Burnout in UK General Practitioners in the COVID-19 aftermath: Are moral distress, self-compassion, psychological flexibility, and practice tenure predictors?

Rukhsaar Bux

Thesis submitted in partial fulfilment of the requirements of Staffordshire University for the degree of Doctorate in Clinical Psychology

April 2024

Total word count: 18,681

THESIS PORTFOLIO: CANDIDATE DECLARATION

Title of degree programme	**Professional Doctorate in Clinical Psychology**
Candidate name	**Rukhsaar Bux**
Registration number	**21026109**
Initial date of registration	**September 2021**

Declaration and signature of candidate
I confirm that the thesis submitted is the outcome of work that I have undertaken during my programme of study, and except where explicitly stated, it is all my own work. I confirm that the decision to submit this thesis is my own. I confirm that except where explicitly stated, the work has not been submitted for another academic award. I confirm that the work has been conducted ethically and that I have maintained the anonymity of research participants at all times within the thesis. Signed: R.Bux Date: 23/04/24

Acknowledgements

As I sit here in this bittersweet moment of proofreading my thesis, I want to thank those who got me to this point and have supported me on this surreal DClinPsy journey.

Thank you to my parents, Abdul and Kausar, for your encouragement, trust, and patience. These last 7 years have been difficult but have been incredibly worth it.

Thank you to my husband, Hamza, for your unwavering support and your unending kindness. I am incredibly grateful for all your love and encouragement.

Thank you to my supervisor, Helen, for supporting this project and teaching me so much. Our supervision conversations have carried me through the doctorate.

Thank you to Mike, my mentor and role model, for seeing my potential before I did and supporting me at such an early stage in my career.

Thank you to Lisa G, Lisa M, and Judith for nurturing me into the psychologist I became and inspiring me to take on this journey in the first place. Even now, I still find myself thinking, "*What would they do*?" when facing something new.

Finally, to all the GPs working tirelessly out there before, during, and since the pandemic - thank you.

Having conducted, written, and arranged the following three reports about burnout and moral distress in healthcare, a quote comes to mind that serves as a reminder that it does not need to be this way...

"You are not required to set yourself on fire to keep other people warm"

- Joan Crawford, 1942.

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Thesis Abstract

Paper one is a literature review that investigates how moral distress can impact the physical, mental, and social wellbeing of nursing professionals and medical doctors. Eleven studies were identified as relevant following a systematic literature search. The review found that higher moral distress was associated with higher anxiety, depression, post-traumatic stress disorder, burnout, higher levels of sickness, reduced engagement at work, and increased intent to leave their jobs. Methodological limitations have been highlighted and evaluated in this review. Clinical and research implications are discussed. The second paper discusses a cross-sectional quantitative study that explored the relationships between burnout in General Practitioners and interpersonal factors such as moral distress, self-compassion, psychological flexibility (including acceptance, avoidance, and harnessing behaviours), and time in practice. Eighty-seven General Practitioners were recruited for the study. Three multiple regression analyses were conducted. The findings suggested that higher levels of moral distress predicted higher levels of emotional exhaustion, and that lower levels of acceptance predicted a reduced sense of personal accomplishment in General Practitioners. The findings also indicated that high avoidance predicted all three domains of burnout, suggesting that avoidance is a key predictor of burnout in General Practitioners. The findings highlighted the importance of addressing moral distress, acceptance, and avoidance, in interventions aimed at preventing or reducing burnout in this population. Further research and clinical implications are discussed. The final report is an executive summary of the study carried out in this thesis. The summary received valuable feedback from two General Practitioners. It was written for General Practitioners as well as for anyone who may be interested in this study.

Paper 1: Literature Review

A Literature Review on the Impact of Moral Distress on the Wellbeing of Doctors and Nursing Professionals

Word count: 8000/8000 (Excluding title page, references, and appendices).

This literature review has been edited for publication in the journal "Journal of Social and Clinical Psychology". The referencing style of this paper is in APA 7th Edition, and in line with author guidelines (Appendix B). Before submitting to the journal, further modifications will be made to meet these guidelines.

Abstract

Introduction: Previous research has found that healthcare practitioners experience varying levels of moral distress. Moral distress is the outcome of repeated ethical conflicts, arising from work-related dilemmas that go against one's morals. Findings from existing research indicate moral distress can negatively impact a healthcare practitioner's physical, mental, and social wellbeing. This review aimed to evaluate the current literature base, exploring how moral distress can impact the physical, mental, and social wellbeing of nursing professionals and medical doctors.

Method: A systematic search was conducted using four electronic databases. Based on predetermined inclusion criteria, eleven studies were included - all using a cross-sectional questionnaire design.

Results: The review identified that higher moral distress was associated with higher anxiety, depression, post-traumatic stress disorder, burnout, higher levels of sickness, reduced engagement at work, and increased intent to leave their jobs.

Discussion: The studies varied in findings, with not all concluding that moral distress increases, for example, anxiety levels. The studies also varied in methodological quality and thus this variability needs to be considered when comparing and interpreting their results. As the research body grows, the effects of moral distress on the wellbeing of healthcare practitioners can be better understood and highlight the importance of prevention, intervention, and management of moral distress.

Introduction

In 2020, around 2.02 million healthcare practitioners were working within England and Wales (Office of National Statistics, 2021). Healthcare practitioners are clinicians qualified to provide medical care and treatment to clients; this includes doctors, nurses, mental health professionals, and numerous other specialists. Healthcare practitioners assess, diagnose, and treat people to support and maintain client health and prevent illness, injury, and other concerns by applying evidence-based medicine to client need (World Health Organisation, 2010).

This review considers doctors and nursing professionals because of their increased responsibility to make ethically appropriate medical decisions. In 2021, there were around 283,663 doctors (General Medicine Council, 2022), and in 2022 there were 758,303 nurses, midwives, and nursing associates on the Nursing and Midwifery Council register (2022).

There are strong distinctions between roles and responsibilities in different healthcare practitioners, as determined by legislations and regulations (The Kings Fund, 2023), that separate doctors and nursing professionals from others. This includes the level of medical and 'medical-moral' decision-making - decisions about medical treatments/practices, while considering the wellbeing and rights of the client and broader ethical dilemmas (Pollard, 2015) such as managing the expectations of the client's family. Additionally, doctors and nursing professionals have increased prescribing powers, and adhering to their organisation's needs and resources such as funding and medical guidelines. Thus, this literature review will consider doctors and nursing professionals due to the unique challenges they face in navigating increased medical-moral decision-making and other moral dilemmas. This is not to devalue other practitioners, but to examine further into specific healthcare contexts where moral distress has been previously more noticed (British Medical Association, 2021; Giannetta et al., 2021).

The high pressures experienced by healthcare practitioners has often been associated with increased anxiety and depression (Melchoir et al., 2007), burnout (Mijakoski et al., 2015), physical health issues (Van der Doef., 1998), and job retention difficulties

(Djazilan & Darmawan, 2020). These roles include restrictions around ethical/moral decision-making in the supposed “do no harm” profession, where professionals are sometimes asked to go against their own morals to suit the needs of the organisation or family members of the client, rather than the client themselves - like continuing life support when it is not in the best interest of the client due to pressures by the client’s family (Mooney, 2021).

Due to the repetitive nature of moral decision-making responsibilities, healthcare practitioners like doctors or nursing professionals can experience elevated levels of moral distress (Epstein & Hamric, 2009). In an already highly demanding field, healthcare practitioners have been facing increased role demands, responsibilities, and morally distressing situations following the rise of COVID-19 (British Medical Association, 2021). Therefore, it seems pertinent to review the literature on how moral distress can impact the wellbeing of healthcare practitioners to provide insight to employers and stakeholders with the aim of reducing morally distressing situations in the workplace.

Moral Distress

Moral distress (Jameton, 1984) is repetitive distress caused by a dissonance from one’s own ethics/morals due to workplace/organisational restrictions which make it impossible to “do what is right”. This, over time, can lead to the build-up of guilt, shame, self-criticism, hopelessness, resentment, or anger about one’s own actions; which can increase burnout, depression, anxiety, fatigue, and sickness (Campbell et al., 2018; Crowell, 2022). Morally distressing situations include, for example, inadequate pain relief given to clients due to issues with a lack of resources, funding, being understaffed or inadequately trained. Another example that has been more recently widely discussed, was the allocation of medical resources during the pandemic due to the moral challenge professionals faced when prioritising client need against fairness in resource distribution while working to save as many lives as possible (Reidel et al., 2022).

Moral distress is differentiated from other work-fatigue phenomena like burnout or compassion fatigue. Epstein and Hamric (2009) separate it from other constructs by

linking it to a perceived violation of one's professional responsibility and integrity, and from the feeling of being limited from making ethically appropriate decisions. This goes beyond work-related fatigue like in burnout, or secondary traumatic stress like in compassion fatigue. Moral distress includes some of this – but it also involves appraising ethics and how this may affect an individual when one's workplace repeatedly compromises their ethics.

Repeated exposure to moral distress leads to a "crescendo effect" - a gradual build-up of the feelings that linger after a morally challenging situation has passed ("moral residue"); whenever a morally distressing situation occurs, the level of moral residue rises too (Epstein & Hamric, 2009). This crescendo effect eventually leads to an overwhelming loss of "moral identity" – a weakening of one's beliefs of how ethical they are themselves, due to repeatedly engaging in behaviours they perceive as unethical; this build-up of moral distress can affect them in many severe ways (Epstein & Hamric, 2009) as detailed below.

When moral distress remains unaddressed, it can result in, for example, physical health concerns like high blood pressure, brain fog, and headaches (Huffman & Rittenmeyer, 2012; Shoorideh et al., 2012; Lerkiatbundit et al., 2009), or mental health concerns like anxiety (Petrisor et al., 2021), depression (Lamiani et al., 2018), burnout (Karakachian et al., 2019), or nightmares (Lerkiatbundit et al., 2009). These outcomes of moral distress are important as they negatively affect employee quality of life, productivity at work, absenteeism, job retention, and workplace safety (Lamiani et al., 2017). This can be damaging to the healthcare practitioners themselves, their clients, and their organisation (Hamric et al., 2012).

Wellbeing

The World Health Organisation (WHO; 1948) conceptualise *wellbeing* with a holistic perspective encompassing the physical, mental, and social aspects of human functioning. These three sub-constructs are defined as:

- ***Physical wellbeing*** – this is an optimum state of physical functioning which allows people to live active and fulfilling lives. When this is negatively affected,

one may experience physical symptoms or illness like hypertension, sweating, colds/flus, diabetes, heart disease, for example (WHO, 2012).

- ***Mental wellbeing*** – this is the absence of mental health concerns and distress caused by external factors such as trauma, allowing people to manage life's challenges effectively. When mental wellbeing is negatively affected, one may experience low mood, anxiety, nightmares, and panic, for example (Devi, 2021). Please note that the term "mental wellbeing" will be used throughout this review as this is the language used by the WHO as referenced earlier.
- ***Social wellbeing*** – this is one's ability to engage with and contribute to social relationships and experience a sense of belonging within their family/friends, workplace, and other groups. When this is impacted, one may experience loneliness and isolation, for example (Reed & Bohr, 2021). In the workplace, this may also negatively affect one's job satisfaction due to not feeling like they belong, intention to leave their job, and lowered confidence in performing their tasks (WHO, 2022).

When one's wellbeing is compromised, it impacts on many levels. This includes intrapersonal effects such as negative self-esteem and self-worth (Marroquín et al., 2017) and interpersonal effects such as social withdrawal, decreased quality of communication with others, reduced effort or care towards others (Marroquín et al., 2017). On a wider systemic level, a worsened reputation for the organisation they work for may occur due to unhappy clients, employee absenteeism and how this affects occupational health costs, and increased staff turnover (Cotton & Hart, 2003). This shows the extent that reduced wellbeing can beyond the healthcare practitioners themselves and can affect wider systems.

Rationale and aims for this review

Moral distress is a critical issue among healthcare practitioners, particularly in doctors and nursing professionals. This issue has grown in research in recent years, with a few literature reviews being conducted on contributing factors to moral distress (for example, Huffman & Rittenmeyer, 2012). This review, instead, considers the aspects of decreased wellbeing that moral distress itself may contribute to – such as anxiety, sickness, or burnout.

Healthcare has changed dramatically in recent years; this introduced new challenges, complexities, and moral dilemmas. Namely, the COVID-19 pandemic brought a considerable burden on healthcare practitioners – they were frequently asked to make difficult decisions about client care, resource allocation, and personal safety (Britt et al., 2021). These changes increased the moral distress already experienced by these professionals (Spilg et al., 2022). These ways of working have continued since COVID-19 (López-Cabarcos et al., 2020), making it a concern that is worth examination.

Most of these reviews have only considered studies with samples of nursing professionals (Lamiani et al., 2017). There is an increasing need to consider reviewing moral distress in doctors as research shows that they are also highly susceptible to developing moral distress, due to the level of responsibility they have around making ethical decisions for clients, while benefiting their employing organisation (Forde & Aasland, 2008). Extending this review, therefore, to include doctors *and* nursing professionals is essential to comprehensively understand the impact of moral distress on these two high-risk populations.

Previous studies have considered moral distress using qualitative research to explore personal narratives of professionals. However, there was a noticeable lack of *quantitative* research to quantify the impact of moral distress on wellbeing. This review aims to address this gap in reviews, to quantitatively examine the impact of moral distress on the mental, physical, and social wellbeing of doctors and nursing professionals.

This review may be useful for employers and stakeholders in the healthcare system, when considering ethical work demands placed on these professionals, in becoming aware of the effects of long-term moral distress.

Method

Search Strategy

An prior literature search was conducted on Google Scholar on 27th May 2023 to explore if there were any existing literature reviews that were like this one. Once it was established that the impact of moral distress on the wellbeing of doctors and nursing professionals had not been reviewed before, a more systematic search was conducted on 29th May 2023 on ***EBSCO*** (including ***MEDLINE, CINAHL Plus, APA PsycINFO, APA PsycArticles), Google Scholar, PubMed***, and ***Web of Science***. Filters were used such as articles written in the English Language and with full text available.

A comprehensive search was conducted across these databases, using multiple search terms listed below, leading to the collection of several relevant articles that addressed the research question. The articles that were eligible for this literature review were hand-searched – using their reference lists, other publications by the authors, and the article's citations on Google Scholar for further eligible papers. No further papers were found through hand-searching. Publication bias was also considered and will be discussed later.

The searches began on 28th May 2023 therefore any potential studies published after this date were not included within the review. The following search terms were used when searching for articles from the above databases: *("MORAL DISTRESS") AND ("medical physicians" OR "medical doctors" OR "healthcare professionals" OR "medical professionals" OR "healthcare doctors" OR "healthcare nurses" OR "medical nurses" OR "nursing professionals" OR "nurses") AND ("mental wellbeing" OR "emotional wellbeing" OR "psychological wellbeing" OR "mental health" OR "physical health" OR "life satisfaction" OR "anxiety" OR "depression") AND ("questionnaire" OR "survey" OR "scale" OR "measure")*.

The first 300 papers from Google Scholar were screened as recommended by Haddaway et al. (2015) to reduce the amount of grey literature in the results of the main searches due to potential issues of reliability. All papers were screened for relevance.

Selection Criteria

Inclusion Criteria

- Papers where the focus is on measuring the ***impact of*** moral distress on wellbeing.
- Papers using psychometric measures of moral distress and measuring wellbeing, for example, physical health, mood, intention to leave their job.
- Participants are doctors or/and nursing professionals with direct care of clients like taking medical histories, conducting physical assessments, administering treatments, performing surgery, and bedside care (Salvage & Smith, 2000).
- Papers published in English or already translated to English due to a lack of translation capacity.
- If studies consider other relevant variables like predictors of moral distress, or other groups of healthcare practitioners, only findings relevant to the inclusion criteria will be reviewed.

Exclusion Criteria

- Literature reviews, intervention studies, studies validating or developing new psychometric measures.
- Commentary, editorial, or opinion pieces.
- Research on other healthcare practitioners like dental practitioners, pharmaceutical professionals, paramedical professionals, dieticians, nutritionists, physiotherapists, psychologists, and occupational therapists.

Selection Process

The search process is shown in *Figure 1* below. The initial search resulted in 153 articles with some relevance to this review, with 112 remaining after removing duplicates both manually and through RefWorks. The initial screening of relevance of

titles and abstracts left 22 papers. The full texts of these remaining papers were reviewed against the inclusion criteria above. Eleven relevant articles remained.

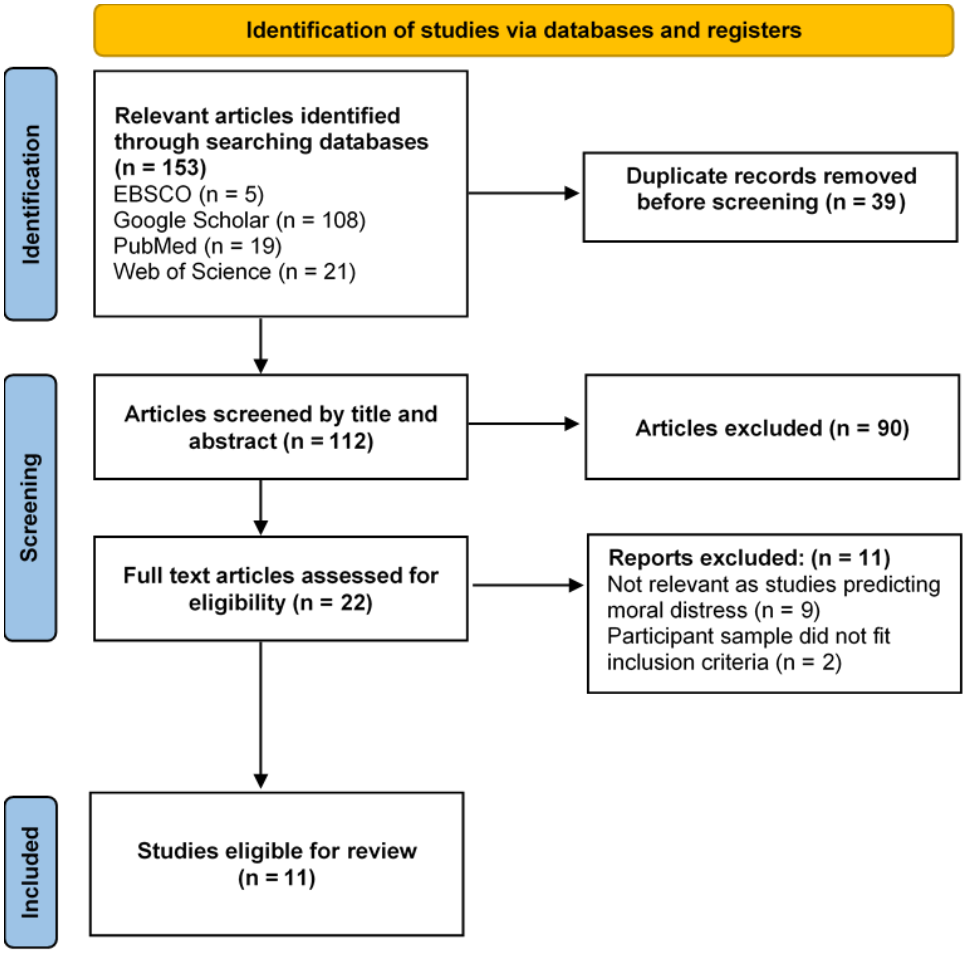

Figure 1: Flow chart of the selection process.

Publication Bias

To check for publication bias, grey literature was searched using Google Scholar and the EThOS British Library database. Four theses were found; however, these texts were not included in the review as they were relating to other healthcare roles (n=2), using qualitative data only (n=1), or were a meta-analysis (n=1).

Critical Appraisal

The studies were appraised using the Appraisal Tool for Cross-Sectional Studies (AXIS; Downes et al., 2016) as all the studies were cross-sectional and observational. This checklist assesses the quality of the study which comprises of 20 questions rated

on a binary rating scale (0="No" and 1="Yes"). These are totalled for a final score of up to 20. Questions 13 and 19 are reverse scored. Appendix A shows the appraisal tool questions and scores for each paper. The final score was used to calculate a score percentage to compare the quality of the studies. There were no cut off scores suggested in the original paper for the AXIS checklist.

Results

Overview of the Studies

Some studies were conducted during the COVID-19 pandemic as moral distress had increased during that time (Spilg et al., 2022) making moral distress more noticeable; however, COVID-19 was not the focus of these studies.

Clark et al. (2021) investigated how moral distress impacted levels of resilience and work engagement in 173 emergency department nurses in the US. Colville et al. (2019) explored the relationship between moral distress and depression in 171 UK-based intensive care nurses and doctors. Guttormson et al. (2022) explored relationships between moral distress, COVID-19, burnout, anxiety, and depression in 488 US-based intensive care nurses. Malliarou et al. (2021) explored the effects of moral distress on professional quality of life including compassion satisfaction, burnout, and secondary traumatic stress in 258 intensive care nurses in Greece during COVID-19. Marturano et al. (2020) investigated frequency and levels of moral distress in 93 inpatient oncology nurses in the US and associations to intent to leave their job, absences, and work assignments. Molazem et al. (2023) investigated intensity of moral distress and its relationships with work life (social wellbeing in the workplace) in 180 inpatient oncology nurses in Iran. Nemati et al. (2021) explored the relationship between moral distress and emotional distress related to medical settings in 296 nurses working on COVID-19 wards in Iran. Petrișor et al. (2021) explored associations between moral distress and anxiety, depression, and intention to leave their job in 79 intensive care nurses in Switzerland during COVID-19. Siswoyo et al. (2021) explored associations between moral distress with burnout in 47 nurses in an intensive care in a hospital in Indonesia. Sommerlatte et al. (2023) investigated relationships between moral distress and anxiety, depression, burnout, pandemic

stress, and somatic symptoms in 121 oncologists and 125 oncology nurses in Germany during the COVID-19 pandemic. Trautmann et al. (2015) investigated the associations between moral distress, intent to leave their job, and levels of autonomy in their work in 246 nurse practitioners in emergency departments across the US.

The studies ranged from 65% to 75% in terms of quality. Eight papers scored 70% or above (Appendix A). Below is a table discussing and summarising the main characteristics of the eleven studies in this review.

Table 1

Author, Year, Location	Design/ Methodology	Sample used	Measures used	Key findings	AXIS Score and Percentage
Clark et al. (2021) United States	Cross-sectional study	173 Emergency Department Nurses	**Moral Distress:** Measure of Moral Distress for Healthcare Professionals (Epstein et al., 2019) **Resilience:** Connor-Davidson Resilience Scale (Connor & Davidson, 2003) **Positive work-related state of mind:** Utrecht Workplace Engagement Scale (Schaufeli & Bakker, 2004) **Job satisfaction:** Own question **Length of time looking for another position:** Own question	The lower the moral distress, and the higher their resilience, the better their work engagement. The higher the moral distress, the lower the job satisfaction.	13/20 (65%)
Colville et al. (2019) United Kingdom	Cross-sectional survey	171 Intensive Care Doctors and Nurses	**Moral Distress:** Moral Distress Scale-Revised (Hamric et al., 2012) **Anxiety and Depression:** The Patient Health Questionnaire for Anxiety and Depression (Kroenke et al., 2009)	Higher moral distress increases risk for developing depression and intention to leave their job.	15/20 (75%)
Guttormson et al. (2022) United States	Descriptive cross-sectional study	488 Intensive Care Nurses	**Moral Distress:** Measure of Moral Distress for Healthcare Professionals (Epstein et al., 2019) **Burnout:** Burnout scale from Professional Quality of Life Scale-5 (Stamm, 2009) **Post-Traumatic Stress Disorder symptoms**: Trauma Screening Questionnaire (Brewin et al., 2002) **Anxiety and Depression:** The Patient Health Questionnaire- Anxiety and Depression Scale (Kroenke et al., 2016)	Moderate-high levels of moral distress, linked to moderate-severe levels of anxiety and depression.	15/20 (75%)
Malliarou et al. (2021) Greece	Cross-sectional study	258 Intensive Care Nurses for COVID-19	**Moral Distress:** Measure of Moral Distress for Healthcare Professionals (Epstein et al., 2019) **Secondary Traumatic Stress, Burnout, Compassion Satisfaction:** Professional Quality of Life Scale-5 (Stamm, 2009)	The higher the moral distress, the higher the secondary traumatic distress and overall distress.	14/20 (70%)
Marturano et al. (2020) United States	Descriptive correlational study	93 Inpatient Oncology Nurses	**Moral Distress:** Moral Distress Scale-Revised (Hamric et al., 2012) Own questions regarding intent to leave, calling out sick, requesting a change in assignment, and changes in care provided, (Marturano et al., 2020).	Higher moral distress levels were linked to higher likelihood of changing client allocation, and changes to the care provided.	15/20 (75%)

Molazem et al. (2023) Iran	Descriptive correlational study	180 Oncology Ward Nurses	**Moral Distress:** Moral Distress Questionnaire (Corley, 2001) **Nurse's work-life quality:** Quality of Nurses work life scale (Brooks, 2001)	The higher the moral distress, the lower the work-life quality.	15/20 (75%)
Nemati et al. (2021) Iran	Cross-sectional survey	296 Nurses working during COVID-19	**Moral Distress:** Moral Distress Scale (Jameton, 1993) **Emotional Distress in medical settings:** Goldberg General Health Questionnaire (Goldberg & Hillier, 1979)	Moral distress levels were low. However, the higher the moral distress, the increased chances of mental health concerns.	15/20 (75%)
Petrisor et al. (2021) Switzerland	Cross-sectional study	79 Intensive Care Nurses	**Moral Distress:** Measure of Moral Distress for Healthcare Professionals (Epstein et al., 2019) **Anxiety and Depression:** The Patient Health Questionnaire for Anxiety and Depression (Kroenke et al., 2009)	Higher moral distress levels predict higher levels of anxiety, depression, and intention to leave their job.	14/20 (70%)
Siswoyo et al. (2021) Indonesia	Descriptive Cross-sectional survey	47 Intensive Care Nurses	**Moral Distress:** Measure of Moral Distress for Healthcare Professionals (Epstein et al., 2019) **Burnout**: Maslach Burnout Inventory (Maslach & Jackson, 1997)	The higher the moral distress, the higher the burnout would be.	13/20 (65%)
Sommerlatte et al. (2023) Germany	Cross-sectional survey	121 Oncologists and 125 Oncology Nurses	**Moral Distress:** Moral Distress Thermometer (Wocial & Weaver, 2013) **Depression**: Patient Health Questionnaire-9 (Kroenke & Spitzer, 2002) **Anxiety**: General Anxiety Disorder-7 (Spitzer et al., 2006) **Somatisation**: Patient Health-Questionnaire-15 (Kroenke et al., 2002) **Burnout**: Maslach Burnout Inventory (Maslach & Jackson, 1997) **Pandemic Stress**: The Stress Barometer (Eckhard et al., 2021)	Higher levels of moral distress predicted higher levels of depression, anxiety, somatic symptoms, burnout symptoms, and mental burden.	13/20 (65%)
Trautmann et al. (2015) United States	Cross-sectional correlational study	246 Emergency Department Nurse Practitioners	**Moral Distress and Intent to Leave:** Moral Distress Scale–Revised (Hamric et al., 2012) **Level of Practice independence behaviour:** Dempster Practice Behaviour Scale (Dempster, 1990).	Higher moral distress linked to stronger intention to leave their job.	14/20 (70%)

Table 1 presents a summary of characteristics of the studies discussed in this review.

Methodology

All eleven studies used a quantitative cross-sectional survey design as appropriate for their aims. All studies received ethical approval from their relevant governing research bodies and obtained informed consent from their participants. All studies were transparent regarding conflicts of interest and funding, allowing the reader to make their own judgment regarding the validity of their findings and interpretations.

Eight studies provided detail about data collection methods allowing for greater replicability of study and demonstrating greater transparency in their research process (Molazem et al., 2023; Marturano et al., 2020; Malliarou et al., 2021; Guttormson et al., 2022; Colville et al., 2019; Clark et al., 2021; Sommerlatte et al., 2023; Trautmann et al., 2015). There is reduced transparency in methodology and reduced replicability of findings in the remaining three studies as they do not share detailed information about their data collection methodology (Nemati et al., 2021; Petrisor et al., 2021; Swisyoso et al., 2021). This may reduce the overall quality of these studies.

All studies adequately described basic and inferential data making it easier for the reader to understand. All studies also provided significance values and only three studies provided confidence intervals (Sommerlatte et al., 2023; Marturano et al., 2020; and Clark et al., 2021). This is a strength of these three studies as confidence intervals suggest the likeliness that a statistical result is accurate (typically aimed to be 95%) and allow the reader to make conclusions about the clinical relevance of the results. Eight studies (Molazem et al., 2023; Marturano et al., 2020; Malliarou et al., 2021; Clark et al., 2021; Sommerlatte et al., 2023; Nemati et al., 2021; Petrisor et al., 2021; Swisyoso et al., 2021) have included effect sizes in their final reports which enhances the comparability and interpretability of their findings. Three studies (Guttormson et al., 2022; Colville et al., 2019; Trautmann et al., 2015) did not include effect sizes, limiting the overall quality of this research. Effect sizes are essential when conducting a power analysis to determine the sample size needed in a study to detect a meaningful effect. By not including effect sizes, these three studies have limited the transparency of the research, while also limiting comparisons of results across different studies and limiting how readers interpret the meaningfulness of the results found.

Many different statistical analyses were used across the studies reviewed and each study used multiple methods of analyses as appropriate to their aims and distribution of data. Regressions were used in seven studies (Marturano et al., 2020; Clark et al., 2021; Colville et al., 2019; Nemati et al., 2021; Petrișor et al., 2021; Sommerlatte et al., 2023; Trautmann et al., 2015). Five studies used a correlation analysis (Clark et al., 2021; Colville et al., 2019; Petrișor et al., 2021; Trautmann et al., 2015; and Siswoyo et al., 2021). Depending on the data collected, studies used other parametric tests (Molazem et al., 2023; Malliarou et al., 2021; Clark et al., 2021; Marturano et al., 2020) or non-parametric tests (Malliarou et al., 2021; Trautmann et al., 2015; Guttormson et al., 2022; Colville et al., 2019; Petrișor et al., 2021) to test other hypotheses.

Participants and Recruitment

The studies recruited nurses, doctors, or both from different healthcare departments like intensive care, oncology, emergency departments, and COVID-19 wards. All eleven studies comprised participants working in more intensive/critical departments.

Only four studies discussed response rates or gave sufficient data to calculate response rates (Clark et al., 2021; Trautmann et al., 2015; Marturano et al., 2020; Sommerlatte et al., 2023). Of these, response rates varied from 12% to 47%. This is low considering that response rates ranging from 50-60% are recommended as appropriate when attempting to minimise non-responder bias – a bias that occurs when those who choose not to participate have different characteristics to those who do participate, which may skew the results due to only collecting data from participants with a small range of differences (Fincham, 2008). Because these studies have low response rates, and there may be a chance of non-responder bias, they should be interpreted with caution. However, such low response rates are not uncommon in research, therefore, this may be considered in the appraisal of these studies too. The studies that did not provide information on response rates should also be interpreted with caution as this raises queries about non-responder bias and transparency. Only Trautmann et al. (2015) discussed the number of participants who dropped out of their

study, which contributes to their level of transparency and increases their study quality; no other study discussed attrition rates.

Sample sizes ranged from 47 to 488. Only three studies (Trautmann et al., 2015; Marturano et al., 2020; and Clark et al., 2021) justified their sample size through a power calculation. Power calculations are important to ascertain the required number of participants needed to detect a meaningful effect in the data. Of these, Clark et al. (2021) was underpowered suggesting that they did not have enough participants to detect a meaningful effect; however, to help with interpretation of their findings, they have included effect sizes in their paper. Equally, Trautmann et al. (2015) was overpowered, suggesting that the sample was larger than needed to detect a meaningful effect, and may increase the risk of detecting statistically significant results when this may not be true, reducing the applicability of the results. It is noted that not all studies discussed a power calculation which is concerning as it is raises question about the transparency, validity, and reliability of these studies, and their overall scientific rigor.

Siswoyo et al. (2021) was the only study that used a total sampling method where they collected data from everyone in their target population to get a representative sample, allowing for greater generalisability of findings– they collected data from all 47 ICU nurses from one hospital. This was their target population that they wanted to generalise their findings to. This, however, was still a small sample from only one hospital which reduces wider generalisability to other nurses in other hospitals.

The other studies (Molazem et al., 2023; Marturano et al., 2020; Malliarou et al., 2021; Clark et al., 2021; Sommerlatte et al., 2023; Nemati et al., 2021; Petrisor et al., 2021; Guttormson et al., 2022; Colville et al., 2019; Trautmann et al., 2015) used convenience sampling, using lists from relevant nursing registers or medical groups. This may lead to collecting samples that are not representative of the population as the individuals aware of and available for this study might differ from the wider target population (Stratton, 2021). This affects the data that is collected as the sample used may not be representative and may mean the results are less reliable. Convenience sampling, however, is commonly used and is commended due to its cost-effective

method of collecting readily available participants willing to participate in research (Stratton, 2021). By using this method, the researchers widened the possibility of other researchers replicating their work as this method is both feasible and convenient (Stratton, 2021).

Measures

All reviewed studies, except for Marturano et al. (2020) and Clark et al. (2021), used standardised measures in their surveys. This is a strength as it increases the validity of the studies and supports reliable data collection too.

Moral Distress Measures

Nemati et al. (2021) used the Moral Distress Scale (Jameton, 1993). Three studies (Colville et al., 2019; Marturano et al., 2020; and Trautmann et al., 2015) used the Moral Distress Scale-Revised (Hamric et al., 2012). Five studies (Clark et al., 2021; Guttormson et al., 2022; Malliarou et al., 2021; Petrișor et al., 2021; and Siswoyo et al., 202) used the Measure of Moral Distress for Healthcare Professionals (Epstein et al., 2019). Finally, Molazem et al. (2023) used the Moral Distress Questionnaire (Corley, 2001) and Sommerlatte et al. (2023) used the Moral Distress Thermometer (Wocial & Weaver, 2013).

Wellbeing Measures

Many different wellbeing variables were measured across the studies, showing how broad the impact of moral distress can be. However, the wellbeing measures in these studies were created to assess the wellbeing of the general population rather than being tailored to the unique context of healthcare practitioners and the connections between their work and wellbeing. This slight misalignment between the constructs that these measures were originally intended to measure for the general population, and the specific context of the healthcare practitioner's role, may introduce variance (from the general population) that influenced the outcomes from these studies.

Mental Wellbeing

Anxiety was measured with The Patient Health Questionnaire for Anxiety and Depression (Kroenke et al., 2009) and General Anxiety Disorder-7 (Spitzer et al.,

2006). Similarly, depression was measured using The Patient Health Questionnaire for Anxiety and Depression (Kroenke et al., 2009), and Patient Health Questionnaire-9 (Kroenke & Spitzer., 2002). Post-Traumatic stress was measured using the Trauma Screening Questionnaire (Brewin et al., 2002). Resilience was measured using the Connor-Davidson Resilience Scale (Connor & Davidson, 2003). Emotional Distress in Medical Settings was measured using the Goldberg General Health Questionnaire (Goldberg & Hillier, 1979). Pandemic-related stress was measured using the Stress Barometer (Eckhard et al., 2021). All measures for mental wellbeing were standardised, which is a strength for their respective studies as this increases their replicability.

Social/Work Wellbeing

Burnout was measured in four studies too, using validated measures: Professional Quality of Life Scale-5 (Stamm, 2009) and Maslach Burnout Inventory (Maslach & Jackson, 1997). Secondary traumatic stress due to work was measured using the Professional Quality of Life Scale-5 (Stamm, 2009) too. Work engagement was measured using the Utrecht Workplace Engagement Scale (Schaufeli & Bakker, 2004) and the Quality of Nurses work-life scale (Brook, 2001). Compassion satisfaction was also measured using the Professional Quality of Life Scale-5 (Stamm, 2009). The level autonomy in the workplace was measured using the Dempster Practice Behaviour Scale (Dempster, 1990). Most measures for social wellbeing at work were standardised too, which is a strength for their respective studies as this increases their replicability too.

Intent to leave one's job was also measured using a standardised questionnaire item from the Moral Distress Scale-Revised (Hamric et al., 2012) and using the researcher's own question in another study (Marturano et al., 2020).

Job satisfaction was measured using the researcher's own single-item question (Clark et al., 2021). Similarly, length of time looking for another position was measured in one study using the researcher's own question (Clark et al., 2021) - these factors related to the focus of this review as they considered job satisfaction which plays an important role in a person's social wellbeing (Shoorvazi et al., 2016). Study results

using these questions generated by the researcher (Marturano et al., 2020; Clark et al., 2021) should be interpreted with care as these measures are not standardised. Although unstandardised questions provide valuable insights, they have drawbacks too. This includes the risk of biased wording in questions, a lack of validity and reliability in these questions, and difficulty replicating the study due to the uncertainty and lack of standardisation of the words used to ask these questions.

Physical wellbeing

Calling in sick was measured in one study using their own question which has not been validated or standardised (Marturano et al., 2020) - this is relevant to the review as it considers how often someone claimed to be unwell due to the moral distress they were experiencing. Using an unvalidated and unstandardised question has its issues which were discussed above. Somatisation was measured using the Patient Health-Questionnaire-15 (Spitzer et al., 2002) which is standardised, and therefore replicable, shows how moral distress could affect physical symptoms in the body like sweating more or heart racing.

Findings

Mental wellbeing

A relationship was found between higher rates of anxiety and higher levels of moral distress in two studies (Petrișor et al., 2021; Sommerlatte et al., 2023). Colville et al. (2019), however, found that moral distress did not increase levels of anxiety. Although Guttormson et al. (2022) also looked at anxiety and moral distress, they did not study the impact of moral distress on anxiety levels. Instead, Guttormson et al. (2022) measured these factors independently of each other to provide a measure for each factor; therefore, these results are not as helpful here. Therefore, there is some support for a relationship between moral distress and anxiety, but there is still some uncertainty based on the four studies reviewed.

Two studies concluded that as moral distress levels increased, levels of depression also increased (Petrișor et al., 2021; Sommerlatte et al., 2023), and that moral distress scores predicted levels of anxiety and depression (Petrișor et al., 2021). Similarly, Nemati et al. (2021) concluded higher levels of moral distress predicted severe

symptoms of depression. The findings by Guttormson et al. (2022) suggested that higher levels of moral distress increased the risk of developing PTSD. Malliarou et al. (2021) found that higher levels of moral distress predicted higher levels of developing traumatic distress. Therefore, there is support for a relationship between moral distress and depression, and between moral distress and trauma.

Physical wellbeing

Marturano et al. (2020) found that high moral distress was significantly associated with calling in sick or considering calling in sick to work. However, Sommerlatte et al. (2023) found that moral distress did not significantly predict physical symptoms of ill health. Therefore, there is some support for moral distress affecting physical wellbeing at work however it is not consistent.

Social wellbeing (at work)

Guttormson et al. (2022) and Malliarou et al. (2021) found that moral distress also increased the risk of burnout overall. Similarly, Siswoyo et al. (2021) and Sommerlatte et al. (2023) found that as moral distress increased, the likeliness to develop moderate levels of burnout increased too; however, this was not elaborated on in either study or so is a limitation of the replicability of the research. Thus, there is some support for a relationship between moral distress and burnout.

Clark et al. (2021) found that as moral distress increased, workplace engagement decreased; with moral distress linked to decreased enthusiasm, interest, emotional investment, and commitment to their work-related activities. Similarly, Molazem et al. (2023) found that higher levels of moral distress predicted lower quality of life due to work, particularly affecting “work-life balance” where work increased emotional strain – this may have led to increased working hours, emotionally impacting personal relationships, and reduced job satisfaction (Hsu et al., 2019) linking to social wellbeing. Malliarou et al. (2021) also found that moral distress did not predict levels of compassion satisfaction (fulfilment gained from helping others through one’s work; Stamm, 2005).

Marturano et al. (2020) found that 47.3% of their sample reported leaving a position or considered leaving a position due to experiencing moral distress. Trautmann et al. (2015) also found that higher moral distress scores significantly predicted a higher chance that a healthcare practitioners would intend to leave their job. Clark et al. (2021) also found that higher levels of moral distress predicted a longer period searching for another job due to dissatisfaction with their role. Marturano et al. (2020) found that higher moral distress, increased likeliness that the professional would request, or consider requesting, that the care of specific clients be transferred to someone else due to moral distress they experienced when working with these clients.

Discussion

The findings of this review suggest that moral distress linked with adverse effects on the mental health of doctors and nursing professionals, particularly increased anxiety, low mood, or trauma symptoms. This suggests a profound emotional burden linked to the moral challenges that they experience as part of their roles, as supported by Spilg et al. (2022).

The review also found that moral distress can have repercussions on the physical wellbeing of doctors and nursing professionals, observed through increased somatic symptoms of distress and a measurable increase in sick leave or contemplating taking sick leave. This highlights how moral distress can compromise their physical wellbeing as is supported by Clark (2020).

The review also found that moral distress affects the social wellbeing of these professionals as it contributed to their intention to leave their jobs, burnout, and reduced job satisfaction. This underlines how moral distress can influence strain on professional dynamics, team relationships, and overall working environment, indicating the wide-spreading nature of moral distress - i.e., it will impact others around the clinician experiencing moral distress; this was supported by Lamiani et al. (2017).

The biopsychosocial model of wellbeing (Engel, 1977) is well-placed to holistically explain this intricate interplay between biological, social, and psychological factors in

the wellbeing of healthcare practitioners. This model offers an appropriate framework for understanding the multifaceted consequences of moral distress discussed in this review on physical ("bio-"), mental ("psycho-"), and social ("-social") wellbeing. Biologically, moral distress may trigger stress responses that lead to physical health symptoms like arthritis or stress-related illness (Korinek et al., 2017). Psychologically, it may induce emotional concerns such as depression, trauma, anxiety which can harm both the practitioner and the care they provide (Hall et al., 2022). Socially, moral distress may strain professional relationships for example (Riedel et al., 2022). Understanding these different dimensions through the biopsychosocial model emphasises a need for more holistic interventions to relieve and prevent moral distress with the aim of promoting healthcare practitioner wellbeing, and ultimately betting patient care outcomes too.

Caution should be used when interpreting and comparing the results of the studies due to differences in quality. Additionally, some studies suggest a relationship between moral distress and a factor, for example anxiety, but other studies did not find a relationship between the two areas. For example, two studies found a relationship between moral distress and anxiety (Petrișor et al., 2021; Sommerlatte et al., 2023), however, Colville et al. (2019) found no relationship between moral distress and anxiety. Therefore, implications may be more difficult to make from this limited data alone.

Findings from this review suggest that higher moral distress was associated with mental wellbeing factors such as anxiety, depression, post-traumatic stress disorder, increased severity of mental health concerns. The review found that higher moral distress in doctors and nurses also linked to their physical wellbeing as it was associated with a higher likelihood of them calling in sick or considering calling in sick due to illness. Finally, the review also found that higher moral distress also affected social wellbeing at work as it was associated with lower workplace engagement, higher intent to leave their job, requesting or considering requesting to change their client assignment, burnout, and decreased care provided for clients (for example decreased quality of communication, advocacy of client rights, decreased emotional support offered to clients, and lowered diligence).

Clinical Implications

This review suggests that moral distress is an important concern for healthcare practitioners. Interventions or workshops, therefore, aimed specifically at moral distress and wellbeing could be developed. The application of the biopsychosocial model (Engel, 1977) appreciates the interconnections between the many dimensions of wellbeing; and so, facilitating a more holistic intervention to address moral distress is recommended. For example, interventions could include working on the body's stress response through management techniques like relaxation (supporting the biological response) (Stein, 2021). Interventions could also include mental health management such as re-engaging with valued activities or exercise (psychological aspects of wellbeing) (Hayes, 2005). Interventions could also work on social wellbeing such as signposting healthcare practitioners to relevant groups where they can meet and connect with others through social prescribing (Liebmann et al., 2022).

Moral distress interventions may focus on factors like willingness to experience morally distressing situations and manage them and resilience as moral dilemmas will always be a part of their role as healthcare practitioners to some extent (Nishikawara & Maynes, 2023), assertiveness training around making their opinions known when in a moral conflict (Hamooleh et al., 2018), and work-life balance prioritisation to encourage professionals to nurture other aspects of their life like personal relations or hobbies (Neumann et al., 2018).

Many well-established staff wellbeing services exist, offering healthcare practitioners support with mental health concerns. As this review emphasises, there are links between moral distress and other mental health concerns, like anxiety, depression, trauma, burnout, and emotional distress. It could be argued thus that existing interventions under staff wellbeing services could be adapted to include therapeutic work on moral distress to provide support for mental health concerns in the context of moral distress too if needed. Such an intervention may involve an integrated Acceptance and Commitment Therapy (Hayes, 2002) and a Compassion Focused Therapy (Gilbert, 2009) focused approach (Vermetten et al., 2023). This approach may support individuals to accept and manage moral distress as part of their role by

using, for example, defusion or mindfulness techniques (Vermetten et al., 2023) through using acceptance strategies. This approach would also encourage self-compassion, self-kindness, and resilience to foster greater overall wellbeing in the face of moral dilemmas (Vermetten et al., 2023).

It is important to note that government funding for NHS Staff Wellbeing Hubs ended in March 2023, with four out of forty hubs having closed already due to financial issues, leaving the healthcare workforce without essential support (BACP, 2023). In the event of reduced availability of staff wellbeing hubs, it may be worth healthcare employers regularly checking in with staff members about how they are feeling at work, either through peer supervision or anonymously to increase openness. This may be helpful at noticing moral distress in the workplace sooner and acting on it to support and protect staff members.

Additionally, training programs could be developed to educate clinicians and employers on moral distress, its effects, ways to reduce it, and coping skills to equip them to navigate moral dilemmas (Bell & Breslin, 2008). Further, education or support groups for ethical decision-making may empower healthcare practitioners to address moral dilemmas differently (Epstein et al., 2021). This training and education may support a change in organisational culture as leaders/employers would be encouraged to actively address any systemic issues that contribute to these moral challenges (Bell & Breslin, 2008) like workload, communication issues, or resource allocation.

Limitations

One researcher carried out this search and review; therefore, the appraisals and interpretations of results may be vulnerable to implicit biases and subjectivity. To manage subjectivity and biases, clear inclusion and exclusion criteria were set, and the collected studies were evaluated and reviewed using the AXIS appraisal checklist. However, it is still possible that, even though a systematic search strategy was used, some relevant papers may have been missed because of the single-researcher nature of the review, and factors like papers that were not published in English or had an English version available. This could mean that this literature review provides an

incomplete understanding of the impact of moral distress on the wellbeing of nursing professionals and doctors.

Additionally, the diversity of measures of moral distress and wellbeing between studies in this review could be considered a limitation as this makes it challenging to compare and synthesise results. However, this was expected due to the broad conceptualisation of wellbeing in this review and the limited amount of research considering each of the sub-factors that fall under the concept of wellbeing (like burnout, physical health, or secondary traumatic stress).

Due to the rationale discussed earlier, this review also overlooks qualitative studies on the impact of moral distress on wellbeing in these two groups. This may be a limitation too as it may potentially overlook valuable lived experiences or perspectives from the target groups, therefore it may be missing relevant contextual information that could only be provided through qualitative data.

Gaps were found in some of the studies reviewed. This included not including a power calculation to justify their sample size, or not discussing non-responder bias where appropriate. This raised concerns about the reliability, validity, generalisability of the data, and biases. Because of this, what can be concluded from some of the papers must be more nuanced. Future studies may benefit from naming their power calculation and discussing non-responders to mitigate this.

Future Research

Because of the cross-sectional nature of the studies reviewed, conclusions about causality cannot be made. Going forward, conducting longitudinal studies may be helpful to understand how moral distress develops and affects wellbeing over time, though there may be ethical issues around this in terms of identifying and acknowledging staff undergoing moral distress and observing, rather than helping, them in the name of research especially considering some of the effects of moral distress as discussed in this literature review. Future research may also wish to study how moral distress in doctors and nursing professionals affects teams and wider organisational systems to show how the effects of moral distress go beyond the clinician experiencing moral distress. Studies may also wish to consider measuring

and comparing levels of moral distress between groups of healthcare practitioners from different health departments – like doctors, nursing professionals, occupational therapists, physiotherapists, psychologists and so on, as this was a gap identified in the research.

Future literature reviews may wish to combine both quantitative and qualitative research studies on the impact of moral distress on the wellbeing of doctors and nursing professionals. This may provide a more holistic understanding of the impact of moral distress on wellbeing as qualitative research can provide insight into the lived experience of doctors and nursing professionals and this may help to further contextualise any quantitative findings being reviewed.

Conclusion

The current review emphasised clear links between moral distress and different aspects of wellbeing in nursing professionals and doctors. The findings across some of the studies corroborated with each other, increasing the confidence and validity of those findings and the generalisability of them, as multiple studies arriving at similar conclusions shows the observed effects are not limited to the specific contexts of individual studies. Equally, the findings across studies varied, like anxiety being found to be predicted by moral distress in two studies (Petrișor et al., 2021; Sommerlatte et al., 2023), however, Colville et al. (2019) also studied these links and found no significant association between anxiety and moral distress.

Employers of doctors and nursing professionals should be mindful of how vulnerable this population can be to moral distress developing over time, and its associated effects on wellbeing. Current staff wellbeing interventions could include psychoeducation and strategies for managing moral distress and the impact it can have on staff wellbeing. Future research could look at widening an understanding of moral distress by conducting more longitudinal studies and learning about how it changes over time and the severity of its long-term effects.

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Appendices

Appendix A: AXIS Appraisal Checklist for Cross Sectional Studies

Papers	Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10	Q 11	Q 12	Q 13	Q 14	Q 15	Q 16	Q 17	Q 18	Q 19	Q 20	Score out of 20	Percentage Score
Clark et al. (2021)	Y	Y	N	Y	N	N	N	Y	Y	Y	Y	Y	?	N	Y	Y	Y	Y	Y	Y	13	65%
Colville et al. (2019)	Y	Y	?	Y	Y	N	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	15	75%
Guttormson et al. (2022)	Y	Y	?	Y	Y	N	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	15	75%
Malliarou et al. (2021)	Y	Y	?	Y	Y	N	N	Y	Y	Y	Y	Y	?	N	Y	Y	Y	N	N	Y	14	70%
Marturano (2020)	N	?	Y	Y	Y	N	N	Y	N	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	15	75%
Molazem et al. (2023)	Y	Y	?	Y	Y	Y	N	Y	Y	Y	Y	Y	?	N Y	Y	Y	Y	N	N	Y	15	75%
Nemati et al. (2021)	Y	Y	?	Y	Y	N	N	Y	Y	Y	Y	Y	?	N	Y	Y	Y	Y	N	Y	15	75%
Petrișor et al. (2021)	Y	Y	?	Y	Y	N	N	Y	Y	Y	Y	Y	?	N	?	Y	Y	Y	N	Y	14	70%
Siswoyo et al. (2021)	Y	Y	?	Y	Y	Y	N	Y	Y	Y	N	Y	?	N	Y	Y	Y	N	?	Y	13	65%
Sommerlatte et al. (2023)	Y	Y	?	Y	Y	N	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	Y	Y	13	65%
Trautmann et al. (2015)	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	Y	Y	N	Y	Y	Y	Y	?	Y	14	70%

Questions 13 and 19 are reverse scored – so that N=Y (1) and Y=N (0). In this table, question marks (?) are scored as 0 as well, as it is unknown if this criterion is met from the information in the report. Please see below for a list of the AXIS questions summarised in the table above:

1. Were the aims/objectives of the study clear?
2. Was the study design appropriate for the stated aim(s)?
3. Was the sample size justified?
4. Was the target/reference population clearly defined? (Is it clear who the research was about?)
5. Was the sample frame taken from an appropriate population base so that it closely represented the target/reference population under investigation?
6. Was the selection process likely to select subjects/participants that were representative of the target/reference population under investigation?
7. Were measures undertaken to address and categorise non-responders?

8. Were the risk factor and outcome variables measured appropriate to the aims of the study?
9. Were the risk factor and outcome variables measured correctly using instruments/ measurements that had been trialled, piloted or published previously?
10. Is it clear what was used to determined statistical significance and/or precision estimates? (e.g. p-values, confidence intervals)
11. Were the methods (including statistical methods) sufficiently described to enable them to be repeated?
12. Were the basic data adequately described?
13. Does the response rate raise concerns about non-response bias?
14. If appropriate, was information about non-responders described?
15. Were the results internally consistent?
16. Were the results presented for all the analyses described in the methods?
17. Were the authors' discussions and conclusions justified by the results?
18. Were the limitations of the study discussed?
19. Were there any funding sources or conflicts of interest that may affect the authors' interpretation of the results?
20. Was ethical approval or consent of participants attained?

Appendix B: Author Guidelines

Please refer to the Journal of Social and Clinical Psychology webpage for author guidelines: https://www.guilford.com/journals/Journal-of-Social-and-Clinical-Psychology/Thomas-Joiner/07367236

- APA 7th referencing has been used in the current paper as per journal guidelines.
- The abstract is structured (Introduction, Methods, Results, and Discussion)
- Tables follow APA 7th style.
- All other formatting will be conducted prior to submission to the journal.

Paper 2: Empirical Paper

Burnout in UK General Practitioners in the Covid-19 aftermath: Are moral distress, self-compassion, psychological flexibility, and practice tenure predictors?

Word Count: 7994/8000

This report is intended for publication in the journal “Psychology, Health & Medicine”. The referencing style of this paper is in APA 7th Edition, and in line with author guidelines (Appendix A). Before submission to the journal, further modifications will be made.

Abstract

The last four years have seen a dramatic change in the role of General Practitioners in the UK since the emergence of COVID-19. This includes a notable rise in workload that raised concerns about moral distress, burnout, and the sustainability of the workforce (Jefferson et al., 2023). Research on the relationship between moral distress and burnout in the general practitioner population is particularly limited. The study aimed to investigate the relationships between burnout and interpersonal factors like moral distress, self-compassion, psychological flexibility (including acceptance, avoidance, and harnessing behaviours), and time in practice. A cross-sectional, multiple regression design was conducted on data that was collected online. The study recruited 87 full-time UK-based General Practitioner participants. The findings suggested that higher levels of moral distress predicted higher levels of emotional exhaustion, and that lower levels of acceptance predicted a reduced sense of personal accomplishment. High avoidance levels predicted all three domains of burnout, indicating that avoidance plays a significant role in the development and maintenance of GP burnout. These findings underscore the importance of addressing moral distress, acceptance, and especially avoidance, as part of interventions aimed at preventing or mitigating GP burnout. However, further research is still needed to fully understand the implications of these findings for clinical practice.

Introduction

General Practice since COVID-19

As a core part of primary healthcare, General Practitioners (GPs) work with clients in the community to manage and prevent ill health, and co-ordinate client care such as referring clients to more specialist care.

In the UK, the GP role has significantly changed since the rise of COVID-19. This includes a significant increase in workload, which led to concerns about burnout and workforce sustainability (Jefferson et al., 2023). It also includes a shift in consultation methods to involve telemedicine and remote working, which has impacted client interactions and workload management (Jefferson et al., 2023). Other challenges include maintaining routine care despite battling backlogs of appointments, leading to longer waiting times (Van Ginneken et al., 2022) and prioritising treatments (Jefferson et al., 2023). This all added to the workload pressures faced by GPs.

There is a growing need to understand the impact that this may have on GPs, to consider adaptations needed in general practice to continue to meet evolving healthcare demands while also safeguarding the wellbeing of GPs. This may positively impact clients (through improved care), and the wider organisation (through, for example, improved attendance, which may positively affect team dynamics).

Burnout in General Practitioners

Burnout is a persistent and lingering response to chronic interpersonal and organisational stressors at work (Maslach & Leiter, 2016). According to Maslach and Jackson (1981), burnout comprises emotional exhaustion (being emotionally drained due to a build-up of stress), depersonalisation (detachment and cynicism towards the job), and a reduced sense of personal accomplishment (negatively evaluating the worth of one's work and feeling ineffective). Maslach's (1998) theory suggests that burnout occurs when there is an ongoing mismatch between a person and one of the following areas within the workplace: workload, lacking control, lacking appropriate reward, lacking a sense of community at work, perceived unfairness, and feeling conflicted against their values. This theory suggests that burnout can lead to a deterioration in job performance and overall health.

Burnout has been a noticeable concern in GPs even before the outbreak of COVID-19 (Hall et al., 2019). During the pandemic, it was reported that around 19% of UK-based GPs were at high-risk of burnout due to pandemic-related role changes (Whitehead et al., 2022).

Burnout has been linked to several negative outcomes in the physical and psychological health of GPs, and negative outcomes for wider factors such as the practice that the GP works for due to increased staff turnover or illness (Salvagioni et al., 2017). These include physical health issues such as musculoskeletal pain, prolonged fatigue, and even more severe conditions like coronary heart disease, and mortality under 45 years of age (Ahola et al., 2010; Leone, 2009; Melamed, 2009; Toker et al., 2012; Kim et al., 2011). Psychological effects of burnout include insomnia, anxiety, and depression (Salvagioni et al., 2017). Burnout has also been linked to GP suicide rates rising to around four times the national average (Gerada, 2021), and GPs resigning at a rate of three per day due to being “in crisis” (Iacobucci, 2021). This higher staff turnover (Zhou et al., 2022; Zhang et al., 2021) is a problem in an already understaffed workforce (Oliver, 2017). Moreover, burnout is associated with job dissatisfaction and being absenteeism due to ill health or distress. This may adversely impact team dynamics, service provision, and clients (Salvagioni et al., 2017). For example, this may reduce quality of care provided, leading to negative experiences for clients (Jefferson et al., 2023; Van Ginneken et al., 2022; Karuna et al., 2022).

The increased strain on GPs has led to an *increased* prevalence in burnout since the pandemic (Gerada, 2021). Even now, at what seems like the tail-end of the pandemic, demands on GPs remain higher than ever as they work through an increased backlog of waiting lists (Van Ginneken et al., 2022), and increasingly distressed clients (Jefferson et al., 2022). It seems pertinent, therefore, to understand factors that influence burnout levels to consider how GPs can be better supported to reduce risk of burnout. Given the already established links between burnout and factors like self-compassion, moral distress, psychological flexibility, and years in practice among GPs, it became vital to investigate their relationships with GP burnout.

Moral Distress

Moral distress is the discomfort that professionals feel when they are restricted in their choices when facing an ethical dilemma and are limited to actions that go against their morals/ethics (Morley et al., 2019), for example, being asked to re-prioritise clients in their care due to their increased waiting lists. Epstein and Hamric's (2009) model of moral distress suggests that repeated exposure to morally distressing situations leads to a build-up of negative feelings related to the situation; whenever a morally distressing situation occurs, these lingering feelings increase too. Eventually, this "crescendo effect" weakens one's beliefs about how ethical they are themselves and leads to moral distress. While the research is still in its infancy, it indicates that moral distress in healthcare professionals can be related to their clients, the service, and the wider system (McCarthy and Monteverde, 2018; Bruce et al., 2015).

Although moral distress has been linked to burnout in other medical professions (Dzeng and Wachter, 2020), less is known about moral distress in GPs. The changes since COVID-19 have increased ethical dilemmas which may make GPs feel guilty, responsible, or hopeless about their work (Silvester et al., 2004; Lenoir et al., 2021). These changes may go against their values and beliefs about their roles - like delivering equitable care, preserving positive client contacts, or respecting professional standards - adding to the 'burden of responsibility' already carried by GPs (Lenoir et al., 2021). Considering the ethical nature of changes that COVID-19 brought (Launer, 2020), moral distress in GPs is a growing concern (British Medical Association, 2021). Given its emerging links to burnout and its prevalence in the medical profession since COVID-19, it was a pertinent to include in this study.

Psychological Flexibility

Psychological flexibility (Hayes, 2005) is a person's ability to accept and adapt to difficulties like dealing with criticism from clients. This concept is associated with Acceptance and Commitment Therapy (Hayes, 2005) which works to help an individual(s) to accept and adapt to ongoing difficulties experienced to live a meaningful life.

Psychological flexibility is composed of six principles (Hayes, 2005): Being present (being in the present moment), cognitive defusion (observing thoughts without getting entangled with them), self as context (seeing oneself as separate to the content of one's thoughts), values (what is important to oneself), acceptance (being willing to experience difficulties), and committed action (commitment to pursue what is important despite difficulties). When an individual is unable to apply these six principles, this is called psychological inflexibility.

An example of how these principles may be seen in healthcare professionals includes perhaps being entirely focused on the tasks that they are working on, rather than worrying about past mistakes or future complications (***being present***). They might also acknowledge negative thoughts they experience (for example about their competence) without letting it affect their performance or confidence (***cognitive defusion***). They may also learn to accept the stress and frustration of a difficult period at work, without it impacting their ability to provide quality care (***acceptance***). They might also maintain a sense of resilience despite facing negative self-judgements (***self-as-context***) and reflect on what aspects of client care are most meaningful to them (***values***) to use this to drive their work such as advocating for clients despite challenges faced (***committed action***).

Psychological flexibility when pursuing a goal (such as at work) has also been measured using three areas (Kashdan et al., 2020) – acceptance and avoidance, as explained above, and a person's ability to use negative experiences to pursue goals or complete tasks ("harnessing"). Higher levels of psychological flexibility, particularly high levels of acceptance and low levels of avoidance, have been linked to lower levels of burnout (Ruiz & Odriozola-González, 2017). Unfortunately, there is no research on how 'harnessing' may affect burnout in healthcare professionals and thus was included in this study as part of psychological flexibility when pursuing goals or completing tasks at work.

Understanding psychological flexibility in GP burnout could have important clinical and therapeutic implications such as providing insight into the use and potential benefits of Acceptance and Commitment Therapy (ACT; Ruiz & Odriozola-González, 2017).

Because there is no research on how psychological flexibility may apply to or support this population, it was considered pertinent to study.

Self-Compassion

Self-compassion (Neff, 2011) is compassion that is extended towards oneself when struggling or suffering and is made up of treating oneself with forgiveness and understanding in times of difficulty, understanding that suffering is part of human experience, and willingness to be present without judgement. Low self-compassion levels have been linked to higher burnout in healthcare professionals and thus increasing self-compassion has been suggested when designing interventions to reduce burnout for medical clinicians (Montero-Marin et al., 2016). Babenko et al. (2019) found that self-compassionate clinicians had higher levels of positive work engagement, were more satisfied with their jobs, and felt less exhausted due to workload compared to those who had less self-compassion. Self-compassion, therefore, may be relevant to this research.

Practice Tenure

Time in practice may also link to GP burnout. Higher burnout has previously been linked to fewer years of experience as a GP; this has been associated with limited development of resilience at such an early stage in their careers (Maslach, 1982; Adam et al., 2018; Abdulla et al., 2010). Zhang et al. (2021) found that GPs with a longer work tenure had a lower likelihood of developing burnout and a lower intention of leaving their job. Therefore, the effects of tenure on burnout were explored in this study.

The Current Study

The aim of this study was to investigate if burnout levels in UK-based GPs is predicted by moral distress, self-compassion, acceptance, avoidance, harnessing, and time in practice. The following hypotheses were tested:

1. Higher levels of moral distress will predict higher levels of burnout in GPs, namely higher emotional exhaustion, depersonalisation, and a reduced sense of personal accomplishment.

2. Lower levels of self-compassion, lower acceptance lower, higher avoidance levels, lower harnessing levels, and less time in practice will predict lower levels of burnout.

This study only considers UK-based GPs to minimise confounding variables due to differences in ways of working in non-UK healthcare systems. This is because diverse ways of working may affect the role and strain, and therefore the levels of burnout experienced by GPs from other systems, though it is recognised that there is likely to be overlap.

Materials and Methods

Ethics

The study was approved by the Staffordshire University Ethics Committee (Appendix B) in July 2023. All participants provided informed consent before participating and were advised that their data would be anonymised.

Design

This study is an online cross-sectional multiple regression study that explored the relationships between moral distress, self-compassion, avoidance, acceptance, harnessing, time in practice, and the three burnout domains (emotional exhaustion, depersonalisation, and personal accomplishment) using the online platform Qualtrics to disseminate the questionnaires and collect data.

Recruitment

To be eligible for the study, participants had to be UK-based full-time GPs who had practiced for at least four years and had worked full-time during the pandemic too. This ensured consistency in participant workload. It ensured a focused exploration of burnout within a specific subset of the GP workforce, and aimed to contribute insights into the unique challenges that full-time GPs face. GPs had to have been working for at least four years to ensure that these GPs had been working during the pandemic too. Exclusion criteria included part-time, trainee, academic, locum, and retired GPs

to avoid skewing results with potentially confounding factors like having different amounts of practice-related responsibility and workload.

Recruitment took place from July-November 2023. A digital research advertisement poster (Appendix C) was posted on social media like Facebook, Twitter, Instagram, and LinkedIn. The study advertisement was also re-shared on relevant public platforms such as GP forums and newsletters; permission was gained for this in advance. Participants were encouraged to share the advertisement with others who may be eligible.

Power Analysis

Soper's (2023) a priori sample size calculator was utilised to determine the sample size required for the three multiple regression analyses (emotional exhaustion, depersonalisation, and personal accomplishment), and six predictor variables. Power was set at .8, alpha at .05, for a medium effect size (.15), based on previous studies exploring burnout in GPs (Hall et al., 2019; Di Monte et al., 2020), determining that 97 participants were required for the study.

Procedure

GPs interested in participating used the URL link or the QR code on the research advertisement to access the study. Upon opening the link, participants were asked to read the information sheet before completing a consent form (Appendix D). Participants could not access the study until they had completed the consent form.

The study began by asking participants to create a unique identification code that would be used to anonymise their data. Participants then completed demographics questions and then completed the rest of the measures (Appendix E) outlined below. After completing the questionnaire, participants were provided with debrief information along with recommended reading or support services (Appendix F).

Participants

In total, 158 individuals accessed the participant information sheet through the study's online link. Of these, 29 (18.35%) did not proceed past the information or consent

sheet; and 42 (26.58%) had begun participating before withdrawing their answers by closing their webpage, and so these were not included in the analysis.

The remaining 87 GPs aged 33-60 (M=46.1, SD=6.65) completed the questionnaire, thus the study was slightly underpowered. Most of the sample identified as female (70.1%) and identified as white British (73.6%). Participant demographic data is presented in Table 1.

Table 1

Sample characteristics (n = 87).

Demographic Characteristic	N (%)	M (SD) Range
Age (Years)		46.1 (6.65) 33-60
Gender		
Female	61 (70.1%)	
Male	24 (27.5)	
Not stated	2 (2.3%)	
Ethnicity		
Asian/Asian British	***12 (13.8%)***	
Asian/Asian British: Indian	5 (5.7%)	
Asian/Asian British: Pakistani	3 (3.4%)	
Asian/Asian British: Bangladeshi	2 (2.3%)	
Asian/Asian British: Chinese	1 (1.1%)	
Asian/Asian British: Any other Asian Background	1 (1.1%)	
Black, Black British, Caribbean or African	***1 (1.15%)***	
Black, Black British, Caribbean or African: Caribbean	1 (1.1%)	
White	***73 (83.91%)***	
White: British	64 (73.6%)	
White: Irish	4 (4.6%)	
White: Any other White background	5 (5.7%)	
Other ethnic Group	***1 (1.15%)***	
Other	1 (1.1%)	

Measures

The questionnaire took 14.86 minutes, on average, to complete and was composed as a section each for demographic and background information (including their

practice tenure), burnout, moral distress, psychological flexibility, and self-compassion.

Demographic Information

Demographic information was collected using a questionnaire created by the researcher. Participants were asked about their age, gender, and their ethnicity.

Burnout

The *Maslach's Burnout Inventory – Human Services Survey* (MBI-HSS; Maslach & Jackson, 1996) is a 27-item questionnaire designed to measure burnout. It comprises three sub-scales representing the three underlying domains of burnout - emotional exhaustion, depersonalisation, and personal accomplishment. This measure was chosen as it is widely used in burnout research in healthcare professionals. Participants rated items on a 7-point Likert scale (0=Never to 6=everyday). An example item includes “I feel worn out at the end of a working day”.

The total scores and proposed cut-off points (Wang et al., 2020) for each subscale are:

- Emotional exhaustion scores range from 0-54. The cut-offs are: <19=low emotional exhaustion, 19–26=moderate emotional exhaustion, >26=high emotional exhaustion.
- Depersonalisation scores range from 0-30. The cut-off scores are <6=low depersonalisation, 6–9=moderate depersonalisation, >9=high depersonalisation.
- Personal accomplishment scores range from 0-48. The cut-offs are: >39=low personal accomplishment, 34–39=moderate personal accomplishment, and <34=high personal accomplishment.

The measure is well-validated (Coker & Omoluabi, 2009) and is often used in burnout research. A Cronbach alpha for emotional exhaustion of 0.9, depersonalisation of 0.76, and personal accomplishment of 0.76 was reported by Iwanicki and Schwab (1981) showing high reliability. In the current study, internal consistency (Appendix G) was also fairly high (Cronbach's α= .76). Permission was gained to use this measure (Appendix H).

Moral Distress

The *Measure of Moral Distress in Health Care Practitioners* (MMD-HCP; Epstein et al., 2019) is a self-report 27-item single-scale questionnaire designed to measure levels of moral distress in healthcare practitioners. This measure collects data about the frequency and level of distress experienced in morally distressing scenarios that a healthcare practitioner may face to measure overall moral distress. It was chosen as it was a more relatable questionnaire for the target population of this study, compared to more general moral distress questionnaires.

Participants rated each item on a scale of 0-4 for frequency (scored as 0=never to 4=very frequently) and rated the same item on a scale of 0-4 for level of distress (0=none to 4=very distressing). This leads to each item having two scores. These two scores are multiplied with each other to generate a final item score; for example, four (for frequency) may be multiplied by a score of three (for level of distress) to generate a final score of twelve. The 27 final item scores were then totalled to generate an overall score of moral distress. An example item includes how frequently one has "*Witness[ed] healthcare providers giving "false hope" to a client or family*" and how distressing this was. The average score across the 27 items ranges from 0–432. A score from 0-144 indicates low moral distress, 145-288 indicates medium moral distress, and a score of 289-432 indicates high moral distress.

This questionnaire has good reliability with a Cronbach's alpha of 0.93 and was found to have promising validity (Epstein et al, 2019) in moral distress research. In the current study, internal consistency (Appendix G) was excellent (Cronbach's $\alpha = .96$). Permission was gained to use this measure (Appendix H).

Self-Compassion

The Self-Compassion Scale (SCS; Neff, 2003) is a self-reported 12-item questionnaire designed to measure Self-Kindness, Self-Judgement, Common Humanity, Isolation, Mindfulness, and Over-identification as a single scale. An example item includes "I try to see my failings as part of the human condition". The measure has a 5-point Likert scale where 1=Almost Never, and 5=Almost always, with six items reverse scored. The scores for the items are then averaged to generate a final score of self-compassion, which can range from 1-5. Scores of 1.0-2.49 are

thought to indicate low self-compassion, scores between 2.5-3.5 indicate moderate self-compassion, and scores between 3.51-5.0 indicate high self-compassion.

The measure demonstrates good reliability with a Cronbach's alpha of 0.92 and has adequate validity as discussed by Neff (2003). In the current study, internal consistency (Appendix G) was fairly high (Cronbach's α = .89). This measure was freely available to use (Appendix H).

Psychological Flexibility

The Personalised Psychological Flexibility Index (PPFI; Kashdan et al., 2020) is a 15-item questionnaire used to measure psychological flexibility. It measures three subscales – acceptance (accepting the feelings that come up when working towards a goal), avoidance (avoiding unpleasant feelings and situations that come up when working towards a goal), and harnessing goals (utilising negative feelings to motivate oneself and work towards a goal). Thus, this questionnaire provides three sub-scores and not an overall score of psychological flexibility. These three subscales were used as three separate predictors (avoidance, acceptance, and harnessing) within each regression.

Participants rated items on a 7-point Likert scale where 1=strongly disagree and 7=strongly agree, with three subscales. An example item includes "I get so caught up in thoughts and feelings that I am unable to pursue this goal". It was made clear in the study that the term "this goal" referred to their job as a GP.

To interpret the scores for each subscale, the following information was provided by Kashdan et al. (2020):

- Avoidance: this ranges from 0-30 with higher scores suggesting lower levels of avoidance.
- Acceptance: this ranges from 0-30 with higher scores suggesting higher levels of acceptance
- Harnessing: this ranges from 0-30 with higher scores suggesting higher levels of commitment to achieving goals

The measure has a Cronbach's alpha of 0.77 in general working professionals, showing high reliability and high validity (Kashdan et al., 2020). In the current study,

internal consistency (Appendix G) was relatively high (Cronbach's α = .71). This questionnaire was freely available to use (Appendix H).

Time in Practice

Time in practice was measured using a single-question item devised by the researcher "In months, how long have you been working as a GP?".

Validity

The only measures that were validated for the population type included in this study (healthcare professionals/human services) were the MBI-HSS to measure burnout and the MMD-HP to measure moral distress. It is worth keeping in mind that the other measures were not validated for the healthcare population. Instead, they were validated for a more general population. This raised a question about the extent to which they can accurately assess the intended constructs within GPs as a healthcare-specific population. Despite this, these measures were used as, at the time of this study, there were no questionnaires measuring these constructs within healthcare practitioners.

Data Analysis

The questionnaire responses were downloaded into Excel. The data were cleaned and then exported into SPSS Statistics (Version 29) for statistical analysis. Correlations were explored and three multiple regression analyses were conducted to assess the relationship between each of the criterion variables and the predictor variables discussed.

Data Screening

Of the 87 questionnaires, five (5.7%) had missing data for analysis – with only single-items missing, accounting for 0.9% of each (of the five mentioned) participant's data, resulting in only five questions having missing data. Because this was a small amount of missing data, multiple imputation was deemed the most appropriate choice to handle the missing data (Austin et al., 2021). A participant mean substitution method was used (Bono et al., 2007) on SPSS. The results discussed are drawn from this imputed set of data.

Statistical Assumptions

The data were checked for each regression to see if the data significantly violated the assumptions for multiple regression analysis, namely, an absence of outliers and multicollinearity, normality, linearity, homoscedasticity, and independence of residuals (Field, 2016; Appendices G-J).

Depersonalisation was the only variable that violated the assumption of multivariate normality where the residuals of the model were not normally distributed. To manage this violation, bootstrapping was applied, and this is reported below. Bootstrapping is a statistical re-sampling method used when there is a violation of the assumption of normality, particularly to the distribution of residuals. This method resamples the data to estimate the sampling distribution of statistics, providing a robust approach to calculate inferential statistics even when this assumption of normality is not met, helping to reduce the impact of this violation on the reliability of the regression results (Field, 2016).

Results

Descriptive Statistics

The means, standard deviations, and ranges for the variables are presented below in Table 2.

Table 2

Summary of the descriptive statistics for the analysis variables including means, standard deviations, and range (n = 87). This table also includes suggested cut-off scores as mentioned earlier, and an indication of where the current sample fell.

	M	SD	Range	Cut-off scores	Interpretation
Emotional Exhaustion	37.58	11.58	3-54	<19=low, 19–26=moderate, >26=high	High
Depersonalisation	12.47	7.4	0-29	<6=low, 6–9=moderate, >9=high	High
Personal Accomplishment	36.14	6.44	17-48	>39=low, 34–39=moderate, <34=high	Moderate
Moral Distress	152.08	86.65	12-394	0-144=low, 145-288=moderate, 289-432=high	High

Self-compassion	3.22	0.43	2.17-4.33	1.0-2.49=low, 2.5-3.5=moderate, 3.51-5.0=high	Moderate
Avoidance	24.53	6.61	7-35	Higher scores=lower avoidance	High
Acceptance	21.75	5.44	5-34	Higher scores=higher acceptance	High
Harnessing	14.89	4.59	5-29	Higher scores=higher commitment to goals	Moderate
Years in Practice	14.64	7.61	2.4-32		

On average, the sample had high emotional exhaustion, high depersonalisation, and a moderate sense of personal accomplishment. These findings showed that GPs are scoring highly for burnout and are in-keeping with previous research in UK-based GPs and worldwide (Hall et al., 2019; Karuna et al., 2022). Additionally, the sample had moderate levels of moral distress. Moral distress has not been quantitatively measured in GPs, so it is difficult to compare these results to others. The sample also had moderate self-compassion, low avoidance levels, high acceptance levels, and moderate levels of harnessing.

Correlations

The correlations (Appendix I) between the variables are presented in Table 3. A moderate significant positive correlation was found between moral distress and emotional exhaustion, with higher levels of moral distress being associated with higher rates of emotional exhaustion (r=.45, p<.001). Additionally, a moderate significant positive correlation was found was between self-compassion and moral distress, which suggests that as self-compassion increased, so did levels of moral distress (r=0.4, p<.001). A moderate but significant negative correlation was found between avoidance and depersonalisation, suggesting that as avoidance levels decreased, depersonalisation levels decreased (r=.42, p<.001).

A small significant correlation was found between avoidance and personal accomplishment, which suggested that lower levels of avoidance (as increasing scores here indicate lower levels of avoidance) were associated with levels of personal accomplishment (r=.36, p<.01). A small significant correlation was also observed between levels of harnessing and acceptance, indicating that higher levels

of acceptance were also linked with harnessing goals despite negative experiences (r=.26, p<.01).

Self-compassion was also found to be linked to emotional exhaustion in a small significant negative correlation, suggesting that lower levels of self-compassion were associated with higher levels of emotional exhaustion (r=-.26, p<.05). Avoidance was found to have a small significant negative correlation with emotional exhaustion, suggesting that higher levels of avoidance are associated with higher levels of emotional exhaustion (r=-.33, p<.05). Acceptance also had a small significant negative correlation with emotional exhaustion, indicating that lower levels of acceptance were related to higher levels of emotional exhaustion (r=-.22, p<.05).

Moral distress had a small significant correlation with depersonalisation, suggesting that higher levels of moral distress were linked with higher levels of depersonalisation (r=.24, p<.05). Additionally, moral distress was found to have a small significant negative correlation with personal accomplishment, suggesting lower levels of moral distress were associated with higher sense of personal accomplishment (r=-.22, p<.05). Acceptance and avoidance also had a small but significant positive correlation, indicating higher levels of acceptance were linked to lower levels of avoidance (r=.23, p<.05).

Table 3

Pearson's r correlations for the variables involved in the regression predicting levels of emotional exhaustion (n=87).

Variable	1	2	3	4	5	6	7	8	9
1. Emotional exhaustion	-								
2. Depersonalisation	.57***	-							
3.Personal Accomplishment	-.49***	-.36**	-						
4. Moral Distress	.45***	.24*	-.22*	-					
5. Self-compassion	.26*	.15	-0.003	.4***	-				
6. Avoidance	-.33*	-.42***	.36**	-.16	-.009	-			

7. Acceptance	-.22*	-.21	.34**	-.15	.05	.23*	-		
8. Harnessing	-.01	-.02	.10	.05	.15	-.03	.26**	-	
9.Time in Practice	-.008	-.05	-.004	-.04	-.15	.15	-.03	.01	-

Note. **p* < .05; ***p* < .01; ****p* < .001.

Multiple Regression Analyses

Three multiple regression analyses were used to predict the three domains of burnout. For each regression, all predictors were entered into the model at the same time.

Emotional Exhaustion

The emotional exhaustion model (Appendix J) was significant (F(6, 80)=5.75, P<.001), accounting for 30.1% of the total variance in emotional exhaustion (24.9% when adjusted). Avoidance (β=-.26, <.01) and moral distress (β=.35, p<.05) were significant predictors of emotional exhaustion. However, acceptance, harnessing, self-compassion, and time in practice were not significant predictors of emotional exhaustion. Table 4 shows the regression coefficients below.

Table 4

Multiple regression analysis of acceptance, avoidance, harnessing, self-compassion, moral distress, and time in practice as predictors of emotional exhaustion(n=87).

	B	**SE B**	**B**	**Sig.**	**95% CI Lower**	**95% CI Upper**
Constant	34.53	10.18		.001	14.28	54.78
Avoidance	-0.46	0.17	-0.26	.009	-0.80	-0.12
Acceptance	-0.21	0.22	-0.10	.327	-0.64	0.22
Harnessing	-0.09	0.25	-0.03	.731	-0.58	0.41
Moral Distress	0.05	0.01	0.35	.001	0.02	0.07
Self-compassion	3.66	2.80	0.14	.194	-1.91	9.23
Time in Practice	0.01	0.01	0.06	.519	-0.02	0.03

Note: R^2 = 30.1%; Adjusted R^2 = 24.9%. This table presents the unstandardised coefficients, standard error, standardised coefficients, confidence intervals, and significance levels for this regression.

To improve the accuracy of the model, the analysis was run again with only the significant predictors, namely, avoidance and moral distress. This model was significant (F(2, 84)=15.95, p<.001), and explained 27.5% of the total variance in

emotional exhaustion (25.8% when adjusted). Both avoidance (β=-.27, p<.01) and moral distress (β=.41, p<.001) remained significant predictors of emotional exhaustion, with moral distress being the strongest predictor (Table 5).

Table 5

Multiple regression analysis of avoidance and moral distress as predictors of emotional exhaustion (n=87).

	B	SE B	B	Sig.	95% CI Lower	95% CI Upper
Constant	40.66	4.85		<.001	31.01	50.31
Avoidance	-0.47	0.17	-0.27	.006	-0.80	-0.12
Moral Distress	0.06	0.01	0.41	<.001	0.02	0.07

Note: R^2 = 27.5%; Adjusted R^2 = 25.8%. This table presents the unstandardised coefficients, standard error, standardised coefficients, significance levels, and confidence intervals for this regression.

Depersonalisation

The depersonalisation model (Appendix K) was significant (F(6, 80) = 3.82, P<.01), accounting for 22.3% of the total variance in depersonalisation (16.4% when adjusted). Avoidance (β=-.38, <.001) was the only significant predictor of depersonalisation. However, moral distress, acceptance, harnessing, self-compassion, and time in practice were not significant predictors of depersonalisation. Table 6 shows the coefficients below.

Due to the violation in normality in the depersonalisation regression, the model was run again using bootstrapping (Table 6). The bootstrapped confidence intervals for avoidance, acceptance, and time in practice did not differ significantly, suggesting that the original model captured the variability across these variables effectively. However, the bootstrapped confidence intervals for moral distress, self-compassion, and harnessing differed considerably from the original confidence intervals, suggesting discrepancies between the assumptions and the reality of the data and that interpretations of this data should made with caution. This suggests that the original model might not have adequately captured variance in the data. Despite this, the bootstrapped model for depersonalisation corroborated with the original regression

and suggested that avoidance is the only significant predictor of depersonalisation, indicating that the findings from the original depersonalisation regression were robust.

Table 6

Multiple regression analysis of acceptance, avoidance, harnessing, self-compassion, moral distress, and time in practice as predictors of depersonalisation both with and without bootstrapping (n=87).

	Multiple Regression						Bootstrapping				
					95% CI					95% BCa CI	
	B	SE B	β	Sig.	Lower	Upper	Bias	SE B	Sig.	Lower	Upper
Constant	18.48	6.87		.009	4.82	32.15	-.28	6.91	.01	5.22	32.48
Avoidance	-.42	.12	-.38	<.001	-.66	-.19	-.005	.12	.002	-.67	-.21
Acceptance	-.14	.15	-.10	.353	-.43	.15	-.009	.16	.37	-.47	.19
Harnessing	-.05	.17	-.03	.777	-.38	.29	-.019	.18	.809	-.453	.27
Moral Distress	.01	.01	.12	.273	-.01	.09	-.001	.01	.344	-.013	.32
Self-compassion	1.88	1.89	.11	.322	-1.88	5.64	.269	2.1	.377	-1.95	6.17
Time in Practice	.002	.01	.03	.793	-.01	.02	.001	.01	.83	-.0.16	.02

Note: R^2 = 22.3%; Adjusted R^2 = 16.4%. This table presents the unstandardised coefficients, standard error, standardised coefficients, confidence intervals, and significance levels for this regression.. There is also a bootstrapped comparison which includes bias-corrected accelerated confidence intervals; these results are based on 1000 bootstrapped samples.

To improve the accuracy of the model, the analysis was run again with only the significant predictor – avoidance. This model was significant (F(1, 85)=17.76, p<.001). This model explained 17.3% of the total variance in depersonalisation (16.3% when adjusted) (Table 7).

Table 7

Regression analysis of avoidance as the only predictor of depersonalisation (n=87).

	B	SE B	β	Sig.	95% CI Lower	95% CI Upper
Constant	23.898	2.807		<.001	18.317	29.479
Avoidance	-0.466	0.111	-0.416	<.001	-0.686	-0.246

Note: R^2 =17.3%; Adjusted R^2 = 16.3%. This table presents the unstandardised coefficients, standard error, standardised coefficients, confidence intervals, and significance levels for this regression.

Personal Accomplishment

The personal accomplishment model (Appendix L) was significant (F(6, 80)=3.78, P<.01), accounting for 22.1% of the total variance in personal accomplishment (16.3% when adjusted). Avoidance (β=.29,<.01) and acceptance (β=.23, p<.05) were significant predictors of personal accomplishment. However, moral distress, harnessing, self-compassion, and time in practice were not significant predictors of personal accomplishment. Table 8 shows the coefficients below.

Table 8

Multiple regression analysis of acceptance, avoidance, harnessing, self-compassion, moral distress, and time in practice as predictors of personal accomplishment (n=87).

	B	SE B	B	Sig.	95% CI Lower	95% CI Upper
Constant	22.646	5.977		.000	10.751	34.540
Avoidance	0.281	0.101	0.288	.007	0.079	0.483
Acceptance	0.270	0.126	0.229	.035	0.019	0.522
Harnessing	0.077	0.145	0.055	.598	-0.212	0.366
Moral Distress	-0.012	0.008	-0.161	.149	-0.028	0.004
Self-compassion	0.589	1.644	0.040	.721	-2.682	3.861
Time in Practice	-0.003	0.007	-0.040	.691	-0.017	0.011

Note: R^2 = 22.1%; Adjusted R^2 = 16.3%. This table presents the unstandardised coefficients, standard error, standardised coefficients, significance levels, and confidence intervals for this regression.

To improve the accuracy of this model, the analysis was run again with only the significant predictors – avoidance and acceptance. This model was significant (F(2, 84)=10.25, p<.001). This model explained 19.6% of the total variance in personal accomplishment (17.7% when adjusted). Both avoidance (β=-.30, p<.01) and

acceptance (β=.27, p<.01) remained significant predictors of personal accomplishment, with avoidance marginally being the stronger predictor (Table 9).

Table 9

Multiple regression analysis of avoidance and acceptance as predictors of personal accomplishment (n=87).

	B	SE B	β	Sig.	95% CI Lower	95% CI Upper
Constant	22.154	3.163		.000	15.864	28.444
Avoidance	0.288	0.098	0.296	.004	0.094	0.483
Acceptance	0.318	0.119	0.268	.009	0.081	0.554

Note: R^2 = 19.6%; Adjusted R^2 = 17.7%. This table presents the unstandardised coefficients, standard error, standardised coefficients, significance levels, and confidence intervals for this regression.

Discussion

Findings

The first hypothesis, that higher levels of moral distress would predict higher levels of burnout in GPs, was partially supported. The individual correlations indicated that moral distress was a significant predictor for all three burnout domains, and was the strongest predictor for emotional exhaustion. The correlations suggested that as moral distress increased, so did levels of emotional exhaustion and depersonalisation, and levels of perceived personal accomplishment decreased.

The multiple regressions, however, suggested moral distress only predicted emotional exhaustion; again, this partially supported the first hypothesis. Because moral distress had not been studied as a predictor of burnout in GPs before, this study adds to previous research which found that moral distress predicts burnout in other healthcare professionals (Burston & Tuckett, 2013; Ong et al., 2022). Moral distress may predict emotional exhaustion because healthcare professionals experiencing moral distress tend to experience frequent heightened emotional concerns like sadness, frustration, and anger; the frequency of this may lead to emotional exhaustion (Wiegand & Funk, 2012; Gutierrez, 2005).

Moral distress did not predict depersonalisation in this study. This finding did not support previous research findings such as Lamiani et al. (2019), who found that moral distress in healthcare professionals could induce depersonalisation – notably, detachment from one's work and increased negative feelings towards clients. It is possible that moral distress may not have predicted depersonalisation due to being mediated by other factors such as avoidance coping mechanisms. For example, using avoidance strategies to cope with morally distressing scenarios which then means that it does not lead them to build a sense of detachment or cynicism towards their work – however this mediation effect was not explored in this study.

Moral distress also did not predict the personal accomplishment domain. This finding is corroborated by findings by Kok et al. (2021) and Maunder et al. (2023) who found that moral distress did not predict a reduced sense of personal accomplishment in healthcare professionals. This could be because, for example, some GPs used avoidance to cope with moral distress, which may have protected their sense of personal accomplishment – however this mediation effect was not explored in this study either.

The second hypothesis was also only partially supported, that lower levels of self-compassion, lower psychological flexibility, and less time in practice would predict higher burnout. For the emotional exhaustion regression model, only avoidance and moral distress were significant predictors. For the depersonalisation model, only avoidance was a significant predictor, and for the personal accomplishment model, only avoidance and acceptance were significant predictors. It is worth noting that not all predictor variables were significant across all three regressions, suggesting that each burnout domain might be influenced by other underlying factors that go beyond those included in this study such as workload or limited resources.

The lack of significance in the other predictors could be attributed to several reasons such as the complexity of interactions between variables that were not studied, sample homogeneity issues which may have meant that certain characteristics were not adequately represented, the study was slightly underpowered leading to the study not being able to detect significant effects reliably, or even the sensitivity of the

psychometric measures used. These potential limitations should be considered when interpreting the findings of the study.

Additionally, it was interesting that avoidance was a significant predictor across all three burnout domains. This was supported by Iglesias et al. (2010) and Kroska et al. (2017) who found that avoidance predicted all three domains in nurses and medical students. Avoidance could be a coping strategy used to deal with times of difficulty (Tyson & Pongruengphant, 1996). Avoidance may provide short-term relief from these difficulties, but there are long-term consequences like increased emotional distress, reduced or delayed problem-solving, or maintenance of burnout symptoms (Fernandez-Rodriguez et al., 2018; Stober et al., 2000; Tyrrell., 2010).

A small number of GPs sent feedback via emails which suggested that although general practice has been difficult to work in since the pandemic, it was “inadequate” before the pandemic too and that GP numbers have been decreasing since before the pandemic. This is supported by Iacobucci (2021). The feedback also provided insight into how GPs understand causes of burnout – this includes high demands and expectations, running services with lower budgets, the government not delivering on NHS and General Practice-related policies and promises, and difficult experiences with clients which all add to the pressure they experience and work to increase their burnout levels. Some of these systemic factors may account for the missing total variance in each of the regressions; perhaps if these variables were accounted for in the original regressions, the total variance that they accounted for in emotional exhaustion, depersonalisation, and personal accomplishment may have been higher and thus producing stronger predictive models for these burnout domains. These systemic factors could be studied with the interpersonal influences that were explored in this study, to suggest a broader context to what shapes GP burnout and suggest avenues for further research to systematically explore the multifaceted nature of burnout in GPs.

Limitations

While this research may be helpful in furthering a general understanding of underlying factors of burnout in UK-based GPs, it has its limitations.

One of the limitations of this study is that it did not have a well-distributed sample for gender and ethnicity. It was noted that the ethnic diversity and gender diversity of the sample did not accurately represent the wider UK-based GP population (Appendix M). For example, the study had a 70.1% female sample but only 54-58% of the GP population identify as females; alternatively, 83.91% of the sample identified as White, whereas a recent consensus has shown that 55% of the GP population are White. This means that the characteristics of the GPs who participated in the study do not accurately reflect the wider demographic composition of GPs in the UK. This lack of representation might introduce biases and, to some extent, limit how generalisable the findings of this study are because the ratings of the more underrepresented groups might not be sufficiently captured. It is vital then to interpret these results within the context of the sample composition, rather than the general population of GPs, to avoid overgeneralising the results. This may have influenced the results as, for example, this study had a majority female sample (70.1%) and Gleichgerrcht and Decety (2013) found that female clinicians are more likely to develop burnout due to having a greater sense of empathy and concern when working with clients. It is difficult to predict what may have been found with a more representative sample, however, findings from a more representative sample may have provided a more generalisable understanding of burnout in GPs in the UK.

There were some noticeable limitations with sampling/recruitment too. Only those who had access to social media had a chance to access the study and so may not be truly representative of the GP population. It is also possible that those with higher levels of burnout did not participate in the study due to fatigue and wanting to avoid completing “another task”. Moreover, this study only included GPs who worked full-time during the onset of the pandemic and have continued to practice full-time since then. This inclusion criterion excludes GPs who may have worked during the pandemic but have subsequently left the profession or altered their working patterns due to high levels of burnout experienced.

Furthermore, the three regression models accounted for a small amount of total variance in each model. This suggested that other variables may have contributed to each of the burnout domains that were not explored in this study; this may include systemic factors discussed earlier such as high work demands with limited resources.

Clinical Implications

This study pointed to high burnout in GPs in the UK and suggested that avoidance is a common factor underlying all three domains of burnout. There are many types of avoidance such as cognitive, situational, or somatic avoidance, and there are many approaches to understanding avoidance such as psychodynamically as a defence mechanism to protect an individual, or a maladaptive cognitive strategy to manage excess fear or anxiety. This study considers “avoidance” from an ACT perspective to keep in line with the concept of psychological flexibility being studied, and therefore considers experiential avoidance (Hayes, 2005) to acknowledge that avoidance can be used as an adaptive strategy to cope with difficulty, but it may lead to more harm than good over time. Experiential avoidance is a phenomenon used to avoid difficult internal experiences that may in turn limit someone from living a meaningful life.

Because this study found that higher avoidance correlated with higher levels of each burnout domain, it may then be suggested that strategies that reduce avoidance may be worth including when developing interventions for burnout. The study supports previous studies as it suggests that improving psychological flexibility, including managing avoidance levels, may be effective in reducing GP burnout. This study found that lower acceptance levels was a significant predictor of lowered sense of personal accomplishment, and that avoidance was a significant predictor of all three burnout domains. This suggested that interventions that build psychological flexibility (including increasing acceptance levels and decreasing avoidance levels) may be beneficial in managing GP burnout. Strategies to support building acceptance of difficult experiences may also be helpful to decrease avoidance levels experienced (Hayes, 2005) by GPs.

This study also showed that moral distress was a significant predictor of emotional exhaustion which could suggest that burnout interventions could consider including elements of moral distress management too (Nishikawara & Maynes, 2023). Such interventions may include psychoeducational work or facilitated groups (Morley et al., 2021).

These interventions, however, may not address the systemic and organisational factors discussed earlier and the impact that these factors may have on GPs. To address these, it may be important to establish institutional initiatives to facilitate problem-solving and open dialogue between GPs and their managers. Though it may be difficult to, for example, increase the workforce (due to budget restrictions) with the aim of spreading workload out more fairly and decrease burnout, it may be more possible to create a reflective space at work for GPs to candidly discuss concerns and escalate them where possible to higher authorities, to foster a culture of transparency and continued improvement within the workplace.

Because burnout levels were high in this population, it may be suggested that GP managers or peers check-in with each other regularly around the six underlying dimensions of work that impact burnout (Maslach, 1998; workload, fairness, control, values, rewards, and community at work). This may encourage open discussion and provide some support to reduce these underlying mechanisms of burnout and, in turn, reduce burnout potentially. These conversations may occur within clinical supervision or mentorship programmes to provide protective space for the GP to offload distress, and in turn, either receive reassurance/social support or provide space to consider potential solutions for their difficulties (Torppa et al., 2016; Jeffrey, 2014). Other ideas that may lead to a similar outcome include providing on-site counselling services, increasing mental health awareness at work in GP practices, and potentially adding empathy and compassionate training to pre-existing leadership programmes for GP managers with the aims of building a more responsive and supportive culture at work.

Future Research

Although this study proposed that avoidance, acceptance, and moral distress are predictors of burnout in GPs, future research may want to explore these variables in qualitative studies to better understand their influences on GP burnout. By delving into the lived experiences of GPs through observations and interviews, this could open the understanding of GP burnout to wider systemic factors that are context-dependent such as the complex interplay between individual, organisational, and societal factors that may contribute to GP burnout in the UK healthcare system (discussed further below).

Systemic factors that may influence burnout include high work demands, working with lower budgets, governmental promises and policies not being acted on leading to bureaucratic challenges, cultural norms in medical practice, difficult interpersonal interactions with clients. These factors may also be researched using quantitative methods. However, this may involve designing and validating a tool (such as a questionnaire) to assess these factors and their effects on burnout. For example, researchers may design and validate a questionnaire tailored to measure cultural norms in medical practice, workload demands, and other systemic factors that are pertinent to burnout in GPs. Using quantitative measures for these systemic factors may complement any qualitative investigations into GP burnout and can offer valuable insights into the prevalence, significance, and impact that these systemic factors can have on GP burnout.

The current study suggested that psychological flexibility-focused interventions, particularly focusing on the impact of avoidance behaviours, such as ACT (Hayes, 2005) may be useful for reducing burnout in GPs so further research into this could be considered. Research in this area might involve researching such ACT interventions, that are tailored to reduce burnout and their effects on GP burnout before and after the intervention.

Conclusion

This study added to the limited evidence base of burnout research in GPs. It has provided evidence demonstrating that avoidance is a predictor for all three burnout domains, moral distress is a predictor of emotional exhaustion, and that level of acceptance is a predictor of personal accomplishment in GPs. These findings are important as they provide an understanding of the interpersonal predictors underlying GP burnout and suggests some areas that could be considered when developing interventions for GP burnout. However, research into these factors could still be furthered to understand GP burnout and to influence the development of interventions for this population.

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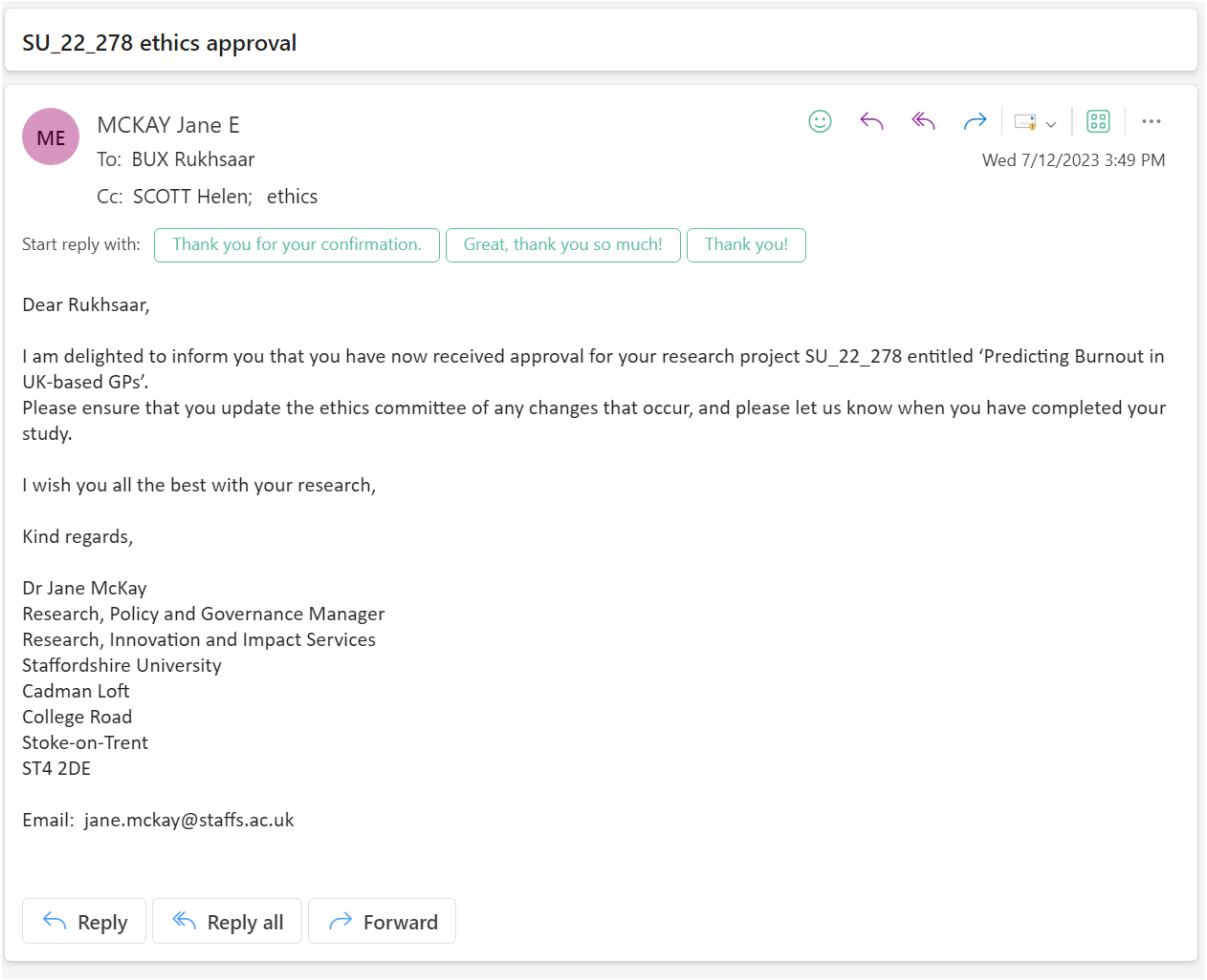
Appendices

Appendix A: Journal Guidelines

Please refer to the Psychology, Health & Medicine webpage for author guidelines: https://www.tandfonline.com/action/authorSubmission?show=instructions&journalCode=cphm20

- APA 7th referencing has been used in the current paper as per journal guidelines.
- The abstract is unstructured and below 300 words.
- Between 3-8 keywords will be generated to make the study discoverable prior to submission to the journal, and the word count will be reduced to less than 7000

Appendix B: Ethics Approval Email



SU_22_278 ethics approval

ME

MCKAY Jane E

To: BUX Rukhsaar

Cc: SCOTT Helen; ethics

Wed 7/12/2023 3:49 PM

Start reply with: Thank you for your confirmation. | Great, thank you so much! | Thank you!

Dear Rukhsaar,

I am delighted to inform you that you have now received approval for your research project SU_22_278 entitled 'Predicting Burnout in UK-based GPs'.
Please ensure that you update the ethics committee of any changes that occur, and please let us know when you have completed your study.

I wish you all the best with your research,

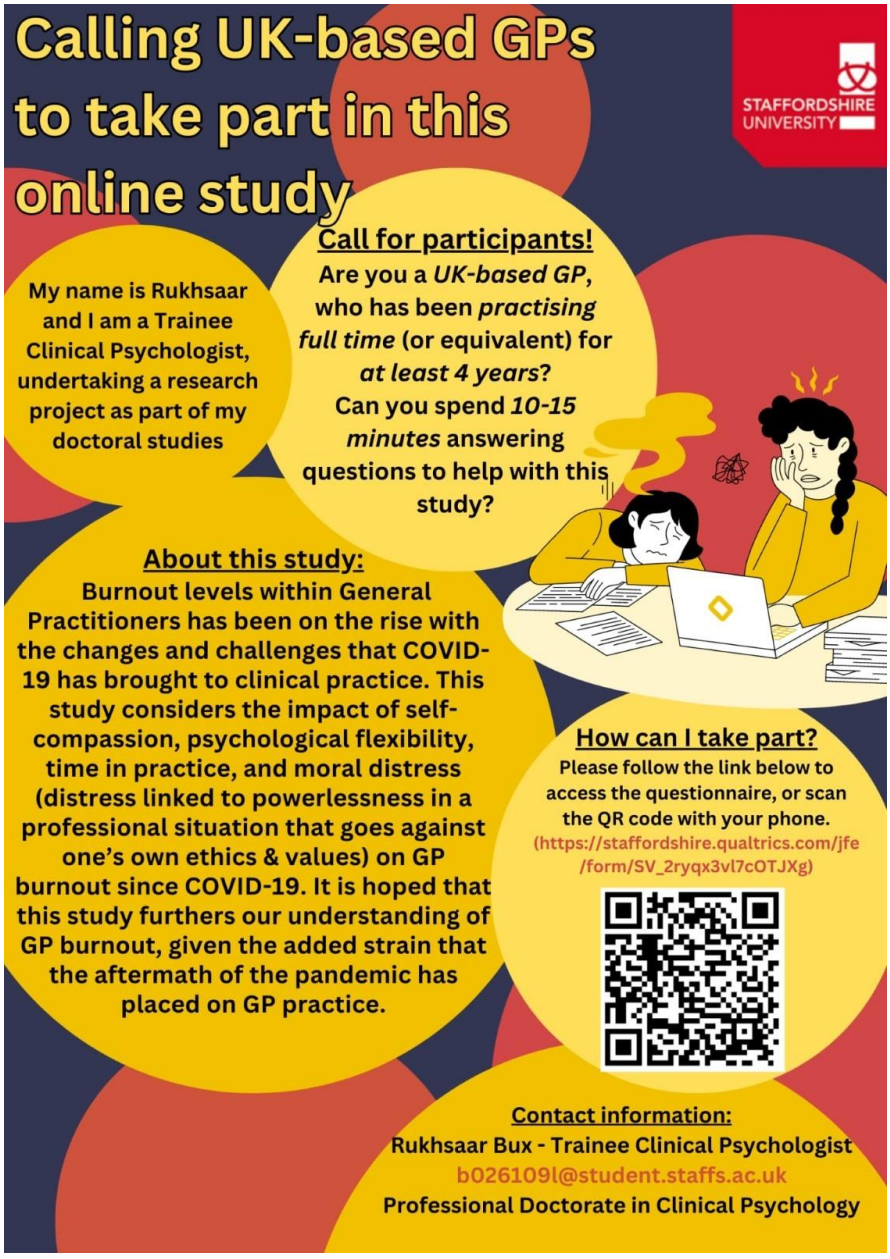
Kind regards,

Dr Jane McKay
Research, Policy and Governance Manager
Research, Innovation and Impact Services
Staffordshire University
Cadman Loft
College Road
Stoke-on-Trent
ST4 2DE

Email: jane.mckay@staffs.ac.uk

Reply | Reply all | Forward

Appendix C: Research Advertisement Poster



Appendix D: Participant Information Sheet and Consent Form

Project Reference Number: SU_22_278

Title of study: Predicting Burnout in UK-based GPs during Covid-19: Are Moral Distress, Self-Compassion, Psychological Flexibility, and time in practice factors?

Invitation Paragraph

My name is Rukhsaar Bux and I am a Trainee Clinical Psychologist at Staffordshire University. I would like to invite you to participate in this research project, which forms part of my doctoral research. Before you decide whether you want to take part, it is important for you to understand why the research is being done and what your participation will involve. Please take time to read the following information carefully and discuss it with others or myself if you wish. Ask me if there is anything that is not clear or if you would like more information.

What is the purpose of the study?

This study is primarily concerned with gaining an understanding of burnout and factors that can impact on that in GPs across the UK within the boundaries of the changes and challenges that COVID-19 has brought to clinical practice. The study is specifically focused on whether moral distress (distress linked to feeling powerlessness in a professional situation that goes against one's own ethics and values), self-compassion, psychological flexibility, and time in practice have an impact on the experience of burnout. It is hoped that this research can expand on the understanding of burnout in GPs, especially given the added strain Covid-19 has placed on GP surgeries.

Why have I been invited to take part?

You have been asked to complete this questionnaire as a UK based GP working full time during the pandemic. I believe your insights as a practicing GP will be invaluable in furthering an understanding of some of the factors that can impact on GP wellbeing during these especially challenging times. This study is looking at burnout in GPs across the UK who have been practicing during the pandemic.

To be eligible to participate in the research, you must meet the following criteria:

- Full time General Practitioners who have been working in this capacity for at least four years

Exclusion criteria:

- Academic GPs/ GP researchers
- Trainee GPs
- Locum GPs
- Retired GPs

What will happen if I take part?

After reading this information sheet, should you agree to participate in this study, you will first be asked to complete the consent form and create a unique identifier for yourself by thinking of a word that you can remember. This unique code will only be linked with your questionnaire answers, and should you wish to withdraw your data, I can use this code to find your answers thus maintaining your anonymity. The questionnaire will then ask you for some demographic information on your age, gender and ethnicity. The questionnaire will then ask you questions to determine if you are eligible to take part in this study by asking you about the number of years you have been practicing as a full-time GP before accessing the questionnaires. The questionnaires comprise questions on burnout, self-compassion, moral distress and psychological flexibility and should take no longer than 10-15 minutes to complete.

There are no right or wrong answers as this study is seeking ***your*** experience.

After completing the study, the information you have provided will be anonymised and collated with information provided by other GPs, which will then be statistically analysed to look for potential relationships between the different factors assessed. The results from this will then be written into a report.

Do I have to take part?

No. Participation is completely voluntary. You should only take part if you want to and choosing not to take part will not disadvantage you in anyway. Once you have read the information sheet, please contact us (details at the end of this information sheet) if you have any questions that will help you make a decision about taking part. If you decide to take part, you will be asked to digitally tick a consent form before being able to access the study questionnaires.

What are the possible risks of taking part?

We understand that it can be busy within clinical practice and this survey can require 10-15 minutes of your time. Additionally, this questionnaire may touch on some emotionally difficult areas. Your participation is voluntary and if you decide not to continue at any point, you may choose to withdraw from the study at any time up until 1st November 2023. You can discuss anything with us before, during, and after completion of the survey. On the final page of this

form, you will find some relevant reading and a list of organisations to contact for support if you are affected by this study.

What are the possible benefits of taking part?

There are no direct benefits in taking part in the research. It is hoped this research will help to further highlight the factors that impact on burnout in GPs and thus broaden our understanding of this important area and suggest potential interventions to mitigate distress and burnout.

Data handling and confidentiality

Your data will be processed in accordance with the data protection law and will comply with the General Data Protection Regulation 2016 (GDPR).

All data will be fully anonymised and assigned to a unique identifier that is generated by yourself, rather than identified by your name and will be kept in a secure location at all times. Both myself and my thesis supervisor, Dr Helen Scott (who will only have access to anonymised data), will have access to the data for analysis and potential publication purposes. It may also be possible that Staffordshire University require access to some data too for audit purposes. Electronic copies will be stored on a password-protected university computer in encrypted files in line with the British Psychological Society's code of ethics and University policy. As data will be combined, it will not be possible to identify any individual in any publication arising from this research. All of the data will be stored securely by the university for 10 years in line with university guidelines, and destroyed thereafter. Should the data need to be transferred, a data transfer agreement will be in place, which will ensure that data continues to be held in compliance with GDPR (UK data protection standards).

Data Protection Statement

The data controller for this project will be Staffordshire University. The University will process your personal data for the purpose of the research outlined above. The legal basis for processing your personal data for research purposes under the data protection law is a 'task in the public interest' You can provide your consent for the use of your personal data in this study by completing the consent form that has been provided to you.

What if I change my mind about taking part?

You are free withdraw at any point of the study, without having to give a reason. Withdrawing from the study will not affect you in any way. You can withdraw your data from the study up until **1st November** 2023, after which withdrawal of your data will no longer be possible as the data will have been combined for analysis.

If you choose to withdraw from the study, we will not retain any information that you have provided us as part of this study. To withdraw, please email me using the email address linked

below and reference your unique identification number and state that you would like to withdraw from the study.

What will happen to the results of the study?

Once all the information has been collected and analysed, the findings may be published in a peer-reviewed academic journal. We also may aim to share the results with other healthcare professionals and researchers at conferences. Finally, a summary report of the findings will also be written for participants. If you would like a copy of this summary, please let me know by contacting me via email by 1st June 2024, and I will ensure that you will receive this once the study has finished. We will need to retain your contact details in order to send this to you.

Should you be interested, sources of support for mental health concerns and physician burnout include:

General sources of support

- Mind: you can find the phone number and email address for your local service on https://www.mind.org.uk/information-support/local-minds/
- Samaritans: https://www.samaritans.org/how-we-can-help/health-and-care/. Samaritans are open day or night for free calls on 116 123
- SHOUT: Text 85258 – this is a free 24/7 mental health text support service. https://giveusashout.org/

GP specific sources of support

- https://physicianburnout.co.uk/
- https://www.generalpracticesurvival.com/
- https://www.gponline.com/gps-access-help-support-struggling-cope/article/1453723
- https://www.bma.org.uk/advice-and-support/your-wellbeing/wellbeing-support-services/counselling-and-peer-support-services

Who should I contact for further information?

If you have any questions or require more information about this study, please contact me using the following contact details:

Rukhsaar Bux (Trainee Clinical Psychologist)
Email b026109l@student.staffs.ac.uk

If you prefer, you can contact my research supervisor, Dr Helen Scott:
Dr Helen Scott (Research Supervisor, Research Director, and Clinical Psychologist)

Email H.Scott@staffs.ac.uk
Work Phone 01782 294021

What if I have further questions, or if something goes wrong?

If this study has harmed you in any way or if you wish to make a complaint about the conduct of the study you can contact the study supervisor or the head of university research:

Professor Nachi Chockalingham (Director of Research)
Email: n.chockalingam@staffs.ac.uk

Thank you for reading this information sheet and for considering taking part in this research.

Consent Form

RESEARCH PROJECT CONSENT FORM

Title of Project: Predicting Burnout in UK-based GPs during Covid-19: Are Moral Distress, Self-Compassion, Psychological Flexibility, and time in practice factors?

Researcher: Rukhsaar Bux

I have read and understood the information sheet, have been given the opportunity to ask questions, and have had these answered satisfactorily.	Yes ☐	No ☐
I confirm that I am eligible to participate in the study based on the inclusion criteria presented	Yes ☐	No ☐
I understand that my participation in this study is entirely voluntary and that I can withdraw at any time before 1st November 2023 without having to give an explanation.	Yes ☐	No ☐
I understand that the questionnaire answers will be collected and used for analysis.	Yes ☐	No ☐
I consent that data collected could be used for publication in a scientific journal or could be presented in scientific forums (conferences,	Yes ☐	No ☐

seminars, workshops) or can be used for teaching purposes and future research, but I understand that all data will be presented anonymously.		
I understand that anonymised data will be looked at by the researcher, research supervisor, and may be audited by the university for quality control purposes. I give permission for this.	Yes ☐	No ☐
I understand that All data will be sorted safely on a password protected computer (electronic data) or locked away securely (hard copies of data) for 10 years before being destroyed.	Yes ☐	No ☐
I hereby give consent to take part in this study	Yes ☐	No ☐

Appendix E: Demographics Form and Questionnaire

Demographics Form

Please answer the following questions:

	Yes (1)	No (2)
Are you currently practicing as a General Practitioner in the UK?	o	o
Is this a full time role, or (if working in multiple jobs) does this equate to a full time role?	o	o
Have you been working as a full time GP for at least the last 4 years?	o	o

What is your age?

What gender do you identify as?

What ethnicity do you identify as?

Please come up with a Unique Identification Code that we can associate your data to. For example "Purple23"

In months, how long have you been working as a GP?

Maslach Burnout Inventory

On the page below, there will be 22 statements of job-related feelings. Please read each statement carefully and decide if you ever feel this way about *your* job.

The term **recipients here refers to service users or patients** whom you provide your service, care, treatment, or instruction to. When answering this survey, please think of these people as recipients of the service you provide, even though you may use another term in your work.

	Never (0)	A few times a year or less (1)	Once a month or less (2)	A few times a month (3)	Once a week (4)	A few times a week (5)	Everyday (6)
I feel emotionally drained from my work.	o	o	o	o	o	o	o
I feel used up at the end of the workday.	o	o	o	o	o	o	o
I feel fatigued when I get up in the morning and have to face another day on the job.	o	o	o	o	o	o	o
I can easily understand how my recipients feel about things	o	o	o	o	o	o	o
I feel I treat some recipients as if they were impersonal objects.	o	o	o	o	o	o	o
Working with people	o	o	o	o	o	o	o

all day is really a strain for me.							
I deal very effectively with the problems of my recipients.	o	o	o	o	o	o	o
I feel burned out from my work	o	o	o	o	o	o	o
I feel I'm positively influencing other people's lives through my work.	o	o	o	o	o	o	o
I've become more callous toward people since I took this job.	o	o	o	o	o	o	o
I worry that this job is hardening me emotionally.	o	o	o	o	o	o	o
I feel very energetic.	o	o	o	o	o	o	o

I feel frustrated by my job.	o	o	o	o	o	o	o
I feel I'm working too hard on my job.	o	o	o	o	o	o	o
I don't really care what happens to some recipients.	o	o	o	o	o	o	o
Working with people directly puts too much stress on me.	o	o	o	o	o	o	o
I can easily create a relaxed atmosphere with my recipients.	o	o	o	o	o	o	o
I feel exhilarated after working closely with my recipients.	o	o	o	o	o	o	o
I have accomplished many worthwhile things in this job.	o	o	o	o	o	o	o

I feel like I'm at the end of my rope.	o	o	o	o	o	o	o
In my work, I deal with emotional problems very calmly.	o	o	o	o	o	o	o
I feel recipients blame me for some of their problems.	o	o	o	o	o	o	o

Measure of Moral Distress for Healthcare Professionals

Moral distress occurs when professionals cannot carry out what they believe to be ethically appropriate actions because of constraints or barriers. This survey lists situations that occur in clinical practice. If you have experienced these situations they may or may not have been morally distressing to you. Please indicate how frequently you have experienced each item. Also, rank how distressing these situations are for you. If you have never experienced a particular situation, select "Never" for frequency. Even if you have not experienced a situation, please indicate how distressed you *would* be if it occurred in your practice.

Please note that you must respond to each item by checking the appropriate column for <u>two</u> dimensions: Frequency and Level of Distress. <u>If you are using your phone, you may find it easier to complete these questions with your phone on it's "landscape mode".</u>

	Frequency					Level of Distress				
	0 (0)	1 (1)	2 (2)	3 (3)	4 (4)	0 (0)	1 (1)	2 (2)	3 (3)	4 (5)
Witness healthcare providers giving “false hope” to a patient or family.	o	o	o	o	o	o	o	o	o	o

Follow the family's insistence to continue aggressive treatment even though I believe it is not in the best interest of the patient.	o	o	o	o	o	o	o	o	o	o
Feel pressured to order or carry out orders for what I consider to be unnecessary or inappropriate tests and treatments.	o	o	o	o	o	o	o	o	o	o
Be unable to provide optimal care due to pressures from administrators or insurers to reduce costs.	o	o	o	o	o	o	o	o	o	o
Continue to provide aggressive treatment for a person who is most likely to die regardless of this treatment when no one will make a	o	o	o	o	o	o	o	o	o	o

decision to withdraw it.										
Be pressured to avoid taking action when I learn that a physician, nurse, or other team colleague has made a medical error and does not report it.	o	o	o	o	o	o	o	o	o	o
Be required to care for patients whom I do not feel qualified to care for.	o	o	o	o	o	o	o	o	o	o
Participate in care that causes unnecessary suffering or does not adequately relieve pain or symptoms.	o	o	o	o	o	o	o	o	o	o
Watch patient care suffer because of a lack of provider continuity.	o	o	o	o	o	o	o	o	o	o
Follow a physician's or family member's	o	o	o	o	o	o	o	o	o	o

request not to discuss the patient's prognosis with the patient/family.										
Witness a violation of a standard of practice or a code of ethics and not feel sufficiently supported to report the violation.	o	o	o	o	o	o	o	o	o	o
Participate in care that I do not agree with, but do so because of fears of litigation.	o	o	o	o	o	o	o	o	o	o
Be required to work with other healthcare team members who are not as competent as patient care requires.	o	o	o	o	o	o	o	o	o	o
Witness low quality of patient care due to poor team communication.	o	o	o	o	o	o	o	o	o	o

Feel pressured to ignore situations in which patients have not been given adequate information to ensure informed consent.	o	o	o	o	o	o	o	o	o	o
Be required to care for more patients than I can safely care for.	o	o	o	o	o	o	o	o	o	o
Experience compromised patient care due to lack of resources/equipment/bed capacity.	o	o	o	o	o	o	o	o	o	o
Experience lack of administrative action or support for a problem that is compromising patient care.	o	o	o	o	o	o	o	o	o	o
Have excessive documentation requirements that compromise patient care.	o	o	o	o	o	o	o	o	o	o

Fear retribution if I speak up.	o	o	o	o	o	o	o	o	o	o
Feel unsafe/bullied amongst my own colleagues.	o	o	o	o	o	o	o	o	o	o
Be required to work with abusive patients/family members who are compromising quality of care.	o	o	o	o	o	o	o	o	o	o
Feel required to overemphasize tasks and productivity or quality measures at the expense of patient care.	o	o	o	o	o	o	o	o	o	o
Be required to care for patients who have unclear or inconsistent treatment plans or who lack goals of care.	o	o	o	o	o	o	o	o	o	o
Work within power hierarchies in teams, units,	o	o	o	o	o	o	o	o	o	o

and my institution that compromise patient care.										
Participate on a team that gives inconsistent messages to a patient/family.	o	o	o	o	o	o	o	o	o	o
Work with team members who do not treat vulnerable or stigmatized patients with dignity and respect.	o	o	o	o	o	o	o	o	o	o

Personalised Psychological Flexibility Index

For each statement below, select the rating that best describes YOUR thoughts and feelings about your "goal". **The term "goal" here refers to your job as a General Practitioner.**

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree Nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
This goal is central to my life.	o	o	o	o	o	o	o

I find this goal challenging.	o	o	o	o	o	o	o
I feel stressed pursuing this goal.	o	o	o	o	o	o	o
I experience negative emotions while pursuing this goal (such as anxiety, frustration, guilt, anger, disappointment).	o	o	o	o	o	o	o
I avoid the most difficult goal-related tasks.	o	o	o	o	o	o	o
I put off pursuing this goal when I could be doing a more enjoyable task.	o	o	o	o	o	o	o
When I feel stressed pursuing this goal, I give up.	o	o	o	o	o	o	o
I get so caught up in thoughts and feelings that I am unable to pursue this goal.	o	o	o	o	o	o	o

When I feel discouraged, I let my commitment for this goal slide.	o	o	o	o	o	o	o
I accept the setbacks while pursuing this goal.	o	o	o	o	o	o	o
While pursuing this goal, I try to accept my negative thoughts and feelings rather than resist them.	o	o	o	o	o	o	o
I am willing to experience negative thoughts and emotions related to this goal.	o	o	o	o	o	o	o
I accept things I cannot change about this goal.	o	o	o	o	o	o	o
While pursuing this goal, I can observe unpleasant feelings without being	o	o	o	o	o	o	o

drawn into them.							
When faced with obstacles related to this goal, my frustration serves to energize me.	o	o	o	o	o	o	o
I find worrying helpful to solving goal-related problems.	o	o	o	o	o	o	o
When people distract me from this goal, I use any anger that arises to stay focused.	o	o	o	o	o	o	o
I get motivated by guilt when I fail to meet my own expectations pursuing this goal.	o	o	o	o	o	o	o
I find unpleasant emotions useful for reaching this goal.	o	o	o	o	o	o	o

Self-Compassion Scale

SCS Please read each statement carefully before answering. For each item, indicate how often you behave in the stated manner, using the following 1-5 scale. Please answer according to what really reflects your experience rather than what you think your experience should be.

	Almost never (1)	Occasionally (2)	Sometimes (3)	Often (4)	Almost always (5)
When I fail at something important to me I become consumed by feelings of inadequacy.	o	o	o	o	o
I try to be understanding and patient towards those aspects of my personality I don't like.	o	o	o	o	o
When something painful happens I try to take a balanced view of the situation.	o	o	o	o	o
When I'm feeling down, I tend to feel like most other people are probably happier than I am.	o	o	o	o	o
I try to see my failings as part of the human condition.	o	o	o	o	o

When I'm going through a very hard time, I give myself the caring and tenderness I need.	o	o	o	o	o
When something upsets me I try to keep my emotions in balance.	o	o	o	o	o
When I fail at something that's important to me, I tend to feel alone in my failure	o	o	o	o	o
When I'm feeling down I tend to obsess and fixate on everything that's wrong.	o	o	o	o	o
When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.	o	o	o	o	o

I'm disapproving and judgmental about my own flaws and inadequacies	o	o	o	o	o
I'm intolerant and impatient towards those aspects of my personality I don't like.	o	o	o	o	o

Appendix F: Debrief Form

Title of study: Predicting Burnout in UK-based GPs during Covid-19: Are Moral Distress, Self-Compassion, Psychological Flexibility, and time in practice factors?

Thank you for participating in this study. This study was looking into the levels of burnout in UK-based GPs since COVID-19 and how factors like moral distress (distress linked to powerlessness in a professional situation that goes against one's own ethics and values), self-compassion, time in practice, and psychological flexibility may affect this.

As a reminder - all anonymised data will be kept in encrypted files that only my supervisor and I will have access to, on an encrypted university computer to ensure full security. The data will be destroyed in a secure manner after 10 years of completing this study.

If you no longer wish for your data to be used as a part of this study, then please contact me using the contact information provided below before 1st November 2023. Please email me with your unique identifier that you set at the beginning of this survey, to let me know that you wish to withdraw your data.

If you are interested in burnout and want to know more, please look at the recommended reading below:

- https://www.guidelinesinpractice.co.uk/your-practice/gp-burnout-how-much-of-a-threat-is-it-to-doctors-and-their-patients/455091.article
- https://www.gponline.com/burnout-risk-gp-trainees-trainers-spiked-2022-gmc-survey-reveals/article/1793437

Other mental health support:

- Mind: you can find the phone number and email address for your local service on https://www.mind.org.uk/information-support/local-minds/
- Samaritans: https://www.samaritans.org/how-we-can-help/health-and-care/. Samaritans are open day or night for free calls on 116 123
- SHOUT: Text 85258 – this is a free 24/7 mental health text support service. https://giveusashout.org/

If you feel like you have been affected by this study or are experiencing burnout or other work-related distress, you may find the following websites and contacts to be helpful:

- https://physicianburnout.co.uk/
- https://www.generalpracticesurvival.com/
- https://www.gponline.com/gps-access-help-support-struggling-cope/article/1453723
- https://www.bma.org.uk/advice-and-support/your-wellbeing/wellbeing-support-services/counselling-and-peer-support-services

If you have any questions about this research study, please feel free to email me or my supervisor about this using our contact details provided below:

Contacts and further information
Rukhsaar Bux (Trainee Clinical Psychologist)

Email b026109l@student.staffs.ac.uk

Dr Helen Scott (Research Supervisor, Research Director, and Clinical Psychologist)
Email H.Scott@staffs.ac.uk
Work Phone 01782 294021

Please remember to click the button below to submit your data. Thank you!

Appendix G: Cronbach's Alpha Calculations for Internal Consistency

Cronbach's Alpha calculation for the Maslach Burnout Inventory

Reliability Statistics

Cronbach's Alpha	N of Items
.763	22

Cronbach's Alpha calculation for the Measure of Moral Distress

Reliability Statistics

Cronbach's Alpha	N of Items
.955	54

Cronbach's Alpha calculation for the Self Compassion Scale

Reliability Statistics

Cronbach's Alpha	N of Items
.891	12

Cronbach's Alpha calculation for the Personalised Psychological Flexibility Inventory

Reliability Statistics

Cronbach's Alpha	N of Items
.707	14

Appendix H: Permission To Use Measures

Permission to use the Maslach Burnout Inventory

MBI-Human Services Survey

Christina Maslach & Susan E. Jackson

The purpose of this survey is to discover how various persons In the human services, or helping professionals view their job and the people with whom they work closely.

Because persons in a wide variety of occupations will answer this survey, it uses the term *recipients* to refer to the people for whom you provide your service, care, treatment, or instruction. When answering this survey please think of these people as recipients of the service you provide, even though you may use another term in your work.

Instructions: On the following pages are 22 statements of job-related feelings. Please read each statement carefully and decide if you ever feel this way about *your* job. If you have *never* had this feeling, write the number "0" (zero) in the space before the statement. If you have had this feeling, indicate *how often* you feel it by writing the number (from 1 to 6) that best describes how frequently you feel that way. An example is shown below.

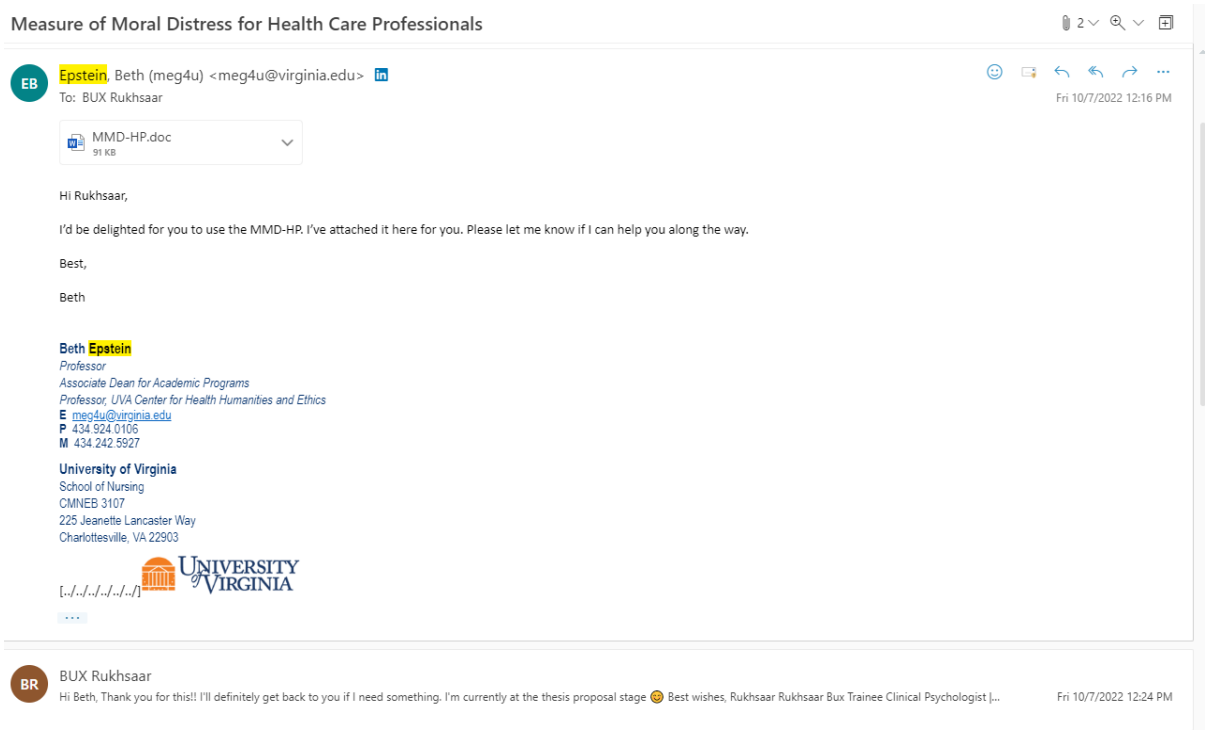
Example:

How often:	**0**	**1**	**2**	**3**	**4**	**5**	**6**
	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

How Often 0-6	**Statement:**
1. _____	I feel depressed at work.

If you never feel depressed at work, you would write the number "0" (zero) under the heading "How Often." If you rarely feel depressed at work (a few times a year or less), you would write the number "1." If your feelings of depression are fairly frequent (a few times a week but not daily), you would write the number "5."

Permission to use the Measure of Moral Distress for Healthcare Practitioners



Measure of Moral Distress for Health Care Professionals

EB Epstein, Beth (meg4u) <meg4u@virginia.edu>
To: BUX Rukhsaar
Fri 10/7/2022 12:16 PM

MMD-HP.doc
91 KB

Hi Rukhsaar,

I'd be delighted for you to use the MMD-HP. I've attached it here for you. Please let me know if I can help you along the way.

Best,

Beth

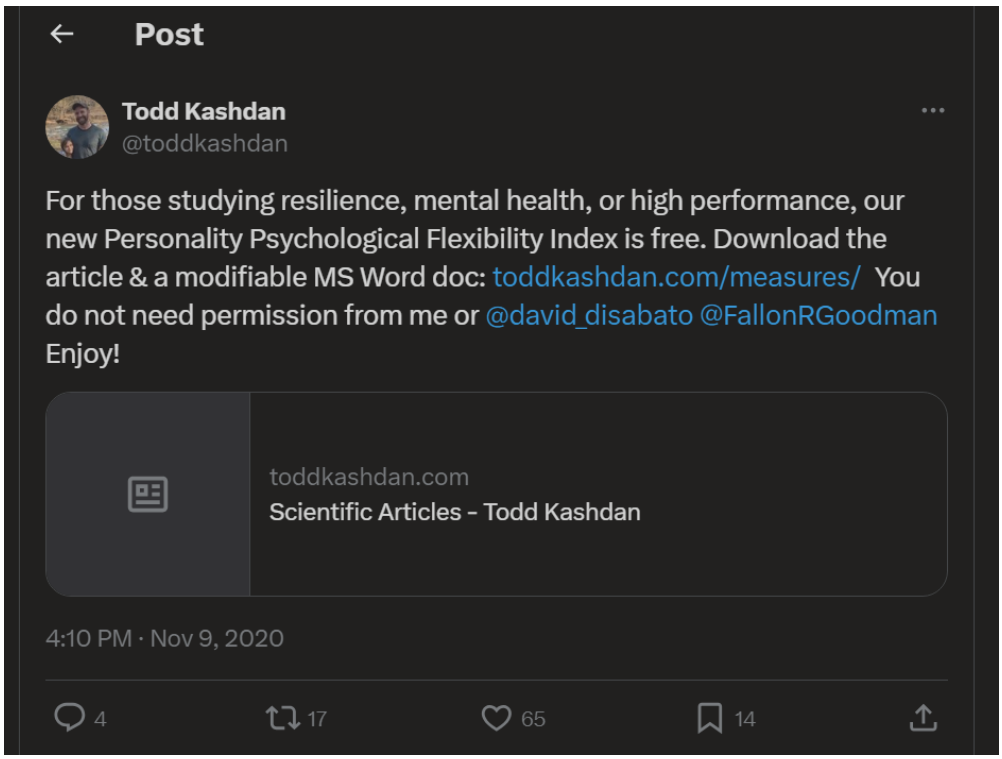
Beth Epstein
Professor
Associate Dean for Academic Programs
Professor, UVA Center for Health Humanities and Ethics
E meg4u@virginia.edu
P 434.924.0106
M 434.242.5927

University of Virginia
School of Nursing
CMNEB 3107
225 Jeanette Lancaster Way
Charlottesville, VA 22903

[../../../../../../]

BR BUX Rukhsaar
Hi Beth, Thank you for this!! I'll definitely get back to you if I need something. I'm currently at the thesis proposal stage Best wishes, Rukhsaar Rukhsaar Bux Trainee Clinical Psychologist |... Fri 10/7/2022 12:24 PM

Permission to use the Personalised Psychological Flexibility Index



Post

Todd Kashdan
@toddkashdan

For those studying resilience, mental health, or high performance, our new Personality Psychological Flexibility Index is free. Download the article & a modifiable MS Word doc: toddkashdan.com/measures/ You do not need permission from me or @david_disabato @FallonRGoodman Enjoy!

toddkashdan.com
Scientific Articles - Todd Kashdan

4:10 PM · Nov 9, 2020

4 17 65 14

Permission to use Self Compassion Scale

The University of Texas at Austin
Educational Psychology
College of Education

1912 Speedway, STE 504, Austin, Texas, 78712-1289 • Mail Code: D5800 • (512) 471-4155 • Fax (512) 471-1288

To Whom It May Concern:

Dr. Kristin Neff grants permission to use the Self-Compassion Scale (Neff, 2003) for any purpose whatsoever, including research, clinical work, teaching, etc. Please cite:

Neff, K. D. (2003). Development and validation of a scale to measure self-compassion. *Self and Identity*, 2, 223-250.

Permission is also given to translate the Self-Compassion Scale using the analytic approach to validate the factor structure that was established in:

Neff, K. D., Tóth-Király, I., Yarnell, L., Arimitsu, K., Castilho, P., Ghorbani, N.,… Mantios, M. (2019). Examining the Factor Structure of the Self-Compassion Scale using exploratory SEM bifactor analysis in 20 diverse samples: Support for use of a total score and six subscale scores. *Psychological Assessment, 31 (1), 27-45.*

Best wishes,

Kristin Neff, PhD

Appendix I: Correlations

Correlations

		MBI_EmotionalExhaustion	PPFI_AvoidanceScale	PPFI_AcceptanceScale	MMDHSS_TotalMoralDistress	Time_inPractice	SelfCompassion_Total	PPFI_HarnessingScale
Pearson Correlation	MBI_EmotionalExhaustion	1.000	-.331	-.217	.454	-.008	.259	-.014
	PPFI_AvoidanceScale	-.331	1.000	.229	-.156	.150	-.009	-.030
	PPFI_AcceptanceScale	-.217	.229	1.000	-.153	-.031	.046	.257
	MMDHSS_TotalMoralDistress	.454	-.156	-.153	1.000	-.036	.399	.050
	Time_inPractice	-.008	.150	-.031	-.036	1.000	-.151	.011
	SelfCompassion_Total	.259	-.009	.046	.399	-.151	1.000	.148
	PPFI_HarnessingScale	-.014	-.030	.257	.050	.011	.148	1.000
Sig. (1-tailed)	MBI_EmotionalExhaustion	.	<.001	.022	<.001	.472	.008	.450
	PPFI_AvoidanceScale	.001	.	.016	.074	.083	.467	.392
	PPFI_AcceptanceScale	.022	.016	.	.079	.389	.337	.008
	MMDHSS_TotalMoralDistress	.000	.074	.079	.	.372	.000	.324
	Time_inPractice	.472	.083	.389	.372	.	.081	.461
	SelfCompassion_Total	.008	.467	.337	.000	.081	.	.086
	PPFI_HarnessingScale	.450	.392	.008	.324	.461	.086	.
N	MBI_EmotionalExhaustion	87	87	87	87	87	87	87
	PPFI_AvoidanceScale	87	87	87	87	87	87	87
	PPFI_AcceptanceScale	87	87	87	87	87	87	87
	MMDHSS_TotalMoralDistress	87	87	87	87	87	87	87
	Time_inPractice	87	87	87	87	87	87	87
	SelfCompassion_Total	87	87	87	87	87	87	87
	PPFI_HarnessingScale	87	87	87	87	87	87	87

Appendix J: Emotional Exhaustion Regression Output

Multiple regression model for emotional exhaustion using the 6 predictor variables (n=87).

Descriptive Statistics

	Mean	Std. Deviation	N
MBI_EmotionalExhaustion	37.5747	11.57446	87
PPFI_AvoidanceScale	24.5287	6.60662	87
PPFI_AcceptanceScale	21.7471	5.44148	87
MMDHSS_TotalMoralDistress	152.0805	86.65210	87
Time_inPractice	175.66	91.338	87
SelfCompassion_Total	3.2241379311	.43307057190	87
PPFI_HarnessingScale	14.8851	4.59379	87

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.549[a]	.301	.249	10.03011	2.170

a. Predictors: (Constant), PPFI_HarnessingScale, Time_inPractice, MMDHSS_TotalMoralDistress, PPFI_AvoidanceScale, PPFI_AcceptanceScale, SelfCompassion_Total

b. Dependent Variable: MBI_EmotionalExhaustion

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3473.009	6	578.835	5.754	<.001[b]
	Residual	8048.255	80	100.603		
	Total	11521.264	86			

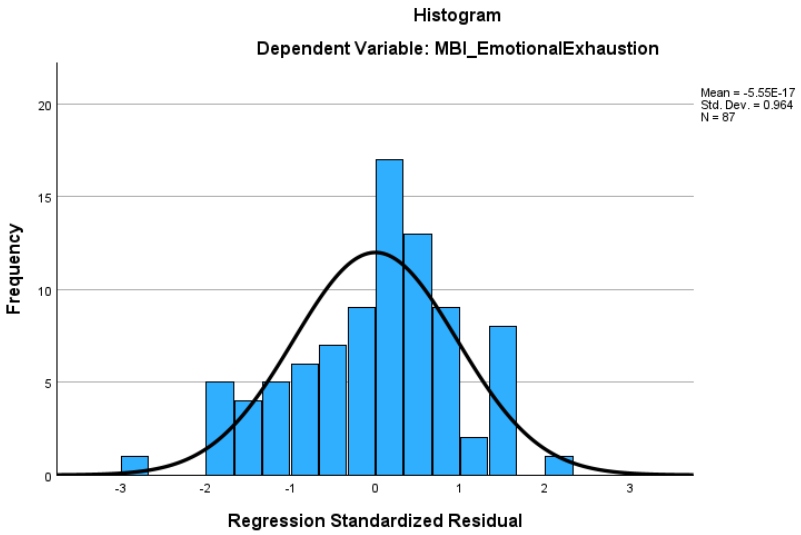
a. Dependent Variable: MBI_EmotionalExhaustion

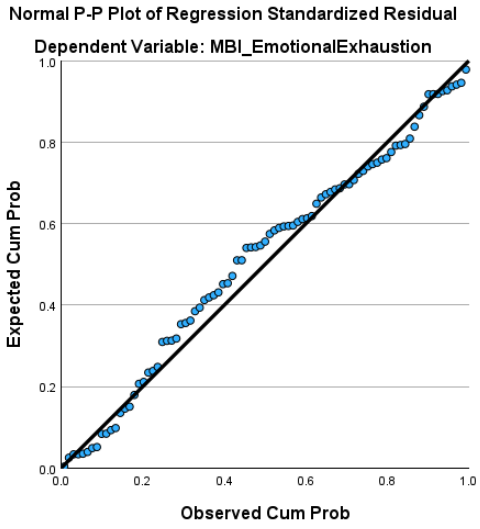
b. Predictors: (Constant), PPFI_HarnessingScale, Time_inPractice, MMDHSS_TotalMoralDistress, PPFI_AvoidanceScale, PPFI_AcceptanceScale, SelfCompassion_Total

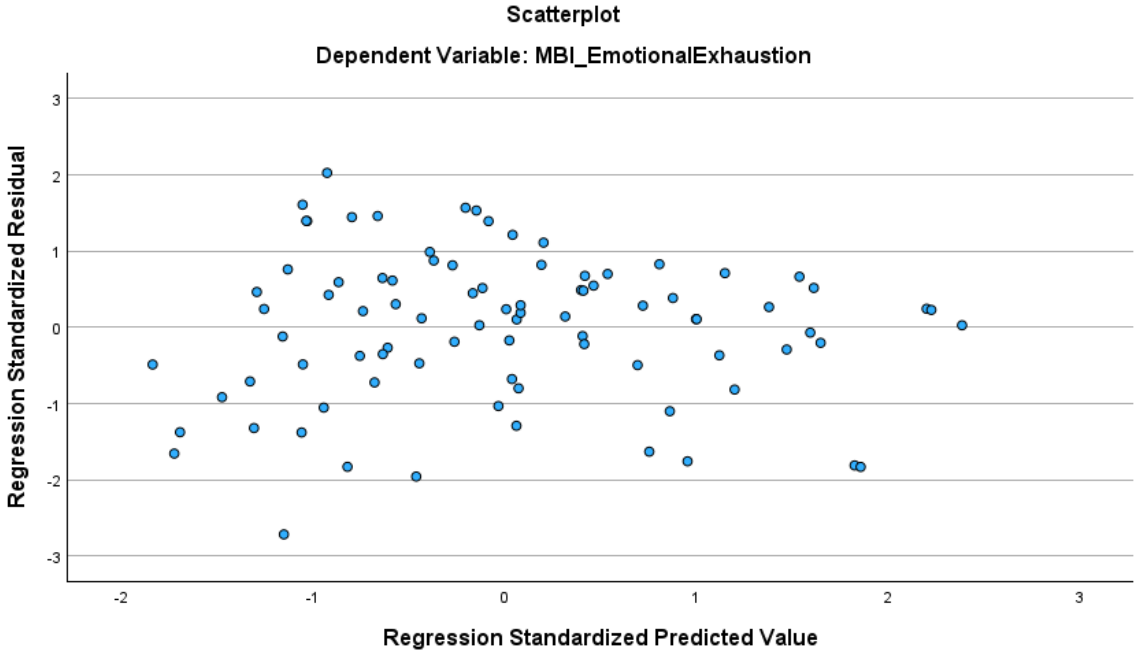
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	34.532	10.177		3.393	.001	14.280	54.784					
	PPFI_AvoidanceScale	-.461	.173	-.263	-2.667	.009	-.805	-.117	-.331	-.286	-.249	.898	1.114
	PPFI_AcceptanceScale	-.212	.215	-.100	-.986	.327	-.641	.216	-.217	-.110	-.092	.853	1.173
	MMDHSS_TotalMoralDistress	.046	.014	.347	3.308	.001	.018	.074	.454	.347	.309	.796	1.257
	Time_inPractice	.008	.012	.062	.648	.519	-.016	.032	-.008	.072	.061	.947	1.056
	SelfCompassion_Total	3.663	2.799	.137	1.309	.194	-1.907	9.233	.259	.145	.122	.796	1.256
	PPFI_HarnessingScale	-.085	.248	-.034	-.345	.731	-.578	.407	-.014	-.039	-.032	.904	1.106

a. Dependent Variable: MBI_EmotionalExhaustion


Histogram
Dependent Variable: MBI_EmotionalExhaustion
Mean = -5.55E-17
Std. Dev. = 0.964
N = 87
Frequency
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: MBI_EmotionalExhaustion
Expected Cum Prob
Observed Cum Prob


Scatterplot
Dependent Variable: MBI_EmotionalExhaustion
Regression Standardized Residual
Regression Standardized Predicted Value

Multiple regression model for emotional exhaustion using the 2 significant predictor variables (n=87).

Correlations

		MBI_EmotionalExhaustion	PPFI_AvoidanceScale	MMDHSS_TotalMoralDistress
Pearson Correlation	MBI_EmotionalExhaustion	1.000	-.331	.454
	PPFI_AvoidanceScale	-.331	1.000	-.156
	MMDHSS_TotalMoralDistress	.454	-.156	1.000
Sig. (1-tailed)	MBI_EmotionalExhaustion	.	<.001	<.001
	PPFI_AvoidanceScale	.001	.	.074
	MMDHSS_TotalMoralDistress	.000	.074	.
N	MBI_EmotionalExhaustion	87	87	87
	PPFI_AvoidanceScale	87	87	87
	MMDHSS_TotalMoralDistress	87	87	87

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.525[a]	.275	.258	9.97072	2.140

a. Predictors: (Constant), MMDHSS_TotalMoralDistress, PPFI_AvoidanceScale

b. Dependent Variable: MBI_EmotionalExhaustion

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3170.376	2	1585.188	15.945	<.001[b]
	Residual	8350.888	84	99.415		
	Total	11521.264	86			

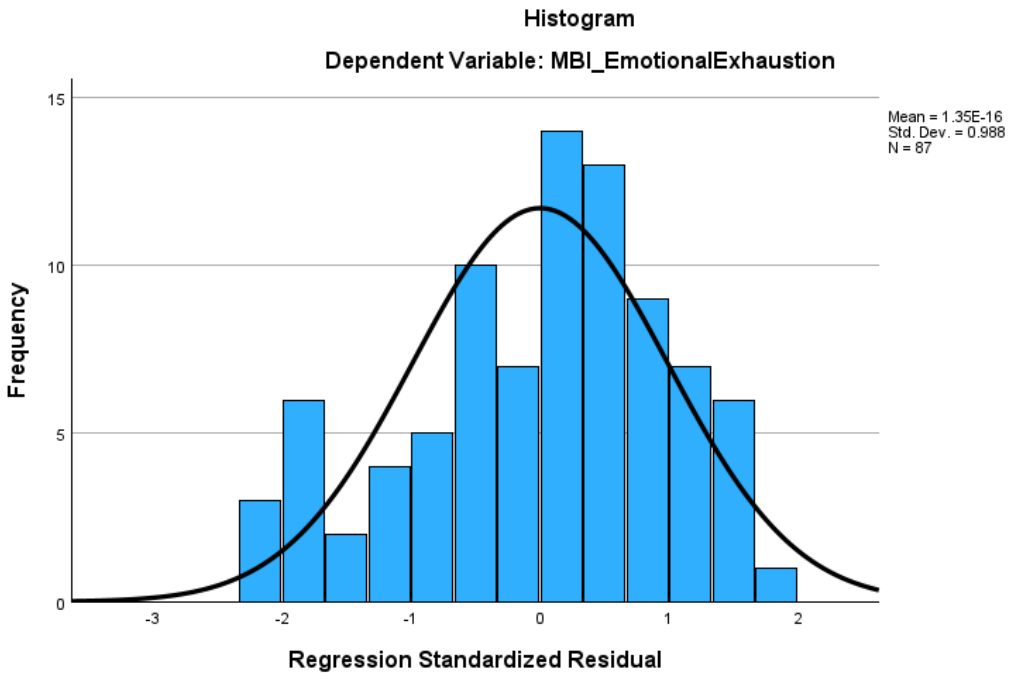
a. Dependent Variable: MBI_EmotionalExhaustion

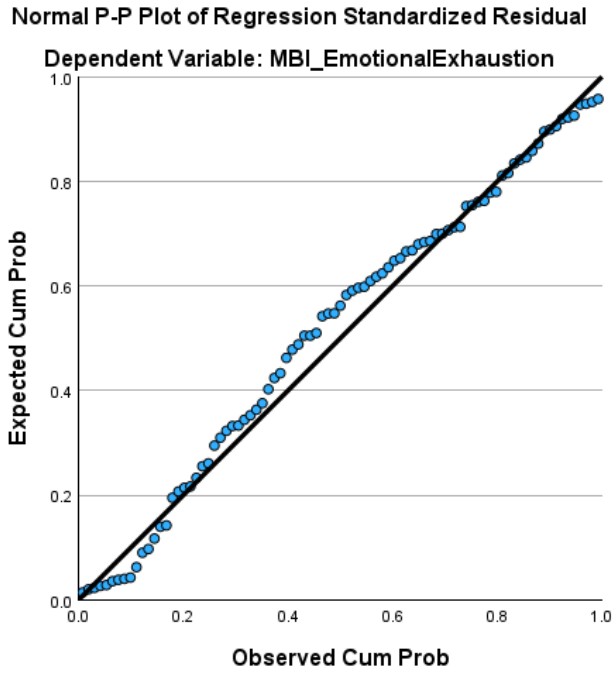
b. Predictors: (Constant), MMDHSS_TotalMoralDistress, PPFI_AvoidanceScale

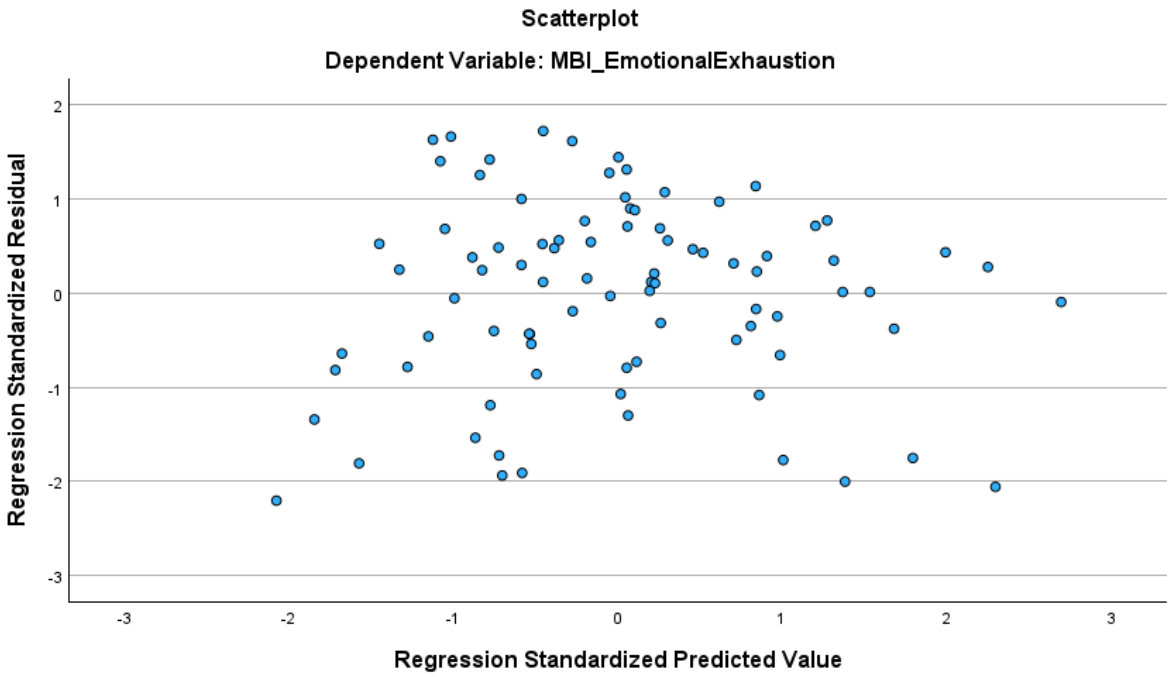
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	40.658	4.852		8.380	<.001	31.009	50.306					
	PPFI_AvoidanceScale	-.467	.165	-.267	-2.834	.006	-.795	-.139	-.331	-.295	-.263	.976	1.025
	MMDHSS_TotalMoralDistress	.055	.013	.412	4.381	<.001	.030	.080	.454	.431	.407	.976	1.025

a. Dependent Variable: MBI_EmotionalExhaustion


Histogram
Dependent Variable: MBI_EmotionalExhaustion
Mean = 1.35E-16
Std. Dev. = 0.988
N = 87
Frequency
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: MBI_EmotionalExhaustion
Expected Cum Prob
Observed Cum Prob


Scatterplot
Dependent Variable: MBI_EmotionalExhaustion
Regression Standardized Residual
Regression Standardized Predicted Value
2
1
0
-1
-2
-3
-3
-2
-1
0
1
2
3

Appendix K: Depersonalisation Regression Output

Multiple regression model for depersonalisation using the 6 predictor variables (n=87).

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.472[a]	.223	.164	6.76806	2.225

a. Predictors: (Constant), Time_inPractice, PPFI_HarnessingScale, MMDHSS_TotalMoralDistress, PPFI_AvoidanceScale, PPFI_AcceptanceScale, SelfCompassion_Total

b. Dependent Variable: MBI_Depersonalisation

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1049.144	6	174.857	3.817	.002[b]
	Residual	3664.534	80	45.807		
	Total	4713.678	86			

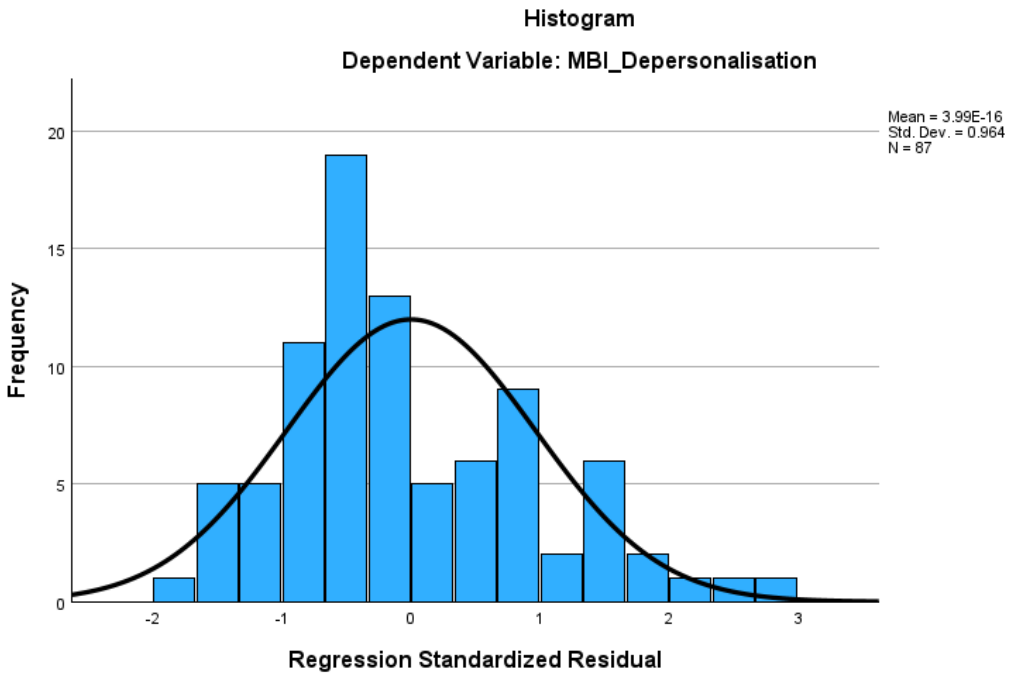
a. Dependent Variable: MBI_Depersonalisation

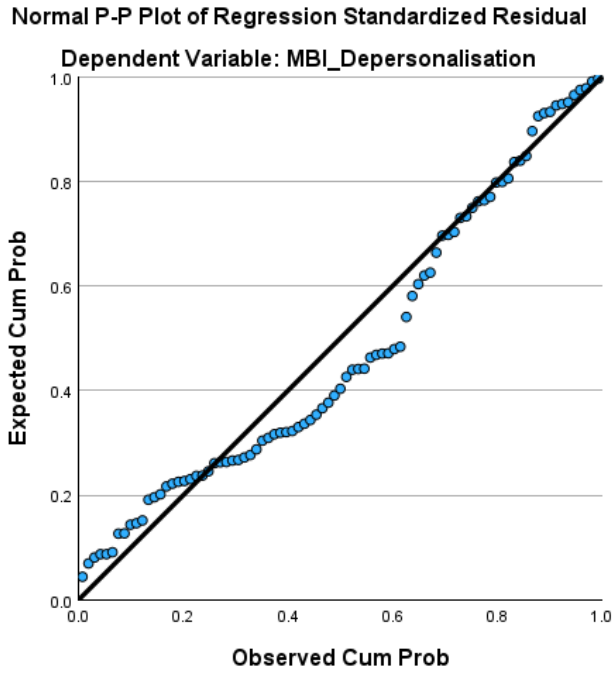
b. Predictors: (Constant), Time_inPractice, PPFI_HarnessingScale, MMDHSS_TotalMoralDistress, PPFI_AvoidanceScale, PPFI_AcceptanceScale, SelfCompassion_Total

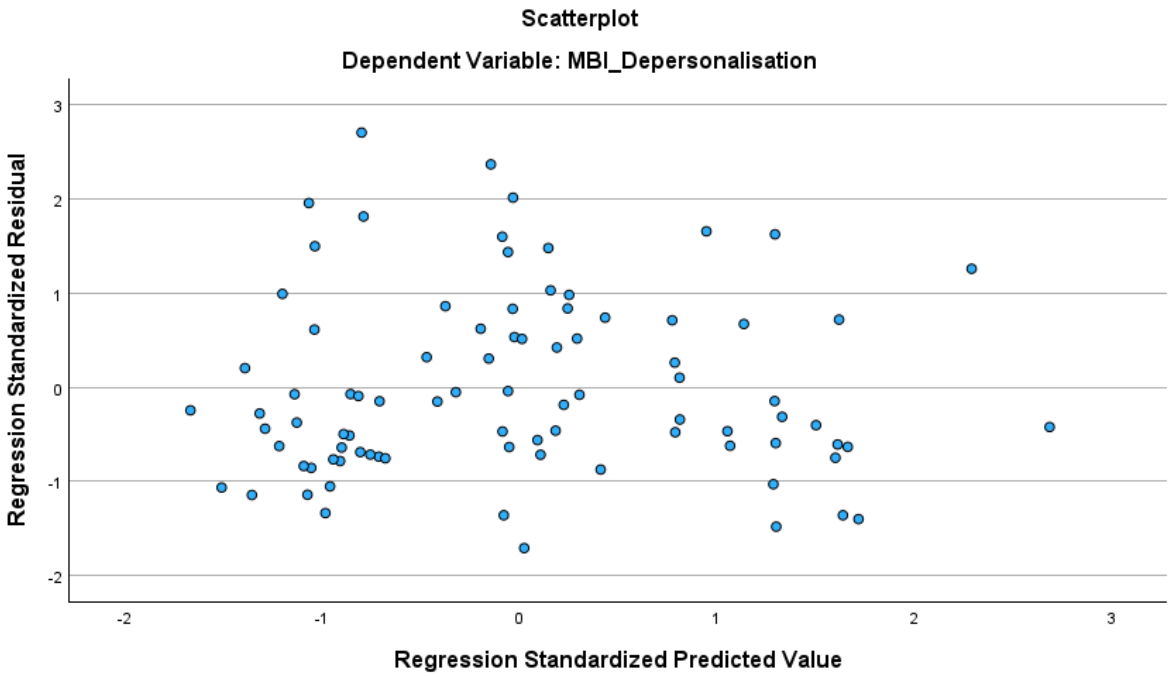
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	18.481	6.867		2.691	.009	4.816	32.147					
	PPFI_AvoidanceScale	-.423	.117	-.378	-3.630	<.001	-.655	-.191	-.416	-.376	-.358	.898	1.114
	PPFI_AcceptanceScale	-.136	.145	-.100	-.935	.353	-.425	.153	-.208	-.104	-.092	.853	1.173
	SelfCompassion_Total	1.882	1.889	.110	.997	.322	-1.876	5.640	.149	.111	.098	.796	1.256
	PPFI_HarnessingScale	-.048	.167	-.030	-.285	.777	-.380	.285	-.021	-.032	-.028	.904	1.106
	MMDHSS_TotalMoralDistress	.010	.009	.122	1.103	.273	-.008	.029	.238	.122	.109	.796	1.257
	Time_inPractice	.002	.008	.027	.264	.793	-.014	.019	-.048	.029	.026	.947	1.056

a. Dependent Variable: MBI_Depersonalisation


Histogram
Dependent Variable: MBI_Depersonalisation
Mean = 3.99E-16
Std. Dev. = 0.964
N = 87
Frequency
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: MBI_Depersonalisation
Expected Cum Prob
Observed Cum Prob



Bootstrap for coefficients

Bootstrap for Coefficients

Model		B	Bootstrap[a] Bias	Std. Error	Sig. (2-tailed)	95% Confidence Interval Lower	Upper
1	(Constant)	18.481	-.279	6.906	.011	5.218	32.482
	Time_inPractice	.002	.001	.009	.830	-.016	.020
	SelfCompassion_Total	1.882	.269	2.098	.377	-1.948	6.165
	PPFI_AvoidanceScale	-.423	-.005	.118	.002	-.668	-.210
	PPFI_AcceptanceScale	-.136	-.009	.163	.368	-.468	.185
	PPFI_HarnessingScale	-.048	-.019	.183	.809	-.453	.269
	MMDHSS_TotalMoralDistress	.010	-.001	.011	.344	-.013	.032

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Multiple regression model for depersonalisation using the only significant predictor variable (n=87).

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.416[a]	.173	.163	6.77282	2.258

a. Predictors: (Constant), PPFI_AvoidanceScale

b. Dependent Variable: MBI_Depersonalisation

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	814.634	1	814.634	17.759	<.001[b]
	Residual	3899.044	85	45.871		
	Total	4713.678	86			

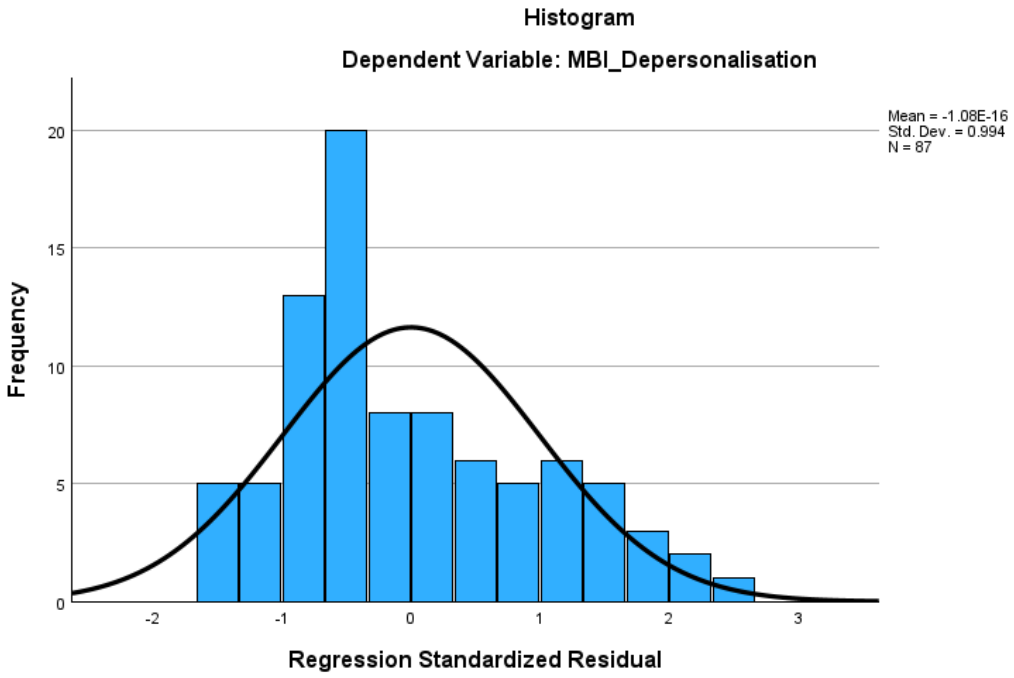
a. Dependent Variable: MBI_Depersonalisation

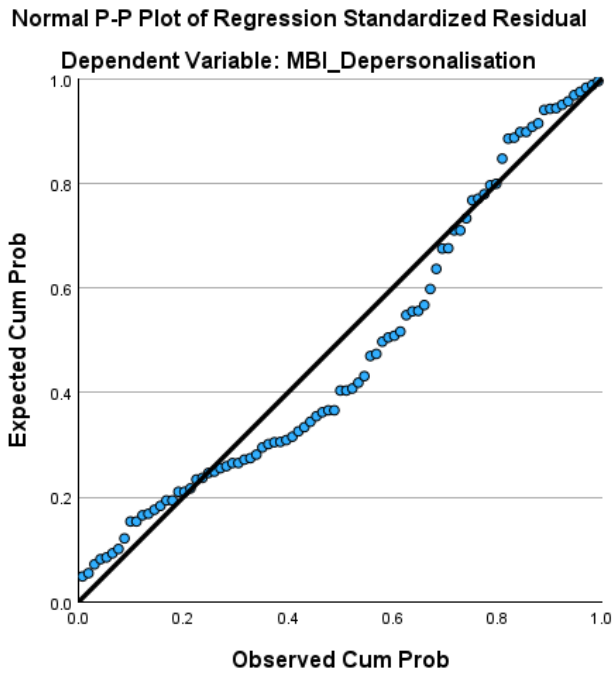
b. Predictors: (Constant), PPFI_AvoidanceScale

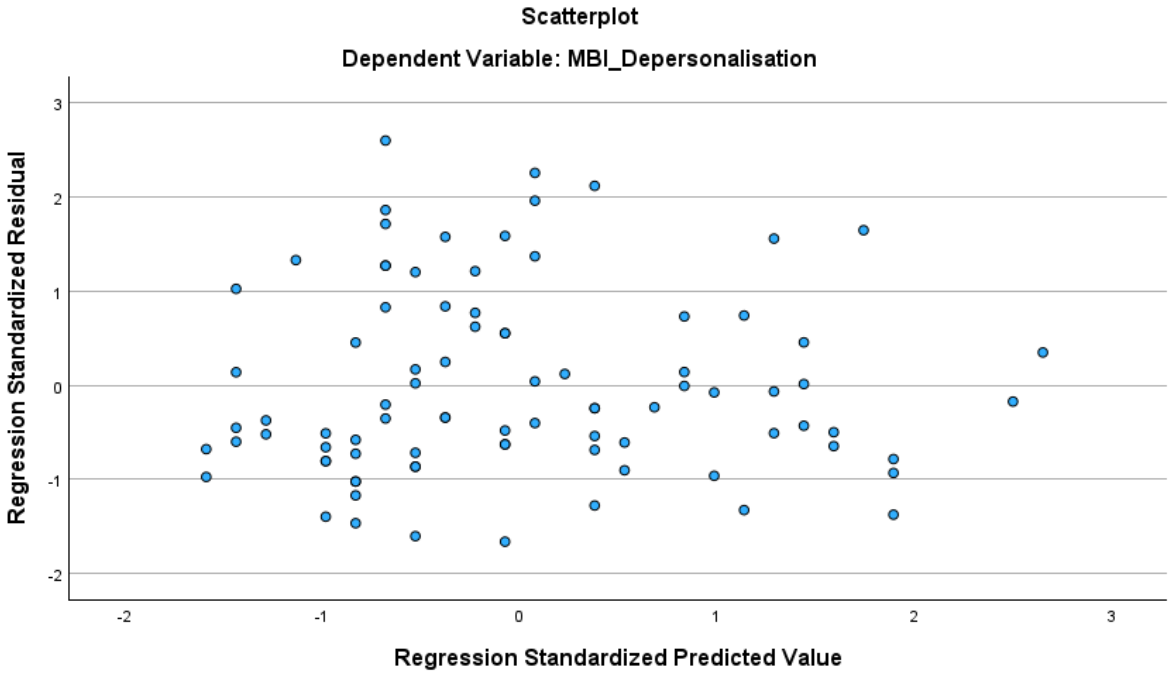
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	23.898	2.807		8.514	<.001					
	PPFI_AvoidanceScale	-.466	.111	-.416	-4.214	<.001	-.416	-.416	-.416	1.000	1.000

a. Dependent Variable: MBI_Depersonalisation




Normal P-P Plot of Regression Standardized Residual
Dependent Variable: MBI_Depersonalisation
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0


Scatterplot
Dependent Variable: MBI_Depersonalisation
Regression Standardized Residual
Regression Standardized Predicted Value
-2
-1
0
1
2
3

Appendix L: Personal Accomplishment Regression Output

Multiple regression model for personal accomplishment using the 6 predictor variables (n=87).

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.470[a]	.221	.163	5.89098	1.949

a. Predictors: (Constant), PPFI_HarnessingScale, Time_inPractice, MMDHSS_TotalMoralDistress, PPFI_AvoidanceScale, PPFI_AcceptanceScale, SelfCompassion_Total

b. Dependent Variable: MBI_PersonalAchievement

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	788.055	6	131.343	3.785	.002[b]
	Residual	2776.289	80	34.704		
	Total	3564.345	86			

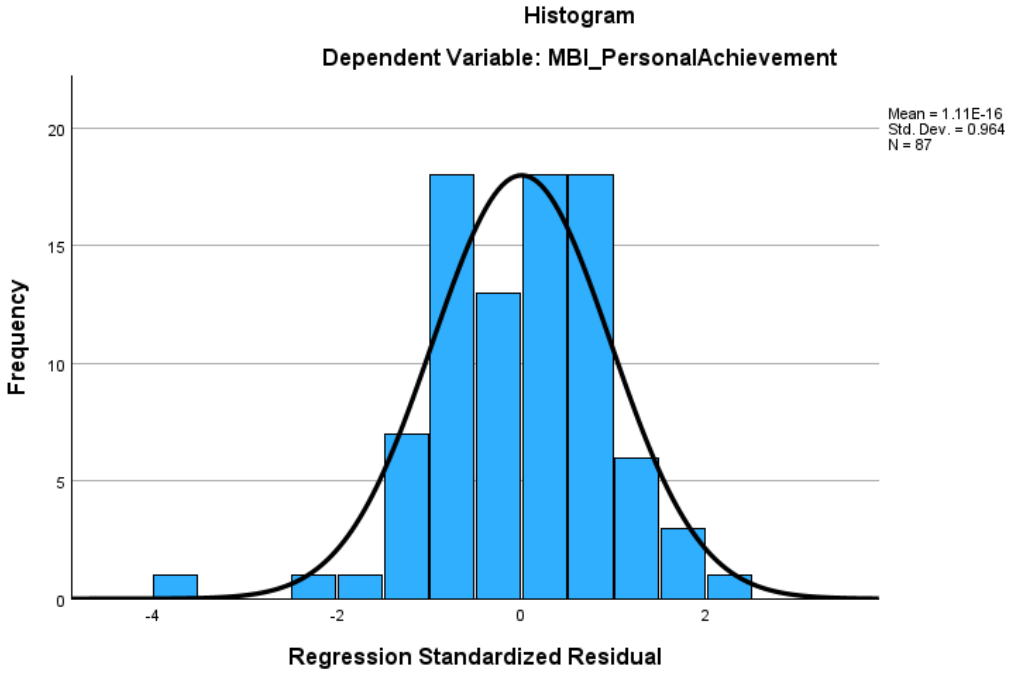
a. Dependent Variable: MBI_PersonalAchievement

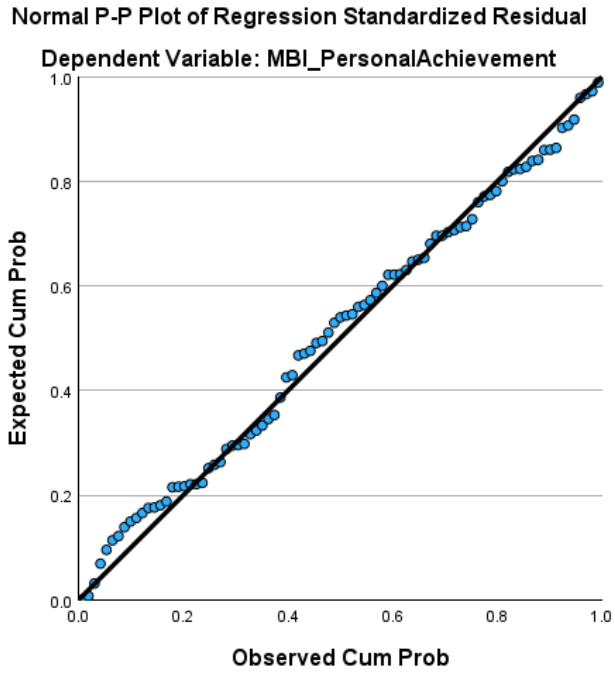
b. Predictors: (Constant), PPFI_HarnessingScale, Time_inPractice, MMDHSS_TotalMoralDistress, PPFI_AvoidanceScale, PPFI_AcceptanceScale, SelfCompassion_Total

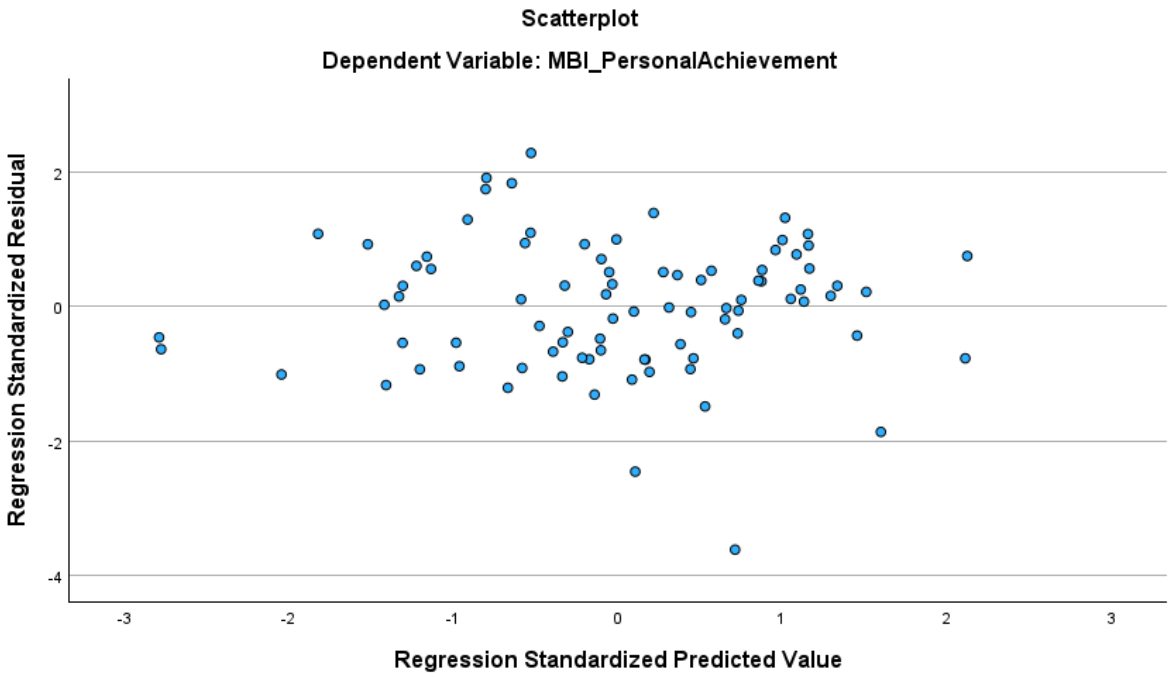
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	22.646	5.977		3.789	<.001	10.751	34.540					
	PPFI_AvoidanceScale	.281	.101	.288	2.766	.007	.079	.483	.357	.295	.273	.898	1.114
	MMDHSS_TotalMoralDistress	-.012	.008	-.161	-1.455	.149	-.028	.004	-.221	-.161	-.144	.796	1.257
	Time_inPractice	-.003	.007	-.040	-.399	.691	-.017	.011	-.004	-.045	-.039	.947	1.056
	SelfCompassion_Total	.589	1.644	.040	.359	.721	-2.682	3.861	-.003	.040	.035	.796	1.256
	PPFI_AcceptanceScale	.270	.126	.229	2.139	.035	.019	.522	.336	.233	.211	.853	1.173
	PPFI_HarnessingScale	.077	.145	.055	.529	.598	-.212	.366	.102	.059	.052	.904	1.106

a. Dependent Variable: MBI_PersonalAchievement


Histogram
Dependent Variable: MBI_PersonalAchievement
Mean = 1.11E-16
Std. Dev. = 0.964
N = 87
Frequency
20
15
10
5
0
-4
-2
0
2
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: MBI_PersonalAchievement
Expected Cum Prob
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
Observed Cum Prob



Multiple regression model for personal accomplishment using the 2 significant predictor variables (n=87).

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.443[a]	.196	.177	5.84045	1.978

a. Predictors: (Constant), PPFI_AcceptanceScale, PPFI_AvoidanceScale

b. Dependent Variable: MBI_PersonalAchievement

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	699.034	2	349.517	10.247	<.001[b]
	Residual	2865.311	84	34.111		
	Total	3564.345	86			

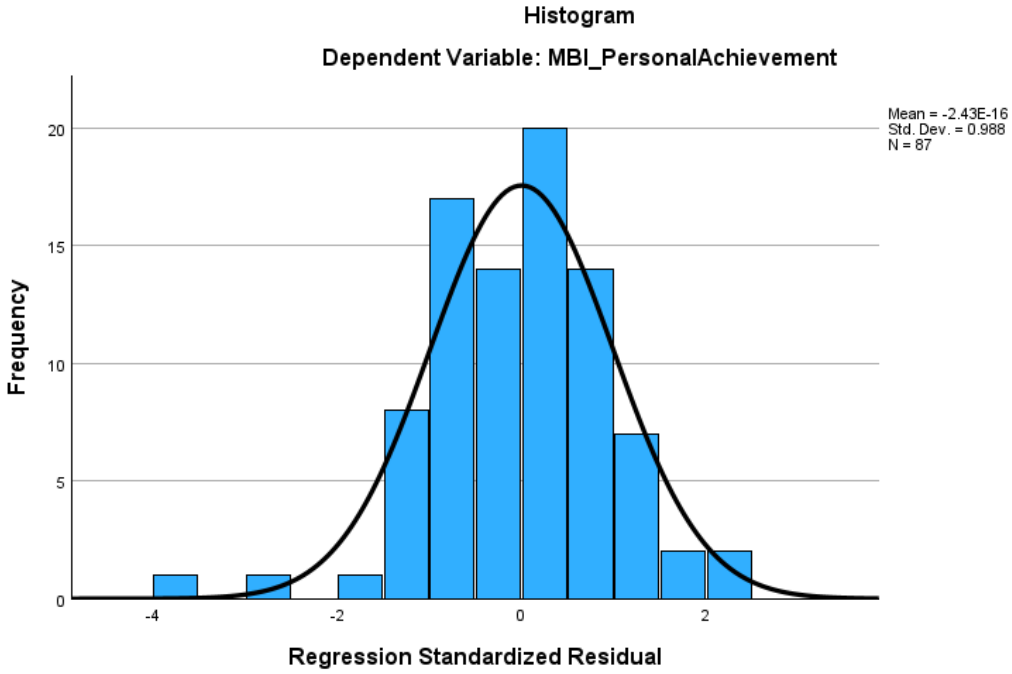
a. Dependent Variable: MBI_PersonalAchievement

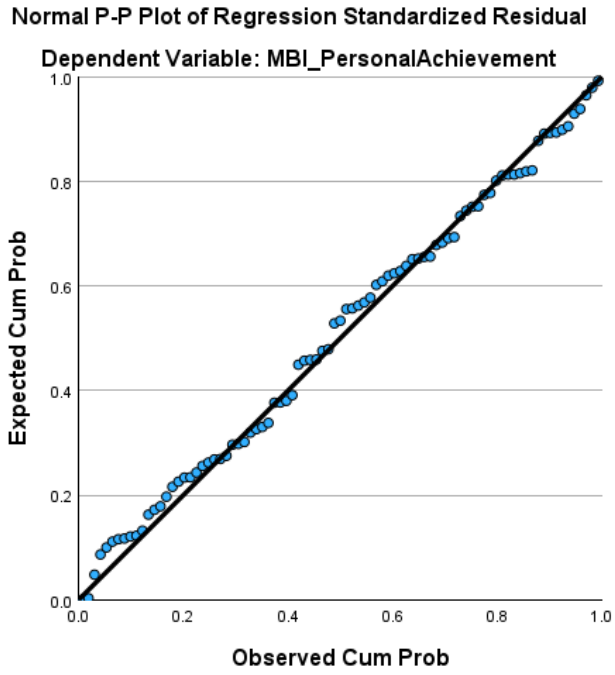
b. Predictors: (Constant), PPFI_AcceptanceScale, PPFI_AvoidanceScale

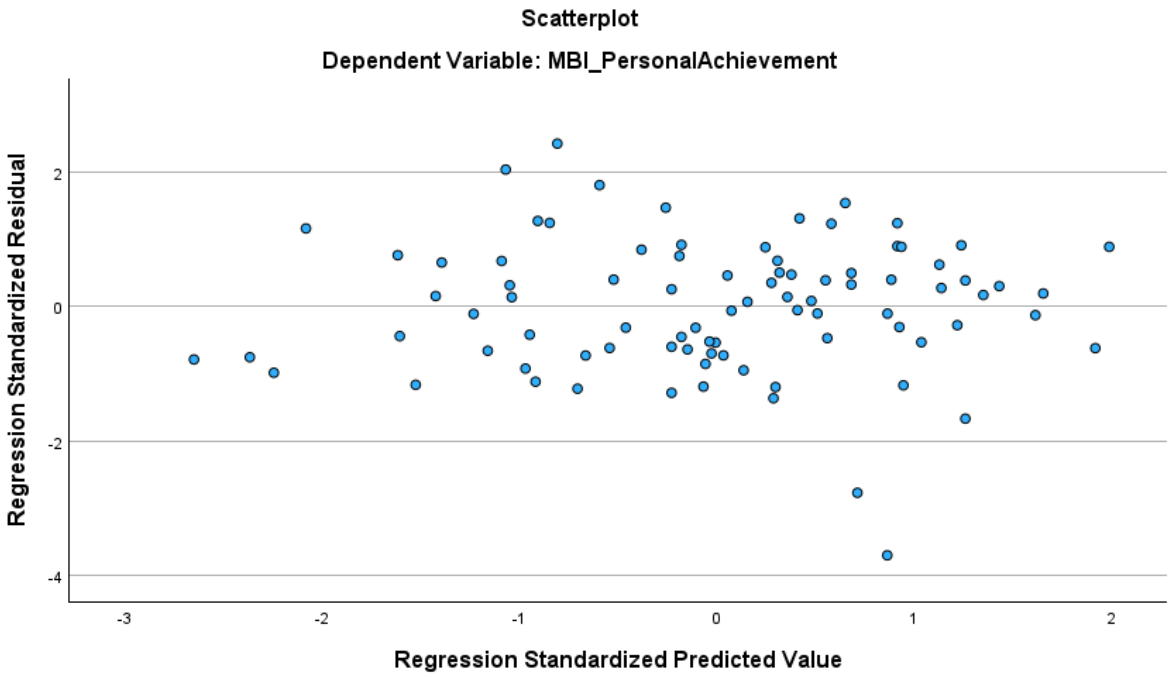
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	22.154	3.163		7.004	<.001	15.864	28.444					
	PPFI_AvoidanceScale	.288	.098	.296	2.946	.004	.094	.483	.357	.306	.288	.948	1.055
	PPFI_AcceptanceScale	.318	.119	.268	2.672	.009	.081	.554	.336	.280	.261	.948	1.055

a. Dependent Variable: MBI_PersonalAchievement


Histogram
Dependent Variable: MBI_PersonalAchievement
Mean = -2.43E-16
Std. Dev. = 0.988
N = 87
Frequency
20
15
10
5
0
-4
-2
0
2
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: MBI_PersonalAchievement
Expected Cum Prob
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
Observed Cum Prob


Scatterplot
Dependent Variable: MBI_PersonalAchievement
Regression Standardized Residual
2
0
-2
-4
-3
-2
-1
0
1
2
Regression Standardized Predicted Value

Appendix M: Gender and Ethnic Diversity of Sample Compared to GP Population

	Sample (n=87)	UK-based GP population
Demographic Characteristic	**N (%)**	**%**
General Practitioner Gender		
Female	61 (70.1%)	***54-58%****
Male	24 (27.5)	
Not stated	2 (2.3%)	
Ethnicity	**N=87**	**N=35222****
Asian/Asian British	***12 (13.8%)***	***21.6%***
Asian/Asian British: Indian	5 (5.7%)	
Asian/Asian British: Pakistani	3 (3.4%)	
Asian/Asian British: Bangladeshi	2 (2.3%)	
Asian/Asian British: Chinese	1 (1.1%)	
Asian/Asian British: Any other Asian Background	1 (1.1%)	
Black, Black British, Caribbean or African	***1 (1.15%)***	***3.2%***
Black, Black British, Caribbean or African: Caribbean	1 (1.1%)	
Mixed/Multiple Ethnic Groups	***0 (0%)***	***1.8%***
White	***73 (83.91%)***	***55%***
White: English, Welsh, Scottish, Northern Irish or British	64 (73.6%)	
White: Irish	4 (4.6%)	

	White: Any other White background	5 (5.7%)	
Other ethnic Group		***1 (1.15%)***	***3.3%***
Other		1 (1.1%)	

* - This statistic was taken from a BMJ Open blog page discussing Gender equality in UK medicine. The site did not discuss any statistics for male GPs or GPs that identify as another gender.

Reference: British Medical Journal Open (March, 2022). *"Doctors tend to overestimate gender equality progress in UK medicine, finds survey"*. BMJ. https://blogs.bmj.com/bmjopen/2022/03/22/doctors-tend-to-overestimate-gender-equality-progress-in-uk-medicine-finds-survey/#:~:text=They%20estimated%20the%20proportion%20of,%25%20(actual%20proportion%2054%25).

** - This statistical set was taken from an NHS Website discussing the General Practice Workforce. The data was taken from a linked Excel spreadsheet with statistics exploring the "General Practice Workforce ethnicity by Job Role – March 2023". And the Job role that was considered from this spreadsheet was "All Qualified Permanent GPs (excludes GPs in Training Grades & Locums)" as this was similar to the current study's inclusion criteria.

Reference: NHS England. (March, 2023). "General Practice Workforce, 31 March 2023". https://digital.nhs.uk/data-and-information/publications/statistical/general-and-personal-medical-services/31-march-2023#chapter-index

Paper 3: Executive Summary

Predicting Burnout in UK General Practitioners using Moral Distress, Self-Compassion, Psychological Flexibility, and Time in Practice.

Word count: 2458/ 2500 (Excluding title page and references)

Summary

This report summarises a research project exploring the relationships between General Practitioner burnout, since COVID-19, and possible factors that affect this.

This research was conducted as there has been a large change in the General Practitioner (GP) role in the UK since COVID-19, which led to a large increase in workload. This raised concerns regarding the wellbeing of GPs and how many GPs would stay in work (Jefferson et al., 2023). Research into burnout and moral distress in the GP population is still growing and the current study aimed to investigate how moral distress, self-compassion, psychological flexibility, and time in practice affected GP burnout.

This summary was written for GPs interested in the study and anyone interested in this area. The summary was developed with the support of two General Practitioners who kindly reviewed the report to provide feedback on its wording, layout, and structure.

Background

General Practice since COVID-19

GPs work with people to manage chronic diseases, prevent illness, and organise client care such as referring clients to urgent or specialist medical services.

The GP role has changed since COVID-19. This includes:

- A large increase in workload, which led to concerns about GP wellbeing, particularly exhaustion and overwhelm due to their work (burnout) and concerns about not having enough GPs to meet ongoing healthcare needs in the long term (Jefferson et al., 2023)
- Changes in appointment methods to include “telemedicine” (providing online or telephone appointments) and working from home, which has impacted client interactions and workload management (Jefferson et al, 2023)
- Keeping up with routine care despite struggling against backlogs of appointments, which leads to longer waiting times (Van Ginneken et al., 2022)
- Prioritising clients with certain conditions and having to delay work with other clients because of this prioritisation (Jefferson et al., 2023).

Burnout in GPs

Burnout in GPs is a growing problem; and around 19% of UK GPs were at high-risk of burnout during the pandemic (Whitehead et al, 2022).

Burnout is a negative response that develops over time due to ongoing work stressors at work (Maslach & Leiter, 2016), commonly seen in healthcare professionals (Slatten et al., 2011). Maslach and Jackson (1981) suggest that burnout is made up of:

- **Emotional exhaustion** - being emotionally drained due to a build-up of stress
- **Depersonalisation** - detachment and cynicism at work, for example seeing clients only as 'cases' and not as people.
- A lowered sense of **personal accomplishment** - negatively valuing one's work and feeling unsuccessful when completing tasks.

Burnout has been linked to several negative outcomes for GPs (e.g., Salvagioni et al., 2017), including:

- **Physical health issues** - such as chronic pain, ongoing fatigue, heart disease, and early death under 45 years of age
- **Psychological concerns** - such as sleep difficulties, anxiety, depression, high stress, and GP suicide rates rising significantly (around four times the national average)
- **Organisational concerns** - such as GPs leaving a workforce that is already understaffed, not feeling satisfied at work, and increased non-attendance at work. These factors may negatively affect relationships between the team, service provision, and clients by, for example, increasing waiting times due to service delays.

Moral Distress

Moral distress is the feeling of participating in behaviour that goes against one's morals (McCarthy and Monteverde, 2018; Bruce et al., 2015). In healthcare professionals, this behaviour can be related to the client, the service, and the wider system. An example of a morally distressing situation may include GPs feeling

pressured to prioritise paperwork over clinical appointments. This may go against their values of client-centered care and could lead to a buildup of moral distress over time.

The changes since COVID-19 may also cause moral dilemmas which may make GPs feel guilty, responsible, and hopeless about client care, or believe that they are not working through their waiting list as quickly as they 'should' (Lenoir et al, 2021). This adds to the ‘burden of responsibility’ already carried by GPs (Lenoir et al, 2021). This moral distress has been linked to burnout in other healthcare professionals (Silvester et al., 2004) but has not been studied in relation to GPs specifically, and therefore seems relevant to consider in this study.

Psychological Flexibility

“Psychological flexibility” is a concept from Acceptance and Commitment Therapy and, is a person’s ability to accept and adapt to difficulties (Hayes, 2005). Examples of this in healthcare professionals include:

- Noticing any negative thoughts, for example, about one’s competency, without it affecting their performance or confidence - allowing them to continue delivering high-quality and effective care despite these difficult experiences
- Reflecting on meaningful aspects of client care and using this as motivation to guide their work.

Higher levels of psychological flexibility have been linked to lower levels of burnout, therefore, interventions that work to increase psychological flexibility such as Acceptance and Commitment Therapy may also be useful in decreasing burnout (Ruiz & Odriozola-González, 2017) in GPs. Because there is no current research on how psychological flexibility may affect GPs specifically, it was considered relevant to this study.

Self-Compassion

“Self-compassion” (Neff, 2011) is compassion that is held towards oneself when struggling or suffering. For example, a GP might acknowledge the difficulties they are facing at work, but respond to themselves with understanding and kindness, like they might with a client in distress.

Lower self-compassion has been linked to higher levels of burnout in medical clinicians, therefore, designing interventions to increase self-compassion is key in reducing burnout in this group (Montero-Marin, 2016). Self-compassion, therefore, may also be relevant to understanding GP burnout in this study.

Time in Practice

Higher levels of burnout have been linked to fewer years of experience due to not having developed as much resilience yet in their careers compared with GPs who have practised for longer and have built coping strategies to better handle work-related stress (Adam et al, 2018; Abdulla et al, 2010). Time in practice, therefore, is measured in this study.

Why carry out this study?

There is a growing need to understand the factors that influence GP burnout. This is to consider changes needed in general practice so that GPs can continue meeting the forever-changing healthcare demands, while also protecting the well-being of GPs. Exploring these factors may also help to guide interventions that aim to reduce GP burnout and, indirectly because of this reduced burnout, make sure that client care continues to be effective. Burnout interventions for GPs may also help with GP retention (making sure GPs do not leave their jobs due to burnout).

Aims of the study

This study aims to investigate if moral distress, self-compassion, psychological flexibility, and time in practice can predict burnout levels in UK-based GPs following the COVID-19 pandemic.

The study predicted that:

1. GPs with higher moral distress will also report higher levels of burnout.
2. Burnout levels in GPs will be influenced by lower psychological flexibility, lower self-compassion, and less time in practice.

Methods

This study has been approved by the Staffordshire University Ethics Committee.

How were Participants Recruited?

Participants were recruited between July and November 2023. An advertisement was shared on GP forums, online groups, and social media. Participants were encouraged to share the advertisement with others who may be suitable.

Who could take part?

GPs had to meet the following criteria to be suitable to participate:

To be able to participate, GPs had to:	GPs could not take part if:
• Be UK-based. • Be working full-time. • Have practised for at least four years. • Have worked full-time during the pandemic.	• They were trainee GPs. • They were an academic or locum GP. • They were retired.

What did taking part involve?

This research used a cross-sectional design (data was collected at one point in time). The study advert included a QR code and a URL link that took participants to a 15-minute online questionnaire. This involved an information section about the study, followed by a consent form to complete if they wished to participate.

Participants were then asked about their age, their self-identified gender, their ethnicity, and how long they had worked as a GP.

This was followed by four questionnaires:

1) **The Maslach's Burnout Inventory – Human Services Survey (Maslach & Jackson, 1996)** is a questionnaire that measures burnout by asking participants how often they feel or behave a certain way relating to their work; for example, “I feel depressed at work”. It is made of three scales that represent

the three burnout domains - *emotional exhaustion*, *depersonalisation*, and *personal accomplishment.*

2) **The Measure of Moral Distress in Health Care Practitioners (Epstein et al., 2019)** is a questionnaire that measures moral distress levels in healthcare practitioners. Participants are asked to rate the level of distress experienced in morally distressing scenarios and how often they happen at work; for example, “fear[ing] retribution if I speak up.”
3) **The Personalised Psychological Flexibility Index (Kashdan et al., 2020)** is a questionnaire that measures three aspects of psychological flexibility: *Acceptance* (accepting difficulties when working towards a goal), *Avoidance* (avoiding unpleasant experiences), and *Harnessing Goals* (using negative feelings to pursue a goal).
4) **The Self-Compassion Scale (Neff, 2003)** is a 12-item questionnaire that measures self-compassion by asking participants to rate how often they behave in a scenario like “I try to see my failings as part of the human condition”.

Who took part?

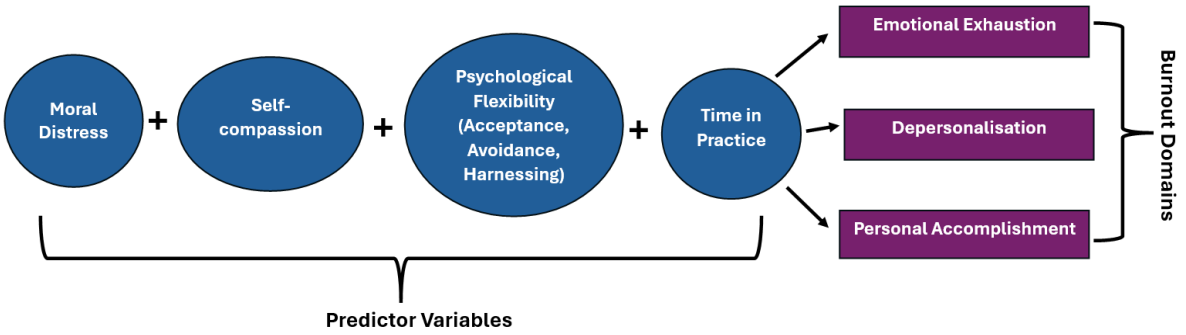
Eighty-seven GPs completed the questionnaire. Most participants were White-British (73.6%) and identified as female (70.1%). The age of participants ranged from 33-66 years old.

How was the data analysed?

Multiple regression analysis was used to assess if there was a relationship between the factors discussed above, such as self-compassion and emotional exhaustion.

If the analysis finds that a factor has a high chance of predicting the rate of the other factor, then it is called a “significant predictor” of this other factor.

Three multiple regression analyses were used to predict each burnout domain. These domains were predicted using the factors moral distress, self-compassion, psychological flexibility, and time in practice. The following diagram aims to explain this.



Key Findings

Burnout Rates

The GPs who participated, on average, showed high levels of emotional exhaustion and depersonalisation and somewhat high levels of perceived personal accomplishment.

Prediction One: *GPs with higher moral distress will also report higher levels of burnout.*

This was only somewhat supported. Moral distress only predicted emotional exhaustion, and not depersonalisation or personal accomplishment. Moral distress may affect emotional exhaustion as healthcare professionals who experience moral distress tend to experience intense emotional concerns like sadness, frustration, and anger (Weigand & Funk, 2012; Gutierrez, 2005).

Prediction Two: *Burnout levels in GPs will be influenced by lower psychological flexibility, lower self-compassion, and less time in practice.*

The second hypothesis was only partly supported. The study found that:

- **Emotional Exhaustion ->** Only avoidance and moral distress were significant predictors of emotional exhaustion.

- **Depersonalisation ->** Avoidance was the only significant predictor of depersonalisation.
- **Personal Accomplishment ->** Only avoidance and acceptance were significant predictors of personal accomplishment levels in GPs.

Avoidance was a significant predictor across all three burnout domains. Avoidance could be a coping strategy used to deal with difficulties (Tyson & Pongruengphant, 1996). Avoidance may, therefore, provide short-term relief from these difficulties. But there are long-term consequences such as higher emotional distress or maintaining symptoms of burnout (Fernandez-Rodriguez et al., 2018; Stober et al., 2008; Tyrrell., 2010).

Feedback from GPs

A small number of GPs sent feedback which suggested that:

- Although general practice has been challenging to work in since the pandemic, it was reported to be "inadequate" before the pandemic too
- GP numbers have been decreasing since before the pandemic
- GPs related their burnout to high demands and expectations at work, running services with lower budgets than what is necessary, the government not delivering on NHS and General Practice-related policies and promises, and challenging client encounters.

Practical Applications

This study found high burnout in the GPs who participated in the study and suggests that avoidance is a common factor underlying all three burnout domains. Strategies that reduce avoidance, through increasing psychological flexibility, may be worth including when developing burnout interventions. Moreover, the current study found that lower acceptance (part of low psychological flexibility) was a significant predictor for a lowered sense of personal accomplishment. This further supports the suggestion to including psychological flexibility strategies when supporting burnt-out GPs.

This study also showed that moral distress was a significant predictor of emotional exhaustion. This suggests that burnout interventions could include moral distress

management strategies too to reduce burnout (Nishikawara & Maynes, 2023) such as educational work about moral distress, or reflective groups (Morley et al., 2021).

Limitations

This research does have its limitations:

- This study does not have equal sample sizes for gender and ethnicity – which could affect the accuracy of findings and limit how we apply the findings to other GPs.
- Only those who access social media saw the study advertisement – which may not be truly reflective of all UK GPs
- It is possible that those with higher burnout did not participate due to fatigue or workload
- The study did not include GPs who worked full-time during the pandemic but have since left the profession or have changed their work patterns because of high burnout. This means the study missed valuable insights from this group of GPs.
- The three regressions explained only a small amount of burnout, suggesting that other factors may affect burnout too.

Recommendations for Researchers

Due to the limitations mentioned, readers should take caution when interpreting the results. Future research is recommended to help verify the results. Examples of further research include:

- Exploring the significant predictors (avoidance, acceptance, and moral distress) using interviews to gain valuable insights by allowing GPs to give details about their experiences.
- Exploring burnout in relation to wider systemic factors for example relevant governmental promises not being followed through, leading to lowered budgets.

- Researching the effects of increasing psychological flexibility, through Acceptance and Commitment Therapy (Hayes, 2005), particularly focusing on managing avoidance and increasing acceptance behaviours.
- Examining other factors that may affect burnout such as workload or average number of clients seen each day and hours of administrative tasks involved.

Conclusion

This study found that avoidance is a predictor for all three burnout domains in GPs. It also found that moral distress is a predictor of emotional exhaustion, and that acceptance of difficulties is a predictor of higher sense of personal accomplishment in GPs.

These findings provide an understanding of the factors that affect GP burnout and suggests some areas that could be considered when developing interventions for GP burnout. However, research into these factors could still be continued in order to grow the understanding of burnout in GPs and to continue influencing the development of interventions for GP burnout.

Dissemination

This research will be shared with the Research and Development Team at North Staffordshire Combined Healthcare NHS Trust. This research will also be submitted to a research journal called “Psychology, Health & Medicine” for publication.

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