Doctorate in Clinical Psychology Thesis

Staff Burnout: An Exploration of Individual and Systemic Factors

Kimberley D Towey-Swift

Supervised by:

Prof Richard Whittington and Dr Laura Golding

The University of Liverpool

January 2017

Submitted in partial fulfilment of the degree of Doctorate in Clinical Psychology

University of Liverpool

Table of Contents

Word Count: 20,290 (excluding figures, tables and references)

Acknowledgements

I would like to acknowledge my supervisory team and extend my thanks to the supervisors involved at the different stages of the project. I am so very grateful to Professor Richard Whittington for agreeing to be the primary supervisor for the research project and his unwavering support throughout the project. Also for continuing to supervise the research accommodating his work in Norway and my maternity leave. I would like to thank the supervisory team involved in the secondary supervisor role: To my initial supervisors Dr Bill Sellwood and Dr James Reilly who were supportive in the development of the research project and to Dr James Reilly for maintaining his involvement the project in an advisory role. To Dr Pierce O'Carroll who supervised the project during the data collection, analysis and preliminary draft, and to Dr Laura Golding who kindly adopted the supervisory role and supported the write up of the project. All the supervisors involved have brought different expertise and perspectives, but all have been generous with their time and supportive of me and the research project.

In addition, I would like to acknowledge the support from D.Clin team throughout the programme. Especially the administrative and research teams and Dr Beth Greenhill.

I would like to acknowledge the Community Mental Health Team (CMHT) staff for their time and participation in the empirical research, without whom the research would not have been possible. Their informal feedback, that staff felt their wellbeing was a neglected area of research and policy was an incredible strength and motivator in completing the research project. Lastly, I feel it is important to acknowledge all CMHT staff not only those who participated in the research. Specifically, the incredibly valuable and sometimes challenging role that frontline staff undertake, in the service of improving the lives and the mental health of their clients.

Introductory Chapter: Thesis Overview

Overview

Burnout has been associated with negative outcomes for both mental health service staff and service-users. However, despite being a well-established phenomenon, the literature surrounding burnout in mental health services is somewhat limited compared to the extensive attention burnout has received in other fields. Morse, Salyers, Rollins, Monroe-DeVita, and Pfahler (2012) reflect the irony that the mental health field has focused little attention to its own workers. Indeed, there has been a call to "*redouble efforts within this sector of healthcare to better understand and address the high levels of distress among those providing mental health services*" (Paris & Hodge, 2010:526). By increasing the understanding of the prevalence, cause, and effect of burnout within mental health services, it is hoped to better inform possible interventions to reduce distress. It is notable the British Psychological Society (BPS) and New Savoy Partnership have brought to the fore the importance of psychological wellbeing of the psychological therapy workforce. The joint 'Charter for Psychological Staff Wellbeing and Resilience', appeals for: greater support of staff wellbeing, requiring clinical leaders who value the dedication of staff and support staff wellbeing (BPS, 2016).

The role of the clinical psychologist has expanded beyond individual client work. Clinical psychology competencies (BPS, 2006) specifically identify the use of broad-based knowledge to: assess, formulate and intervene, both with individuals and within service systems. Furthermore, the HCPC Standards of Proficiency (2015) outline the role of psychologists in intervening psychologically in service systems. Thus the impetus to bring psychological skills and knowledge to service systems is unambiguous. Within the NHS, team-working is central to the role of clinical psychologists and is reflected in the New Ways of Working: Working Psychologically in Teams (BPS, 2007). This guidance specifically

identifies leadership and team-working roles for clinical psychologists. Furthermore, it highlights that local team development interventions and process should include how teams will remain healthy and functioning. It is argued that systems and organisational interventions must augment individually focused interventions to address burnout (Paris & Hodge, 2010; Public Health England, 2016). Arguably, clinical psychologists have the skills and competencies to meet both of these challenges when working within teams in mental health services.

Rationale

The two papers within this thesis attempt to address the supposition by Paris and Hodge (2010) and Public Health England (2016) that further research exploring staff burnout in mental health services is required and that this should focus on both systemic and individual factors. The first of the chapters aimed to address the potential benefit of Acceptance and Commitment Therapy (ACT) as an individually-focused intervention for burnout; while the second chapter presents a study which aimed to address developing a better understanding of the systemic level factors that contribute to burnout and the potential effects of burnout on service-users.

Review Paper

This paper sought to establish the current state of the research evidence for ACT-based interventions in the field of burnout. ACT is a third wave cognitive behavioural therapy which considers psychological distress to stem from the interaction of language and cognitions with events, which generates behaviours that impede valued action (Hayes, Luoma, Bond, Masuda & Lillis, 2006). The therapeutic processes of ACT are based around increasing psychological flexibility and values based action; this can be considered in two groupings: mindfulness and acceptance processes, and commitment and behaviour change

processes (Luoma, Hayes, Walser, 2007). A systematic search strategy was employed which identified eight research studies that utilised interventions explicitly based on ACT theory and measured burnout as an outcome measure. There was considerable variability in the delivery of the intervention, the comparators, and also in the reporting of the burnout measures. Therefore, meta-analysis was not appropriate and a narrative synthesis was conducted. The variability in the implementation of ACT interventions could be viewed to demonstrate the flexibility of the ACT model. A general trend for the effectiveness of ACT interventions in reducing burnout scores was identified. The underlying principles of the active processes of ACT were moderately supported in the studies which reported process measures. Overall, there appeared to be sufficient evidence of effectiveness to warrant further study in this area. The findings suggested there is potential to utilise ACT approaches with staff groups to reduce burnout. Given the preliminary support and the flexible ways ACT has been applied, this could be a particularly useful approach for clinical psychologists working within team systems.

Empirical Paper

The empirical study explored individual appraisals of systemic factors that contribute to burnout among Community Mental Health Team (CMHT) staff and the subsequent impact on service-users. In this study, burnout was viewed under the broader auspices of 'Compassion Fatigue'. Compassion Fatigue is a superordinate construct which encompasses Burnout together with Secondary Traumatic Stress; Compassion Fatigue then together with 'Compassion Satisfaction' forms the Professional Quality of Life construct (Stamm, 2010). Specifically, the study examined how person-job congruence across the areas of Worklife impacted on Professional Quality of Life, and how Professional Quality of Life impacted upon service-users through staff attitude towards recovery. Person-job congruence is the perceived fit between the environmental demands and the person's individual interaction with these; it is the appraisal of the person-job fit that is considered to drive cognitive,

behavioural and affective responses (Dewe, O'Driscoll & Cooper, 2012). A total of 132 professionally qualified staff from three NHS trusts in England took part in the research. The study found that low congruence in several areas of Worklife were significantly associated with Compassion Fatigue, while high Worklife congruence was associated with Compassion Satisfaction. The research did not find significant associations between Compassion Fatigue or Compassion Satisfaction with endorsement of staff attitude towards recovery at the multivariate level. Drawing on wider literature, the paper discusses the possible role for clinical psychology in addressing the congruence in the areas of Worklife identified.

Identified Journals

The review paper has been written as for the journal: Journal of Mental Health; and the empirical paper has been written as for the journal: Applied Psychology: Health and Well-Being. The author guidelines for each journal were adhered to.

References

British Psychological Society. (2006). *Core Competencies Clinical Psychology: A Guide.* Leicester: British Psychological Society.

British Psychological Society. (2007). *New Ways of Working for Applied Psychologists in Health and Social Care Working Psychologically in Teams*. Leicester: British Psychological Society.

British Psychological Society (2016), *Charter for Psychological Staff Wellbeing and Resilience.* Available: http://www.bps.org.uk/system/files/Public%20files/Comms-media/press_release_and_charter.pdf

Department of Health, (2009). *NHS Health and Well-being. Final Report, November 2009.* London: Department of Health.

Dewe, P. J., O'Driscoll, M. P., & Cooper, C. L. (2012). Theories of psychological stress at work. In R. J. Gatchel, I. Z. Schultz, R. J. Gatchel, I. Z. Schultz (Eds.), *Handbook of Occupational Health and Wellness* (pp. 23-38). New York: Springer Science & Business Media. doi:10.1007/978-1-4614-4839-6_2

Hayes, S. C., Luoma, J. B., Bond, F. W., Masuda, A., & Lillis, J. (2006). Acceptance and Commitment Therapy: Model, processes and outcomes. *Behaviour Research and Therapy, 44*1-25. doi:10.1016/j.brat.2005.06.006

HCPC. (2015). *Standards of proficiency: Practitioner psychologists.* London: Health and Care Professions Council.

Luoma, J. B., Hayes, S. C., & Walser, R. D. (2007). *Learning ACT: An acceptance and commitment therapy skills-training manual for therapists,* Oakland: New harbinger Publications.

Morse, G., Salyers, M., Rollins, A., 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 and Mental Health Services Research*, *39*(5), 341-352. doi: 10.1007/s10488-011-0352-1.

Paris, M., & Hodge, M. (2010). Burnout in the Mental Health Workforce: A Review. *Journal of Behavioral Health Services & Research*, *37*(4), 519-528.

Public Health England. (2016). *Interventions to Prevent Burnout in High Risk Individuals: Evidence Review*. London: Public Health England.

Stamm, B. H. (2010). *The Concise ProQoL Manual*, 2nd Edition, Pocatello, ID: ProQOL.org.

Review Chapter[1]

Acceptance and Commitment Therapy (ACT) for Staff Burnout: A Systematic Review

January 2017

Submitted in partial fulfilment of the degree of Doctorate in Clinical Psychology,

University of Liverpool

[1] Written as for the Journal of Mental Health.

Abstract

Background, Staff working in people-oriented professions are vulnerable to burnout which is negatively associated with professional wellbeing and service-user care. ***Aims****,* To investigate if interventions based on Acceptance and Commitment Therapy (ACT) are effective in reducing staff burnout. ***Method,*** Systematic database and reference list searches were conducted resulting in the inclusion of eight quantitative papers. A narrative synthesis was performed. ***Results,*** All studies were controlled trials. The settings for ACT delivery were varied across health, social care, and public services. The ACT interventions had a statistically significant impact on burnout compared to both waiting-list and active controls. The interventions returned effects in favour of ACT in the majority of subscales measured across studies. Positive aspects of work engagement such as accomplishment were sensitive to professional role. ***Conclusions,*** The review's findings suggested that ACT-based interventions may have the potential to decrease burnout across a range of professional groups using a wide range of formats. However, samples were small in the studies reviewed and the interventions poorly defined. Further research would benefit from larger studies, incorporating process measures, with explicit protocols.

Keywords: Acceptance and Commitment Therapy, ACT, burnout, mental health, review.

Introduction

People-oriented professions including healthcare and education have been recognised as holding particular risks for professionals, specifically burnout (Maslach & Goldberg, 1998). Burnout has been defined as *"a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do 'people work'..."* (Maslach, 1982:3). Burnout is also incorporated within Stamm's professional quality of life model, under the superordinate construct 'compassion fatigue', which also encompasses secondary traumatic stress (Stamm, 2010). The impact of burnout and

compassion fatigue has significant personal implications for staff including: low mood, anxiety, hopelessness, physical symptoms, and memory and attentional difficulties (Lizano, 2015; Public Health England [PHE] 2016; Schaufeli & Buunk, 2003). In the mental health setting, burnout prevalence is estimated at between 21 – 67% (Morse *et al*, 2012) and has been associated with negative service-user outcomes such as: lower service-user safety (Kowalski *et al*, 2010), negative attributions towards service-user behaviours (Bethay *et al*, 2009) and disruptions to care through staff turnover (Morse *et al*, 2012). These factors clearly impact service-user care. The Francis report (2013) identifies the importance of compassionate care to NHS service delivery. While the Boorman report highlighted staff wellbeing as explicitly linked to NHS service quality and service-user care; and that NHS organisations which prioritised staff wellbeing achieved enhanced performance, improved patient care, and reduced staff absence (Department of Health [DoH], 2009). Greater support for staff wellbeing, emphasising the consequent impact on sustainable services, has also been called for by the joint Charter for Psychological Staff Wellbeing and Resilience (British Psychological Society [BPS], 2016). Schaufeli and Buunk (2003) consider occupational stress a generic term for the temporary adaption process where job demands and individual adaptive resources are incompatible; whereas, they consider burnout a specific chronic and multifaceted form of occupational stress. Distinctly, burnout includes the development of negative attitudes and behaviours towards service-users, the job, and the organisation (Schaufeli & Buunk, 2003). Thus, burnout is distinct from occupational stress and warrants specific attention in the context of the potential harm to staff and service-users.

Countless attempts to address staff burnout through both individual and systemic changes have been made. However, in a Cochrane review of approaches to preventing occupational stress in healthcare workers (Marine *et al*, 2009), the authors reported limited evidence for the effectiveness of person-directed interventions. In that review, all of the interventions were examined through Randomised Control Trials (RCT) including: cognitive-behavioural

therapy, relaxation, music, massage and multicomponent interventions. Encouragingly, a further review of burnout specifically within mental health services, reported that 60% of included interventions effectively reduced burnout (Morse *et al*, 2012). Interventions in that review included varied formats and a range of interventions: psychodynamic, cognitive-behavioural, supervision, psychosocial, and assertiveness.

More recently, third wave cognitive behavioural therapies including Acceptance and Commitment Therapy (ACT) have been utilised positively to address workplace stress and effectiveness (Flaxman *et al*, 2013; Moran, 2015). ACT is a flexible approach that has been used with individuals and groups, for short-term and long-term therapy (Harris, 2006). ACT is considered a transdiagnostic therapy (Smout *et al*, 2012) and has been shown to achieve effective outcomes with difficulties ranging from work-stress to psychosis (Hayes *et al*, 2006). The objective in ACT is to create a meaningful life aligned to values, through psychological flexibility, while accepting the inevitable pain that accompanies life (Harris, 2006). ACT-based interventions have successfully reduced stress for health care staff, including intellectual disabilities support staff (McConachie *et al*, 2014), and trainee clinical psychologists (Stafford-Brown & Pakenham, 2012). However, as discussed above, burnout is distinct from workplace stress. Additionally, ACT interventions for clinical psychology trainees have been associated with improving positive therapist qualities (Stafford-Brown & Pakenham, 2012). In one study, after receiving ACT training, the service-users of ACT-trained therapists have reported significantly greater coping scores than the service-users of comparator therapists not trained in ACT (Strosahl *et al*, 1998).

ACT is based on Relational Frame Theory (RFT) with philosophical roots in functional contextualism (Hayes *et al*, 2006). The focus of change with ACT is the context of the distress rather than the content. Psychopathology in the ACT model is identified through six

processes of psychological inflexibility: (a) experiential avoidance, (b) cognitive fusion (regulation of behaviour by verbal processes), (c) attachment to the conceptualised self, (d) dominance of a conceptualised past and feared future, (e) lack of values clarity, and (f) inaction impulsivity or avoidant persistence (Hayes, et al, 2006). In response to psychological inflexibility, ACT therapeutically targets these processes with the aim of increasing psychological flexibility and developing psychological skills through focussing on the six core processes. Hayes et al (2006) describe the six processes of psychological flexibility as: (a) **acceptance**: embracing private events without seeking to change them, (b) **cognitive defusion**: changing the interaction with one's thoughts to diminish unhelpful function, (c) **self as context**: the context of verbal knowing rather than the content of knowing, (d) **being present**: experiencing the world directly, (e) **values**: qualities of purposive action, and (f) **committed action**: concrete goals consistent with values.

Theoretically, the association between ACT processes and burnout suggests that the application of ACT to address burnout would be effective. Behaving according to one's values is a key element of ACT psychological flexibility. Value congruence has been positively associated with greater staff wellbeing (Sagiv & Schwarts, 2000) and lower burnout (Veage *et al*, 2014). Additionally, mindfulness and values-based processes have demonstrated a stronger and more consistent relationship with burnout than work-site factors (Vilardaga *et al,* 2011). Within the literature base a number of studies have evaluated the effectiveness of ACT in different populations, and thus it is considered timely to systematically examine the effectiveness of ACT in addressing burnout. The review is relevant to clinicians who have a role in supporting professional staff groups and systems, or hold leadership responsibilities. The outcomes are potentially important for staff groups and service-users given the deleterious effects of burnout.

Review Question

1. Are interventions based on Acceptance and Commitment Therapy (ACT) effective in reducing burnout in staff groups?

Method

Protocol

The review followed a predetermined protocol (Appendix A); however the protocol was not formally registered prior to the study. The key details are identified below. The systematic review was conducted in line with PRISMA guidance (www.prisma-statement.org).

Inclusion and exclusion criteria

Studies were selected for inclusion in the review if they satisfied the following predefined inclusion criteria:

i) The population under investigation were identified as a staff group in any profession,

ii) The intervention was explicitly based on the ACT model regardless of delivery format,

iii) Burnout or compassion fatigue were assessed by any tool as an outcome measure,

iv) The report was published in English.

The requirement for the study to be published in English was due to the resource limitations of the project. Both peer reviewed and grey literature studies were included and studies with or without control comparators were eligible.

Studies were excluded from the review if they met the following predefined exclusion criteria:

i) The population under investigation were not recruited by virtue of being a staff group,
ii) The intervention was not explicitly based on ACT,
iii) The reported outcome measures did not capture burnout or compassion fatigue,
iv) The main report was published in any language other than English.

.

Search Strategy and Selection Criteria

The databases: CINAHLplus, MEDLINE, PsychARTICLES, PsychINFO, PubMed, Science Direct, Scopus, Web of science and Open Grey, were searched for articles from database inception. Searches were completed in May 2016. The search terms for each database were based on the following combination: ((burnout OR compassion fatigue OR secondary traumatic stress, OR work stress) AND (Acceptance and Commitment Therapy OR Acceptance Commitment Therapy)). There were no limiters to the searches. Inclusion decisions were made in two stages. At stage 1 (screening), all titles and abstracts were reviewed for initial eligibility based on the criteria above. Duplicates were removed and reasons for exclusion were recorded. At stage 2 (eligibility), the full text articles identified as potentially eligible were obtained and reviewed again against the criteria to establish eligibility. The reference lists for included studies were also reviewed for any possible studies missed. A 20% random sample at stage 1 and again at stage 2, were screened by a second reviewer (Appendix B) and there was total agreement on inclusion.

Data extraction

Data were systematically extracted from each included study in line with the quality assessment tool displayed in Table 1. The quality of included studies was assessed by the Quality Assessment Tool for Studies with Diverse Design (QATSDD; Sirriyeh *et al*, 2011). This tool was selected due to its applicability to diverse research designs, and also its detailed 4-point ratings format which enables more fine-grained assessments (range: not at all, very slightly, moderately, complete). Three articles were assessed by a second reviewer against the QATSDD criteria and agreement was established (Appendix B). The QATSDD authors suggest calculating a percentage of the maximum possible score for each study to aid comparison. This was not calculated to avoid the criticisms of summary scores being misleading and lacking detail (O'Connor *et al*, 2015).

Further details were then extracted from the studies under the following headings: Study identifying information, author and year; participant details, staff group and number; country; attrition; method; intervention; comparator; outcomes, all measures used; findings related to the burnout measure; test time points and follow-up details (see Table 2).

Data synthesis

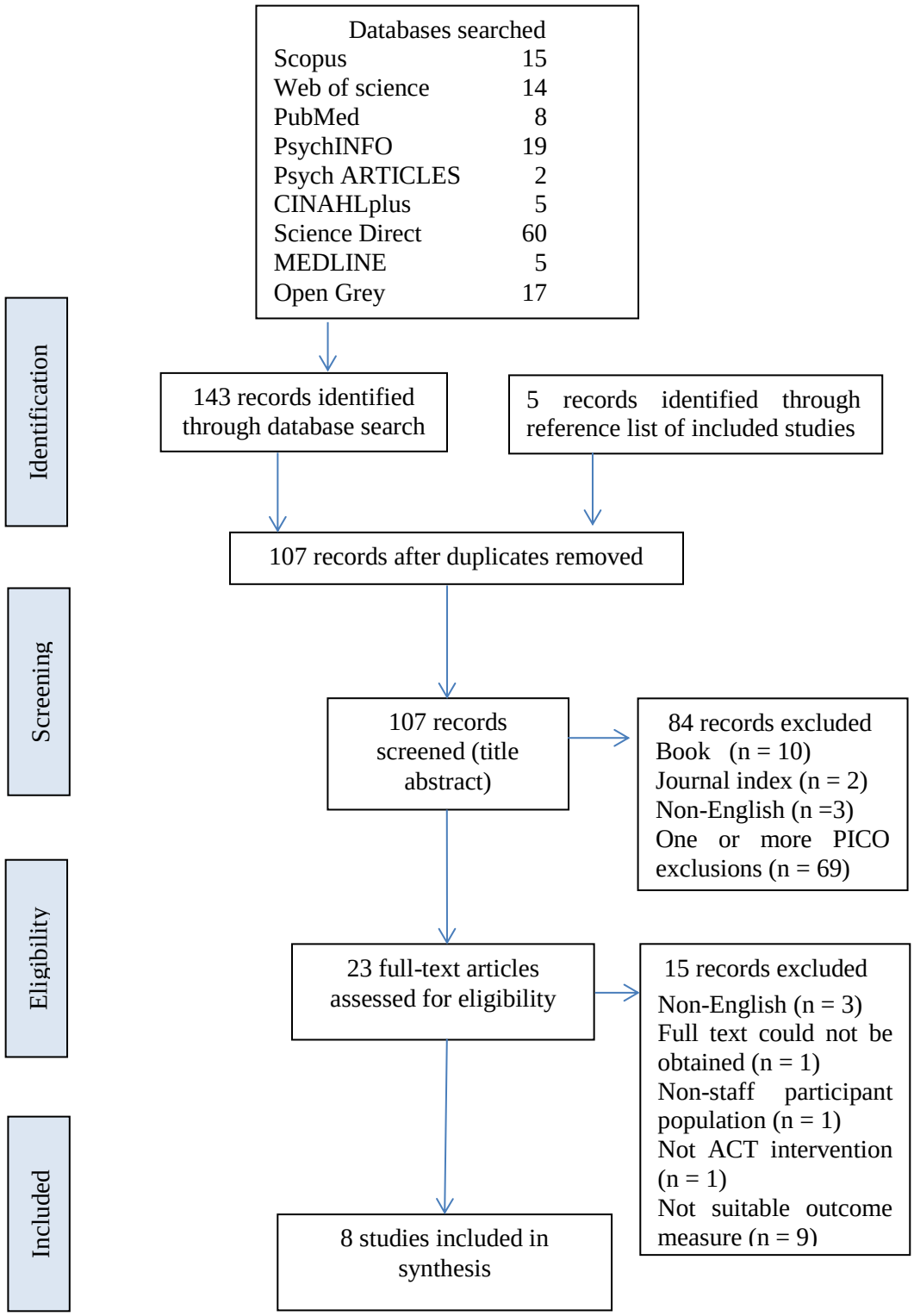
This review used a narrative synthesis approach. There was significant heterogeneity in participant samples, intervention comparators, and further diversity in the format and delivery of the intervention. For these reasons, a meta-analysis was not considered to be appropriate. Data were not combined across studies but effect sizes were calculated for each study to create a basis for common comparison across the sample.

Results

After deduplication, 107 articles were screened for eligibility, 23 full text articles were reviewed and eight of these were included in the synthesis and displayed in a PRISMA flow diagram in figure 1.

Figure 1

Study Selection Flow Diagram



Quality Assessment

Overall, the studies were of reasonable quality as rated by the QATSDD tool with all studies obtaining over two thirds of the total possible score (see Table 1). As identified in the methods section, summary scores for QATSDD were not calculated for comparison. The QATSDD gives equal weighting to each item of the tool whereas the impact of each item on quality and bias are variable. Researchers have suggested the tool be considered as a dialogue instrument to enhance in-depth understanding of the paper's strengths and limitations (Fenton, Lauckner & Gilbert, 2015). In this review the QATSDD ratings were reviewed for the themes of quality and the impact on the research. All studies provided acceptable detail regarding: the explicit theoretical framework, the objectives of the research, the research setting, detailed recruitment data, the rationale for the data collection tools and the procedure for data collection. The choice of data collection and analysis was appropriate to the research aims and all studies acknowledged strengths and weaknesses within their research. However, the QATSDD does not directly rate bias, so bias was examined separately.

Bias.

Seven of the eight studies were RCTs: two were allocated with randomly generated computer programmes (Brinkborg *et al,* 2011; Luoma *et al,* 2007), one with simple randomisation unspecified (Frögéli, *et al* 2016). The remaining four were randomised but no specific details of the random generation were provided (Bethay *et al,* 2013; Hayes *et al,* 2004; Lloyd *et al*, 2013; Luoma & Vilardaga 2013). One study was a Controlled Clinical Trial (CCT) and had allocated participants based on participant scheduling availability.

Table 1

Quality Assessment

Criteria	Bethay 2013	Brinkborg 2011	Emery 2012	Frögeli 2016	Hayes 2004	Lloyd 2013	Luoma 2007	Luoma 2013
Explicit theoretical framework	2	3	3	2	2	3	2	3
Statement of aims/objectives in main body of report	3	3	3	3	2	2	3	1
Clear description of research setting	2	3	3	3	3	2	2	2
Evidence of sample size considered in terms of analysis	1	1	3	1	1	0	0	0
Representative sample of target group of a reasonable size	1	3	3	2	3	1	2	1
Description of procedure for data collection	3	2	3	2	3	2	2	3
Rationale for choice of data collection tool(s)	3	3	3	2	3	3	3	3
Detailed recruitment data	2	3	2	3	3	3	3	2
Statistical assessment of reliability and validity of measurement tool(s) (Quantitative only)	1	3	3	3	3	3	2	3
Fit between stated research question and method of data collection (Quantitative only)	3	3	3	3	3	3	3	3
Fit between research question and method of analysis	3	3	3	3	3	3	2	3
Good justification for analytic method selected	3	3	3	2	3	1	0	1
Evidence of user involvement in design	0	0	0	0	0	0	0	0
Strengths and limitations critically discussed	3	3	3	2	2	3	3	3

Note. Selected articles identified by first author and year. The score awarded to each criteria relate to 0 = Not at all, 1 = Very slightly, 2 = Moderately, 3 = Complete.

Attrition rates varied from 7% to 33% within conditions in the studies (see Table 2). Potential bias from withdrawals and drop-outs was generally low with 80% or greater total participation in four studies (Bethay et al, 2013; Brinkborg et al, 2011; Hayes et al, 2004; Luoma & Vilardaga, 2013) and the remaining four studies held 60% or greater total participation. For the studies where attrition rates were reported separately for each condition, the rates of attrition across intervention and control conditions were similar, with the exception of one (Brinkborg *et al,* 2011) where all attrition was within the ACT condition. Where the reasons for attrition were reported (Bethay *et al,* 2013; Brinkborg *et al,* 2011; Luoma & Vilardaga, 2013), these were reported as unknown or unrelated to the study outcome e.g. illness, schedule commitments, unrelated life event, and changed mind. However, workload was cited by nine participants in Brinkborg *et al's* (2011) study, and workload has an established relationship with burnout (Morse *et al,* 2012). In two of the remaining studies (Frögéli *et al*, 2016; Lloyd *et al,* 2013), no reasons were given, but there were no baseline differences between intervention and control conditions. Reasons for attrition for the remaining three studies were not reported. The risk of bias from attrition is limited by the high overall participation within studies, and as there were relatively similar attrition rates between conditions for the majority of studies. Thus significant risk of bias from attrition was not presumed.

Missing data were treated through intention to treat (ITT) analysis in two studies (Brinkborg *et al,* 2011; Frögéli *et al,* 2016) and last data carried forward in one study (Luoma *et al* 2007), limiting the bias in these studies. Three of the five remaining studies excluded participants with incomplete data from analysis (Bethay *et al,* 2013; Emery, 2012; Lloyd *et al,* 2013) possibly reducing the statistical power of the research. Finally, two studies did not specify how they managed missing data (Hayes *et al,* 2004; Luoma & Vilardaga, 2013). There is an unclear risk of bias for incomplete data.

Study Characteristics

The included studies were published between 2004 and 2016. Summary details are set out in Table 2. The studies were conducted in three countries: five in the USA, two in Sweden, and one in the UK. Six were carried out with health and social care staff, one with teachers, and one with unspecified government employees. All the studies were controlled trials. Seven studies were RCTs and one was a CCT with allocation based pragmatically on participant scheduling availability. The sample sizes ranged from 22 to 106 study participants.

The ACT interventions varied in content and length, ranging from one to six sessions (median = 2.5) and delivered over a range of 6 to 12 hours (median = 7.5). All the main ACT interventions were delivered in a group face-to-face format but one study employed individual telephone ACT consultations in addition to group ACT. There was an equal number of active (alternative intervention) and inactive (waiting-list) controls employed across the selected studies. Three of the studies compared ACT interventions with waiting-list controls. One study utilised waiting-list control for the ACT telephone consultation aspect of the intervention. Three used alternative educational teaching sessions, and one used reflection seminars.

Table 2

Study Characteristics

Study	Participants	Dropout	Method	Intervention	Comparator	Outcomes	Burnout Results	Test and follow-up
Bethay (2013)	Direct care staff and teachers Learning Disability services. USA N=38	ACT[a] = 2 (10%) Control[a] = 2 (11%)	Random allocation ACT+ABA or ABA.	Three 3-hour group sessions, totalling 6-hours of ACT training combined with 3-hours of ABA principles. Intervention outline given.	Three 3-hour group sessions 9 hours of didactic training in principles of ABA.	GHQ-12 **MBI** **BBS** SVS	Decrease BBS score in ACT group compared to control. There was no significant group time interaction No significant change MBI.	Pre-test, post-test and 3 month follow-up.
Brinkborg (2011)	Social workers. Sweden N = 106	Pre-intervention ACT = 7 (10%) Follow-up ACT = 12 (17%)	Initial screening separated participants to low or high stress, then randomly allocated to conditions.	Four 3-hour group sessions. Swedish ACT-SMI Intervention outline referenced.	Waiting-list	PSS GHQ-12 **MBI** Pbse-scale DCSQ AAQ	ACT-SMI group significantly lower scores MBI post-treatment. Significant for total group, high stress and low stress groups.	Pre-test, post-test, only.
Emery (2012)	School teachers. USA N = 58	Pre-intervention[b] = 15 (26%) Follow-up[b] = 4 (7%)	Pragmatically allocated to ACT workshop or waiting-list from availability to attend workshop dates.	One 6-hour ACT workshop No intervention outline given.	Waiting-list	ITS **MBI** AAQ PVQ	MBI decreased immediately after intervention and at follow-up for ACT group.	Pre-test, 3-month follow-up

Study	Participants	Dropout	Method	Intervention	Comparator	Outcomes	Burnout Results	Test and follow-up
Frögéli (2016)	Student nurses. Sweden N = 113	Post-intervention ACT = 20 (29%) Control = 13 (30%) Follow-up ACT = 11 (16%) Control = 6 (14%)	Randomised control pilot.	Six 2-hour group sessions utilising ACT techniques. Outline referenced to website	Two 3-hour reflection seminars with no pre-set agenda.	AFQ-Y MAAS PSS **SWEBO -** burnout subscale	BO significantly decreased at post treatment. No significant difference at follow-up	Pre-test, post-test and 3-month follow-up.
Hayes (2004)	Substance abuse counsellors. USA N = 90	Follow-up ACT = 4 (13%) Multicultural = 2 (6%) Education = 2 (7%)	Randomly allocated to conditions.	Day-long workshop on Acceptance and Commitment Training No outline given,	Multicultural training, or educational control	CASA CAMI **MBI** SAB	MBI significantly decreased at post-test and follow-up in the ACT group.	Pre-test, post-test and 3-month follow-up.
Lloyd (2013)	Government department staff. UK N = 90	ACT[a] = 18 (30%) Control[a] = 18 (24%)	Randomly allocated to conditions.	Three 3-hour training sessions in ACT (2+1, session 1 & 2 consecutive weeks session 3 two months later)	Waiting-list	GHQ-12 **MBI** AAQ-II	MBI subscales emotional exhaustion and depersonalisation significantly decreased post – test and follow-up.	Pre-test, beginning of second and third workshop and 6-months follow-up.

Study	Participants	Dropout	Method	Intervention	Comparator	Outcomes	Burnout Results	Test and follow-up
Luoma (2007)	Substance abuse counsellors. USA N = 30	2-month follow-up[b] = 2 (7%) 4-month follow-up[b] = 6 (20%)	Randomly allocated to conditions.	1-day (6-hours) workshop in implementing GDC and eight 1.5-hour weekly consultation group sessions based on ACT principles.	1-day (6-hours) workshop in implementing GDC	TARS **MBI** GDC knowledge and adoption measures	MBI subscale personal accomplishment increased post intervention and was maintained at follow-up.	Pre-test, post-test, 2-month and 4-month follow-up.
Luoma (2013)	Therapists. USA N = 22	Pre-intervention[b] = 2 (10%) Follow up Control = 1 (10%)	Randomly allocated to conditions.	2-day ACT continuing education workshop plus six sessions of ACT based telephone consultations delivered over 3-months. No outline given	2-day ACT continuing education waiting-list for telephone consultation.	CSQ-3 AAQ **MBI** ACT knowledge quiz	MBI overall scale small significant reduction pre-test to follow-up. Small significant improvement personal accomplishment subscale for the ACT with telephone consultation. No between group difference	Pre-test, post-test and 3-month follow-up.

Note. Study is identified by first author and year. Percentage of dropout is calculated from the total in the condition. The measures related to burnout are in boldface. AAQ = Acceptance and Action Questionnaire, AAQ-II = Acceptance and Action Questionnaire-II, ABA = Applied Behavioural Analysis, ACT = Acceptance and Commitment Therapy, AFQ-Y = Avoidance and Fusion Questionnaire for Youth, BBS = Burnout Believability Scale, CASA = Community Attitudes Towards Substance Abusers, CSQ-3 = Client Satisfaction Questionnaire-3, DCSQ = Demand-Control-Support Questionnaire, GDC = Group Drug Counseling manual, GHQ-12 = General Health Questionnaire-12, ITS = Index of Teaching Stress, MAAS = Mindful Attention Awareness Scale, MBI = Maslach Burnout Inventory, Pbse-scale = Performance-based self-esteem scale, PSS = Perceived Stress Scale, PVQ = Personal Values Questionnaire, SAB = Stigmatizing Attitudes-Believability, SMI = Stress Management Intervention, SVS = Social Validity Survey, SWEBO = burnout subscale of Scale of Work Engagement and Burnout, TARS = Treatment Acceptability Rating Scale, TES = Teacher Efficacy Scale. [a] denotes intervention stage not specified. [b] denotes intervention condition not specified.

Study design

All studies were controlled trials. Two studies (Bethay *et al*, 2013 & Luoma *et al*, 2007), combined the ACT intervention with training: Applied Behavioural Analysis (ABA) or Group Drug Counselling (GDC) implementation, respectively. The ABA and GDC training were used as the control condition, allowing for the additive effect of ACT to be measured. Two studies augmented ACT workshops with ACT-based continued input: eight 1.5-hour weekly face-to-face consultations (Luoma et al, 2007), and six telephone consultations (Luoma & Vilardaga, 2013).

There were two post intervention assessment time points: firstly, immediately after completion of the intervention (post-intervention), and secondly longer term (follow-up). Seven studies (all except Brinkborg *et al*, 2011) employed a follow-up data collection point, ranging from two to six months post intervention (median = 3). One study reported only pre-intervention and post-intervention outcome measures (Brinkborg *et al*, 2011), and two reported only pre-intervention and follow-up outcome measures (Emery, 2012; Luoma & Vilardaga, 2013). The remaining four studies reported pre-intervention, post-intervention, and follow-up outcomes.

All but one study reported baseline comparisons between the intervention and control group and confirmed there were no significant differences at this point (five reported outcome measure comparability, two reported demographic comparisons). Lloyd *et al* (2013) did not report baseline comparisons for the total sample but did report comparability between the intervention and control baseline measures related to attrition.

Intervention characteristics.

It was not possible to compare the content of the interventions or which ACT processes were targeted, as the intervention protocols were not available for all studies. The protocol was outlined in one study (Bethay, 2013). Frögéli, *et al* (2016) provided an internet link but the protocol could not be retrieved. One study did not reference the intervention outline but it was delivered by Steven C Hayes, who is largely credited with the development of the ACT model (Louma, & Vilardaga, 2013). The remaining studies referenced previous work drawn upon to develop their intervention, but no outlines were given to determine which aspects were included or omitted. As reported earlier, the length and frequency of the interventions were diverse.

Burnout measures.

The majority of the studies (n = 7) used the Maslach Burnout Inventory (MBI; Maslach *et al*, 1996) to measure burnout. The MBI contains three subscales: emotional exhaustion (EE), depersonalization (DP) and personal accomplishment (PA). High scores equate to high burnout except for personal accomplishment where high scores relate to high accomplishment. The included studies reported the MBI results differently with three approaches: separate subscales, combined subscales, and total score. One article used the Scale of Work Engagement and Burnout (SWEBO; Hultell & Gustavsson, 2010) rather than the MBI. The SWEBO contains two subscales, one measuring burnout and the other measuring work engagement. In both subscales high scores indicate high occurrence. One article used the Burnout Believability Scale (BBS; Bethay et al, 2013) in addition to the MBI. The BBS was adapted from the MBI to assess the believability of selected items.

Impact of ACT on burnout.

Seven of the studies reported a statistical improvement in at least one measure of burnout compared to controls from baseline to post-intervention or follow-up (i.e. all except Bethay

et al 2013). Two of the six studies which reported post-intervention and follow-up data, found that improvement on the burnout measures from post-intervention were maintained at follow-up (Hayes, *et al* 2004; Lloyd, *et al* 2013).

Effect size (ES).

Effect size was calculated to provide a common metric for comparison. Cohen's *d* was calculated for each burnout measure based on between group measures at follow-up for all studies apart from Brinkborg *et al* (2011) where only post-intervention scores were available. Table 3 reports the obtained effect sizes. Meta-analysis was considered but was not judged appropriate due to the heterogeneity of the participant populations and the intervention: comparators, formats and unconfirmed content.

Most observed MBI ESs were in the predicted direction (reduced EE and DP, increased PA, noting Hayes *et al* [2004] reverse scored PA for analysis i.e. low score relate to high accomplishment) and were small or moderate in size (0.2-0.5; Cohen 1988, cited in Ellis, 2010:41). The SWEBO study (Frögéli, 2016) revealed a large ES in favour of ACT with the efficacy sample. The exceptions to the ES directions were: Brinkborg *et al* (2011), personal accomplishment was lower in the ACT condition; Luoma and Vilardaga (2013), burnout (combined EE &DP) was higher in the ACT condition with telephone consultation; and Bethay *et al* (2013), depersonalisation was higher in the ACT condition and personal accomplishment was lower.

The study reporting the largest effect (*d*= 2.5; Frögéli, 2016) utilised a student nurse sample with six 2 hour group sessions but there was no effect with the ITT analysis. However, the ITT may be overly conservative given the high attrition rate. A large effect was also reported in depersonalisation following three 3 hour combined intervention sessions with direct care

staff and teachers (Bethay *et al* 2013), but this was in favour of the active control. The studies reporting a medium effect in burnout scores (MBI total, MBI EE & DP combined) all utilised samples of counsellors and health and social care staff. These studies employed both waiting-list and active control comparisons. The remaining professional groups: teachers and government staff unspecified, revealed small ES.

Table 3

Effect Size of Burnout Measures Between ACT Intervention and Control Groups

	MBI EE	MBI DP	MBI PA	MBI EE & DP	MBI Total	BBS	SWEBO
			Therapists				
Hayes (2004) Multicultural training			-0.04**	-0.57			
Hayes (2004) Educational training			-0.47**	-0.62			
Luoma (2007)			0.40	-0.53			
Luoma (2013)			0.38	0.1			
			Health Social Care Staff				
Bethay (2013)	-0.09	0.96	- 0.06			-0.13	
Brinkborg (2011)*	-0.33	-0.32	-0.47		-0.52		
Frögéli (2016) intention to treat							0
Frögéli (2016) efficacy sample							-2.50
			Teachers				
Emery (2012)					-0.16		
			Government Staff				
Lloyd (2013)	0	-0.18					

Note: BBS = Burnout Believability Scale, MBI = Maslach Burnout Inventory, MBI subscales: EE = emotional exhaustion, DP = depersonalization, PA = personal accomplishment. SWEBO = burnout subscale of Scale of Work Engagement and Burnout.
Hayes (2004) utilised two active control comparators.
* baseline to post-intervention effect size.
** MBI PA scores are reversed so negative denote improved PA

Theory of change.

Due to the largely unknown content of the ACT interventions, a focus on the theoretical processes of ACT interventions was examined as part of the evidence synthesis of this review. This was done to ascertain if the intervention was affecting the specific processes of change identified within the ACT model. Two studies (Luoma *et al,* 2007; Bethay *et al,* 2013) did not include process measures. The remaining six studies included process measures of acceptance and action, believability, values, or mindful awareness. Of the four studies measuring acceptance and action using the Acceptance and Action Questionnaire (AAQ), one study (Brinkborg *et al,* 2011) reported no significant interaction between acceptance and burnout scores. But, AAQ scores were high pre-intervention so there was little room for improvement (the mean score equated to 71% of the possible AAQ total score). In mediation analysis, acceptance was found to account for variance in burnout scores in two of the studies (Emery, 2012; Lloyd *et al,* 2013). Luoma and Vilardaga (2013) reported increased acceptance and action over time with large between group effects in favour of the intervention. However, they did not analyse the interaction of acceptance with burnout. One study measured the importance and commitment to personal values, but this did not explain variance in burnout (Emery, 2012). Frögéli *et al,* (2016) reported that changes in burnout were mediated by experiential avoidance and mindful awareness. The believability of stigmatizing attitudes as a process measure was reported as a mediator between ACT and burnout (Hayes *et al,* 2004). While Bethay *et al* (2013) did not collect process measures they did provide an intervention protocol consistent with ACT. Thus, providing further support for the intervention in the studies reviewed operating through the theoretical processes of ACT.

Discussion

This review examined the current research evidence for the effectiveness of ACT based interventions in reducing burnout in staff groups. A systematic search strategy was employed, identifying eight research studies for inclusion in the review. The ACT interventions were varied in delivery format yet all had a statistically significant impact on burnout compared to both waiting-list and active controls. The interventions returned effects in favour of ACT in the majority of subscales measured across studies. There was moderate support for ACT based interventions to reduce burnout, across a range of professional settings.

The weight of the evidence reviewed here was in favour of ACT being an effective intervention to target burnout in staff groups. However, the effect size was never more than moderate when measured using the MBI and was often small. A narrative approach was adopted for this review due to the heterogeneity of the ACT intervention formats in the included studies; specifically the unquantifiable variability between interventions, as protocols were largely unavailable and studies combining intervention designs. While there were similarities between studies, combining the results would not have been meaningful. Nonetheless, all of the studies reviewed were controlled trials, and all but one were randomised, lending strength to the evidence base. The ACT interventions did have a statistically significant impact on burnout as compared to controls and the interventions yielded effects in favour of ACT in the majority of subscale measures across studies. However, the specific content of the ACT interventions was largely unclear and process measures were not routinely used. Therefore, there is limited evidence from which to promote a definitive conclusion that ACT is an effective intervention in terms of reducing staff burnout.

While the heterogeneity in the professions studied prevents firm conclusions being drawn about the effectiveness of ACT within a particular professional group, it does on the other hand allow for preliminary conclusions about broad applicability across staff groups.

Quality

The quality of studies reviewed was fair as rated by the QATSDD; implying the findings were moderately robust in this respect. The majority of studies were thorough and explicit in the theoretical framework and research design but had low sample sizes or high attrition. Measurement bias was low given the self-report nature and choice of the MBI 'gold standard' burnout measure (Maslach, *et al*, 2009) in all but one study. In addition to the QATSDD rating a bias section was included. The randomisation method was not explicit or was invalid for the majority of studies. The risk of bias from non-blinding of participants and researchers was unclear but assumed to be moderately high across all included studies. The theoretical underpinnings of ACT are explicit in the interventions. The impossibility of blinding participants and researcher when the therapy involves engagement with the theoretical rationale has been acknowledged (Button & Munafo, 2015). This is reflective of challenges faced by psychotherapy research generally and does not set ACT apart from other psychological models in terms of the strength with which conclusions can be drawn.

Impact of ACT on burnout

Due to varied reporting of statistical significance in the analyses, effect sizes were calculated to examine the practical significance through a common comparator. All included studies found an effect in favour of the ACT intervention on one or more subscale. The studies observing large or medium effects in burnout scores in favour of ACT all employed samples of health and social care staff. This is pertinent given the deleterious impact of burnout on

staff and service-users in this population, as discussed earlier. These studies incorporated varied control conditions and had divergent interventions formats. Thus, the effectiveness of ACT interventions in reducing self-reported burnout scores in health and social care staff populations seems robust regardless of the delivery format.

Statistically significant results and effect sizes in favour of ACT were observed across both active and inactive control groups. Button and Munafo (2015) assert comparison with waiting-list likely overestimates effectiveness, whereas comparison with active controls likely underestimates effectiveness. As the included studies contained active and inactive controls this potentially provides balance to the evidence. As the waiting-list and active control groups both revealed statistically significant improvements in burnout scores, concerns about non-specific therapeutic effects are less indicated.

Of the studies reporting improved burnout scores being maintained at follow-up, the interventions varied from a one day workshop to three 3 hour sessions. Maintenance was observed over waiting-list and active control. Therefore, it is suggestive that the format of the intervention did not impact the effectiveness of the intervention to maintain significant at follow-up.

From the included studies, both face-to-face and telephone ACT-based continued input had an effect on burnout subscales. The implication is that continued input or refresher sessions could be provided in flexible ways to meet the needs and possible constrains of different services. Consistent with these findings, Awa *et al,* (2010) conclude in their review of burnout prevention that intervention programmes are beneficial and can be enhanced with refresher sessions.

Professional role and efficacy

There appears to be an impact of professional role with personal accomplishment. Half of the studies that found no effect for ACT were within the subscale personal accomplishment (PA) and involved frontline care staff: direct care staff and social workers. Whereas, studies reporting an effect in favour of ACT within PA all utilised staff holding therapy roles: substance abuse counsellors and therapists. Adams *et al's* (2016) systematic review of burnout in different professions observed lower burnout in the PA domain for counsellors than social workers. They considered that counsellors work in more limited contexts with smaller groups of people and inbuilt boundaries which may be protective in relation to burnout; whereas social workers experience challenges in relation to their role and complexity, conflict and ambiguity (Adams *et al,* 2016). Thus, personal efficacy may relate to professional role and be influential in the success of interventions. Previous research has also observed significant differences in personal efficacy across different staff positions and occupational settings (Ray *et al*, 2013). This observation is suggestive that professional role may moderate the impact of interventions such as ACT targeting burnout, particularly for the PA domain.

Wider research has considered the role of training in promoting professional self-efficacy and possibly reducing the risk of burnout. Jennett *et al* (2003) found factors including commitment to philosophy and teaching orientation were predictive of burnout in teachers undertaking training in approaches including ABA. Within the current review, the largest effect in favour of control related to depersonalisation and was in favour of an active control: ABA training (Bethay *et al,* 2013), representing a large ES. The intervention was delivered to direct care staff and teachers. Thus, interventions that impact one's professional efficacy may also impact burnout. But the comparison between ACT and control interventions

targeting professional self-efficacy as approaches to address burnout requires further investigation.

Theory of change

Understanding the theory of change was considered valuable in the context of the heterogeneity of the sample population and intervention design. Process measures were examined to determine if ACT was effective through its theoretical processes. The ACT model is based on six interrelated therapeutic processes: acceptance, cognitive defusion, being present, self as context, values, and committed action. Despite notable differences between the included studies, the theory of change in the ACT model was partially supported. In line with the ACT theoretical assertion, measures of: acceptance and action, believability, and mindful awareness, were found to account for variance in burnout measures in the ACT intervention groups. The therapeutic process of values was not uniquely associated with burnout within this review. Therefore, the ACT interventions reviewed appear to work through the theoretical processes ACT is based on. While this provides a reassuring indication that aspects of the ACT model are therapeutically targeted, the process areas were not consistently measured and reported. Few studies reported multiple processes so the strength and interaction effects of the model components are not possible to comment on.

ACT in the wider context

The findings in this review are reflective of ACT interventions in the wider literature. A previous empirical review of ACT across diverse research designs and target conditions, summarised ACT as superior to control and treatment as usual, but that further evidence was required to determine ACT's impact against established treatments (Ruiz, 2010). Further reviews have stated that there is sufficient quality evidence using ACT for the treatment of

OCD, chronic pain, and anxiety disorders; but that for other conditions, the evidence is not yet conclusive (Smout *et al*, 2012). Thus, the current review does indicate the efficacy of ACT approaches for addressing burnout but findings are preliminary.

Although there was incomplete reporting of reasons for attrition, one study reported a high number of participants within a sample of social workers citing workload pressures (Brinkborg *et al,* 2011). As part of an evidence review into burnout among high risk individuals, workload pressure and workload practice have been associated with burnout (PHE, 2016). Social workers have been identified as particularly vulnerable to burnout (Onyett, 2011).Reid *et al* (1999) identified overload and administrative demands as a major source of stress for mental health professionals, especially nurses and social workers. Future research needs to be vigilant for the crossover of burnout correlates impacting upon attrition. Thus, consideration as to how to facilitate staff to access interventions in high risk professions where demands may be high is warranted. Furthermore, Bethay *et al* (2013) only found a statistically significant impact of ACT on burnout when participants were stratified by distress. Thus, those with increased distress warrant further attention but may be absent from studies due to attrition.

Strengths and limitations of the review

This review has a number of strengths and limitations. A second researcher was able to cross check a sample of screened articles but it is acknowledged this is not ideal and a second researcher to search and extracted all data would have been preferable. Nonetheless, there was total agreement between researchers on the crosschecked sample and good agreement between researchers on the quality assessment crosschecked sample. The quality tool QATSDD did provide valuable information about the quality of included studies but it was limited as it did not fully address bias; however this was mitigated by addressing bias

separately. The sample sizes for all studies were modest, which limits the possible conclusions that can be derived from the research without meta-analysis. With small sample sizes, any difference between intervention and control risks being due to chance, or important differences being missed (Bland, 2008). Although there was variability in the ACT interventions the studies were similar in many aspects and notably all were controlled trials which lends to the strength of the evidence.

Future Research

There has been some support for the efficacy of ACT in reducing self-reported levels of burnout. However, the interventions discussed within this review varied greatly in delivery format and the content was not explicit. Future research would benefit from investigating a standardised ACT intervention protocol across different settings, or explicitly acknowledging which ACT processes were targeted. This may allow for meaningful future meta-analysis. A protocol identifying which processes of ACT were targeted (e.g. Flaxman *et al*, 2013) would be beneficial from a research perspective. Furthermore, including process measures and their interaction with burnout measures would be valuable in establishing the effectiveness of the ACT interventions. Additionally, the included studies had small sample sizes, so larger studies are indicated. As burnout is highly prevalent for mental health professionals, further research in this population would be beneficial; especially considering the possible additive benefit of positive service-user effects from staff based interventions (Stafford-Brown & Pakenham, 2012). Moreover, issues relating to staff burnout directly impact the NHS; the Francis report (2013) highlighted the central importance of delivering compassionate care, while the Boorman report (DoH, 2009) identified the link between staff wellbeing and NHS service quality.

Clinical Relevance

The BPS and New Savoy Partnership 'charter for psychological staff wellbeing and resilience' endorse that "*professionals delivering frontline services should expect to be well supported in their important work*" (BPS, 2016). The findings from this review offer some support for the further development and application of ACT with health and social care staff including psychological therapists. Working in multidisciplinary teams is becoming more prevalent in mental health services and is identified in New Ways of Working: Working Psychologically in Teams (BPS, 2007). Thus, there is a responsibility towards the wellbeing of the team and leadership of the team function. The relevance to leadership of addressing burnout is clear given the association between supporting staff wellbeing and improved service quality, patient care, and reduced staff absence (DoH, 2009). The review also indicates the flexible delivery formats of the ACT intervention, permitting adaptation to different clinical settings. The potential for ACT interventions to benefit service-users as well as clinicians within a mental health setting is indicated. As Strosahl, *et al* (1998) have demonstrated the clinical utility of training therapists in ACT as beneficial for service-users and staff. Additionally, ACT-informed stress management programmes have indicated improved positive therapist qualities (Stafford-Brown & Pakenham, 2012). The heterogeneity of the studies included in this review does reflect the flexible ways in which ACT interventions for burnout could be delivered and adapted for different services. Moreover, all interventions were delivered in a group format which holds additional benefits to efficiently supporting staff. Additionally as there was heterogeneity in the professions reviewed it is suggestive of broad applicability across staff groups, which again holds promise for the efficacy of ACT for burnout in different team configurations and the wider applicability of the intervention.

Conclusion

There is cautious optimism that ACT-based interventions may have the potential to decrease burnout. But there is insufficient evidence at this time to identify ACT as a treatment of choice for burnout. While further large scale studies with treatment protocols are required, ACT is a promising area of further exploration in the field of burnout.

References

Adams, C. J., Hough, H., Proeschold-Bell, R. J., Yao, J., & Kolkin, M. (2016). Clergy burnout: A comparison study with other helping professions. *Pastoral Psychology*, doi:10.1007/s11089-016-0722-4

Awa, W. L., Plaumann, M., & Walter, U. (2010). Burnout prevention: A review of intervention programs. *Patient Education and Counseling 78.* 184–190. doi:10.1016/j.pec.2009.04.008

Bethay J, S, Wilson, K, G, & Moyer, K. H. (2009), Acceptance and Commitment Therapy Training for Work Stress and Burnout in Mental Helath Direct Care Providers. In: J. T. Blackledge, J. Ciarrochi, & F. P. Deane. (Editors) *Acceptance and Commitment Therapy: Contemporary Theory, Research and Practice*. (pp.223 – 246) Brisbane: Australian Academic Press.

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*(2), 113-121. doi:10.1007/s12671-012-0103-8

Bland, M. (2008, July) *Some Problems with Sample Size.* Paper presented at the Joint Meeting of the Dutch Pathological Society and the Pathological Society of Great Britain & Ireland, Leeds UK.

Bond, F. W. (2004). Acceptance and Commitment Therapy for stress. In S. C. Hayes & K. D. Strosahl (Eds.), *A practical guide to Acceptance and Commitment Therapy*. 275-293. New York: Springer.

Bond, F. W., & Hayes, S. C. (2002). ACT at work. In Bond, F. B. & Dryden, W. (Eds) *Handbook of Brief Cognitive Behaviour Therapy*, 117-140. Chichester: John Wiley & Sons.

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*(6-7), 389-398. doi:10.1016/j.brat.2011.03.009

British Psychological Society. (2007). *New Ways of Working for Applied Psychologists in Health and Social Care Working Psychologically in Teams*. Leicester: British Psychological Society.

British Psychological Society (2016), *Charter for Psychological Staff Wellbeing and Resilience.* Retrieved from http://www.bps.org.uk/system/files/Public%20files/Comms-media/press_release_and_charter.pdf

Button, K, S., Munafo, M. R. (2015). Addressing risk of bias in trials of cognitive behavioral therapy. *Shanghai Archives of Psychiatry, 27(3).* 144-148. doi: 10.11919/j.issn.1002-0829.215042

Department of Health, (2009). *NHS Health and Well-being. Final Report, November 2009.* London: Department of Health.

Ellis, P. D. (2010) *The Essential Guide to Effect Sizes*. Cambridge: Cambridge University Press.

Emery, D. W. (2012). *Crisis in education: A call to ACT*. (72), ProQuest Information & Learning, US. Retrieved from http://liverpool.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2012-99100-581&site=ehost-live&scope=site Available from EBSCOhost psyh database.

Fenton, L., Lauckner, H., & Gilbert, R. (2015). The QATSDD critical appraisal tool: comments and critiques. *Journal of Evaluation in Clinical Practice*. *21*. 1125-1128. doi:10.1111/jep.12487

Fife-Shaw, C. (2000). Quasi-experimental designs. In. M. Breakwell, S. Hammond & C. Fife-Schaw (Eds). *Research Methods in Psychology*. (pp. 75-88). London: Sage Publications.

Flaxman, P. E., Bond, F. W., & Livheim, F. (2013). *The Mindful and Effective Employee*. Oakland: New Harbinger Publications Inc.

Francis R (2013). *Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry*. London: The Stationery office.

Frögéli, E., Djordjevic, A., Rudman, A., Livheim, F., & Gustavsson, P. (2016). A randomized controlled pilot trial of acceptance and commitment training (ACT) for preventing stress-related ill health among future nurses. *Anxiety, Stress and Coping, 29*(2), 202-218. doi:10.1080/10615806.2015.1025765

Harris, R. (2006). Embracing your demons: an overview of acceptance and commitment therapy. *Psychotherapy in Australia, 12(4)*. 1-8.

Hayes, S. C., Bissett, R., Roget, N., Padilla, M., Kohlenberg, B. S., Fisher, G., . . . Niccolls, 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*(4), 821-835. doi:http://dx.doi.org/10.1016/S0005-7894(04)80022-4

Hayes, S. C., Luoma, J. B., Bond, F. W., Masuda, A., & Lillis, J. (2006). Acceptance and Commitment Therapy: Model, processes and outcomes. *Behaviour Research and Therapy, 44*1-25. doi:10.1016/j.brat.2005.06.006

Hultell, D., & Gustavsson, J. (2010). A psychometric evaluation of the Scale of Work Engagement and Burnout (SWEBO). Work, 37(3), 261-274. doi:10.3233/wor-2010-1078

Jambrak, J., Deane, F. P., & Williams, V. (2014). Value motivations predict burnout and intentions to leave among mental health professionals. *Journal of Mental Health, 23*(3), 120-124 5p. doi:10.3109/09638237.2013.869576

Jennett, H. K., Harris, S. L., & Mesibo, G. B. (2003). Commitment to Philosophy, Teacher Efficacy, and Burnout Among Teachers of Children with Autism. *Journal of Autism and Developmental Disorders, 33(6).* 583-593.

Kowalski, C., Driller, E., Ernstmann, N., Alich, S., Karbach, U., Ommen, O., & ... Pfaff, H. (2010). Associations between emotional exhaustion, social capital, workload, and latitude in decision-making among professionals working with people with

disabilities. *Research in Developmental Disabilities, 31*470-479. doi:10.1016/j.ridd.2009.10.021

Lizano, E. L. (2015). Examining the Impact of Job Burnout on the Health and Well-Being of Human Service Workers: A Systematic Review and Synthesis. *Human Service Organizations Management Leadership & Governance, 39*(3), 167-181.

Lloyd, J., Bond, F. W., & Flaxman, P. E. (2013). The value of psychological flexibility: Examining psychological mechanisms underpinning a cognitive behavioural therapy intervention for burnout. *Work and Stress, 27*(2), 181-199. doi:10.1080/02678373.2013.782157

Luoma, J. B., Hayes, S. C., Twohig, M. P., Roget, N., Fisher, G., Padilla, M., …& Kohlenberg, B. (2007). Augmenting continuing education with psychologically focused group consultation: Effects on adoption of group drug counseling. *Psychotherapy, 44*(4), 463-469. doi:10.1037/0033-3204.44.4.463

Luoma, J. B., & Vilardaga, J. P. (2013). Improving Therapist Psychological Flexibility While Training Acceptance and Commitment Therapy: A Pilot Study. *Cognitive Behaviour Therapy, 42*(1), 1-8. doi:10.1080/16506073.2012.701662

Marine, A., Ruotsalainen, J. H., Serra, C., & Verbeek, J. H. (2009). Preventing occupational stress in healthcare workers . *Cochrane Database of Systematic Reviews 2009(1)*. 1-42. doi:10.1002/14651858.CD002892.pub2.

Maslach, C. (1982), *Burnout- The cost of caring*, London: Prentice-Hall International.

Maslach, C., & Goldberg, J. (1998). Prevention of burnout: new perspectives. *Applied and Preventative Psychology, 7*. 63-74.

Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). The Maslach Burnout Inventory (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.

Maslach, C., Leiter, M., & Schaufeli, W. B. (2009) Measuring burnout, In S. Cartwright * C. L. Cooper (Eds). *The Oxford Handbook of Organizational Well-being.* (pp. 86-108) Oxford: Oxford University Press.

Moran, D. J. (2015). Acceptance and Commitment Training in the workplace. *Current Opinion in Psychology, 2.* 26-31.

McConachie, D. A. J., McKenzie, K., Morris, P. G., & Walley, R. M. (2014). Acceptance and mindfulness-based stress management for support staff caring for individuals with intellectual disabilities. *Research in Developmental Disabilities, 35*(6), 1216-1227. doi:http://dx.doi.org/10.1016/j.ridd.2014.03.005

Morse, G., Salyers, M., Rollins, A., 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 And Mental Health Services Research, 39*(5), 341-352. doi: 10.1007/s10488-011-0352-1.

O'Connor, S. R., Tully, M. A., Ryan, B., Bradley, J. M., Baxter, G. D., & McDonough, S. M. (2015). Failure of a numerical quality assessment scale to identify potential risk of bias in a systematic review: a comparison study. *BMC Research Notes, 8(1),* 224-230. doi:10.1186/s13104-015-1181-1

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

Public Health England. (2016). *Interventions to prevent burnout in high risk individuals: evidence review*. London: Public Health England.

Ray, S. L., Wong, C., White, D., & Heaslip, K. (2013). Compassion satisfaction, compassion fatigue, worklife conditions, and burnout among frontline mental health care professionals, *Traumatology,* published online 9 January 2013, DOI: 10.1177/1534765612471144

Ruiz, F. (2010). A review of acceptance and commitment therapy (ACT) empirical evidence: Correlational, experimental psychopathology, component and outcome studies. *International Journal of Psychology and Psychological Therapy, 10(1),* 125-162.

Sagiv, L., & Schwartz, S. (2000). Value priorities and subjective well-being: Direct relations and congruity effects. *European Journal of Social Psychology, 30(2),* 177-198

Schaufeli, W. B., & Buunk, B. P. (2003). Burnout: An overview of 25 years of research and theorizing. In M. J. Schabracq, J. A. M. Winnubst, & C. L. Cooper (Eds). *The handbook of work & health psychology, Second edition.* (pp. 383-425). Chichester: John Wiley & Son.

Schaufeli, W. B., & Van Dierendonck, D. (1995). A cautionary note about the cross-national and clinical validation of cut-off points for the Maslach Burnout Inventory., *Psychological Reports, 76*. 1083-1090.

Sirriyeh, R., Lawton, R., Gardner, P., & Armintage, G. (2011). Reviewing studies with diverse designs: the development and evaluation of a new tool. *Journal of Evaluation in Clinical Practice. 18.* 746-752. doi: 10.1111/j.1365-2753.2011.01662.x

Smout, M. F., Hayes, S. C., Atkins, P. W. B., Klausen, J., & Duguid, J. E. (2012). The empirically supported status of acceptance and commitment therapy: An update. *Clinical Psychologist. 16(3).* 97-109. doi: 10.1111/j.1742-9552.2012.00051.x

Stamm, B. H. (2010). *The Concise ProQOL Manual*, 2nd Edition, Pocatello, ID: ProQOL.org.

Stafford-Brown, J., & Pakenham, K. I. (2012). The Effectiveness of an ACT Informed Intervention for Managing Stress and Improving Therapist Qualities in Clinical Psychology Trainees. *Journal of Clinical Psychology, 68*(6), 592-513. doi:10.1002/jclp.21844

Strosahl, K. D., Hayes, S. C., Bergan, J., Romano, P., (1998). Assessing the field effectiveness of acceptance and commitment therapy: An example of the manipulated training research method. *Behavior Therapy, 29*(1), 35-64. doi:10.1016/S0005-7894(98)80017-8

Veage, S., Deane, F. R., Andresen, R., Oades, L. G., Crowe, T. P., & Ciarrochi, J. (2014). Value congruence, importance and success and in the workplace: Links with well-being and burnout amongst mental health practitioners. *Journal of Contextual Behavioral Science, 3(4),* 258-264. doi:10.1016/j.jcbs.2014.06.004

Vilardaga, R., Luoma, J. B., Hayes, S. C., Pistorello, J., Levin, M. E., Hildebrandt, M. J., Kohlenberg, B., Roget, N. A., Bond, F. (2011), Burnout among the addiction counselling workforce: The differential roles of mindfulness and values-based processes and work-site factors. *Journal of Substance Abuse Treatment, 40(4).* 323-35. doi: 10.1016/j.jsat.2010.11.015.

Empirical Chapter[2]

Person-job congruence, compassion and recovery attitude in Community Mental Health Teams

January 2017

Submitted in partial fulfilment of the degree of Doctorate in Clinical Psychology,

University of Liverpool

[2] Written as for the journal Applied Psychology: Health and Wellbeing.

Abstract

Background, Community Mental Health Team (CMHT) staff are vulnerable to burnout and compassion fatigue, which has implications for service-user care and recovery outlook. Burnout itself is reduced when professionals perceive that there is high congruence between themselves and their job. The research aimed to identify how person-job congruence is associated with compassion fatigue and compassion satisfaction and how these in turn are related to staff recovery attitudes. **Method**, A cross-sectional survey of 132 CMHT staff, utilising the Areas of Worklife Scale (AWS: Leiter & Maslach, 2011), Professional Quality of Life Scale (ProQoL; Stamm 2010) and Recovery Knowledge Inventory (RKI; Bedregal *et al*, 2006). **Results,** Multiple regression analysis revealed negative associations between 'Workload' congruence and Secondary Traumatic Stress ($p = .001$). Low congruence in 'Workload' ($p = <.001$) 'Reward' ($p = .005$) and 'Values' ($p = .005$) were associated with increased Burnout. 'Workload' congruence was positively associated with Compassion Satisfaction ($p = .041$). Compassion Satisfaction and Compassion Fatigue were not significantly associated with recovery attitude. **Conclusions,** Interventions to address compassion fatigue are indicated to target: workloads, increasing rewards, and organisational and personal values being aligned. Further research is needed to identify broader predictors of compassion satisfaction and recovery attitude.

Keywords: Community Mental Health Team, CMHT, compassion satisfaction, compassion fatigue, recovery.

Introduction

Across the literature base, burnout in mental health professionals has been negatively associated with service delivery quality and staff and client outcomes. Burnout is defined as, "*a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do 'people work*'…" (Maslach 1982:3). Estimates indicate that 40% of UK mental health professionals experience occupational distress (Evans *et al.,* 2006; Hannigan *et al,* 2004), and between 21-67% of mental health workers experience high levels of burnout (Morse *et al,* 2012). UK mental health services staff, report greater burnout than European counterparts (Hill *et al,* 2006). Working in an English Community Mental Health Team (CMHT) has been associated with increased emotional strain as compared to other English mental health services (Johnson *et al,* 2012; Nelson *et al,* 2009). The individual costs of burnout can present through: affective, cognitive, physical, behavioural, and motivational difficulties for staff (Schaufeli & Buunk, 2003). Staff burnout also impacts on service delivery. The Boorman report (Department of Health [DoH], 2009a) links staff health and wellbeing to the three dimensions of NHS service quality: patient safety, patient experience and the effectiveness of patient care. Similarly, Kowalski *et al* (2010) found staff burnout was associated with lower service-user safety. Equally, the New Savoy Partnership and British Psychological Society comment that workplace culture impacts upon staff wellbeing (Saleem *et al,* 2016). The joint Charter for Psychological Staff Wellbeing and Resilience, calls for greater support of staff wellbeing, stressing the subsequent impact on sustainable services that most benefit the service-users they serve (British Psychological Society [BPS], 2016). Reducing burnout, therefore, has the potential for improving staff wellbeing, care quality, and service-user outcomes.

Though burnout and emotional burden can be high, CMHT staff can simultaneously experience high job satisfaction derived from service-user contact and team working (Lasalvia *et al.,* 2009; Onyett, 2011; Reid *et al,* 1999). Positive Clinical Psychology gives

equal focus to positive and negative aspects of distress, its understanding, and treatment (Wood & Tarrier, 2010). In line with this, the current study sought to broaden current understanding by assessing both the positive and negative aspects of CMHT work. The ProQoL framework (Stamm, 2010) incorporates Burnout and Secondary Traumatic Stress, under the superordinate construct of "Compassion Fatigue" and also includes a positive dimension reflecting the pleasure derived from doing one's job well captured by "Compassion Satisfaction". Compassion in this model is described as: "*bearing the suffering of others*" (Figley, 2002:1434). Rather than forming binary opposites, compassion satisfaction and compassion fatigue are considered independently. Nonetheless, professionals with higher levels of compassion satisfaction appear less affected by compassion fatigue (Ray *et al*, 2013). Significantly, the importance of compassionate care and strong leadership were central to the Francis Report (2013) recommendations. In a response to the Francis Report, Evans (2014) posits that the mechanisms for reflection and containment for staff have been eroded resulting in reduced staff capacity for compassionate care. Evans (2014) also proposes that targets, austerity and internal markets may have contributed to organisational 'survival anxiety' and created an unexpressed resentment towards service-users and the organisation by health care staff as they are uncared for themselves. This suggests that capacity for compassionate care is bound within the environment from which it is provided. The systemic culture is centrally important especially considering health care commentators assert that *"Culture eats strategy for breakfast, every day, every time"* (Davies, 2002:142).

It has been proposed that wider system changes are required as clinicians cannot sustain their wellbeing through individual changes alone (Killian, 2008). Through reviewing correlates of burnout, Maslach and Leiter (1997; as cited in Leiter & Maslach, 2004) propose a model that emphasises the individual's appraisal of perceived person-job congruence (or match) across six 'areas of Worklife': (a) **Workload**: the amount of work to be done in a given time that is

manageable, (b) **Control**: the opportunity to make choices and decisions that correspond with the accountability for the work, (c) **Reward**: the recognition and reward received for contributions to work, (d) **Community**: the quality of the social environment, (e) **Fairness:** the consistency and equity of rules and resources, and (f) V**alues**: the congruence between organisational and staff values or organisational commitment to its values. Within these six areas, greater perceived person-job congruence is associated with greater likelihood of work engagement, and reduced likelihood of burnout. Similarly, when perceived person-job congruence is low, burnout is more likely. Importantly, subjective perceptions of fit are considered better predictors than actual fit between individuals and their environment (Cable & DeRue, 2002). The Worklife areas Workload, Fairness, and Control have been significantly associated with burnout amongst Italian CMHT staff (Lasalvia *et al,* 2009). Further exploration of these relationships is merited in a UK sample where service and cultural factors may differ significantly. UK psychologists have also reported increasing concerns about workload in relation to wellbeing (Saleem *et al,* 2016).

Burnout raises risks for service-users due to the development of negative attitudes towards service-users (Schaufeli & Buunk, 2003). One risk may include negative attitudes toward recovery philosophy. Recovery is a key concept in mental health and explicit in government strategy (DoH 2009b; DoH 2012) which recommends a focus on: choice, recovery, and personalisation. Anthony (1993) describes recovery as a multi-dimensional concept incorporating: a personal and unique process of changing one's attitudes, values, goals and roles; where an individual develops a new meaning, to live a satisfying, hopeful and contributing life, although the limitations caused by the illness may remain. In relation to compassion, Oades, Walker, and Fisher (2011) have found a negative association between burnout and attitudes towards recovery. Attitude is defined as "*a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor*" (Eagly & Chaiken, 1993:1). Favour towards recovery domains can therefore be considered to reflect

a positive recovery attitude. Furthermore, Spandler and Stickley (2011) assert that cultivating compassion is a prerequisite for environments aiming to foster hope and recovery. Understanding staff recovery attitudes is important to engendering the recovery philosophy.

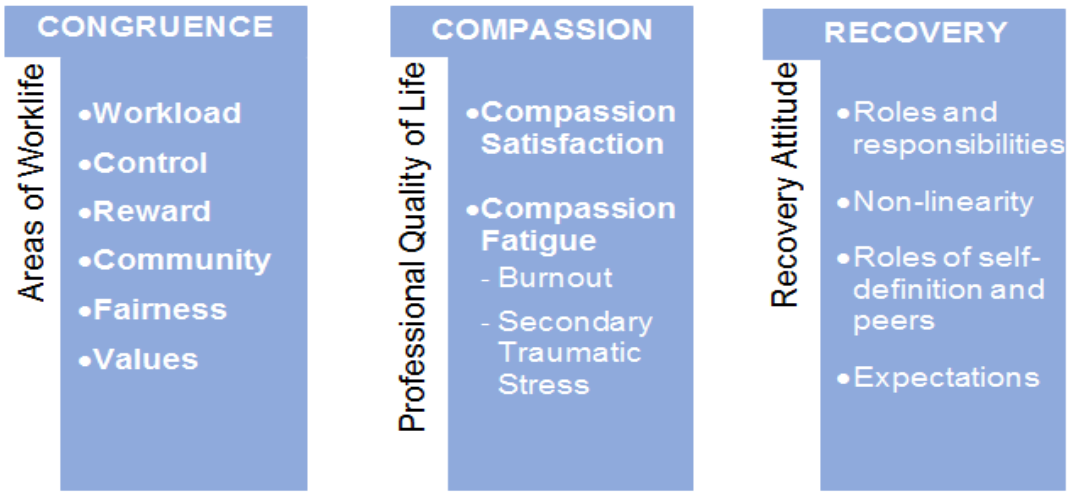
Clinical psychology has a role in supporting frontline mental health staff within CMHTs. The impetus for psychologists to assess, formulate and intervene both individually and within service systems is explicit in clinical psychologists' competencies (BPS, 2006). Furthermore, within New Ways of Working: Working Psychologically in Teams (BPS, 2007) it is clearly stated that clinical psychologists need to provide consultancy: including leadership and teamwork development, and reducing staff burnout involving expression of and reflection of staff experience. Thus, the responsibility to bring psychological skills and understanding to the systemic working of the team is clear.

Aim and Objectives

Three potentially key and inter-related components of effective CMHT care have been identified: person-job congruence, compassion, and recovery attitudes (Figure 1). This study aimed to examine relationships between these three components to identify which aspects of congruence might be targeted to improve compassion and improve commitment to a recovery philosophy. The study objectives were twofold: (1) to examine the relationship between perceived person-job congruence and burnout (alongside other aspects of compassion). (2) to examine the relationship between burnout (alongside other aspects of compassion) and recovery attitude.

Figure 1

The components of: person-job congruence, compassion, and recovery attitudes



Hypotheses

1. Low person-job congruence will be associated with high Burnout and Secondary Traumatic Stress ('Compassion Fatigue').
2. Person-job congruence will be associated with high Compassion Satisfaction.
3. Higher Burnout and Secondary Traumatic Stress ('Compassion Fatigue') will be associated with lower endorsement of recovery-oriented attitudes.
4. Higher Compassion Satisfaction will be associated with greater endorsement of recovery-orientated attitudes.

Method

Procedure

The study was a cross sectional multisite questionnaire survey. Ethical approval and sponsorship were granted by the University of Liverpool. NHS approval was granted at each site. Potential participants were informed about the study in a brief presentation at each

CMHTs team meeting and, if they expressed interest and gave informed consent, were invited to participate through completing a questionnaire pack. Completed packs could be returned to the researcher or via post. Participants had the option to enter a prize draw in recognition of their efforts; teams were also entered into a second prize draw (appendix E).

Sample

The study population comprised of professionally qualified CMHT staff employed within three NHS trusts. An a-priori power calculation was computed to guide recruitment and sufficient power was achieved for the study to detect a medium effect size (Appendix D). Three NHS trusts in the North West of England hosted the research and all the CMHTs within the trusts were contacted. All professionally qualified staff working within the teams were eligible to participate. Sixteen teams responded and were visited; recruitment was conducted in fourteen generic CMHTs and two specialist CMHT (Early Intervention Service). Questionnaires were distributed to 217 staff with 132 returned (61% return rate). The data was collected between March and June 2016.

Measures

The questionnaire pack comprised: participant information sheet, consent form, prize draw information and the following measures (Appendices: G, H, I, J).

Areas of Work Life Scale

The Areas of Work Life Scale (AWS; Leiter & Maslach, 2011) is a 28 item questionnaire examining six domains of person-job congruence: Workload (five items), Control (four items), Reward (four items), Community (five items), Fairness (six items), and Values (four items). Items are scored on a 5-point Likert scale from one (strongly disagree) to five (strongly agree) with some reverse scored. High scores for all domains indicate greater

congruence. The scale yields good reliability (α = .70, .70, .82, .82, .82 and .73 respectively. In this study: α = .65, .77, .85, .84, .82, .62). Sample items include: Workload: 'I do not have time to do the work that must be done' (reversed score).

Professional Quality of Life Scale

The Professional Quality of Life Scale (ProQoL; Stamm, 2010) is a 30 item questionnaire assessing professional quality of life through three subscales (10 items each): Compassion Satisfaction, Burnout and Secondary Traumatic Stress, each with good reliability (α = .88, .75, and .81. In this study: α = .80, .82, .88). All items are scored on a 5-point Likert scale ranging from one (never) to five (very often) with higher scores indicating greater occurrence. Sample items include: Compassion Satisfaction: 'my work makes me feel satisfied'.

Recovery Knowledge Inventory

The Recovery Knowledge Inventory (RKI; Bedregal *et al*, 2006) is a 20 item questionnaire, developed to measure recovery-oriented knowledge and attitudes amongst care providers. The RKI examines four domains: Roles and responsibilities in recovery (seven items), Non-linearity of the recovery process (six items), Roles of self-definition and peers in recovery (five items), and Expectations regarding recovery (two items). Reliability is mixed (α = .81, .70, .63, .47 respectively. In this study α = .74, .62, .43, .39, with total scale α = .81) suggesting the need for caution in interpreting the subscale scores. All items are scored on a 5-point Likert scale from one (strongly disagree) to five (strongly agree) with some reverse scored. High scores indicate greater recovery knowledge and attitude. Sample items include: Non-linearity: 'symptom reduction is an essential component of recovery' (reversed score).

Demographic Survey

The demographic survey was generated from reviewing previous burnout research to ascertain possible covariates for inclusion in the analysis and identifying a representative sample. The survey therefore captured data on: age, gender, educational level, profession, type of employment (part-time, full-time or agency), caseload size, years of experience (in the profession and in the current setting), weekly overtime (hours), regularly taking a lunchbreak (yes/no), type of CMHT (generic / specialist) and the employing NHS Trust.

Data Analysis

Cut off scores were calculated for each questionnaire based on the respective manuals. For the AWS and ProQoL this reflects scores <25th percentile and >75th percentile based on normative data. The RKI cut scores reflect any deviation from the neutral score of 3 to reveal low or high scores.

A total score was calculated for the RKI for several reasons: previous research has reported RKI total scores (Meehan & Glover, 2009; Salgado *et al* 2010), there has been doubt raised about the four factor structure of the RKI (Wilryox *et al*, 2011; Happell *et al*, 2015) and the internal consistency of the RKI within the current study was more robust for the total score.

Relationships between the questionnaire subscales and demographic variables were examined to identify subscale correlations and identify covariates. Two sets of regression analyses were planned: (i) regressing the three ProQoL subscales on the six AWS subscales and (ii) regressing the four RKI subscales on the three ProQoL subscales. Only variables that were significant in correlation and t-tests were entered into the regression. Where identified, demographic covariates were entered at step one in sequential multiple regression as the

lesser set, and the main variables were entered at step two as the major set to evaluate the added prediction over covariance (Tabachnick & Fidell, 2007). Where there were no covariates identified simple multiple regression using enter method was calculated.

Results

There were 132 participants (95 female, 72%) from five professional groups: Nurses (52%), Social Workers (34%), Occupational Therapists (OTs: 8%), Psychiatrists (2%) and Psychologists (4%). The majority of participants were educated to undergraduate degree level or higher (77%). The majority of staff were within the following age ranges: 31-40 years (27%), 41-50 years (34%) and 51-60 years (23%). The sample were relatively well-established in their profession in the CMHT, measured in years of experience within their profession (M = 13.58, SD = 9.31) and years in the current setting (M = 6.44, SD = 6.03).

The means and standard deviations for the questionnaire factors are reported below (table 1). To provide context to these scores, the percentage of the sample who scored below cut-off (negative status for the subscale) and above cut-off (positive status for subscale) are presented. The AWS subscales indicate low congruence compared to norms in areas of Workload (58%), and Reward (30%); but high congruence in the areas of Control (56%), Community (56%) and Fairness (39%). Values was distributed in line with manual norms. Overall, respondents reported high ProQoL Burnout (32%) and Secondary Traumatic Stress (27%), with low Compassion Satisfaction (28%) compared to manual norms. Respondents also overall reported relatively positive recovery attitudes in two areas; ‘Roles and Responsibility’ (63%) and ‘Self-Definition’ (73%). And low recovery attitude in the areas: ‘Expectations’ (32%) and especially Non-linearity in recovery process (service-user recovery following an individual path) which was negatively endorsed (50% below cut-off).

Participants demonstrated high overall recovery knowledge and attitude for RKI total score (92% above cut-off).

Table 1.

Mean Scores, Standard Deviation and Cut Scores of the Variables

		Total (N =132)	
	M (SD)	below cut-off	above cut-off
AWS			
Workload	2.25 (0.64)	58%	5%
Control	3.16 (0.81)	6%	56%
Reward	3.08 (0.85)	30%	22%
Community	3.83 (0.66)	6%	56%
Fairness	3.10 (0.71)	11%	39%
Values	3.08 (0.71)	24%	24%
ProQoL			
Burnout	28.29 (5.75)	25%	32%
Secondary Traumatic Stress	23.14 (5.53)	21%	27%
Compassion Satisfaction	33.30 (5.86)	28%	21%
RKI			
Roles and Responsibilities	4.03 (0.59)	2%	63%
Non-Linearity	2.93 (0.57)	50%	5%
Self-Definition	4.12 (0.46)	1%	72%
Expectations	3.08 (0.92)	35%	23%
Total	3.63 (0.43)	7%	92%

Note. AWS = Areas of Worklife Scale, ProQoL = Professional Quality of Life, RKI = Recovery Knowledge Inventory.

Initial Data Analysis

Parametric assumptions for the data were met (see Appendix I). Correlations between the instrument subscales were examined to identify significant relationships (Table 2). All six AWS subscales were significantly correlated with the ProQoL subscales in the anticipated direction: Burnout (negatively) and Compassion Satisfaction (positively). Five of the AWS

subscales (all excluding Community), were significantly correlated with Secondary Traumatic Stress (negatively). Only Compassion Satisfaction was significantly correlated with the RKI total scale.

Correlations and ANOVAs between the dependent and demographic variables were examined to identify covariates. The variables: years in setting (r= .178, p= .041) and years in profession (r=.246, p= .005) were significantly correlated with Burnout and included in the regression model. There was also significant variance between profession and Burnout (F(4,127), 2.720, p= .033) where psychologists reported significantly lower Burnout than all other professions. As profession was a categorical variable with unequal categories it was not added to the regression. The variable years worked in current setting was significantly negatively correlated with Compassion Satisfaction (r= -.203, p= .020) and added to the regression model. Participant age was significantly negatively correlated with RKI total score (r= -.251, p= .004). There was also significant variance between RKI total with profession (F(4,127), 4.843, p= .001), highest level of education (F(4,127), 7.198, p< .001) and NHS trust (F(2,129), 4.434, p= .014). Post hoc analysis indicated Significantly higher RKI total scores for psychologists than all other professions and those with doctoral level education than other levels of education. One NHS trust reported significantly lower RKI scores than the other two trusts. There was significant variance between RKI total and type of employment however no significant differences in employment were maintained at post hoc analysis. As profession, education, employment type, and NHS trust, were unequal categorical variables they were not added to the regressions.

Table 2.

Correlation Matrix for the Instrument Subscales AWS, ProQoL and RKI.

	1	2	3	4	5	6	7	8	9
AWS									
1 Workload									
2 Control	.265**								
3 Reward	.196*	.415**							
4 Community	.245**	.285**	.330**						
5 Fairness	.210*	.438**	.480**	.430**					
6 Values	.220*	.308**	.350**	.217*	.489**				
ProQoL									
7 Burnout	-.480**	-.430**	-.483**	-.320**	-.429**	-.454**			
8 Secondary Traumatic Stress	-.362**	-.235**	-.284**	-.104	-.264**	-.243**	.614**		
9 Compassion Satisfaction	.326**	.333**	.363**	.288**	.329**	.326**	-.784**	-.441**	
RKI									
10 Total Score	-.061	.130	.155	.091	.188*	.138	-.140	-.053	.170[a]

Note. ** denotes significance 0.01 level (2-tailed), * denotes significance 0.05 level (2-tailed), [a] denotes significance .0509.

Regression analyses

Two main regression analyses were completed. Firstly, the ProQoL (compassion) was examined as a dependent variable and the AWS (congruence) and the demographic factors were treated as independent variables. Then the RKI (recovery attitude) was examined as a dependent variable and the ProQoL (compassion) and the significant demographic factors were treated as independent variables. Only variables that were significantly correlated in bivariate correlations were entered into the regression, and only significant relationships are reported in Table 3. Of the significant regressions reported, there was no significant collinearity within any of the regression models (Appendix I).

Congruence as a Predictor of Compassion

Each of the ProQoL factors were examined separately. A hierarchical regression was calculated for Burnout with the independent variables: years in profession, and years in setting at step one, plus AWS subscales at step two. Only the AWS subscales Workload, Reward and Values emerged as significantly associated with Burnout in Model 2 and explained 42% of the variance in this outcome (R^2 = 0.422, F(8,106) = 11.411, p = < .001). Standardised beta values were negative indicating that low person-job congruence was associated with increased Burnout. Consistent with hypothesis 1, low congruence in the AWS subscales Workload, Reward, and Values were significant predictors of Burnout.

A standard multiple regression was then calculated for Secondary Traumatic Stress, with five AWS subscales (all excluding Community). No demographic factors were identified as significant in the bivariate analysis so were not entered. Only Workload emerged as significantly associated with Secondary Traumatic Stress. The overall model was significant and accounted for 16% of the variance in Secondary Traumatic Stress (R^2 = .163, F(5.126) =

6.100, p = <.001). Consistent with hypothesis 1, the standardised beta values were negative indicating that low congruence was associated with increased Secondary Traumatic Stress.

A hierarchical regression was calculated for Compassion Satisfaction. Here years worked in the current setting was significant at step one (p= .020) but became insignificant when the six AWS subscales were added (p= .213). In this Model 2, only Workload was significantly associated with Compassion Satisfaction and accounted for 22% of the variance (R^2 = .222, F(7,123)= 6.315, p = <.001). The standardised beta value was positive indicating that increased Worklife congruence was associated with increased Compassion Satisfaction. This finding was consistent with hypothesis 2.

Table 3.

Significant Hierarchical and Multiple Regression Models between AWS and ProQoL Measures

Model		Unstandardized Coefficients		Standardized Coefficients	Sig
		B	Std. Error	Beta	
			Burnout		
Step 1	Years in Profession	.159	.072	.270	.030
Step 2	Workload	-3.056	.670	-.355	.000
	Reward	-1.407	.546	-.220	.011
	Values	-1.589	.642	-.206	.015
			Secondary Traumatic Stress		
Standard	AWS Workload	-2.485	.723	-.289	.001
			Compassion Satisfaction		
Step 1	Years in Setting	-.197	.084	-.203	.020
Step 2	Workload	1.585	.767	.174	.041

Note. All R^2 refers to Adjusted R^2.

Hierarchical Multiple regression, Burnout step 1 R^2 = .046, step 2, R^2 =.422. Burnout ΔR^2 = .376, p = < .001. Simple multiple regression: Secondary Traumatic Stress R^2 =.163. Compassion Satisfaction R^2 = .163. Hierarchical Multiple regression, Compassion Satisfaction step 1 R^2 = .034, step 2, R^2 =.222. Burnout ΔR^2 = .188, p = < .001.

Compassion as a Predictor of Recovery Attitudes

Hypothesis 3 was not explored in the regression analyses because there were no significant relationships between the RKI and the Compassion Fatigue subscales. Compassion Satisfaction revealed a significant relationship at bivariate analysis when the p-value was read with two decimal places. Therefore, it was decided to further analyse the relationship; as age was also correlated this factor was added to the model. Thus, hypotheses 4 was explored. Only the significant relationships are reported in table 4 below.

Table 4.

Significant Hierarchical Model between ProQoL and RKI Measures

Model		Unstandardized Coefficients		Standardized Coefficients	Sig
		B	Std. Error	Beta	
Step 1	Age	-.101	.034	-.251	.004
Step 2	Age	-.093	.035	-.230	.008

Note. R^2 refers to Adjusted R^2.

Step 1 $R^2 = .056$, step 2 $R^2 = .067$. $\Delta R^2 = .011$, $p = .117$.

The RKI total score was examined with Compassion Satisfaction and participant age. The demographic factor age was significantly negatively associated with RKI total score in both model 1 and 2. Compassion Satisfaction did not significantly predict RKI total score. Age alone accounted for 5% variance in RKI total score. ($R^2 = .056$, $F(1,130) = 8.746$, $p = .004$). There was no support for hypotheses 3 or 4.

Discussion

This study set out to examine the relationship between, firstly, congruence and compassion; and secondly, compassion and recovery attitudes in UK CMHT staff. This study found a significant relationship between congruence and compassion but not between compassion and recovery attitudes.

Congruence and Compassion

As hypothesised, perceived Worklife congruence was associated with the components of ProQoL compassion (Burnout and Secondary Traumatic Stress [Compassion Fatigue] and Compassion Satisfaction). Three aspects: Workload, Reward and Values, specifically

emerged as significantly negatively associated with Burnout. Low congruence in Workload had the strongest association followed by Values then Reward. Workload congruence was also negatively associated with Secondary Traumatic Stress and positively associated with Compassion Satisfaction. These findings are consistent with the research base. Although a number of demographic factors were implicated in the relationship between congruence and compassion, none remained significant when controlled for in sequential multiple regression models.

Congruence and Compassion Fatigue.

This study has established a significant association between low Workload congruence and increased Compassion Fatigue (Burnout and Secondary Traumatic Stress). Excessive Workload is a well-established correlate of burnout for mental health staff (Hill *et al*, 2006; Morse *et al*, 2012; Onyett, 2011), and themes of workload have been reported in psychological staff wellbeing survey (Saleem et al, 2016). Workload congruence has specifically been associated with burnout for Italian CMHT staff (Lasalvia *et al*, 2009). Despite a large proportion of the current study participants reporting low Workload congruence, interestingly caseload size in itself was not significantly related to Workload scores. Reid *et al* (1999) identifies non-direct service-user work such as overload and administrative demands as major sources of stress for mental health professionals. These aspects may influence workload but, additional aspects may be contributing beyond the objective demand imposed. The subjective perception of Workload congruence beyond objective demands has been supported elsewhere. Laschinger, *et al* (2006) support perceptual factors through demonstrating the mediating relationship of Worklife congruence between empowerment and burnout. High workplace stress has been associated with the relationship between high job demand (i.e. workload), and low control (Karasek, 1979; Williams-Whitt *et al*, 2015). However, in the present study, Control was not significantly

associated with compassion fatigue. The lack of significance of control in this study was unexpected.

Low Reward congruence was also significantly associated with increased Burnout. Mental health professionals have identified being undervalued as a source of distress (Prosser *et al,* 1997). Additionally, goals for mental health staff are frequently negatively focused, with success often defined through the absence of an occurrence e.g. avoiding hospital admissions (Hyde & Thomas, 2002). Arguably, recognition in this framework is lacking. Reward is associated with job satisfaction, and implicated in mental health staff employment retention (Scanlan, *et al,* 2013). While formal reward approaches (e.g. employee of the month) have been considered ineffective; enhancing perceived recognition through timely personal expressions of appreciation, sincere praise, and management involvement with staff, have been considered effective (Nelson, 2004). Moreover, Nelson (2004) endorses eliciting staff opinion to address reward through approaches valued by staff.

Low Values congruence was associated with increased Burnout. The wider literature supports this finding; the conflicts between personal values and work based actions have been associated with increased burnout (Jambrak *et al* 2014; Veage *et al,* 2014). Congruence between personal and workplace values has been associated with wellbeing, irrespective of the actual values ascribed as important (Sagiv & Schwartz, 2000). However, Values was the only subscale displaying variance between the participating NHS trusts, so interpretation of the association is made with caution. Adcroft *et al,* (2014) report considerable differences in the prominence and communication given to values in different NHS trusts. Perhaps given the fragmentation of the NHS into separate trusts with divergent priorities and strategic focus (Bach, 2007), divergent trust values and the ensuing congruence with these are unsurprising. West *et al* (2012) consider that the strategy and support provided to CMHTs by NHS Trusts

is important in the effective delivery and continued improvement of service-user care, and that good leadership is critical. Veage *et al* (2014) posit values clarification and linking values to action in professional development as ways to promote values congruence and increase professional resilience.

Participants with greater years of experience in their profession reported increased Burnout. This pattern was similar to previous findings in CMHT settings (Green *et al*, 2014). There was significant variance in Burnout across professions, but this related to significantly lower Burnout scores for psychologists, there were no significant differences between other professional groups. This contrasts with previous research which identified social workers as particularly affected by burnout (Lloyd, *et al*, 2002; Onyett, 2011) and the recent New Savoy Partnership Staff Wellbeing Report which identified increased levels of burnout among psychological staff (Saleem *et al*, 2016).

Congruence and Compassion Satisfaction.

While all the areas of Worklife were correlated with Compassion Satisfaction, only Workload remained significantly associated at multivariate analysis. Positively, there was high congruence for the aspects of Community (the quality of the social environment), and Fairness (the consistency and equity of rules and resources) but these aspects of congruence were not significantly correlated to compassion satisfaction. Reid *et al's*, (1999) study of stress and satisfaction among mental health professionals and Onyett's (2011) review of burnout in CMHTs highlighted contacts with colleagues as rewarding. Furthermore, social support is associated with compassion satisfaction, with contact such as debriefing and supervision being implicated in enhanced resilience (Killian, 2008). Thus, the lack of significant findings in this study leaves an open question as to what factors beyond workload congruence may support Compassion Satisfaction in CMHTs.

Compassion and Recovery Attitudes

In relation to the second objective, the relationship between compassion and recovery attitudes revealed no support for the hypotheses that Compassion Fatigue was significantly associated with recovery attitude. There was limited support for the hypothesis that Compassion Satisfaction would be positively associated with recovery. Compassion Satisfaction was positively correlated with recovery attitude but this relationship was not predictive in the regression analysis. However, lower age was predictive of increased recovery attitude. There were also a number of demographic factors related to variance within recovery attitudes including: the NHS trust where the study's participants work, holding the profession of psychologist, holding a doctorate degree compared to any other level of education and having masters degree over a diploma. These factors are reflective of recovery attitude being communicated through work environments (NHS trust) and educational training (profession and education). Recovery focused training programmes have demonstrated positive relationships with staff recovery attitudes and practice (Meehan & Glover, 2009; Tsai *et al*, 2011). This may imply that recovery attitudes are receptive to external influences.

Professional discipline has been noted before as a significant source of variation in the satisfaction and stress literature for CMHTs (Onyett, 2011). There are salient patterns of practice associated with professional training and professional socialisation, including variations in the acquisition of knowledge, roles and attitude connected with the practice of a particular profession (Clark, 1997). The role of profession in relation to recovery attitude and burnout possibly reflects socialisation within professional training.

Positively, overall CMHT staff reported strong endorsement of recovery-oriented knowledge and attitudes. However, this research was focused on self-reported staff attitude rather than

action or behaviour. As Wells (1997) notes, in the context of current political agendas, finite resources and increased accountability, more defensive practices will prevail. As pertinent to Values congruence, mental health professionals are balancing values with competing and sometimes conflicting role demands (Lloyd *et al,* 2002). Thus, recovery orientation may be strong but recovery-orientated behaviour may not always be practicable in reality, which may further impact values congruence. Future research would benefit from examining recovery orientated practice rather than just recovery knowledge and attitude.

Clinical Implications

Worklife congruence could be targeted through clinical leadership. Investing in skilled leadership is considered vital for CMHT effectiveness and continued development (West *et al,* 2012). For psychologists, this is an area of clinical practice highlighted in the BPS report, Working Psychologically in Teams (BPS, 2007). Laschinger *et al,* (2015) report the positive effect of authentic leadership on AWS Worklife congruence. Whilst Bamford *et al* (2013) support the mediating role of person-job congruence between authentic leadership and work engagement. Whilst leadership can take many forms, supervision is identified within clinical leadership competencies, and is directly identified in Working Psychologically in Teams (BPS, 2007). As relating to workload congruence, Weigl *et* al (2016) report a three-way interaction between supervisor support, work-overload, and burnout; whereby burnout and depression were more strongly associated when supervision support was low. Pertinently, effective clinical supervision has been associated with lower levels of burnout for CMHT staff (Edwards *et al,* 2006). The Care Quality Commission (2013) advocates clinical supervision as a context for establishing values and increasing perceptions of organisational support. The CQC perspective may potentially indicate the role of clinical supervision in supporting values congruence. Interventions aimed at improving congruence need to acknowledge the wider political and systemic context. In the context of mental health services' systemic defences, Evans (2014) contends that containing staff and systemic

defensive anxieties is fundamental within clinical leadership. Furthermore, in response to defences, Hyde and Thomas (2002) assert that after identifying a problem, where change is successful, group members become collaboratively involved in local change, thus becoming the drivers of change within the system. Involving staff also communicates a desire to support and involve them. Therefore, to effectively target local idiosyncrasies it may be prudent to involve frontline staff in generating approaches to improve Worklife congruence.

Strengths and Limitations

An important strength of the study was that the profile of the participating CMHTs was similar to previous UK research. The configuration of CMHT staffing was in line with government guidance (DoH, 2001) and comparable to previous research, with the highest representation of nurses followed by social workers (Nelson *et al,* 2009; Onyett *et al,* 1995). McGuiness & Leiba (2007) reported average CMHT caseload size to be similar to this study. The years of experience in both the current setting and in the profession were similar to previous UK research (Nelson *et al,* 2009). A high proportion of women participated in the research; previous research has also reflected greater proportion of female participants (Johnson *et al,* 2012; Onyett *et al* 1995).

Whilst a number of interesting patterns in the relationship between congruence, compassion and recovery attitudes have been potentially identified, there are a number of limitations to this study. Most importantly, the study used a cross-sectional design; consequently no causal relationship between variables can be inferred. While the study investigated a range of organisational and demographic factors, there are a number of other potentially relevant variables that were outside its focus. It may be beneficial for future research to examine managerial factors, which may incorporate leadership or supervision processes. The RKI is an appropriate tool of its sort but it has low reliability in some respects so interpretations

need to be made with caution. The study was conducted within the North West of England, so the findings may not be broadly generalizable. However, the profile of the participating CMHTs was similar to previous UK research and the study findings are concordant with international established research. Thus, findings may be generalizable to CMHTs in other parts of the country but further research would need to establish this.

Conclusion

Congruence in the Worklife areas of: Workload, Reward, and Values were important predictors of professional quality of life. However, of these areas only Workload was consistently predictive across all aspects of Compassion Fatigue and Compassion Satisfaction. The Burnout subscale had the most association with congruence. Neither Compassion Fatigue nor Compassion Satisfaction, predicted recovery attitude. In the context of limited NHS resources, workload is unlikely to be significantly reduced. Approaches aiming to streamline non-direct service-user workload deserve attention, alongside interventions targeting perceived reward and values. Improving person-job congruence has the potential to improve professional quality of life.

References

Adcroft, L., Philipp, R., & Thorne, P. (2014). The NHS Constitution values are not always clearly expressed on Trust websites in England. *Public Health, 128*(10), 948-951.

Anthony, W. A. (1993). Recovery form mental illness: the guiding vision of the mental health service system in the 1990s. *Psychosocial Rehabilitation Journal, 16(4),* 11-23.

Bach, S. (1994). Restructuring the Personnel Function: the Case of NHS Trusts. *Human Resource Management Journal, 5*(2), 99-115. doi:10.1111/j.1748-8583.1994.tb00369.x

Bamford, M., Wong, C., & Laschinger, H. (2013). The influence of authentic leadership and areas of worklife on work engagement of registered nurses. *Journal of Nursing Management, 21*(3), 529-540.

Bedregal, L.E., O′Connell, M., & Davidson, L. (2006). The Recovery Knowledge Inventory: assessment of mental health staff knowledge and attitudes about recovery. *Psychiatric Rehabilitation Journal,* 30, 96–103.

British Psychological Society. (2006). *Core Competencies Clinical Psychology: A Guide.* Leicester: British Psychological Society.

British Psychological Society. (2007). *New Ways of Working for Applied Psychologists in Health and Social Care Working Psychologically in Teams*. Leicester: British Psychological Society.

British Psychological Society (2016), *Charter for Psychological Staff Wellbeing and Resilience.* Retrieved from http://www.bps.org.uk/system/files/Public%20files/Comms-media/press_release_and_charter.pdf

Cable, D. M., & DeRue, D. S., (2002). The convergent and discriminate validity of subjective fit perceptions. *Journal of Applied Psychology, 87(5)*. 875-884. doi: 10.1037//0021-9010.87.5.875.

Care Quality Commission (2013) *Supporting information and guidance: supportive effective clinical supervision.* Care Quality Commission. Retrieved from https://www.cqc.org.uk/sites/default/files/documents/20130625_800734_v1_00_supporting_information-effective_clinical_supervision_for_publication.pdf

Clark, P., G. (1997). Values in health care professional socialization: Implications of geriatric education in interdisciplinary teamwork. *The Gerontologist, 37(4).* 441-451.

Davies, H.T.O. (2002). Understanding organisational culture in reforming the National Health Service. *Journal of the Royal Society of Medicine, 95,* 140-142.

Department of Health, (2001). *The Mental Health Policy Implementation Guide.* London: Department of Health.

Department of Health, (2009a). *NHS Health and Well-being. Final Report, November 2009.* London: Department of Health.

Department of Health (2009b), *New Horizons: A Shared Vision for Mental Health,* London: Department of Health.

Department of Health (2012). *No Health Without Mental Health: Implementation Framework.* London: Department of Health; Centre for Mental Health; Mind, July 2012.

Eagly, A. H. & Chaiken, S. (1993). *The Psychology of Attitudes*. London: Harcourt Brace College Publishers.

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

Evans, M. (2014). 'I'm beyond caring', a response to the Francis Report: The failure of social systems in health care to adequately support nurses and nursing in the clinical care

of their patients. *Psychoanalytic Psychotherapy*, *28*(2), 193-210. doi:10.1080/02668734.2014.914076

Evans, S., Huxley, P., Gately, C., Webber, M., Mears, A., Pajak, S., Medina, J., Kendall, T. & Katona, C. (2006). Mental health, burnout and job satisfaction among mental health social workers in England and Wales, *British Journal of Psychiatry, 188*, 75-80.

Figley, C., R. (2002). Compassion Fatigue: Psychotherapists' chronic lack of self care. [SUP 1]. *Journal of Clinical Psychology. 58(11).* 1433-1411. doi: 10.1002/jclp.10090

Francis R (2013). *Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry*. London: The Stationery office.

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

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.

Happell, B., Byrne, & Platania-Phung, C. (2015). The Recovery Knowledge Inventory for Measurement of Nursing Student Views on Recovery-oriented Mental Health Services. *Issues in Mental Health Nursing*, *36*(10), 799-808. doi:10.3109/01612840.2015.1049310

Hill, R., Ryan, P., Hardy, P., Anczewska, M., Kurek, A., Dawson, I., & ... Turner, C. (2006). Situational levels of burnout among staff in six European inpatient and community mental health teams. *The Journal of Mental Health, Training & Practice*, *1*(1), 12-21.

Hyde, P., & Thomas, A. B. (2002). Organisational defences revisited: systems and contexts. *Journal of Managerial Psychology. 17(5).* 408-421. doi 10.1108/02683940210432646

Jambrak, J., Deane, F. P., & Williams, V. (2014). Value motivations predict burnout and intentions to leave among mental health professionals. *Journal of Mental Health, 23*(3), 120-124 5p. doi:10.3109/09638237.2013.869576

Johnson, S., Osborn, D., Araya, R., Wearn, E., Paul, M., Stafford, M., & ... Wood, S. (2012). Morale in the English mental health workforce: questionnaire survey. *British Journal of Psychiatry, 201*(3), 239-246. doi: 10.1192/bjp.bp.111.098970

Karasek, R., A. (1979). Job Demands, Job Decision Latitude, and Mental Strain: Implications for Job Redesign. *Administrative Science Quarterly*, (2). 285-308.

Killian, K, D, (2008), Helping till it hurts? A multimethod study of compassion fatigue, burnout, and self-care in clinicians working with trauma survivors, *Traumatology, 14(2),* 32-44.

Kowalski, C., Driller, E., Ernstmann, N., Alich, S., Karbach, U., Ommen, O., & ... Pfaff, H. (2010). Associations between emotional exhaustion, social capital, workload, and latitude in decision-making among professionals working with people with disabilities. *Research in Developmental Disabilities, 31*470-479. doi:10.1016/j.ridd.2009.10.021

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

Laschinger, H. S., Borgogni, L., Consiglio, C., & Read, E. (2015). The effects of authentic leadership, six areas of worklife, and occupational coping self-efficacy on new graduate nurses' burnout and mental health: A cross-sectional study. *International Journal of Nursing Studies, 52(6).* 1080-1089. doi:10.1016/j.ijnurstu.2015.03.002

Laschinger, H. S., Wong, C. A., & Greco, P. (2006). The impact of staff nurse empowerment on person-job fit and work engagement/burnout. *Nursing Administration Quarterly, 30(4),* 358-367.

Leiter, M. P., & Maslach, C. (2004). Areas of worklife: A structured approach to organizational predictors of job burnout. In: P. Perrewé and D. C. Ganster, (Eds.),

Research in Occupational Stress and Well-being, Vol. 3, (pp. 91-134). Oxford: Elsevier. doi: 10.1192/bjp.bp.108.060871

Leiter, M. P., & Maslach, C. (2011). *Areas of Worklife Survey Manual and Sampler Set, 5th Edition.* Mind Garden Inc. www.mindgarden.com

Lloyd, C., King, R., & Chenoweth, L. (2002). Social work, stress and burnout: a review. *Journal of Mental Health. 11(3)*. 255-265. doi:10.1080/09638230020023642

Maslach, C. (1982), *Burnout- The Cost of Caring,* London: Prentice-Hall International.

McGuiness, M., & Leiba, T. (2007). Managing community mental health teams' workloads. *Nursing Times, 103(16).* 32. Retrieved from: https://www.nursingtimes.net/managing-community-mental-health-teams-workloads/201886.article

Meehan, T., & Glover, H. (2009). Using the recovery knowledge inventory (RKI) to assess the effectiveness of a consumer-led recovery training program for service providers. *Psychiatric Rehabilitation Journal*, *32*(3), 223-226. doi:10.2975/32.3.2009.223.226

Morse, G., Salyers, M., Rollins, A., 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 and Mental Health Services Research*, *39*(5), 341-352. doi: 10.1007/s10488-011-0352-1.

Nelson, B. (2004). Formal recognition programs do not work. *Industrial & Commercial Training*, *36*(6/7), 243-246. doi:10.1108/00197850410556685

Nelson, T., Johnson, S., & Bebbington, P. (2009). Satisfaction and burnout among staff of crisis resolution, assertive outreach and community mental health teams. *Social Psychiatry and Psychiatric Epidemiology*, *44*(7), 541-549. doi 10.1007/s00127-008-0480-4

Oades, L., Walker, R., & Fisher, N. (2011). Staff wellbeing predicting positive attitude towards mental health recovery [Abstract]. *The Interpersonal Journal of Person Centred Medicine. 1(3).* doi: 10.5750/ijpcm.v1i3.119

Onyett, S., Pillinger, T., & Muijen, M. (1995). *Making Community Mental Health Teams Work: CMHTs and the people who work in them.* London: The Sainsbury Centre for Mental Health.

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

Prosser, D., Johnson, S., Kuipers, E., Szmukler, G., Bebbington, P., & Thornicroft, G. (1997). Perceived sources of work stress and satisfaction among hospital and community mental health staff, and their relation to mental health, burnout and job satisfaction., *Journal of Psychosomatic Research, 43(1).* 51-59.

Ray, S. L., Wong, C., White, D., & Heaslip, K. (2013). Compassion satisfaction, compassion fatigue, worklife conditions, and burnout among frontline mental health care professionals, *Traumatology,* published online 9 January 2013, DOI: 10.1177/1534765612471144

Reid, Y., Kuipers, E., Szmukler, G., Thornicroft, G., Johnson, S., Bebbington, P., & ... Prosser, D. (1999). Explanations for stress and satisfaction in mental health professionals: A qualitative study. *Social Psychiatry and Psychiatric Epidemiology*, *34*(6), 301-308. doi:10.1007/s001270050148

Sagiv, L., & Schwartz, S., H. (2000). Value priorities and subjective well-being: Direct relations and congruity effects. *European Journal of Social Psychology*, *30*(2), 177-198.

Saleem, A., Bhutani, G., Dosanjh, N., Clarke, J., Hacker Hughes, J., Easton, S., Van Laar, D & Cohen-Tovee, E. (2016). *Psychological Wellbeing and Resilience: Resetting the Balance*. The New Savoy Partnership and British Psychological Society. Retrieved from http://www.bps.org.uk/system/files/Public%20files/ar_v10_resetting_the_balance_160516.docx.pdf

Salgado, J., Deane, F., Crowe, T., & Oades, L. (2010). Hope and improvements in mental health service providers' recovery attitudes following training. *Journal of Mental Health, 19*(3), 243-248. doi:10.3109/09638230903531126

Scanlan, J. N., Meredith, P., & Poulsen, A. A. (2013). Enhancing retention of occupational therapists working in mental health: Relationships between wellbeing at work and turnover intention. *Australian Occupational Therapy Journal, 60*(6), 395-403 9p. doi:10.1111/1440-1630.12074

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study. *Journal of Organizational Behavior, 25*(3), 293-315. doi:10.1002/job.248

Schaufeli, W. B., & Buunk, B. P. (2003). Burnout: An overview of 25 years of research and theorizing. In M. J. Schabracq, J. A. M. Winnubst, & C. L. Cooper (Eds). *The Handbook of Work & Health Psychology, Second edition.* (pp. 383-425). Chichester: John Wiley & Son.

Spandler, H., & Stickley T. (2011), No hope without compassion: the importance of compassion in recovery-focused mental health services, *Journal of Mental Health, 20(6),* 555-566.

Stamm, B. H. (2010). *The Concise ProQoL Manual*, 2nd Edition, Pocatello, ID: ProQOL.org.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using Multivariate Statistics,* Fifth Edition. Boston: Pearson Education Inc.

Tsai, J., Salyers, M. P., & McGuire, A. B. (2011). A cross-sectional study of recovery training and staff attitudes in four community mental health centers. *Psychiatric Rehabilitation Journal, 34*(3), 186-193. doi:10.2975/34.3.2011.186.193

Veage, S., Deane, F. P., Andresen, R., Oades, L. G., Crowe, T. P., & Ciarrochi, J. (2014). Value congruence, importance and success and in the workplace: Links with well-being and burnout amongst mental health practitioners. *Journal of Contextual Behavioral Science, 3(4),* 258-264. doi:10.1016/j.jcbs.2014.06.004

Weigl, M., Stab, N., Herms, I., Angerer, P., Hacker, W., & Glaser, J. (2016). The associations of supervisor support and work overload with burnout and depression: a cross-sectional study in two nursing settings. *Journal of Advanced Nursing*, *72*(8), 1774-1788. doi:10.1111/jan.12948

Wells, J. S. G. (1997). Priorities, 'street level bureaucracy' and the community mental health team. *Health and Social Care in the Community*, *5*(5), 333-342.

West, M., Alimo-Metcalfe, B., Dawson, J., El Ansari, W., Glasby, J., Hardy, G., … Richter, A. (2012). *Effectiveness of Multi-Professional Team Working (MPTW) in Mental Health Care*. National Institute for Health Research. Retrieved from http://www.netscc.ac.uk/hsdr/files/project/SDO_FR_08-1819-215_V01.pdf

Williams-Whitt, K., White, M. I., Wagner, S. L., Schultz, I. Z., Koehn, C., Dionne, C. E., ... Wright, M. D. (2015). Job Demand and Control Interventions: A Stakeholder-Centered Best-Evidence Synthesis of Systematic Reviews on Workplace Disability. *International Journal of Occupational & Environmental Medicine*, *6*(2), 61-78.

Wilrycx, G., Croon, M. A., Van den Broek, A., & van Nieuwenhuizen, C. (2012). Psychometric properties of three instruments to measure recovery. *Scandinavian Journal of Caring Sciences*, *26*(3), 607-614. doi:10.1111/j.1471-6712.2011.00957.x

Wood, A. M., & Tarrier, N. (2010). Positive Clinical Psychology: A new vision and strategy for integrated research and practice. *Clinical Psychology Review*. *30*, 819-829.

Appendices

Appendix A: Systematic Review Protocol

Research Question & Aims

Are interventions based on Acceptance and Commitment Therapy (ACT) effective in reducing staff burnout?

The aim of the review is to determine the evidence for the role of interventions based on Are interventions based on Acceptance and Commitment Therapy (ACT) in reducing staff burnout. Where, burnout was taken to include the related concept of compassion fatigue which includes the component parts of burnout and secondary traumatic stress.

PICO Table:

Review Question	Are interventions based on Acceptance and Commitment Therapy (ACT) effective in reducing staff burnout?
Population	Any staff group.
Intervention	Acceptance and Commitment Therapy.
Comparator	Any: pre-post measure, waiting list control or active control
Outcomes	Any measures capturing burnout or compassion fatigue.
Study Design	Experimental intervention research design.

Search Strategy

Key databases pertinent to psychological research will be searched for relevant research papers. These will be: CINAHL Plus, PsycINFO, PubMed, and Scopus. Following the screening and selection process, the reference lists from the papers included in the review will be searched following the same screening and selection process, to identify any potential additional papers.

The data bases will be searched using the search string formatting of each database platform. Searches will be conducted in the free-text and subject headings fields. All searches will use combinations of the terms: burnout OR compassion fatigue OR secondary traumatic stress OR work stress, AND Acceptance and Commitment Therapy or Acceptance Commitment Therapy.

Screening & Selection

Stage1: The research papers generated from the search strategy will first be screened by a title and abstract review. Duplicate records will be identified and removed, the number of which will be recorded and reported. Papers will then be excluded according to the exclusion criteria. The number of papers excluded will be recorded and reported. A second reviewer will be sought to review a sample of selected papers to confirm reliability.

Inclusion Criteria: factors listed in the PICO table.

Exclusion Criteria: studies which have not recruited staff groups, have not used an intervention explicitly based on ACT or have not reported outcome measures that capture burnout or compassion fatigue. Studies reported in any language other than English will be excluded. Book chapters and non-intervention studies will also be excluded.

Stage 2: From the remaining papers all the full text papers that are possible to access through the University of Liverpool library system will be requested. If any full text papers are unavailable the number will be recorded and reported. The remaining and relevant available papers will be assessed for quality. A second reviewer will be sought to review a sample of selected papers to confirm reliability.

Quality Assessment

The quality of the research papers will be assessed using the Quality Assessment Tool for studies with diverse designs (QATSDD) checklist.

Data Extraction

Source: study ID and Citation details.

Eligibility: confirm eligibility for review and Reason for exclusion.

Methods: study design, study duration and any concerns about bias.

Participants: total number, setting, and attrition.

Outcomes: outcomes with time points, outcome definition and scale of measurement.

Results: statistical significant relationship, mean and standard deviation.

Miscellaneous: funding source, and references to other relevant studies.

Data Synthesis

Synthesis will be narrative or meta-analysis depending on whether the data is appropriate.

Timeframe

The systematic review will be completed between May and June 2016.

Appendix B: Data Screening and Selection of Articles

Initial Search

Nine databases were searched: CINALplus, MEDLINE, Psych ARTICLES, PsychINFO, PubMed, Science Direct, Scopus, Web of science and Open Grey. The search strategy for each database contained the combination search: burnout OR compassion fatigue OR secondary traumatic stress OR work stress, AND Acceptance and Commitment Therapy OR Acceptance Commitment Therapy. Although the review focused on burnout or compassion fatigue outcome measures, work stress was included in the initial search to capture measures where burnout may have been a targeted but not been explicitly listed in key words or abstract. The initial search was conducted by the primary reviewer.

Title and Abstract Review

After removal of duplicates, the title and abstracts of the identified articles were read to ascertain if the articles met the inclusion criteria to be taken forward for full text review. A screening tool was utilised to assist the screening and record decision to include or exclude (Appendix C). Articles were also taken for full text review if it was unclear if article met the inclusion criteria, for further details to be reviewed. Inclusion and exclusion criteria are displayed, in a PICO format, in table 1.

A random selection of 20% (n = 21) of the identified articles were screened at the title and abstract stage by a second reviewer (N.A.) who had previous experience of conducting a systematic review. Both primary and second reviewers screened the articles using the inclusion exclusion criteria on the screening tool. There was 100% agreement between the two reviewers on the sample articles: six were included for full article review, 13 were

excluded as they did not satisfy the one or more of the PICO inclusion criteria, one was excluded for being non-English language, and one was excluded for being non-experimental.

Table 1.
Table of Inclusion and Exclusion Criteria

	Inclusion	Exclusion
Participants	Any staff groups.	Participants not selected due to being in a staff role.
Intervention	Any intervention explicitly based on Acceptance and Commitment Therapy (ACT).	Non-intervention studies or interventions not explicitly based on ACT.
Control / comparison	Any - either waiting list, pre-post, or therapeutic control.	No exclusion for comparator / control.
Outcome	Any measure of burnout or compassion fatigue as primary or secondary measure.	If outcome measures are not related to burnout or compassion fatigue.
Language	English language.	Not written in English language.
Format	Research.	Not research e.g. books.

Full Article Review

Twenty-three articles were identified for full article review. The full text articles were reviewed using the same screening tool as for title and abstract review. Again a random selection of 20% (n = 5) of the identified articles were screened as full text by the second reviewer (N.A.). Both primary and second reviewers screened the articles using the inclusion exclusion criteria on the screening tool. There was 100% agreement between the two reviewers on the sample articles: two were included for the review, one was excluded for the full text being non-English language (abstract was written in English language), two were excluded as they did not satisfy the PICO inclusion criteria (non-intervention, not measuring burnout). Of the 23 full text articles identified, 15 records were excluded after full text review. The remaining eight articles were reviewed for quality.

Quality Review.

Eight articles were identified for quality review. Thirty percent (n = 3) of the identified articles were randomly selected to be rated by a second reviewer (L.B.) who had previous experience of conducting a systematic review. There was 86% exact agreement between researchers on the crosschecked sample quality with the six differences on rating no greater than one score. The quality ratings were compared and differences were discussed. The QATSDD developers propose an iterative approach to resolve differences in scores through group discussion (Sirriyeh, Lawton, Gardner & Armitage, 2011). Following discussion agreement was reached.

References

Sirriyeh, R., Lawton, R., Gardner, P., & Armintage, G. (2011). Reviewing studies with diverse designs: the development and evaluation of a new tool. *Journal of Evaluation in Clinical Practice. 18.* 746-752. doi: 10.1111/j.1365-2753.2011.01662.x

Appendix C: Sample Screening Selecting Tool

Review question: Are interventions based on Acceptance and Commitment Therapy (ACT) effective in reducing staff burnout?

Inclusion Criteria:

- P Staff groups.
- I Any intervention explicitly based on Acceptance and Commitment Therapy.
- C Either waiting list, pre-post, or therapeutic control.
- O Any measure of burnout or compassion fatigue as primary of secondary measure.

Exclusion:

Not written in English language.
Not research / books.

- P Participants not selected in staff role.
- I Non-intervention studies / interventions not explicitly based on ACT.
- C No exclusion for comparator.
- O If burnout or compassion fatigue are not outcome measures.

Reviewer: Date:

Author / Study ID: Year:

Title:

Journal:

	Include	Exclude
P		
I		
C		
O		
Decision	Include	Exclude

Notes:

Appendix D: Sample Size and Power

The study aimed to recruit 109 participants to achieve adequate power to detect a medium effect size through multiple regression. The a-priori power calculation was based on the primary research question, which examined the relationship between Areas of Worklife Survey (AWS) and Professional Quality of Life (ProQoL). The power calculation was conducted using G*Power (version 3.1.6). The AWS contains six worklife areas which were entered as predictor variables. With six predictor variables and adhering to Cohen's (1988) recommendation of a power of .80, with an alpha level of .05 to detect a medium effect size of 0.15, a sample size of 98 was required. This was sufficient power for the secondary analyses of the ProQoL three subscales as predictor variables and recovery attitude as the dependent variable.

However as the demographic variables were considered to possibly constitute covariates, although there was no particular reason to expect significant contribution, a further two predictors were added to the power calculation. The addition of two further predictor variables was included as a precaution to allow sufficient power to add potential demographic covariates to the analysis should they emerge as significant. The G*Power calculation was recalculated using the same parameters as detailed above but with eight predictors which generated a sample size of 109. Target recruitment was based on this calculation.

Post hoc power analysis demonstrated that the 132 participants recruited, generated a power of .99. This was based on the six predictor variables of the AWS and the addition of three demographic variable. The demographic variables: 'years in profession', 'years in current

setting' and 'profession' were added to the calculation, due to the significant correlation with ProQoL subscale burnout. The post hoc power analysis was calculated with G*Power to detect a medium effect size from the data with an alpha level of .05 and nine predictor variables.

Reference

Cohen, J, (1988), Statistical *Power Analysis for the Behavioral Sciences* (2nd ed.), Lawrence Erlbaum Associates: New Jersey.

Appendix E: Prize Draw Protocol

There are two prize draws associated with the study: one for for the individual participants and one for the participating teams. The protocol was established prior to data collection.

The two prize draws will be organised as a traditional prize draw, whereby the winner will be selected at random from all valid entries provided by participants. The chance of winning will be accurately portrayed e.g. the chance of winning one of three prizes.

Participant Prize Draw

All participants will be provided with a slip to complete with their preferred contact details and name to return with the questionnaire pack. All completed slips will be added to the prize draw. The winners will be contacted via the contact details they provided.

Team Prize Draw

All participating teams will be automatically entered into the prize draw. There will be no stipulation for a minimum number of participants from each of the teams. The winning teams will be contacted via the team managers at the office address. The researcher will complete a prize draw slip for each team that they visit to present the research to.

Relating to both prize draws

The prize draw entries will close at the end of the data collection period. As the research will finish before June 2016, the draw will be made July 2016, to allow time for postal entries to be received.

The £50 shopping vouchers will be purchased as an ‘all4one gift card’ purchased from the Post Office. There will be no cash alternative.

The entry slips will be collected and the prize draw will be drawn from a hat by Professor Richard Whittington at the University of Liverpool. The draw will be witnessed by Kim Towey-Swift. Where a postal address has been provided as the preferred contact, the gift cards will be posted to the prizewinners within 30 days of the draw with proof of postage. If the preferred contact details provided by the participant is not a postal address, the winning participant will be contacted by their chosen means (telephone or email) to arrange for the gift card to be dispatched. If contact with a winning participant cannot be established, attempts will continue to be made to establish contact for three weeks. If after the three week period the participant cannot be contacted, the prize draw will be re-drawn from the hat, following the same procedure as the original draw.

Appendix F: Participant Consent Form

Participant Consent Form

Research Project: CMHT quality of life and outlook

Researcher(s): Kim Towey-Swift, Richard Whittington & Pierce O'Carroll.

By signing below I am agreeing to the following five statements:

1. I confirm that I have read and have understood the information sheet dated [April 2014] for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw without giving any reason, without my rights being affected.
   In addition, should I not wish to answer any particular question or questions, I am free to decline.

3. I understand that, under the Data Protection Act, I can at any time ask for access to the information I provide and I can also request the destruction of that information if I wish.

4. I understand that my individual responses will be kept confidential. I understand that my responses will be anonymised, and I will not be identified or identifiable in the report or reports that result from the research.

5. I agree to take part in the above study.

Participant Name:…… Signature: ……

Researcher: …… Signature: ……

Principal Investigator:
Name: Richard Whittington
Work Address: University of Liverpool Health Services Research, Eleanor Rathbone Building, Bedford Street South, Liverpool, L69 7ZA,
Work Email: [redacted]@liverpool.ac.uk

Student Researcher:
Name: Kim Towey-Swift
Work Address: University of Liverpool Division of Clinical Psychology, Whelan Building, Brownlow Hill, Liverpool, L69 3GB
Work Telephone: 0151 [redacted]
Work Email: [redacted]@liv.ac.uk

Appendix G: Participant Information Sheet

Participant Information

You are invited to participate in a research study. Please take time to read the following information and please ask if you would like more information or have any questions.

Having previously worked as a social worker in a care coordinator role, I have become interested in the experience of front line mental health professionals' quality of life.

Aims of the study: We are interested in the experiences of professionals working in community mental health services. We are specifically interested in how the work setting impacts on professional quality of life and outlook. We hope that the study will provide new information on how best to promote professional quality of life and reduce potential harms arising from the work.

We are asking all professionally qualified staff from community mental health teams within three NHS trusts based in the North West region to take part in the study. While unqualified staff provide a valuable role, we are not asking unqualified staff to take part.

Participating in this study will involve you completing three short questionnaires and basic demographic information. All your answers will be recorded and stored anonymously. The NHS trusts will not have access to the completed questionnaires and will not be able to identify any individual professionals. The data will be analysed and reported in a summary document, reporting overall statistical relationships. At the conclusion of the study, this summary document will be made available to you.

If you choose to take part in the study, you can withdraw your participation at any time. All data will be stored securely at the University of Liverpool. The research is being conducted as part of a Doctorate of Clinical Psychology qualification and may be submitted for publication.

We appreciate your time is valuable and to thank you for taking part in the study you can enter a prize draw to win one of three £50 vouchers. The participating teams will also be entered into the prize draw to win one of three further £50 vouchers.

Although there are no direct benefits for you from taking part in the research; we hope that participating provides an opportunity for you to share your experiences and potentially influence future change.

If participating in this study raises any concerns or distress relating to your workplace or job role please contact your local staff support service:

- Greater Manchester West NHS Trust:
  Tel: 0161
- Manchester Mental Health and Social Care Trust
  Tel: 0161
- Mersey Care NHS Trust
  Tel: 0151

If you have any questions or concerns about the research study please contact:

Kim Towey-Swift
Trainee Clinical Psychologist

Address:
Doctorate of Clinical Psychology
Division of Clinical Psychology
Whelan Building, Brownlow Hill
Liverpool, L69 3GB

Email: [redacted]@liverpool.ac.uk

Participant Information Sheet V1.3
April 2014

Appendix H: Questionnaire Permissions

Permission was sought to use each of the measures in the empirical research. The Areas of Worklife Survey was purchased from Mind Garden and used in accordance with user permissions. The Professional Quality of Life provides an open permission to use the measure, confirmation of this was sought through the internet site and letter confirmation was received. The author of the Recovery Knowledge Inventor was contacted directly to seek permission of use, confirmation was provided via email.

Appendix I: Data Screening and Testing Assumptions of Parametric Data

Incomplete Data

The inputted dataset was initially screened for incomplete data. The original questionnaires were reviewed for input error, and there were no input errors identified. The data was screened and no respondent had more than one missing value (unanswered question) on any questionnaire subscale. From the total data set 83.33% (n=110) participants had complete data with no missing values. This corresponded to 99.71% (N=11846) of complete values in the total sample. Of this 87.88% (n=116) participants had complete data for the three questionnaires. To preserve the statistical power of the data analysis, the missing data was imputed. This corresponded to imputing 0.23% (24 items) of the total data set for questionnaire responses. Tabachnick and Fidell (2007) assert where there is less than 5% missing data in a large data set most procedures for imputation will yield similar results. Mean substitution was calculated from the respondent mean value of the subscale of the missing item. As the demographic details were primarily gathered to ascertain if the data reflected representative sample and to test for possible covariance, any missing data in the demographic survey was treated as missing and not imputed (N=10).

One returned questionnaire pack was not imputed into the dataset as over 30% of the item responses were missing.

Outliers

Outliers were assessed by calculating outlier labelling rule the using interquartile range with a multiplier of 2.2 as advised by Hoaglin, and Iglewicz (1987). There were no outliers within the ProQoL. In the AWS there was one high outlier in the workload subscale, and seven low outliers in the Community subscale. In the RKI there was one low outlier in the self-definition subscale. Outlier scores were considered legitimate observations after original

questionnaire responses were confirmed. Therefore, the outlier observations were retained to reflect the population.

Assumptions of Parametric Data

To assess if the data met the assumptions of parametric data, the data was checked prior to analysis. The assumptions of parametric tests are that the data is: interval, normally distributed, has homogeneity of variance and is independent. Data distribution was assessed in SPSS through skew and kurtosis and through visually inspecting histograms, normal Q-Q plots and box plots. This showed that the Areas of Worklife Scale, Professional Quality of Life Scale and Recovery Knowledge Inventory were approximately normally distributed across each subscale with no significant skew or kurtosis, on all but two sub-scales. Skew and kurtosis z-scores were considered normal in a medium sample (>50 n <300) with a .05 alpha level, as the z-scores were between - 3.29 and +- 3.29 as outlined by Kim (2013). The AWS subscale community, was negatively skewed -.9.41 (SE .211) and fairness was kurtotic 1.89 (SE .419). As regression requires normal distribution of regression residuals rather than the data distribution, parametric analysis was calculated but homoscedasticity of regression residuals was checked.

Homoscedasticity.

Normality was assessed visually using normal P-P plot of regression standardised residuals and the observed residuals lay closely with the line of normal distribution. The scatterplot of regression standardised residuals against regression standardised predicted values showed no systematic patterns but varied around zero. There were no outliers in the regression residuals statistics as assessed by Mahalanobis distance. This was checked as being below the critical value in all regression analysis (Pallant, 2013). The critical value was below 22.46 with six predictor variables, for the AWS predicting ProQoL (Secondary Traumatic Stress:

maximum= 16.320). Where additional variables were added to the primary analysis the Mahalanobis distance remained under the critical value of 24.32 for seven variables (Burnout: maximum= 24.151; Compassion satisfaction: maximum= 21.875). For the ProQoL predicting RKI, the critical value remained below 13.82 with two predictor variables (RKI total: maximum= 10.250).

Analysis of variance across NHS trusts.

In order to ensure comparability of data across the three NHS Trusts a one-way ANOVA was calculated to examine variance. NHS Trust was entered as the factor variable with each questionnaire subscale as the dependent variables. There was no significant difference between NHS Trust on the AWS subscales: Workload ($F(2,129) = 01.060$, $p = .349$), Control ($F(2,129) = 0.645$, $p = .527$), Reward ($F(2,129) = 0.370$, $p = .691$), Community ($F(2,129) = 1.092$, $p = .339$), and Fairness ($F(2,129) = 2.034$, $p = .135$). However, there was a significance difference between trusts on the subscale Values ($F(2,129) = 7.451$, $p = .001$). Post hoc testing using Games-Howell was used due to unequal sample size (Field, 2009). This revealed the difference on this subscale was between trust 1 and trust 3 $p = .001$. Therefore, any relationships related to this subscale would be less generalizable. Study recruitment was unevenly distributed across the three trusts (A. n = 65, B. n = 36, C. n = 31). There was no significant difference between NHS Trust on the ProQoL subscales: Burnout ($F(2,102) = 0.935$, $p = .395$), Secondary Traumatic Stress ($F(2,102) = 2.493$, $p = .087$), Compassion Satisfaction ($F(2,102) = .699$, $p = .499$). There was no significant difference between NHS trust on the RKI subscales: Self-Definition ($F(2,129) = 0.887$, $p = .415$), and Expectations ($F(2,129) = 1.060$, $p = .349$). However, there was a significance difference between trusts on the RKI subscales: Roles and Responsibility ($F(2,129) = 4.576$, $p = .012$) Non-Linearity ($F(2,129) = 4.069$, $p = .019$) and also on the RKI total scale ($F(2,129) = 4.434$, $p = .014$).

Demographic covariates.

Preliminary analyses compared demographic variables with the dependent variables using correlations and ANOVAs depending on levels of data.

Within the ProQoL instrument the analyses revealed significant positive correlations between Burnout with: 'years in profession' r= -.246, n= 132, p= 005, and 'years in setting' r= 0.178, n= 132, p= .041. There was also significant variance in burnout across 'professional discipline' (F(4,127), 2.720, p = .033). However, at post hoc testing (Game-Howell) there were no significant differences between professional disciplines, although psychologists reflected lower scores than other professional disciplines. There was a negative correlation between ProQoL compassion satisfaction and 'years in setting' r= -.203, n= 132, p= .020. There were no significant demographic covariates associated with the subscale Secondary Traumatic Stress.

Within the RKI measure the analysis also revealed a significant negative correlation with the RKI total score with 'age' r= -.251, n= 132, p= .004. There was significant variance in RKI total scores across 'professional discipline' (F(4,127), 4.843, p = .001), education (F(4,127), 7.198, p= < .001) and 'employment type' (F(2,129), 3.344, p = .038). In post hoc analysis (Game-Howell) there were no significant differences between employment types, but temporary staff revealed lower RKI total mean scores. Additionally, the professional discipline of psychologist was significantly different to all other professions and psychologists reflected higher RKI total mean scores. Post hoc testing also revealed doctoral level education to be significantly different to all other levels of education and diploma and masters to be significantly different. In each case higher levels of education were associated with higher RKI total mean scores.

Collinearity.

Of the significant regressions reported, there was no significant collinearity within the models. Collinearity was assessed as low as the tolerance values were greater than 0.2 and Variance Inflation Factor (VIF) values were below 10 (Field, 2009). In the hierarchical multiple regression where burnout was regressed on the six AWS subscales controlling for covariates, low multicollinearity was present (profession, years in profession, years in setting, workload, control, reward, community, fairness and values: tolerance = .875, .468, .518, .841, .712, .677, .730, .535, .705, .715. VIF = 1.143, 2.136, 1.932, 1.190, 1.404, 1.477, 1.370, 1.870, 1.419). In the simple multiple regression where secondary traumatic stress was regressed on five of the six AWS subscales, low multicollinearity was present (workload, control, reward, fairness and values: tolerance = .904, .728, .705, .611, .729: VIF = 1.106, 1.374, 1.419, 1.636, 1.371). In the hierarchical multiple regression where compassion satisfaction was regressed on the six AWS subscales controlling for covariates, low multicollinearity was present (years in setting, workload, control, reward, community, fairness and values: tolerance =.899, .843, .724, .691, .763, .550, .726: VIF =1.112, 1.186, 1.380, 1.446, 1.311, 1.818, 1.377). In the final hierarchical multiple regression where RKI total score was regressed on compassion satisfaction controlling for covariates multicollinearity was also low (age, & compassion satisfaction: tolerance = ..959, .947: VIF = 1.043, 1.056).

Data exploration.

A correlation was calculated for the relationship between actual caseload size and workload scores. This was calculated both with and without the extreme scores; neither correlations were significant, the correlation excluding extreme cases is reported. This was calculated excluding the two psychiatrist and three nursing responses, due to their caseloads being greater than 90 clients and excluding missing values as these generated significant outliers. As these were legitimate observations and related to the professional role of the respondents,

it was decided not to transform the observation but to run the correlation for the remaining participants. Pearson correlation was calculated and no significant relationship was observed r= .058, n=122, p= .522. The reported caseloads for full-time staff ranged from 3–47 clients with a mean of 24.33, due to extreme cases this was calculated with 5% trimmed mean.

Demographic data for overtime and lunch breaks were available for 130 and 132 participants. This data identified that 85.4% (n= 111) of staff worked over their contracted hours on an average week and 80.3% (n= 106) of staff do not routinely stop to take a lunch break.

References

Field, A. (2009). *Discovering Statistics Using SPSS, Third Edition.* London: Sage.

Hoaglin, D. C., & Iglewicz, B. (1987). Fine-Tuning Some Resistant Rules for Outlier Labeling. Journal of the American Statistical Association, 82(400). 1147-1149.

Kim, H. (2013). Statistical notes for clinical researchers: assessing normal distribution (2) using skewness and kurtosis. *RDE : Restorative Dentistry & Endodontics*, (1), 52.

Pallant, J., (2013). *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using IBM SPSS*, 5th Edition. Berkshire: McGraw-Hill.

Tabachnick, B. G., & Fidell, L. S. (2007) *Using Multivariate Statistics, Fifth Edition.* Boston: Pearson Education Inc