

**THE ROLE OF PERSONAL RESOURCES IN EXPLAINING  
BURNOUT AND ENGAGEMENT IN PSYCHOLOGISTS:  
A JOB DEMANDS-RESOURCES APPROACH**

*Thesis submitted in part fulfillment of the degree of  
Doctorate in Clinical Psychology (DClinPsy)  
at the University of Leicester*

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## **DECLARATION**

This thesis is an original and authentic piece of work, written and submitted in part fulfillment of the degree of Doctorate in Clinical Psychology. I have fully acknowledged and referenced all material incorporated from secondary sources. It has not, in whole or part, been presented elsewhere for assessment. An anonymity checklist is included at Appendix A and I confirm that this work was checked for errors prior to submission.

Sameen Malik

August 2018

## THESIS ABSTRACT

### Systematic Literature Review

The loss of a patient to suicide is an occupational hazard for clinicians. This critical interpretive meta-synthesis provides a conceptual overview of the ways medical and nursing professionals can experience patient suicide. A systematic search of electronic databases identified seven papers. Constructs elicited via reciprocal translation analysis comprised four inter-related themes: (1) *Intrinsic but taboo*: patient suicide perceived as inevitable yet difficult to talk about. (2) *Significant emotional impact*: clinicians deeply affected, with resilience important for mitigating impact. (3) *Failure and accountability*: intense self-scrutiny, guilt and shame with differing attributions of blame across professional cultures. (4) *Legacy of patient suicide*: opportunities for growth but a lack of formal postvention guidance. Further research is directed at evaluating postvention procedures to inform effective guidance and support for clinicians after patient suicide.

### Research Project

Diminished resources and increasing demands in the NHS have contributed to heightened workplace distress among UK psychologists. Consequently, interest in personal resources (i.e. resiliency) has grown. Using the Job Demands-Resources model, this study explored the role of psychologists' personal resources in explaining burnout and work engagement through their interactions with various job characteristics. Using validated measures, cross-sectional data from 422 psychologists assessed three job demands (workload, psychological demands, work-self conflict); three job resources (autonomy, colleague support, work feedback); three personal resources (self-efficacy, proactive behaviour, reflective behaviour); burnout; and work engagement. Hierarchical multiple regressions with moderation analyses revealed that: (1) job demands and job resources were the most important predictors of burnout and engagement, respectively. (2) Overall, personal resources did not interact with these relationships. Employers are directed to balance job demands and job

resources to reduce burnout and enhance work engagement, rather than overstate the benefits of personal resources alone.

### **Critical Appraisal**

A reflective account of the author's research journey throughout this thesis is provided.

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<sup>†</sup> Excluding contents pages, tables, figures, references and mandatory appendices

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## **LIST OF ABBREVIATIONS**

BPS	British Psychological Society
CASP	Critical Appraisal Skills Programme
COR	Conservation of Resources
ERP	Extra-Role Performance
H <sub>1a-b</sub>	Hypothesis 1a and Hypothesis 1b
H <sub>2a-b</sub>	Hypothesis 2a and Hypothesis 2b
IRP	In-Role Performance
JD	Job Demand
JD-PD	Job Demand – Psychological Demands
JD-R	Job Demand – Resources
JD-WL	Job Demand – Workload
JD-WSC	Job Demand – Work-Self Conflict
JR	Job Resource
JR-A	Job Resource – Autonomy
JR-CS	Job Resource – Colleague Support
JR-WF	Job Resource – Work Feedback
NHS	National Health Service
PR	Personal Resource
PR-PB	Personal Resource – Proactive Behaviour
PR-RB	Personal Resource – Reflective Behaviour
PR-SE	Personal Resource – Self-Efficacy
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses

## **PART ONE: SYSTEMATIC LITERATURE REVIEW**

### **THE IMPACT OF PATIENT SUICIDE ON DOCTORS AND NURSES: A CRITICAL INTERPRETIVE META-SYNTHESIS**

Target journal: Suicide and Life-Threatening Behavior.  
Please see Appendix B for Author Guidelines.

## 1. ABSTRACT

**Objective:** To provide a conceptual overview of the ways in which medical and nursing professionals experience patient suicide via a critical interpretive meta-synthesis.

**Method:** *Search strategy* – Electronic databases AMED, CINAHL, Medline, PsycInfo, Scopus and ISI Web of Science were searched systematically using key words and subject headings within the core review concepts of suicide, profession and qualitative methodology. *Inclusion criteria* – Primary, qualitative research published in English of doctors' and nurses' experiences of patient suicide. *Data extraction and synthesis* – Data were extracted from seven papers and constructs elicited via reciprocal translation analysis.

**Results:** Findings comprised four inter-related themes: (1) *Intrinsic but taboo* – patient suicide perceived as inevitable yet difficult to talk about. (2) *Significant emotional impact* – clinicians deeply affected, with resilience important for mitigating impact. (3) *Failure and accountability* – intense self-scrutiny, guilt and shame with differing attributions of blame across professional cultures. (4) *Legacy of patient suicide* – opportunities for growth but clear lack of formal postvention guidance.

**Conclusions:** The loss of a patient to suicide has a profound and adverse impact on clinicians. Further research is therefore directed at evaluating postvention procedures to guide design and implementation of effective protocols to support clinicians in the aftermath of patient suicide.

**Keywords:** Patient suicide, doctors, nurses, qualitative research synthesis, reciprocal translation analysis

## **2. INTRODUCTION**

Approximately 800,000 people die by suicide worldwide annually, with many more attempting to take their own lives (World Health Organisation, 2018). Mental ill health is consistently reported as a risk factor for suicide (Cavanagh, Carson, Sharpe, & Lawrie, 2003; Hawton, Houston, Haw, Townsend, & Harriss, 2003; Séguin, Turecki, & Lesage, 2007), with estimates of individuals experiencing mental health difficulties ranging from 87% (Arsenault-Lapierre, Kim, & Turecki, 2004) to 98% when enacted (Bertolote, Fleischmann, De Leo, & Wasserman, 2004). Suicide is thus increasingly regarded as a healthcare issue with considerable research aimed at identifying and evaluating strategies for clinical intervention to mitigate risk and reduce fatalities (Mann et al., 2005; Zalsman et al., 2016). Despite clear difficulties in prediction and diagnosis (Leavey et al., 2017), healthcare professionals in particular have been identified as a key workforce in reducing incidence, as a significant proportion of those who commit suicide are in touch with a professional prior to the event (Lewis, 2004; NCISH, 2014; Stanistreet, Gabbay, Jeffrey, & Taylor, 2004).

There appear to be no definitive epidemiological data identifying the number of clinicians (i.e. professionals within or across healthcare disciplines) who have lost patients to suicide (Séguin, Bordeleau, Drouin, Castelli-Dransart, & Giasson, 2014). Studies to date have utilised convenience samples revealing considerable variance in incidence, from 22% (Chemtob, Hamada, Bauer, Torigoe, & Kinney, 1988) to 86% (Linke, Wojciak, & Day, 2002). Whilst these data may not be representative, patient suicide has been described as an occupational hazard (Chemtob, Bauer, Hamada, Pelowski, & Muraoka, 1989) with two types of clinicians typically discerned: those who have already lost a patient to suicide and those who will (Brown, 1987).

Despite its frequency, the loss of a patient to suicide is not inconsequential (Ellis & Patel, 2012) and delivering care as a trained professional does not necessarily confer resilience (Midence, Gregory, & Stanley, 1996). Concurrent with notions of healthcare professionals as 'second victims' following adverse patient events (Scott et al., 2009;



Strobl et al., 2014; Wu, 2000), an increasing body of research conveys a consistent and compelling narrative that patient suicide has a significant impact on clinicians. The impact of the loss has been likened to losing a family member (Chemtob et al., 1988) and can resemble post-traumatic stress disorder (McAdams & Foster, 2000; Spiegelman & Werth, 2005). Emotions commonly experienced include shock, disbelief, profound sadness and grief (Anderson, 2005; Darden & Rutter, 2011; Hendin, Haas, Maltsberger, Szanto, & Rabinowicz, 2004; Landeen, 1988; Litman, 1965; Spencer, 2007; Tillman, 2006). Clinicians can also experience a sense of failure and guilt, where consequent self-blame and shame may reinforce feelings of responsibility or compound fears of possible litigation (Gaffney et al., 2009; Goldstein & Buongiorno, 1984; Kendall & Wiles, 2010; Menninger, 1991; Robertson, Paterson, Lauder, Fenton, & Gavin, 2010; Talseth & Gilje, 2007; Ting, Sanders, Jacobson, & Power, 2006; Valente & Saunders, 2002; Waring, 2005). This seems particularly amplified when clinicians feel unprepared to deal with the aftermath of patient suicide (Grad & Michel, 2005), often termed 'postvention' in the literature (Schneidman, 1971).

In advancing this field of study, methodological approaches have varied over time. The impact of patient suicide on clinicians was initially documented through autobiographical essays, commentaries and individual case reports (Carter, 1971; Fox & Cooper, 1998; Kolodny, 1979). A need for empirical studies with clear theoretical underpinnings then emerged; validated scales were used to report the severity of impact, and influence on future patient interactions were explored through changes in clinical practice (Chemtob et al., 1988; Cyran, Kelly, & McCaffrey, 1995; Erlich et al., 2017; Hendin, Lipschitz, Maltsberger, Haas, & Wynecoop, 2000; Spencer, 2007; Takahashi, Chida, & Nakamura, 2011; Veilleux & Bilsky, 2016). The findings from such studies have been summarised in numerous reviews, some narrative (Ellis & Patel, 2012) and some systematic (Séguin et al., 2014; Talseth & Gilje, 2011). All offer some consensus that although loss of a patient to suicide is an emotionally challenging experience, clinician attitudes towards the level and type of support required varies. The reviews also indicate that further research is required to underpin more systematic clinical training, and to inform formal guidance for postvention (Schneidman, 1971). However, the utility of these reviews is constrained by the

quantitative methodologies of included studies. This precludes detailed phenomenological explanations of the variation observed and therefore limits understanding of how differences between clinicians should be considered in the aftermath.

Recognition of the constraints of quantitative data is reflected in a recent shift towards rigorous qualitative methodologies for understanding how clinicians experience patient suicide (Darden & Rutter, 2011; Davidsen, 2011; Foggin et al., 2016; Kouriatis & Brown, 2014; Sanders, Jacobson, & Ting, 2005). Whilst quantitative studies have identified the content and patterns of reactions, qualitative methodologies afford opportunities for researchers to investigate phenomenological complexity, providing valuable experiential insights to contextualise the impact of events (Clarke & Jack, 1998). An in-depth understanding of how healthcare professionals experience patient suicide could therefore support the development of more nuanced strategies for postvention and self-care for clinicians (Norcross, 2000), itself a growing field of inquiry (Andriessen, 2014). Accordingly, there is a need to systematically review the emerging body of qualitative literature investigating the experiential impact of patient suicide on clinicians.

The context of populations, settings and research philosophy is fundamental to qualitative studies as it allows researchers to make methodologically sound interpretations of differing experiences. As a result, some researchers assert that a key challenge in synthesising qualitative research without promoting a 'positivist' approach can arise from incongruities of heterogeneity, predominantly between potentially contrasting philosophical assumptions that may underpin these studies (Barbour, 2001). This can be problematic when aggregating findings, as context is broadly overlooked. However, others suggest this can be addressed by systematically integrating findings, utilising the same hermeneutic principles that apply to individual studies. This approach honours phenomenological experiences by enabling syntheses through rich and meaningful interpretations across studies (Noblit & Hare, 1988; Zimmer, 2006).

To date, research evidence regarding the impact of suicide on clinicians either aggregates findings from multidisciplinary teams or explores experiences within discrete professions, the majority of which comprise doctors or nurses. To reconcile the contextual factors that may influence experiences, the review was thus limited to studies investigating medical and nursing professionals only (Zimmer, 2006). The rationale for this was twofold: (1) whilst their professional cultures differ (Hall, 2005), both have a shared history of working together to manage risk in medical settings (Mackay, 1993; Walby & Greenwell, 1994); (2) numerous studies for each of these professions would enable in-depth, meaningful interpretations and comparisons across papers (Paterson, Thorne, Canam, & Jillings, 2001). This would be difficult to achieve for other healthcare professions given the current paucity of research. The main aim of this review was therefore to conduct an interpretive meta-synthesis of existing qualitative literature to provide a conceptual overview of the ways in which doctors and nurses experience patient suicide. The review also sought to consider variations that could affect postvention strategies following patient suicide.

### **3. METHOD**

Meta-ethnography informed the approach to the review and meta-synthesis. This established method for interpretative meta-synthesis (Bridges et al., 2013; Britten et al., 2002; Harrison et al., 2014) offers a broad conceptual understanding of phenomena; instead of aggregating results using an integrative approach, findings from across a number of qualitative studies are synthesised and re-interpreted to provide new insights (Noblit & Hare, 1988). The methods applied align with Noblit and Hare's seven phases of meta-ethnography, including: developing a research question and appropriate search strategy; using inclusion and exclusion criteria to identify relevant studies; appraising the quality of papers; and extracting data for synthesis and re-interpretation via reciprocal translation analysis (where common themes are iteratively translated into one another).

To ensure a robust review of the literature, the meta-synthesis drew on guidelines from PRISMA (Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, 2009), CASP (Critical Appraisal Skills Programme, 2013) and Cochrane (Noyes & Lewin, 2011) to systematically identify, appraise and collate papers.

#### **3.1. Search Strategy**

CHIP (Context, How, Issue, Populations) was used to formulate the research question and search strategy (Shaw, 2011). Qualitative methodologies were privileged, as the review aimed to understand the experiential impact of patient suicide on doctors and nurses. An initial scoping exercise was conducted to identify key words and phrases. Search terms were then refined using the library of Medical Subject Headings (MeSH). Key words and subject headings within the core review concepts of patient suicide, profession (i.e. medical & nursing) and qualitative research were combined using the BOOLEAN operator 'OR'. These searches were then combined using 'AND'. The final search strategy was developed in conjunction with a librarian subject specialist to optimise identification of relevant papers across multiple electronic medical, sociological and psychological databases (Table 1). An extensive search was conducted

in January 2018 in the databases: AMED; CINAHL; Medline; PsycINFO; Scopus; and ISI Web of Science. Finally, reference lists from key studies were manually searched for additional papers.

**Table 1:** Search terms utilised for systematic literature review

Patient Suicide	Profession	Qualitative Research
patient suicide	doctor*	impact
client suicide	physician*	effect*
completed suicide	general practitioner*	experie <sup>n</sup> c*
suicide postvention	gp*	attitude*
SUICIDE <sup>†</sup>	psychiatrist*	qualitative
	medic	interview*
	PHYSICIANS	focus group*
	GENERAL PRACTITIONERS	phenomenolog*
	INTERNSHIP AND RESIDENCY	ipa
	nurse*	hermeneutic*
	nursing	ethnograph*
	NURSES <sup>†</sup>	narrative*
	NURSING <sup>†</sup>	thematic analysis
		content analysis
		discourse analysis
		grounded theory
		ATTITUDE OF HEALTH PERSONNEL
		QUALITATIVE RESEARCH <sup>†</sup>
		QUALITATIVE ANALYSIS <sup>†</sup>
		INTERVIEW AS TOPIC
		FOCUS GROUPS
		GROUNDING THEORY
		DISCOURSE ANALYSIS
		CONTENT ANALYSIS
		PHENOMENOLOGY
		HERMENEUTICS
		ETHNOGRAPHY

\* Terms were truncated to maximise relevant returns.

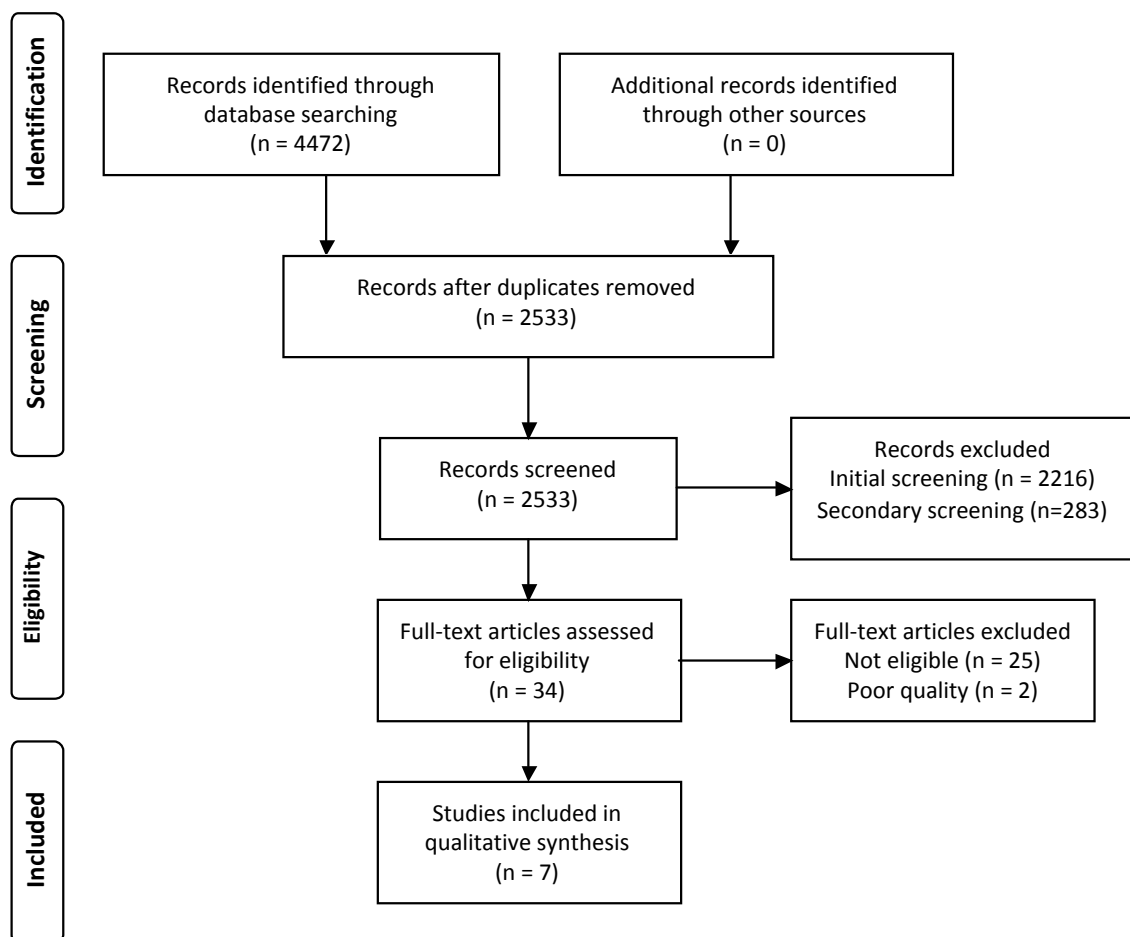
† Subject terms were exploded within databases wherever possible to optimise the search strategy.

Lower case terms indicate key words; CAPITALISED terms indicate subject headings, matched across databases.

Peer-reviewed qualitative studies reporting the experiential impact of patient suicide on doctors and nurses published in English were included in the synthesis. Studies were excluded if: the sole focus was on patient, family or caregiver experiences; their primary concern was risk assessment, management, prevention or intervention; they documented staff experiences of assisted or attempted suicide; participants were not doctors or nurses; or only quantitative findings were reported. Editorials and reviews were excluded on the basis that they did not offer new data.

### 3.2. Identification of Papers

The initial database search identified 2533 unique studies once duplicates were removed. The author initially screened all titles and abstracts by applying the following criteria: (1) Does the study focus on patient suicide; and (2) Does the study explore clinicians' experiences of patient suicide? From this, 2216 studies were excluded. Of the remaining 317, a further 283 were excluded and 34 qualified for full-text review on the basis that they met the inclusion criteria or could not be excluded by the title and abstract alone. At full-text screening 25 studies were excluded, resulting in nine papers for quality assessment. No additional studies were manually identified from key papers (Figure 1).



**Figure 1.** PRISMA flow chart documenting the identification of papers

### **3.3. Determination of Quality**

Debate regarding the approach to assessing methodological quality and rigour in qualitative research is ongoing (Dixon-Woods et al., 2007). However, it is widely acknowledged that poor quality studies can raise doubts about the integrity of findings. Their inclusion can thus bring into question the credibility of a meta-synthesis (Barbour, 2001). To address this, the quality of the nine papers was appraised at full-text level using the CASP quality assessment checklist (Critical Appraisal Skills Programme, 2013). This tool assesses issues of methodological clarity, data collection, analysis and reporting. Devising a rating system, whereby a score of one or zero points was assigned depending on whether the answer to each question was 'yes' or 'no', respectively, enabled efficient comparison of studies. It is acknowledged that this approach is contentious, often resulting in the assignment of arbitrary cut-off points for inclusion. Consequently, it was initially determined that no studies would be excluded; instead the ratings would identify study limitations that could influence the results of the review and therefore inform an appropriate weighting for the current meta-synthesis.

The author and supervisor undertook the appraisal independently before discussing together. The ratings matched and for the purposes of this review, two studies were identified as fatally flawed on the grounds of methodological and reporting quality (Appendix C). One paper did not report the approach to analysis and failed to support interpretations and conclusions with evidence from the data itself (Kahne, 1968). Whilst the second did support some interpretations with direct quotations, it tended to privilege a quantitative approach to the analysis, reporting the percentage of participants who felt a particular way (Midence et al., 1996). Again, there was no indication of how the themes were arrived at and the study limitations implied that not all participants were qualified nurses, thus raising further doubts. To maintain meta-ethnographic fidelity, it was therefore decided to exclude these studies. Consequently, seven studies were included in the final analysis, the theoretical underpinnings of which could be meaningfully integrated through interpretative analysis (Zimmer, 2006; Table 2). These articles all scored between seven and ten

points using the CASP tool, with particular strengths in robust, reflexive and transparent analysis. They were therefore weighted equally in the analysis.

### **3.4. Interpretive Meta-Synthesis**

In the interpretive paradigm, individuals' narratives are regarded as interpretations based on meanings they assign to their experiences (Noblit & Hare, 1988). These primary data from qualitative studies are identified as first-order constructs (Britten et al., 2002; Zimmer, 2006). Noblit and Hare suggest researchers then make interpretations from the primary data based on their own experiences and epistemological positions, namely second-order constructs. It follows then that when multiple studies are drawn together in a meta-synthesis, new insights are developed through interpretations of interpretations. These are termed third-order constructs and encompass their own contextual complexity.

In practice, difficulties distinguishing between first- and second-order constructs arise as it is often unclear whether researchers' commentaries are descriptive of participant narratives or interpretations based on their own experiences and methodological standings (Atkins et al., 2008). The review therefore followed the approach recommended by Atkins et al., where all data extracted from the original papers were considered first-order constructs, including participant quotations as well as comments from study authors. The wording used in the original papers was preserved to promote fidelity of meanings and concepts (Britten et al., 2002).



**Table 2:** Study profiles for the seven papers included in the meta-synthesis

Study	Davidson (2011), Denmark	Foggin et al. (2016), England & Wales	Joyce & Wallbridge (2003), USA	Robertson et al. (2010), Scotland	Saini et al. (2016), England	Talseth & Gilje (2007), Norway	Wang et al. (2016), China
<b>Research Aims</b>	To investigate how GPs were affected by patient suicides & whether reaction linked to propensity to explore risk	To explore experiences of GPs dealing with parents bereaved by suicide & personal impact of patient suicide	To gain insight into the effects on nurses of a series of patient suicides & identify factors that helped them to cope	To explore how psychiatric nurses construct & orient to accountability when discussing patient suicide experiences	To explore how GPs are affected by patient suicide & the formal support available to them	To describe psychiatrist response to patient suicide in light of a published model of consolation	To explore impact of inpatient suicides on nurses, patterns of regulation and their support needs
<b>Theoretical Framework</b>	Interpretative phenomenology	Thematic	Thematic	Discursive	Thematic	Interpretative phenomenology	Descriptive phenomenology
<b>Sampling/ Population</b>	Purposive sampling GPs ( $n = 14$ )	Purposive sampling GPs ( $n = 13$ )	Purposive sampling Nurses ( $n = 9$ )	Volunteer sampling Mental nurses ( $n = 2$ )	Purposive sampling GPs ( $n = 198$ )	Purposive sampling Psychiatrists ( $n = 5$ )	Purposive sampling Nurses ( $n = 15$ )
<b>Methodology</b>	Semi-structured interviews	Semi-structured interviews	Structured interviews	Unstructured interviews	Mixed-methods: Questionnaires & semi-structured interviews	Semi-structured interviews	Semi-structured interviews
<b>Analysis</b>	Interpretative phenomenological analysis	Thematic analysis with constant comparatives	Thematic analysis	Discourse analysis	Framework analysis	Thematic analysis	Phenomenological analysis
<b>Ethical Considerations</b>	Ethical approval and informed consent	Informed consent was obtained	Informed consent was obtained	Institutional approval & informed consent	Ethical & institutional approval, & informed consent	Ethical approval & informed consent	Ethical, institutional approval, & informed consent
<b>Reflexivity</b>	First person reporting, clear decision rationale & prolonged analysis period for reflexivity	Recruitment rationale was reported	None	Clear decision rationale & researcher position considered	None	Clear decision rationale, verification strategies, researcher position considered & reflections offered	None

Second-order constructs were then developed iteratively for each of the seven studies. These were largely consistent across studies and where individual concepts were not identified explicitly in particular papers, there were no notable contradictions. Additional interpretations that emerged from the first-order constructs were reflected in themes of: perceived helplessness; difficulty talking about suicide; clinician shame following completed suicides; differences in accountability across professional cultures; and the importance of resilience and postvention guidance in fostering opportunities for personal and professional growth. Table 3 presents examples of first- and second-order constructs interpreted from one medical and one nursing paper for illustration (remaining papers included at Appendix D).

The reciprocal nature of the constructs identified enabled contextually congruent translation of accounts into one another to develop third-order constructs across studies (Paterson et al., 2001; Zimmer, 2006). Conceptual themes were first grouped to develop a coherent line of argument (Britten et al., 2002). With the original papers to hand, the interpretations were then refined to ensure they emerged from the original data and captured all findings relevant to the aims of the review (Noblit & Hare, 1988). Third-order constructs comprised four inter-related conceptual themes, which featured in all seven papers: 'Intrinsic but Taboo'; 'Significant Emotional Impact'; 'Failure and Accountability'; and 'Legacy of Patient Suicide' (Table 4). The themes are discussed under these headings.

**Table 3: First- and second-order constructs**

Study	Aims	Themes (1 <sup>st</sup> Order)	Authors Comments (1 <sup>st</sup> Order)	Conclusions (2 <sup>nd</sup> Order)
<b>Joyce &amp; Wallbridge (2003)</b>	To gain insight into the effects on nurses of a series of patient suicides & identify factors that helped cope	<ul style="list-style-type: none"> <li>Effects on staff. Nurses identified with patients and families "I felt extremely stressed... I'd just sit alone in my car and cry." Rumination was evident in home context. "The sense of failure it gives is the biggest thing."</li> <li>Effects on ward environment. Increased anxiety, tension and fear of blame. "I saw my peers experiencing fear that somehow they would be... blamed." Some lost trust in patients.</li> <li>Changes in clinical practice. Increase in vigilance and adherence to protocol "by the book." "The reaction is to think about what I could or should have done." Some learning: "I've become a better worker... I'm more aware of the patients and the environment".</li> <li>Support. There was a "pull between staff who needed to talk about it right away and staff who didn't want to discuss it at all." Personal resilience important, including "spiritual beliefs" and positive reframing.</li> </ul>	<ul style="list-style-type: none"> <li>Effects of stress, sadness, shock, fear and emotional upset reported by nurses, notably headaches, disturbed sleep and withdrawal.</li> <li>Individual variation depended on caring proximity to suicide and personal grief processes. Some drew upon spiritual beliefs to help cope.</li> <li>Increased vigilance, suspicion of colleagues and decreased trust in patients increased ward tensions. Some felt scapegoated and ostracised by peers. Since no legal proceedings initiated, authors surmise changes based on fear of legal action or criticism.</li> <li>Nurses who adapted less well showed more emotional conflict.</li> <li>Debriefing, supportive stance from managers and more information cited as helpful.</li> </ul>	<ul style="list-style-type: none"> <li>Variation in reactions but themes of adversity clear. Nurses identified with patient but some felt negatively towards them. Resilience important.</li> <li>Working capacity of team altered. Support from colleagues not elicited due to fear of blame.</li> <li>Tension may be caused by expectation to keep patients safe but losing trust in patients' ability to keep themselves safe, indicates perceived inevitability of suicide and helplessness.</li> <li>Space to reflect and discuss important for growth but no consensus on timing.</li> </ul>
<b>Saini et al. (2016)</b>	To explore how GPs are affected by patient suicide & the formal support available to them	<ul style="list-style-type: none"> <li>Part and parcel. Suicide accepted as "a fact of life." "It would affect me if I knew the patient well and I hadn't picked up they were suicidal." Some would not seek support, "it's obviously distressing but not such that it warrants professional counselling."</li> <li>Failing patients. GPs reported significant self-scrutiny "The first thing you think is was it my fault", "It certainly did affect me because I felt I put myself out and say that I wanted to help."</li> <li>Informal support systems. GPs uncertain of support available. Level of support depended on each case.</li> </ul>	<ul style="list-style-type: none"> <li>Despite some being pragmatic about suicide, other GPs reported frustration at inability to help. Grief, guilt and self-scrutiny emphasised.</li> <li>Suggested older GPs needed more support, possibly due to deeper GP-patient relationship over time with high professional attachment. However, younger GPs might be more emotionally vulnerable.</li> <li>Individual differences in support required depended on preference and impact of suicide.</li> <li>Peer discussions gave GPs opportunity for reflection and learning.</li> </ul>	<ul style="list-style-type: none"> <li>Inevitability of suicide and impact on GPs accepted as core to role.</li> <li>Relationship with the patient affected level of self-scrutiny, particularly where patients were on the 'road to recovery'.</li> <li>GPs uncertain what constituted formal support. Ambivalence towards seeking support possibly due to: seeing distress as intrinsic to role; feeling unworthy due to perceived failure; or lack of formal guidance.</li> <li>Reflection and debriefing important for growth.</li> </ul>

**Table 4:** Third-order constructs – taxonomy of findings

Intrinsic but Taboo
<ul style="list-style-type: none"><li>• Patient suicide thought to be unavoidable in healthcare</li><li>• Perceived helplessness potentiated clinicians' distress</li><li>• Despite perceived inevitability, stigma made it difficult to talk about suicide</li></ul>
Significant Emotional Impact
<ul style="list-style-type: none"><li>• Clinicians deeply affected by patient suicide – shock, panic and grief</li><li>• Level of distress dependent on quality of professional attachments</li><li>• Resilience important for mitigating personal and professional impact</li></ul>
Failure and Accountability
<ul style="list-style-type: none"><li>• Intense self-scrutiny exercised – clinicians wondered if they had overlooked something</li><li>• Rumination of failure to prevent suicide resulted in guilt and shame</li><li>• Attributions of blame differed across professional cultures:<ul style="list-style-type: none"><li>○ Nurses identified external locus of control through increased reliance on protocols</li><li>○ Medics suspected failure in doctor-patient relationships</li></ul></li></ul>
Legacy of Patient Suicide
<ul style="list-style-type: none"><li>• Self-reflection engendered opportunities for personal and professional growth</li><li>• Uncertainty evident when attending to patients' families</li><li>• Organisational responses required to enable supportive cultures post-incident</li><li>• Lack of formal guidance for postvention procedures and self-care highlighted</li></ul>

## **4. FINDINGS**

All quotations comprise author commentaries and direct clinician quotes from the original papers of the seven studies included in the review.

### **4.1. Intrinsic but Taboo**

Clinicians communicated a sense that patient suicide was intrinsic to healthcare, albeit infrequent. The expression of this however, varied. Most openly talked about it being “part and parcel in the job” (Saini, Chantler, While, & Kapur, 2016, p.417) and “inevitable in certain situation, no matter how hard we try” (Wang, Ding, Hu, & Zhang, 2016, p.356). Others described a “decreased trust” (Joyce & Wallbridge, 2003, p.19) in patients’ abilities to keep themselves safe, recognising that risk of suicide was core to the contexts in which they worked. Medical and nursing professionals therefore felt responsible for the welfare of their patients. Implicit in the narrative was “a sense of captivity and wishfulness... about what could have been... [which conveyed] their expectation to have prevented the suicide” (Talseth & Gilje, 2007, p.631). At times however, they described feeling unable to prevent it: “if somebody really wants to, they will” (Foggin et al., 2016, p.740). Lack of resources was cited as a contributing factor: “I’d requested staff but never got any” (Robertson et al., p.4). Helplessness was thus embedded in clinicians’ descriptions.

Notions of taboo surrounding patient suicides were evident and there was a clear sense suicide was difficult to talk about. Clinicians “differed in their propensity to explore suicide ideation” (Davidsen, 2011, p.113) and some worried that talking about suicide would increase risk (Wang et al., 2016). This persisted in the aftermath of patient suicide, as evidenced in clinicians’ discourse (Robertson et al., 2010). Euphemisms such as “topped himself [and] this sort of incident” (Foggin et al., 2016, p.740) were commonly used to guard against the social stigma of suicide when describing experiences to researchers. The pressure to remain professional compounded this defence for clinicians attempting to express themselves: “I was not restless on the outside, but I was on the inside” (Talseth & Gilje, 2007, p.623). This

mirrored the difficulties and stigma patients experienced in disclosing suicidal ideation, which seemed to entrench the taboo of suicide.

#### **4.2. Significant Emotional Impact**

Intense emotions including shock, stress, sadness and grief were experienced post-incident. “The suicides had seriously shaken” clinicians (Davidsen, 2011, p.115) and the significant impact was clear: “I felt like there was a stone on my chest” (Wang et al., 2016, p.358). Some observed that the level of distress depended partly on how involved they had been in the patient’s care. For example doctors who had a “deeper GP-patient relationship with a high level of professional attachment” (Saini et al., 2016, p.418) over time were particularly affected and commentaries suggested they required more support. Involvement with greater caring “proximity to the event” (Joyce & Wallbridge, 2003, p.21) over a shorter period also appeared intensely distressing: “It certainly did affect me because I felt I put myself out and say that I wanted to help” (Saini et al., 2016, p.418).

Several clinicians disclosed personal experiences of suicide and “explained that such personal losses could sometimes make it extremely difficult” (Foggin et al., 2016, p.742) when faced with patient suicide. However, clinicians’ distress was not always predicated on previous experience of suicide and individual variation in recovery time and process was apparent. Statements from clinicians and author commentary seemed to reflect the importance of personal resilience in managing the emotional impact of patient suicide. Some drew on “spiritual beliefs” (Joyce & Wallbridge, 2003, p.21) to help cope. Others found sharing their distress with family and friends cathartic: “I was badly hurt and cried to my husband” (Wang et al., 2016, p.358). There was also recognition that “becoming open to self and others” (Talseth & Gilje, 2007, p.630) was helpful for working through negative emotions, as was positively reframing experiences, either by reflecting with others or alone.

#### **4.3. Failure and Accountability**

Medical and nursing professionals emphasised that “the sense of failure [patient suicide] gives is the biggest thing” (Joyce & Wallbridge, 2003, p.19). This arose from feeling responsible for managing risk and resulted in “great self-scrutiny” (Saini et al., 2016, p.418). Clinicians expended “a great deal of mental energy to think through the process” (Davidsen, 2011, p.115), wondered “what could have been done differently” (Foggin et al., 2016, p.742) and blamed themselves harshly: “How could I be so naïve” (Talseth & Gilje, 2007, p.626), “I should have known” (Wang et al., 2016, p.354). Rumination about what they may have missed resulted in feelings of guilt and shame. Consequently, clinicians expressed fear of “perceived judgment and blame” (Wang et al., 2016, p.354). The discourse used by some seemed to create distance between themselves and the suicide “to show they did their job well and that they are ‘good’ [clinicians]” (Robertson et al., 2010, p.3). This may have been due to “fear of legal action” (Joyce & Wallbridge, 2003, p.19), which would reinforce the perceived burden of blame if held accountable.

Whilst the underlying sense of failure, guilt, self-scrutiny and repercussions for accountability were mirrored for medical and nursing professionals, attributions of blame differed. Despite wondering if they had missed something, nurses tended to attribute patient suicide externally. This was reflected in an increased vigilance and adherence to protocol “by the book” (Joyce & Wallbridge, 2003, p.19) after patient suicide. Some emphasised they had undertaken thorough assessment of risk prior to the event and drew on others’ assessments to rebuff any unspoken suspicion that may imply culpability. For example, one nurse emphasised the patient seemed well since “there had been nothing untoward indicating... any intention of suicide... she was bright... attended to her hygiene... had her breakfast” (Robertson et al., 2010, p.4). Others anticipated potential professional repercussions by suggesting they had not been taught the skills to manage risk appropriately: “I don’t know how to ask... how to comfort” (Wang et al., 2016, p.354), again creating distance between the limits of their expertise and the patient’s decision to end their life.

Medical professionals also wondered whether they had overlooked something but tended to attribute patient suicide to failure in emotionally connecting with their patients. Doctors were acutely aware that “it might have been [them] that... made the delay in the diagnosis” (Foggin et al., 2016, p.741). They appeared particularly self-critical if they felt they had been unable to facilitate disclosure of suicidal ideation: “they had actually come to talk about this... but they never came out with it... there we have actually failed” (Davidsen, 2011, p.115). Feelings of guilt and self-blame were amplified if doctors felt they had developed meaningful relationships with patients “who they felt [were] on the ‘road to recovery’” (Saini et al., 2016, p.418). Attributions of blame were thus internalised. This tended to foster reflection on how doctors could change their approach in the aftermath of patient suicide in an attempt to counteract any adverse “impact on professional practice” (Talseth & Gilje, 2007, p.621).

#### **4.4. Legacy of Patient Suicide**

The profound self-doubt experienced by some clinicians initially left them feeling lost or questioning their abilities: “I doubt whether I could do this job anymore” (Wang et al., 2016, p.358). For most, intense self-scrutiny motivated action to improve. Clinicians articulated instances of professional growth, which was evident in comments such as “I’m more aware of the patients and the environment” (Joyce & Wallbridge, 2003, p.21) and “I have got better at asking if they think of suicide” (Davidsen, 2011, p.115). The ability to use their experiences in “teaching students and colleagues” (Talseth & Gilje, 2007, p.632) to improve future care was also cited as a mechanism for growth.

Statements from clinicians and author commentaries indicated that interactions with bereaved families in the immediate aftermath of patient suicide were also affected. There was some evidence that clinicians felt responsible for supporting distressed families. However, post-incident helplessness was again apparent, as clinicians felt unprepared and reported not having sufficient time to counsel families. Furthermore, “very few responders were able to name third-sector organisations that specifically supported those bereaved by suicide” (Foggin et al., 2016, p.742) to enable



appropriate referrals. This resulted in avoidance of families by some clinicians, particularly when they were “afraid of medical disputes” (Wang et al., 2016, p.358).

Clinicians made clear the importance of organisational support in managing emotional impact and “professional accountability” (Robertson et al., 2010, p.5) following patient suicide. The level and type of support required varied across clinicians: “[There was a] pull between staff who needed to talk about it right away and staff who didn’t want to discuss it at all” (Joyce & Wallbridge, 2003, p.19). A supportive, non-judgmental stance from managers appeared helpful and reassurance from colleagues was crucial for moving forward: “I talked... with my chief... He clearly said I could not have done anything else... I was relieved” (Talseth & Gilje, 2007, p.627). Where this was not available, clinicians “hesitate[d] to share their feelings” (Wang et al., 2016, p.359), and expressed particular concern when they felt they needed to manage “the emotional impact of the suicide by themselves” (Davidsen, 2011, p.115). Author commentaries suggested this may reflect insufficient “space to deal with their own grief” (Foggin et al., 2016, p.744) due to the pressures of ongoing patient interactions in the immediate aftermath of patient suicide.

A pervasive theme across papers was the sense that organisations offered insufficient guidance to manage clinicians’ responses to patient suicide effectively, and was reflected in a notable absence of formal postvention arrangements within clinicians’ narratives. This related to working with bereaved families as previously noted, as well as managing personal impact: “we’re very good at supporting each other... but we don’t have any formal back up” (Saini et al., 2016, p.418). Confusion and uncertainty regarding what constituted formal support was also expressed. Many informally accessed “support from colleagues” (Davidsen, 2011, p.114) or family members. Barriers to utilising support included “pride... as well as the residual stigma of mental health in health professionals” (Foggin et al., 2016, p.742). Consequently, the necessity of introducing postvention guidance comprising personal support and professional procedures was highlighted as a necessary outcome “to help [clinicians] better cope with negative consequences of [patient] suicide” (Wang et al., 2016, p.359).

## **5. DISCUSSION**

Whilst the term ‘suicide survivor’ has traditionally been limited to family and friends bereaved by suicide, clinicians with experience of patient suicide are increasingly recognised as legitimate survivors (Grad & Michel, 2005). The current review supports this, demonstrating that the same stigma that engenders shame and self-blame in families also applies to healthcare professionals. The findings thus parallel notions of second victimhood, where clinicians become traumatised by adverse patient events (Scott et al., 2009; Wu, 2000).

### **5.1. Cognitive-Emotional Dissonance and Support**

Despite perceived inevitability, the review demonstrates that doctors and nurses were all deeply affected by patient suicides. Clinician distress may therefore have been compounded by the consequent dissonance between their cognitions (i.e. suicide is inevitable hence untreatable) and the significant negative emotions experienced in the aftermath (Talseth & Gilje, 2007). It was clear that clinicians attempted to reconcile considerable guilt and shame in their perceived failure to prevent patients from completing suicide with their awareness that it was an occupational hazard (Chemtob et al., 1988). Implied in the narrative was therefore a sense that clinicians were balancing the inherent risks of suicide with the fear of being held responsible for the death of a patient. This was likely to have contributed to feelings of intense self-blame. For some, the fear of blame was linked to litigation (Foggin et al., 2016). For others, it was colleagues’ perceptions of their competence (Joyce & Wallbridge, 2003). This supports previous consensus that losing a patient to suicide is an intensely challenging experience and may explain the high levels of post-incident self-scrutiny (Chemtob et al., 1988; Ellis & Patel, 2012; McAdams & Foster, 2000; Midence et al., 1996; Spiegelman & Werth, 2005; Séguin et al., 2014).

The distress linked to the cognitive-emotional dissonance may also have contributed to some clinicians attempting to cope alone, or with close family and friends rather than colleagues. The self-blame arising from intense self-scrutiny left some clinicians wary

of voicing their distress in case it reinforced others' impressions of their perceived guilt (Robertson et al., 2010). This may also have left them feeling unworthy or undeserving of receiving formal support (Davidsen, 2011). However, the review demonstrated that when clinicians felt supported by colleagues and discussed their concerns with them, it was beneficial (Saini et al., 2016), aligning with previous findings that seeking support following adverse patient events is invaluable for clinicians' growth (Scott et al., 2009). Given the significant emotional impact of patient suicide identified here, as well as previous quantitative data reporting its pervasive effects, it seems vital that such reactions to patient suicide are normalised among clinicians as common and experienced by most. Findings from the emerging postvention literature suggest this may encourage clinicians to seek support (Andriessen & Krynska, 2012).

## **5.2. Differences across Professional Cultures**

The differences between medical and nursing cultures observed in the review seemed to reflect the educational values and roles of both professions. Nurses traditionally train in teams to problem-solve collectively, perform effective handover of patient information and commonly value patient self-determination (Hall, 2005). Whilst both professionals in the review tended to hesitate in discussing patient suicide with colleagues, professional censure for nurses was primarily due to fearing they would be criticised by colleagues and held responsible for failing the team (Joyce & Wallbridge, 2003). This may explain their external attributions of blame and tendency to enact rule-bound denial, as it minimised their own stake in the incident (Robertson et al., 2010). This was evident in criticisms of their training (Wang et al., 2016), as well as their reliance on protocols, guidance and multidisciplinary risk assessments.

Conversely, doctors train independently in highly competitive and academic environments (Hall, 2005). This was described in author commentaries as doctors having "pride [in their abilities] or... personality traits of high achieving... workers" (Foggin et al., 2016, p.742). This seemed to contribute to many internalising blame and feeling they should manage the impact of patient suicide alone, as they felt they should have performed better (Davidsen, 2011). As arbiters of medical knowledge, Hall

suggests doctors also tend to uphold an authoritarian physician-patient relationship. This was espoused in their perceptions that patient suicide was attributable to their being unable to connect with patients, which they felt hindered their ability to diagnose and identify risk (Saini et al., 2016). Furthermore, subtle differences emerged between doctoral specialisms: psychiatrists tended to adopt a more reflective stance than GPs. Participating psychiatrists described themselves as therapists, suggesting experience of delivering psychotherapy (Talseth, Jacobsson, & Norberg, 2000). Analysis of clinicians' personal reactions to their patients (i.e. countertransference) is valued within psychotherapeutic supervision models (Tillman, 2006), which may explain the greater reflexivity observed in this professional culture.

### **5.3. Importance of Organisational Responses and Implications for Practice**

Whilst individual clinicians utilised a wide range of strategies to help cope with patient suicide (e.g. talking to others, positive reframing & spiritual practices), both clinician and author commentaries communicated the belief that organisations should also be accountable for the wellbeing of their employees. This is broadly consistent with previous research across a range of healthcare professionals, which call on advances in postvention training and guidance to better prepare clinicians for patient suicide and facilitate recovery from the adverse impact observed (Ellis & Patel, 2012; Grad & Michel, 2005; Schneidman, 1971; Sanders et al., 2005). Effective leadership approaches including supervision appropriate to the needs of the bereaved clinician have been suggested to support future patient interaction (Fairman et al., 2014; Grad, Zavasnik, & Groleger, 1997; Henry & Greenfield, 2009; Knox, Burkard, Jackson, Schaack, & Hess, 2006). Indeed, a supportive working environment where clinicians felt able to share their concerns and received reassurance from supervisors was considered beneficial in the review. Coordinated organisational responses therefore seem vital in addressing the taboo of suicide and offering formal postvention interventions, including guidance for working with grieving families (Foggin et al., 2016).

Current policy guidance from which organisations draw upon tends to focus on protocol-driven suicide prevention strategies and critical incident reviews after adverse patient events (Anderson, Byng, & Bywaters, 2006; Department of Health, 2012; Public Health England, 2016). Although these permit organisations to make sense of suicide and may offer lessons to improve future patient care, the evidence suggests they are ineffective as they fail to address clinicians' shared cultural experience of patient suicide (Cutcliffe & Stevenson, 2008; Kendall & Wiles, 2010). Consequently, they can exacerbate feelings of guilt and self-blame and may not be conducive to the supportive environments necessary for clinicians' self-care (Norcross, 2000; Strobl et al., 2014). Organisations must therefore ensure that their postvention procedures comprise space for clinicians to address the significant emotional impact of patient suicide to mitigate any adverse effects on future care outcomes (Taylor et al., 2007). For efficacy, they must also ensure any guidance is mindful of this review's findings and is co-produced with clinicians to accommodate individual preferences and variations across professional cultures.

#### **5.4. Strengths and Limitations**

Past reviews regarding the impact of patient suicide on healthcare professionals have not been systematic in approach (Ellis & Patel, 2012), have aggregated findings from across methodologies without contextual regard (Séguin et al., 2014; Valente & Saunders, 2002), or have not separated the impact of patient suicide and caring for suicidal patients (Talseth & Gilje, 2011). These reviews therefore present a limited analysis of the domain, with consequent weaknesses in generalisability. Whilst some argue this challenge is mirrored in reviewing qualitative literature with differing epistemological and methodological assumptions (Barbour, 2001), this systematic review utilised rigorous, theory-driven techniques to apply an interpretive synthesis, which can improve generalisability of findings (Noblit & Hare, 1988). Although it may be limited by the exclusion of grey literature and publication biases, the search strategy itself was wide-ranging to ensure articles relevant to the aims of the review were selected from reputable databases. The paucity of qualitative studies available of sound methodological and reporting quality resulted in the review being limited to

medical and nursing professionals. Even within these studies, the aims varied somewhat. Concepts relevant to the review were thus emergent in some studies and re-interpretation was dependent upon the data reported rather than considering the primary data directly.

Whilst grounded in transparent methodology, the derivation of second- and third-order constructs represented one way of interpreting the data, which was shaped by author subjectivity: a replication study may not arrive at the same taxonomy of findings. Double hermeneutics (i.e. the inextricable link between researchers and their interpretations) is a core concept within meta-ethnography (Giddens, 1987). The background of the researcher must therefore be recognised as integral to the analysis. The current author has personal experience of suicide and is a psychologist working therapeutically with patients who commonly present with suicidal ideation. These experiences are likely to have affected interpretations. Verification of constructs by the supervisor and reflection on issues of countertransference throughout the analysis therefore minimised subjective bias and enhanced methodological rigour.

## **5.5. Directions for Future Research**

The dearth of rigorous qualitative literature exploring the impact of patient suicide among clinicians was evidenced in the decision to limit the review to doctors and nurses. This reaffirms Hjelmeland and Knizek's (2010) call to increase qualitative studies in suicide research to advance this field of understanding. They argue that qualitative methodologies enable exploration of the relationships between factors to discern the psychological mechanisms underlying variation in quantitative studies. This leads to interventions grounded in psychological theory that can then be tested quantitatively. It is vital that such research extends to other healthcare professionals in recognition of the differences identified across professional cultures. Given that little is currently known about effective organisational approaches to support clinicians in the aftermath of patient suicide (Ellis & Patel, 2012), continued research in the design and evaluation of postvention procedures is also necessary to facilitate the development of evidence-based guidance and protocols.

## **6. CONCLUSION**

Patient suicide has long been considered an occupational hazard for healthcare professionals and research in this field has historically utilised quantitative methodologies to identify the content and patterns of clinicians' responses in the aftermath (Chemtob et al., 1988). Qualitative studies are now emerging, which acknowledge the phenomenological complexity of patient suicide and which attend to the variation in responses between clinicians to enhance postvention procedures. To advance this field of study, the review aimed to provide a conceptual overview of the experiential impact of patient suicide on doctors and nurses by privileging qualitative research. Seven papers were identified following a systematic literature search and a critical interpretive meta-synthesis via reciprocal translation analysis was conducted (Noblit & Hare, 1988). The findings demonstrate that the loss of a patient to suicide has a profound impact on clinicians. Whilst there may be opportunities for growth, the lack of formal postvention guidance to support clinicians in managing the personal and professional repercussions of patient suicide may potentiate their distress. Given the high risk of patient suicide and its significant impact on clinicians, organisations must anticipate its occurrence and prepare to respond to clinicians' needs, taking variations across professional cultures into account. Further research is required to support organisations in defining and developing such strategies for clinician self-care.

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## **PART TWO: RESEARCH PROJECT**

### **THE ROLE OF PERSONAL RESOURCES IN EXPLAINING BURNOUT AND ENGAGEMENT IN PSYCHOLOGISTS: A JOB DEMANDS-RESOURCES APPROACH**

Target journal: British Journal of Clinical Psychology.  
Please see Appendix B for Author Guidelines.

## **1. ABSTRACT**

**Objectives:** Diminished resources that fail to meet increasing demands in the NHS have contributed to heightened workplace distress among UK psychologists. To address this, interest in resilience (i.e. personal resources) has grown. Using the Job Demands-Resources model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), this study explored the role of psychologists' personal resources in explaining burnout and work engagement through their interactions with various job characteristics.

**Design:** A cross-sectional study of 422 psychologists working therapeutically with NHS patients in England was undertaken utilising self-report questionnaires. Validated measures assessed three job demands (workload, psychological demands and work-self conflict), three job resources (autonomy, colleague support and work feedback) and three personal resources (self-efficacy, proactive behaviour and reflective behaviour).

**Methods:** Multiple regression analyses first examined associations between job demands and burnout, and job resources and work engagement. Moderation analyses then identified whether interactions between personal resources and each job characteristic explained additional variance in burnout and work engagement.

**Results:** Job demands and job resources were the most important predictors of burnout and work engagement, respectively. Overall, personal resources did not demonstrably interact with these relationships.

**Conclusions:** To reduce burnout and enhance work engagement, employers should attend to the balance of job demands and job resources, rather than overstating the benefits of enhancing personal resources alone.

## **Practitioner Points**

### **Clinical Implications:**

- Manageable workloads should reduce the negative impact of job demands by diminishing burnout. Concurrently, affording psychologists with job resources is likely to improve work engagement.
- Despite financial constraints, employers can empower psychologists to remain engaged through interpersonal job resources such as autonomy, colleague support and work feedback.

### **Cautions and Limitations:**

- The study relied exclusively on self-report measures from a single time-point.
- Clinical Psychologists were overrepresented in the sample.

**Key Words:** Job Demands-Resources; psychologists; personal resources; resilience; burnout; work engagement.

## **2. INTRODUCTION**

Psychologists in clinical settings face a multitude of challenges and professional demands. Many are inherent to their roles: feeling responsible for others' lives; attending to their distress; managing behaviour that challenges; and maintaining constructive and containing relationships (Bober, Regehr, & Zhou, 2006; Deutsch, 1984; Farber & Heifetz, 1981; Hellman & Morrison, 1987; Stebnicki, 2007; Stevanovic & Rupert, 2004). However, delivering care as a trained professional does not necessarily confer resilience (Sherman, 1996). Concurrent with notions of vicarious trauma (Baird & Kracen, 2006; McCann & Pearlman, 1990), secondary traumatic stress and compassion fatigue (Figley, 1995), an increasing body of research presents a consistent and compelling narrative that psychologists themselves can also experience significant distress in the workplace (Gilroy, Carroll, & Murra, 2002; Hannigan, Edwards, & Burnard, 2004; Pope & Tabachnick, 1994). The emotionally demanding nature of therapy has thus been described as an occupational hazard (Rupert, Miller, & Dorociak, 2015).

Although challenges to wellbeing have long been a feature of their work, psychologists now report rising distress and declining wellbeing; for instance 48% of UK psychologists surveyed now report depression, an 8% increase from 2014 (BPS, 2017a). Recent changes in the NHS, the largest employer of psychologists in the UK, may contribute to an understanding of heightened workplace distress. The introduction of the Health and Social Care Act (2012) reinforced marketisation of the NHS and has promoted a more aggressive, commercially driven and competitive environment. Consequently, there has been an increased requirement for staff to transform their way of working, alongside continuous service restructuring for cost improvements (Ham, Dixon, & Brooke, 2012). One manifestation is that staff are encouraged to do 'more with less' to meet increasing demands within tightening budgets (Hurst & Williams, 2012). In effect, a shortfall in resources is failing to meet increased demands within a period of sustained austerity (Dunn, McKenna, & Murray, 2016). If not addressed, the tensions between job demands and the available resources may have

profound consequences for workplace distress, (i.e. increased burnout and reduced engagement in the workplace), with a detrimental impact on work performance (Bakker, Demerouti, & Sanz-Vergel, 2014; Barnett, Baker, Elman, & Schoener, 2007; Lee & Ashforth, 1996; Maslach, Schaufeli, & Leiter, 2001).

Since easing others' distress is a key workplace objective for psychologists, interest in the value of resiliency among this professional group has grown, not only as a method of self-care in a challenging environment, but also to guard against burnout as an ethical imperative (Bamonti et al., 2014; Barnett, Johnston, & Hillard, 2006; Gilroy et al., 2002; Sherman, 1996). The current study contributes to this growing field as the first to test the role of psychologists' resilience within the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2017; Demerouti et al., 2001; Schaufeli & Bakker, 2004). Resiliency is thus conceptualised as an individual's Personal Resources (PRs), which may interact with various Job Demands (JDs) and Job Resources (JRs) to affect workplace burnout and engagement. The aim of this exploratory study is therefore to answer the following research question: What is the role of PRs in explaining burnout and work engagement among psychologists providing therapeutic services for NHS patients? Before detailing the study hypotheses, an overview of the literature pertaining to burnout, work engagement and the role of PRs within existing JD-R literature is presented.

## **2.1. Burnout and Work Engagement**

First coined by Freudenberg (1974), the term burnout is used to describe a gradual emotional depletion or exhaustion caused by JDs, which results in loss of motivation or incentive to work. Research consistently demonstrates that JDs (e.g. total hours worked, administrative pressures, and negatively appraised patient contact) predict burnout (Bakker et al., 2014; Kant, Jansen, van Amelsvoort, Mohren, & Swaen, 2004; Rupert et al., 2015). The significance of this is evident in the adverse impact that burnout can have on personal and professional outcomes (Maslach et al., 2001). Individuals who report higher rates of burnout are more likely to suffer from depressive or anxiety disorders over time (Ahola, 2007; Hakanen & Schaufeli, 2012).

and experience poor physical health (Armon, Melamed, Shirom, & Shapira, 2010; Mohren et al., 2003). Burnout also predicts absenteeism and is related to poor performance (Bakker & Heuven, 2006; Taris, 2006).

Conversely, the availability of JRs (e.g. supervision, support from colleagues and feedback) has been identified as the most important predictor of engagement at work (Christian, Garza, & Slaughter, 2011; Halbesleben, 2010; Schaufeli & Bakker, 2004). Work engagement is conceptualised as a dynamic, dialectical relationship between an individual and their work, where engaged employees identify strongly with their roles and demonstrate high levels of energy and effort (Kahn, 1990; Kahn, 1992). Whereas chronic exhaustion in burnout reduces wellbeing and workplace functioning (Bakker et al., 2014), engaged employees enjoy better health (Seppala et al., 2012) and personal fulfilment (Rodriguez-Munoz, Sanz-Vergel, Demerouti, & Bakker, 2014); instead of viewing their work as a stressful demand, highly engaged employees may perceive it as a well-resourced challenge (Bakker, Schaufeli, Leiter, & Taris, 2008). Engaged workers tend to feel more inspired and are open to new ideas (Schaufeli & van Rhenen, 2006), resulting in proactive behaviours (Sonnentag, 2003) and enhanced performance (Bakker, Demerouti, & Verbeke, 2004; Demerouti & Cropranzano, 2010). Whilst work engagement was initially viewed as the antithesis of burnout (Maslach & Leiter, 1997), contemporary findings reveal it to be a distinct construct (Demerouti, Mostert, & Bakker, 2010), which is associated with higher profitability in business (Harter, Schmidt, & Hayes, 2002; Gruman & Saks, 2011; Salanova, Agut, & Peiro, 2005; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). These findings are paralleled in healthcare settings and are therefore pertinent to psychologists, as work engagement has been demonstrated to improve wellbeing and performance with respect to healthcare outcomes (Ackerley, Burnell, Holder, & Kurdek, 1988; MacLeod & Clarke, 2009; Rupert & Kent, 2007; West & Dawson, 2012).

The literature thus provides evidence for distinctive patterns of predictors and outcomes of burnout and work engagement (Bakker et al., 2014). A number of theoretical models have been posited to explain the psychological mechanisms underlying these patterns. These include the Two-Factor theory (Herzberg, Mausner, &

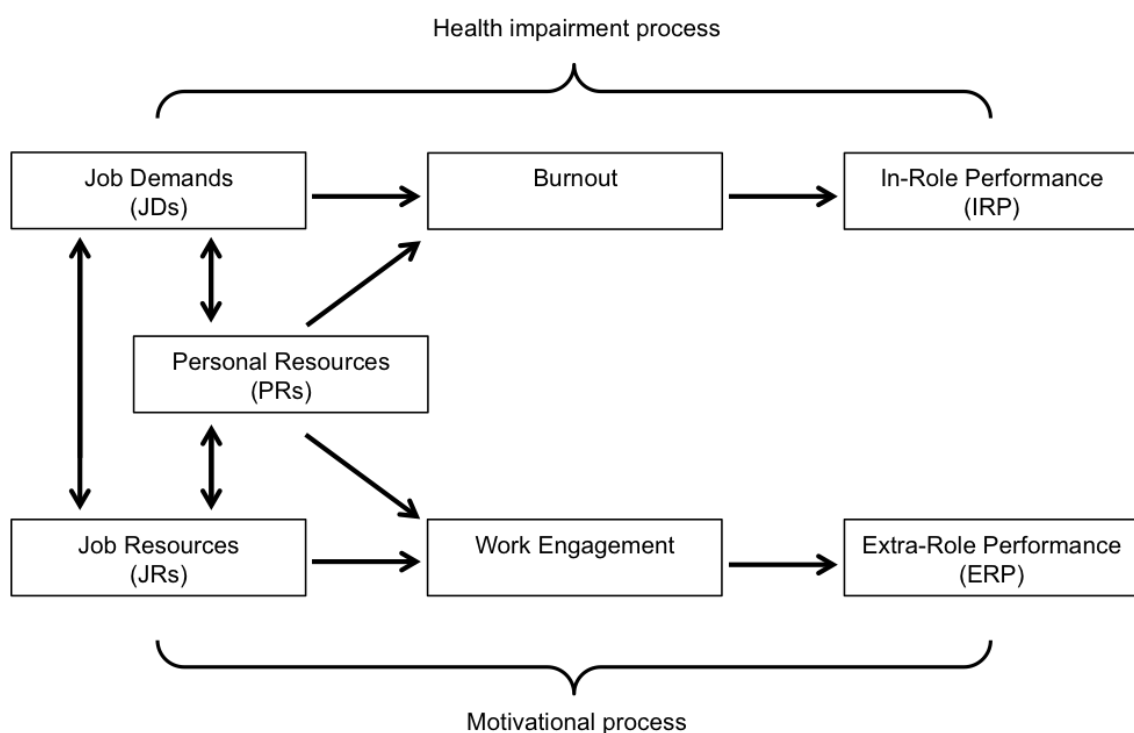
Snydermann, 1959), the Demands-Control model (Karasek, 1979), the Effort Reward Imbalance model (Siegrist, 1996) and the Job Demands-Resources (JD-R) model (Demerouti et al., 2001). It is beyond the scope of this paper to discuss each in turn. However, it is important to note that all consider the role of various job characteristics in the relationships between burnout, work engagement and performance. The JD-R model is currently accepted as the leading model (Schaufeli & Taris, 2014) with a substantial evidence base (Bakker & Demerouti, 2007; Bakker & Demerouti, 2017) and was therefore chosen as the theoretical framework to underpin this study.

## **2.2. The Job Demands-Resources (JD-R) Model**

A key factor in the popularity of the JD-R model is rooted in its heuristic assumption that whilst each occupation has its own work elements associated with burnout and work engagement, these employer-driven job characteristics can all be modelled into two broad categories: JDs and JRs. JDs refer to the aspects of the role that require sustained effort and are therefore associated with physical, psychological or social costs. JRs refer to the aspects of the role that support the achievement of workplace goals, reduce the impact of costs and stimulate growth (Bakker et al., 2004; Demerouti et al., 2001). The central tenet of the model is that these broad categories elicit two relatively independent psychological processes: health impairment and motivation (Bakker & Demerouti, 2007; Figure 2). In the health impairment process, chronic JDs exhaust employees' resources, deplete their energy levels and can lead to health concerns. If energy levels are not effectively restored (Hockey, 1993), the long-term effects can result in mental fatigue, burnout and reduced In-Role Performance (IRP; i.e. the prescribed tasks that directly serve organisational objectives; Bakker et al., 2014; Bakker et al., 2004; Motowidlo & van Scotter, 1994; Veldhuizen, Gaillard, & de Vries, 2003). In the motivational process, abundant JRs satisfy employees' needs to feel stimulated and empowered (Deci & Ryan, 2000; Hackman & Oldham, 1980). This promotes a positive psychological contract between employees and their employers that fosters willingness to dedicate energy and effort to their roles (Makin, Cooper, & Cox, 1996). This in turn cultivates Extra-Role Performance (ERP; i.e. completing tasks beyond their role requirements in good will; Meijman & Mulder, 1998). When

sustained lack of JRs precludes goal attainment, employees tend to withdraw from work and lose motivation (Bakker, Demerouti, de Boer, & Schaufeli, 2003). This has been linked to lower ERP (Bakker et al., 2004).

A further assumption of the JD-R model is that although relatively independent, the health impairment and motivational processes may interact. Building on earlier models of workplace stress (Karasek, 1979; Siegrist, 1996), the JD-R model suggests that JRs may interact with JDs to affect levels of burnout (Bakker, Demerouti, Taris, Schaufeli, & Schreurs, 2003; Bakker, Demerouti, & Euwema, 2005). Specifically, individuals with fewer JRs tend to experience greater levels of burnout when faced with higher JDs, compared to individuals with more JRs. These findings can be explained by the Conservation of Resources (COR) theory (Bakker & Demerouti, 2007; Bakker & Demerouti, 2017; Schaufeli & Taris, 2014), which asserts that when faced with conditions that might result in depleted energy levels, individuals utilise the resources at their disposal (e.g. time or energy) to counteract negative outcomes (Hobfoll, 1989). Individuals with more JRs are thus able to utilise their resources to buffer the effects of JDs on burnout.



**Figure 2.** Dual-process JD-R model including PRs and performance



### **2.3. The Role of Personal Resources (PRs) in the JD-R Model**

Whilst the JD-R model initially attributed wellbeing and engagement to only employer-driven job characteristics, a notable development has been the incorporation of PRs (Bakker & Demerouti, 2007; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). Predicated on COR theory, PRs are defined as the positive self-evaluations and characteristics associated with resiliency that foster an individual's belief in their ability to successfully impact their environment (Hobfoll, Johnson, Ennis, & Jackson, 2003). Possessing an abundance of PRs (e.g. self-efficacy, optimism and organisational-based self-esteem) is therefore linked with higher goal self-concordance, whereby individuals are intrinsically motivated to pursue their goals (Judge, Bono, Erez, & Locke, 2005; Luthans & Youssef, 2007). Accordingly, PRs have been identified as predictors of higher work engagement (Hakanen, Bakker, & Schaufeli, 2006; Hakanen, Perhoniemi, & Toppinen-Tanner, 2008; Karatepe & Olugbade, 2009; Xanthopoulou, Bakker, Heuven, Demerouti, & Schaufeli, 2008), lower burnout (Kalimo, Pahkin, Mutanen, & Toppinen-Tanner, 2003; Schwarzer & Hallum, 2008), and enhanced performance (Bateman & Crant, 1999; Dikkers, Jansen, de Lange, Vinkenbureg, & Kooij, 2010; Frese & Fray, 2001).

Given the well-established relationships between JDs and burnout, JRs and work engagement, and the impact of both these relationships on performance, interest in incorporating the PR literature into the JD-R model has grown. Exploration of the interaction effects between PRs, JDs and JRs is however, fragmented (Schaufeli & Taris, 2014). This has resulted in mixed findings (Lorente, Salanova, Martinez, & Schaufeli, 2008; Xanthopoulou et al., 2007). Consequently, the JD-R literature proposes a number of ways in which the model could be extended to accommodate PRs. These include: PRs shaping the ways in which people understand and respond to JDs and JRs (Bandura, 1997; Judge, Bono, & Locke, 2000); PRs mediating various interactions between JDs, JRs, burnout, engagement and performance (Mastenbroek, Jaarsma, Scherpbier, van Beukelen, & Demerouti, 2014; Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008; Vink, Ouweneel, & Le Blanc, 2011; Xanthopoulou et al., 2007); and PRs acting as separate variables that may independently affect the relationship between JDs and JRs (Bakker et al., 2010). Evidently, consensus regarding the

underlying mechanisms by which PRs should be incorporated into the JD-R model is yet to be achieved. However, the model's proponents consider PRs as comparable to JRs in that they operate within the motivational process, whilst also interacting with the health impairment process (Bakker & Demerouti, 2017; Schaufeli & Taris, 2014).

In support of this, PRs have most frequently been shown to buffer the negative effects of JDs on burnout, whilst increasing the positive impact of JRs on work engagement (Brenninkmeijer, Demerouti, Le Blanc, & Van Emmerik, 2010; Van den Broeck, Van Ruysseveldt, Smulders, & De Witte, 2011). The former parallels the interaction effects of JRs on burnout through JDs (Bakker et al., 2005). The latter makes a unique contribution to JD-R literature and lends further support to COR theory. In addition to utilising resources to reduce the negative effects of demands (Hobfoll, 1989), COR theory also states that individuals strive to protect and accumulate their resources in 'resource caravans' to improve long-term coping and wellbeing (Hobfoll, 2002). When limited, individuals are thought to only invest their resources when they feel confident in their recovery at a later stage (Goodman & Svyantek, 1999). However, when resources (JRs and PRs) are plentiful, individuals tend to reinvest them to stay motivated, seeking further challenges and resources for even higher levels of motivation and work engagement. Studies have demonstrated reciprocal relationships between JRs, PRs, engagement and performance over time (e.g. Salanova, Bakker & Llorens, 2006). Consequently, PRs may interact with JRs to boost work engagement within the context of the JD-R model (Xanthopoulou et al., 2007).

## **2.4. Context of the Present Study**

As previously noted, psychologists encounter significant JDs inherent to their roles (Rupert et al., 2015), the effects of which may be exacerbated by a shortfall in JRs (Dunn et al., 2016; Ham et al., 2012; Hurst & Williams, 2012). In this context, PRs could play an important role in supporting psychologists to cope with balancing JDs and JRs whilst remaining engaged and avoiding burnout (Rupert et al., 2015). Furthermore, psychologists are advised to actively monitor their own wellbeing and promote resiliency (i.e. PRs) by engaging in acts of self-care (BPS, 2017b; Cummings, Massey, &

Jones, 2007). This is important not only for themselves as individuals, but also to retain high-quality care for their patients by maintaining therapeutic effectiveness (Baker, 2003; Norcross, 2000; Smith & Moss, 2009).

Although a number of studies have explored burnout among psychologists, most tend to focus on isolated predictors such as hours worked (Ballenger-Browning et al., 2011) or specific work activities (Rupert & Morgan, 2005). Fewer still have investigated the role of PRs. Those that have, also tend to explore aspects of resiliency or self-care in isolation (Emery, Wade, & McLean, 2009; Myers et al., 2012; Rupert & Kent, 2007). This seems to have polarised burnout and resilience research among psychologists, with the former typically recommending systemic and organisational solutions, and the latter recommending individualistic solutions (Norcross & Guy, 2007). In other occupational groups, the JD-R model reconciles these opposing views by incorporating the complex interactions between different JDs, JRs and PRs, and their impact on burnout and work engagement into a unitary framework. However, there appear to be no studies investigating these interactions among psychologists. Accordingly, there is a need to draw these elements together for consideration in a single, inclusive study focusing on this occupational group.

It is recognised that a number of hypotheses could be formed using the JD-R model. However, the current study focused on investigating the impact of PRs for psychologists in the associations between JDs and burnout, and JRs and work engagement. The rationale for this was threefold. First, it would enable the role of PRs among psychologists to be tested with respect to the central tenet of the JD-R model, namely the dual health impairment and motivational processes. Secondly, these relationships are theoretically grounded with empirical support from across other professional groups. Finally, the model's proponents suggest that further research is required to test the interaction effects of a range of PRs within the established model (Bakker & Demerouti, 2017).

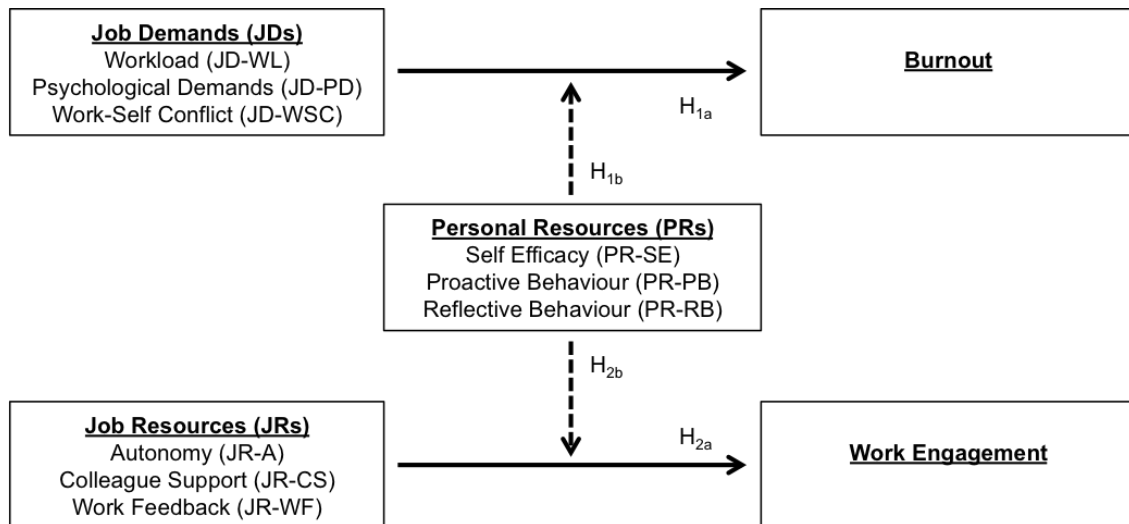
## **2.5. Aims and Hypotheses**

The central aim of this study was therefore to answer the following research question: What is the role of PRs in explaining burnout and work engagement among psychologists providing therapeutic services for NHS patients? Specifically, the following was hypothesised (Figure 3):

**Hypothesis 1** a) JDs are positively related to burnout; and  
**(H<sub>1</sub>)** b) There is an interaction effect between JDs and PRs for burnout, such that the relationship between JDs and burnout is less pronounced among individuals with high PRs compared to individuals with low PRs.

**Hypothesis 2** a) JRs are positively related to work engagement; and  
**(H<sub>2</sub>)** b) There is an interaction effect between JRs and PRs for work engagement, such that the relationship between JRs and work engagement is more pronounced among individuals with high PRs compared to individuals with low PRs.

To test these hypotheses, the heuristic JD-R model was first operationalised for use among psychologists to determine which JDs, JRs and PRs to explore (Figure 3). The rationale for the specific demands and resources included is discussed in Section 3.1.



**Figure 3.** Research model describing the expected role of PRs in the JD-R model for psychologists. Continuous lines indicate anticipated unique predictors. Discontinuous lines indicate anticipated interaction effects.

### **3. DESIGN AND METHODOLOGY**

#### **3.1. Operationalising the JD-R Model among Psychologists**

Therapeutic work with patients is emotionally demanding and may therefore draw upon resources in ways that are unique to psychologists (Rupert et al., 2015). Consequently, the heuristic JD-R was first operationalised for use among psychologists to identify specific demands and resources to explore. As the model has not previously been tested within this occupational group, this was achieved in consultation with 11 psychologists from across disciplines and settings. Adapting the approach taken by Mastenbroek et al. (2014) who first operationalised the JD-R model among veterinarians, semi-structured interviews were conducted by the author. The open-ended questions asked about the positive and negative aspects of work that help or hinder psychologists in their therapeutic endeavours with patients. This resulted in a largely consistent list of JDs, JRs and PRs that were deemed most important for psychologists when undertaking clinical work. From this, the final selection of JDs, JRs and PRs was based on existing, but limited, research relating to psychologists, as well as the broader JD-R literature across other professions.

JDs selected were: Workload (JD-WL); Psychological Demands (JD-PD); and Work-Self Conflict (JD-WSC; i.e. working in ways that are not in accordance with personal beliefs) (Bakker & Demerouti, 2007; Ballenger-Browning et al., 2011; Deutsch, 1984; Lee & Ashforth, 1996; Mastenbroek et al., 2014; Rosenberg & Pace, 2006; Rupert & Morgan, 2005). JRs selected were: Autonomy (JR-A); Colleague Support (JR-CS); and Work Feedback (JR-WF) (Ackerley et al., 1988; Bakker & Demerouti, 2007; Ben-Zur & Michael, 2007; Huebner, 1994; Mastenbroek et al., 2014; Rupert & Kent, 2007; Schaufeli & Bakker, 2004; Schaufeli, Bakker, & van Rhenen, 2009). PRs selected were: Self-Efficacy (PR-SE); Proactive Behaviour (PR-PB); and Reflective Behaviour (PR-RB) (Bandura, 1997; Bateman & Crant, 1999; Ben-Zur & Michael, 2007; Dikkers et al., 2010; Emery et al., 2009; Barnett et al., 2007; Frese & Fray, 2001; Norcross & Guy, 2007; Rupert & Kent, 2007; Schon, 1983; Xanthopoulou et al., 2008).

### **3.2. Study Design**

This quantitative study employed a within-participant, cross-sectional self-report questionnaire design. Participants were asked to complete a single, online questionnaire containing all measures and a range of demographic information to describe and situate the sample (Appendix E).

### **3.3. Procedure**

Participation was invited through professional networks including alumni from doctoral psychology training programmes in England; social media forums (i.e. LinkedIn and Facebook); professional psychology blogs; and was snowballed by asking potential participants to forward the study details to colleagues who may be eligible and interested in taking part. Participants were asked to click an online link to complete the ten-minute questionnaire. The participant information sheet and consent form (Appendix F) were integrated into the questionnaire and the first set of questions screened for eligibility: the questionnaire automatically ended if eligibility criteria were not met.

### **3.4. Participants**

#### ***3.4.1. Eligibility Criteria***

The study included psychologists working therapeutically with NHS patients from a range of primary, secondary and tertiary healthcare settings for adults and children in England. Students, trainees and psychologists working outside England or exclusively in non-therapeutic roles (e.g. research/management) or private practice seeing only non-NHS patients were excluded. These criteria intended to promote sample homogeneity given the varied demands and resources across some psychologist populations. For example, trainee psychologists are deemed less affected by JDs due to the protective advantages of additional supervision and training compared with their qualified counterparts (Brown, 1987).

### **3.4.2. Power Analysis**

The required sample size was determined by an *a priori* power analysis using G\*Power 3.1 (Faul, Erdfelder, Lang, & Buchner, 2007). Since multiple regression was central to the statistical analyses (Section 3.7), the calculation was based on the multiple linear regression model (fixed model,  $R^2$  deviation from zero); a recommended medium effect size  $d = .15$  (Cohen, 1992) with a power of .95,  $p < .05$ ; and 36 independent variables. These comprised nine control variables (seven demographic variables alongside IRP and ERP) nine core variables (three JDs, three JRs and three PRs) and 18 unique interaction terms between each JD and PR, and each JR and PR to test the interaction effects. Burnout and work engagement were not included as these were considered dependent variables in each hypothesis. This yielded an indicative minimum sample size of 280 participants.

### **3.4.3. Study Sample**

A total of 503 questionnaires were submitted. Of these, 39 did not meet the eligibility criteria. A further 22 were duplicate entries detected by identical email addresses. The final sample therefore consisted of 442 participants with no missing data for scale measures. The majority were female (86%), between the ages of 25 and 44 (80%), identified as 'White British' (92%) and worked full-time (62%) as Clinical Psychologists (96%). Most were employed directly by the NHS (88%) in Band 7 (27%), Band 8a (45%) or higher paid roles. Time since qualification ranged from one to 42 years ( $\bar{x} = 8.12$ ,  $\sigma = 6.82$ ) and time in current post ranged from zero to 39 years ( $\bar{x} = 4.61$ ,  $\sigma = 4.76$ ). Table 5 shows the range of services participants worked in.



**Table 5.** Service contexts within which participants worked

Service	Number of Participants (n)*	Percentage (%)*
Adult primary care	19	4.3
Adult secondary care	143	32.4
Adult tertiary care	14	3.2
Children and young people	114	25.8
Forensic	33	7.5
Learning disabilities	64	14.5
Neuropsychology	41	9.3
Older adults	38	8.6
Physical health	69	15.6

\* Some participants worked in several services, thus total figures do not equal sample  $n=442$  or 100%

### 3.5. Ethical Considerations

Study approvals were obtained from the University of Leicester Psychology Ethics Sub-Committee; the host NHS Trust's Research and Development department; and the Health Research Authority (Appendix G). Since the study was limited to the involvement of staff, NHS ethical approval was not required. In line with the BPS Code of Ethics and Conduct (BPS, 2018) and the BPS Code of Human Research Ethics (BPS, 2014a), consent was fully informed by offering participants the opportunity to contact the author before agreeing to participate.

### 3.6. Measures

Data were collected using validated measures consisting of Likert-type scales. All measures were appropriate for self-report and were designed for use among adults in employment. Specifically, each was selected due to previous use in comparable research, reliability (Appendix H), face validity and best fit. Given the total number of measures included, brevity was also a key consideration to ensure the overall questionnaire could be completed in the shortest time possible to reduce the burden for potential participants. Consequently, abbreviated scales were privileged over full measures. Original measures comprised five, six and seven-point rating scales. For consistency, all were converted to seven-point scales. Increasing variance is thought to have no effect on the core analysis and may improve response reliability (Barnes,

Daswar, & Gilbert, 1994). This approach has been adopted successfully in other studies (e.g. Ying & Ahmad, 2009) and some evidence suggests that participants may prefer seven-point rating scales (Preston & Colman, 2000).

### **3.6.1. Job Demands (JDs)**

The three dimensions of JDs included in the questionnaire were: Workload (JD-WL), Psychological Demands (JD-PD) and Work-Self Conflict (JD-WSC). JD-WL was assessed via a six-item scale developed by Haynes, Wall, Bolden, Stride and Rick (1999). An example item was: 'I do not have enough time to carry out my work'. JD-PD was assessed via a nine-item scale adapted from the Therapist Stress Scale (Deutsch, 1984). An example item was: 'How often does it happen that your clients appear to be apathetic or lack motivation'. JD-WSC was assessed via a four-item scale developed by Demerouti (2012). An example item was: 'How often does it happen that you feel full of energy after work and can therefore enjoy your personal interests more. All were rated from one, '*never*' to seven, '*always*'.

### **3.6.2. Job Resources (JRs)**

The three dimensions of JRs included in the questionnaire were: Autonomy (JR-A), Colleague Support (JR-CS), and Work Feedback (JR-WF). All three were based on scales developed by Haynes et al. (1999). JR-A was assessed via a six-item scale (one = '*never*', seven = '*always*'). An example item was: 'To what extent do you determine the methods and procedures you use in your work. JR-CS was assessed via a four-item scale (one = '*never*', seven = '*always*'). An example item was: 'To what extent can you count on your colleagues to help you with a difficult task at work'. JR-WF was assessed via a four-item scale (one = '*strongly disagree*', seven = '*strongly agree*'). An example item was: 'I usually know whether or not my work is satisfactory in this job'.

### **3.6.3. Personal Resources (PRs)**

The three dimensions of PRs included in the questionnaire were: Self-Efficacy (PR-SE), Proactive Behaviour (PR-PB) and Reflective Behaviour (PR-PB). All dimensions of PRs were assessed from one, '*strongly disagree*', to seven, '*strongly agree*'. PR-SE was

assessed via an eight-item scale developed by Chen, Gully and Eden (2001). An example item was: 'I will be able to successfully overcome many challenges'. PR-PB was assessed via the ten-item Proactive Behaviour Scale developed by Siebert, Crant and Kraimer (1999). An example item was: 'I am always looking for better ways to do things'. PR-RB was assessed via a twelve-item scale developed by Grant, Franklin and Langford (2002). An example item was: "I frequently take time to reflect on my thoughts".

#### **3.6.4. Burnout and Work Engagement**

Burnout was measured using the nine-item abbreviated Maslach Burnout Inventory validated by Iverson, Olekalns and Erwin (1998). An example item was: 'I feel emotionally drained from work' (one = '*strongly disagree*', seven = '*strongly agree*'). Work engagement was measured with the English version of the nine-item Utrecht Work Engagement Scale (Schaufeli, Bakker, & Salanova, 2006). An example item was: 'I am enthusiastic about my job' (one = '*never*', seven = '*always*').

#### **3.6.5. Performance (IRP & ERP)**

Given the known relationships between burnout and IRP pertinent to H<sub>1</sub>, and work engagement and ERP pertinent to H<sub>2</sub> (Bakker et al., 2004; Mastenbroek et al., 2014), it was necessary to control for their effects within the analysis. Measures of both were therefore included in the questionnaire. IRP was assessed via the three-item Task Performance scale (Goodman & Svyantek, 1999). An example item was: 'I achieve my overall work objectives'. ERP was measured using the three-item Altruism scale (Goodman & Svyantek, 1999). An example item was: 'I volunteer to do things at work that are not formally required of me'. Both were measured from one, '*not at all characteristic*' to seven, '*totally characteristic*'.

### **3.7. Data Analysis**

Data were entered into IBM SPSS (version 24) for analysis. All responses to scale items were coded such that higher scores indicated higher JDs, JRs, PRs, burnout, work engagement, IRP and ERP. Composite scores for each scale were then calculated by

computing the mean score according to the relevant scoring guidelines. Descriptive statistics were utilised for participant characteristics. Means and standard deviations were utilised to describe continuous variables. Percentages were utilised to describe dichotomous variables. All scale scores were treated as interval data to enable hypothesis testing (Labovitz, 1971).

### **3.7.1. Preliminary Analysis**

The assumptions central to multiple regression analyses were tested prior to the main analyses (Appendix I). Given the large sample size, normality of dependent variables was assessed through inspection of P-P plots, Q-Q plots and histograms as recommended by Field (2013). This confirmed reasonably normal distributions. Bootstrapping was therefore not required (Efron & Tibishirani, 1993). Scatterplots regressing the standardised residuals against the standardised predicted residual demonstrated that the assumptions of homoscedasticity were not violated. Since the assumptions of normality and homoscedasticity were met, linearity was also not violated (Field, 2013). Inspection of tolerance factors and variance inflation factors (VIF) for each predictor variable were no smaller than .30 and no larger than 3.37, respectively. Consequently, they did not violate the threshold values for tolerance statistics of less than .10 and VIF of at least 10 that would suggest multicollinearity between independent variables (Tabachnick & Fidell, 2013). Durbin-Watson test statistics for all analyses ranged from 1.59 to 1.90, indicating that assumptions of autocorrelation were also not violated based on acceptable values of between 1.50 and 2.50 (Durbin & Watson, 1951). Finally, outliers were screened using Cook's distances with no cases removed in the final analysis (Field, 2013).

### **3.7.2. Hypothesis Testing**

A series of nine three-step hierarchical multiple regressions were performed for both hypotheses (18 in total), with burnout and work engagement used as the dependent variables, respectively. Since IRP is a known predictor for burnout and ERP is a known predictor for work engagement, both were entered at Step 1 alongside demographic variables (i.e. gender, age, years qualified, years in current post, hours worked,

ethnicity and pay) to control for their effects. In each hierarchical regression, a specific job characteristic (i.e. a JD for  $H_1$  or a JR for  $H_2$ ) and a specific PR were included as the predictor variables in Step 2 to test the main effects ( $H_{1a}$  &  $H_{2a}$ ). Finally, to examine whether the predictive value of the specific job characteristic varied as a result of the PR tested in each regression, a further step (Step 3) was introduced to conduct a moderator analysis ( $H_{1b}$  &  $H_{2b}$ ). This involved computing a new variable by factoring a specific job characteristic with each PR to create an interaction term. Entering this interaction term at Step 3 enabled an examination of the extent to which the interaction explained a unique proportion of the variance in the dependent variable after controlling for the main effects (Aiken & West, 1991).

As recommended by Aiken and West (1991), all independent variables were first centred around their mean to prevent multicollinearity with the interaction term. Where significant interaction effects were found, interaction plots were generated using median split procedures for the moderating variable (i.e. the specific PR tested): individuals reporting lower levels of PRs than the sample median were categorised as the low PR group, whereas those reporting higher levels were categorised as the high PR group. This enabled simple slopes interpretation of the effects of high versus low PRs in the associations between predictor and dependent variables.

## **4. RESULTS**

### **4.1. Descriptive Statistics**

The means, standard deviations and correlations between variables are shown in Tables 6.1 and 6.2 along with internal consistencies of validated scales included in the analyses. All show good reliabilities with Cronbach's alpha coefficients higher than .7 (Nunnally, 1978) with the exception of JD-PD ( $\alpha = .69$ ) and JD-WSC ( $\alpha = .64$ ). This is common in scales consisting of less than ten items (Field, 2013), where mean inter-item correlations of between .2 and .4 are considered an acceptable alternative (Briggs & Cheek, 1986). These were .20 and .33 for JD-PD and JD-WSC respectively, therefore demonstrating acceptable reliability (Appendix J).

All independent (i.e. predictor) variables were moderately related to each other in the directions expected based on each hypothesis. For example, all JDs tested for  $H_1$  had significantly positive correlations with burnout: for JD-WL,  $r = .40, p < .01$ ; for JD-PD,  $r = .33, p < .01$ ; and for JD-WSC,  $r = .58, p < .01$ . Correlations for demographic variables also demonstrated some significant results. For example, gender correlated significantly with JR-CS,  $r = .11, p < .05$ . This indicated that females tended to rate higher levels of support from colleagues than their male counterparts, which is consistent with the literature (Stevanovic & Rupert, 2004; van Emmerik, 2002). Pay also correlated significantly with JD-WL ( $r = .13, p < .01$ ) and JR-A ( $r = .10, p < .05$ ). This suggested that higher paid psychologists were more likely to have a higher workload but also more scope to make decisions autonomously within their roles. The inter-correlations between the demographic and predictor variables further supported the need to control for demographic variables in further analyses.

**Table 6.1.** Means, standard deviations and correlations among study variables <sup>a</sup>

Predictor <sup>b</sup>	$\bar{x}$	$\sigma$	1	2	3	4	5	6	7	8	9	10	11	12	13
1. JD-WL	4.76	1.27	(.87)												
2. JD-PD	3.74	.67	.19**	(.69)											
3. JD-WSC	4.39	.99	.44**	.19**	(.64)										
4. JR-A	5.20	.93	-.15**	-.11**	-.24**	(.83)									
5. JR-CS	5.47	1.20	-.19**	-.13**	-.34**	.22**	(.90)								
6. JR-WF	4.43	1.18	-.22**	-.23**	-.34**	.29**	.27**	(.83)							
7. PR-SE	5.08	.86	-.14**	-.09*	-.27**	.28**	.19**	.31**	(.90)						
8. PR-PB	4.32	.96	.09*	.01	-.08*	.15**	-.01	.12**	.45**	(.90)					
9. PR-RB	5.84	.87	.07	.10*	-.05	.00	.13**	.02	.10*	.12**	(.92)				
10. WE	4.60	.95	-.21**	-.16**	-.50**	.39**	.35**	.42**	.46**	.33**	.07	(.88)			
11. Burnout	3.14	.88	.40**	.33**	.58**	-.34**	-.31**	-.42**	-.35**	-.11*	-.05	-.59**	(.80)		
12. IRP	4.94	1.04	-.28**	-.16**	-.24**	.29**	.20**	.48**	.58**	.30**	.08	.49**	-.41**	(.81)	
13. ERP	5.24	1.19	-.03	-.06	-.14**	.15**	.19**	.24**	.21**	.31**	.09*	.36**	-.23**	.33**	(.85)

<sup>a</sup> Internal consistency statistics (Cronbach's  $\alpha$ ) are displayed diagonally in parentheses<sup>b</sup> JD-WL = JD workload; JD-PD = JD Psychological Demands; JD-WSC = JD Work-Self Conflict; JR-A = JR Autonomy; JR-CS = JR Colleague Support; JR-WF = JR Work Feedback; PR-SE = PR Self Efficacy; PR-PB = PR Proactive Behaviour; PR-RB = PR Reflective Behaviour; WE = Work Engagement; IRP = In-Role Performance; ERP = Extra-Role PerformancePearson correlations coefficients ( $r$ ) are shown;  $n = 442$ ; \*  $p < .05$ , \*\*  $p < .01$ , 1-tailed

**Table 6.2.** Correlations among study and demographic variables

Predictor <sup>a</sup>	14	15	16	17	18	19	20
1. JD-WL <sup>1</sup>	-.01	.18**	.14**	.18**	.03	.05	.13**
2. JD-PD <sup>1</sup>	-.00	-.07	-.10*	-.05	-.09*	-.08*	-.02
3. JD-WSC <sup>1</sup>	.00	.06	.05	.08*	.01	.04	.02
4. JR-A <sup>1</sup>	.02	.01	.09	.04	-.00	-.01*	.10*
5. JR-CS <sup>1</sup>	.11*	-.08	-.05	-.09*	-.01	.07	-.01
6. JR-WF <sup>1</sup>	.05	.04	.06	.03	-.05	-.07	.09*
7. PR-SE <sup>1</sup>	.02	-.10*	-.07	-.09*	-.09*	-.05	.04
8. PR-PB <sup>1</sup>	.04	-.12**	-.04	-.08	-.18**	-.07	.07
9. PR-RB <sup>1</sup>	-.01	-.04	-.02	-.06	.07	.01	-.03
10. WE <sup>1</sup>	.02	-.11*	-.06	-.11*	-.07	-.05	.01
11. Burnout <sup>1</sup>	.01	.02	.02	.08	-.03	.04	-.02
12. IRP <sup>1</sup>	.02	-.05	.01	.01	-.15**	-.02	.03
13. ERP <sup>1</sup>	-.01	-.09*	-.07	-.09*	-.20**	-.02	.01
14. Gender <sup>1</sup>		-.12*	-.05	-.09*	.21**	.05	-.06
15. Age <sup>1</sup>			.76**	.63**	.35**	.08	.31**
16. Y-Qual <sup>1</sup>				.72**	.34**	.07	.34**
17. Y-Post <sup>2</sup>					.25**	.02	.32**
18. Hours <sup>3</sup>						.08	.21**
19. Ethnicity <sup>2</sup>							.02
20. Pay <sup>1</sup>							

<sup>a</sup> JD-WL = JD Workload; JD-PD = JD Psychological Demands; JD-WSC = JD Work-Self Conflict; JR-A = JR Autonomy; JR-CS = JR Colleague Support; JR-WF = JR Work Feedback; PR-SE = PR Self Efficacy; PR-PB = PR Proactive Behaviour; PR-RB = PR Reflective Behaviour; WE = Work Engagement; IRP = In-Role Performance; ERP = Extra-Role Performance; Y-Qual = Years qualified; Y-Post = Years in current post  
Pearson correlations coefficients (*r*) are shown

<sup>1</sup> *n* = 442, <sup>2</sup> *n* = 440, <sup>3</sup> *n* = 439; \* *p* < .05, \*\* *p* < .01

## 4.2. Hypothesis Testing

### 4.2.1. Hypothesis 1

H<sub>1</sub> stated that a) JDs are positively related to burnout; and b) there is an interaction effect between JDs and PRs for burnout, such that the relationship is less pronounced among individuals with high PRs compared to individuals with low PRs. The results for each JD are presented in Tables 7 – 9 (Appendix K). Full results for Step 1 (control variables) are included at Appendix L for both H<sub>1</sub> and H<sub>2</sub>.



**Table 7.** Regression of burnout on each JD and PR: Self Efficacy

Step	Model <sup>a</sup>	<i>B</i>	$\beta$	<i>t</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>F</i>	$\Delta F$
2	JD-WL	.22	.31**	7.05				
	PR-SE	-.18	-.17**	-3.35	.30	.10	17.96**	29.66**
3	JD-WL x PR-SE	-.01	-.02	-0.40	.30	.00	16.31**	0.16
2	JD-PD	.40	.27**	6.52				
	PR-SE	-.16	-.16**	-3.03	.29	.09	17.05**	26.04**
3	JD-PD x PR-SE	-.01	-.01	-0.14	.29	.00	15.47**	0.02
2	JD-WSC	.44	.50**	13.01				
	PR-SE	-.07	-.06	-1.40	.44	.24	33.17**	90.62**
3	JD-WSC x PR-SE	.00	.00	0.08	.44	.00	30.09**	0.01

<sup>a</sup> JD-WL = JD Workload; PR-SE = PR Self Efficacy; JD-PD = JD Psychological Demands; JD-WSC = JD Work-Self Conflict

\*\*  $p < .01$

**Table 8.** Regression of burnout on each JD and PR: Proactive Behaviour

Step	Model <sup>a</sup>	<i>B</i>	$\beta$	<i>t</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>F</i>	$\Delta F$
2	JD-WL	.22	.32**	6.98				
	PR-PB	-.05	-.06	-1.24	.28	.08	16.63**	24.34**
3	JD-WL x PR-PB	.01	.02	0.35	.28	.00	15.10**	0.13
2	JD-PD	.36	.28**	6.48				
	PR-PB	-.01	-.01	-0.19	.27	.07	15.80**	21.02**
3	JD-PD x PR-PB	-.02	-.01	-0.30	.27	.00	14.34**	0.09
2	JD-WSC	.45	.51**	13.36				
	PR-PB	.01	.01	0.21	.44	.24	32.83**	89.26**
3	JD-WSC x PR-PB	.03	.03	0.85	.44	.00	29.89**	0.72

<sup>a</sup> JD-WL = JD Workload; PR-PB = PR Proactive Behaviour; JD-PD = JD Psychological Demands; JD-WSC = JD Work-Self Conflict

\*\*  $p < .01$

**Table 9.** Regression of burnout on each JD and PR: Reflective Behaviour

Step	Model <sup>a</sup>	<i>B</i>	$\beta$	<i>t</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>F</i>	$\Delta F$
2	JD-WL	.22	.31**	6.92				
	PR-RB	-.04	-.04	-0.97	.28	.08	16.53**	23.94**
3	JD-WL x PR-RB	-.02	-.02	-0.58	.28	.00	15.04**	0.33
2	JD-PD	.37	.28**	6.55				
	PR-RB	-.04	-.04	-0.92	.27	.07	15.91**	21.46**
3	JD-PD x PR-RB	.01	.01	0.21	.27	.00	14.44**	0.05
2	JD-WSC	.45	.51**	13.36				
	PR-RB	.01	.01	0.24	.44	.24	32.83**	89.27**
3	JD-WSC x PR-RB	-.00	-.00	-0.11	.44	.00	29.78**	0.01

<sup>a</sup> JD-WL = JD Workload; PR-RB = PR Reflective Behaviour; JD-PD = JD Psychological Demands; JD-WSC = JD Work-Self Conflict

\*\*  $p < .01$

For each regression in Step 1, the control variables demonstrated statistical significance in predicting burnout ( $F [8, 428] = 13.257, r^2 = .20, p < .01$ ), with years in current post ( $\beta = .15, p < .05$ ); hours worked ( $\beta = -.13, p < .01$ ); and IRP ( $\beta = -.44, p < .01$ ) accounting for unique variance. In terms of the main effects in Step 2, the inclusion of JDs and PRs led to statistically significant changes in  $R^2$  for burnout in all models tested. For example, when included with PR-SE, JD-WL explained an additional 10% of the variance in burnout ( $\Delta F [2, 426] = 29.66, p < .01$ ); JD-PD explained an additional 9% of the variance in burnout ( $\Delta F [2, 426] = 26.04, p < .01$ ); and JD-WSC explained an additional 24% of the variance in burnout ( $\Delta F [2, 426] = 90.62, p < .01$ ). JDs accounted for unique variance in all models tested. Where PRs accounted for unique variance (i.e. PR-SE, Table 3), the effect sizes ( $\beta$ ) for JDs were larger. JDs were therefore the most important predictors of burnout. At Step 3, the interactions terms did not increase the variance explained in any of the models tested. Overall, these results demonstrate that JDs are positively related to burnout, thereby supporting  $H_{1a}$ . However,  $H_{1b}$  was not supported as no interaction effects were found between JDs and PRs for burnout.

#### 4.2.2. Hypothesis 2

H<sub>2</sub> stated that a) JRs are positively related to work engagement; and b) there is an interaction effect between JRs and PRs for work engagement, such that the relationship between JRs and work engagement is more pronounced among individuals with high PRs compared to individuals with low PRs. The results for each JR are presented in Tables 10 - 12.

**Table 10.** Regression of work engagement on each JR and PR: Self Efficacy

Step	Model <sup>a</sup>	B	β	t	R <sup>2</sup>	ΔR <sup>2</sup>	F	ΔF
2	JR-A	.28	.27**	6.63				
	PR-SE	.38	.34**	8.13	.36	.22	23.84**	72.91**
3	JR-A x PR-SE	.03	.02	0.57	.36	.00	21.67**	0.33
2	JR-CS	.19	.24**	5.75				
	PR-SE	.41	.37**	8.93	.34	.20	22.30**	66.28**
3	JR-CS x PR-SE	-.03	-.03	-0.85	.35	.00	20.32**	0.73
2	JR-WF	.22	.27**	6.44				
	PR-SE	.37	.33**	7.88	.36	.22	23.49**	71.41**
3	JR-WF x PR-SE	-.08	-.09	-2.14	.36	.01	21.95**	4.56*

<sup>a</sup> JR-A = JR Autonomy; PR-SE = PR Self Efficacy; JR-CS = JR Colleague Support; JR-WF = JR Work Feedback

\*  $p < .05$ ; \*\*  $p < .01$

**Table 11.** Regression of work engagement on each JR and PR: Proactive Behaviour

Step	Model <sup>a</sup>	B	β	t	R <sup>2</sup>	ΔR <sup>2</sup>	F	ΔF
2	JR-A	.35	.34**	8.05				
	PR-PB	.20	.20**	4.60	.29	.16	17.78**	46.84**
3	JR-A x PR-PB	.04	.04	0.95	.30	.00	16.24**	0.91
2	JR-CS	.25	.31**	7.36				
	PR-PB	.26	.26**	5.87	.28	.14	16.48**	41.23**
3	JR-CS x PR-PB	-.02	-.03	-0.63	.28	.00	15.00**	0.40
2	JR-WF	.29	.36**	8.51				
	PR-PB	.22	.22**	5.17	.31	.17	18.71**	50.84**
3	JR-WF x PR-PB	.07	.09	2.26	.31	.01	17.64**	5.11*

<sup>a</sup> JR-A = JR Autonomy; PR-PB = PR Proactive Behaviour; JR-CS = JR Colleague Support; JR-WF = JR Work Feedback

\*\*  $p < .01$

**Table 12.** Regression of work engagement on each JR and PR: Reflective Behaviour

Step	Model <sup>a</sup>	<i>B</i>	$\beta$	<i>t</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>F</i>	$\Delta F$
2	JR-A	.37	.36**	8.33				
	PR-RB	.04	.04	0.89	.26	.12	15.03**	34.99**
3	JR-A x PR-RB	-.09	-.08	-1.96	.27	.01	14.10**	3.85
2	JR-CS	.23	.30**	6.63				
	PR-RB	.00	.00	0.04	.21	.08	12.06**	22.23**
3	JR-CS x PR-RB	.00	.00	0.05	.21	.00	10.94**	0.00
2	JR-WF	.30	.37	8.40				
	PR-RB	.04	.03	0.77	.26	.12	15.17**	35.59**
3	JR-WF x PR-RB	-.02	-.02	-0.53	.26	.00	13.79**	0.28

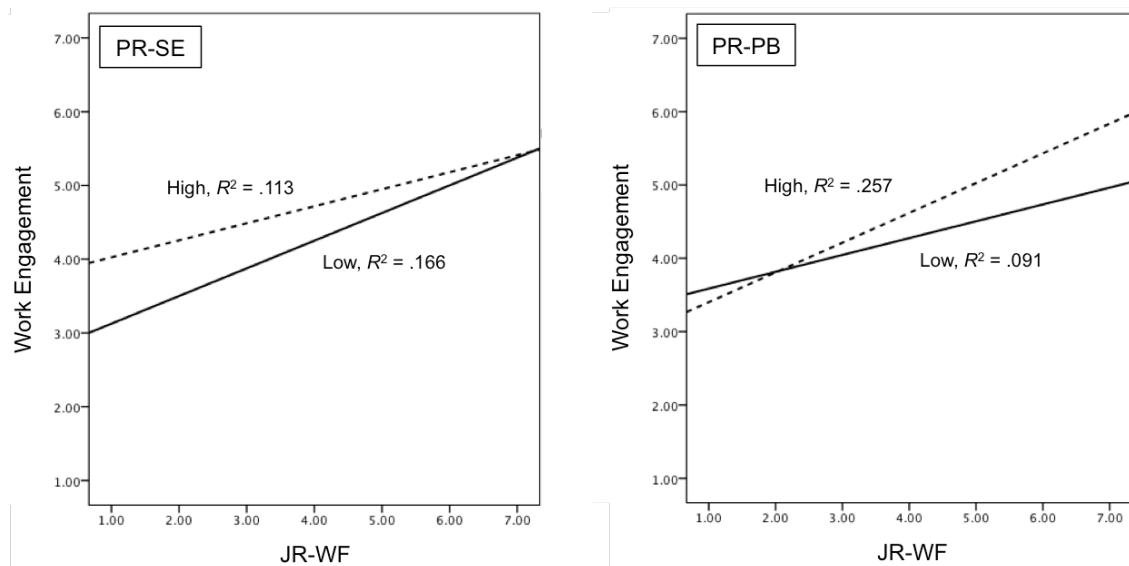
<sup>a</sup> JR-A = JR Autonomy; PR-RB = PR Reflective Behaviour; JR-CS = JR Colleague Support; JR-WF = JR Work Feedback

\*\*  $p < .01$

For each regression in Step 1 (Appendix L), the control variables demonstrated statistical significance in predicting work engagement ( $F [8, 428] = 8.66, r^2 = .14, p < .01$ ), with only ERP ( $\beta = .35, p < .01$ ) accounting for unique variance. In terms of the main effects in Step 2, the inclusion of JRs and PRs led to statistically significant changes in  $R^2$  for work engagement in all models tested. For example, when included with PR-SE, JR-A explained an additional 22% of the variance in work engagement ( $\Delta F [2, 426] = 72.91, p < .01$ ); JR-CS explained an additional 20% of the variance in work engagement ( $\Delta F [2, 426] = 66.28, p < .01$ ); and JR-WF explained an additional 22% of the variance in work engagement ( $\Delta F [2, 426] = 71.41, p < .01$ ). JRs accounted for unique variance in all models tested. PR-SE (Table 10) and PR-PB (Table 11) also accounted for unique variance. Although the effect sizes ( $\beta$ ) for PR-SE were larger than JRs, the effect sizes for PR-PBs were smaller than JRs, whilst PR-RB did not account for unique variance. Overall, JRs were therefore the most important predictors of work engagement. These results support H<sub>2a</sub>.

At Step 3, only two of the nine possible interaction terms led to statistically significant changes in  $R^2$  for work engagement. These were: JR-WF and PR-SE, and JR-WF and PR-PB. The statistical effect sizes for both were small (i.e.  $\beta < .3$ ; Cohen, 1998). The

interaction between JR-WF and PR-SE explained an additional 1% of the variance in work engagement ( $\Delta F [1, 425] = 4.56, p < .05$ ). As illustrated in Figure 4, the relationship between JR-WF and work engagement was less pronounced for psychologists reporting high PR-SE ( $r = .34$ ) than those reporting low PR-SE ( $r = .41$ ). This is opposite to the direction of effect predicted. The interaction between JR-WF and PR-PB also explained an additional 1% of the variance in work engagement ( $\Delta F [1, 425] = 5.11, p < .05$ ). As illustrated in Figure 4, the relationship between JR-WF and work engagement was more pronounced for psychologists reporting high PR-PB ( $r = .51$ ) than those reporting low PR-PB ( $r = .30$ ). This supported the direction of effect predicted. Overall,  $H_{2b}$  was therefore largely unsupported as few interaction effects were found between JRs and PRs for work engagement.



**Figure 4.** Interaction effects of JR-WF and PR-SE / PR-PB on work engagement

## **5. DISCUSSION**

The purpose of this study was to explore the role of PRs in explaining burnout and work engagement among psychologists. Drawing on the JD-R model (Demerouti et al., 2001) and COR theory (Hobfoll, 1989; Hobfoll, 2002), this study specifically aimed to investigate the extent to which PRs interacted with JDs to predict burnout, and interacted with JRs to predict work engagement. It was expected that the positive relationship between JDs and burnout via the health impairment process ( $H_{1a}$ ) would be less pronounced among individuals with high PRs compared to individuals with low PRs ( $H_{1b}$ ), because the PRs would buffer the negative impact of JDs. Conversely, it was expected that the positive relationship between JRs and work engagement via the motivational process ( $H_{2a}$ ) would be more pronounced among individuals with high PRs compared to individuals with low PRs ( $H_{2b}$ ), because the PRs would boost the positive impact of JRs. The results supported  $H_{1a}$  and  $H_{2a}$ . No interaction effects were found between PRs and JDs for burnout so  $H_{1b}$  was rejected. Whilst two of the possible nine two-way interactions between PRs and JRs for  $H_{2b}$  were supported, the effect of only one was in the direction expected. Overall,  $H_{2b}$  was therefore also rejected.

### **5.1. Job Demands (JDs) and the Health Impairment Process**

The three dimensions of JDs tested in this study were workload (JD-WL), psychological demands (JD-PD) and work-self conflict (JD-WSC). The findings demonstrated that psychologists with higher JDs were more likely to report burnout than psychologists with lower JDs. This is consistent with studies in the JD-R literature among other occupational groups (Bakker et al., 2003; Bakker et al., 2004) and thus supports the health impairment process described by the model. This can be explained by mental fatigue. When JDs are high, individuals are required to exert additional effort with a particular focus to fulfill specific task requirements. Overall, this makes it difficult for them to allocate their attention and energies efficiently (Gaillard, 2001; Hockey, 1997). Usually, individuals utilise their resources to offset any impairment arising from the strain of these additional efforts (Hobfoll, 1989; Hobfoll, 2002). However, disproportionately high JDs prevent individuals from returning to baseline energy

levels (Veldhuizen et al., 2003). The resulting strain can accumulate over time (Craig & Cooper, 1992), furthering mental fatigue (Hockey, 1993), eventually leading to burnout and reduced IRP (Freudenberger, 1974; Lee & Ashforth, 1996).

For psychologists in particular, this aligns with notions of vicarious trauma (Baird & Kracen, 2006), secondary traumatic stress and compassion fatigue (Figley, 1995). Whilst these constructs correspond to burnout across occupational groups (Maslach et al., 2001; Stamm, 1997), they especially emphasise the unique psychological demands inherent to a psychologist's role; these typically entail greater emotional attention and effort. Specifically, psychologists are required to express compassion towards their patients by bearing their suffering (Figley, 1995). This enables them to establish and maintain effective therapeutic alliances to achieve therapeutic outcomes (Martin, Garske, & Davies, 2000). Without adequate support to offset the emotional strain, psychologists can themselves suffer trauma triggered by others' experiences, which reduces their capacity for empathic engagement, and thus impairs IRP (Figley, 2002). The underlying psychological mechanism for this is often attributed to the cumulative effects of countertransference (i.e. the emotional reaction of the psychologist to the patient's presentation; McCann & Pearlman, 1990). This is therefore comparable to the process of mental fatigue in the health impairment process, which underlies burnout to effect negative impact on performance (Bakker et al., 2004; Hockey, 1993).

## **5.2. Job Resources (JRs) and the Motivational Process**

The three dimensions of JRs tested in this study were autonomy (JR-A), colleague support (JR-CS) and work feedback (JR-WF). The findings demonstrated that psychologists with higher JRs were more likely to report work engagement than psychologists with lower JRs. This is also consistent with studies in the JD-R literature among other occupational groups (Bakker et al., 2003; Bakker et al., 2004), and thus supports the motivational process described by the model. Bakker et al. (2003) explained that when JRs are low, individuals are unable to attain their goals and become frustrated by the perceived inevitability of failure. Consequently, they lose motivation and withdraw from their work to guard against future frustrations of not

achieving work-related goals (Hackman & Oldham, 1980; Kahn, 1990; Kahn, 1992). Conversely, an abundance of JRs empowers individuals to repay organisational support by undertaking tasks that go beyond the requirements of their role (i.e. ERP; Deci & Ryan, 2000; Demerouti & Cropranzano, 2010; Hackman & Oldham, 1980; Wayne, Shore, & Liden, 1997). This is derived from the psychological contract between the employee and their employer (Makin et al., 1996): well-resourced individuals are more likely to establish rules of reciprocity, where they engage in acts of good will in return for more JRs (Goodman & Svyantek, 1999). The findings therefore support COR theory (Hobfoll, 2002) and align with research demonstrating the reciprocal relationships between JRs, work engagement and ERP over time (Salanova et al., 2006).

For psychologists and other clinicians working with NHS patients in England, the realities of an efficiency and productivity agenda in a period of sustained austerity have resulted in fewer material resources (Dunn et al., 2016). Whilst there is little research directly exploring the clinical impact of productivity in the context of such constraints (Ham et al., 2012), the literature suggests that it can affect cooperation and engagement between clinicians and their employers (Burns & Muller, 2008). This in turn affects care outcomes (MacLeod & Clarke, 2009; West & Dawson, 2012). However, Burns and Muller argue that where organisations offer interpersonal JRs such as autonomy and candid communication, work engagement can increase through mutual trust. Consistent with this, the JRs tested among psychologists in this study (i.e. JR-A, JR-CS and JR-WF) may be conceptualised as interpersonal JRs. The findings in this study therefore suggest that despite economic pressures, psychologists can still feel empowered to engage at work when they feel their efforts are rewarded (Deci & Ryan, 2000; Goodman & Svyantek, 1999; Hobfoll, 2002; Salanova et al., 2006).

### **5.3. The Role of Personal Resources (PRs) among Psychologists**

The three dimensions of PRs tested in this study were self-efficacy (PR-SE), proactive behaviour (PR-PB) and reflective behaviour (PR-RB). The findings demonstrated that these PRs did not interact with the JDs in the study to affect burnout. Consequently, this does not support findings from the majority of previous studies, where PRs were



found to buffer the negative effects of JDs on burnout (Brenninkmeijer et al., 2010; Makikangas & Kinnunen, 2003; Pierce & Gardner; Van den Broeck et al., 2011; van Ypren & Snijders, 2000). This buffering effect is underpinned by the assumption that PRs are comparable to JRs (Bakker & Demerouti, 2017; Schaufeli & Taris, 2014), which themselves also buffer the effects of JDs on burnout (Bakker et al., 2005). However, post hoc analyses revealed no interaction effects between JRs and JDs on burnout in this study either. According to COR theory, it is possible that psychologists in this study felt JDs were disproportionately high and thus felt unable to return to baseline energy levels by utilising their resources (JRs or PRs) to offset impairment (Hobfoll, 1989; Hobfoll, 2002; Veldhuizen et al., 2003). Consequently, the rejection of  $H_{2a}$  may be attributed to Type II errors due to a restriction in the range of responses arising from sample homogeneity (Banerjee, Chitnis, Jadhav, Bhawalkar, & Chaudhury, 2009).

However, the findings mirror Xanthopoulou et al. (2007), whose results also demonstrated no interaction effects between PRs and JDs on burnout. Alternative to Type II errors, they suggest the lack of significant interaction may be due to the nature of the specific PRs included. This is plausible as the current study and Xanthopoulou et al.'s research examine the role of PR-SE, which was not included in comparable studies. It is therefore possible that PR-SE (rather than all PRs) does not buffer the health impairment process. Given that PR-SE operates at an affective-cognitive level, such PRs may operate as antecedents of the association between JDs and burnout by shaping the ways in which people understand and respond to JDs (Bandura, 1997; Judge et al., 2000). Although PR-PB and PR-RB have been conceptualised as behavioural-practical PRs in some studies (Mastenbroek et al., 2014), proactivity and reflexivity are key cognitive components of personality so could also operate at the affective-cognitive level (Bandura, 1999). Although no interaction effects for PRs and JDs on burnout were found in this study, it is possible that other PRs not tested may instead interact with JDs to buffer the effects of burnout (Brenninkmeijer et al., 2010; Van den Broeck et al., 2011).

Allied to the motivational process within the JD-R model, the findings also demonstrated that overall, PRs tended not to interact with JRs to affect work

engagement. This does not support findings from previous research, where PRs boosted the positive effects of JRs on work engagement (Brenninkmeijer et al., 2010; Van den Broeck et al., 2011). This may again be explained by a possible restriction of range arising from sample homogeneity (Banerjee et al., 2009). However, the PRs tested in this study again differed to those in other studies. Moreover, as two of the possible nine two-way interactions between PRs and JRs were significant, it is likely that only certain interactions between specific PRs and JRs buffer the association between JRs and work engagement for psychologists (Bakker & Demerouti, 2017).

PR-SE was found to interact with the association between work feedback (JR-WF) and work engagement. Specifically, work engagement was higher when JR-WF was high but PR-SE was low. This was opposite to the direction of effect predicted. It is possible that feedback was more effective for psychologists reporting lower levels of PR-SE due to the additional emotional validation conferred (Lepore, Regan, & Jones, 2000), thereby providing a temporary boost to PR-SE. This effect is supported in theories of academic motivation (Margolis & McCabe, 2006). When individuals have low PR-SE, they believe they lack the ability to succeed and are at risk of disengaging. However, constructive feedback to improve their performance motivates them to continue engaging (Schunk, 1991). PR-PB was also found to interact with the association between JR-WF and work engagement. Specifically, work engagement was higher when both JR-WF and PR-PB were high; this was as predicted. Proactive psychologists are more likely to seek feedback that motivates them (Bateman & Crant, 1999; Norcross & Guy, 2007), which in turn maintains a psychological contract of resource reciprocity in the workplace (Goodman & Svyantek, 1999; Hobfoll, 1989; Hobfoll, 2002; Makin et al., 1996; Salanova et al., 2006). Reasons for only these interactions reaching statistical significance are unclear. This therefore requires further research to understand the differences between specific interactions within the JD-R model (Bakker & Demerouti, 2017).

#### **5.4. Theoretical and Practical Implications**

This study makes a unique contribution to the burnout and resilience literature among psychologists as the first to utilise the JD-R model to integrate a range of JDs, JRs and PRs in a single study. This opens progressive avenues of research and theory for those already exploring psychologist burnout, engagement and resiliency. The findings of this study not only extend support of the JD-R model and COR theory to another occupational group, but also offer novel contributions in understanding the role of PRs. In support of a proposition by Bakker and Demerouti (2017), the study specifically highlights the need to consider the unique interactions between specific PRs and job characteristics, as each may contribute to burnout and work engagement differently, both within and across professions.

For psychologists, the application of the JD-R model makes burnout and work engagement amenable to assessment and intervention. Support for balanced, manageable workloads should reduce the negative impact of JDs by diminishing burnout. Equally, affording employees with JRs is likely to increase instances of ERP that arise from work engagement. The significant interactions in the study specifically demonstrate that work feedback for psychologists with low self-efficacy as well as those with high proactive behaviour is likely to be associated with higher work engagement. However, since the overall findings largely rejected the moderating role of PRs in the relationships between JDs and burnout and JRs and work engagement, employers should not overstate the benefits of enhancing resiliency alone. Although PRs can help employees to cope with high JDs, the benefits may be less pronounced for psychologists who are often selected for their resilience (BPS, 2014b). In the context of financial restraints and a need to deliver 'more with less' (Hurst & Williams, 2012), organisations should therefore take responsibility in empowering psychologists to remain engaged by supporting access to interpersonal JRs such as autonomy, colleague support and work feedback.

## **5.5. Strengths and Limitations**

Whilst the sample comprised psychologists working across a breadth of service contexts, one limitation was the over-representation of clinical psychologists. Nevertheless, a key strength of the study is its contribution to the literature by investigating a generally under-researched occupational group. The heuristic nature of the JD-R model thus enabled a tailored exploration of the demands and resources specific to psychologists, whilst ensuring the study was grounded in a strong, underlying theoretical framework. Consequently, whilst the cross-sectional study design does not confer conclusions of causality, speculative inferences could be made where findings seemed consistent with existing studies demonstrating cause and effect relationships over time (e.g. Ahola, 2007; Hakanen & Schaufeli, 2012). However, it is recognised that the use of different validated tools when operationalising the model limits comparison across studies. This is linked to a wider debate on measurement issues within the JD-R literature, although the model's proponents argue that its validity is underscored when it is supported through different tools (Bakker & Demerouti, 2011).

## **5.6. Directions for Future Research**

Attempts have been made to review the literature exploring a range of JDs, JRs and PRs pertinent to psychologists with respect to the JD-R model (Rupert et al., 2015). However, these tend to focus on the health impairment process via burnout rather than the motivational process mediated via work engagement. Aligned with the recent shift in research focus from the negative aspects and consequences of work towards the positive (Seligman & Csikszentmihalyi, 2000), the latter approach would promote the inclusion of a wider range of PRs linked to resiliency and self-care (Emery et al., 2009; Myers et al., 2012; Rupert & Kent, 2007). A comprehensive, systematic review of the range of JDs, JRs and PRs relevant to psychologists and their impact on work engagement (in addition to burnout) may therefore advance this field of study.

Empirically, the breadth of the JD-R literature opens a vast array of possibilities for future studies (Bakker & Demerouti, 2017). As the study was limited to three

dimensions of JDs, JRs and PRs, future studies could explore alternative demands and resources. As previously indicated, continued exploration of the interactions between different demands and resources would also further clarify the role of PRs among psychologists. From this, it may be possible to determine the set of resources that are most important in supporting psychologists and thereby enhancing service provision. Finally, as individuals are thought to accumulate resources over time to improve long-term coping and wellbeing (Hobfoll, 2002), future research could explore the reciprocity of the relationship between JRs and PRs for psychologists. This might be achieved through longitudinal or experimental study designs.

## **6. SUMMARY AND CONCLUSION**

Constrained resources that fail to meet increasing demands within a period of sustained austerity have contributed to rising levels of workplace distress among UK psychologists (BPS, 2017a; Dunn et al., 2016; Ham et al., 2012). To guard against the negative consequences of this (i.e. burnout and poor performance), developing resilience has been cited as an ethical imperative (Bamonti et al., 2014; Barnett et al., 2006). However, despite the known associations between JDs, JRs, PRs burnout and work engagement, existing studies among psychologists fail to consider the complex interactions between these factors. Instead, they focus on isolated predictors of either burnout or resilience. This study therefore utilised the JD-R model to understand the role of PRs among psychologists in explaining burnout and work engagement through their interactions with various JDs and JRs.

Validated measures assessed three JDs (workload, psychological demands and work-self conflict), three JRs (autonomy, colleague support and work feedback) and three PRs (self-efficacy, proactive behaviour and reflective behaviour). Through multiple regression analyses, controlling for demographic variables and performance, the findings demonstrated that JDs were the most important predictors of burnout and JRs were the most important predictors of work engagement. Overall however, PRs did not demonstrably interact with these relationships, with only two of the possible nine interaction terms between JRs and PRs explaining additional variance in work engagement. Whilst this highlights the need to consider the unique interaction terms between specific PRs and job characteristics separately, it also suggests that employers should attend to the balance of JDs and JRs to reduce burnout and enhance engagement, rather than overstating the benefits of enhancing resiliency through PRs alone. Future research is directed towards exploring alternative demands and resources to those included in this study; the unique interactions between them; and the reciprocity of relationships between JRs and PRs over time. These avenues of research could not only benefit psychologists as individuals, but could also promote high-quality care outcomes (Baker, 2003; Norcross, 2000; Smith & Moss, 2009).

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## **PART THREE: CRITICAL APPRAISAL**

### **PERSONAL REFLECTIONS AND APPRAISAL OF THE RESEARCH PROCESS**

## **1. INTRODUCTION**

This section comprises personal reflections over the course of my research journey and a critical appraisal of the research itself. It is based on entries made in my research journal and is written in the first person to aid reflexivity (Berger, 2015). A chronology of the research process is included at Appendix M and a statement of epistemological position is at Appendix N.

### **1.1. My Interest in Staff Experiences in the Workplace**

The role that employers play in the health and wellbeing of their employees, and particularly the impact of organisational policies and procedures, has been a long-standing interest for me. I worked with vulnerable adults as a healthcare assistant some time ago, where I felt increasingly concerned about the lack of resources made available to my colleagues and me. I was surprised by this given the highly emotive nature of the role, the physical demands expected and the level of risk involved. My patients often protested about the impact of high staff turnover on them, and I began to wonder about the links between working environment factors and various work-related outcomes. My growing unease coincided with a working environment psychology module during my undergraduate psychology degree. In addition to good job design, training and supervision, employee wellbeing and engagement were also emphasised as vital corollaries of staff retention and performance. It was through this occupational psychology lens that I became fascinated by the interplay between individuals and organisational contexts.

My Masters in Human Resource Management allowed me to further explore this interest and apply the knowledge to my role at the time as a Human Resources and Organisational Development professional within the NHS. Working with highly dedicated healthcare professionals who had access to limited resources, I developed my understanding of constructs such as burnout (Freudenberger, 1974), vicarious trauma (Baird & Kracen, 2006; McCann & Pearlman, 1990), secondary traumatic stress and compassion fatigue (Figley, 1995). I was especially interested in the psychological

processes underlying these constructs and came across the Job Demands-Resources (JD-R) literature whilst researching for this (Bakker & Demerouti, 2017; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001).

## **1.2. Choosing a Research Topic**

I was keen to bridge my previous experiences of working in human resources and my current experiences as a trainee psychologist. Research exploring psychologists' experiences in the workplace thus seemed a natural fit. I wondered how the JD-R model had been applied to psychologists and was surprised to find only one article overtly utilising this approach; a review paper by Rupert, Miller and Dorociak (2015), which used the JD-R model as a framework to discuss psychologist burnout. To my knowledge, no papers had explicitly tested the relationships between various Job Demands (JDs), Job Resources (JRs), Personal Resources (PRs) and outcomes for psychologists within the context of the JD-R model.

Aligned with a recent shift in research focus from the negative aspects and consequences of work (e.g. burnout) towards the positive (e.g. work engagement; Seligman & Csikszentmihalyi, 2000), I was particularly interested in exploring the role of PRs (i.e. resiliency factors) within this framework. As a trainee, I was struck by the emphasis that tutors placed on resilience and self-care as a key component of ongoing personal and professional development. The metaphor of not being able to pour from an empty container was often cited, and I felt this held particular significance in the context of increasing pressures and diminishing resources in the NHS. Consequently, I decided to research psychologists' resilience in the workplace, taking various job characteristics into consideration.

## **1.3. Research Process**

I spoke with psychologists from across disciplines to ascertain the value of the topic. I was encouraged by the positive feedback and worked with my research supervisor to develop the ideas through to fruition. Involving psychologists at the design stage also enabled me to think critically about the specific dimensions of JDs, JRs and PRs to

include in the study. Attending supervision meetings helped me to consider the practicalities of conducting research and reflect on my personal and professional development throughout. This praxis (a constant reflection and action to transform outcomes; Freire, 1970) not only enriched my knowledge of research process, it also encouraged me to consider the impact of clinical work on psychologists themselves. The research was thus an iterative process of continuous learning and adjustment.



## **2. SYSTEMATIC LITERATURE REVIEW**

The aim of the systematic literature review was to provide a conceptual overview of the ways in which medical and nursing professionals experience patient suicide.

### **2.1. Defining the Review Topic**

I had initially sought to undertake a meta-analysis of psychologists' resilience as a predictor of workplace wellbeing, engagement or performance. Unfortunately, limited studies among this occupational group were returned, thus rendering this unfeasible for systematic review. I then explored possible avenues for review in the related fields of burnout, vicarious trauma, compassion fatigue and self-compassion. Whilst there seemed to be a proliferation of studies investigating these constructs in recent years, lack of homogeneity across papers made it difficult to complete a systematic review of publishable quality. It felt as though I had reached an impasse in defining a feasible research question.

In supervision, I discussed my motivations for researching the impact of clinical work on staff, and the responsibility I felt organisations had towards their employees, particularly in the caring professions. This led to a conversation about a service evaluation I had recently undertaken to explore staff experiences of risk assessment in mental health services. When disseminating the results among participating teams, I was struck by the candid reflections from staff about their past experiences of patient suicide and the overwhelming sense of guilt and shame they experienced. Notions of stigma and the taboo of suicide were evident, with staff initially feeling unsure if their reactions were to be expected or not. They asked if what they were feeling was normal and wondered what the evidence suggested about the most appropriate personal and professional responses within an organisational context. It therefore seemed reasonable to explore this question, as it linked conceptually with my research project.

## **2.2. Choice of Methodology**

The rationale for conducting a qualitative meta-synthesis (rather than a quantitative meta-analysis) was its suitability to the aims of the review. However, a further incentive was to broaden my experience of this approach. Whilst reading about qualitative methodologies, I found myself wondering about the epistemological stance of a number of review papers that seemed to contrast with the epistemology of the studies they were reviewing. I raised this in supervision and thought about the importance of context in interpreting differences in experiences (Barbour, 2001). Consequently, I decided that aggregating studies with contrasting philosophical assumptions would make it difficult to make methodologically sound comparisons across studies. Consequently, I adopted an integrative, interpretive position for the meta-synthesis that allowed me to utilise the same hermeneutic principles that apply to individual studies to translate findings from across papers into each other (Noblit & Hare, 1988; Zimmer, 2006). My previous experience in this approach was limited to a teaching exercise as part of my training. In addition to reading about the process, I spoke with researchers who had previously utilised this approach to ensure my review was robust and retained methodological fidelity. Overall, I enjoyed the creativity this process afforded and felt the approach enabled me to connect with the data.

## **2.3. Personal Impact**

A core concept within interpretive methodology is that researchers are linked to their data in a double hermeneutic: researchers try to make sense of how their participants make sense of the world (Giddens, 1987). Adopting this approach therefore required me to remain aware of my experiences throughout the analysis by considering how my personal experiences and beliefs might influence my interpretation of the data (Noblit & Hare, 1988). Although my supervisor supported me in minimising subjective bias by reviewing the final themes, I also ensured that my potential biases were made transparent to the reader in my write-up.

My personal experiences of suicide meant that the process of analysis was poignant at times. My own reactions to the data frequently reminded me that the participants in

each of the studies reviewed were reflecting on equally difficult experiences where they were unable to support patients in distress. The process of research supervision was therefore crucial for me in acknowledging my own countertransference, which at times resulted in feelings of helplessness similar to those described by study participants. My clinical experience of working psychodynamically was therefore valuable in allowing me to reflect on and formulate my reactions throughout the research process. Moreover, peer supervision, keeping a reflective log and engaging in the same self-care strategies that we as psychologists encourage our patients to utilise (e.g. exercise and nutrition), supported me in bracketing these influences. Concurrent with notions of vicarious trauma (McCann & Pearlman, 1990), this made me contemplate the impact that participants' stories had on the researchers themselves. Consequently, researchers engaged in future studies to explore the impact of adverse events on others should also be mindful of the impact that the research process could have on them (Whitt-Woosley & Sprang, 2017).

### **3. RESEARCH PROJECT**

The aim of the research project was to answer the following research question: What is the role of PRs in explaining burnout and work engagement among psychologists providing therapeutic services for NHS patients?

#### **3.1. Development of Study Design**

To ensure the study was meaningful, I defined my research question (and subsequently the operationalisation of the JD-R model) in consultation with psychologists. Upon submitting my research proposal, it was noted by reviewers that this was an ambitious project for a DClInPsy. However, the positive feedback I received and others' enthusiasm for its potential impact encouraged me to proceed. Whilst collecting participant data at different time points would have improved the study design, this was not possible within the constraints of this doctoral programme. The study was therefore exploratory in nature and a cross-sectional design was thus deemed appropriate to inform future hypotheses. I used hierarchical multiple regressions with moderation analyses to test the hypotheses in this study. This was for reasons of suitability. Explicitly, the models generated enabled exploration of the role of each variable in explaining unique variance in outcomes. Additionally, the study variables had known associations with individual demographics (e.g. gender) and performance. Adopting a hierarchical approach thus enabled the effects of these variables to be controlled.

#### **3.2. Study Approvals and Ethical Considerations**

The process of obtaining the necessary approvals for this study required liaising between a number of different teams and organisations. These were: the University of Leicester as my research sponsors; the University of Leicester Psychology Ethics Sub-Committee (NHS ethical approval was not required as the study was limited to staff); my local NHS Research and Development department as my host site; and the Health Research Authority (HRA) for approval to conduct research within a health context. Regrettably, I was unable to collect data from participants in Ireland, Scotland or

Wales, as my HRA approval only applied to England. Unfortunately, I became aware of the different approval processes for the other home countries at a later stage and was thus unable to obtain extended HRA approval in time. For those who could take part, the study was classified as 'low risk', as the questionnaire was not likely to cause greater distress than might be encountered in participants' daily lives. Ethical approval was therefore granted promptly.

### **3.3. Recruitment and Data Collection**

I am acutely aware of the pressures that psychologists face in services with multiple and competing demands on their time. Consequently, I was anxious about achieving the large sample size indicated by *a priori* power calculations. As the study tested a large number of variables, I was also mindful that longer questionnaires are negatively associated with response rates (Galesic & Bosnjak, 2009). To address these concerns, I ensured that the overall mix of validated measures selected for the final questionnaire took no more than ten minutes to complete. I also adopted a range of recruitment approaches to maximise sample reach. I was particularly struck by the interest generated in my study online and how quickly the sample seemed to snowball. Many participants contacted me to voice support for the topic, and wish me luck with the analysis and write up. Notably, the experience of taking part was also positive for many; comments included: '[the questionnaire] made me realise I actually do like my job!' and '[I'm now] feeling better about my job after a hard day!' Those who did not meet eligibility criteria also contacted me to request a study summary and encouraged me to submit the findings to a peer-reviewed journal. The nature of utilising an online study design meant that I had not expected to interact with my participants. This was therefore a pleasant surprise and a motivating experience.

### **3.4. Data Analysis and Interpretation of Findings**

My previous experience of multiple regression analyses was limited to investigating single predictors with single moderating variables. The large number of variables in this study therefore enabled me to build on and develop my skills in this method of analysis. Upon completing the analysis, I noticed that reflective behaviour (PR-RB) did

not significantly predict outcomes in any of the models tested. PR-RB is a known predictor of burnout and work engagement across a range of occupational groups (e.g. Mastenbroek, Jaarsma, Scherpbier, van Beukelen, & Demerouti, 2014), so I was surprised. I felt this finding was particularly noteworthy and wondered what the possible reasons for this might be.

Reflexivity is emphasised as a key skill for psychologists to foster a complex understanding of themselves in relation to others (BPS, 2017). They are required to utilise clinical supervision to consider their experiences, biases and impact on their patients, and record ongoing reflective practice to retain professional registration. Although this is an increasing feature in a number of professions, psychologists are explicitly selected for their reflective skills and then trained as reflective scientist-practitioners (BPS, 2014). I therefore wondered whether PR-RB was considered as a resource in itself, or instead a JD inherent to the role as a psychologist. This raised structural questions about the distinctions between demands and resources, and I wondered what their respective roles across different occupational groups might be. Whilst it was beyond the scope of this thesis, the structural outcomes might be explored in future analysis through factor analyses.

## **4. DISSEMINATION**

It is common research practice within a scientific community to build on each other's findings to develop and test theories. The proponents of the JD-R model themselves accredit earlier models of workplace stress as key influencers in their research (Bakker & Demerouti, 2017). The dissemination of findings is therefore a necessary element of cultivating theoretical advances as well as evidence-based practice. To this end, I have been involved in organising a research conference with my peers at which I hope to present the findings of my thesis. I will also prepare a poster for the conference, which will be used to generate discussion about the role of PRs and resiliency among psychologists. Additionally, I have shared the findings from my systematic literature review with medical, nursing and psychology professionals at a clinical seminar. I am also in the process of arranging a collaborative workshop for psychologists and service managers to consider not only the role of individual resilience and self-care, but also to explore how the organisation can better support their employees with balanced, manageable workloads and access to a range of resources. Furthermore, I have prepared an article for submission to a peer-reviewed journal. Finally, I will be sharing a summary of the study with my participants.

## **5. PERSONAL AND PROFESSIONAL DEVELOPMENT**

Overall, this research has afforded me with considerable opportunities for development. Although initially disheartening, the time spent exploring various possibilities for the systematic literature review broadened my knowledge on a wide range of issues pertinent to healthcare professionals. These include the individual and organisational determinants of employee wellbeing, the personal and professional impact of engaging in clinical roles, and a variety of interventions to mitigate the negative aspects and consequences of work. For example, mindfulness-based interventions are associated with increased self-compassion and decreased distress among healthcare professionals (Shapiro, Aston, Bishop, & Cordova, 2005), with self-compassion shown to predict performance outcomes (Neff, Hsieh, & Dejitterat, 2005). Researching a range of topics also exposed me to a variety of research methodologies such as Interpretative Phenomenological Analysis (IPA) and Structural Equation Modelling (SEM).

Although I have undertaken a number of research projects prior to commencing this doctoral programme, this was the first time I had led the process from study inception through to dissemination. This made it possible for me to gain experiences in writing a detailed research protocol and coordinate the range of study approvals required. Consequently, I was exposed to the finer details and intricacies associated with good research practice. These included compliance with data storage guidelines, identifying rules for incentivising participation and researching indemnity arrangements. Given the restriction of this research to psychologists practising within England only, I am now aware that there are different approval processes across countries. I would therefore endeavor to account for this in future research to ensure appropriate sample reach for populations under investigation.

Engaging in the research from start to finish also aided my personal development. In addition to writing a research protocol, making an application for ethical approval and preparing journal articles, I have also written study information for participants, a lay



summary of the research for dissemination and presented my findings to healthcare professionals at a clinical seminar. From this, I have enhanced my communication skills by tailoring information to the audience and its intended purpose. Furthermore I have managed multiple demands to meet academic deadlines whilst retaining therapeutic effectiveness in my clinical work. Overall, this has enabled me to invest in and strengthen my own PRs.

## **6. FINAL REFLECTIONS**

My research journey has required great commitment over a number of years, and yet I feel privileged to have undertaken it. This doctoral thesis presented a unique opportunity for me to apply my experience of human resources to my chosen career in clinical psychology, which I have thoroughly enjoyed. Notably, there is some irony in researching the role of PRs in burnout and engagement whilst undertaking a demanding doctoral programme. Balancing academic and clinical responsibilities alongside self-care has been challenging at times. However, the topic has enabled me to reflect on and consider my own resources and resiliency throughout the process; I have been able to build on existing capabilities and test new strategies in a safe and supportive environment. Given praxis is key to the role of clinical psychologists as reflective scientist-practitioners, I am grateful that this project has enabled me to enact that process and I look forward to sharing my findings more widely.

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## **PART FOUR: APPENDICES**

Mandatory appendices are indicated with an asterisk

## A. ANONYMITY CHECKLIST

	Checked in abstract	Checked in main text	Checked in appendices
Pseudonym or false initials used	✓	✓	✓
Reference to pseudonym/false initials as a footnotes	✓	✓	✓
Removed any reference to names of hospitals/clinics/services (including letterhead if including letters in appendices)	✓	✓	✓
Removed any reference to names/addresses/location of client(s) (including relatives), and supervisor(s)	✓	✓	✓
Removed/altered references to client(s) jobs/professions where this may potentially identify them	✓	✓	✓
Removed any information that may identify the trainee (consult with course staff if this will detract from the points the trainee is making)	✓	✓	✓
<b>No Tippex</b> or other method has been used to obliterate the original text – unless the paper is subsequently photocopied and the trainee has ensured that the obliterated text cannot be read	✓	✓	✓
The "find and replace" function in word processing has been used to check the assignment for use of client(s) names/other confidential information	✓	✓	✓

## **B. \* AUTHOR GUIDELINES FOR TARGET JOURNALS**

### **B.1. Literature Review: Suicide and Life-Threatening Behaviour**

As of December 1, 2010 all manuscript submissions to *Suicide and Life-Threatening Behavior* can be made online via [Manuscript Central](#), the web-based submission, tracking and peer review system.

*Suicide and Life-Threatening Behavior* is devoted to emergent theoretical, scientific, clinical, and public health approaches related to violent, self-destructive, and life-threatening behaviors. It is multidisciplinary and concerned with a broad range of related topics including, but not limited to, suicide, suicide prevention, death, accidents, biology of suicide, epidemiology, crisis intervention, postvention with survivors, nomenclature, standards of care, clinical training and interventions, violence.

**Brief Summary.** Manuscripts should be submitted with a 200-word abstract. The entire manuscript, including references, quotations, text, and tables, and be double-spaced. American Psychological Association (APA) standard style should be used. Manuscript length, except under unusual circumstances, should not be over 20 double-spaced pages, and, ordinarily, should be shorter.

**Original Contributions.** Authors should only submit manuscripts that have not been published elsewhere, and are not under review by another publication. Cover Letter. With your submission include a cover letter designating one author as correspondent for the review process, and provide a complete address, including phone and fax. In this letter please attest that neither the manuscript nor any other substantially similar paper has been published, except as described in the letter. The corresponding author should also attest that in the case of several authors, each one has studied the manuscript in the form submitted, agreed to be cited as a coauthor, and has accepted the order of authorship. If author affiliations are given with regard to academic,



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**Editing.** Manuscripts will be copyedited, and page proofs will be sent to the authors for review. Authors are responsible for all statements made in their work. Manuscripts should not only be well written in the sense of organization and clarity, but should be explained in a manner that is interesting and engaging to readers with a wide range of backgrounds. All manuscripts should begin with an abstract of the paper.

**Manuscript Preparation.** Your paper should be double spaced and submitted in Microsoft Word. On the title page list the full names, affiliations, and professional degrees of all the authors. Abbreviations should not be used in the title or abstract, and should be very limited in the text.

**Abstracts.** An abstract of up to 200 words must include the following sections and headings: Objective: a brief statement of the purpose of the study; Method: a summary of study participants (sample size, age, gender, ethnicity), and descriptions of the study design and procedures; Results: a summary of the primary findings; Conclusions: a statement regarding the implications of the findings. Below the abstract, supply up to five keywords or short phrases.

**References.** Reference lists should be prepared according to the style illustrated in the articles in this issue of the journal. This approach minimizes punctuation in the specific references, but utilizes the author and date in the text of the articles, to provide maximum information quickly to the reader.

**Illustrations.** Graphics should be executed in Microsoft Excel in either Mac or IBM formats for making graphs. If this is not possible, please submit camera ready copy. In all cases indicate the correct positioning of the item in the text. Illustrations should be

cited in order in the text using Arabic numerals. A legend should accompany each illustration, and not exceed 40 words. Please include reproductions of all illustrations. As the author you are ultimately responsible for any required permissions regarding material quoted in your text, tables, or illustrations of any kind.

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**Reviews and Decisions.** Manuscripts are generally sent to outside reviewers, and you will be informed of the editorial decision as soon as possible. Ordinarily a decision will be reached in about 3 months after submission is acknowledged. A request for revising the manuscript along the lines suggested by the Editor and reviewers does not constitute a decision to publish. All revised manuscripts will be re-evaluated, and the Editors reserve the right to reject a paper at any point during the revision process.

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## **B.2. Research Project: British Journal of Clinical Psychology**

The British Journal of Clinical Psychology publishes original contributions to scientific knowledge in clinical psychology. This includes descriptive comparisons, as well as studies of the assessment, aetiology and treatment of people with a wide range of psychological problems in all age groups and settings. The level of analysis of studies ranges from biological influences on individual behaviour through to studies of psychological interventions and treatments on individuals, dyads, families and groups, to investigations of the relationships between explicitly social and psychological levels of analysis.

All papers published in The British Journal of Clinical Psychology are eligible for Panel A: Psychology, Psychiatry and Neuroscience in the Research Excellence Framework (REF).

The following types of paper are invited:

- Papers reporting original empirical investigations
- Theoretical papers, provided that these are sufficiently related to the empirical data
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## **1. Circulation**

The circulation of the Journal is worldwide. Papers are invited and encouraged from authors throughout the world.

## **2. Length**

The word limit for papers submitted for consideration to BJCP is 5000 words and any papers that are over this word limit will be returned to the authors. The word limit does not include the abstract, reference list, figures, or tables. Appendices however are included in the word limit. The Editors retain discretion to publish papers beyond this length in cases where the clear and concise expression of the scientific content requires greater length. In such a case, the authors should contact the Editors before submission of the paper.

## **3. Submission and reviewing**

All manuscripts must be submitted via [Editorial Manager](#). The Journal operates a policy of anonymous (double blind) peer review. We also operate a triage process in which submissions that are out of scope or otherwise inappropriate will be rejected by the editors without external peer review to avoid unnecessary delays. Before submitting, please read the [terms and conditions of submission](#) and the [declaration of competing interests](#). You may also like to use the [Submission Checklist](#) to help you prepare your paper.

## **4. Manuscript requirements**

- Contributions must be typed in double spacing with wide margins. All sheets must be numbered.
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- Tables should be typed in double spacing, each on a separate page with a self-explanatory title. Tables should be comprehensible without reference to the text. They should be placed at the end of the manuscript but they must be mentioned in the text.
- Figures can be included at the end of the document or attached as separate files, carefully labelled in initial capital/lower case lettering with symbols in a form consistent with text use. Unnecessary background patterns, lines and shading should be avoided. Captions should be listed on a separate sheet. The resolution of digital images must be at least 300 dpi. All figures must be mentioned in the text.
- All papers must include a structured abstract of up to 250 words under the headings: Objectives, Methods, Results, Conclusions. Articles which report original scientific research should also include a heading 'Design' before 'Methods'. The 'Methods' section for systematic reviews and theoretical papers should include, as a minimum, a description of the methods the author(s) used to access the literature they drew upon. That is, the abstract should summarize the databases that were consulted and the search terms that were used.
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- For reference citations, please use APA style. Particular care should be taken to ensure that references are accurate and complete. Give all journal titles in full and provide DOI numbers where possible for journal articles.
- SI units must be used for all measurements, rounded off to practical values if appropriate, with the imperial equivalent in parentheses.

- In normal circumstances, effect size should be incorporated.
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## C. QUALITY APPRAISAL: CASP RATINGS

The 10 questions in the CASP checklist are designed to help researchers consider quality issues systematically. They are listed below, with answers of 'yes' scoring one point for each study, and answers of 'no' scoring zero points as set out in the table below. A score of zero was also assigned where it was not possible to answer the questions from the reporting in the study paper.

1. Was there a clear statement of the aims of the research?
2. Is a qualitative methodology appropriate?
3. Was the research design appropriate to address the aims of the research?
4. Was the recruitment strategy appropriate to the aims of the research?
5. Was the data collected in a way that addressed the research issue?
6. Has the relationship between researcher and participants been adequately considered?
7. Have ethical issues been taken into consideration?
8. Was the data analysis sufficiently rigorous?
9. Is there a clear statement of findings?
10. How valuable is the research?

Study	CASP Question										Score
	1	2	3	4	5	6	7	8	9	10	
Davidson (2011)	1	1	1	1	1	1	1	1	1	1	10
Foggin et al. (2016)	1	1	1	1	1	0	1	1	1	1	9
Joyce & Wallbridge (2003)	1	1	1	1	1	0	0	0	1	1	7
Kahne (1968)	0	1	0	1	1	0	0	0	0	0	3
Midence et al. (1996)	1	1	0	0	0	0	0	0	0	1	3
Robertson et al., (2010)	1	1	1	1	1	1	1	1	1	1	10
Saini et al. (2016)	1	1	1	1	1	0	1	1	1	1	9
Talseth & Gilje (2007)	1	1	1	1	1	1	1	1	1	1	10
Wang et al. (2016)	1	1	1	1	1	0	1	1	1	1	9

## D. TABLE OF FIRST- AND SECOND-ORDER CONSTRUCTS

Study	Aims	Themes (1 <sup>st</sup> Order)	Authors Comments (1 <sup>st</sup> Order)	Conclusions (2 <sup>nd</sup> Order)
<b>Davidson et al. (2011)</b>	To investigate how GPs were affected by patient suicides & whether reaction was linked to propensity to explore risk.	<ul style="list-style-type: none"> <li>Emotional impact, guilt and failure. "And then one day he'd shot himself. Then I was really shocked... It was terrible... you feel really guilty." "They had actually come to talk about this, the depression, but they never came out with it... there we have actually failed."</li> <li>Self-scrutiny. GPs checked for own mistakes and reformulated. "It's hard to say what I could have done differently." "My goodness I had to ponder over it afterwards."</li> <li>Talking about it difficult for GPs and propensity to discuss risk varied. "I don't think that I distinctly used the word... suicide." "I have got better at asking if they think of suicide."</li> </ul>	<ul style="list-style-type: none"> <li>Most GPs experienced suicide. It had seriously shaken them all as a 'critical case'. Reported difficulties in emotional connection with patient, blamed themselves for not identifying suicidal ideation and assumed they had overlooked something.</li> <li>GPs expended considerable mental energy to consider the process, usually on their own. High levels of self-scrutiny suspected, as GPs felt responsible for discovering risk.</li> <li>GPs less likely to explore suicidal ideation without diagnosis of depression. Younger doctors were more likely to talk about suicide, possibly due to shifts in training.</li> </ul>	<ul style="list-style-type: none"> <li>Patient suicides part of role, yet still a terrible experience for GPs. All recounted incident and emotional impact on their own terms –linked to self-blame.</li> <li>Frustration at failure to emotionally connect with patients contributed to self-scrutiny, failure and guilt. Support from colleagues required without pressure to manage emotional impact/professional implications alone.</li> <li>Recognition that talking with patients about suicide helpful. Need to build on confidence to identify risk in all patients, not only those diagnosed with depression. Implication that suicide is taboo.</li> </ul>
<b>Foggin et al. (2016)</b>	To explore experiences of GPs dealing with parents bereaved by suicide & personal impact.	<ul style="list-style-type: none"> <li>Integral to role, GPs felt suicide was "an infrequent event" and "if somebody really wants to, they will."</li> <li>Facing the bereaved. Need to be informed but poor communication systems: "The embarrassment of not knowing when someone's died." Experiences of being prepared varied: "anxiety about going [to see the bereaved]... it might have been you that... made the delay in the diagnosis."</li> <li>Helping the bereaved. Most felt they could offer little: "All I could do was give her a hug, nothing else". "GPs don't have enough time [for counselling families]."</li> <li>GPs helping themselves. Several had personal experience of suicide and felt "terribly distressed", "you feel you could have done more". Barriers to accessing support: "[GPs] think they're probably the best at sorting themselves out... which is wrong."</li> </ul>	<ul style="list-style-type: none"> <li>Mental health 'part and parcel' of the job. However, seemed uncomfortable talking about suicide using euphemisms "topped themselves", "this sort of incident."</li> <li>GPs concerned about being uninformed of suicide prior to consultation with bereaved parents. Readiness to speak with parents and perceptions of their utility depended on familiarity with family, some disclosed guilt.</li> <li>Sense of helplessness when supporting bereaved parents. GPs relied on third-sector services but few could name organisations to support those bereaved by suicide.</li> <li>GPs empathised with bereaved parents and wondered what they could have done differently. Insufficient space to address own grief affected subsequent patient contacts.</li> </ul>	<ul style="list-style-type: none"> <li>GPs felt anxiety, guilt and helplessness. It was difficult to talk about suicide despite perceived inevitability.</li> <li>Concern about parental anger/blame, or feel intruding on private grief. Confusion around communication processes for identifying deceased patients added to failure, helplessness and guilt.</li> <li>Pressure to cope well despite stigma of mental ill health in doctors, as well as continuing to care for other patients.</li> <li>Lack of resources to adequately support families and GPs in self-care. Highlights need for improved training/postvention procedures.</li> </ul>

Study	Aims	Themes (1 <sup>st</sup> Order)	Authors Comments (1 <sup>st</sup> Order)	Conclusions (2 <sup>nd</sup> Order)
<b>Robertson et al. (2010)</b>	To explore impact of inpatient suicides on nurses, patterns of regulation and support needs.	<ul style="list-style-type: none"> <li>Scene setting. "From what I remember..." "I'd just started... a lot of problems with staffing... there was a lot of things going on basically. I'd requested staff but never got any."</li> <li>Intuitive and formal risk assessment. "there had been nothing untoward indicating... any intention to suicide... she was bright... cheery... attended to her hygiene... had her breakfast."</li> <li>Attribution for the suicide. "I'd spoke to the patient that morning and she was fine... she was for discharge the next day."</li> <li>Confirmation and contradiction. "she was fine... she did have a schizophrenic illness though."</li> </ul>	<ul style="list-style-type: none"> <li>Nurses wanted to demonstrate they were good people by externalizing suicide cause. Disclaimers placed in narratives.</li> <li>Nurses shared markers for risk assessments, suggesting awareness of accountability. Implied they had not missed anything. Drew on others' assessments to reduce agency.</li> <li>Nurses spoke of a 'settled' period before introducing unexpected event. Authors suggest this serves to contextualise/ rebuke unspoken objections that may leave nurses open to blame.</li> <li>Nurses did not say 'accountability', 'responsibility' or 'blame'. Reflective of concerns that owning accountability may suggest blame and reinforce burden.</li> </ul>	<ul style="list-style-type: none"> <li>Narratives constructed to attribute suicide to system challenges to counter professional accountability and avoid blame. Lack of resources implied helplessness.</li> <li>Nurses had knowledge of potential risk factors and indirectly asserted they had not missed anything. Self-reflection evident.</li> <li>They distanced themselves from the suicide by making their assessments credible. Diagnosis noted as an alternative explanation, suggesting inevitability of risk.</li> <li>Professional accountability indicated potential legal action, which would increase burden. Contextualises significance of avoiding blame.</li> </ul>
<b>Talseth &amp; Gilje (2007)</b>	To describe psychiatrist response to patient suicide in light of a published model of consolation.	<ul style="list-style-type: none"> <li>Professionally responsible whilst vulnerable. "I was really reflecting... I was not restless on the outside, but I was on the inside."</li> <li>Becoming open to self and others fosters readiness to open up. "I was very affected by the family's feelings... I used myself as a tool."</li> <li>Dialoguing with self, reflecting, remembering, reasoning, judging. "I blamed myself harshly... How could I be so naïve." Dialoguing with others through therapeutic communication to assess future risk.</li> <li>Being true to self. "It was difficult to evaluate." "[Colleagues] see it is painful for you."</li> <li>Unburdening grief through shifting perspectives "I talked... with my chief at the time... He clearly said I could not have done anything else... I was relieved."</li> </ul>	<ul style="list-style-type: none"> <li>Shock, guilt, self-doubt and grief. Psychiatrists judged themselves harshly and strived to balance boundaries: 'power to', being open to accept suicide as human reaction vs 'power over', to search for explanations. Recognised need to see beyond the stigma of suicide.</li> <li>Wishfulness conveyed expectations of prevention.</li> <li>Psychiatrists' communion with self (finding inner peace/self-confidence) emerged from integrity, participating in the suffering and not giving up. Implied reflections strengthened relatedness, despite suffering.</li> <li>Suffering understood through metaphors (e.g. teaching students as marker for improvements in future care) or using reflection to gain deeper understanding of self.</li> <li>To mitigate grief, perspectives shifted from self-doubt to self-confidence, from tragedy to fragility, from voiceless shock to retelling the stories.</li> </ul>	<ul style="list-style-type: none"> <li>Despite stigma, psychiatrists were touched by suffering and experienced intense emotions. Being honest and open to them and reflecting on them with others/alone helped.</li> <li>Psychiatrists seemed to balance grief with responsibility and possible repercussions for professional practice.</li> <li>Initially felt lost but tried to make sense of the experience through a range of mechanisms including opportunities for growth. Indicative of resilience.</li> <li>Dissonance in reconciling cognition (suicide is inevitable) and emotion (guilt, self-blame).</li> </ul>

Study	Aims	Themes (1 <sup>st</sup> Order)	Authors Comments (1 <sup>st</sup> Order)	Conclusions (2 <sup>nd</sup> Order)
Wang et al. (2016)	To explore the impact of inpatient suicides on nurses, the patterns of regulation and their needs for support.	<ul style="list-style-type: none"> <li>• Cognitions about inpatient suicide. Felt suicide "is hard to prevent" in high-risk patients. Nurses believed they lacked skills "I don't know how to ask... how to comfort."</li> <li>• Psychological reactions. Shock, panic, fear and "perceived judgement and blame." "I was scared to cry at the time... I could not eat anything for days after." Self-accusation, guilt, frustration and self-doubt prominent. "I should have known."</li> <li>• Impact on practice. Stress and excessive vigilance common. "It felt like there was a stone on my chest... I doubt whether I could do this job anymore." "Working efficiency was quite low. I strongly feel tired".</li> <li>• Patterns of regulation. Nurses most commonly shared distress with family and friends "I was badly hurt and cried to my husband". They also showed avoidance "I had been nervous... so the leader transferred me", "I was very afraid of medical disputes, I tried to avoid communicating with patients' families."</li> </ul>	<ul style="list-style-type: none"> <li>• Nurses believed signals were present before patients committed suicide but worried it was difficult to prevent or that talking about it would increase risk. Possibly due to focus on medical rather than psychological knowledge.</li> <li>• Nurses adversely affected if anxieties not relieved in timely way. Most concerned they had missed something, done something wrong or would be held responsible for having failed. Led to frustration and self-doubt.</li> <li>• Excessive vigilance included touring the unit to ensure safety. May contribute to burnout.</li> <li>• Recovery time and process varied – support from managers and self-regulation (e.g. prayers) helped. Avoidance worked short-term but resulted in long-term distress. Nurses tended not to seek support from colleagues, possibly for fear of being judged or blamed.</li> </ul>	<ul style="list-style-type: none"> <li>• Patient suicide difficult to talk about attributed to lack of training. Fear of blame heightened by feeling ill equipped to deal with suicidal patients. May contribute to helplessness.</li> <li>• Significant distress experienced. Resilience strategies utilised to help nurses cope.</li> <li>• Avoidance of ward environment enabled distance. Linked to fear of it happening again or being blamed/held responsible.</li> <li>• Professional censure evident. Safe spaces in a supportive environment to discuss concerns necessary alongside education for risk management and postvention.</li> </ul>

## E. \* STUDY QUESTIONNAIRE

The study questionnaire was distributed online only. The text is shown below:

### *[Eligibility screening]*

Do you have clinical (i.e. therapeutic) contact with NHS clients?	Yes	No
Are you a student or trainee psychologist?	Yes	No
Do you practice clinically in England?	Yes	No

*[If eligibility criteria were not met, the questionnaire ended and the following message was shown: "Unfortunately you have not met the eligibility criteria outlined on the information page. Thank-you for taking the time to participate in this study."]*

1. Thinking about your main clinical work, how often do you find yourself facing the following problems in carrying out your job:

	Never				Always		
I do not have enough time to carry out my work	1	2	3	4	5	6	7
I cannot meet all the conflicting demands made on my time at work	1	2	3	4	5	6	7
I never finish work feeling I have completed everything I should have	1	2	3	4	5	6	7
I am asked to do work without adequate resources to complete it	1	2	3	4	5	6	7
I cannot follow best practice in the time available	1	2	3	4	5	6	7
I am required to do basic tasks which prevent me completing more important ones	1	2	3	4	5	6	7

2. The following statements concern your work with clients. Your clients may be individuals or groups of people. How often does it happen that:

	Never				Always		
Your clients make suicidal statements	1	2	3	4	5	6	7
You feel unable to help an acutely distressed client feel better	1	2	3	4	5	6	7
Clients express anger towards you	1	2	3	4	5	6	7
There is a lack of observable progress with your clients	1	2	3	4	5	6	7
Your clients are severely depressed	1	2	3	4	5	6	7
Your clients appear to be apathetic or lack motivation	1	2	3	4	5	6	7
You do not like a client	1	2	3	4	5	6	7
Your clients end therapy prematurely	1	2	3	4	5	6	7
You need to give potentially painful interpretations or feedback to your clients	1	2	3	4	5	6	7

3. The following statements concern the way in which your work influences your personal interests. Personal interests mean all your interests and activities that are not related to your work or family. They concern your free time, hobbies, social contacts etc. Please select the answer that is most applicable to you. How often does it happen that:

	Never				Always		
You come home feeling cheerful after work, which positively affects the experience of your personal interests	1	2	3	4	5	6	7
Your work schedule makes it difficult for you to fulfil your personal interests	1	2	3	4	5	6	7
The things you have learned at work help you to better fulfil your personal activities	1	2	3	4	5	6	7
You feel full of energy after work and can therefore enjoy your personal interests more	1	2	3	4	5	6	7

4. The following questions concern the amount of choice you have in your job. To what extent do you:

	Never				Always		
Determine the methods and procedures you use in your work	1	2	3	4	5	6	7
Choose what work you will carry out	1	2	3	4	5	6	7
Decide when to take a break	1	2	3	4	5	6	7
Vary how you do your work	1	2	3	4	5	6	7
Plan your own work	1	2	3	4	5	6	7
Carry out your work in the way you think best	1	2	3	4	5	6	7

5. The following questions ask about the extent to which other people provide you with help or support at work. To what extent can you:

	Never				Always		
Count on your colleagues to listen to you when you need to talk about problems at work	1	2	3	4	5	6	7
Count on your colleagues to back you up at work	1	2	3	4	5	6	7
Count on your colleagues to help you with a difficult task at work	1	2	3	4	5	6	7
Really count on your colleagues to help you in a crisis situation at work, even though they would have to go out of their way to do so	1	2	3	4	5	6	7

6. The following statements concern the information you get about your work performance. Please answer rate how much you agree or disagree with them.

	Strongly Disagree				Strongly Agree		
I usually know whether or not my work is satisfactory in this job	1	2	3	4	5	6	7
I often have trouble figuring out whether I am doing well or poorly in this job	1	2	3	4	5	6	7
Most people in this job have a pretty good idea of how well they are performing their work	1	2	3	4	5	6	7
Most people in this job have trouble figuring out whether they are doing a good or bad job	1	2	3	4	5	6	7



7. The following statements are about how you might see yourself in everyday life. Please rate how much you agree or disagree with them.

	Strongly Disagree				Strongly Agree		
I will be able to achieve most of the goals that I have set for myself	1	2	3	4	5	6	7
When facing difficult tasks, I am certain that I will accomplish them	1	2	3	4	5	6	7
In general, I think that I can obtain outcomes that are important to me	1	2	3	4	5	6	7
I believe I can succeed at most any endeavour to which I set my mind	1	2	3	4	5	6	7
I will be able to successfully overcome many challenges	1	2	3	4	5	6	7
I am confident that I can perform effectively on many different tasks	1	2	3	4	5	6	7
Compared to other people, I can do most tasks very well	1	2	3	4	5	6	7
Even when things are tough, I can perform quite well	1	2	3	4	5	6	7

8. The following statements are about some of ideas or opportunities you might have in everyday life. Please rate how much you agree or disagree with them.

	Strongly Disagree				Strongly Agree		
I am constantly on the lookout for new ways to improve my life	1	2	3	4	5	6	7
Wherever I have been, I have been a powerful force for constructive change	1	2	3	4	5	6	7
Nothing is more exciting than seeing my ideas turn into reality	1	2	3	4	5	6	7
If I see something I don't like, I fix it	1	2	3	4	5	6	7
No matter what the odds, if I believe in something I will make it happen	1	2	3	4	5	6	7
I love being a champion for my ideas, even against others' opposition	1	2	3	4	5	6	7
I excel at identifying opportunities	1	2	3	4	5	6	7
I am always looking for better ways to do things	1	2	3	4	5	6	7
If I believe in an idea, no obstacle will prevent me from making it happen	1	2	3	4	5	6	7
I can spot a good opportunity long before others can	1	2	3	4	5	6	7

9. The following statements concern different types of reflective practice in general. Please rate how much you agree or disagree with them.

	Strongly Disagree					Strongly Agree	
I don't often think about my thoughts	1	2	3	4	5	6	7
I rarely spend time in self-reflection	1	2	3	4	5	6	7
I frequently examine my feelings	1	2	3	4	5	6	7
I don't really think about why I behave in the way that I do	1	2	3	4	5	6	7
I frequently take time to reflect on my thoughts	1	2	3	4	5	6	7
I often think about the way I feel about things	1	2	3	4	5	6	7
I am not really interested in analysing my own behaviour	1	2	3	4	5	6	7
It is important for me to evaluate the things that I do	1	2	3	4	5	6	7
I am very interested in examining what I think about	1	2	3	4	5	6	7
It is important to me to try to understand what my feelings mean	1	2	3	4	5	6	7
I have a definite need to understand the way that my mind works	1	2	3	4	5	6	7
It is important to me to be able to understand how my thoughts arise	1	2	3	4	5	6	7

10. The following questions concern how you might feel about your job. How often is it that:

	Never					Always	
I feel bursting with energy at work	1	2	3	4	5	6	7
I feel strong and vigorous at my job	1	2	3	4	5	6	7
I am enthusiastic about my job	1	2	3	4	5	6	7
My job inspires me	1	2	3	4	5	6	7
When I get up in the morning, I feel like going to work	1	2	3	4	5	6	7
I feel happy when I am working intensely	1	2	3	4	5	6	7
I am proud of the work that I do	1	2	3	4	5	6	7
I am immerse in my work	1	2	3	4	5	6	7
I get carried away when I am working	1	2	3	4	5	6	7

11. The following statements also concern how you might feel about your job. Please rate how much you agree with them.

	Strongly Disagree				Strongly Agree			
I feel emotionally drained from my work	1	2	3	4	5	6	7	
I feel used up at the end of the work day	1	2	3	4	5	6	7	
I feel burned out from my work	1	2	3	4	5	6	7	
I have become more callous towards people since taking this job	1	2	3	4	5	6	7	
I worry that this job is hardening me emotionally	1	2	3	4	5	6	7	
I really do not care what happens to some clients	1	2	3	4	5	6	7	
I feel I am positively influencing other people’s lives through my work	1	2	3	4	5	6	7	
I have accomplished many worthwhile things in this job	1	2	3	4	5	6	7	
I feel good after working closely with my clients	1	2	3	4	5	6	7	

12. The final set of statements are about your job too. How characteristic are each of the following statements about you when you are at work.

	Not at all characteristic				Totally characteristic		
I achieve my overall work objectives	1	2	3	4	5	6	7
I feel I am competent in all areas of my job	1	2	3	4	5	6	7
I perform well at work and carry out tasks as expected	1	2	3	4	5	6	7
I help colleagues with their work when they have been absent	1	2	3	4	5	6	7
I volunteer to do things at work that are not formally required of me	1	2	3	4	5	6	7
I help others with their work when their workload increased	1	2	3	4	5	6	7

This last section asks a little bit about you

Which gender do you most identify with? Male

Female

Age

18-24 25-34 35-44 45-54 55-64 65-74 75+

To the nearest full year, how long have you been qualified as a Psychologist

\_\_\_\_\_

While role do you most identify with

-Clinical psychologist  
-Counselling psychologist  
-Forensic psychologist  
-Health psychologist  
-Other (please specify)

What would you say are the main client groups you work with?

-Adult: Primary care mental health/IAPT  
-Adult: Secondary care mental health  
-Children & Young People  
-Forensic  
-Learning Disabilities  
-Neuropsychology  
-Older People  
-Physical Health  
-Other (please specify):

Working hours

Part-time

Full-time

To the nearest full year, how long have you worked in your current role?

\_\_\_\_\_

Which ethnicity do you most identify with?

-Asian or Asian British (Bangladeshi/ Indian/ Pakistani/ Any other Asian background)  
-Black or Black British (African/ Caribbean/ Any other Black background)  
-Mixed (White & Asian/ White & Black African/ Asian &

	Black Caribbean/ Any other mixed background) -White (British/ Irish/ Any other White background) -Other ethnic group (Chinese/ Any other ethnic group					
Please indicate your primary employer	NHS	3 <sup>rd</sup> Sector	Independent	Equal NHS/non NHS		
Which band is your NHS Agenda for Change pay scale band your post in?	7	8a	8b	8c	8d	9
If you have an alternative pay scale, please specify which whole-time equivalent band your post is in	£10,000 or less			£10,001-£20,000		
	£20,001-£30,000			£30,001-£40,000		
	£40,001-£50,000			£50,001-£60,000		
	£60,001-£70,000			£70,001-£80,000		
	£80,001-£90,000			£90,001-£100,000		
	£100,001-£110,000			£110,001-£120,000		
	£120,001-£130,000			£130,001-£140,000		
	£140,001-£150,000			£150,001 or over		

Please click 'Next' to submit your responses.

*[Next – button]*

Thank you for taking the time to complete this questionnaire. If you would like to be entered into the prize draw to win £50 Amazon vouchers, please leave your email address below. Please be assured that this information will be kept separately from your responses and will be deleted once the winner is selected in April 2018.

Email \_\_\_\_\_

Thank-you once again

## **F. \* PARTICIPANT INFORMATION AND CONSENT**

### **F.1. Participant Information Sheet**

This was incorporated in to the online questionnaire as the first page:

**Study Title:** The role of personal resources in predicting wellbeing, engagement and performance among psychologists; a job demands-resources approach

**Purpose of data collection:** Doctoral research

**Researcher:** Sameen Malik – Trainee Clinical Psychologist, University of Leicester

**Supervisor:** Dr. Noelle Robertson – Programme Director DClinPsy, University of Leicester

**Contact details:** [REDACTED]

You are being invited to take part in this research study by completing an online questionnaire. To be eligible to take part, you must be a qualified professional working therapeutically with NHS patients. Before you decide on whether to participate, please read the following information carefully. Please email me – Sameen, the researcher – if there is anything that is not clear to you. You can also email me if you would like me to send you a copy of this information for your records.

**Purpose of the research:** The latest British Psychological Society (BPS) staff wellbeing survey shows increasing levels of stress and depression among psychological therapies staff. It is thought too many job demands have contributed to staff feeling burnt out and too few resources have inhibited wellbeing and engagement at work. This study therefore aims to investigate the complex interactions between different job demands and resources relevant to psychologists working therapeutically with NHS service users.

**Why have I been chosen:** You have received this questionnaire because we believe you might be a qualified psychologist working with NHS clients.

**Am I eligible to take part:** You must be a qualified psychologist providing psychological services for NHS clients. Unfortunately students, trainees and psychologists working exclusively in research, non-clinical roles (e.g. management) or private practice settings seeing only non-NHS clients will not be able to take part.

**Do I have to take part:** It is entirely up to you whether you participate. There is no penalty if you decide you do not wish to take part and you may discontinue your participation at any time without consequence by not submitting your responses. You do not have to give a reason. If you do decide to take part, your responses would be valued and you will be asked to provide consent at the bottom of this page.

**What do I have to do:** You will be asked to complete an online questionnaire. All of the questions can be answered with numerical rating scales or by selecting an answer from the list provided. It should take around 10 minutes to complete. Once you submit the questionnaire, your participation will be complete and you will not need to do anything else.

**What are the risks of taking part:** There are no expected risks for taking part. You will not be asked for your name or the organisation you work for at any point in the questionnaire so you can answer honestly without facing any disadvantages to you or your work.

**What are the benefits of taking part:** All participants who submit a completed questionnaire with a contact email address will be entered into a prize draw to win £50 Amazon vouchers. Please be assured that your email address will be kept separately from your responses and will be deleted once the winner is selected in April 2018. Whilst there are no other immediate benefits for those people participating in this study, it is hoped that the findings will help policy makers to address the balance between job demands and resources. Given that staff working with NHS clients are being asked to deliver more with fewer resources, the results may also shed light on some of the implications of austerity.

**Will my information be kept confidential:** Yes, all the information we collect about you in the questionnaire will be kept strictly confidential. Your personal data (i.e. email address) will be kept separately from your questionnaire data and will be securely destroyed in accordance with the University's Information Handling Policy after the winner of the £50 voucher is selected. In line with the University's Research Code of Conduct, the research data will be retained for a period of at least six years after the final report is submitted. It will not be possible to identify individual participants and only the researcher and supervisor will know the passwords to access this data.

**Who is funding the research:** The University of Leicester and sponsoring and funding this research study

**Who has reviewed the study:** To protect your rights and safety, this research has been reviewed and approved by the University of Leicester and also by an independent group of individuals within the Leicester Psychology Research Ethics Committee

**What if something goes wrong:** If you wish to complain or have any concerns about the way you have been approached or treated in connection with the study, you should ask to speak to Sameen Malik (Chief Investigator) or Dr. Noelle Robertson (Academic Supervisor) by calling [REDACTED] and they will do their best to support you. The University of Leicester is providing insurance and indemnity for this study.

**What happens if I change my mind:** You have the right to withdraw from the study at any time prior to the submission of your completed questionnaire without giving any reason. To withdraw you simply need to exit and close the browser. Please note that

once you submit your responses at the end of the questionnaire, it will not be possible to withdraw your data from the study due to your responses being anonymous.

**Thank you:** for taking the time to read this information. If you are happy to take part in this study, please complete the consent form on the following page.

*[Proceed to Consent – button]*

## **F.2. Participant Consent Form**

This was incorporated in to the online questionnaire as the second page:

Please read each of the statements below and click 'Yes' if you would like to take part in this study.

1. I confirm that I have read the information for this study above and I am aware of what my participation involves. 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 may withdraw from the study at any time up until I submit my responses to the questionnaire without giving any reasons.
3. I understand that my data will be held confidentially and only the researcher Sameen Malik and her supervisor Dr Noelle Robertson will have access to them.
4. In line with the University of Leicester Research Code of Conduct, I understand that my questionnaire data will be kept electronically for a period of at least six years after the final report is published. They will be deleted after this time.
5. By providing my email address, I understand that it will be used to enter me into the prize draw and to send me a summary of the study results. I understand that my email address will be stored separately to my questionnaire data and that it will be deleted once the study summary has been sent and the winner of the prize draw is selected.
6. In accordance with the requirements of some scientific journals and organisations, I understand that the combined data from all participants may be shared with other competent researchers. This data may also be used in other related studies. It will not be possible to identify you or others within this data set.
7. Once the study is complete, I understand that the overall findings will be available to view in the Leicester Research Archive, may be submitted for publication in a scientific journal or presented at scientific conferences.
8. I agree to take part in the above study.

If you have further questions about this study, you may contact the researcher by emailing [REDACTED]. This study was reviewed by the University of Leicester Psychology Research Ethics Committee (PREC). You may contact the Chair of the PREC [REDACTED] at [REDACTED] if you have any questions or concerns regarding the ethics of this study.

If you would like to receive general information about the results of this research when the study is complete, please provide your email address below. As noted above, this will be kept separate from your answers to the questionnaire and deleted once the study summary has been sent.

Email address: \_\_\_\_\_

*[Proceed to Questionnaire - button]*



## **G. \* STUDY APPROVALS**

### **G.1. Letter Granting Ethical Approval**

University Ethics Sub-Committee for Psychology

06/04/2017

**Ethics Reference:** [REDACTED]

Name of Researcher Applicant: Sameen Malik

Department: Psychology

Research Project Title: The role of personal resources in explaining wellbeing, engagement and performance among psychologists: a Job Demands-Resources approach

Dear Sameen Malik,

**RE: Ethics review of Research Study application**

The University Ethics Sub-Committee for Psychology has reviewed and discussed the above application.

**1. Ethical opinion**

The Sub-Committee grants ethical approval to the above research project on the basis described in the application form and supporting documentation, subject to the conditions specified below.

**2. Summary of ethics review discussion**

The Committee noted the following issues:

This application has been approved.

**3. General conditions of the ethical approval**

The ethics approval is subject to the following general conditions being met prior to the start of the project:

As the Principal Investigator, you are expected to deliver the research project in accordance with the University's policies and procedures, which includes the University's Research Code of Conduct and the University's Research Ethics Policy.

If relevant, management permission or approval (gate keeper role) must be obtained from host organisation prior to the start of the study at the site concerned.

4. Reporting requirements after ethical approval

You are expected to notify the Sub-Committee about:

- Significant amendments to the project
- Serious breaches of the protocol
- Annual progress reports
- Notifying the end of the study

5. Use of application information

Details from your ethics application will be stored on the University Ethics Online System. With your permission, the Sub-Committee may wish to use parts of the application in an anonymised format for training or sharing best practice. Please let me know if you do not want the application details to be used in this manner.

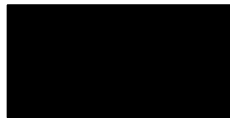
Best wishes for the success of this research project.

Yours sincerely,

A black rectangular box redacting the signature of the Chair.

Chair

## G.2. Local Research and Development Office Approval



Direct dial: [Redacted]  
Email: [Redacted]

[Redacted]

Miss Sameen Malik



31<sup>st</sup> May 2017

Dear Sameen

**RE: CONFIRMATION OF CAPACITY: The role of personal resources in explaining wellbeing, engagement and performance among psychologists: a Job Demands-Resources approach**

Study Codes:				
Trust Reference:			IRAS (REC) Reference:	
EDGE ID:			Portfolio ID:	
Sponsor Reference:				
Study Sponsor:	University of Leicester			

Thank you for your application in respect of "confirmation of capacity" (formerly known as NHS Management Permission), to conduct screening & recruitment activity for the above study at [Redacted]. This study has now been validated and reviewed through the ORCA (Organisational Research Capacity Assessment) process and I can confirm that we have capacity to support this research on the condition that the Trust suffers no unforeseen costs as a result of this study being undertaken. Your research has been entered onto the Trust's Research Database.

All research studies taking place are now subject to monitoring in respect of NHS Permission timelines, recruitment to time and target and so on. As a result, some of this information is reproduced in the table below. The key monitoring target is a 70-day timeline from receipt of a Valid Research Application at site, which incorporates the 30-day timeline from "NHS Permission", within which the first patient or participant should be recruited. Please give due regard to this requirement and inform the R&D Office if this target is likely to be breached. This does not currently apply to non-portfolio but may be in future, so recorded for information.

CONFIRMATION OF CAPACITY STATUS			
Full Approval	<input checked="" type="checkbox"/>	Approval in Principle	<input type="checkbox"/>
		Approval refused	<input type="checkbox"/>
TIMELINES			
Date of Final HRA Approval <sup>1</sup>	16/05/2017	Target Date: First Patient/Participant Visit (FPFV) (B +30)	30 <sup>th</sup> June 2017
Date of Confirmation of Capacity: (B)	31/05/2017		
Date of Ethical Approval:	Not required (NHS Staff Only)		

The conduct of your study (including examination of the site file) at this site may be subject to audit for protocol adherence and other monitoring. This approval is subject to the accuracy of the following information:

Study Summary			
Chief Investigator (Supervisor):	Dr Noelle Robertson		
Principal Investigator (Local):	Miss Sameen Malik	CRN Delivery Co-ordinator	N/A
Other Investigators:	n/a		
Indemnity Provider:	University of Leicester	Start Date (Local)	30 <sup>th</sup> May 2017
NIHR Portfolio:	No	End Date (Local)	30 <sup>th</sup> October 2018
Student Project	Yes	Target Recruitment	275
Funding Source:	N/A	Amount:	N/A
Local NHS Support Costs:	N/A		
Local NHS Sites	None Specified (National Survey)		

Please note that all research with an NHS element is subject to the Research Governance Framework for Health and Social Care 2005. If you are unfamiliar with the standards contained in this document, or the [Redacted] policies that reinforce them, you can obtain advice from the R&D Office or your Sponsor. You must stay in touch with the R&D Office during the course of the research project, particularly if/ when:

- There is a change of Principal Investigator;
- To fulfil requirements for performance reporting;
- The project finishes (please complete a summary report form);
- Amendments are made, whether minor or substantial;
- Serious Adverse Events occur (adhere to local and Sponsor SOPs).

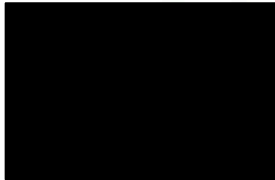
This is necessary to ensure that your indemnity cover is and remains valid. Should any issues arise that inhibit study delivery it is essential that you contact the R&D Office immediately. If patients or staff members are involved in an incident, you should also contact the Clinical Risk Manager and report as per Trust Policy.

Provision against NHS Costs: The Trust reserves the right to invoice the study team, in the unlikely event of any unexpected costs arising from this study, including, but not limited to:

- Staff Time attending interviews.
- Travel and administrative costs


I hope the project goes well, and if you need any help or assistance during its course, please do not hesitate to contact the Office.

Kind regards



Operational Lead (R&D)

Copies To:

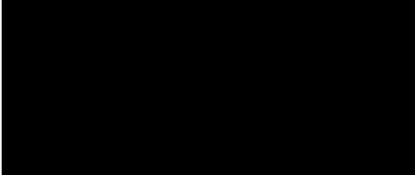
Sponsor:  (University of Leicester)

### G.3. Health Research Authority Approval



Health Research Authority

Miss Sameen Malik



16 May 2017

Dear Miss Malik

**Letter of HRA Approval**

**Study title:** The role of personal resources in explaining wellbeing, engagement and performance among psychologists: a Job Demands-Resources approach

**IRAS project ID:** [Redacted]

**Protocol number:** [Redacted]

**REC reference:** [Redacted]

**Sponsor** University of Leicester

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

**Participation of NHS Organisations in England**

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

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

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

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

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

## **Appendices**

The HRA Approval letter contains the following appendices:

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

## **After HRA Approval**

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

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

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

## **Scope**

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

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

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

## **User Feedback**

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

## **HRA Training**

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

Your IRAS project ID is [REDACTED] Please quote this on all correspondence.

Yours sincerely

[REDACTED]

Assessor

Email: [REDACTED]

Copy to:

[REDACTED]

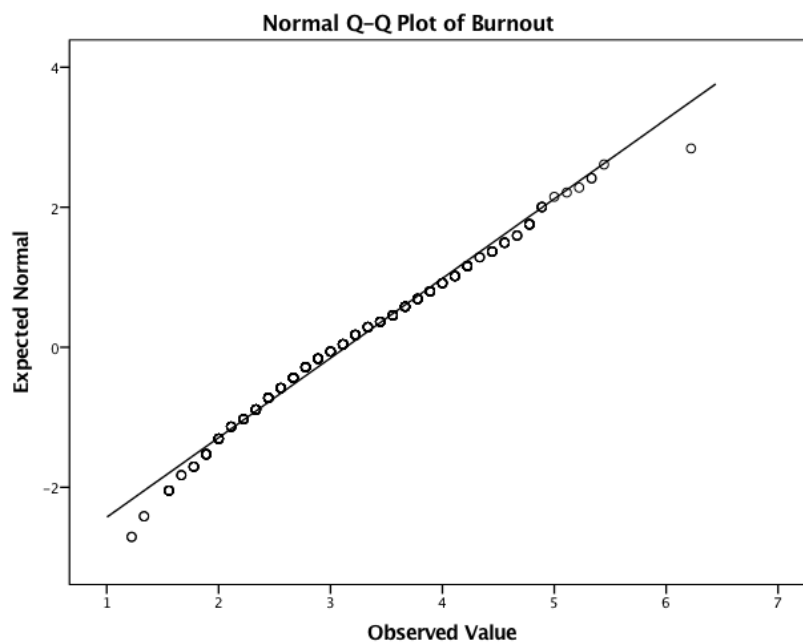
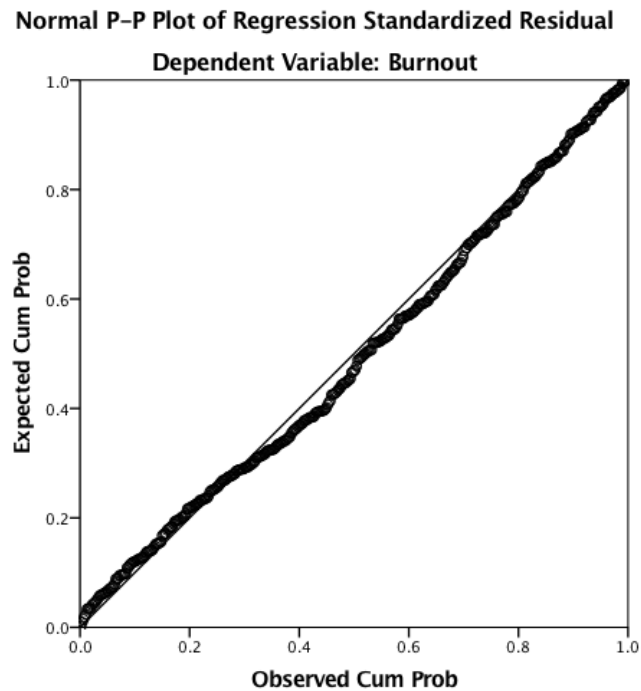
## H. SCALE RELIABILITES FOR MEASURES FROM THE LITERATURE

Model Facet	Scale	$\alpha^*$
<b>Job Demands</b>		
<i>Workload</i>	Six-item Work Demands scale (Haynes et al., 1999)	.89 - .91
<i>Psychological Demands</i>	Nine items adapted from the Therapist Stress Scale (Deutsch, 1984)	NR
<i>Work-Self Conflict</i>	Four items adapted from the Work-Self Facilitation scale (Demerouti, 2012)	.70
<b>Job Resources</b>		
<i>Autonomy</i>	Six-item Autonomy and Control scale (Haynes et al., 1999)	.83 - .89
<i>Colleague Support</i>	Four-item Peer Support scale (Haynes et al., 1999)	.90 - .92
<i>Work Feedback</i>	Four-item Feedback scale (Haynes et al., 1999)	.70 - .87
<b>Personal Resources</b>		
<i>Self-Efficacy</i>	Ten-item New Self-Efficacy Scale (Chen et al., 2001)	.86 - .90
<i>Proactive Behaviour</i>	Ten-item abbreviated Proactive Behaviour Scale (Seibert et al., 1999)	.86
<i>Reflective Behaviour</i>	Twelve-item Self-Reflection Scale (Grant et al., 2002)	.91
<b>Burnout</b>	Nine-item abbreviated Maslach Burnout Inventory (Iverson et al., 1998)	.69 - .87
<b>Work Engagement</b>	Nine-item Utrecht Work Engagement Scale (Schaufeli et al., 2006)	.85 - .92
<b>Performance</b>		
<i>In-Role</i>	Three-item scale adapted from the Task Performance factor of the Contextual Performance Scale (Goodman & Svyantek, 1999)	.93
<i>Extra-Role</i>	Three-item scale adapted from the Altruism factor of the Contextual Performance Scale (Goodman & Svyantek, 1999)	.86

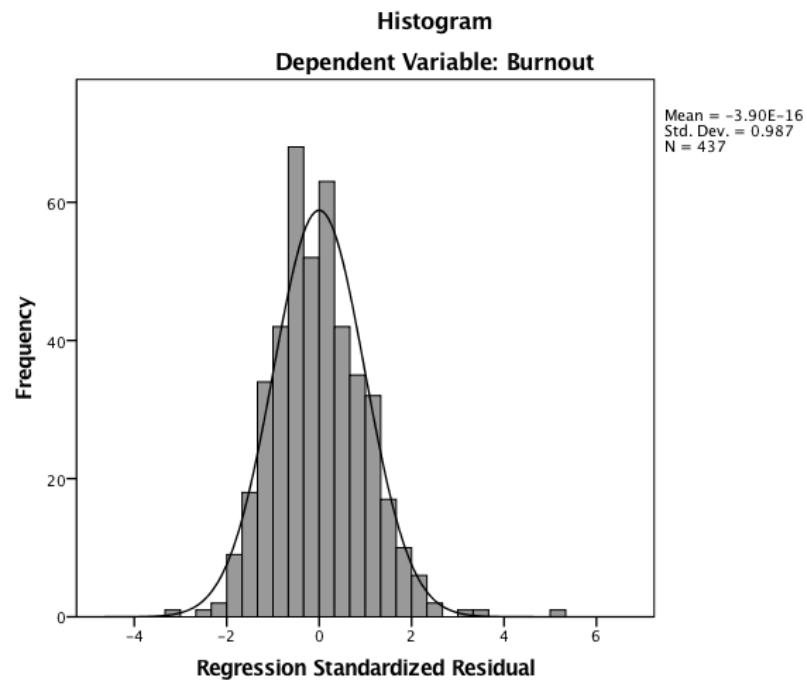
\* Cronbach's  $\alpha$  values are given where reported in previous research. NR= Not Reported.

## I. TESTING LINEAR REGRESSION ASSUMPTIONS

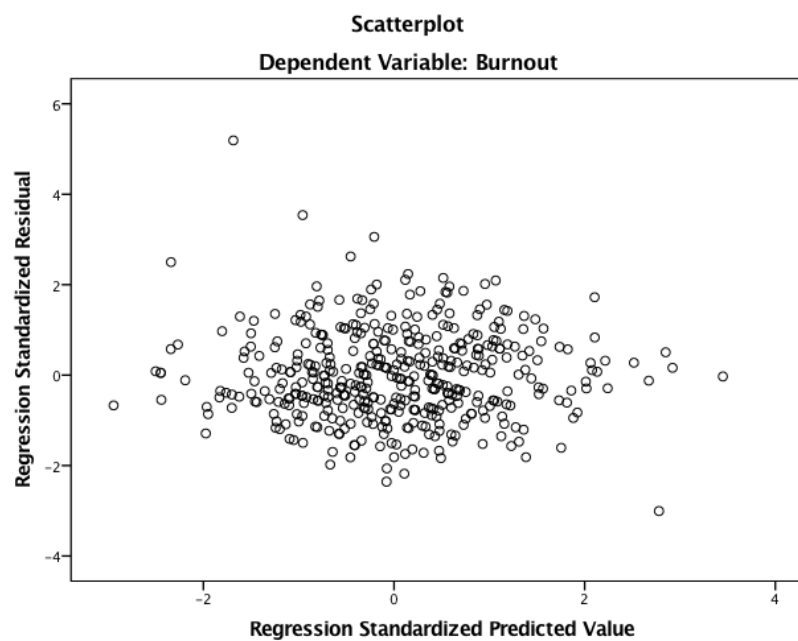
The following P-P plot, Q-Q plot and histogram for burnout are included as example to illustrate how the assumptions for linearity and normality were tested:







The following scatterplot for burnout is included as example to illustrate how the assumptions for homoscedasticity were tested:



## J. SCALE RELIABILITIES FOR MEASURES IN THE CURRENT STUDY

The following SPSS output for JD-WL is included as example to illustrate how the scale reliabilities were assessed. JD-WL demonstrates good scale reliability (Cronbach's alpha = .87), with all items contributing to reliability as demonstrated by good alpha scores even if items were deleted.

Reliability Statistics					
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items				N of Items
.869	.872				6

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
1.1 I do not have enough time to carry out my work	23.54	41.378	.738	.723	.837
1.2 I cannot meet all the conflicting demands made on my time at work	23.62	40.485	.756	.721	.833
1.3 I never finish work feeling I have completed everything I should have	23.40	40.531	.645	.463	.852
1.4 I am asked to do work without adequate resources to complete it	24.20	40.270	.694	.511	.843
1.5 I cannot follow best practice in the time available	24.14	41.188	.653	.476	.850
1.6 I am required to do basic tasks which prevent me completing more important ones	23.77	42.981	.544	.333	.869

For JD-WSC, Cronbach's alpha does not reach the .70 recommended cut off (Nunnally, 1978). Alpha does not improve by removing any items. Given the measure has fewer than ten items, the inter-item correlation score of .33 was accepted instead.

Reliability Statistics					
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items				N of Items
.642	.667				4

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
R3.1 You come home feeling cheerful after work, which positively affects the experience of your personal interests	13.18	9.326	.564	.389	.476
3.2 Your work schedule makes it difficult for you to fulfill your personal interests	13.80	9.535	.305	.118	.682
R3.3 The things you have learned at work help you to better fulfill your personal activities	13.57	10.699	.327	.148	.637
R3.4 You feel full of energy after work and can therefore enjoy your personal interests more	12.15	9.987	.565	.385	.493

Summary Item Statistics							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	.334	.118	.590	.472	5.008	.021	4

## K. STATISTICAL ANALYSES FOR HYPOTHESIS TESTING

The following SPSS outputs for the association between JD-WL and burnout ( $H_{1a}$ ), and the interaction between JD-WL and PR-SE ( $H_{1b}$ ) are included as example to illustrate how the statistical analyses were conducted.

Model Summary <sup>d</sup>										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change	Durbin-Watson
						F Change	df1	df2		
1	.446 <sup>a</sup>	.199	.184	.79800	.199	13.257	8	428	.000	
2	.545 <sup>b</sup>	.297	.280	.74940	.098	29.658	2	426	.000	
3	.545 <sup>c</sup>	.297	.279	.75014	.000	.157	1	425	.692	1.781

a. Predictors: (Constant), In-Role Performance, Years in current post, Ethnicity, Gender, AfC band, Hours worked, Age range, Years qualified

b. Predictors: (Constant), In-Role Performance, Years in current post, Ethnicity, Gender, AfC band, Hours worked, Age range, Years qualified, cJDWL, cPRSE

c. Predictors: (Constant), In-Role Performance, Years in current post, Ethnicity, Gender, AfC band, Hours worked, Age range, Years qualified, cJDWL, cPRSE, cJDWLxcPRSE

d. Dependent Variable: Burnout

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	67.538	8	8.442	13.257	.000 <sup>b</sup>
	Residual	272.552	428	.637		
	Total	340.090	436			
2	Regression	100.850	10	10.085	17.958	.000 <sup>c</sup>
	Residual	239.240	426	.562		
	Total	340.090	436			
3	Regression	100.938	11	9.176	16.307	.000 <sup>d</sup>
	Residual	239.152	425	.563		
	Total	340.090	436			

a. Dependent Variable: Burnout

b. Predictors: (Constant), In-Role Performance, Years in current post, Ethnicity, Gender, AfC band, Hours worked, Age range, Years qualified

c. Predictors: (Constant), In-Role Performance, Years in current post, Ethnicity, Gender, AfC band, Hours worked, Age range, Years qualified, cJDWL, cPRSE

d. Predictors: (Constant), In-Role Performance, Years in current post, Ethnicity, Gender, AfC band, Hours worked, Age range, Years qualified, cJDWL, cPRSE, cJDWLxcPRSE

Model	Coefficients <sup>a</sup>					95.0% Confidence Interval for B		Collinearity Statistics	
	Unstandardized Coefficients		Standardized Coefficients		Sig.	Lower Bound	Upper Bound	Tolerance	VIF
	B	Std. Error	Beta	t					
1	(Constant)	5.092	.563	9.044	.000	3.985	6.198		
	Gender	.129	.117	.050	1.106	.269	-.100	.359	.903
	Age range	-.033	.076	-.030	-.434	.665	-.183	.117	.381
	Years qualified	-3.812E-5	.010	.000	-.004	.997	-.020	.020	.305
	Years in current post	.027	.012	.147	2.250	.025	.003	.051	.440
	Hours worked	-.237	.089	-.131	-2.671	.008	-.412	-.063	.778
	Ethnicity	.048	.052	.040	.926	.355	-.054	.150	.985
	AfC band	-.032	.057	-.027	-.554	.580	-.145	.081	.810
	In-Role Performance	-.370	.037	-.436	-9.882	.000	-.444	-.296	.963
2	(Constant)	4.727	.550	8.589	.000	3.645	5.809		
	Gender	.090	.110	.035	.817	.415	-.126	.305	.900
	Age range	-.084	.072	-.077	-1.163	.246	-.225	.058	.378
	Years qualified	.002	.010	.013	.181	.856	-.017	.021	.303
	Years in current post	.017	.011	.092	1.490	.137	-.005	.039	.434
	Hours worked	-.170	.084	-.094	-2.021	.044	-.334	-.005	.770
	Ethnicity	.024	.049	.020	.493	.622	-.072	.120	.981
	AfC band	-.056	.055	-.047	-1.023	.307	-.163	.051	.792
	In-Role Performance	-.209	.045	-.246	-4.667	.000	-.297	-.121	.594
	cJDWL	.215	.031	.308	7.047	.000	.155	.275	.862
	cPRSE	-.175	.052	-.170	-3.354	.001	-.278	-.073	.641
3	(Constant)	4.720	.551	8.564	.000	3.637	5.804		
	Gender	.091	.110	.036	.830	.407	-.125	.307	.899
	Age range	-.086	.072	-.079	-1.189	.235	-.228	.056	.376
	Years qualified	.002	.010	.015	.202	.840	-.017	.021	.302
	Years in current post	.017	.011	.091	1.465	.144	-.006	.039	.433
	Hours worked	-.167	.084	-.092	-1.980	.048	-.332	-.001	.765
	Ethnicity	.024	.049	.020	.483	.629	-.073	.120	.980
	AfC band	-.056	.055	-.047	-1.019	.309	-.163	.052	.792
	In-Role Performance	-.208	.045	-.245	-4.638	.000	-.296	-.120	.593
	cJDWL	.218	.031	.312	6.969	.000	.156	.279	.825
	cPRSE	-.172	.053	-.167	-3.257	.001	-.276	-.068	.627
	cJDWLxcPRSE	-.014	.036	-.017	-.396	.692	-.084	.056	.912

a. Dependent Variable: Burnout

## L. STATISTICAL ANALYSES FOR CONTROL VARIABLES AT STEP 1

Step 1, regressing control variables on burnout

Step	Model <sup>a</sup>	<i>B</i>	$\beta$	<i>t</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>F</i>	$\Delta F$
1	Gender	.13	.05	1.11				
	Age	-.03	.03	-0.43				
	Y-Qual	-.00	.00	-0.00				
	Y-Post	.03	.15*	2.25				
	Hours	-.24	-.13**	-2.67				
	Ethnicity	.05	.04	0.93				
	Pay	-.03	-.03	-0.55				
	IRP	-.37	-.44**	-9.88	.20	.20	13.26**	13.26**

<sup>a</sup> Y-Qual = Years qualified; Y-Post = Years in current post; IRP = Extra-Role Performance

\*  $p < .05$ ; \*\*  $p < .01$

Step 1, regressing control variables on work engagement

Step	Model <sup>a</sup>	<i>B</i>	$\beta$	<i>t</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>F</i>	$\Delta F$
1	Gender	.03	.01	0.21				
	Age	-.11	-.09	-1.27				
	Y-Qual	.01	.09	1.07				
	Y-Post	-.02	-.09	-1.38				
	Hours	.05	.02	0.47				
	Ethnicity	-.05	-.04	-0.86				
	Pay	.05	.04	0.76				
	ERP	.28	.35**	7.60	.14	.14	8.66**	8.66**

<sup>a</sup> Y-Qual = Years qualified; Y-Post = Years in current post; IRP = Extra-Role Performance

\*\*  $p < .01$

## **M. \* CHRONOLOGY OF RESEARCH PROCESS**

Jan - May 2016	Exploration of research topic to generate ideas for systematic literature review and research project.
Jun 2016	Agreed research question with supervisor and sought feedback from Service User Reference Group.
Jul – Dec 2016	Prepared and submitted research proposal for peer review.
Jan 2017	Favourable opinion received from peer review. Continued to explore feasibility of a number of questions for systematic literature review.
Feb - May 2017	Applied for sponsorship, Health Research Authority (HRA) approval, and ethical approval. Ethical and HRA approvals granted.
Jun 2017	University sponsorship ‘greenlight’ given. Confirmation of capacity and capability granted from local Research and Development office.
Jul – Dec 2017	Began disseminating online questionnaire. Identified target journal and began writing research paper.
Dec 2017	Research question and meta-synthesis approach for systematic literature review agreed and began literature search.
Jan - Feb 2018	Identified target journal and completed meta-synthesis. Began writing literature review paper. Completed research data collection.
Mar - Apr 2018	Analysed data and continued to write both papers.
May 2018	Completed critical appraisal and submitted final draft of thesis for examination.
Jun – Jul 2018	Preparation and submission of journal article.
Aug 2018	Preparation of research poster.
Sept 2018	Preparation for research conference and dissemination of research findings to colleagues and participants.

## **N. \* STATEMENT OF EPISTEMOLOGICAL POSITION**

The author adopted a positivist position for the research project. In this epistemological stance, the constructs of job demands, job and personal resources, burnout and engagement were considered objective entities that could be measured quantitatively through validated tools. This informed the methodology, where questionnaires were utilised to collect numerical data. These were then statistically analysed to test hypotheses. Inferences were subsequently made about the generalisability of results to populations wider than the research sample. Given the assumption in positivism that the researcher is independent to the data, participants completed the questionnaires in their own time away from the author to minimise researcher-participant interactions.

The author has worked as a human resource professional in health and social care environments. In these roles, the author held a special interest in employee engagement and wellbeing as core to personal, professional and organisational development. This interest has continued throughout training on the DClinPsy course. Whilst on placement, the author has encountered burnout, vicarious trauma, secondary traumatic stress and compassion fatigue in clinicians. These are constructs that have widely been investigated from a positivist position. The context of these experiences informed the development of this research.

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