thought that I could find enjoyment in writing my thesis, but through trusting in you it was made possible. 'May the God of hope fill you with all joy and peace as you trust in him, so that you may overflow with hope by the power of the Holy Spirit' (Romans 15:13).

Finally, thank you to Mum and Dad, who over the years have given me the determination and drive to achieve my dreams; always supporting me in whatever way I needed. You have both been an inspiration in my choice of career. Thank you, Mum, for offering much needed breaks from my work at home and our very timely trip to Israel. Thank you, Dad, for showing me how years of hard work and compassion can make a difference to so many lives. Although you aren't able to see the finished project, Dad, I'm thankful for your support in the first year and a half of this course.

Chapter 1: LITERATURE REVIEW

Is Workplace Support Associated with Burnout in Mental Health Professionals?

1.1 Introduction

Much discussion has been documented recently concerning the low morale of the mental health work force, and how, in the context of the economic difficulties facing the National Health Service (NHS), mental health professionals face significant challenges (Onyett, 2011; Reininghaus & Priebe, 2007). Unsurprisingly, burnout rates are high within mental health professionals (Morse, Salyers, Rollins, Monroe-DeVita & Pfahler, 2012). Organisational factors have been found to have an association with burnout in this population (Paris & Hoge, 2010). However, the specific role of workplace support in reducing burnout has not been systematically reviewed.

The current review investigates burnout and its relationship to workplace support. Firstly, the concept and study of both burnout and workplace support will be discussed. Secondly, the theoretical basis of the relationship between each concept, in a mental health professional population, will be reviewed. This then leads to an examination and critique of the current literature in this area, using a systematic search. Finally, the findings will be discussed and theoretical and clinical implications considered.

1.1.1 Burnout

Construct and Measurement

The term burnout was coined by Freudenberger (1974) following reports from staff of exhaustion and lack of motivation in mental healthcare settings. In the late 1970s, the 'professionalisation' of human services in the United States began and some employees began reporting that they found little fulfilment in their work (Maslach, Shaufeli & Leiter, 2001). At this point, Maslach and Jackson (1981) formalised the concept of burnout, which remains widely accepted today with little critique (Maslach, 2003). The Maslach Burnout

Inventory (MBI: Maslach & Jackson, 1981) was introduced, allowing services and researchers to reliably assess prevalence, aetiology and correlates of burnout.

It is generally accepted that burnout has three dimensions (Maslach et al., 2001). Emotional exhaustion is the most easily recognisable and widely researched component, defined as being emotionally overextended and exhausted by work. This is believed to create emotional and cognitive distance between the employee and the subject of their work (Maslach et al., 2001). Depersonalisation refers to cynical, impersonal feelings towards clients or the organisation. Reduced personal accomplishment is defined as feelings of incompetence and underachievement in one's work. Emotional exhaustion and depersonalisation are considered to be separate but related constructs with a strong relationship with each other (Maslach & Jackson, 1981). Personal accomplishment has a weaker relationship to the other components, with some research suggesting that it occurs as a result of a combination of emotional exhaustion and depersonalisation (Maslach et al., 2001).

Discriminant Validity

Burnout can be distinguished from occupational stress by considering the relationship between the professional and the recipient or client (Maslach, 2003). That is, burnout encapsulates the effects on the human services employee of working with people, rather than other stressors of the job. Depersonalisation, for instance, may be a means by which the professional is able to distance themselves from the job, or indeed clients, to cope with its demands (Maslach & Jackson, 1981).

Burnout is also a separate construct from job dissatisfaction. Maslach and Jackson (1981) found a moderate negative correlation between job satisfaction and both emotional exhaustion and depersonalisation, and a weak positive correlation with personal accomplishment. However, none of these correlations accounted for more than six percent of variance, therefore suggesting separate entities. Burnout is also related to, but distinct from, depression (Maslach et al., 2001); with depression affecting every area of one's life and burnout relating specifically to the workplace (Maslach et al., 2001).

Prevalence

Morse et al. (2012) reported several studies measuring prevalence of burnout in a range of mental health professionals. Rates of high emotional exhaustion ranged between 21-67% of staff, high depersonalisation ranged between 38-50% and reduced personal accomplishment was found in up to 66% of mental health professionals. This highlights a significant concern in this population, with no significant change over the past twenty years, suggesting that despite the vast research in this area, little has been done to reduce this problem.

Correlates

Paris and Hoge (2010), in their review of burnout in the mental health workforce, reported a number of individual correlates of burnout, including younger age, low education level, long tenure and increased anxiety levels. Organisational correlates of burnout included working long hours, lack of control over work activities, increased administrative tasks, poor communication with employers and lack of collegial support.

Consequences

In a recent review, Morse et al. (2012) described consequences of burnout, which included impaired emotional and physical health, depression, anxiety, sleep problems and reduced commitment to one's organisation. Barak, Nissly and Levin (2001) conducted a meta-analysis and found burnout to be one of the strongest predictors of turnover or intention to leave in human service employees. Peterson et al. (2008) investigated sickness absence and sickness presence (attending work despite being unwell) in a group of high burnout and non-burnout responders. Both sickness absence and presence rates were higher in burnout than non-burnout groups. However, the study used correlational rather than experimental data (common throughout the majority of the burnout literature) and as such causality cannot be implied and a reciprocal relationship may exist.

The consequences of burnout go beyond those of the employee and the organisation. Priebe et al. (2004) investigated burnout in the staff of assertive outreach teams. Low personal accomplishment in staff was associated with higher hospital admissions for patients at 9-month follow up. Furthermore,

Garman, Corrigan and Morris (2002) found that low emotional exhaustion in inpatient and community mental health team staff was significantly positively related to patient satisfaction.

Summary

The literature on the concept, prevalence, correlates and consequences of burnout in mental health professionals has been extensive, with one widely accepted definition and measure of burnout (Maslach & Jackson, 1981). However, the empirical literature is rife with methodologically weak designs, small sample sizes and cross-sectional correlational questionnaire methods. The research into correlates of burnout has therefore produced studies with small effects and inconsistent findings.

1.1.2 Workplace Support

Social Support

Social support can be categorised into four components: emotional, instrumental, informational and appraisal assistance (House & Kahn, 1985). Emotional support is the most widely researched, concerned with caring for and empathising with another, while instrumental and informational support concerns sharing information or physical resources. Despite this differentiation of support types, Semmer et al. (2008), in an experimental study, found that instrumental support has an emotional meaning, pertaining to relatedness and belonging. They found that the degree of enthusiasm or reluctance in delivery of support influenced how it was perceived. A distinction has also been made in the literature between support appraisals and support behaviours (Vaux, 1992). Therefore, the perception of support may not be an accurate representation of actual or received support (Sarason, Sarason & Pierce, 1990). Both the perception-receipt distinction and the confounding effect of emotional meaning in instrumental support have important implications for the empirical study of this concept.

Definition of Workplace Support

For the purpose of this review, workplace support will be defined as social support in an organisational context. That is, support from supervisors, co-workers and the organisation as a whole. Ng and Sorensen (2008) investigated

the relationship between different sources of workplace support. They found that support is often measured as a single variable, which fails to account for the unique contribution of each source of support. Ng and Sorensen (2008) recommend that future research should investigate the differential effects of different support sources on wellbeing.

Supervisory support.

The supervisory relationship is unique and often non-reciprocal with supervisors exerting a degree of authority, being directed by the organisation to support and manage the supervisee (Rousseau & Aubé, 2010). The support given will vary depending on the supervisory relationship but has the potential to be more stable than co-worker support given the formal arrangements around frequency and duration of supervision (Luchman & Gonzalez-Morales, 2013). Supervisory support may contribute to the experience of higher control and fewer job demands given the power the supervisor may have to reduce workload or provide practical support (Luchman & Gonzalez-Morales, 2013).

Supervisory support is often provided through supervision. Barak, Travis, Pyun and Xie (2009) conducted a meta-analysis of the impact of supervision on a range of worker outcomes in social workers. Three quantitative empirical studies were identified that investigated the impact of clinical supervision on mental health professionals, one of which measured burnout (Webster & Hackett, 1999). An association was found between the effectiveness of clinical supervision and reduced emotional exhaustion/depersonalisation, but not with increased personal accomplishment. However, the literature has not identified which aspects of supervision make it effective.

Co-worker support.

Co-worker support holds its own distinct characteristics and is markedly different from supervisory or managerial support, being by nature more informal (Rousseau & Aubé, 2010). Co-workers may support each other by discussing work or non-work related topics and sharing the workload (Rousseau & Aubé, 2010). Co-workers are therefore able to reciprocally offer a range of the four support types (House & Kahn, 1985). However, Ng and Sorensen (2008) argue that co-worker support may also be perceived as

negative, with the possibility of received support suggesting incompetence, or as having a political motive. However, Ng and Sorensen (2008) also note that co-worker support is positively associated with job satisfaction.

Perceived organisational support.

The term organisational support has been used throughout the literature with a variety of definitions. However, Eisenberger, Huntington, Hutchison and Sowa (1986) developed the Perceived Organisational Support (POS) theory which has a good theoretical and empirical basis. They define POS as the extent to which employees believe that the organisation cares about their wellbeing and values their contribution. Rhoades and Eisenberger (2002) distinguish POS from other related variables such as affective organisational commitment, defined as emotional attachment to the organisation (Rousseau & Aubé, 2010). Antecedents to POS include fairness regarding distribution of resources at work, supervisory support, organisational rewards, job conditions and employee characteristics (Rhoades & Eisenberger, 2002).

Correlates of Workplace Support

A number of studies have investigated the impact of workplace support on psychological wellbeing outcomes. Coffey and Coleman (2001) found significantly higher psychological stress and psychiatric 'caseness' scores in forensic community nurses who found their manager unsupportive as opposed to supportive. Michie and Williams (2003) conducted a systematic review of psychological ill-health and sickness absence and found that low support at work was strongly related to these dependent variables. Correlates of high POS include organisational commitment, organisational membership incorporated into the employees' social identity and contributing to the organisation's welfare (Rhoades & Eisenberger, 2002).

1.1.3 Relationship between Workplace Support and Burnout

A number of studies have investigated the influence of workplace support on burnout, in a variety of populations. For example, Jawahar, Stone and Kisamore (2007) looked at the impact of POS in software development organisations. They found that organisational support was negatively related with depersonalisation and emotional exhaustion, with no significant

relationship to personal accomplishment. POS uniquely explained variance in a hierarchical regression model for the emotional exhaustion component of burnout only. A study with intellectual disability support staff revealed that low organisational support was a significant predictor of burnout (Mutkins, Brown & Thorsteinsson, 2011). A recent study with social workers found that low workplace support had a strong relationship with high burnout (Hombrados-Mendieta & Cosano-Rivas, 2013). They recommend that the study of workplace social support and burnout should inform effective interventions.

Theoretical Models

Existing models may help explain the association between workplace support and burnout. The most widely cited is the job-demand-control (JDC) model (Karasek, 1979) which posits that high demands in the workplace will lead to poor worker health outcomes in settings of low control (the extent to which an employee is able to control their activity levels and participate in decision making). This was later developed by Johnson and Hall (1988) to include a support component and became the job-demand-control-support (JDCS) model. Häusser, Mojzisch, Niesel and Schulz-Hardt (2010) performed a systematic review on the updated model. When emotional exhaustion was examined as an outcome variable, the model was supported in 39% of studies. The JDC as opposed to JDCS model was better supported, though they believed this was due to the additional criterion variable in the JDCS, reducing the likelihood of any model being supported. They noted that the JDCS model was better supported for cross-sectional than for longitudinal studies, suggesting a reverse or reciprocal causation and the need for experimental studies to clarify this relationship.

Another model commonly tested is Cohen and Wills' (1985) main effect and buffering hypothesis of social support and stress. This suggests either that support directly influences the outcome, or that there is an interaction between the two variables, for example where high levels of support reduce negative outcomes but only if stress levels are high. In a study on social support in mental health professionals, Jenkins and Elliott (2004) found evidence for both main and buffering effects of social support between stress and burnout. Higher levels of co-worker support were associated with lower levels of emotional exhaustion. They attributed this to the 'breadth and immediacy' of

support from peers. Buffering effects were found where depersonalisation levels were high in cases of high stress and high but not low support. This was not expected and they suggest that talking with others may exaggerate the perception of the difficulties with a client. However, the literature on this model is not well supported; indeed Hausser et al. (2010) found support for the buffering model in only one out of thirteen studies.

1.1.4 Workplace Support, Burnout and Mental Health Professionals

A search was conducted using the Cochrane database and psychINFO to find existing systematic reviews on burnout in mental health professionals. The burnout literature has been reviewed, both systematically and through discussion of low morale. However, there have been no reviews that focus specifically on the unique role of workplace support on burnout in mental health professionals.

Paris and Hoge (2010) conducted a systematic review of burnout in the mental health workforce. However, they reviewed just one study considering the relationship between burnout and workplace support (Corrigan et al., 1994), finding that high depersonalisation was significantly associated with low collegial support. Onyett (2011) reviewed the literature on job satisfaction and burnout in community mental health teams in the UK. They identified support, supervision, management and leadership as protective factors. However, they describe only two studies that focus on the relationship between supportive management and burnout in mental health professionals. More recently, Morse et al. (2012) reviewed the prevalence, correlates and interventions for burnout in mental health professionals. However, they used limited search terms and state that their review was not exhaustive.

Other reviews that focus on burnout in particular professionals such as clinical psychologists (Hannigan, Edwards & Burnard, 2004), psychiatrists (Fothergill, Edwards & Burnard, 2004) and psychiatric nurses (Melchior, Bours, Schmitz & Wittich, 1997) all suggest social support to be a coping strategy for and a moderator of burnout and stress. However, none of them review the role of support in depth.

Furthermore, Paris and Hoge (2010) identified the lack of organisational level interventions and Rossler (2012) suggested that future research should

investigate the lack of adequate support from supervisors as a predictive factor for burnout.

1.2 Aims and Scope of Literature Review

Existing reviews have neglected the role of workplace support on burnout in mental health professionals. The vast array of empirical studies on burnout in this population have included a range of measures and often only report the significant predictors. There is a need to disentangle the findings from these studies and review them in depth to investigate the association between workplace support and burnout.

1.2.1 Review Objectives

1. To investigate the unique associations between perceived support from supervisors, managers, co-workers, organisations and burnout in mental health professionals.

2. To review and critique the contribution of the burnout and workplace support (in mental health professionals) literature to the models of burnout.

3. To review and critique the reliability and validity of the findings within the literature on workplace support and burnout in mental health professionals, and recommend future research.

4. To provide suggestions of how mental health organisations can support their staff according to the findings of this review.

1.2.2 Search Strategy

The following electronic databases were searched: PsychINFO, MEDLINE, CINAHL, and EMBASE, using search terms identified from previous reviews (Morse et al., 2012; Onyett, 2011; Paris & Hoge, 2010; Rossler, 2012). Terms were adjusted according to MeSH and thesaurus terms for each database. Free text in English and American-English was used. The search was exhaustive due to the wide ranging terminology used throughout the burnout and mental health literature. All search terms were included in each database (see table 1).

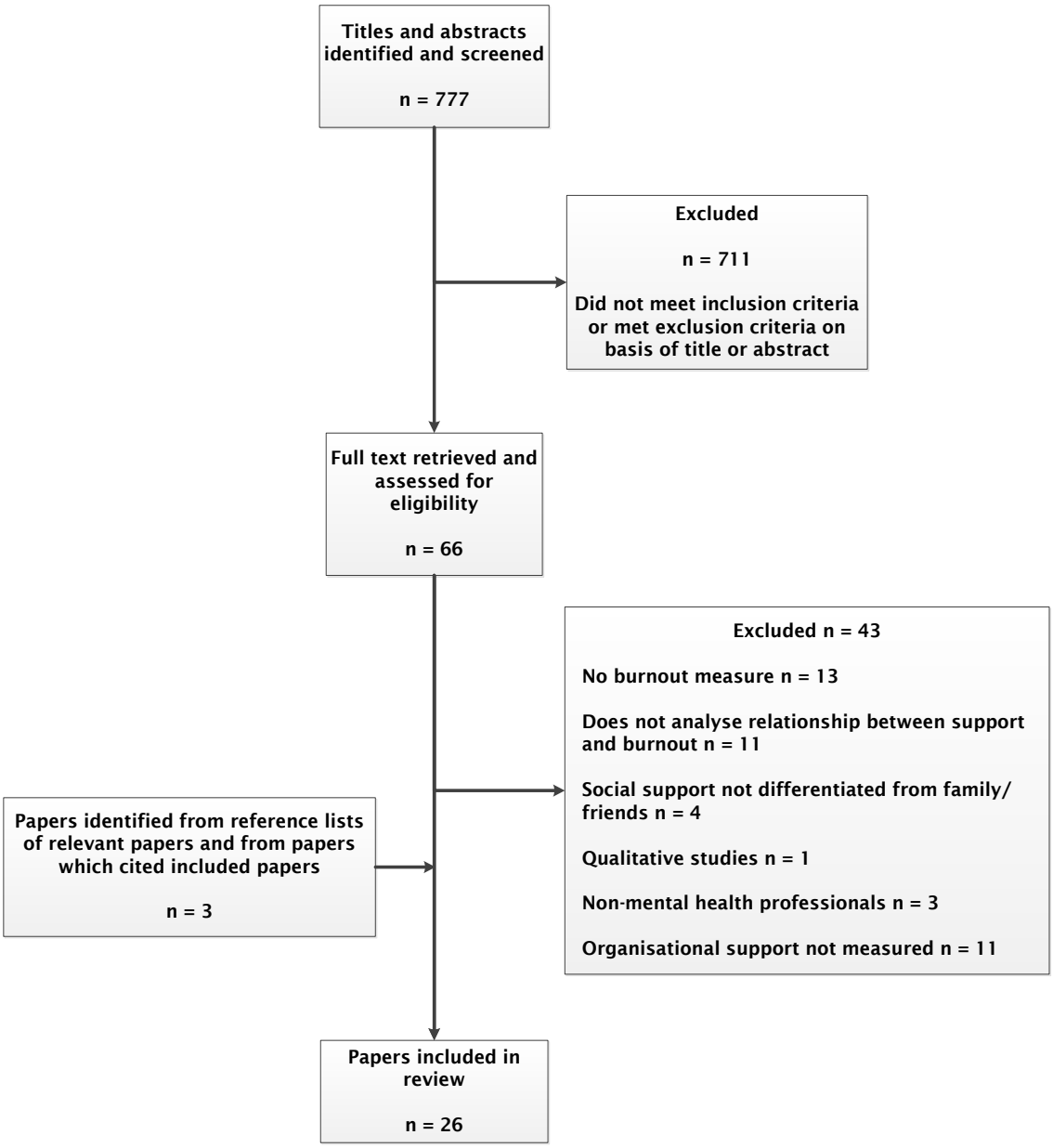
Table 1 *Search terms used to identify studies investigating the relationship between burnout and workplace support in mental health professionals*

Terminology category	Search terms used
Population	Mental health personnel/professional
	Mental health services/organisations
	Community mental health centres/teams/services
	Psychiatric hospital staff
	Psychiatric nurses/nursing/aides
Outcome variables	Burnout
	Occupational stress
	Job stress
	Emotional exhaustion
	Depersonalisation
	Personal accomplishment
Predictor variables	Support
	Social support
	Organisational support
	Coworker support
	Supervisor support
	Management
	Organisational climate/culture
	Personnel management
	Organisational management

The search yielded 777 English language peer-reviewed journal articles from the past 25 years, once duplicates were removed. Titles and abstracts were scrutinised according to predetermined inclusion and exclusion criteria. Papers were included if the paper was empirical, the population considered was mental health professionals, a burnout outcome measure was used and at least one organisational support measure was used or a social support intervention was included. Papers were excluded if they were case studies, qualitative studies with no quantitative burnout measure or where there was no analysis of the relationship between or effect of workplace support on burnout, or no statistical results presented. Papers where support from friends and family was not differentiated from workplace support were excluded. Critical incident stress management studies, veteran studies and substance abuse counsellor studies were excluded on the basis that clientele did not always have a mental health difficulty. This ensured that only studies relevant to mental health services were included.

Sixty-six articles were found to be relevant and full texts were accessed. On further scrutiny, 23 articles were found to be relevant (see figure 1). Three additional articles were found by examining reference lists and articles cited by the included papers. This gave a total sample size of 26 studies.

Figure 1 *Flow chart of study selection process.*



1.3 Data Extraction and Synthesis

A descriptive summary of the design and measures of included studies will be given, followed by a narrative exploration of results. Table 2 outlines the design and results of each study.

Table 2 *Quantitative empirical studies investigating the relationship between workplace support and burnout in mental health professionals (1988 - 2013).*

Reference	Population	Design and sample size	Burnout measure	Total burnout rates			Support type measured	Support measure	Results
				EE	DP	PA			
Acker (2003)	Social work case managers from 15 outpatient mental health settings in New York	CS n = 259 74% female Age (M = 43)	MBI (1986)	-	-	-	Supervisor; Coworker	Caplan, Cobb, French, Van Harrison and Pinneau (1980)	Coworker and supervisor support sig. associated with EE (r= -.15 and -.15, p< .05) respectively, but not DP; Coworker (but not supervisor) support sig. associated with PA (r= .17, p< .01). Supervisor and coworker support did not contribute sig. to multiple regressions for EE, DP, PA.
Acker (2012)	New York mental health service providers	CS n = 460 73% female Age (M = 41)	MBI (1996) EE subscale	19.64	-	-	Supervisor	Caplan et al., 1980: supervisor support subscale	Supervisor support sig. associated with EE (r= -.30, p< . 001).

Reference	Population	Design and sample size	Burnout measure	Total burnout rates			Support type measured	Support measure	Results
				EE	DP	PA			
Adali et al. (2003)	Psychiatric nurses from 5 psychiatric hospitals and departments in Greece	CS n = 199 78% female Age (M = 34.4)	MBI (1986)	18.36	6.43	34.62	Supervisor	Moos and Insel Work Environment Scale (1974): supervisor support subscale	Stepwise multiple linear regression: Supervisor support negatively correlated with EE but not DP or PA (correlations not reported). Supervisor support found to be a sig. predictor of EE (Slope -1.1122, Standard error = .399, p = .006)
Carney et al. (1993)	New York intensive case managers	CS n = 66 45.5% female Age (M = 39)	MBI (1981)	Reported to be below national norm		-	Organisat-ional	Written by authors: ratings of support from Intensive Case Manager program, employing agency and other agencies in the community	Perceived support from ICM provider agency associated with EE and DP (r = -.28 and r = .33, p < .05) respectively but not PA. Perceived lack of support from community service providers was associated with EE (r = .35, p < .05) but not DP or PA.

Reference	Population	Design and sample size	Burnout measure	Total burnout rates			Support type measured	Support measure	Results
				EE	DP	PA			
Carson (1999)	Psychiatric nurses from a psychiatric hospital in the UK	RCT intervention trial n = 53 64% female Age (M = 32)	MBI (1986)	-	-	-	Social support intervention (vs control group) as independent variable		No time or group effects of intervention
Coffey and Coleman (2000)	UK Community forensic mental health nurses	CS n = 80 46.3% female Age (M = 37.8)	MBI (1986)	44.3% high scores	16.6% high scores	26.6% low scores	Line manager	Community psychiatric nurse questionnaire (Carson, Bartlett & Croucher, 1991)	22.9% of high EE group found manager unsupportive compared with 3.6% in the low EE group. Chi = 6.901, d.f. = 1, p = .008. No statistically different comparisons between high and low DP or PA for line manager support.

Reference	Population	Design and sample size	Burnout measure	Total burnout rates			Support type measured	Support measure	Results
				EE	DP	PA			
Corrigan et al. (1994)	Psychiatric inpatient staff in the US	Cross lagged panel design n = 35 48.6% female Age (M = 46.2)	MBI (1986)	15.94	5.82	34.88	Coworker	Modified social support questionnaire (Sarason, Levine, Basham & Sarason, 1983) adapted for collegial support only	Cross-lagged correlations between time 1 coworker support and time 2 DP were significant (r = -.55, p < .05). Cross lagged correlations between time 1 DP and time 1 DP and time 2 coworker support were not significant (r = -.35, p > .05).
Corrigan, Holmes and Luchin (1995)	Psychiatric inpatient staff in the US	CS n = 47 50% female Age (M = 45.2)	MBI (1986)	15.53	5.51	35.09	Coworker	Modified social support questionnaire (Sarason et al., 1983) adapted for collegial support only	Size of support network was not sig. correlated with EE and DP (combined score) or PA. Satisfaction with support network was sig correlated with EE and DP (r = .40, p < .01) but not PA.

Reference	Population	Design and sample size	Burnout measure	Total burnout rates			Support type measured	Support measure	Results
				EE	DP	PA			
Dietzel and Coursey (1998)	Non residential community psychosocial rehabilitation staff in the US	CS n = 94 72.3% female Age (M = 34)	MBI (1986) EE subscale	44.7% high scores	-	-	Supervisor-coworker combined	Oxley and Barrera (1984): perceived social support from coworkers and supervisors	Workplace support sig. associated with EE (r = -.28, p < .01) Multiple regression analysis with EE as dependent variable: social support was not a significant individual predictor. F(5, 84) = 9.45, p < .000, t(92) = -.41, p = .683, β = -.04, SE = .11.
Edwards et al. (2006)	Psychiatric nurses from community mental health teams in Wales	CS n = 260 62% female Age (M = 42)	MBI (1986)	22.32	6.02	31.45	Supervisor	Manchester Clinical Supervision scale (MCSS; Winstanley, 2000)	Sig. correlations between total MCSS score and EE and DP subscales (r = -0.148, p = .05, r = -0.22, p = .003) respectively.

Reference	Population	Design and sample size	Burnout measure	Total burnout rates			Support type measured	Support measure	Results
				EE	DP	PA			
Evans et al. (2006)	Mental health social workers in the UK	CS n = 237 61% female Age (M = 46)	MBI (1986)	26.3 (social workers) 24.2 (psych-iatrists)	7.3 (social workers) 8.5 (psych-iatrists)	33.9 (social workers) 36.0 (psych-iatrists)	Supervisor-coworker combined	Job content questionnaire (Karasek, 1979)	ANOVAs: EE associated with low social support. Multivariate analyses: High EE associated directly with higher job demands but not low decision latitude or low social support. DP and PA not associated with support variables
Fielding and Weaver (1994)	Community and hospital based mental health nurses in the UK	CS n = 126 61.8% female in community; 47.3% female in hospital	MBI (1986)	17.51 (hospital based nurses) 19.89 (community based nurses)	5.54 (hospital based nurses) 5.35 (community based nurses)	35.12 (hospital based nurses) 35.80 (community based nurses)	Supervisor	Work environment scale (Moos, 1986)	Community nurses rated sig. higher supervisor support than hospital nurses ($t(120) = 3.21$, $p < .001$). Hospital nurses: DP sig related to support ($r = -.27$, $p < .05$). EE sig related to support ($r = -.26$, $p < .05$). No sig. association between support and PA. No sig. association between support and burnout for community nurses.

Reference	Population	Design and sample size	Burnout measure	Total burnout rates			Support type measured	Support measure	Results
				EE	DP	PA			
Hallberg (1994)	Psychiatric nurses on a child psychiatric ward in Sweden	Mixed design. n = 11 64% female Age (M = 39)	MBI (1981)	-	-	-	Supervisor	Qualitative	Main themes: feeling understood and understanding others leading to improved cooperation and self-confidence within the ward. No significant changes in burnout over time.
Hannigan, Edwards, Coyle, Fothergill and Burnard (2000)	Psychiatric nurses from community mental health teams in Wales	CS n = 283 62% female Age (M = 40)	MBI (1996)	21.2	5.2	34.8	Line manager	Community psychiatric nurse questionnaire revised: Brown, Leary, Carson, Bartlett & Fagin (1995)	Mean EE scores sig. higher for those with unsupportive line managers, $t(268) = 2.9$, $p < .001$). No sig. differences found between those with supportive managers compared to those with unsupportive managers for DP or PA.

Reference	Population	Design and sample size	Burnout measure	Total burnout rates			Support type measured	Support measure	Results
				EE	DP	PA			
Jenkins and Elliott (2004)	Psychiatric nurses in 11 acute mental health settings in the UK	CS n = 93 66.7% female Age (M = 37)	MBI (1986)	57% high scores	37.6% high scores	60.2% low scores	Supervisor; Coworker	Generic support: House and Wells (1978) (supervisor, coworker, spouse/partner and friends/relatives).	EE sig .correlated with support from coworkers (r = - .32, p < .01) but not supervisors. DP and PA not sig correlated with any support subscales.
Levert, Lucas and Ortlepp (2000)	Psychiatric nurses in psychiatric units in South Africa	CS n = 94 73.4% female Age (M = 40)	MBI (1986)	29.9	19.16	9.63	Coworker	Work load and lack of collegial support measure (Dewe, 1987)	Sig. associations between coworker support and EE and DP but not PA (r = .21, r = .23, p < .05) respectively. (note: authors reverse scored scales).
Littlewood (2003)	Child and adolescent psychiatrists in UK and Eire CAMHS teams	CS n = 323 53% female Age (M = 43)	MBI (1986)	-	-	-	Coworker	Peer support from the recruitment and retention questionnaire: unstandardised	Absence of a close, supportive relationship with colleagues was sig associated with EE (p < .05) but not DP or PA. χ^2 (2, N = 307), p < .05.

Reference	Population	Design and sample size	Burnout measure	Total burnout rates			Support type measured	Support measure	Results
				EE	DP	PA			
Miller, Ellis, Zook and Lyles (1990)	Psychiatric inpatient staff in the US	CS n = 417 68% female	MBI (1981)	15.6	7.6	19.1	Supervisor; Coworker	Caplan et al., 1980	Associations between supervisor support and EE (r = - .48) DP (r = - .38) and PA (r = - .24). Coworker support and EE (r= - .18) DP (r= - .24) and PA (r= - .18). Did not report significance of correlations.
Ogresta, Rusac and Zorec (2008)	Croatia mental health workers: state psychiatric hospitals and psychiatric clinics	CS n = 174 79.9% female Age (M = 41.2)	MBI (Croatian version)	24.5	16.6	21.8	Supervisor-coworker combined	Job Satisfaction Survey (Spector, 1992)	EE, DP and PA not significantly correlated with satisfaction of support from supervisors and colleagues. Stepwise multiple regression analyses found satisfaction of support from supervisors and colleagues was not a sig. predictor of EE, DP or PA.

Reference	Population	Design and sample size	Burnout measure	Total burnout rates			Support type measured	Support measure	Results
				EE	DP	PA			
Pedrini et al. (2009)	Psychiatric nurses from community mental health teams in Italy	CS n = 202 64.8% female	MBI (1981)	12.97	3.31	35.84	Supervisor	Job diagnostic survey: support from supervisors (Hackman & Oldham, 1975)	Univariate logistic regressions: EE was sig. associated with support from coordinators (OR = .35, CI = .21-.60, p < .001) when entered with other variables. DP and PA not predicted by poor support from coordinators.
Sherring and Knight (2009)	Psychiatric nurses in the UK	CS n = 166 73.1% female	MBI (1986)	19.7	4.41	33.78	Organisat-ional	Questions developed by authors: feeling supported at work, feeling valued at work, involved in decision making	Sig. difference in EE scores (F=3.488, p< .009) with medium effect size (η^2 = .08) between group that strongly agreed with feeling unsupported at work and group who strongly disagreed. Sig. difference in EE scores (F=16.82, p< .001) with a large effect size (η^2 = .29), and PA scores (F=2.55, p= .026) with a medium effect size (η^2 = .06) between those who strongly agreed with feeling valued at work and those who did not.

Reference	Population	Design and sample size	Burnout measure	Total burnout rates			Support type measured	Support measure	Results
				EE	DP	PA			
Sochos and Bowers (2012)	Trainee Psychiatrists in the UK	CS n = 112 60% female Age (M = 30.6)	MBI (1996)	18.3	5.7	13.1	Supervisor; Coworker	Generic support: House and Wells (1978) (supervisor, coworker, spouse/partner and friends/relatives).	Moderated regression analyses for combined general and medical trainees. Instrumental, emotional, supervisor and family support moderated effect of speciality group on DP. This only sig. reduced DP in medical trainees.
Tummers, Janssen, Landeweerd and Houkes (2001)	Psychiatric nurses in the Netherlands	CS n = 178 43% female Age (M = 34)	MBI (1986) EE scale	30.5	-	-	Supervisor-coworker combined	Social support at work (colleagues and seniors) by a Dutch questionnaire (Bergers, Marcelissen & De Wolff, 1986)	Sig. association between social support and EE ($r = -.31$, $p < .01$). Structured equation modelling (LISREL) showed that EE predicted by workload and social support

Reference	Population	Design and sample size	Burnout measure	Total burnout rates			Support type measured	Support measure	Results
				EE	DP	PA			
Umene-Nakano et al. (2013)	Psychiatrists in Japan	CS n = 704 22.6% female Age (M = 37)	MBI (1996)	18.9	4.6	26.2	Supervisor-coworker combined	Social support in the workplace questionnaire (standardised in Japan).	Multiple linear regression: Receiving little social support is an individual predictor of EE (β=-0.22, p < 0.0001), DP (β = -0.14, p = 0.0004) and PA (β = 0.10, p = 0.0138).
Van Bogaert et al. (2013)	Psychiatric nurses in 32 psychiatric units in Belgium	CS n = 357 78% female Age (M = 36)	MBI (1996)	11.64	4.3	34.6	Organisat-ional	Hospital and management support Dutch translation of revised nursing work index (Aiken and Patrician, 2000).	Linear mixed effects model: Sig associations found for nurse management at unit level (EE: Adjusted Slope = -7.73, SE = 1.31, p < .001; DP: Adjusted Slope = -1.99, SE = .58, p = .001; PA: Adjusted Slope = 3.52, SE = .97, p < .001), and hospital management and organisational support (EE: Adjusted Slope = -8.24, SE = 1.30, p < .001; DP: Adjusted Slope = -2.12, SE = .58, p < .001; PA: Adjusted Slope = 2.28, SE = .96, p < .05).

Reference	Population	Design and sample size	Burnout measure	Total burnout rates			Support type measured	Support measure	Results
				EE	DP	PA			
Wood et al. (2011)	Staff in inpatient, community teams and crisis resolution teams in UK	CS n = 2258	MBI (1998)	-	-	-	Line manager; Coworker	Ward or team manager support - 3 items, non standardised and Colleague support: 4 item, non-standardised.	Coworker support associated with EE and PA respectively (r = -.22, r = .23). Manager support associated with EE and PA respectively (r = -.29, r = .19). (authors excluded DP variable from analyses due to floor effect). Multi-level regression model found that coworker support uniquely predicted EE and PA respectively (β = -.115, p < .005; β = .191, p < .005). Manager support uniquely predicted EE and PA respectively (β = -.148, p < .005; β = .051, p < .005).

Note. CS = Cross sectional study design; EE = emotional exhaustion; DP = depersonalisation; PA = personal accomplishment. Sig = significantly; SE = standard error. Data included in table where available from study article. Missing data indicates information missing from article.

1.3.1 Design

Twenty-four studies had non-experimental, observational and cross-sectional designs, one of which used a cross-lagged panel design (Coffey & Coleman, 2001). One study employed a mixed qualitative and quantitative design (Hallberg, 1994) and one study was a randomised control intervention trial (Carson et al., 1999).

Population Characteristics and Sample Size

The mean age of professionals across studies, where reported, was 39 years and mean length of tenure was 10.7 years. Twelve studies had a psychiatric nurse sample, three had social workers and three had psychiatrists. Eight studies included a range of mental health professionals. Both acute and community settings were represented with nine studies taking their sample from inpatient staff, nine from community teams and seven used a combination of both. A range of countries were represented, all developed and not all English speaking. Sample sizes ranged from 11 to 2258. The majority of studies contained mostly female samples, five contained mostly males, one study had an even split and one did not report gender ratios. The majority of samples were mainly Caucasian with a small number of studies having a mixture of Caucasian and African-American samples.

Measures

Burnout.

All studies used the Maslach Burnout Inventory (MBI: Maslach & Jackson, 1981; 1986; Maslach, Jackson & Leiter, 1996). The original MBI was formed for human service professionals (Maslach & Jackson, 1981). It was later updated and became the most widely used measure of burnout in mental health professionals (Maslach & Jackson, 1986; Maslach et al., 1996). A 22 item scale asks respondents to rate the frequency of statements relating to their feelings about their job and clients (recipients) on a seven-point likert scale (0 = never, 6 = everyday). Higher scores on emotional exhaustion and depersonalisation subscales and lower scores on the personal accomplishment subscale indicate higher burnout.

All three versions of the MBI have internal validity as measured by Cronbach's alpha (α) of good-excellent for the emotional exhaustion subscale and good for depersonalisation and personal accomplishment (Maslach & Jackson, 1981; 1986; Maslach et al.,1996). Eight studies reported internal consistency of the MBI in their own sample, which were good for emotional exhaustion and personal accomplishment and acceptable for depersonalisation.

Included studies differed in how they reported burnout scores, with some using standardised cut-offs, differing for each scale version. Some studies used mental health professional norms for comparisons (M = 16.89 for emotional exhaustion, M = 5.72 for depersonalisation and M = 30.87 for personal accomplishmen; Maslach et al., 1996).

Four studies used translated language versions of the MBI (Hallberg, 1994; Ogresta, Rusac & Zorec, 2008; Tummers, Janssen, Landeweerd & Houkes, 2001; Umene-Nakano et al., 2013). Geisinger (1994) recommended that when assessment tools are translated into different languages, they must be analysed to ensure they are measuring the same constructs. Ogresta et al. (2008) used a Croatian version of the MBI and factor analysis revealed the same dimensions as the original version. Cronbach's alpha reliability for each dimension was comparable to the original MBI.

Workplace support.

A range of workplace support measures were used. Very few measures were standardised and fewer still were standardised for a mental health worker population. Some studies used subscales of standardised questionnaires which were analysed separately from total scores. Though the studies in the current review span 25 years, the standardised measures were all more than 19 years old. This lack of updated support measures may account for some authors creating their own scales. The wide variety and lack of standardised measures of support makes it difficult to compare studies. However, for the purpose of this review, each source of support, from supervisors, managers, co-workers and the organisation itself will be considered separately. Some measures combine the findings for co-worker and supervisor support, and as such this will be classified in a 'generic support' category. Despite the limitations in support measurement, it is the perception of support at work which is of

relevance to this review. Therefore, any self-report questionnaire pertaining to how supported one feels will be useful when assessing the relationship of this, albeit varied, construct with burnout. It is worth noting that supervisor support measures contain a range of questions regarding perceived support from a supervisor, not the presence of supervision arrangements per se.

1.3.2 Results

The next section will review burnout rates, followed by the differential association of each source of support on each burnout dimension. Contributions for each professional group and of non-cross-sectional studies will then be discussed. The findings will be discussed in terms of each study's contribution to the theoretical models underpinning this research area.

Burnout Rates

Maslach and Jackson (1981; 1986) and Maslach et al. (1996) provide burnout dimension cut-offs and norms for mental health professionals (see table 3).

Table 3 *Burnout rates and range of experienced burnout for MBI subscales (Maslach and Jackson, 1981; 1986) and Maslach et al. (1996)*

	Range of Experienced Burnout								
	Low (lower third)			Average (middle third)			High (upper third)		
MBI Subscales	1981	1986	1996	1981	1986	1996	1981	1986	1996
Emotional exhaustion	≤ 12	≤ 13	≤ 13	13 - 21	14 - 20	14 - 20	≥ 22	≥ 21	≥ 21
Depersonalisation	≤ 2	≤ 4	≤ 4	3 - 5	5 - 7	5 - 7	≥ 6	≥ 8	≥ 8
Personal accomplishment	≥ 38	≥ 34	≥ 34	31 - 37	33 - 29	33 - 29	≤ 30)	≤ 28	≤ 28

The majority of studies reported mean scores for burnout dimensions. In comparing studies which found significant relationships between support and burnout, a pattern emerged. When mean emotional exhaustion scores were in the 'low' or 'average' range, studies reported a significant association between burnout and support (Acker, 2012; Adali et al., 2003; Carney et al, 1993; Corrigan et al., 1994; Corrigan, Holmes & Luchins, 1995; Fielding & Weaver, 1994; Miller, Ellis, Zook & Lyles, 1990; Pedrini et al., 2009; Sherring & Knight, 2009; Umene-Nakano et al., 2013; Van Bogaert et al., 2013). Moreover, four of these studies also found lack of support to be a significant predictor of burnout (Adali et al., 2003; Pedrini et al., 2009; Umene-Nakano et al., 2013; Van Bogaert et al., 2013). When emotional exhaustion rates are in the 'high' range, the pattern is less clear. However, all three studies which investigated the predictive value of lack of support found a non-significant result had high reported rates of burnout (Dietzal & Coursey, 1998; Evans et al., 2006; Ogresta et al., 2008). These findings were consistent across support types. It may be tentatively inferred that when emotional exhaustion is low-average, support has a stronger and more reliable relationship with burnout than when emotional exhaustion is high.

Sources of Support

Supervisory support.

Eight studies investigated the relationship between burnout and supervisory support. Six of these samples were psychiatric nurses. Fielding and Weaver (1994) found that community nurses rated supervisor support significantly higher than hospital based nurses did. They found a significant negative association between emotional exhaustion and supervisory support. However, they did not investigate the predictive value of support on emotional exhaustion. They did, however, find a significant negative association between supervisor support and depersonalisation, though no significant association with personal accomplishment. Adali et al. (2003) used multiple linear regressions and found low supervisor support to be a significant predictor of high emotional exhaustion in psychiatric inpatient nurses in Greece. There were no significant relationships between supervisor support and other burnout dimensions. Consistent with this, Pedrini et al. (2009) also found low supervisor support to be a significant predictor of high emotional exhaustion,

using univariate logistic regressions after controlling for workload, task variety, task identity and feedback.

Jenkins and Elliott (2004) investigated the impact of social support on burnout in a sample of acute setting psychiatric nurses in the UK. Support from supervisors was not significantly associated with any burnout dimension. This is inconsistent with all other studies investigating the role of supervisor support on emotional exhaustion in psychiatric nurses. Given that Jenkins and Elliott's sample was taken from 11 trusts, it is unlikely to be due to a particular set of supervisors. Interestingly, both Adali et al. (2003) and Miller et al.'s (1990) study of psychiatric inpatient staff did find an association between supervisor support and emotional exhaustion in acute settings, though neither of these studies were conducted within the NHS. It is possible that the strength of relationship varies between different health services, due to organisation structure, value differences and supervisor training opportunities, for example. This is of course a tentative explanation and further research is required to investigate these findings.

In a study on effects of supervision in community psychiatric nurses in Wales, Edwards et al. (2006) found that emotional exhaustion was significantly negatively correlated with 'trust/rapport' and 'finding time' aspects of clinical supervision. Depersonalisation was significantly negatively correlated with these two aspects as well as 'supervisor advice/support.' However, as for the majority of correlational studies, causality cannot be inferred. Not finding enough time for supervision and being emotionally exhausted may both be explained by a high caseload, for example.

There is little to conclude from Hallberg's (1994) mixed methodology study on psychiatric nurses and supervisor support as no significant changes in burnout were found following twelve months of psychodynamic supervision on a child psychiatric ward. Main themes of supportive supervision identified included feeling understood and understanding others, which led to improved cooperation and self-confidence within the ward. Non-significant differences in burnout over time may be explained by low baseline burnout levels, hence there not being much scope for change. Also, the sample size was small at 11 nurses and supervision occurred less frequently than suggested.

A further three studies investigated supervisory support, one with a mixed psychiatric inpatient sample (Miller et al., 1990), one with a mixed community team sample (Acker, 2012) and another with a sample of New York social workers (Acker, 2003). Miller et al. (1990) found a strong negative association between supervisor support and emotional exhaustion and a moderate negative correlation between supervisor support and depersonalisation. Acker (2012) found a significant moderate negative correlation between supervisor support and emotional exhaustion but did not measure depersonalisation or personal accomplishment. Acker (2003) found a low but significant association between low supervisor support and high emotional exhaustion but not depersonalisation or personal accomplishment. However, using a hierarchical regression, supervisor support did not significantly contribute to the multiple regression equation when the outcome was any of the burnout dimensions. This was a large sample and this result is inconsistent with psychiatric nurse studies investigating the predictive, not just correlational, value of supervisor support on burnout dimensions (Adali et al., 2003; Pedrini et al., 2009).

The relationship between supervisory support and emotional exhaustion is largely supported. This is particularly true for studies with psychiatric nurse samples, though this observation may be attributed to the larger number of studies utilising this population. However, the association between supervisory support and emotional exhaustion was not supported in UK psychiatric nurse acute settings or New York social workers. The relationship between depersonalisation and personal accomplishment and supervisor support is less clear. Where associations exist, they are weaker and reported less often.

Managerial support.

Three studies investigated the relationship between burnout and support from managers, all with UK mental health team samples. Wood et al. (2011) conducted a large scale study of community, inpatient and crisis resolution staff. Job demands, control, and supportive relationships with managers were all uniquely associated with emotional exhaustion and personal accomplishment. However, Hannigan, Edwards, Coyle, Fothergill and Burnard (2000) only found support for a relationship between low managerial support and high emotional exhaustion. Mean scores on the emotional exhaustion

subscale were significantly higher for nurses with unsupportive managers, though effect sizes were not reported. Coffey and Coleman (2001) found similar results with a sample of community forensic mental health nurses. Twenty-three percent of nurses who scored high on the emotional exhaustion subscale found their manager to be unsupportive compared with less than four percent of those reporting low emotional exhaustion. No statistically different comparisons were found between high and low scorers on other burnout subscales.

Co-worker support.

Five of the nine studies looking at the role of co-worker support used inpatient samples. Corrigan et al. (1994) used a cross-lagged panel design and found that correlations between low co-worker support at baseline and high depersonalisation eight months later were significant whereas the reverse association was not significant. This provides more substantial evidence than cross-sectional designs that increased co-worker support can reduce depersonalisation. There were no significant correlations with either emotional exhaustion or personal accomplishment. Corrigan et al. (1995) found that satisfaction with, but not size of, psychiatric inpatient staff's support network was related to a combined score for low emotional exhaustion and depersonalisation. Personal accomplishment was not related to co-worker support. Similarly, Levert, Lucas and Ortlepp (2000) found no relationship between co-worker support and personal accomplishment in psychiatric inpatient nurses in South Africa. They found significant associations between low co-worker support and high levels of emotional exhaustion and depersonalisation.

In another inpatient setting, Jenkins and Elliott (2004) found a significant negative correlation between co-worker support and emotional exhaustion but not the other dimensions of burnout. Furthermore, Miller et al. (1990) found only weak or negligible correlations between co-worker support and the three dimensions of burnout, in contrast to their findings of the effect of supervisor support.

Four studies investigated the effects of co-worker support using mixed or community samples, each giving different findings. Littlewood, Case, Gater and Lindsey (2003) investigated this relationship in child and adolescent mental

health psychiatrists in the UK and Eire. They found that the absence of a close, supportive relationship with colleagues was significantly associated with high emotional exhaustion but not depersonalisation or low personal accomplishment. Sochos and Bowers (2012) found no significant relationships between co-worker support and burnout dimensions, corroborating findings by Miller et al. (1990). Acker et al. (2003) found co-worker support was associated with emotional exhaustion and personal accomplishment, though this was not found to be a predictor on applying hierarchical regression analyses. Wood et al. (2011) found that low co-worker support was significantly and uniquely associated with high emotional exhaustion and low personal accomplishment.

There is some support for the relationship between co-worker support and burnout, particularly in inpatient settings. However, most studies used acute or a combination of settings so it is difficult to conclude whether environment affects this relationship. No pattern emerged for type of professional.

Generic workplace support.

Five studies did not differentiate between co-worker and supervisor support. There is much inconsistency between findings, with one study showing no significant associations between burnout variables and support (Ogresta et al., 2008); one study finding all three dimensions of burnout uniquely predicting workplace support (Umene-Nakano et al., 2013); one study reporting that emotional exhaustion is a significant independent predictor of support (Tummers et al., 2001) and two studies finding that workplace support is not a significant predictor of emotional exhaustion (Dietzel & Coursey, 1998; Evans et al., 2006). These inconsistencies may be due to different sources of support having a differential impact on burnout in different settings as found throughout this review. Generic support measures do not allow an investigation of this.

Organisational support.

Three studies examined the relationship between perceived organisational support and burnout. Carney et al. (1993) conducted a cross-sectional study of correlates of burnout in New York case managers. Perceived support from provider agency was significantly negatively, though weakly,

correlated with emotional exhaustion and significantly negatively moderately correlated with depersonalisation. Interestingly, burnout rates were far below the norm for mental health workers. This may be attributed to the set-up of the organisation, which was designed in teams of 10-12 case managers, with one coordinator, to allow for mutual support and effective communication. This organisational concern and implementation may have prevented high levels of burnout and is perhaps reflected in the high levels of perceived support reported.

In a more recent study, Van Bogaert et al. (2013) investigated the effects of hospital and management support in a large sample of UK acute setting psychiatric nurses. They found significant associations in the expected direction between all burnout subscales and unit level nurse management, hospital management and organisational support. This study also measured job satisfaction and quality of care, though organisational support was not as strongly associated with these variables as with burnout.

Sherring and Knight (2009) also studied burnout in acute and community psychiatric nurses in an NHS trust. Questions were developed by the authors to investigate relationships between feeling supported and valued at work, and burnout. Analysis of variance was employed rather than the common correlational or regression analysis used in the majority of burnout studies. They found a medium effect size ($\eta^2 = .08$) and significantly higher emotional exhaustion scores for nurses who strongly agreed with the statement 'I feel unsupported at work' compared with those who strongly disagreed. They found significantly lower emotional exhaustion scores and significantly higher personal accomplishment scores for those that felt valued at work compared with those that did not, with large ($\eta^2 = .29$) and medium ($\eta^2 = .06$) effect sizes respectively. No significant relationships were found between organisational support and depersonalisation.

The three studies reported suggest that organisational support has a consistent negative relationship with emotional exhaustion. Relationships between organisational support and other burnout variables are less clear.

Type of Professional

There is support for an association between workplace support and emotional exhaustion in community psychiatric nurses (Coffey & Coleman, 2001; Edwards et al., 2006; Hannigan et al., 2000; Pedrini et al., 2009). There is tentative support for a relationship between workplace support and emotional exhaustion in psychiatrists, with all three studies finding a significant association between variables (Littlewood et al., 2003; Sochos and Bowers, 2012; Umene-Nakano et al., 2013) with one study reporting that combined supervisor and co-worker support significantly predicted emotional exhaustion (Umene-Nakano et al., 2013). However, it is difficult to compare these studies as they all measure different support sources.

The three studies with social workers also measured different support sources making comparisons difficult. However, two studies tested regression models and found supervisor and co-worker support not to be significant predictors of any dimension of burnout. This may tentatively suggest less support for an association between workplace support and burnout in social workers.

Dimensions of Burnout

The studies so far have shown that workplace support has differential effects on each dimension of burnout. Emotional exhaustion has the strongest relationship with support, forming much of the previous discussion.

Of the twenty-five studies, twenty-three measured depersonalisation and personal accomplishment. Eight studies found significant relationships between support and depersonalisation (Carney et al., 1993; Corrigan et al., 1994; Corrigan et al., 1995; Edwards et al., 2006; Fielding & Weaver, 1994; Levert et al., 2000; Umene-Nakano et al., 2013; Van Bogaert et al., 2013), while Miller et al. (1990) found a moderate negative correlation between supervisor support and depersonalisation but did not report the significance of this result. There were no observable differences between professional groups or country of origin for this burnout variable.

Only five studies found a significant relationship between low support and low personal accomplishment (Acker, 2003; Sherring & Knight, 2009; Umene-Nakano et al., 2013; Van Bogaert et al., 2013; Wood et al., 2011).

These studies varied in terms of source of support, professional group, workplace setting, country of origin and standardisation of support questionnaires, making it difficult to explain this relationship.

Intervention Trials

One study used a randomised control intervention trial to test the effectiveness of a social support group in UK inpatient psychiatric nurses (Carson et al., 1999). Burnout was measured before and after a course of five once-weekly sessions and at six-month follow up. Sessions covered possible stressors, types and benefits of social support and personal support networks. Group discussions aimed to encourage supportive relationships between staff. A control group was given feedback on their burnout scores and a stress management booklet. The intervention group was unsuccessful in reducing burnout, despite participants commenting that developing relationships at work was helpful and that support from others provided perspective. However, attendance was poor, with only three out of twenty-four participants attending all sessions. They also did not measure support before the intervention and some staff may have already had satisfactory support networks, thereby reducing the potential effectiveness of the group.

Studies Testing Models

Two studies explicitly tested theoretical models of burnout. Wood et al. (2010) tested Johnson and Hall's (1988) job demand-control-support model of occupational stress in British mental health workers. They found job demands, control and supportive relationships from managers and co-workers were each uniquely associated with emotional exhaustion and personal accomplishment. They concluded that low demands, high control and high levels of support are each beneficial for the wellbeing of mental health staff but that the interaction between them does not contribute significantly to burnout outcomes. Interestingly they did find support for the buffer model when testing depression and anxiety as outcomes.

Miller et al. (1990) used path analyses to test their model which hypothesised that problems with communication variables (supervisory support, co-worker support and participation in decision making) lead to stress variables (role stress and work load) then to burnout, job dissatisfaction and

low occupational commitment, in psychiatric inpatient staff. They hypothesised that workplace support within this model would enable the employee to process stressors at work, reduce uncertainty, enhance control and subsequently prevent burnout. They hypothesise that high co-worker support would be directly related to low personal accomplishment through reinforcing a sense of self-worth, but that this would be the only dimension of burnout related to peer support. Initially, they found strong negative correlations between supervisor support and emotional exhaustion, a moderate association with depersonalisation and a weak association with personal accomplishment. Co-worker support was weakly correlated with depersonalisation, with negligible associations with emotional exhaustion and personal accomplishment. However, on testing the model, they found little effect of co-worker or supervisor support on any burnout variable. Their main finding was that participation in decision making was associated with higher personal accomplishment. They found that perceptions of participation and influence in decisions had a greater impact on burnout than more emotional forms of support.

1.4 Discussion

Recent reviews on burnout in mental health professionals have stated that the role of organisational factors in predicting burnout is not well understood and that interventions for such predictors are lacking (e.g. Morse et al., 2012; Onyett, 2011). Specifically, Rossler (2012) identified a gap in the literature of the role of supervisory support in burnout in mental health professionals. The current review has collated the 26 quantitative empirical studies in this area over the past 25 years and offered some tentative conclusions.

1.4.1 Main Findings

In studies where burnout rates are low-average there was more likely to be a significant relationship between workplace support and burnout, regardless of support source. In addition, a lack of supervisory and managerial support was often, though not always, significantly related to burnout. Low co-worker support was also significantly related to high burnout in a number of studies, though the dimension of burnout for which this was true was not

consistent. Where supervisory and co-worker support was measured as a single variable there was inconsistency in the significance of the relationship with burnout. Studies investigating effects of organisational support consistently found a negative relationship to burnout, though only three studies were available. Only one study used a randomised-control trial and found non-significant changes in burnout rates following a social support intervention in an inpatient psychiatric unit.

Tentative conclusions can be made for the effect on burnout of different sources of support between professionals. Stronger associations were found between high burnout and low co-worker support for psychiatric nurses in acute rather than community settings. However, psychiatric nurses were the most common sample studied, perhaps biasing these findings. There is some support for the relationship between low workplace support and high emotional exhaustion in psychiatrists and less support for this relationship in social workers. There is more evidence for the effect of supervisory and managerial than co-worker support in community staff.

Considering each dimension of burnout separately, the majority of studies found support for the relationship between low workplace support and high emotional exhaustion and little support for the relationship between personal accomplishment and workplace support. The findings for depersonalisation were less consistent.

The majority of findings apply to mental health professionals working with adults, with few samples including staff working with children and adolescents.

1.4.2 Critical Review

Methodological Quality of the Review

There are a number of review level limitations which should be noted when assessing the contribution of findings. Only published articles were included in the search criteria. Dickersin (1990) highlights the effect of publication bias where studies may not be published if the expected strength or direction of effect is not obtained. Furthermore, studies investigating predictors of burnout usually include multiple variables, diluting the depth of

investigation into the effect of each and creating an outcome reporting bias (Moher, Liberati, Tetzlaff & Altman, 2009).

Methodological Quality of Included Studies

Study level.

There are a number of methodological weaknesses in the study of predictors of burnout, common to all cross-sectional designs. All research was conducted in clinical settings, increasing ecological validity and generalisability of findings. However, it is not possible to conclude whether inconsistent results are due to work-environments, source of support, weak study designs or non-comparable measures. Although a strength of this review is the inclusion of a number of countries and professionals, this may also be a contributory reason for the lack of consistency between studies.

The vast majority of included studies used an opportunity sampling and snowball method, creating a response bias with potential to skew data. Response rates varied between 20.7% and 77%. Evans et al. (2006) conducted preliminary analyses on differences between responding and non-responding social work authorities contacted to participate in their study but found no differences in authority type or performance analysis. However, at an individual level there are a number of reasons why staff members may choose not to participate in studies. On the one hand, staff who are more 'burnt-out' may have less motivation to complete questionnaires, skewing the sample toward those with lower burnout rates. On the other hand, those who feel more emotionally exhausted or less well supported in their work may be more interested in the research and choose to participate. It is not possible to derive conclusions about this from the included studies, though Gonge and Buus (2011), in a study that did not meet inclusion criteria for this review, analysed the selection bias in a study on the benefits of supervision in psychiatric nursing. Respondents differed from non-respondents in location, education level and work shifts, possibly affecting burnout levels (Maslach et al., 1996) and social support (Ng & Sorensen, 2008).

There was little variation in participant individual characteristics between studies, though there were notable differences for gender according to type of professional. Psychiatric nurse studies tended to have more females whereas

studies of psychiatrists contained more males. Gender differences have been found in burnout norms (Maslach et al., 1996) and effect of workplace support (Ng & Sorensen, 2008), which is likely to affect reliability of conclusions based on type of professional.

There are also differences in ethnicity between studies. Maslach et al. (1996) report substantial differences in mean MBI ratings between ethnic groups, perhaps skewing the data. Each country also has different healthcare systems which have changed over the 25 year span of this review. The American social work system, for example, changed significantly and this in itself may have influenced burnout levels, support, and the relationship between the two (e.g. Evans et al., 2006).

Outcome level.

Burnout rates are easily comparable by consistent use of the MBI. The literature evaluating measures of support in the workplace is weak, hence the large number of support measures used. Indeed, Hutchison (1999) commented on the difficulty of measuring social support due to the vague nature of the construct and lack of clear operational definition for research. In addition, methods used to assess workplace support and burnout have consistently been self-report. In the current review, however, it is the perception, not receipt, of support that is of interest. It is therefore helpful that all studies measure perceived support. Indeed, Haber, Cohen, Lucas and Baltes (2007) found that perceived and received support has contrasting effects on stress and health outcomes.

Podsakoff, Mackenzie, Lee and Podsakoff (2003) discuss the impact of a number of inherent difficulties with self-report questionnaires, each of which contribute to common method variance, altering the observed relationship between predictor and criterion variables. For example, the negative affectivity effect suggests the respondent's mood is likely to influence ratings. For example, an employee feeling emotionally exhausted may perceive support from supervisors to be lower, by virtue of having low mood. However, Spector, Zapf, Chene and Frese (2000) believe that negative affectivity is not a confounding variable, rather it is part of the construct being measured, therefore giving useful information.

In terms of statistical analysis, only nine studies used regression models to test whether workplace support significantly and uniquely predicts burnout. Multicollinearity may be high between predictor variables. Without a regression analysis, a correlation between two variables provides only limited information. It is possible that where correlations exist, staff who are more burnt out may seek more supervision, hence offering an alternative explanation for this association. This may explain why some studies found significant correlations but that support was not a significant predictor of burnout. Although regression models do not explicitly imply causation (Tabachnick & Fidell, 2007), it can be more readily argued that increasing workplace support will reduce burnout. Corrigan et al.'s (1994) cross-lagged panel design also provided evidence for a causal relationship between coworker support and depersonalisation, though more studies with similar designs are necessary to draw conclusions.

1.4.3 Theoretical Implications

It was found that when emotional exhaustion rates are low-average, as opposed to high, the relationship between workplace support and burnout may be stronger. This may inform the theoretical literature of the mechanism by which support is helpful. When one becomes more 'burnt-out' support may no longer buffer the effects of low control or high demands, for example. Evans et al. (2006) gives some possible reasons for this. Social workers were going through a time of uncertainty due to the change of role. Over a quarter of respondents had a strong or very strong desire to leave and had high burnout rates. Workplace support in itself is perhaps unlikely to buffer against such high work demands in this instance.

It is difficult to test models of burnout using cross-sectional and correlational designs which make up the majority of the research in this area (Hutchison, 1999). The job demand-control-support theory (Johnson & Hall, 1988) can only be tested if all components of the model are measured and the interaction between them statistically assessed. Only one study formally tested this and found support for an additive but not an interactional effect between variables (Wood et al., 2011). However, Hutchison suggests the interaction model cannot be tested in a cross-sectional study due to cross-sectional interaction effects and that a longitudinal design is required. The studies which

assessed the individual predictive value of workplace support may refute the job demand-control-support model if support is found not to have a unique predictive value to burnout (Acker, 2003; Dietzel & Coursey, 1998; Ogresta et al., 2008). However, when support is found to be a significant predictor it does not necessarily follow that this model is supported, only that one component of the model is supported. Hausser et al. (2010) found statistically more support for the job demand-control model as opposed to the job demand-control-support model. However, current results show that support does have some relationship with burnout, with some studies finding support to be an independent predictor. It is possible that some of the correlational studies would have found support to be an independent predictor had they tested regression models.

The evidence to suggest that organisational support has a significant negative relationship with emotional exhaustion is tentative given that only three studies investigated this support source. However, this finding is consistent with Jawahar et al.'s (2007) finding that perceived organisational support (POS) is significantly related to emotional exhaustion. Eisenberger et al.'s (1986) theory of POS suggests that this concept is related to organisational commitment and contributes to the organisations welfare. Further research specifically looking at POS, beyond that of supervisor or co-worker support, and the effect on burnout would be an interesting possible addition to the studied consequences of this concept.

It is not possible from the current review to draw inferences regarding differential effects of perceived and received support, as support was only measured using self-report methods. Further research assessing the receipt of support would be required, perhaps by use of diaries recording actual support given, though this may be time consuming and not practicable in a clinical setting. However, this is still a self-report method and thus still open to demand characteristics and participant bias.

Another contribution to the literature provided by included studies is that workplace support has differential effects on burnout compared with other psychological outcome variables (e.g. Wood et al., 2011). This corroborates the existing literature on burnout as a distinct concept (Maslach et al., 2001) and

suggests that models of workplace support should consider differential effects on different outcomes.

1.4.4 Clinical Implications

Paris and Hoge (2010) found that organisational level interventions in mental health teams are lacking, whereas current interventions tend to focus on individual changes (e.g. Richardson & Rothstein, 2008). The findings of this review are tentative, but may inform areas in which teams can intervene to prevent burnout.

The findings suggest that when emotional exhaustion is low-average then organisational interventions to increase support may prevent burnout. However, when emotional exhaustion is high, interventions other than social support may be more beneficial.

In community settings, supervisory and managerial support appears slightly more beneficial than co-worker support. This tentative conclusion makes intuitive sense, where staff in autonomous roles are likely to benefit from supervisors taking some level of responsibility and protection for staff in the community. This is particularly relevant as previous research has found that supervisory support can lower job demands (Luchman & Gonzalez-Morales, 2013) and subsequently is likely to reduce emotional exhaustion. Therefore, the most obvious way of increasing supervisory support is through supervision, and there is an emerging literature on how this could be achieved (e.g. Barak et al., 2009). Miller et al. (1990) find that participation in decision making is an important aspect of supervisory support and worth considering for intervention, though Semmer et al. (2008) suggested the emotional meaning behind this is also important. Identifying aspects of supervision that are helpful in reducing burnout requires further research.

Co-worker support appears more beneficial in inpatient than community settings, particularly for psychiatric nurses. In acute settings, co-workers can share the workload, thereby decreasing emotional exhaustion (Rousseau & Aubé, 2010). In an intervention study, Heany, Price and Refferty (1995) found evidence for reduced depressive and somatisation symptoms following a social support group for intellectual disability care staff. Although they did not measure burnout, it is possible that such a group, focusing on teaching skills

to enhance workplace relationships, may reduce symptoms of emotional exhaustion. However, in a review of support groups for mental health nurses, Ritter, Tolchard and Stewart (1995) presented inconclusive evidence for the usefulness of such groups. Ritter et al. (1995) note that the content of such groups is often not theory-driven, hence the need for further research to examine the process by which social support is helpful in mental health workplaces. Other problems include low attendance due to time commitments and the fear of being vulnerable in front of colleagues and seniors. These difficulties inherent in this type of research may explain why there are not more recent social support intervention studies in the literature. It is also not surprising that such support groups are not always thought useful by staff (Reid et al., 1999). Clinical psychologists' skills in formulation and developing effective interventions based on empirical findings may be beneficial when setting up such groups, particularly with their knowledge of systemic processes (Johnstone & Dallos, 2013). Reflective groups, for example, may allow professionals to share experiences and emotions, strengthening co-worker relationships (Bulman & Schulz, 2013).

Higher levels of POS are likely to reduce burnout. Therefore, concentrating efforts on the antecedents of POS, such as supervisory support, fair organisational procedures and favourable rewards and job conditions (Rhoades & Eisenberger, 2002) may reduce burnout. However, the strength of relationship between supervisory support and POS will depend on whether the employee identifies the supervisor with the organisation (Rhoades & Eisenberger, 2002). The included studies provide some indications of how to increase POS. For example, Carney et al. (1993) recommended that the agency should increase communication with workers, ensure access to required resources and set up regular meetings between directors and social workers. Van Bogaert et al. (2013), however, believed that a shared responsibility between managers, administrators and clinical staff was necessary to ensure a supportive environment. In both cases, communication, respect and understanding of the roles within an organisation may be important in increasing POS and therefore reducing burnout.

1.5 Conclusions

This review has explored the relationship between workplace support and burnout in mental health professionals. Overall, there is some evidence for the relationship between workplace support and emotional exhaustion, though inconsistent evidence for its association with depersonalisation and personal accomplishment. As the majority of studies used only correlational designs and most did not test regression models, causation cannot be inferred. In addition, the quantitative study of workplace support and burnout thus far has not provided many explanations of how workplace support reduces burnout. Each review objective in turn will now be discussed.

1.5.1 Review Objectives

1. The role of perceived support from a variety of sources was investigated. Low supervisor support was often related to high burnout, particularly emotional exhaustion. Low co-worker support was often associated with high burnout, though the dimension to which it was related was inconsistent. Within acute settings, co-worker support for psychiatric nurses was more strongly related to burnout, whereas in community settings supervisor support appeared more beneficial. POS showed a consistent negative relationship with burnout, though only three papers were reviewed and hence more research is required.

2. The included papers have been reviewed for their contribution to the literature on burnout models. It is difficult to draw conclusions, given the methodological weaknesses inherent in cross-sectional designs and the lack of experimental evidence. However, where there are low-average, compared with high, reported emotional exhaustion rates, a relationship between low support and high burnout is more likely to exist. This finding requires further study to investigate the possible mechanisms by which this occurs. There is also some support for Johnson and Hall's (1988) additive version of the job demand-control-support model. It is not possible to infer any information about which of House and Kahn's (1985) components of social support is most useful, though Miller et al. (1990) suggests that participation in decision making has a greater impact on burnout than emotional forms of support.

3. The included papers have been critiqued at the study and outcome level. The methodological quality of studies in this area is generally weak, making it difficult to draw conclusions from the different findings. A lack of consensus on workplace support measures, lack of standardisation and reliance on subscales also makes comparisons difficult. It is also difficult to compare studies when only some use statistical analyses to test for predictors. Correlational studies do not allow for shared variance to be partialled out and in the case of differing support sources, it is likely that a large proportion of shared variance exists.

4. The findings of this review suggest there are ways in which mental health organisations may support and protect their staff from burnout. For example, when emotional exhaustion is low-average, then workplace support may be beneficial. When emotional exhaustion is high, then staff may require interventions other than workplace support. Within acute settings, psychiatric nurses may benefit from co-worker support interventions, whereas supervisory support should be the focus in community settings.

1.5.2 Recommendations for Future Research

Despite inconsistencies in study findings, it is likely that more of the same type of research, with a correlational design, will not contribute significantly to these conclusions. Therefore it is recommended that predictors of workplace support on burnout in mental health professionals be studied explicitly with regression analyses. In addition, longitudinal studies, controlling for common method variance (Podsakoff et al., 2003) would benefit this area of research, particularly as Hausser et al. (2010) found differing levels of support for the job demand-control-support model (Johnson & Hall, 1988) between cross-sectional and longitudinal designs, suggesting that the type of study influences findings. Path analyses can also provide more robust evidence toward a causal link between workplace support and burnout and should be a priority for further research in this area along with randomised control intervention studies.

A more stringent definition of workplace support is required which may aid the development of a standardised measure for use in research, allowing studies in this area to be more comparable. A measure that incorporates each

type of support (House & Kahn, 1985) may also be useful in investigating which components of support are related to burnout, particularly from different sources. This may contribute to an understanding of how support can be helpful, or indeed unhelpful in reducing burnout. In addition, the measurement of received, as opposed to perceived support (Sarason et al., 1990) requires investigation.

Given the finding that rates of emotional exhaustion may influence the relationship between workplace support and burnout, future research could investigate the mechanism by which this occurs. This may contribute to an understanding of how support potentially reduces burnout when emotional exhaustion is low. In addition, the role of depersonalisation and its relationship to support should be a focus of research given the inconsistency of findings in this review.

Each source of support appears to have a differential relationship to burnout, though POS has not been investigated thoroughly. Future research that investigates this variable is required, particularly as the studies reviewed have found this to have a significant negative relationship with burnout.

It has become apparent that there is a lack of studies investigating the impact of workplace support on burnout in child and adolescent mental health professionals. Future research investigating workplace support as a predictor of burnout in this population would contribute to the evidence base.

Chapter 2: Empirical Paper

Predictors of Burnout and Secondary Traumatic Stress in Child and Adolescent Mental Health Staff

2.1 Introduction

Current economic and social strains are taking their toll on the NHS, and demands upon staff are increasing (Morse et al., 2012). Mental health professionals work in highly emotive environments and experience demanding relationships with clients (Rossler, 2012). The 2013 National NHS staff survey (Healthcare Commission, 2013) stated that 43% of staff in mental health and learning disability trusts suffered work related stress. This indicates a need to consider the effects of working with vulnerable client groups, such as burnout, secondary traumatic stress (STS) and sickness absence (e.g. Bride, 2004; Onyett, Pillinger & Muijen, 1997). Moreover, it is important to determine the predictors of such outcomes. Much of the literature in this area considers the experience of professionals within adult mental health teams (Morse et al., 2012). The study of burnout and STS in child and adolescent mental health service (CAMHS) staff has been neglected (Lizano & Mor Barak, 2012).

2.1.1 Burnout

Freudenberger (1974) coined the term burnout after he and his colleagues experienced feelings of mental and physical exhaustion in their work as psychiatrists. Maslach and Jackson (1981) developed this model for human service employees. Burnout is understood to comprise of three facets: emotional exhaustion (emotionally overextended and exhausted by work), depersonalisation (cynical feelings about clients), and reduced personal accomplishment (competence and achievement) (Maslach et al., 2001). Between 21-67% of mental health staff have been reported to experience high levels of burnout (Morse et al., 2012), and emotional exhaustion is high among community mental health teams in the UK (Johnson et al., 2012). The

prevalence of burnout in children and family social workers (Martin & Schinke, 1998) and child and adolescent psychiatrists (Littlewood et al., 2003) is also reported to be high. Reininghaus and Priebe (2007) have noted that there has not been a decline in burnout in mental health services despite much empirical study, which itself is a cause for concern. Consequences of burnout include diminished emotional and physical health, reduced outcomes for clients, and high staff turnover (Green, Miller & Aarons, 2011).

2.1.2 Secondary Traumatic Stress

The term secondary traumatic stress (STS) is defined as a distress reaction upon hearing a client's traumatic experiences (McCann & Pearlman, 1990). Client exposure is defined as the traumatic event under consideration and symptoms are similar to post traumatic stress disorder; including avoidance of reminders or thoughts of the trauma, arousal at trauma-related triggers and intrusion of trauma related thoughts (Figley, 1995). Bride (2004) performed a literature review on STS in professionals who provide psychological support to traumatised populations. All included studies found presence of mild STS symptoms, which were correlated with exposure to hearing the client's trauma. Meldrum, King and Spooner (2002) found relatively high levels of STS in community mental health professionals. Staff with STS have higher rates of personal distress and are at greater risk of making poor judgements at work (Collins, 2003).

However, the question of whether STS is a separate construct from burnout is debated in the literature (e.g. Korczak, Huber & Kister, 2010; Sabin-Farrell & Turpin, 2003). For example, Devilly, Wright and Varker (2009) found that STS and burnout were highly convergent constructs and that only burnout held construct validity. This area of research needs clarification (Ting, Jacobson, Sanders, Bride & Harrington, 2005).

2.1.3 Sickness Absence

An association has been found between emotional exhaustion at work and physical health (Puig et al., 2012). This may contribute to healthcare professionals with high burnout being more likely to report higher sickness absence (Peterson et al., 2008). However, Onyett et al. (1997) found that sick

leave was not associated with burnout in mental health professionals. This inconsistency in the literature requires further investigation as sickness absence may highlight a concern for employees' physical and mental wellbeing and may affect organisational productivity (Libet et al., 2001).

2.1.4 Predictors of Burnout and STS

Numerous studies have aimed to identify predictors of burnout and STS in a range of mental health professional populations. In attempting to explain the concept of burnout, Karasek (1979) and later Johnson and Hall (1988) posited the job demand theory. This states that high demands in the workplace met with low support and low control can lead to poor worker outcomes. Therefore, both organisational and individual factors have unsurprisingly been found to influence levels of burnout and STS (e.g. Bride, 2004; Paris & Hoge, 2010). Recent literature has also explored the predictive value of Acceptance and Commitment Therapy (ACT) variables in explaining burnout and STS, and some support has been found (e.g. Hayes, Bissett, et al., 2004). These predictors will be discussed in turn.

Organisational Factors

Onyett (2011) identified organisational support, good leadership, supervision and management as protective factors for burnout in mental health professionals. Qualitative studies have identified that a negative culture and insufficient support at work may create stress and emotional exhaustion in this population (Reid et al., 1999; Taylor & Barling, 2004). Johnson et al. (2012) confirmed these findings and stressed the importance of examining these factors within the organisational changes in the NHS. In addition, Lasalvia et al. (2009) found perceived unfairness from supervisory staff to be predictive of burnout. These systemic factors require examination as they contribute to the context within which staff aim to meet their high job demands. Indeed, workplace support, the additional component in Johnson and Hall's (1988) model has been found to be an important correlate of burnout (e.g. Carney et al., 1993; Pedrini et al., 2009). In child and adolescent psychiatrists, Littlewood et al. (2003) found absence of supportive colleagues and inadequacy of resources to be associated with burnout. More specifically, efficient supervision is also associated with lower emotional exhaustion and

depersonalisation in mental health professionals (Hykas, 2005; Webster & Hackett, 1999).

Individual Factors

Exposure to own trauma and perceived stress levels.

McLean, Wade and Encel (2003) found that staff with a recent history of personal trauma reported a higher level of burnout (but not STS) than those with no recent exposure to trauma. However, in a literature review on STS, Bride (2004) concluded that exposure to trauma was indeed related to higher levels of STS symptoms. Experiencing at least one negative life event in the past year has also been found to be associated with burnout in community mental health professionals in Italy (Rossi et al., 2012). In addition, perceived stress levels and previous stressful life events have been found to predict both burnout (Kozak, Kersten, Schillmoller & Nienhaus, 2013) and STS (Collins, 2003). These studies suggest that both the perception of stress and actual exposure to traumatic events may be associated with burnout and STS.

Acceptance and commitment therapy (ACT) variables.

ACT posits that the non-judgemental moment-to-moment noticing and acceptance of negative thoughts and feelings enables one to live according to personal values (Hayes, 2004). In burnout, ruminating over negative thoughts and feelings about work may prevent an employee from engaging with their value set, perhaps causing emotional exhaustion and an emotional distancing from their clients (Brinkborg, Michanek, Hesser & Bergland, 2011). In this situation, ACT would propose noticing these thoughts and behaviours but acting consistently or in line with personal values despite this. The ACT variables (experiential avoidance, cognitive fusion and valued living) and their association with burnout and STS will each be discussed.

Experiential avoidance.

Experiential avoidance is defined as an unwillingness to remain in contact with private experiences, such as thoughts or bodily sensations (Hayes, 2004). Such avoidance-related coping strategies have been found to be a predictor of emotional exhaustion (Stalker, Mandell, Frensch, Harvey & Wright, 2007; Vilardaga et al., 2011). Brinkborg et al. (2011) trialled an ACT

intervention for stress management in social workers in Sweden, and reported a moderate effect size of the intervention on burnout. They found that a reduction in experiential avoidance was significantly correlated with a reduction in burnout (Brinkborg et al., 2011).

In addition, McLean et al. (2003) found that actively avoiding strong emotions was a predictor of STS. The literature on STS and experiential avoidance is sparse. However, given the overlap in symptomatology with STS (Figley, 1995), much may be borrowed from the research on experiential avoidance and Post Traumatic Stress Disorder (PTSD). For example, the willingness to experience thoughts, memories and bodily sensations has been found to account for a significant percentage of variance in PTSD symptomatology (e.g. Vujanovic, Youngwirth, Johnson & Zvolensky, 2008). Further, mindfulness (non-judgemental awareness of private experiences) has been found to significantly reduce PTSD symptomatology in veterans (Owens, Walter, Chard & Davis, 2012). As the criteria for STS is identical to PTSD in all except the nature of the trauma (Figley, 1995), it may tentatively follow that being less experientially avoidant may predict a reduction in STS symptomatology.

Cognitive fusion.

Cognitive fusion is described as the extent to which a person believes the content of their thoughts, and the intensity to which they are impacted by them (Hayes, 2004). McLean et al. (2003) found that beliefs regarding avoidance of emotions predicted both STS and burnout. Furthermore, cognitive fusion was found to be independently related to each of the three facets of burnout (Vilardaga et al., 2011). In particular, high cognitive fusion was most strongly related to low personal accomplishment. Furthermore, Bethay, Wilson, Schnetzer, Nassar and Bordieri (2013) found that the extent to which one believed in burnout related thoughts such as 'working with people all day is a real strain' reduced over the course of an ACT intervention, suggesting a reduction in cognitive fusion.

One symptom of STS is intrusive thoughts about trauma (Figley, 1995). Therefore, if someone is highly cognitively fused then these thoughts may have a significant impact on the individual (Hayes, 2004) and they may be more

likely to develop STS. As a relatively new concept, the empirical study on the association between cognitive fusion and STS is sparse.

Valued living.

Valued living is the ACT variable which measures the extent to which one values a given life domain and how committed one is to living accordingly (Hayes, 2004). A lack of commitment to work-related values has been found to be an independent predictor of all burnout dimensions (Vilardaga et al., 2011). Furthermore, Vassos and Nankervis (2012) found that when staff values were incongruent with the organisations values, this predicted burnout in disability support workers.

Valued living and the relationship to STS has not been well studied and requires further research. However, Orsillo and Batten (2005) suggest that ACT specifically targets avoidance of private experiences in people with PTSD in order to increase one's quality of life. Given that one of the main symptoms of both PTSD and STS is experiential avoidance, it is likely that an association exists between valued living and STS. This is tentative however, and requires further study.

There is tentative evidence to suggest that these ACT variables may be associated with burnout and STS, and may offer a theoretical framework by which the mechanisms of both concepts can be explained.

Demographic factors.

A number of demographic factors have been found to influence levels of burnout and STS in mental health professionals; such as staff grade (Johnson et al., 2012), profession (Priebe, Fakhoury, Hoffman & Powell, 2005), longer working hours (Lim, Kim, Kim, Yang & Min Lee, 2010) and gender (Kozak et al., 2013; Rossi et al., 2012); notably where being female is associated with higher levels of burnout. The research regarding the effect of tenure on burnout is inconsistent (Devilly et al., 2009; Rossi et al., 2012).

2.1.5 Rationale of the Current Study

CAMHS staff are seen to be a neglected population in the study of burnout and STS in mental health staff (Lizano & Mor Barak, 2012; McLean et

al., 2003). Much of the research has been conducted with staff working with adult populations outside of the NHS. Onyett (2011) stated that burnout is often specific to the context in which staff work, highlighting the necessity to examine the rates and predictors of burnout in different populations. There is some evidence to suggest that CAMHS staff may be somewhat protected from burnout although it is uncertain why this may be the case; and this requires further investigation (Johnson et al., 2012).

There is inconsistency in the literature on the relationship between burnout and STS (Devilly et al., 2009; Korczak et al., 2010). Furthermore, Ting et al. (2005) recommend that future research should aim to discriminate between STS and other related constructs. This may inform the literature of the processes involved in each construct (Collins, 2003).

Identifying both organisational and individual factors that may predict burnout and STS in a CAMHS population may aid development of preventative measures and interventions for each outcome. In addition, investigating the relationship that sickness absence has with each predictor and outcome has implications for the physical health of staff and human resources within mental health services.

2.1.6 Research Question

This research has investigated the rates of burnout, STS and sickness absence in a CAMHS staff population. Specifically, the relationships between burnout, STS and sickness absence were investigated. Potential predictors (both individual and organisational) of burnout and STS were investigated to identify whether these variables independently predicted burnout, STS and sickness absence. Specifically, ACT variables were investigated as potential predictors of burnout and STS in order to contribute to the growing literature in this area.

Hypotheses

1) It was predicted that a significant association would exist between burnout, STS and number of days of sick leave taken.

2) It was predicted that high levels of perceived stress, low perceived organisational support, high cognitive fusion, low levels of living according to

personal values and high levels of experiential avoidance would be significantly associated with high levels of emotional exhaustion and depersonalisation, and low levels of personal accomplishment.

3) It was predicted that high levels of exposure to own trauma, high cognitive fusion, low levels of living according to personal values and high levels of experiential avoidance would be significantly associated with high levels of STS.

2.2 Method

2.2.1 Design

A cross-sectional questionnaire design with a convenience sample was used.

2.2.2 Participants

Managers in four NHS trust CAMHS services were contacted, informed about the study aims and asked whether they would invite their staff to participate in the study. Two CAMHS services declined to take part due to time commitments and their own audits being conducted. Two CAMHS service managers agreed to invite their teams to take part. An email with a link to an online set of questionnaires was then sent to the manager to forward to all health and social care staff who have clinical contact with clients aged 0-18 years. Participants were also recruited via an online professional child psychology network using a study poster (see Appendix A). It contained a link to the questionnaire and specified that participants must work with children experiencing mental health difficulties.

Participants were recruited between October 2013 and February 2014. Similarly structured studies have achieved between 20.7% and 83% response rates (Pedrini et al., 2009; Sochos & Bowers, 2012). There was a total of 157 CAMHS staff within the trusts and 23 registered users in the child psychology network creating a total of 180 staff members contacted to take part.

The minimum sample size required for multiple regression analyses with five predictors, the maximum number of predictors per hypothesis, was

calculated using G power (Faul, Erdfelder, Buchner & Lang, 2009) to be 77 with 0.8 power, 5% significance and an effect size of r2 = 0.18 (Ogresta et al., 2008). Eighty participants (66 female, 12 male), completed a minimum of one page of questions, relating to one variable on the questionnaire. A further two participants completed less than one page of questions and these data sets were excluded from the analysis. The majority of participants worked in a tier three service, between 30-37.5 hours per week and had worked in the organisation for less than five years. A range of ages were represented, with 43.75% of participants aged 26-35. Demographic information can be seen in table 4. The total response rate was 44.44%.

Table 4 *Demographic Characteristics*

	N	Frequency (%)
Gender		
Male	66	84.6
Female	12	15.40
Age		
16-25	4	5
26-35	35	43.75
36-45	15	18.75
46-55	14	17.95
56-65	12	15.38
66+	0	0
Tier		
1	0	0
2	10	12.5
3	61	76.25
4	9	11.25
Hours Worked		
< 7.5	1	1.25
7.5 - 15	1	1.25
15 - 22.5	11	13.75
22.5 - 30	15	18.75
30 - 37.5	41	51.25
37.5 +	11	13.75
Length of time in organisation		
< 1 year	24	30
1 - 5 years	28	35
6 - 10 years	9	11.25
11 - 15 years	10	12.5

	N	Frequency (%)
16 - 20 years	4	5
+20 years	5	6.25
Supervision		
Yes	76	95
No	4	5
Employer		
Health	74	92.5
Social Care	6	7.5
Profession		
Clinical Psychologist	21	26.25
Social Worker	9	11.25
Mental Health Nurse	16	20
Community Therapist	6	7.5
Psychotherapist	2	2.5
Art Psychotherapist	2	2.5
Trainee Clinical Psychologist	6	7.5
Family Therapist	2	2.5
Psychiatrist	7	8.75
Support Worker	2	2.5
Counselor	2	2.5
Assistant Psychologist	2	2.5
Occupational Therapist	2	2.5

2.2.3 Materials

All variables were measured using questionnaires. The three criterion variables were burnout, STS and sickness absence (number of days off sick in the last year). There were six predictor variables in total (5 to predict burnout and 4 to predict STS, with overlap).

Demographic Information

Demographic information (see Appendix B) collected included age, gender, tier, profession, hours worked, length of employment, whether health or social care worker, and number of days sickness absence over the last year. Access to clinical supervision was assessed by stating the Department of Health (1993) definition 'a process in which practice is supported and challenged through discussion and reflection with a trained supervisor, promoting safe and effective delivery of care.' Participants answered yes or no to the question 'Do you currently have access to supervision?'.

Burnout

The Maslach Burnout Inventory - Human Services Survey (MBI 3rd edition: Maslach et al., 1996) was used. This is a development from the original scale and was designed to measure burnout in employees of the helping professions. It measures three dimensions of burnout: depersonalisation, emotional exhaustion and reduced personal accomplishment, using a 22-item seven-point Likert scale to yield three subscale burnout scores. It asks respondents questions related to how often (0 = never, 6 = everyday) they have certain feelings about their job and their 'recipients,' i.e. those with whom they work closely. High scores on the emotional exhaustion and depersonalisation subscales and low scores on personal accomplishment indicate high levels of burnout. It has a good factor structure, validity and internal reliability (Cronbach's alpha, α: .90 for emotional exhaustion, .79 for depersonalisation, .71 for personal accomplishment). It is widely used as a measure of burnout in mental health professionals (Onyett et al., 1997). Categories of high, average and low burnout scores for each subscale and norms for mental health professionals are available for comparison (Maslach et al., 1996).

Secondary Traumatic Stress

The Secondary Traumatic Stress Scale (STSS; Bride, Robinson, Yegidis & Figley, 2004) is a 17-item measure of intrusion, avoidance and arousal symptoms related to working with traumatised clients. The STSS was developed to be consistent with Figley's (1995) definition of STS. It was designed to reflect the DSM-IV criteria for PTSD with 'client exposure' as the traumatic event to which the professional responds (Bride, Radey & Figley, 2007). Respondents are asked to rate how true each statement was for them in the last week on a five-point Likert scale (1 = never, 5 = very often). In a sample of social workers, Bride et al. (2004) found evidence for a three factor structure of the STSS: intrusion, avoidance and arousal. However, Ting et al. (2005) investigated the psychometric properties of the STSS in a sample of social workers and found each factor to be highly correlated. They proposed that STS is a unidimensional construct and hence best explained by a single factor model. Due to these inconsistencies in the literature, the STSS total score, rather than subscale scores will be analysed. Total scores range between 17 and 74. Bride (2007) provides symptom severity categories (see table 5) and recommends a clinical cut-off total score of 38, with a sensitivity of .93 and specificity of .91 when comparing to PTSD diagnostic criteria. Cronbach's alpha ($\alpha = .93$) indicated very good internal reliability; and convergent and discriminant validity are supported (Bride et al., 2004). The STSS has been widely used within research investigating stress in mental health teams (e.g. Devilly et al., 2009).

Table 5 *Clinical ranges for Secondary Traumatic Stress Scale (STSS) scores (Bride, 2007)*

Total score	STS symptom severity
< 28	Little/no
28 – 37	Mild
38 – 43	Moderate
44 – 48	High
≥ 49	Severe

Perceived Organisational Support

The 8-item Survey of Perceived Organisational Support (SPOS-8) is a shortened version of the 36-item scale (Eisenberger et al., 1986). Participants use a seven-point Likert-scale to indicate how much they agree with a statement related to the organisation's view of the individual's contribution and care about their wellbeing (0 = strongly disagree, 6 = strongly agree). This generates a possible total score of 48, with a higher score indicating higher support. The original SPOS was found to have unidimensionality as a measure of perceived organisational support, good construct validity and internal reliability (α = .95: Shore & Tetrick, 1991). The eight items for the shortened version were chosen as they load highly to the original 36 items and the SPOS-8 was shown to have high internal reliability (Rhoades & Eisenberger, 2002). The theory of perceived organisational support is the only recognised and empirically studied model of organisational support to be well defined, tested and validated in a number of studies (Rhoades & Eisenberger, 2002; Lynch, Eisenberger & Armeli, 1999).

Perceived Stress

The Perceived Stress Scale (PSS-10: Cohen & Williamson, 1988) is a 10-item five-point Likert scale measuring one's appraisal of stress. Participants rate how often they perceive thoughts and feelings to be unpredictable or uncontrollable in their life (0 = never, 5 = very often). It was designed to follow Lazarus and Folkman's (1984) theory of stress, suggesting that one's appraisals about the ability to cope with demands influence the psychological stress response. The PSS-10 yields a possible total score of 40 with higher scores indicating higher perceived stress. It has been found to have convergent and divergent validity and internal reliability (α = .89: Cohen & Williamson, 1988). The PSS-10 was used in the study of burnout in social workers, with Cronbach's reliability of .85 (Brinkborg et al., 2011). The PSS-10 has item invariance to sex, race and education meaning that it can be used across different populations (Cole, 1999).

Exposure to Personal Trauma

The Life Events Checklist (LEC: Blake et al., 1995) is a 17-item measure of exposure to potentially traumatic events, scored as present (1) or absent (0),

yielding a possible total score of 17. Participants state whether they have experienced or witnessed the event ('experienced' or 'witnessed' subscales) or whether it does not apply to them. Gray, Litz, Hsu and Lombardo (2004) found good internal reliability (α = .91), test-retest reliability (α = .74) and it correlates highly with measures of PTSD symptomology. Life events within this scale will be referred to as 'traumas' in subsequent sections.

Experiential Avoidance

The Acceptance and Action Questionnaire (AAQ-2; Hayes, Strosahl, et al., 2004) measures experiential avoidance, acceptance and action using a 10-item Likert scale (1 = never true; 7 = always true). Total scores are calculated and high scores (20-70) are indicative of high psychological flexibility. Low scores indicate higher rates of experiential avoidance. It shows good test-retest reliability, internal consistency (α = .84) and good construct validity and discriminant validity (Bond et al., 2011). The AAQ-2 has been used in ACT stress management intervention studies (Flaxman & Bond, 2010).

Cognitive Fusion

The Cognitive Fusion Questionnaire (CFQ13: Gillanders, 2014) is a 13-item Likert scale. Respondents are asked to rate the truth of a list of statements relating to how much they believe in and are impacted by intrusive thoughts (1 = never true, 7 = always true). The sum of scores provides a total fusion score, where higher scores indicate higher cognitive fusion. It shows good test-retest reliability and internal reliability (α = .86) and whilst it is not widely used it is one of the only standardised measures of cognitive fusion (Gillanders, 2014).

Valued Living

The Valued Living Questionnaire (VLQ: Wilson, Sandoz, Kitchens & Roberts, 2010) rates 10 areas of life according to importance and consistency on a 10 point Likert scale (1 = not at all important, 10 = extremely important). A composite score is derived from the product of the importance and consistency scores, indicating the extent to which they are living according to personal values. Internal consistency of the composite score (α = .65) and test-retest reliability for the composite score (α = .75) was high (Wilson et al., 2010). Validity was supported but not strong, suggesting that conclusions

drawn from this measure should be tentative (Wilson et al., 2010). For the purpose of this study, only the work item was relevant and hence this was the only question included. There is a lack of other standardised measures of the value employees place on their work and the consistency with which they live by them, hence the need for this adaptation.

2.2.4 Procedure

Participants received an email from their service manager, or via an online child psychology network, inviting them to participate in the study online by clicking on a link. The email contained brief information about the study (see Appendix C). At the beginning of the questionnaire, a participant information sheet informed the participants of the purpose and nature of the study (see Appendix D). A consent form was then presented, requiring a box to be clicked indicating consent (see Appendix E). The information sheet also stated that, if they wanted, the participant could be entered into a prize draw to win one of three £50 high street vouchers. Participants were asked to type their email address into the survey when prompted if they wished to be involved and were explicitly assured that this would be kept, in confidence, separate from their questionnaire data. Each questionnaire was then presented for completion followed by a debrief sheet (see Appendix F). Following staff's receipt of the email, the experimenter visited staff team meetings to advertise and provide information on the nature and procedure of the study. This was to encourage more staff to participate. Once all data were collected, the three winning participants were emailed to inform them of their prize winnings.

2.2.5 Ethical Considerations

Ethical approval was gained from the Southampton University School of Psychology Ethics Committee and Research Governance (see Appendix G), and both NHS trust Research and Development teams, using the Integrated Research Application System (see Appendices H and I). A participant information sheet and consent form explained the nature of the study and the right to withdraw at any time without affecting employment. Participants were informed that their data would be transferred to a password protected electronic database accessed only by the researcher and would be anonymous. They were informed that their data would be held separately from their email

address (if given). Contact details of the researcher were provided on the information and debrief sheets. A debrief statement gave information of the reason for the study and advice to contact their GP, occupational health or a clinical psychologist in the team in which they work, should they suffer distress following completion.

2.2.6 Data Analysis

Data analysis was conducted using SPSS version 21. Pearson correlations were conducted to investigate hypothesis one. Pearson correlations and hierarchical multiple regression models were used to investigate hypotheses two and three. Although conservative, a Bonferroni correction was used to control for type 1 errors (Coolican, 2009) and a significance level of 0.01 for a maximum of four predictors per regression was required for significance.

2.3 Results

2.3.1 Data Preparation

Descriptive statistics for each variable are shown in Table 6. Less than five percent of the data were missing. Missing data were therefore replaced with the respondent's mean for the corresponding subscale as suggested by Tabachnick and Fidell (2007). Cases were excluded pairwise for demographic variables where missing data could not be replaced. Total and subscale scores for each scale were calculated.

All variables were independent and all criterion and predictor variables created interval data. Normal distribution for criterion variables was investigated using histograms and the Shapiro-Wilk test of skewness and kurtosis. Emotional exhaustion (EE), personal accomplishment (PA) and the secondary traumatic stress scale (STSS) were normally distributed. Depersonalisation (DP) was positively skewed, $W(80) = .812$, $p < 0.000$, skewness ($z = 6.23$) and kurtosis ($z = 5.6$). This is consistent with the literature, for example with a floor effect found for the depersonalisation subscale in Wood et al. (2011). Bootstrapping was therefore employed in further statistical analysis.

Number of days of sick leave was identified via a histogram as having a large floor effect of 'no sickness absence,' $W(80) = .339$, $p < 0.000$, skewness ($z = 26.21$) and kurtosis ($z = 106.11$). Sickness absence was therefore recoded to become a dichotomous variable where 0 = none to two sick days taken and 1 = more than three sick days taken. This enabled a point-biserial correlation to be used during analysis. This also allowed for an outlier of 80 days of sickness to be part of the data set.

Normal distribution for predictor variables was investigated using histograms and the Shapiro-Wilk test of skewness and kurtosis. The SPOS, PSS, AAQ2, CFQ and VLQ scales were all normally distributed. The LEC (experienced), $W(142) = .861$, $p < 0.000$, skewness ($z = 4.99$) and kurtosis ($z = 4.20$) and LEC (witnessed), $W(80) = .773$, $p < 0.000$, skewness ($z = 6.48$) and kurtosis ($z = 6.06$) were positively skewed. Both LEC subscales were recoded into dummy variables because of a floor effect. For both experienced and witnessed subscales separately, 'some' exposure indicates between one and three traumas experienced/witnessed and 'high' exposure indicates more than four traumas experienced/witnessed against a reference group of no trauma experienced or witnessed. Homogeniety of variance was assessed and verified using Levene's test and ZRESID and ZPRED plots for regression.

In order for demographic variables to be analysed using correlations and regressions, each categorical and non-dichotomous variable (age, tier, hours worked and tenure) was recoded into dummy variables. It was not judged not to be meaningful to do this for profession as 13 different professions were represented.

2.3.2 Descriptive Statistics

Burnout

Mean EE scores ($M = 20.94$, $SD = 10.38$), were higher than mental health professional norms ($M = 16.89$, $SD = 8.90$) and are categorised as just within the average level of experienced burnout for mental health professionals (high EE ≥ 21: Maslach et al., 1996). Mean DP scores ($M = 3.3$, $SD = 3.7$) were lower than mental health professional norms ($M = 5.72$, $SD = 4.62$) and are categorised in the low range of burnout (Maslach et al., 1996). Mean PA scores

(M = 39.14, SD = 5.16) are in the low range, though higher than mental health professional norms (Maslach et al., 1996).

Males experienced a high rate of EE (M = 21.25, SD = 12.12) and females experienced an average rate (M = 20.40, SD = 9.93). An independent t-test found this difference to be non-significant, $t(76) = .20$, $p > 0.05$, $r = .02$, 2-tailed. Males experienced an average rate of DP (M = 5.42, SD = 5.98) with females experiencing a low range (M = 2.94, SD = 3.13). An independent t-test found this difference in means to be non-significant: $t(76) = 1.40$, $p > 0.05$, $r = .16$, 2-tailed.

Staff working in higher tiers experienced higher rates of EE (tier 2: M = 17, SD = 9.31; tier 3: M = 20.61, SD = 10.40; tier 4: M = 23.78, SD = 3.04). No effect of supervision on burnout rates was observed, although only four staff did not receive supervision, hence comparisons are not meaningful. Similarly, only six staff worked for social care, hence comparisons between employers were also not meaningful. There was an interesting effect of hours worked on EE with average EE for 15-22.5 hours worked (M = 15.45, SD = 7.13) and 30-37.5 hours worked (M = 20.02, SD = 1.5) and high EE for 22.5-30 hours worked (M = 22.14, SD = 9.77) and ≥ 37.5 hours worked (M = 25.50, SD = 14.08). There were no notable effects of tenure on burnout rates. Due to the large number of professional groups that took part in this study, it was not meaningful to examine effect of profession on burnout rates.

Secondary Traumatic Stress

Mean total STSS scores (M = 33.43, SD = 8.42) were in the 'mild' range and below the clinical cut-off (Bride, 2007). This was comparable to that reported for mental health social workers by Ting et al. (2005) with a mean total STSS score of 33.30. However, 26 participants (33%) scored above the clinical cut-off with 18 people scoring in the moderate range, four in the high and four in the severe range (Bride, 2007) which is a concerning proportion of the sample.

STSS scores were comparable between genders. There was a trend for higher STSS scores for staff working in higher tiers (tier 2: M = 30.5, SD = 7.93; tier 3: M = 33.63, SD = 8.8, tier 4: M = 34.44, SD = 6.09). There were no

notable differences in STSS scores for hours worked, tenure, supervision or employer.

Sickness Absence

Mean reported sickness absence was 2.81 days in the past year (SD = 9.39). These sickness absence rates were lower than those reported in Onyett et al. (1997) who found a mean sickness absence rate of 3.4 days in the past six months.

Predictor Variables

Perceived organisational support.

No norms for perceived organisational support exist for mental health professionals, making meaningful comparisons with other studied populations difficult. In the current sample, total mean scores were 27.69, out of a total support score of 48. There was a high level of variation in perceived organisational support (SD = 10.87).

Perceived stress.

Perceived stress levels (M = 16.38, SD = 6.03) were lower than the normative sample (M = 23 for females and 22.8 for males: Cole, 1999). Scores were also lower than for a sample of social workers in a study of burnout (Brinkborg et al., 2011), where mean PSS scores were 27.6 (SD = 7.2) prior to an ACT intervention and 22.2 (SD = 7.5) post intervention. No clinical cut-off scores were found for this measure.

Exposure to personal trauma.

Before coding into dummy variables, the mean number of direct experiences of trauma was 2.26 (SD = 2.28) and the mean number of traumas witnessed was 1.64 (SD = 2.08). Following coding into dummy variables, 39 participants were understood to have directly experienced ‘some’ trauma and 19 had experienced high rates of trauma. Thirty-six participants had witnessed ‘some’ trauma and 12 had witnessed high rates of trauma.

Experiential avoidance.

AAQ2 scores (M = 53.78, SD = 8.41) were comparable to a university student and community sample (M = 50.72), indicating similar psychological flexibility scores compared with the general population. No mental health professional population norms were found for this measure.

Cognitive fusion.

Mean scores on the CFQ (M = 37.76, SD = 10.47) were comparable to a non-clinical sample (M = 40.2, SD = 11.04) and scores were considerably lower than for a work stress sample (M = 47.3, SD = 12.3) as reported in Gillanders (2014).

Valued living.

The mean VLQ composite score was 63.84 (SD = 17.62). This was higher than the work domain in the VLQ validation paper (M = 45.5, SD = 36.5; Wilson et al., 2010) indicating higher rates of living according to personal values.

Table 6 *Descriptive Statistics and Psychometric Properties of Major Study Variables*

Variable	n	*M*	SD	Mdn	α	Range	
						Min	Max
MBI							
Emotional Exhaustion	80	20.94	10.38	19	.90	1	46
Depersonalisation	80	3.3	3.70	0	.67	0	18
Personal Accomplishment	80	39.14	5.16	39	.62	28	48
STSS total	79	33.43	8.42	33	.73	17	53
Sickness absence	80	2.81	9.39	2	-	0	80
SPOS	80	27.69	10.87	27	.90	3	48
PSS	80	16.38	6.03	16.5	.85	3	32
LEC							
Experienced	80	2.26	2.28	2	.72	0	11
Witnessed	80	1.64	2.08	1	.74	0	10
AAQ2	80	53.78	8.41	54	.83	29	68
CFQ	80	37.76	10.47	36.5	.87	17	60
VLQ	79	63.84	17.62	64	.37	24	100

2.3.3 Reliability

Internal reliability was assessed using Cronbach's alpha for each study variable total scale and subscales. All dependent variables showed at least adequate consistency as indicated in Table 6. With the exception of the VLQ, all predictor variables showed at least adequate internal consistency. The VLQ is made up of only two questions, hence the low reliability score on this scale.

2.3.4 Correlations

The assumption of linearity was checked using scatter plots. This assumption was met.

Hypothesis 1: Relationship between Criterion Variables

Pearson correlations were computed to investigate the relationship between burnout dimensions, STSS and sickness absence (see table 7). Relationships between burnout dimensions were consistent with those reported in the literature (Maslach & Jackson, 1981). EE and DP subscales showed a significant, moderate, positive correlation, $r = .356$ $p < .01$ with a medium effect size and 12.67% of variance accounted for. EE and PA subscales were significantly, weakly and negatively correlated with a small effect size, $r = .277$ $p < .05$, accounting for 7.67% of variance. DP and PA were not significantly correlated, $r = -.077$ $p > .05$.

EE was significantly, positively and strongly correlated with total STSS scores with a large effect size, $r = .635$, $p < .01$, with 40.32% of variance accounted for. These relationships indicate that higher EE scores are related to higher STS. DP was significantly, positively and moderately correlated with total STSS scores with a small effect size, $r = .388$, $p < .01$, with 15.05% of variance accounted for. PA was not significantly correlated with total STSS scores, $r = -.274$, $p > .05$.

Further analyses using multiple regression with the enter method revealed that higher EE significantly predicted higher STSS scores (see table 8). In addition, higher STSS scores significantly predicted higher EE and DP scores (see table 9).

Table 7 *Pearson's Correlation Matrix for Criterion and Predictor Variables*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Emotional Exhaustion	-													
2. Depersonalisation	.356**	-												
3. Personal Accomplishment	-.277*	-.077	-											
4. Secondary Traumatic Stress	.635**	.388**	-.274	-										
5. Sick leave	.181	-.179	.076	.310**	-									
6.Perceived Organisational Support	-.594**	-.317**	.027	-.354**	-.121	-								
7. Personal Stress	.646**	.441**	-.269*	.607**	.196	-.341**	-							
Exposure to trauma														
8. Some exposure (experienced)	-.020	.102	.215	-.010	.180	-.033	.059	-						

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
9. High exposure (experienced)	-.040	.007	-.138	.080	.011	-.065	-.018	-.553**	-					
10. Some exposure (witnessed)	.101	-.071	-.066	.114	.050	.004	.017	.049	.149	-				
11. High exposure (witnessed)	-.109	.240*	-.044	.190	.047	-.064	.105	-.060	.337**	-.385**	-			
12. AAQ2	-.293**	-.252*	.339**	-.469**	-.197	.112	-.499**	.023	.123	-.110	-.074	-		
13. CFQ	.327**	.357**	-.238*	.447**	.168	-.118	.614**	-.054	-.103	.076	.086	-.768**	-	
14. VLQ	-.268*	-.289	.337**	-.072	.064	.109	-.265*	-.017	.167	.096	-.051	.063	-.151	-

Note: * p < .05 (2 tailed). ** p < .01 (2 tailed).

Table 8 *Multiple Regression Analyses to test the effect of burnout variables on secondary traumatic stress*

	B	SE	95% CI	β
Variable				
Constant	29.86	5.93	16.89-40.62	
Emotional Exhaustion	.45	.07	.32-.60	.55**
Depersonalisation	.41	.23	-.03-.90	.18
Personal Accomplishment	-.18	.14	-.43-.10	-.11

Note: CI = confidence interval. Total R^2 = .45, F(75) = 20.73***
** p < .01 *** p < .001

Table 9 *Multiple Regression Analyses to test the effect of secondary traumatic stress on burnout variables*

Variable	Model 1 B	95% CI	Model 2 B	95% CI	Model 3 B	95% CI
Constant	-5.37	-11.66-1.19	-2.29	-5.08-.59	44.98	40.56-48.98
STSS	.78	.59-.97	.17	.07-.26	-.28	-.30--.04
R^2	.41		.14		.08	
F	54.37***		12.84**		6.70*	

Note: CI = confidence interval. The DV for model 1 is emotional exhaustion. The DV for model 2 is depersonalisation. The DV for model 3 is personal accomplishment.
* p < .05. ** p < .01. *** p < .001

Sickness absence was not significantly correlated with any burnout dimension. However, sickness absence was significantly, positively and moderately correlated with total STSS scores with a medium effect size, r = .310, p < .01, with 9.61% variance accounted for.

Hypotheses 2 and 3: Predictors of Burnout, STS and Sickness Absence

Pearson correlations were computed to investigate the relationship between all demographic and major study variables (see table 7). Sickness absence was not significantly correlated with any predictor variables.

Perceived organisational support.

EE was significantly, negatively and strongly correlated, with a large effect size, with SPOS, $r = -.594$, $p < .01$, with 35.38% of variance accounted for. DP was significantly, negatively and moderately correlated, with a medium effect size, with SPOS, $r = -.317$, $p < .01$, accounting for 10.05% of variance. These relationships indicate that higher levels of perceived organisational support were associated with lower levels of EE and DP. PA was not significantly correlated with SPOS, $r = .027$, $p > .05$. Total STSS was significantly, negatively and moderately correlated, with a medium effect size, with SPOS, $r = -.354$, $p < .01$, accounting for 12.53% of variance. This relationship indicates that higher levels of perceived organisational support were associated with lower levels of STS.

Personal Stress levels.

EE was significantly, positively and strongly correlated, with a large effect size, with PSS, $r = -.646$, $p < .01$, accounting for 41.73% of variance. DP was significantly, positively and strongly correlated, with a medium effect size, with PSS, $r = -.441$, $p < .01$, accounting for 19.45% of variance. PA was significantly, negatively and weakly correlated with a small effect size, with PSS, $r = -.269$, $p < .05$, accounting for 7.24% of variance. Higher levels of personal stress were associated with higher levels of EE and DP and low levels of PA. Total STSS was significantly, positively and strongly correlated, with a large effect size, with PSS, $r = .607$, $p < .01$, accounting for 36.84% of variance. Higher levels of personal stress were associated with higher levels of STS.

Exposure to personal trauma.

DP was significantly, positively and weakly correlated, with a small effect size, with ‘some trauma witnessed’ against a reference group of no trauma witnessed, $r = .240$, $p < .05$, with 5.76% of variance accounted for. There were

no other significant correlations between burnout or STS and any level of exposure to or witness of a traumatic event (see table 7).

Experiential avoidance.

EE and DP were significantly, negatively and weakly correlated, with a small effect size, with AAQ2, $r = -.293$, $p < .01$, accounting for 8.58% of variance and $r = -.252$, $p < .05$, accounting for 6.35% of variance respectively. These relationships indicate that higher levels of psychological flexibility (low experiential avoidance) were associated with lower levels of EE and DP. PA was significantly, positively and moderately correlated with AAQ2, $r = .339$, $p < .01$, accounting for 11.49% of variance. Total STSS was significantly, negatively and strongly correlated, with a medium effect size, with AAQ2, $r = -.469$, $p < .001$, accounting for 22% of variance. This relationship indicates that higher levels of psychological flexibility are associated with lower levels of STS.

Cognitive fusion.

EE and DP were significantly, positively and moderately correlated, with a medium effect size, with CFQ, $r = .327$, $p < .01$, accounting for 10.69% of variance and $r = .357$, $p < .01$, accounting for 12.74% of variance respectively. PA was significantly, negatively and weakly correlated, with a small effect size, with CFQ, $r = -.238$, $p < .05$, accounting for 5.66% of variance. These relationships indicate that higher levels of cognitive fusion were associated with higher levels of EE and DP and lower levels of PA. Total STSS was significantly, negatively and strongly correlated, with a medium effect size, with CFQ, $r = .447$, $p < .01$, with 19.98% of variance accounted for. This relationship indicates that higher levels of cognitive fusion are associated with higher levels of STS.

Valued living.

EE was significantly, negatively and weakly correlated, with a small effect size, with VLQ, $r = -.268$, $p < .01$, accounting for 7.18% of variance. DP was significantly, negatively and weakly correlated with valued living, $r = -.289$, $p < .01$, accounting for 8.35% of variance. PA was significantly, positively and moderately correlated with valued living, with a medium effect size, $r = .337$, $p < .01$, accounting for 11.36% of variance. Total STSS was not significantly correlated with valued living.

2.3.5 Regressions

All assumptions required for regression analyses were met including homoscedasticity (investigated using histograms showing normality of the residuals). The results can therefore be generalised to the child and adolescent mental health professional population (Field, 2009). Four multiple linear regression models were employed, one for each dependent variable: emotional exhaustion, depersonalisation, personal accomplishment and STS. No regression model was tested with sickness absence as an outcome variable given the non-significance of correlations with any predictor variable. A data reduction technique was employed to decide which demographic and predictor variables to enter into the regression models. Predictor variables which were significantly correlated ($p < .01$) with each dependent variable were entered into that regression model, controlling for type 1 errors. For each regression, demographic variables were entered into the first block, as control variables. Predictor variables were entered into the second block. The Durbin-Watson test for each regression indicated that residual terms were independent.

Multicollinearity was investigated between variables. AAQ2 and CFQ scores were highly correlated ($r = .768$, $p < .000$). Tabachnick and Fidell (2007) state that multicollinearity is only of concern when $r > .9$, but comparisons between AAQ2 and CFQ variables should be interpreted with caution. A similar correlation of $r = .81$, $p < .001$ was also found in Gillanders (2014) and expected given that both are measuring a form of psychological flexibility (Hayes, Bissett, et al., 2004).

Hypotheses 2 and 3

Emotional exhaustion.

Perceived organisational support, perceived stress levels, experiential avoidance and cognitive fusion were all entered into the regression model using the enter method. No demographic variables were significantly correlated with EE; hence no variables were entered as controls. The overall regression model was significant, $F (75) = 24.36$, $p < .001$. The regression model suggested that lower rates of perceived organisational support and lower levels of perceived stress independently predicted higher rates of EE.

Neither experiential avoidance or cognitive fusion were significant predictors of EE (see table 10).

Depersonalisation.

Perceived organisational support, perceived stress levels and cognitive fusion were all entered into the regression model using the enter method. No demographic variables were significantly correlated with DP, hence no variables were entered as controls. The overall regression model was significant, $F(76) = 7.99$, $p < .001$. The regression model suggested that no variable independently predicted DP (see table 11).

Personal Accomplishment.

A hierarchical multiple regression model was used. The dummy variable 30-37.5 hours was entered into block one to act as a control as this variable was significantly correlated with PA ($r = -.303$, $p < .01$). Experiential avoidance and valued living were entered into block two. Both model one, $F(77) = 7.69$, $p < .01$ and model two, $F(75) = 7.80$, $p < .001$, were significant. The regression model suggested that experiential avoidance and valued living each independently predicted PA (see table 12).

Secondary traumatic stress.

Perceived organisational support, perceived stress levels, experiential avoidance and cognitive fusion were all entered into the regression model using the enter method. No demographic variables were significantly correlated with STS hence no variables were entered as controls. The overall regression model was significant, $F(74) = 13.38$, $p < .001$. The regression model suggested that only perceived stress levels independently predicted STS (see table 13).

Table 10 *Regression to test the effect of predictor variables on emotional exhaustion*

	B	SE	95% CI	β
Variable				
Constant	20.41	12.02	-3.54-44.36	
SPOS	-.41	.08	-.56--.25	-.43**
PSS	.88	.18	.53-1.24	.51**
AAQ	-.01	.15	-.31	-.01
CFQ	-.05	.13	-.31-.29	-.05

Note: CI = confidence interval. Total R^2 = .57, F(75) = 24.36,***
** p < .01 *** p < .001

Table 11 *Regression to test the effect of predictor variables on depersonalisation*

	B	SE	95% CI	β
Variable				
Constant	.26	2.00	-3.86-4.51	
SPOS	-.07	.04	-.14-.01	-.20
PSS	.17	.08	.00-.33	.27
CFQ	.06	.05	-.03-.15	.17

Note: CI = confidence interval. Total R^2 = .24, *F*(76) = 7.99***
* p < .05. ** p < .01 *** p < .001

Table 12 *Hierarchical multiple regression to test the effect of demographic and predictor variables on personal accomplishment*

	B	SE	95% CI	β
Variable				
Step 1 Demographic characteristics				
Constant	38.61	.91	36.88-40.18	
Hours worked 30-37.5	1.13	1.16	-1.29-3.55	-.30
Step 2 Demographic characteristics				
Constant	22.77	3.46	15.82-29.83	
Hours worked 30-37.5	.03	1.10	-2.4-2.57	-.16
AAQ2	.20	.06	.08-0.30	.31**
VLQ	.09	.03	.02-0.16	.25**

Note: CI = confidence interval. Total R^2 = .22 Step 1: R^2 = .01, $F(77)$ = .94***
Step 2: R^2 change = .15, $F(75)$ = .6.87***
** p < .01 *** p < .001

Table 13 *Regression to test the effect of predictor variables on secondary traumatic stress*

	B	SE	95% CI	β
Variable				
Constant	41.77	11.27	19.32-64.23	
SPOS	-.14	.07	-.29-.00	-.14
PSS	.61	.17	.28-.94	-.04**
AAQ	-.24	.14	-.52-.03	-.24
CFQ	-.03	.12	-.28-.21	.12

Note: CI = confidence interval. Total R^2 = .42, F(74) = 13.38***
** p < .01 *** p < .001

2.4 Discussion

The aim of this study was to investigate the prevalence and predictors of burnout, STS, and sickness absence in a CAMHS staff population.

2.4.1 Prevalence of Burnout, STS and Sickness Absence

Emotional exhaustion levels were found to be at the top end of the average range and were considerably higher than mental health professionals' normative data (Maslach et al., 1996). This is consistent with studies and reviews investigating the prevalence of burnout in community mental health teams (Johnson et al., 2012; Morse et al., 2012; Onyett, 2011), child and adolescent psychiatrists (Littlewood et al., 2003) and child and family social workers (Martin & Schinke, 1998). Depersonalisation levels were in the low range for females and high range for males and were lower than norms for a mental health worker population (Maslach et al., 1996). Gender differences found were consistent with MBI norms (Maslach et al., 1996) though were non-significant. Personal accomplishment levels were in the low range, indicating reduced personal accomplishment in this population, although higher than mental health professional norms (Maslach et al., 1996).

Mean STS scores were below the clinical cut-off (Bride, 2007) although worryingly 33% of the sample scored above this. Rates of STS were comparable to other mental health professional populations (Ting, Jacobson & Sanders, 2008) though lower than child and family social worker populations (Bride et al., 2007). Sickness absence rates were lower than reported in previous studies using a community mental health team sample (Onyett et al., 1997), though a large floor effect existed.

2.4.2 Hypothesis 1

The first hypothesis, that there would be a significant association between burnout, STS and sickness absence, was partly supported. A high correlation was found between STS and both emotional exhaustion and depersonalisation, though not high enough to suggest they are measuring the same variable (Field, 2009). Furthermore, less than half of the variance in the correlation between the emotional exhaustion and depersonalisation subscales

and STS was accounted for. This provides tentative evidence for STS and burnout as distinct constructs, which has been debated in the literature (Devilly et al., 2009; Korczak et al., 2010; Ting et al., 2005).

Regression analyses revealed that STS is independently predicted by emotional exhaustion. In addition, both emotional exhaustion and depersonalisation were independently predicted by STS.

This may be tentatively explained using the vulnerability-stress model (Ingram & Luxton, 2005), where being emotionally exhausted due to one's work makes one more vulnerable to experiencing STS. In addition, staff suffering symptoms of STS may be more likely to burn out. This has significant implications for organisations. For example, recognising and treating STS may reduce the likelihood of burnout in staff, and vice versa.

Sickness absence was not significantly associated with burnout, though it was significantly positively associated with STS. That is, higher STS symptoms were associated with more sickness absence. Addressing STS within staff may therefore reduce sickness absence.

2.4.3 Hypothesis 2

The second hypothesis, that high levels of perceived stress, low perceived organisational support, high cognitive fusion, low levels of living according to personal values, and low levels of psychological flexibility, would be significantly associated with high levels of emotional exhaustion and depersonalisation, and low levels of personal accomplishment, was partly supported. Perceived support and valued living were significantly associated with emotional exhaustion and depersonalisation but not personal accomplishment. Perceived stress, experiential avoidance and cognitive fusion were all significantly associated with all three burnout dimensions.

Regression analyses revealed that high emotional exhaustion was independently predicted by high levels of perceived stress and low perceived organisational support. Depersonalisation was not independently predicted by any variable. Low levels of personal accomplishment were independently predicted by high experiential avoidance and high levels of living according to one's values.

Perceived Stress and Emotional Exhaustion

The relationship between perceived stress and burnout is well documented in the literature on mental health professionals (e.g. Korczak et al., 2010). This may be explained by the vulnerability-stress model (Ingram & Luxton, 2005) where personal stress may lower one's capacity to manage work stress. Furthermore, Wood et al. (2011) investigated the job-demand-control-support model of occupational stress (Johnson & Hall, 1988) and its relationship with burnout in mental health professionals. They found that each component of the model was uniquely associated with emotional exhaustion. This suggests, therefore, that high demands and low control, along with lack of support to cope with stressors may lead to burnout. Lazarus and Folkman's (1984) model of stress suggests that appraisals of ability to cope with stressors will influence one's stress response, of which emotional exhaustion may be part.

Perceived Organisational Support and Emotional Exhaustion

Perceived organisational support is defined as the extent to which an employee feels valued by their employer and that their wellbeing is cared for (Eisenberger et al., 1986). The relationship found between perceived organisational support and emotional exhaustion supports both quantitative and qualitative findings in the literature (e.g. Reid et al., 1999; Taylor & Barling, 2004; Van Bogaert et al., 2013). Johnson and Hall (1988) suggest that support in the workplace is integral to employee wellbeing. A number of explanations may account for this process. For example, workplace support may help the employee process stressors, reduce uncertainty and increase a sense of self-worth (Miller et al., 1990), while supportive supervisors may reduce job demands (Luchman & Gonzalez-Morales, 2013).

Acceptance and Commitment Variables

All ACT variables were significantly, albeit not strongly, associated with emotional exhaustion and depersonalisation. This supports previous research. For example, Vilardaga et al. (2011) found a significant association between all three components of ACT and burnout in addiction counsellors, while Stalker et al. (2007) found that avoidance of emotions significantly predicted emotional exhaustion. However, the study of how ACT interventions mitigate

staff burnout has shown inconsistent findings (Bethay et al., 2013; Brinkborg et al., 2011).

However, as none of the ACT variables were independent predictors of emotional exhaustion or depersonalisation, it is important to consider that they may be less relevant in a CAMHS staff population. It is also important to consider that ACT does not primarily aim to reduce symptomatology and hence is more concerned with 'living according to values' despite the presence or absence of negative symptoms (Hayes, 2004). That is, staff may have burnout related thoughts but believe them to a lesser extent (Bethay et al., 2013).

Interestingly, low experiential avoidance and living according to personal values independently predicted high levels of personal accomplishment. Perhaps there is some satisfaction in one's work when being mindful and living according to values, irrespective of burnout or STS symptoms. This is a tentative explanation and would need to be explored in future research. It is interesting however, that high cognitive fusion did not predict reduced personal accomplishment, as this association has previously been found (Vilardaga et al., 2011).

2.4.4 Hypothesis 3

Finally, the hypothesis that high levels of exposure to own trauma, high cognitive fusion, low levels of living according to personal values, and low levels of psychological flexibility would be significantly associated with high levels of STS, was partly supported. Cognitive fusion, experiential avoidance, perceived support and personal stress were significantly associated with STS. Exposure to own trauma and valued living were not significantly associated with STS. Regression analyses revealed that the only independent predictor of STS was perceived stress.

Perceived Stress as a Predictor for STS

Explanations for the relationship between perceived stress and STS may be similar to those accounting for the relationship between perceived stress and emotional exhaustion, such as the vulnerability-stress model (Ingram & Luxton, 2005). The content of the STSS and PSS scales are sufficiently different to negate the assumption that both are measuring the same construct.

Although not predictors, strong associations existed between STS and experiential avoidance and cognitive fusion. McLean et al. (2003) found that actively avoiding strong emotions, and beliefs regarding this, were predictors of STS. Furthermore, this association is supported by the PTSD literature which has found that willingness to experience thoughts, memories and emotions is related to reduced PTSD symptoms. Given that the construct of STS is based on PTSD symptomatology (Figley, 1995), it is likely that the same processes are shared between disorders. It is important for further research to re-assess the association between STS, experiential avoidance and cognitive fusion, perhaps with a variety of measures, given that the AAQ2 and CFQ are relatively new.

The lack of a significant association between exposure to trauma and STS may be due to a lack of true relationship between these variables in this sample or a difficulty in measuring exposure to trauma. That is, a positive skew in the data exists due to the majority of participants having not experienced more than one trauma, many having not experienced any at all. However, the literature on this relationship suggests that a relationship does exist in some mental health professional samples (e.g. Bride et al., 2004).

2.4.5 Clinical Implications

Findings suggest that staff that experience emotional exhaustion may require support from their organisation and strategies to manage stress. This may be achieved via supervision. However, in the current study, presence/absence of supervision was not found to be associated with burnout. This may be due to the vast majority of participants having reported receiving supervision and a lack of meaningfulness of the measure. Some studies have begun to investigate the association between burnout and the effectiveness, rather than presence/absence, of supervision (Hykas, 2005; Webster & Hackett, 1999).

As a preventative strategy, it may be beneficial to educate staff about the symptoms of STS and burnout. This is particularly important given that 33% of participants had STS rates above the clinical cut-off (Bride, 2007). Awareness and early recognition of symptoms may enable staff to seek early support. This relatively cost-effective prevention strategy could involve a brief education session and availability of accessible information to staff in their work place.

Increasing perceived organisational support may reduce emotional exhaustion. This could be achieved by increasing supervisory support and having fair organisational procedures and job conditions (Rhoades & Eisenberger, 2002). Furthermore, increased communication between management and staff has been suggested to increase the supportiveness of the work environment (Carney et al., 1993; Van Bogaert et al., 2013).

ACT interventions may be beneficial to increase staff's perceived personal accomplishment. This study suggests that work around psychological flexibility and living according to one's values may be useful. Previous studies have found inconsistent usefulness of ACT interventions for burnout (Bethay et al., 2013; Brinkborg et al., 2011), hence the need for further research in this area. Given the findings of this study, this is clearly important for a child mental health worker population.

Stress management interventions may reduce the risk of staff developing STS. Rabin, Feldman and Kaplan (1999) provide a useful discussion of such interventions for mental health professionals. They suggest that organisations must be aware of a combination of stress reduction and stress management techniques for staff. Support groups for staff have been found to reduce stress (Heany et al., 1995), though such groups need to be evidence-based and theory-driven to be effective (Ritter et al., 1995). It may also be advantageous for staff with high perceived stress levels to avoid taking on traumatic cases given the increased risk of developing STS.

2.4.6 Strengths and Limitations

Although a strength of this study is the wide range of professions represented, both this and the relatively small sample size meant that professional group could not be meaningfully analysed individually. Furthermore, the use of the child psychology network to recruit participants biased the sample toward clinical psychologists. The small sample size was partly due to two NHS trusts having declined participation in the study. This may be reflective of the time pressures that staff are facing, which itself is shown to be related to burnout (Lasalvia et al., 2009).

The response rate was less than 50% showing that a significant proportion of staff did not participate in the study. It is possible that a

response bias may have existed. For example, respondents with higher burnout and STS levels may have completed measures based on being able to identify with the study (Bride, 2007). However, it is also possible that staff who were 'burnt out' may have perceived completing the study as an additional strain and therefore did not respond. This may affect the generalisability of the results.

In terms of outcome level limitations, it is important to recognise the impact of self-report questionnaires on common method variance (Podsakoff et al., 2003). For example, the negative affectivity bias may have influenced correlations where staff low in mood respond negatively to more than one questionnaire. However, measuring the perception of variables such as support and stress is of interest to this study, rather than objective receipt. Furthermore, it is important to state that although regressions provide proposed predictor variables, they do not necessarily imply causality (Tabachnick & Fidell, 2007). Therefore, explanations of findings must be treated with caution.

It is difficult to draw meaningful conclusions from the sickness absence findings, as the data had a floor effect and conversion to a binary variable was required.

2.4.7 Directions for Future Research

Future research with a larger sample of the same population would help to generalise the findings of this study. Also, it would be interesting to explore the differences in depersonalisation rates between mental health professionals working with different client groups. Consistencies in emotional exhaustion and STS rates and differences in depersonalisation rates may inform us about the similarities and differences between working with different populations. For example, staff that work with children may be less prone to depersonalisation. It is possible that the client group with whom one works has an impact on whether one experiences cynical feelings towards the clients. However, it is equally possible that people who choose to work with particular client groups may be less susceptible to depersonalisation. This area of research requires more in-depth study.

Further studies using ACT variables would also help to clarify the inconsistencies in the literature around which variables are related to burnout and STS. In addition, intervention studies would explore the usefulness of an ACT intervention for increasing personal accomplishment through psychological flexibility. This would contribute to the growing literature on ACT intervention studies on burnout (Bethay et al., 2013; Brinkborg et al., 2011). Intervention studies involving stress reduction and stress management and their impact on burnout and STS would also be of worth.

2.5 Conclusions

These findings contribute to the burnout and STS literature by providing prevalence rates for a child mental health professional population. Similar emotional exhaustion rates, lower depersonalisation rates and higher personal accomplishment rates were found when compared with studies of adult mental health workers. A worryingly high proportion of staff reported STS scores above the clinical cut-off, although sickness rates were relatively low. This study suggests that burnout and STS are distinct constructs with different predictors. Perceived stress, organisational support and ACT variables were all found to be predictors of burnout. Preventative and supportive interventions for CAMHS staff are recommended. It is promising to note that a recently published study on burnout in child and adolescent mental health staff in the United States staff found that transformational leadership accounted for a large proportion of variance in burnout (Green, Albanese, Shapiro & Aarons, 2014). The literature in this area appears to be growing, with a variety of organisational predictors being examined. It is important for CAMHS teams to remain the subject of empirical study on burnout and STS.

Appendices

Appendix A Study Poster

Win a £50 High Street Voucher!!

Do you work with children with mental health difficulties?

I am looking for people to take part in a psychology study.

The aim is to find out what factors contribute to burnout and secondary trauma in mental health professionals who work with children. This is so we can find out how to best support staff with the 'cost of caring'.

Whether you feel burnt out or not - please could you take 15 minutes to help out? There are 3 £50 High Street vouchers to be won!

Please follow this link to take part:

https://www.isurvey.soton.ac.uk/8448

For more information contact: mh33g11@soton.ac.uk

Appendix B Demographic Information

Please answer the following questions (please tick)

Male _____ Female ____

Age:

18 - 25_____ 26 - 32_____ 33 - 40____ 41 - 48____

49 - 56_____ 57 - 65_____ 66+ _____

Which tier do you currently work for? If you work for more than one tier, please tick the box which relates to the majority of your work.

Tier 1_____

Tier 2_____

Tier 3_____

Tier 4_____

How many hours do you work per week?

Under 7.5 _____

Up to 15 hours _____

Up to 22.5 hours _____

Up to 30 hours _____

Up to 37.5 hours _____

More than 37.5 hours _____

How long have you worked in your current service? _____

Less than a year _____

Under 7.5 _____

1 - 5 years _____

6 - 10 years _____

11 - 15 years _____

16 - 20 years _____

More than 20 years _____

Clinical Supervision

Clinical supervision is defined as 'a process in which practice is supported and challenged through discussion and reflection with a trained supervisor, promoting safe and effective delivery of care (Department of Health, 1993).

Do you currently have access to Clinical Supervision?

YES _____ NO_____

Do you currently work for health or social care?

Health_____ Social care _____

What is your profession? _____

How many days off sick have you taken during the past year? _____

Appendix C Email to Staff

Dear all

Would you like to win a £50 high street voucher?

I'm looking for CAMHS staff to take part in my Clinical Psychology doctoral research study on burnout and secondary trauma (the effect on staff of hearing client's traumatic experiences) in mental health professionals. The aim is to identify ways to protect staff from and support staff with the negative effects that can come with working with distressed children.

The online questionnaire takes about 15 minutes. If you're willing to take part, you have the choice of entering into a prize draw to win one of three £50 high street vouchers. Your chance of winning will be around 1 in 30.

Please follow this link to take part: https://www.isurvey.soton.ac.uk/8448

This study has gained ethical approval from the University of Southampton.

Thank you very much - and if you have any questions then please do get in touch.

Mary Halsey

Trainee Clinical Psychologist

University of Southampton

mh33g11@soton.ac.uk

Appendix D Participant Information Sheet

Participant Information Sheet. Version 4. 12/09/13

Study Title: Predictors of Burnout and Secondary Traumatic Stress in Child and Adolescent Mental Health Staff

Researcher: Mary Halsey Ethics number:5816

Please read this information carefully before deciding to take part in this research. If you are happy to participate you will be asked to tick a consent box.

What is the research about?

This research will form part of a Clinical Psychology doctoral thesis within the University of Southampton. I am interested in factors which affect burnout and secondary traumatic stress in staff who work in CAMHS settings. The questions are related to how your work with children impacts upon you as a practitioner. We wish to determine how best to prevent staff from experiencing distress when working with children with mental health problems, what staff are already doing to cope with the demands of this work, and how to best support staff that suffer distress as a consequence of their work.

Why have I been chosen?

All clinical staff that work with children with mental health problems across three NHS trusts are being asked to participate. Staff who work in CAMHS are also being contacted via professional online networks to take part.

What will happen to me if I take part?

This study is all online and will take approximately 15 minutes of your time. You will be asked to answer a series of questions.

Are there any benefits in my taking part?

If you decide to take part you have the option of being entered into a prize draw to win one of three high street vouchers of £50 each. If you wish to take part you will need to give your email address at the end of the study. This will

be kept separately to the answers to your questions so there will be no way of linking your email address to your answers.

Are there any risks involved?

Some questions ask about current stress levels and past traumatic events. You may find these distressing and if so you are advised to contact your GP, your Occupational Health department or a Clinical Psychologist in the team you work in. If you feel unable to answer a question you may skip the question and move to the next. You may also withdraw from the study at any time.

Will my participation be confidential?

All data will be transferred to a password protected electronic database accessed only by the researcher and will be anonymous. If you decide to give your email address for the prize draw this will be kept separately to all other data. This research complies with the Data Protection Act and University confidentiality policy. The researcher is not employed by the NHS trust.

What happens if I change my mind?

You have the right to withdraw at any time without your legal rights or employment being affected.

What happens if something goes wrong?

In the unlikely case of concern or complaint, you should contact Dr Martina Prude, Head of Research Governance (02380 595058, mad4@soton.ac.uk) or the Chair of the Ethics Committee, Psychology, University of Southampton, SO17 1BJ, UK. Phone: +44 (0)23 8059 4663, email slb1n10@soton.ac.uk

Where can I get more information?

If you would like to contact a member of the research team you may do so by emailing Mary Halsey on mh33g11@soton.ac.uk.

The results of this study will be communicated back to the staff teams involved, by way of a written report and verbal presentation.

Appendix E Consent Form

Study title: Predictors of Burnout and Secondary Traumatic Stress in Child and Adolescent Mental Health Staff

Researcher name: Mary Halsey

Study reference:

Ethics reference: 5816

Please click the boxes if you agree with the statement(s):

I have read and understood the information sheet (12.09.13/version 4)

I agree to take part in this research project and agree for my data to be used for the purpose of this study

I understand my participation is voluntary and I may withdraw at any time without my legal rights being affected

I understand that participation in the prize draw is optional. If I wish to partake in the prize draw then my email address will be kept separately from my data and therefore my data will remain anonymous

Data Protection

I understand that information collected about me during my participation in this study will be stored on a password protected computer and that this information will only be used for the purpose of this study. All files containing any personal data will be made anonymous.

Please click this box if you agree with this statement.

Appendix F Debrief Sheet

Participant Debrief Sheet version 4. 12/09/13

Study Title: Predictors of Burnout and Secondary Traumatic Stress in Child and Adolescent Mental Health Staff

Researcher: Mary Halsey Ethics number: 5816

Thank you for taking part in this research. We appreciate the time you have taken and the information you have given.

Prize draw

You have the option of being entered into a prize draw to win one of three high street vouchers of £50 each. If you wish to take part please enter your email address in the box below. The three winners will be contacted at the end of the study. Your email address will be stored separately to your questionnaire data and there will be no way of linking the two.

Please enter your email address _____

What to do if you are feeling distressed

Some of the questions you were asked may have left you feeling low or worried. These feelings will likely pass within a short space of time. In the event that you feel unduly distressed, you are advised to contact your GP, your Occupational Health department or a Clinical Psychologist in the team you work in.

Confidentiality

All data will be transferred to a password protected electronic database accessed only by the researcher and will be anonymous. If you have decided to give your email address for the prize draw this will be kept separately to all

other data. This research complies with the Data Protection Act and University confidentiality policy.

What happens if I have a concern?

In the unlikely case of concern or complaint, you should contact Dr Martina Prude, Head of Research Governance (02380 595058, mad4@soton.ac.uk) or the chair of the ethics committee, Psychology, University of Southampton, SO17 1BJ, UK. Phone: +44 (0)23 8059 4663, email slb1n10@soton.ac.uk

Where can I get more information?

If you would like to contact a member of the research team you may do so by emailing Mary Halsey on mh33g11@soton.ac.uk

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

Research Governance Feedback on your Ethics Submission (Ethics ID:7944)

ERGO [ergo@soton.ac.uk]

Actions

To:

Halsey M.

Thursday, October 24, 2013 1:35 PM

Submission Number 7944:

Submission Title Predictors of Burnout and Secondary Traumatic Stress in Child and Adolescent Mental Health Staff (Amendment 2):

The Research Governance Office has reviewed and approved your submission

You can begin your research unless you are still awaiting specific Health and Safety approval (e.g. for a Genetic or Biological Materials Risk Assessment) or external ethics review (e.g. NRES).The following comments have been made:

Submission ID : 7944

Submission Name: Predictors of Burnout and Secondary Traumatic Stress in Child and Adolescent Mental Health Staff (Amendment 2)

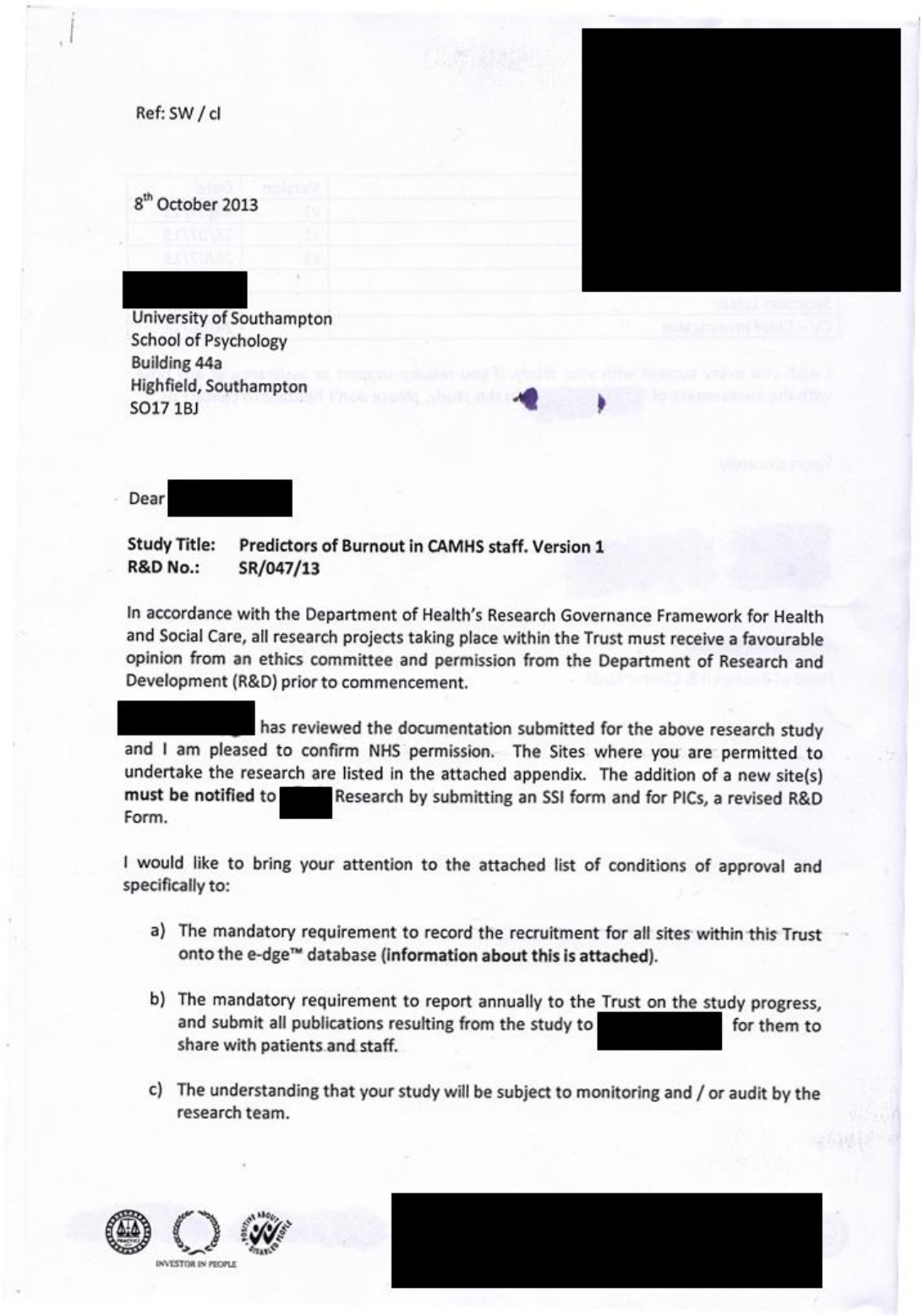
Date : 24 Oct 2013

Created by : Mary Halsey

ERGO : Ethics and Research Governance Online

http://www.ergo.soton.ac.uk

Appendix H NHS Trust Research and Development Team approval (1)



[redacted]

Ref: SW / cl

8th October 2013

[redacted]
University of Southampton
School of Psychology
Building 44a
Highfield, Southampton
SO17 1BJ

Dear [redacted]

Study Title: **Predictors of Burnout in CAMHS staff. Version 1**
R&D No.: **SR/047/13**

In accordance with the Department of Health's Research Governance Framework for Health and Social Care, all research projects taking place within the Trust must receive a favourable opinion from an ethics committee and permission from the Department of Research and Development (R&D) prior to commencement.

[redacted] has reviewed the documentation submitted for the above research study and I am pleased to confirm NHS permission. The Sites where you are permitted to undertake the research are listed in the attached appendix. The addition of a new site(s) **must be notified** to [redacted] Research by submitting an SSI form and for PICs, a revised R&D Form.

I would like to bring your attention to the attached list of conditions of approval and specifically to:

a) The mandatory requirement to record the recruitment for all sites within this Trust onto the e-dge™ database (**information about this is attached**).

b) The mandatory requirement to report annually to the Trust on the study progress, and submit all publications resulting from the study to [redacted] for them to share with patients and staff.

c) The understanding that your study will be subject to monitoring and / or audit by the research team.

INVESTOR IN PEOPLE

[redacted]

Appendix H

Documents Reviewed

Document	Version	Date
Protocol	v1	26/07/13
Participant Information Sheets	v1	26/07/13
Consent Forms	v1	26/07/13
Indemnity / Insurance		05/08/13
Sponsors Letter		06/09/13
CV – Chief Investigator		24/06/13

I wish you every success with your study. If you require support or assistance at any time with the involvement of [redacted] in this study, please don't hesitate to contact us.

Yours sincerely

[redacted]

Head of Research & Clinical Audit

[redacted]

Appendix I NHS Trust Research and Development Team approval (2)

26 November 2013

Dear xxx,

Predictors of Burnout and Secondary Traumatic Stress in Child and Adolescent Mental Health Staff

I am writing formally to confirm that the R&D Committee gave management permission ("R&D approval") to the above project on 22 November. We note that, under the harmonised Governance Arrangements for Research Ethics Committees (GAfREC), your research involves NHS staff recruited as research participants by virtue of their professional role and therefore does not require REC review.

One of the local governance checks relates to the issue of Honorary Research Contracts or Letters of Access where required. We note that you will also require "access to identifiable and/or anonymised staff data only" outside of our NHS facilities and therefore a Letter of Access will not be required.

This management permission is conditional upon the following:

- Submission of a progress report 12 months from today's date. Annual progress reports should be submitted thereafter until the end of the study. If the study has not started within 12 months of this management permission, you should give an explanation for the delay in the first progress report

- If you plan to extend the duration of the study beyond the period specified in your initial R&D application, you should notify the R&D Office in writing, giving reasons for the extra time needed to complete the research

Appendix I

 You should notify the R&D Office in writing of the conclusion or early termination of the study and send a summary of the final research report within 12 months of the end of the study. As a minimum, you should state whether the study achieved its objectives, the main findings, and arrangements for publication or dissemination of the research, including any feedback to participants

I wish you every success with your study.

Yours sincerely

xxxxx

Research Management and Governance Manager

List of References

Acker, G. M. (2003). Role conflict and ambiguity: Do they predict burnout among mental health service providers? *Social Work in Mental Health, 1*(3), 63-80. doi: 10.1300/J200v01n03_05

Acker, G. M. (2012). Burnout among mental health care providers. *Journal of social work, 12*(5), 475-490. doi: 10.1177/1468017310392418

Adali, E. A., Priami, M., Evagelou, H., Mougia, V., Ifanti, M., & Alevizopoulos, G. (2003). Burnout in psychiatric nursing personnel in Greek hospitals. *European Journal of Psychiatry, 17*(3), 173-181.

Aiken, L., & Patrician, P. (2000). Measuring organizational traits of hospitals: the revised nursing working index. *Nursing Research, 49,* 146-153. doi: 10.1097/00006199-2000050000-00006

Barak, M. E. M., Nissly, J. A., & Levin, A. (2001). Antecedents to retention and turnover among child welfare, social work, and other human service employees: What can we learn from past research? A review and metanalysis. *Social Service Review, 75*(4), 625-661. doi: 10.1086/323166

Barak, M. E. M., Travis, D. J., Pyun, H., & Xie, B. (2009). The impact of supervision on worker outcomes: a meta-analysis. *Social Service Review, 83*(1), 3-32. doi: 10.1086/599028

Bethay, J. S., Wilson, K. G., Schnetzer, L. W., Nassar, S. L., & Bordieri, M. J. (2013). A controlled pilot evaluation of Acceptance and Commitment Training for intellectual disability staff. *Mindfulness, 4,* 113-121. doi: 10.1007/s12671-012-0103-8

Bergers, G. P. J., Marcelissen, F. H. G., De Wolff, C. J. (1986). *Work Stress Questionnaire-Doetinchem. Manual (in Dutch).* Nijmegen University, the Netherlands.

Blake, D. D., Weathers, F. W., Nagy, L. M., Kaloupek, D. G., Gusman, F. D., Charney, D. S., & Keane, T. M. (1995). The development of a clinician-administered PTSD scale *Journal of Traumatic Stress, 8*, 75-90. doi: 10.1002/jts.2490080106

Bond, F. W., Hayes, S. C., Baer, R. A., Carpenter, K. M., Guenole, N., Orcutt, H. K., & Zettle, R. D. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire-II: A revised measure of

psychological inflexibility and experiential avoidance *Behavior Therapy, 42*(4), 676-688. doi: 10.1016/j.beth.2011.03.007

Bride, B. E. (2004). The impact of providing psychosocial services to traumatized populations. *Stress, Trauma, and Crisis: An International Journal, 7*(1), 29-46. doi: 10.1080/15434610490281101

Bride, B. E. (2007). Prevalence of secondary traumatic stress among Social Workers. *Social Work, 52*(1), 63-70. doi: 10.1093/sw/52.1.63

Bride, B. E., Radey, M., & Figley, C. R. (2007). Measuring Compassion Fatigue. *Clinical Social Work Journal, 35*(3), 155-163. doi: 10.1007/s10615-007-0091-7

Bride, B. E., Robinson, M. M., Yegidis, B., & Figley, C. R. (2004). Development and validation of the secondary traumatic stress scale. *Research on Social Work Practice, 14*(1), 27-35. doi: 10.1177/1049731503254106

Brinkborg, H., Michanek, J., Hesser, H., & Berglund, G. (2011). Acceptance and Commitment Therapy for the treatment of stress among social workers: A randomized controlled trial. *Behaviour Research and Therapy, 49,* 389-398. doi: 10.1016/j.brat.2011.03.009

Brown, D., Leary, J., Carson, J., Bartlett, H., & Fagin, L. (1995). Stress and the community mental health nurse: the development of a measure. *Journal of Psychiatric and Mental Health Nursing, 2,* 9-12. doi: 10.1111/j.1365-2850.1995.tb00160.x

Bulman, C., & Schulz, S. (2013). *Reflective practice in nursing* (5th ed.). Oxford: Blackwell-Wiley.

Carney, J., Donovan, R., Yurdin, M., Starr, R., Pernell-Arnold, A., & Bromberg, E. M. (1993). Incidence of burnout among New York City intensive case managers: Summary of findings. *Psychosocial Rehabilitation Journal, 16*(4), 25-38. doi: 10.1037/h0095654

Carson, J., Bartlett, H., & Croucher, P. (1991). Stress in community psychiatric nursing: a preliminary investigation. *Community Psychiatric Nursing Journal, 11*, 8-12.

Caplan, R. D., Cobb, S., French, J. R. P., Jr., Van Harrison, R., & Pinneau, S.R., Jr. (1980). *Job demands and worker health: Main effects and occupational differences.* Ann Arbor: University of Michigan. Institute for Social Research.

Carson, J., Cavagin, J., Bunclark, J., Maal, S., Gournay, K., Kuipers, E., . . . West, M. (1999). Focus. Effective communication in mental health nurses: did

social support save the psychiatric nurse? *NT Research, 4*(1), 31-42. doi: 10.1177/136140969900400105

Coffey, M., & Coleman, M. (2001). The relationship between support and stress in forensic community mental health nursing. *Journal of Advanced Nursing, 34*(3), 397-407. doi: 10.1046/j.1365-2648.2001.01770.x

Cohen, S., & Williamson, G. (1988). Perceived stress in a probability sample of the United States. In S. Spacapan & S. Oskamp (Eds.), *The Social Psychology of Health.* Newbury Park, CA: Sage.

Cohen, S., & Wills, T. A. (1985). Stress, social support and the buffering hypothesis. *Psychological Bulletin, 98*(2), 310-357. doi: 10.1037/0033-2909.98.2.310

Cole, S. R. (1999). Assessment of differential item functioning in the Perceived Stress Scale-10. *Journal of Epidemiology and Community Health 53,* 319-320. doi: 10.1136/jech.53.5.3.319

Collins, S. (2003). Working with the psychological effects of trauma: consequences for mental health-care workers: A literature review. *Journal of Psychiatric and Mental Health Nursing, 10,* 417-424. doi: 10.1046/j.1365-2850.2003.00620.x

Coolican, H. (2009*). Research Methods and Statistics in Psychology* (5th ed.). New York: Routledge.

Corrigan, P. W., Holmes, E. P., & Luchins, D. (1995). Burnout and collegial support in state psychiatric hospital staff. *Journal of Clinical Psychology, 51*(5), 703-710. doi: 10.1002/1097-4679

Corrigan, P. W., Holmes, E. P., Luchins, D., Buican, B., Basit, A., & Parks, J. J. (1994). Staff burnout in a psychiatric hospital: A cross-lagged panel design. *Journal of Organizational Behavior, 15*(1), 65-74. doi: 10.1002/job.4030150107

Department of Health. (1993). *A vision for the future. Report of the Chief Nursing Officer*. London: HMSO.

Devilly, G. J., Wright, R., & Varker, T. (2009). Vicarious trauma, secondary traumatic stress or simply burnout? Effect of trauma therapy on mental health professionals. *Australian and New Zealand Journal of Psychiatry, 43*, 373-385. doi: 10.1080/00048670902721079

Dewe, P. J. (1987). Identifying the causes of nurses' stress: A survey of New Zealand nurses. Work & Stress: *An International Journal of Work, Health & Organisations, 1*(1), 15-24. doi: 10.1080/02678378708258477

References

Dickersin, K. (1990). The existence of publication bias and risk factors for its occurrence. *JAMA: the journal of the American Medical Association, 263*(10), 1385-1389. doi: 10.1001/jama.1990.03440100097014

Dietzel, L. C., & Coursey, R. D. (1998). Predictors of emotional exhaustion among nonresidential staff persons. *Psychiatric Rehabilitation Journal, 21*(4), 340-348. doi: 10.1037/h0095290

Edwards, D., Burnard, P., Hannigan, B., Cooper, L., Adams, J., Juggessur, T., . . . Coyle, D. (2006). Clinical supervision and burnout: the influence of clinical supervision for community mental health nurses. *Journal of Clinical Nursing, 15*(8), 1007-1015. doi: 10.1111/j.1365-2702.2006.01370.x

Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organisational support. *Journal of Applied Psychology, 71,* 500-507.

Evans, S., Huxley, P., Gately, C., Webber, M., Mears, A., Pajak, S., . . . Katona, C. (2006). Mental health, burnout and job satisfaction among mental health social workers in England and Wales. *The British Journal of Psychiatry, 188*(1), 75-80. doi: 10.1192/bjp.188.1.75

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*(4), 1149-1160. doi: 10.3758/BRM.41.4.1149

Field, A. (2009). *Discovering Statistics using SPSS* (3rd ed.). London: Sage.

Fielding, J., & Weaver, S. M. (1994). A comparison of hospital- and community-based mental health nurses: perceptions of their work environment and psychological health. *Journal of Advanced Nursing, 19(*6), 1196-1204. doi: 10.1111/j.1365-2648.1994.tb01204.x

Figley, C. R. (Ed.). (1995). *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized*. London: Psychology Press.

Flaxman, P. E., & Bond, F. W. (2010). A randomised worksite comparison of Acceptance and Commitment Therapy and stress inoculation training. *Behaviour Research and Therapy, 48*, 816-820. doi: 10.1016/j.brat.2010.05.004

Fothergill, A., Edwards, D., & Burnard, P. (2004). Stress, burnout, coping and stress management in psychiatrists: findings from a systematic review.

International Journal of Social Psychiatry, 50(1), 54-65. doi: 10.1177/0020764004040953

Freudenberger, H. J. (1974). Staff burnout. *Journal of social issues, 30*(1), 159-165. doi: 10.1111/j.1540-4560.1974.tb00706.x

Garman, A. N., Corrigan, P. W., & Morris, S. (2002). Staff burnout and patient satisfaction: evidence of relationships at the care unit level. *Journal of Occupational Health Psychology, 7(*3), 235. doi: 10.1037/1076-8998.7.3.235

Geisinger, K. F. (1994). Cross-cultural normative assessment: Translation and adaptation issues influencing the normative interpretation of assessment instruments. *Psychological Assessment, 6*(4), 304. doi: 10.1037/1040-3590.6.4.304

Gillanders, D. T. (2014). The development and initial validation of the Cognitive Fusion Questionnaire. *Behavior Therapy, 45*(1), 83-101. doi: 10.1016/j.beth.2013.09.001

Gonge, H., & Buus, N. (2011). Model for investigating the benefits of clinical supervision in psychiatric nursing: A survey study. *International Journal of Mental Health Nursing, 20*(2), 102-111. doi: 10.1111/j.1447-0349.2010.00717.x

Gray, M. J., Litz, B. T., Hsu, J. L., & Lombardo, T. W. (2004). Psychometric properties of the life events checklist. *Assessment 11*(4), 330-341. doi: 10.1177/1073191104269954

Green, A. E., Miller, E. A., & Aarons, G. A. (2011). Transformational leadership moderates the relationship between emotional exhaustion and turnover intention among community mental health providers. *Community Mental Health Journal, 49*(4), 373-379. doi: 10.1007/s10597-011-9463-0

Green, A. E., Albanese, B. J., Shapiro, N. M., & Aarons, G. A. (2014). The roles of individual and organizational factors in burnout among community-based mental health service providers. *Psychological Services, 11*(1), 41-49. doi: 10.1037/a0035299

Haber, M. G., Cohen, J. L., Lucas, T., & Baltes, B. B. (2007). The relationship between self-reported received and perceived social support: A meta-analytic review. *American Journal of Community Psychology, 39*(1-2), 133-144. doi: 10.1007/s10464-007-9100-9

References

Hackman, R., & Oldham, G. (1975). Development of the Job Diagnostic Survey. *Journal of Applied Psychology, 60,* 159-170. doi: 10.1037/h0076546

Hallberg, I. R. (1994). Systematic clinical supervision in a child psychiatric ward: satisfaction with nursing care, tedium, burnout, and the nurses' own report on the effects of it. *Archives of Psychiatric Nursing, 8*(1), 44-52. doi: 10.1016/0883-9417(94)90020-5

Hannigan, B., Edwards, D. & Burnard, P. (2004). Stress and stress management in clinical psychology: Findings from a systematic review. *Journal of Mental Health, 13*(3), 235-245. doi: 10.1080/09638230410001700871

Hannigan, B., Edwards, D., Coyle, D., Fothergill, A., & Burnard, P. (2000). Burnout in community mental health nurses: findings from the all Wales stress study. *Journal of Psychiatric and Mental Health Nursing, 7*(2), 127-134. doi: 10.1046/j.1365-2850.2000.00279.x

Häusser, J. A., Mojzisch, A., Niesel, M., & Schulz-Hardt, S. (2010). Ten years on: A review of recent research on the Job demand–control (-Support) model and psychological well-being. *Work & Stress., 24*(1), 1-35. doi: 10.1080/02678371003683747

Hayes, S. C. (2004). Acceptance and Commitment Therapy, Relational Frame Theory, and the third wave of behavioral and cognitive therapies. *Behavior Therapy, 35*(4), 639-665. doi: 10.1016/S0005-7894(04)80013-3

Hayes, S. C., Bissett, R., Roget, N., Padilla, M., Kohlenberg, B. S., Fisher, G., . . . Nicolls, R. (2004). The impact of Acceptance and Commitment training and multicultural training on the stigmatizing attitudes and professional burnout of substance abuse counselors. *Behavior Therapy 35,* 821-835. doi: 10.1016/S0005-7894(04)80022-4

Hayes, S. C., Strosahl, K., Wilson, K. G., Bissett, R., Pistorello, J., Toarmino, D., & McCurry, S. M. (2004). Measuring experiential avoidance: A preliminary test of a working model. *Psychological Record 54*(4), 553-578. doi: 35400012136322.0050

Healthcare Commission. (2013). NHS staff survey. *London: Healthcare Commission.* Retrieved from http://www.nhsstaffsurveys.com

Heaney, C. A., Price, R. H., & Rafferty, J. (1995). Increasing coping resources at work: a field experiment to increase social support, improve work team functioning, and enhance employee mental health. *Journal of Organizational Behavior, 16*(4), 335-352. doi: 10.1002/job.4030160405

Hombrados-Mendieta, I., & Cosano-Rivas, F. (2013). Burnout, workplace support, job satisfaction and life satisfaction among social workers in Spain: A structural equation model. *International Social Work, 56*(2), 228-246. doi: 10.1177/0020872811421620

House, J. S., & Kahn, R.L. (1985). Measures and concepts of social support. In S. Cohen, Syme, S.L. (Ed.), Social Support and Health (pp. 83-108). Orlando: Academic Press.

House, J. S., & Wells, J. A. (1978). Occupational stress, social support and health. In *Reducing occupational stress: Proceedings of a conference* (pp. 78-140). Washington, DC: DHEW (NIOSH).

Hutchison, C. (1999). Social support: factors to consider when designing studies that measure social support. *Journal of Advanced Nursing, 29*, 1520-1526. doi: 10.1046/j.1365-2648.1999.01041.x

Hykas, K. (2005). Clinical supervision, burnout, and job satisfaction among mental health and psychiatric nurses in Finland. *Issues in Mental Health Nursing 26*, 531-556. doi: 10.1080/01612840590931975

Ingram, R. E., & Luxton, D. D. (2005). Vulnerability-Stress Models In B. L. Hankin & J. R. Abela (Eds.), *Development of Psychopathology: A Vulnerability-Stress Perspective* (pp. 32-46). London: Sage.

Jawahar, I. M., Stone, T. H., & Kisamore, J. L. (2007). Role conflict and burnout: The direct and moderating effects of political skill and perceived organizational support on burnout dimensions. *International Journal of Stress Management, 14*(2), 142. doi: 10.1037/1072-5245.14.2.142

Jenkins, R., & Elliott, P. (2004). Stressors, burnout and social support: nurses in acute mental health settings. *Journal of Advanced Nursing, 48*(6), 622-631. doi: 10.1111/j.1365-2648.2004.03240.x

Johnson, J. V., & Hall, E. M. (1988). Job strain, work place social support, and cardiovascular disease: a cross-sectional study of a random sample of the Swedish working population. *American Journal of Public Health, 78(*10), 1336-1342. doi: 10.2105/AJPH.78.10.1336

Johnson, S., Osborn, D. P., Araya, R., Wearn, E., Paul, M., Stafford, M., . . . Wood, S. (2012). Morale in the English mental health workforce: a questionnaire survey. *i* 239-246. doi: 10.1192/bjp.bp.111.098970

Johnstone, L., & Dallos, R. (2013). *Formulation in psychology and psychotherapy*. East Sussex: Routledge.

References

Karasek, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Journal of Administrative science quarterly, 24*, 2. doi: 10.1086/323166

Korczak, D., Huber, B., & Kister, C. (2010). Differential diagnostic of the burnout syndrome *GMS Health Technology Assessment 6*. doi: 10.3205/hta000087

Kozak, A., Kersten, M., Schillmoller, Z., & Nienhaus, A. (2013). Psychosocial work-related predictors and consequences of personal burnout among staff working with people with intellectual disabilities. Research in Developmental Disabilities 34(1), 102-115. doi: 10.1016/j.ridd.2012.07.021

Lasalvia, A., Bonetto, C., Bertani, M., Bissoli, S., Cristofalo, D., Marrella, G., . . . Ruggeri, M. (2009). Influence of perceived organisational factors on job burnout: survey of community mental health staff. *British Journal of Psychiatry 195,* 537-544. doi: 10.1192/bjp.bp.108.060871

Lazarus, R. S., & Folkman, S. (1984). *Stress: Appraisal and Coping.* New York: Springer Publishing Company.

Levert, T., Lucas, M., & Ortlepp, K. (2000). Burnout in psychiatric nurses: Contributions of the work environment and a sense of coherence. *South African Journal of Psychology, 30*(2), 36-43. doi: 10.1177/008124630003000205

Libet, J. M., Frueh, B. C., Pellegrin, K. L., Gold, P. B., Santos, A. B., & Arana, G. W. (2001). Absenteeism and productivity among mental health employees. *Administration and policy in mental health, 29*(1), 41-50. doi: 10.1023/A:1013116931570

Lim, N., Kim, E., Kim, H., Yang, E., & Min Lee, S. (2010). Individual and work-related factors influencing burnout of mental health professionals: a meta-analysis. *Journal of Employment Counseling, 47,* 86-96. doi: 10.1002/j.2161-1920.2010.tb00093.x

Littlewood, S., Case, P., Gater, R., & Lindsey, C. (2003). Recruitment, retention, satisfaction and stress in child and adolescent psychiatrists. *Psychiatric Bulletin, 27*(2), 61-67. doi: 10.1192/pb.02-084

Lizano, E. L., & Mor Barak, M. E. (2012). Workplace demands and resources as antecedents of job burnout among public child welfare workers: A longitudinal study. *Children and Youth Services Review, 34,* 1769-1776. doi: 10.1016/j.childyouth.2012.02.006

Luchman, J. N., & González-Morales, M. G. (2013). Demands, control, and support: A meta-analytic review of work characteristics interrelationships. *Journal of Occupational Health Psychology, 18*(1), 37-52. doi: 10.1037/a0030541

Lynch, P. D., Eisenberger, R., & Armeli, S. (1999). Perceived organizational support: Inferior versus superior performance by wary employees. *Journal of Applied Psychology, 84*(4), 467-483. doi: 10.1037/0021-9010.84.4.467

Martin, U., & Schinke, S. P. (1998). Organizational and individual factors influencing job satisfaction and burnout of mental health workers. *Social Work in Health Care, 28*(2), 51-62. doi: 10.1300/J010v28n02_04

Maslach, C. (2003). Job burnout new directions in research and intervention. *Current directions in psychological science, 12*(5), 189-192. doi: 10.1111/1467-8721.01258

Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. J*ournal of Organizational Behavior, 2*(2), 99-113. doi: 10.1002/job.4030020205

Maslach, C., & Jackson, S. E. (1986). *Maslach Burnout Inventory Manual* (2nd ed.). Palo Alto: Consulting Psychologists Press.

Maslach, C., Jackson, S.E., & Leiter, M.P. (1996). *Maslach burnout inventory manual* (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual review of psychology, 52*(1), 397-422. doi: 10.1146/annurev.psych.52.1.397

McCann, L., & Pearlman, L. A. (1990). Vicarious traumatization: A framework for understanding the psychological effects of working with victims. *Journal of Traumatic Stress, 3*(1), 131-149. doi: 10.1007/BF00975140

McLean, S., Wade, T. D., & Encel, J. S. (2003). The contribution of therapist beliefs to psychological distress in therapists: an investigation of vicarious traumatization, burnout and symptoms of avoidance and intrusion *Behavioural and Cognitive Psychotherapy 31*(4), 417-428. doi: 10.1017/S135246580300403X

Melchior, M. E. W., Bours, G. J. J. W., Schmitz, P., & Wittich, Y. (1997). Burnout in psychiatric nursing: a meta-analysis of related variables. *Journal of Psychiatric and Mental Health Nursing, 4*(3), 193-201. doi: 10.1046/j.1365-2850.1997.00057.x

References

Meldrum, L., King, R., & Spooner, D. (2002). Secondary traumatic stress in case managers working in community mental health services. In C. R. Figley (Ed.), *Treating compassion fatigue* (pp. 85-106). New York: Brunner-Routledge.

Michie, S., & Williams, S. (2003). Reducing work related psychological ill health and sickness absence: a systematic literature review. *Occupational and Environmental Medicine, 60*(1), 3-9. doi: 10.1136/oem.60.1.3

Miller, K. I., Ellis, B. H., Zook, E. G., & Lyles, J. S. (1990). An integrated model of communication, stress, and burnout in the workplace. *Communication Research, 17*(3), 300-326. doi: 10.1177/009365090017003002

Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Annals of Internal Medicine, 151*(4), 264-269. doi: 10.7326/0003-4819-151-4-200908180-00135

Moos, R. H. (1986). *The work environment scale manual 2nd edn*. Palo Alto: Consulting Psychologists Press.

Moos, R. H., & Insel, P. M., (1974). *Work environment scale*. Palo Alto: Consulting Psychologists Press.

Morse, G., Salyers, M. P., Rollins, A. L., Monroe-DeVita, M., & Pfahler, C. (2012). Burnout in mental health services: a review of the problem and its remediation. *Administration and policy in mental health, 39* (5), 341-352. doi: 10.1007/s10488-011-0352-1

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. doi: 10.1111/j.1365-2788.2011.01406.x

Ng, T. W., & Sorensen, K. L. (2008). Toward a further understanding of the relationships between perceptions of support and work attitudes A meta-analysis. *Group & Organization Management, 33*(3), 243-268. doi: 10.1177/1059601107313307

Ogresta, J., Rusac, S., & Zorec, L. (2008). Relation between burnout syndrome and job satisfaction among mental health workers. *Croatian Medical Journal, 49*(3), 364-374. doi: 10.3325/cmj.2008.3.364

Onyett, S. (2011). Revisiting job satisfaction and burnout in community mental health teams. [Review]. *Journal of Mental Health, 20*(2), 198-209. doi: 10.3109/09638237.2011.556170

Onyett, S., Pillinger, T., & Muijen, M. (1997). Job satisfaction and burnout among members of community mental health teams. *Journal of Mental Health, 6*(1), 55-66. doi: 10.1080/09638239719049

Orsillo, S. M., & Batten, S. V. (2005). Acceptance and Commitment Therapy in the treatment of Posttraumatic Stress Disorder. *Behavior Modification 29*(1), 95-129. doi: 10.1177/0145445504270876

Owens, G. P., Walter, K. H., Chard, K. M., & Davis, P. A. (2012). Changes in Mindfulness skills and treatment response among Veterans in residential PTSD treatment. *Psychological Trauma: Theory, Research, Practice, and Policy, 4*(2), 221-228. doi: 10.1037/a0024251

Oxley, D. & Barrera, Jr. (1984). Undermanning theory and the workplace: Implications of setting size for job satisfaction and social support. *Environment and Behavior, 16*(2), 211-234. doi: 10.1177/0013916584162004

Paris, J. M., & Hoge, M. A. (2010). Burnout in the mental health workforce: a review. *The Journal of Behavioral Health Services & Research, 37*(4), 519-528. doi: 10.1007/s11414-009-9202-2

Pedrini, L., Magni, L. R., Giovannini, C., Panetta, V., Zacchi, V., Rossi, G., & Placentino, A. (2009). Burnout in nonhospital psychiatric residential facilities. *Psychiatric Services, 60*(11), 1547-1551. doi: 10.1176/appi.ps.60.11.1547

Peterson, U., Demerouti, E., Bergström, G., Samuelsson, M., Åsberg, M., & Nygren, Å. (2008). Burnout and physical and mental health among Swedish healthcare workers. *Journal of Advanced Nursing, 62*(1), 84-95. doi: 10.1111/j.1365-2648.2007.04580.x

Podsakoff, P. M., Mackenzie, S., Lee, J., & Podsakoff, N. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*, 879–903. doi: 10.1037/0021-9010.88.5.879

Priebe, S., Fakhoury, W., Hoffman, K., & Powell, R. (2005). Morale and job perception of community mental health professionals in Berlin and London *Social Psychiatry and Psychiatric Epidemiology, 40*, 223-232. doi: 10.1007/s00127-005-0880-7

Priebe, S., Fakhoury, W., White, I., Watts, J., Bebbington, P., Billings, J., ... & Wright, C. (2004). Characteristics of teams, staff and patients:

associations with outcomes of patients in assertive outreach. *The British Journal of Psychiatry, 185*(4), 306-311. doi: 10.1192/bjp.185.4.306

Puig, A., Baggs, A., Mixon, K., Min Park, Y., Young Kim, B., & Min Lee, S. (2012). Relationship between job burnout and personal wellness in mental health professionals *Journal of Employment Counseling 49*, 98-109. doi: 10.1002/j.2161-1920.2012.00010.x

Rabin, S., Feldman, D., & Kaplan, Z. (1999). Stress and intervention strategies in mental health professionals *British Journal of Medical Psychology, 72,* 159-169. doi: 10.1348/000711299159916

Reid, Y., Johnson, S., Morant, N., Kuipers, E., Szmukler, G., Thornicroft, G., . . . Prosser, D. (1999). Explanations for stress and satisfaction in mental health professionals: a qualitative study. [Multicenter Study]. *Social Psychiatry and Psychiatric Epidemiology, 34*(6), 301-308. doi: 10.1007/s001270050148

Reininghaus, U., & Priebe, S. (2007). Assessing morale in community mental health professionals. *Social Psychiatry and Psychiatric Epidemiology, 42*(3), 237-243. doi: 10.1007/s00127-007-0154-7

Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: a review of the literature. *Journal of Applied Psychology, 87*(4), 698. doi: 10.1037/0021-9010.87.4.698

Richardson, K. M., & Rothstein, H. R. (2008). Effects of occupational stress management intervention programs: a meta-analysis. *Journal of Occupational Health Psychology, 13*(1), 69. doi: 10.1037/1076-8998.13.1.69

Ritter, S. A., Tolchard, B. & Stewart, R. (1995). Coping with stress in mental health nursing. In J. Carson, Fagin, L. & Ritter, S. (Ed.), *Stress and Coping in Mental Health Nursing* (pp. 161-179). London: Chapman & Hall.

Rossi, A., Cetrano, G., Pertile, R., Rabbi, L., Donisi, V., Grigoletti, L., . . . Amaddeo, F. (2012). Burnout, compassion fatigue, and compassion satisfaction among staff in community-based mental health services. *Psychiatry Research 200,* 933-938. doi: 10.1016/j.psychres.2012.07.029

Rossler, W. (2012). Stress, burnout, and job dissatisfaction in mental health workers. *European Archive of Psychiatry and Clinical Neuroscience, 262*(2), S65-S69. doi: 10.1007/s00406-012-0353-4

Rousseau, V., & Aubé, C. (2010). Social support at work and affective commitment to the organization: the moderating effect of job resource adequacy and ambient conditions. *The Journal of Social Psychology, 150*(4), 321-340. doi: 10.1080/00224540903365380

Sabin-Farrell, R., & Turpin, G. (2003). Vicarious traumatization: implications for the mental health of health workers? *Clinical Psychology Review, 23,* 449-480. doi: 10.1016/S0272-7358(03)00030-8

Sarason, I. G., Levine, H. M., Basham, R. B. & Sarason, B. R. (1983). Assessing social support: The social support questionnaire.', *Journal of Personality and Social Psychology, 44,* 127-139. doi: 10.1037/0022-3514.44.1.127

Sarason, I. G., Sarason, B. R., & Pierce, G. R. (1990). Social support: The search for theory. *Journal of Social and Clinical Psychology, 9*(1), 133-147. doi: 10.1521/jscp.1990.9.1.133

Semmer, N. K., Elfering, A., Jacobshagen, N., Perrot, T., Beehr, T. A., & Boos, N. (2008). The emotional meaning of instrumental social support. *International Journal of Stress Management, 15*(3), 235. doi: 10.1037/1072-5245.15.3.235

Sherring, S., & Knight, D. (2009). An exploration of burnout among city mental health nurses. *British Journal of Nursing, 18*(20), 1234-1240. Retrieved from http://web.b.ebscohost.com/ehost/pdfviewer/pdfviewer?sid=2948f2a1-5591-4a9a-9d59-301b4cc701ef%40sessionmgr112&vid=2&hid=127

Shore, L. M., & Tetrick, L. E. (1991). A construct validity study of the survey of perceived organizational support. *Journal of Applied Psychology, 76*(5), 637-643. doi: 10.1037/0021-9010.76.5.637

Sochos, A., & Bowers, A. (2012). Burnout, occupational stressors, and social support in psychiatric and medical trainees. *The European Journal of Psychiatry, 26*(3), 196-206. doi: 10.4321/S0213-61632012000300006

Spector, P. E. (1992). *Summated rating scale construction: an introduction.* Newbury Park (CA): Sage.

Spector, P. E., Zapf, D., Chen, P. Y., & Frese, M. (2000). Why negative affectivity should not be controlled in job stress research: don't throw out the baby with the bath water. *Journal of Organizational Behavior, 21*(1), 79-95. doi: 10.1002/(SICI)1099-1379(200002)21:1<79::AID-JOB964>3.0.CO;2-G

References

Stalker, C. A., Mandell, D., Frensch, K. M., Harvey, C., & Wright, M. (2007). Child welfare workers who are exhausted yet satisfied with their jobs: how do they do it? *Child and Family Social Work, 12,* 182-191. doi: 10.1111/j.1365-2206.2006.00472.x

Tabachnick, B. G., & Fidell, L.S. (2007). *Using Multivariate Statistics* (5th ed.). London: Pearson.

Taylor, B., & Barling, J. (2004). Identifying sources and effects of carer fatigue and burnout for mental health nurses: a qualitative approach. *International Journal of Mental Health Nursing, 13*, 117-125. doi: 10.1111/j.1445-8330.2004.imntaylorb.doc.x

Ting, L., Jacobson, J. M., Sanders, S., Bride, B. E., & Harrington, D. (2005). The Secondary Traumatic Stress Scale (STSS). Confirmatory factor analyses with a national sample of mental health Social Workers. *Journal of Human Behavior in the Social Environment, 11*(3-4), 177-194. doi: 10.1300/J137v11n03_09

Ting, L., Jacobson, J. M., & Sanders, S. (2008). Available Supports and Coping Behaviours of Mental Health Social Workers Following Fatal and Nonfatal Client Suicidal Behavior. *Social Work, 53*(3), 211-221. doi: 10.1093/sw/53.3.211

Tummers, G. E., Janssen, P. P., Landeweerd, A., & Houkes, I. (2001). A comparative study of work characteristics and reactions between general and mental health nurses: a multi-sample analysis. *Journal of Advanced Nursing, 36*(1), 151-162. doi: 10.1046/j.1365-2648.2001.01952.x

Umene-Nakano, W., Kato, T. A., Kikuchi, S., Tateno, M., Fujisawa, D., Hoshuyama, T., & Nakamura, J. (2013). Nationwide survey of work environment, work-life balance and burnout among psychiatrists in Japan. *PLoS ONE, 8*(2). doi: 10.1371/journal.pone.0055189

Van Bogaert, P., Clarke, S., Wouters, K., Franck, E., Willems, R., & Mondelaers, M. (2013). Impacts of unit-level nurse practice environment, workload and burnout on nurse-reported outcomes in psychiatric hospitals: A multilevel modelling approach. *International Journal of Nursing Studies, 50*(3), 357-365. doi: 10.1016/j.ijnurstu.2012.05.006

Vassos, M. V., & Nankervis, K. L. (2012). Investigating the importance of various individual, interpersonal, organisational and demographic variables when predicting job burnout in disability support workers.

Research in Developmental Disabilities, 33, 1780-1791. doi: 10.1016/j.ridd.2012.04.016

Vaux, A. (1992). Assessment of Social Support. In H. O. F. B. Veiel, U. (Ed*.), The meaning and measurement of social support* (pp. 193-215). London: Hemisphere Publishing

Vilardaga, R., Luoma, J. B., Hayes, S. C., Pistorello, J., Levin, M. E., Hildebrandt, M. J., . . . Bond, F. (2011). Burnout among the addiction counseling workforce: The differential roles of mindfulness and values-based processes and work-site factors. *Journal of Substance Abuse Treatment 40,* 323-335. doi: 10.1016/j.jsat.2010.11.015

Vujanovic, A. A., Youngwirth, N. E., Johnson, K. A., & Zvolensky, M. J. (2008). Mindfulness-based acceptance and posttraumatic stress symptoms among trauma-exposed adults without axis I psychopathology. *Journal of Anxiety Disorders, 23,* 297-303. doi: 10.1016/j.janxdis.2008.08.005

Webster, L., & Hackett, R. K. (1999). Burnout and leadership in community mental health systems. *Administration and Policy in Mental Health and Mental Health Services Research, 26(*6), 387-399. doi: 10.1023/A:1021382806009

Wilson, K. G., Sandoz, E. K., Kitchens, J., & Roberts, M. (2010). The valued living questionnaire: Defining and measuring valued action within a behavioral framework. *The Psychological Record, 60,* 249-272. doi: 10.1037/t04346-000

Winstanley, J. (2000). Manchester Clinical Supervision Scale. *Nursing Standard, 14*(19), 31-32. Retrieved from: http://www.ncbi.nlm.nih.gov/pubmed/11209386

Wood, S., Stride, C., Threapleton, K., Wearn, E., Nolan, F., Osborn, D., . . . Johnson, S. (2011). Demands, control, supportive relationships and well-being amongst British mental health workers. *Social Psychiatry and Psychiatric Epidemiology, 46*(10), 1055-1068. doi: 10.1007/s00127-010-0263-6