Doctorate in Clinical Psychology Research Portfolio

**Eye Movement Desensitisation Reprocessing for Covid-19 Related Psychological Distress in Health Care Professionals: A Systematic Literature Review**

**&**

**Predictors of Vicarious Trauma and Burnout in Assistant Psychologists: Empirical Paper**

**&**

**An Executive Summary**

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

April 2025

Total word count: 17,827

Thesis abstract: 400

Literature review: 7083

Empirical paper: 7897

Executive summary: 2477

# THESIS PORTFOLIO: CANDIDATE DECLARATION

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|---|---|
| **Title of degree programme** | **Professional Doctorate in Clinical Psychology** |
| **Candidate name** | Amy Megan Harrison |
| **Registration number** | H042171m |
| **Initial date of registration** | September 2022 |

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# Acknowledgements

# Contents

**Thesis Abstract**

This thesis is comprised of three papers. The first is a systematic literature review exploring the use and effectiveness of Eye Movement Desensitisation Reprocessing (EMDR) for healthcare professionals (HCPs) experiencing Covid-19 related psychological distress. The second is a cross-sectional empirical study on the predictors of vicarious trauma and burnout in Assistant Psychologists (APs). The third paper is an executive summary of the empirical research.

The systematic literature review comprised of 13 studies which evaluated the use of EMDR for HCPs experiencing psychological distress related to the Covid-19 pandemic. Differences in EMDR protocols and delivery methods are noted, alongside methodological issues. Results from the systematic review provide tentative evidence for the effectiveness of EMDR for HCPs in the treatment of Covid-19 related psychological distress and suggest its usefulness as an early intervention in crisis scenarios. Implications for clinical practice are discussed.

The empirical paper investigated the presence and predictors of vicarious trauma and burnout in APs working with traumatised populations. Predictors investigated were psychological flexibility, resilience, personal trauma history, supervision quality and quantity. A quantitative, cross-sectional design using multiple regression analysis was applied. A total of 265 APs completed seven validated questionnaires online; the Vicarious Trauma Scale (VTS; Vrklesvski & Franklin, 2008), Maslach Burnout Inventory (MBI; Maslach and Jackson, 1981) and measures of psychological flexibility, resilience, personal trauma history, supervision quality and quantity. Four multiple regression analyses were run to identify predictors of vicarious trauma and the three constructs of burnout: emotional exhaustion, depersonalisation and personal accomplishment. Psychological flexibility and supervision quality negatively predicted vicarious trauma, emotional exhaustion and depersonalisation. Resilience positively predicted personal accomplishment. Results suggest APs who are more psychologically flexible and who receive higher quality supervision, are less likely to experience vicarious trauma, emotional exhaustion and depersonalisation, and APs who are more resilient, are more likely to experience feelings of personal accomplishment. Findings highlight the importance of providing opportunities to increase psychological flexibility and resilience, and providing high quality supportive supervision, to protect against vicarious trauma and burnout in APs. The paper offers recommendations to support these early career psychologists.

The executive summary provides an overview of the empirical research and is written in an accessible manner. It is aimed at APs, those who work alongside or employ APs. It may also be of interest to other psychological healthcare professionals. The method, results, conclusions, and recommendations based on the research, are outlined in the executive summary.

# Eye Movement Desensitisation Reprocessing for Covid-19 Related Psychological Distress in Health Care Professionals: A Systematic Literature Review

Amy Megan Harrison

*This review is written in the required style for The Journal of EMDR Practice and*

*Research*

**Abstract**

       Healthcare professionals (HCPs) experienced elevated rates of psychological distress during the Covid-19 pandemic. Psychological distress encompasses symptoms of post-traumatic stress disorder (PTSD), anxiety and depression. The psychological impact of Covid-19 on HCPs necessitated the experimental use of EMDR, to offer a psychological intervention to HCPs who continued to work in highly distressing clinical environments. The novel use of EMDR within this healthcare crisis context warrants review. A systematic search was conducted on PsycINFO, PsycArticles, PubMed, CINAHL, Science Direct and the Cochrane Library, to identify studies assessing the use and effectiveness of EMDR for HCPs experiencing Covid-19 related psychological distress. The final search was completed in October 2024. A total of 13 studies were included. Considering the quality appraisal, which highlighted the low to moderate quality of the studies, this systematic review provides tentative evidence for the effectiveness of EMDR for HCPs in the treatment of Covid-19 related psychological distress and suggests its utility as an early intervention in crisis scenarios. Clinical and significant improvements were evidenced for PTSD, anxiety and depression. Differences in EMDR protocols and delivery methods were evident and this is discussed, alongside methodological issues and quality appraisal. Clinical implications are also discussed. More robust and higher quality research examining the effectiveness of EMDR for Covid-19 related psychological distress in HCPs is required, though initial findings highlight EMDR to be effective.

**Introduction**

       The Covid-19 pandemic, also known as the SARS-CoV-2 pandemic, had profound impacts on the mental health of healthcare professionals (HCPs) worldwide (Andhavarapu et al., 2022; Chen et al., 2020; Hill et al., 2022; Hooper et al., 2021; Shanafelt et al., 2020; WHO, 2020a). Beginning in December 2019, Covid-19 spread rapidly, resulting in an estimated 14.9 million deaths between January 2020 and December 2021 (WHO, 2022b). The unprecedented challenges placed on HCPs, including redeployment, the emotional toll of patient care, a lack of psychological support, staff shortages, quarantine restrictions, imposed isolation from support systems, increased workloads, risk of infection and fear of infecting loved ones, and witnessing colleagues' deaths, led to a surge in psychological distress among HCPs (Asmundson & Taylor, 2020; Chen et al., 2020; Schoonhoven et al., 2020; Shanafelt et al., 2020). Psychological distress can be defined as an umbrella term referring to a state of emotional suffering characterized by symptoms of PTSD, depression, anxiety, and stress (APA Dictionary of Psychology, n.d.).

       HCPs faced chronic trauma, witnessing high patient mortality rates and feeling powerless against the virus (Eftekhar Ardebili et al., 2021). The rapid spread had left healthcare services

unprepared (Hamid et al., 2020), significantly heightening the pressure on HCPs (Minder & Peltier, 2020; WHO, 2020c). As a result, studies reported high rates of psychological distress in HCPs, including depression, anxiety, stress, burnout, fatigue, insomnia, and PTSD (Bahadirli & Sagaltici, 2021; Chew et al., 2020; Hill et al., 2022; Marvalidi et al., 2021; Sahebi et al., 2021; Schoonhoven et al., 2020; Demilew et al., 2022; Lai et al., 2020; Mulatu et al., 2021; Northwood et al., 2021). In response, interventions such as Eye Movement Desensitization and Reprocessing (EMDR) have been explored for their effectiveness in addressing psychological distress among HCPs during Covid-19, defined as Covid-19 related psychological distress for this review.

EMDR, developed by Francine Shapiro (1989a,b), is a trauma-focused psychotherapy based on the Adaptive Information Processing (AIP) model (Shapiro, 2018) which aims to resolve pathology by processing distressing memories. The AIP model posits that traumatic experiences that are not adequately processed at the time of the event can lead to dysfunctional information processing. These inadequately processed and maladaptively stored memories can result in psychological distress, including PTSD, anxiety, and depression. For HCPs enduring ongoing trauma during Covid-19, there was no post-trauma safety window for proper memory consolidation (Jarero et al., 2011; Jarero & Uribe, 2011;2012) likely preventing this process (Jarero & Artigas, 2022) and leading to Covid-19 related psychological distress. EMDR uses bilateral stimulation to activate the information processing system, facilitating the reprocessing and adaptive storage of traumatic memories and enabling the formation of new cognitive understandings of events (Solomon & Shapiro, 2008).

EMDR was originally designed for PTSD treatment but has since been applied to various psychological conditions, including anxiety and depression (Perlini et al., 2020; Valiente-Gomez et al., 2017), highlighting its broader efficacy (Scelles & Bulnes, 2021). The effectiveness of EMDR in crisis situations and trauma-related disorders has been well-documented. Studies have demonstrated its efficacy in reducing symptoms of PTSD, depression, and anxiety among forcibly displaced individuals (Macgowan et al., 2022) and Syrian refugees (Yurtsever et al., 2018). The National Institute for Health and Care Excellence recommends EMDR for adults experiencing PTSD symptoms (NICE, 2018). Research also supports EMDR as an early intervention for traumatized professional personnel (Jarero & Uribe, 2011, 2012). Findings suggest EMDR could be a valuable early intervention for HCPs experiencing Covid-19 related psychological distress.

Whilst initially developed for face-to-face delivery (Shapiro, 2001), EMDR protocols were adapted for online use during the Covid-19 pandemic to comply with infection control and social distancing regulations. This coincided with the rise of telehealth interventions, which have shown

mixed results (e.g. see Backhaus et al., 2012; Flukiger et al., 2018; Gosh et al., 1997; Hilty et al., 2013; Langarizadeh et al., 2017). Online delivery of EMDR exclusively has been less well-studied, a recent systematic review by Lenferink et al. (2020) identified only one study assessing the feasibility of a combined online Cognitive Behavioural Therapy (CBT) and EMDR for treating PTSD in adults, using an open-trial design. Results indicated significantly reduced psychological distress between pre-treatment and follow-up (Spence et al., 2013).

**Aims of the systematic literature review**

There is a consensus in the literature that HCPs were at increased risk of Covid-19 related psychological distress. Establishing effective, safe, evidence-based psychological interventions is vital to support their mental health. EMDR emerged as a promising early psychological intervention for Covid-19 related psychological distress in HCPs, though the methods of delivery varied between studies, warranting systematic evaluation. Using the definition of psychological distress as an umbrella term incorporating symptoms of PTSD, anxiety and depression, this review aims to systematically evaluate the use and effectiveness of EMDR for Covid-19 related psychological distress in HCPs, understand what EMDR protocols and delivery methods were used and evaluate the quality of the research.

## Methods

**Registration**

This systematic literature review has been registered with the International Prospective Register of Systematic Reviews (PROSPERO): CRD42024521427

**Search strategy**

The search strategy was completed in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines (Page et al., 2021). Six electronic databases were searched: PsycINFO, PsycArticles, Medline, CINAHL, Science Direct and the Cochrane Library.  An initial scoping search was conducted to inform the development of the search terms. In line with findings from the scoping search, psychological distress as an umbrella term encapsulating any symptoms of anxiety, depression, sleep disturbances, moral injury, stress, Covid-19 related trauma, burnout, vicarious trauma, secondary traumatic stress, complex PTSD and PTSD, was used. Any term which could be considered to sit under this umbrella of psychological distress was included to ensure that results were not prematurely limited to only anxiety, depression and PTSD and all relevant papers could be identified. A thesaurus was consulted to ensure no relevant search terms were missed. HCPs are defined as professionals working to maintain the health of humans through evidence-based medicine and caring, and are those that study, diagnose, treat and prevent illness,

injury and other physical or psychological impairments in the human population (ILO, 2013, 2023; WHO 2013; Gupta 2011). A list of HCPs, informed by the International Standard Classification of Occupations (ISCO) (ILO 2013, 2023; WHO 2013) was used to define categories of HCPs, this was supplemented by any professional groups identified by the scoping search. As the aims of this review were to report on EMDR interventions offered throughout and following the Covid-19 pandemic, the date range of searches was refined to 2019 (the first report of the Global Pandemic) to present day. The final search was completed on 26th October 2024. The reference lists of suitable studies were hand searched for any additional studies which were eligible for inclusion. To reduce publication bias, grey literature was also searched using Ethos.

Searches were conducted using the following keywords and Boolean operators: ((EMDR) OR (Eye Movement Desensitisation Reprocessing)) AND ((Healthcare professionals) OR (Healthcare workers) OR (healthcare staff) OR (healthcare assistant) OR (HCP) OR (HCW) OR (pharmacist) OR (staff) OR (nurses) OR (doctors) OR (occupational therapists) OR (psychologists) OR (therapists) OR (dentists) OR (midwives) OR (psychiatrists) OR (physicians) OR (medical staff) OR (key workers) OR (emergency workers) OR (frontline workers)) AND ((Covid-19) OR (Coronavirus-19) OR (pandemic) OR (Covid) OR (SARS) OR (SARS-CoV-2)) AND ((PTSD) OR (Post Traumatic Stress Disorder) OR (Complex PTSD) OR (psychological distress) OR (anxiety) OR (depression) OR (stress) OR (burnout) OR (sleep disturbances) OR (vicarious trauma) OR (secondary traumatic stress) OR (trauma) OR (psychological trauma) OR (pandemic related post-traumatic stress disorder) OR (mental health) OR (moral injury)).

**Eligibility criteria**

Studies which examined the efficacy of an EMDR intervention for HCPs experiencing psychological distress related to the Covid-19 pandemic were included. To quantify the impact of the EMDR intervention on Covid-19 related psychological distress, research was included if it used a quantitative measure of psychological distress, such as the Beck Depression Inventory (BDI-II; Beck et al.,1996). This enabled a change in scores from pre- to post-intervention to be observed and extracted. The search was not limited to RCT's; due to the psychological impact on HCPs, many of the included studies used a pre-post cohort design as it would have been unethical to withhold or delay psychological support to HCPs during this time in order to establish a control group. Due to a lack of translation resources, studies were excluded if they were not reported in English. In line with the move to online services during the pandemic, studies were included if the delivery of EMDR was online or in person and both individual and group EMDR interventions were included. Studies which utilised other therapeutic models in conjunction with EMDR were excluded if it was not possible to ascertain the impact of EMDR alone and a change in symptoms of psychological distress could not be

exclusively attributed to the EMDR intervention. Related interventions e.g. the flash technique, were excluded as they could not be reliably compared. The inclusion criteria are summarised below:

- A study design which measures the effectiveness of EMDR for HCPs using a measure of psychological distress to observe change.
- The EMDR intervention was tested for Covid-19 related psychological distress.
- The EMDR target memory is related to working during the Covid-19 pandemic.
- The participants in the study are HCPs working during the Covid-19 pandemic.
- Available in the English language.

**Study selection and data extraction**

In line with PRISMA guidelines (Page et al., 2021), Figure 1 shows the study selection and exclusion process. The first author conducted the main search, and references were collated using Zotero software. All duplicates were removed, and remaining articles were screened by their title and abstract and assessed for eligibility in line with the inclusion criteria. The remaining papers underwent a full screening and were assessed for eligibility; 13 studies were included in the final sample. No additional papers were identified via hand searches. To reduce bias, data extraction was completed prior to the quality appraisal. The studies were heterogeneous in design and therefore extracted data was tabulated (see Table 1).

Figure 1

*Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) Flow Chart*

| Identification | Records identified through database searching (n = 1984)<br>Additional records identified through handsearching (n=0)<br>　　　　PsychArticles: 1<br>　　　　PsychInfo: 22<br>　　　　MedLine/Pubmed:33<br>　　　　CINAHL: 8<br>　　　　Cochrane: 1881 |

↓

**Records after duplicates removed (n = 1755)**

↓

| Screening | Records screened (n = 1755) | → | Records excluded (n = 1711) |

↓

| Eligibility | Full-text articles assessed for eligibility (n = 44) | → | Full-text articles excluded, with reasons (n=31)<br><br>Sample comprised of non-HCPs or participants experiencing psychological distress not related to the pandemic (n = 13)<br><br>Did not measure effectiveness of EMDR for psychological distress in HCPs (n=18)<br><br>Did not use EMDR (e.g. a different psychological intervention was evaluated: Flash Technique, meditation, breathwork, iCBT) (n=3) |

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| Included | Studies included in quantitative synthesis (n = 13) |

*Note.* PRISMA Flow Chart (Page et al., 2021)

## Quality assessment

The Effective Public Health Practice Project Quality Assessment Tool for Quantitative Studies (EPHPP, 2010; Thomas et al., 2004) was used as a quality appraisal tool to assess for quality and risk of bias; to critically appraise the included studies. The EPHPP was selected due to its versatile

application to various research designs, including RCTs, non-randomised studies, pre-post studies and observational studies. The EPHPP has been highlighted as an effective tool for systematic reviews and has been found to have adequate content and construct validity (Thomas et al., 2004), and adequate interrater reliability (Armijo-Olivo et al., 2012). The EPHPP provides a comprehensive framework to assess the quality of the study design and reporting, it assesses eight domains: (a) selection bias, (b) study design, (c) confounders, (d) blinding, (e) data collection methods, (f) withdrawals and dropouts, (g) intervention integrity and (h) analysis. Components A-F are assessed against a set criterion and are defined as strong, moderate or weak. Components G-H are assessed but not given a formal score. A final global rating of strong, moderate or weak is then assigned to the study based on the component ratings. See Appendix 1.

**Analysis strategy**

A narrative synthesis was deemed most appropriate due to the heterogeneity of the studies, namely differences in the EMDR protocols, design of studies and outcome measures used. In line with guidance on conducting narrative analysis (Popay et al., 2006), data was summarised and synthesised, allowing for similarities and differences to be identified (see Tables 1, 2). The EPHPP was used to support a critical appraisal of the evidence base. In addition, the pre- and post- scores for means, standard deviations and significance levels were collated and effect sizes have been calculated using these values (see Table 3).

## Results

### Overview of studies

The studies included within this systematic literature review (*N*=13) were published between 2019 and 2024 and evaluated the use of EMDR as a psychological intervention for HCPs experiencing Covid-19 related psychological distress. Participants were recruited globally. The majority of studies were conducted in Italy (*n*= 6), and the remaining in Turkey (*n*=2), Egypt (*n*=1), Ireland (*n*=1), Canada (*n*=1), Mexico (*n*=1) and France (*n*=1). All studies used HCPs who had worked during the Covid-19 pandemic, a total of 1602 HCPs were included in this review, with a range of 11 to 744 participants in each study. Studies primarily used a pre-post uncontrolled study design (*n*=6), studies also consisted of Randomised Control Trials (RCT; *n*=3), pre-post uncontrolled pilot studies (*n*=2), a pre-post retrospective observational study with waitlist control group(*n*=1) and a randomised pre-post study using Trauma-Focused Cognitive Behavioural Therapy (TF-CBT) as a comparator intervention (*n* = 1). In line with the inclusion criteria for this systematic review, all studies used at least one standardised measure of psychological distress to measure the effectiveness of an EMDR intervention, however there was considerable variability in the choice of outcome measures between studies. Due to the

global nature of the research, several of the measures were translated and validated into other languages besides English, including Italian, Spanish and Turkish. See Table 1 for more detail.

Various EMDR protocols and delivery methods were employed across studies. Due to social restrictions and isolation measures during the pandemic, the majority of EMDR interventions were conducted using online or tele-health methods ($n$=10). Two studies administered the EMDR intervention in person, while one study reported using a combination of in-person and online methods for EMDR delivery. The majority of EMDR interventions were conducted in group settings ($n$=8). Seven different EMDR protocols were identified across the studies. The number of EMDR sessions varied across protocols, ranging from one to eight sessions, with session durations ranging from one hour to two hours and 14 minutes. See Table 2 for EMDR protocols and methods.

**Table 1**

*Table of Characteristics*

| Author | Country | Sample (n) | Participants | Design | Outcome Measures | Follow-Up | Main Findings |
|---|---|---|---|---|---|---|---|
| El-Abassy et al. (2021) | Egypt | 100 | Nurses | Quasi-experimental Pre-Post | CIAS, SDS, SQS | Not reported | EMDR significantly reduced anxiety and depression scores post-intervention compared to pre-intervention. EMDR significantly improved sleep quality post-application. |
| Beldivere et al. (2023) | Italy | 43 | HCPs (nurses and doctors) | Cohort | ET, IES-R, PTG-I | 6 months | Significant reduction in PTSD symptoms post-intervention, with values dropping below the clinical PTSD risk threshold. Significant decreases in anxiety and depression. |
| Faretta et al. (2022a) | Italy | 11 | HCPs | Pre-Post Pilot Uncontrolled | IES-R, ET | 9 months | EMDR improved PTSD symptoms, with significant reductions in intrusiveness, avoidance, and hyperarousal scores. Participants reported substantial improvements in stress, anxiety, and sleep. |
| Farrata et al. (2022b) | Italy | 122 | HCPs (nurses) | Pre-Post Uncontrolled | IES-R, ET | No follow-up | EMDR significantly reduced PTSD symptoms—significant improvements found in intrusiveness and avoidance, but not for hyperarousal. |
| Farrell et al. (2023) | Ireland, UK, NI, US, Canada, NZ, Aus, Greece, Turkey | 95 | Frontline health and social care workers, emergency/first responders | RCT, delayed (1-month) treatment intervention (control) versus an active group | ITQ, GAD-7, PHQ-9, MIES, EQ-5D, SUD, ACE, BCE | 1, 3, and 6 months | For both the delayed and immediate treatment groups, significant improvement in PTSD, anxiety and depression from pre to post intervention and at each follow up point were observed. |
| Fernandez et al. (2022) | Italy | 744 | HCPs (doctors, nurses, non-medical HCPs, intensive care support staff, psychologists) | Pre-Post Uncontrolled Comparison groups (non-treated group were offered debriefing space with a psychologist) | IES-R, ET | No follow-up | Treated subjects showed marked improvement over non-treated subjects. Significant reductions in PTSD symptoms across all subscales (avoidance, intrusiveness, hyperarousal) post-EMDR. Significant improvements in stress, anxiety, mood, anger, sleep, and need for help post-EMDR. Greater reduction in PTSD scores in treated subjects indicating a stronger effect of EMDR compared to the passage of time alone or debrief with a psychologist. |
| Fogliato et al. (2022) | Italy | 150 | HCPs | A retrospective observational study | IES-R, PTG-I | No follow-up | EMDR significantly reduced symptoms across all IES-R subscales (avoidance, intrusiveness, hyperarousal) and total scores. The risk of developing PTSD decreased significantly after treatment. HCPs treated in the first wave maintained improvements into the second wave, demonstrating resilience and less vulnerability. |
| Moench & Billsten (2021) | Canada | 34 | HCPs (mental health clinicians) | Controlled randomized trial, with pre-post between subjects | GSE, DASSS-21 | 1 week | Both immediate and delayed treatment conditions showed significant decreases in depression, anxiety, and stress, and significant increases in general self-efficacy. |

| | | | | comparison of immediate treatment and waitlist conditions. | | | |
|---|---|---|---|---|---|---|---|
| Perez et al. (2020) | Mexico | 80 | HCPs (nurses, doctors) | Two arms longitudinal multisite randomized control trial, using waitlist/delayed treatment control group | PCL-5, HADS, SPRINT | 90 days | Significant reductions in PTSD, anxiety, and depression post-EMDR with continued symptom reduction observed at 90-day follow-up. |
| Perri et al. (2021) | Italy | 38 | Individuals requiring support with trauma associated with quarantine, isolation or work in Covid-19 hospital wards. | Randomized Pre-Post Comparison between EMDR R-TEP and TF-CBT | PCL-5, STAI-Y1, BDI-II | 1 month | Both EMDR and TF-CBT were equally effective in reducing trauma-related symptoms when administered online. Both treatments resulted in significant reductions in PTSD, anxiety, and depression symptoms. Post-hoc comparisons confirmed significant decreases in symptoms from pre-treatment to post-treatment and follow-up for both groups. |
| Sağaltıcı et al. (2022) | Turkey | 14 | HCPs (physicians, nurses, HCPs, non-medical staff) | Pre-Post Uncontrolled Pilot | BAI, BDI, IES-R, MBI | 1 month | EMDR significantly reduced PTSD symptoms (intrusion and hyperarousal significantly improved, avoidance subscale showed no significant change), anxiety, depression, and emotional exhaustion. For burnout, although emotional exhaustion improved, depersonalization and personal accomplishment did not show significant changes. |
| Tarquinio et al. (2021) | France | 17 | HCPs (nurses) | Pre - Post. Uncontrolled | HADS, SUDS | 1 week | EMDR effectively reduced distress, anxiety, and depression. There was a significant decrease in anxiety, depression and Subjective Units of Distress (SUD) after 24 hours, which remained stable after one week. Fear of going to work and fear for safety also decreased, though less significantly. |
| Yurtsever et al. (2022) | Turkey | 154 | 'At risk groups' (Includes individuals working with coronavirus patients and frontline professionals) | Pre - post 1x3 design | IES-R (adapted to Turkish) | 1 month | The protocol effectively reduced PTSD symptoms across all groups, with frontline professionals experiencing the most significant and sustained reductions. Frontline professionals showed significant decreases in PTSD scores from pre-test to post-test and follow-up and significant difference from post-test to follow-up. |

*Note.* Abbreviations: **CIAS**: Covid-19 Induced Anxiety Scale. **SDS**: Zung Self-Rating Depression Scale. **SQS**: Sleep Quality Scale. **ET**: Emotions Thermometer. **IES-R**: Impact of Event Scale-Revised. **PTG-I**: Post-Traumatic Growth Inventory. **ITQ**: International Trauma Questionnaire. **GAD-7**: Generalized Anxiety Disorder 7-item Scale. **PHQ-9**: Patient Health Questionnaire-9. **MIES**: Moral Injury Events Scale. **EQ-5D**: EuroQol-5 Dimension. **SUD**: Subjective Units of Distress. **ACE**: Adverse Childhood Experiences. **BCE**: Benevolent Childhood Experiences. **GSE**: General Self-Efficacy Scale. **DASSS-21**: Depression, Anxiety, and Stress Scale-21. **PCL-5**: PTSD Checklist for DSM-5. **HADS**: Hospital Anxiety and Depression Scale. **SPRINT**: Short PTSD Rating Interview Scale. **STAI-Y1**: State-Trait Anxiety Inventory Form Y-1. **BDI**: Beck Depression Inventory. **BAI**: Beck Anxiety Inventory. **MBI**: Maslach Burnout Inventory. **SUDS**: Subjective Units of Distress Scale. **HCP**: Healthcare Professionals.

**Table 2**

*EMDR Protocols and Delivery Methods*

| Study authors | EMDR Protocol | Number of sessions | Duration of sessions | Frequency of sessions | Delivery method | Bilateral Stimulation | Group or Individual |
|---|---|---|---|---|---|---|---|
| El-Abassy et al. (2021) | EMDR | 3-8 | 1.5 hours | 2 sessions per week. | Online | Finger movements back and forth | Group |
| Beldivere et al. (2023) | Brief EMDR intervention adapted to Covid-19, based on the EMDR -IGTP | 3 | Not detailed | 1 session per week | In person | Butterfly hug | Group |
| Faretta et al. (2022a) | EMDR- IGTP | 5 | 1 hour to 1.5 hours | Not detailed | Online | Butterfly hug | Group |
| Farrata et al. (2022b) | EMDR-IGTP | 3 - 5 | Not detailed | Not detailed | Online | Butterfly hug | Group |
| Farrell et al. (2023) | EMDR G -TEP as VGTEP | 4 | 2 hours | 4 sessions per week | Online | Not detailed | Group |
| Fernandez et al. (2022) | EMDR-IGTP EMDR | 3 | 1 – 1.5 hours 2 hours | 1 session per week | Combination | Butterfly hug | Group and Individual |
| Fogliato et al. (2022) | EMDR-IGTP | 3 | 1.5 hours | 3 sessions in one month | In person | Butterfly hug | Group |
| Moench & Billsten (2021) | STEP | 1 | 1.5 hours | 1 session | Online | Visually following self-directed finger movements back and forth on worksheet whilst listening to bilateral beats | Individual |
| Perez et al (2020) | EMDR-IGTP-OTS-R | 4 | 1 – 1.5 hours | 4 sessions per week | Online | Butterfly hug | Group |
| Perri et al. (2021) | EMDR R-TEP | 7 | Not detailed | 2 sessions per week | Online | Butterfly hug | Individual |
| Sağaltıcı et al. (2022) | EMDR R-TEP | 5 | 1.5 hours | 2 sessions per week | Online | Not detailed | Individual |
| Tarquinio et al. (2021) | URG-EMDR | 1 | 2 hours 14 minutes | 1 session delivered within 72 hours of critical incident | Online | Butterfly hug | Not detailed |
| Yurtsever et al. (2022) | EMDR R-TEP | 5 | Not detailed | 1 session per day, consecutive days | Online | Not detailed | Individual |

*Note*. Abbreviations: **EMDR**: Eye Movement Desensitisation Reprocessing, full 8 phase protocol. **EMDR IGTP:** EMDR Integrative Group Treatment Protocol. **EMDR G-TEP**: EMDR Group Traumatic Episode Protocol. **STEP**: The Self-Care Traumatic Episode EMDR protocol. VGTEP: Video-conference psychotherapy. **EMDR-IGTP-OTS-R**: EMDR Integrative Group Treatment Protocol for Ongoing Traumatic Stress Remote. **EMDR R-TEP**: EMDR Recent Traumatic Episode Protocol. **URG EMDR**: Urgent EMDR protocol.

**Quality appraisal**

Quality ratings were assigned to each of the studies included in the systematic review using the Effective Public Health Practice Project (EPHPP). Eight of the 13 studies were rated as weak, the remaining five studies were rated as moderate. See Table 4 in Appendix for all ratings. The included studies evidence that EMDR is effective for Covid-19 related psychological distress in HCPs, however, the overall quality of research is weak to moderate, thus only tentative conclusions may be drawn.

**Sample and recruitment**

Participants of most studies (El-Abassy et al. 2021; Beldivere et al. 2023; Farrell et al., 2023; Fernandez et al., 2022; Fogliato et al., 2022; Moench & Billsten, 2021; Perez et al., 2020; Yurtsever et al.,2022) were voluntary or recruitment took place via spontaneous sampling, which indicates a level of self-selection bias. For other studies, participants were recruited via physician referrals (Perri et al., 2021), requests from a sample of HCPs who had applied to an outpatient psychiatric clinic due to symptoms they had developed related to working in the pandemic (Sağaltıcı et al., 2022) or from contact with managers who had requested psychological support from the EMDR Europe Association for their staff members during Covid-19 (Faretta et al., 2022a). Self-selecting participants lead to the possibility of bias and ambiguity, and the sample may not be fully representative of the general population of HCPs. Two studies (Faretta et al., 2022b; Tarquinio et al., 2021) did not detail the recruitment method.

A range of HCPs were recruited across all studies, including doctors, nurses, intensive care support staff and psychologists. In line with the EPHPP, more highly rated studies included those with larger sample sizes which recruited a range of HCPs (Faretta et al., 2022b; Farrell et al., 2023; Fernandez et al., 2022; Fogliato et al., 2022; Perez et al., 2020), meaning the results are more likely to be generalisable. Several studies, including pilot studies, (Beldivere et al. 2023; Faretta et al., 2022a; Fogliato et al., 2022; Perri et al., 2021; Sağaltıcı et al., 2022; Tarquinio et al., 2021) had sample sizes of less than 45. Smaller samples, including those which were limited to only one category of HCP, can limit the generalisability of the findings and reduce statistical power. There was a higher proportion of female participants compared to male participants in most studies ($n = 11$) which may present as a confounding factor. It was not possible to ascertain the gender split in the remaining studies ($n=2$; Moench & Billsten, 2021; Yurtsever et al.,2022).

**Study design**

Traditional control groups were not used in any of the studies. Belvedere et al (2023) point out ethical concerns with withholding psychological support to staff experiencing ongoing trauma and whilst working in highly distressing environments such as the Covid-19 pandemic. However, five studies used an alternative control method. Of these, three were RCTs using delayed or waitlist

control groups (Farrell et al., 2023; Moench & Billsten, 2021; Perez et al., 2020), and one was a pre-post design utilising delayed control (Fernandez et al., 2022). One study (Perri et al., 2021) utilised a comparator group, in which 19 participants received TF-CBT. These studies were rated more highly by the EPHPP for study design. According to the EPHPP, the pre-post cohort studies were rated as weak for design due to the lack of control group, which limits their ability to attribute positive results to the EMDR intervention alone.

**Outcome and follow-up measures**

All studies were rated as strong for their data collection methods; all studies used at least one validated outcome measure which, according to existing validation studies, have been measured as valid and reliable. Some studies which used more than one measure of psychological distress, used idiosyncratic or bespoke measures to support results. Follow up measures were completed by most of the studies (*n*=9) which presents as an additional strength. However, the follow-up periods varied greatly and made comparisons between studies difficult. Four of the studies did not use follow-up measures.

**Data analysis and reporting**

The studies all provided clear descriptions of their statistical analyses, and most studies reported their results clearly e.g. presenting the changes in pre-post score graphically. Generally, few studies reported confidence intervals (CIs) for test statistics and effect sizes were not reported consistently. The lack of CIs means that the direction and strength of the effect of the EMDR intervention cannot be obtained, meaning limited conclusions can be drawn regarding the clinical relevance of the findings (du Prel et al., 2009). For all studies, the statistical analysis used was appropriate for the study design and data type. Regarding discussing findings and considering individual study limitations, most studies were deemed to do so sufficiently. The clear reporting enabled means, standard deviations and significance levels to be collated and effect size to be calculated (see Table 3).

**Table 3**

*Means and Standard Deviations of Pre- and Post- EMDR Scores with Significance Levels and Effect Sizes.*

| Study | Measures | Pre-EMDR M (SD) | Post-EMDR M (SD) | Significance | Effect Size (Cohen's *d*) |
|---|---|---|---|---|---|
| El-Abassy et al. (2021) | CIAS | Not reported | Not reported | P <.0001 | - |
| | SDS | Not reported | Not reported | P<.0001 | - |
| | SQS | Not reported | Not reported | P <.02 | - |
| Beldivere et al. (2023) | IES-R (total) ET | 42.37 (15.83) | 24.12 (18.53) | P < .001 | 1.10 |
| | Stress | 5.71 (2.36) | 2.35 (1.73) | P < .001 | 1.62 |

| | | | | | |
|---|---|---|---|---|---|
| | Anxiety | 5.51 (2.64) | 2.14 (1.78) | P < .001 | 1.50 |
| | Mood | 4.55 (2.75) | 1.56 (2.03) | P < .001 | 1.24 |
| | Anger | 5.05 (2.82) | 2.07 (2.25) | P < .001 | 1.17 |
| | Sleep | 5.15 (2.96) | 1.81 (2.35) | P < .001 | 1.25 |
| | Help | 5.10 (2.57) | 1.95 (1.85) | P < .001 | 1.41 |
| | PTG-I | Not reported | 78.88 (23.04) | Not reported | - |
| Faretta et al. (2022a) | IES-R (total) ET | 37.55 (4.18) | 18.36 (3.09) | P < .0000 | 5.22 |
| | Stress | 7.36 (2.73) | 3.64 (3.29) | P< .0000 | 1.23 |
| | Anxiety | 6.73 (3.52) | 3.64 (3.61) | P<.0003 | 0.87 |
| | Mood | 4.09 (3.62) | 2.27 (3.29) | P< .005 | 0.53 |
| | Anger | 5.36 (4.30) | 2.09 (2.39) | P< .001 | 0.94 |
| | Sleep | 7.91 (2.43) | 3.91 (3.48) | P< .0000 | 1.33 |
| | Help | 7.09 (2.51) | 3.36 (3.64) | P< .001 | 1.19 |
| Farrata et al. (2022b) | IES-R (total) ET | 32.71 (16.87) | 21.24 (16.29) | P < .0001 | 0.44 |
| | Stress | 5.36 (2.62) | 4.02 (2.54) | P<.0001 | 0.52 |
| | Anxiety | 4.62 (3.12) | 3.15 (2.73) | P< .0001 | 0.50 |
| | Mood | 3.03 (2.77) | 2.10 (2.39) | P = .0002 | 0.36 |
| | Anger | 3.69 (3.13) | 2.39 (2.38) | P<.0001 | 0.47 |
| | Sleep | 3.92 (3.39) | 2.34 (2.64) | P<.0001 | 0.52 |
| | Help | 4.04 (2.81) | 2.26 (2.25) | P< .0001 | 0.70 |
| Farrell et al. (2023) | ITQ | 36.8 (14.8) | 21.2 (15.1) | P<.0001 | 1.04 |
| | GAD-7 | 11.2 (4.91) | 6.49 (4.73) | P< .0001 | 0.977 |
| | PHQ-9 | 11.7 (5.58) | 6.64 (5.79) | P<. 0001 | 0.89 |
| | MIES | Not reported | Not reported | Not reported | - |
| | EQ-5D | 65.02 (17.99) | Not reported | P<.001 | - |
| | SUD | Not reported | Not reported | P <.0001 | - |
| Fernandez et al. (2022) | IES-R (total) ET: | 39.13 (17.62) | 21.63 (17.61) | P < 0.001 | 0.99 |
| | Stress | 5.27 (2.59) | 3.22 (2.27) | P < 0.001 | 0.84 |
| | Anxiety | 4.42(2.83) | 2.47 (2.13) | P < 0.001 | 0.78 |
| | Mood | 3.51 (2.78) | 1.95 (2.10) | P < 0.001 | 0.63 |
| | Anger | 4.04(3.10) | 2.43(2.32) | P < 0.001 | 0.59 |
| | Sleep | 4.36 (3.21) | 2.49 (2.69) | P < 0.001 | 0.63 |
| | Help | 3.79 (2.70) | 2.33 (2.25) | P < 0.001 | 0.59 |
| Fogliato et al. (2022) | IES-R (total) | | | | |
| | Wave 1 | 45.65 (15.83) | 31.13 (16.21) | P< .001 | 0.91 |
| | Wave 2 | 50.21 (16.99) | 34. 37 (17.15) | P< .001 | 0.93 |
| | PTG-I | Not detailed | Not detailed | Not reported | - |
| Moench & Billsten (2021) | GSE | ITG: 33.32 (3.86) DTG: 31.53 (3.76) | ITG 35.06 (3.70) DTG: 32.69 (3.36) | P<.05 P<.01 | -0.46 -0.33 |
| | DASSS-21 | ITG: 12.50 (8.42) DTG:14.58 (11.20) | ITG: 7.38 (5.35) DTG: 8.06 (12.72) | P<.01 P <.01 | 0.73 0.54 |
| Perez et al (2020) | PCL-5 | ITG: 35.85 (6.42) DTG: 35.48 (3.64) | ITG: 21.22 (5.29) DTG: 23.69 (5.21) | P<. 000 P<. 000 | 2.49 2.62 |
| | HADS:A | ITG:14.45 (2.63) DTG: 14.15 (2.68) | ITG: 9.48 (2.48) DTG: 9.89 (1.42) | P<. 000 P<.001 | 1.94 1.99 |
| | HADS:D | ITG: 12.94 (2.54) DTG: 12.71 (2.58) | ITG:7.31 (3.29) DTG: 7.58 (1.81) | P<.001 P<.001 | 1.92 2.30 |
| Perri et al. (2021) | PCL-5 | 38.2 (16.7) | 18.5 (12.3) | P <.0001 | 1.34 |
| | STAI-Y1 | 47.4 (13.1) | 35.8 (14.5) | P <.0001 | 0.84 |
| | BDI-II | 22.4 (10.5) | 10.2 (6.4) | P <.0001 | 1.40 |
| Sağaltıcı et al. (2022) | IES-R (total) | 48.5 (32 -61.5) | 9.5 (12.25 -29.5) | P < .001 | 0.81-1.61 |
| | BAI | 24 (19.75 −32.25) | 11.5 (8 − 20.25) | P<.001 | 0.46 -0.83 |
| | BDI | 20 (15 − 25.75) | 7.5 (3.75 − 10.25) | P< .001 | 0.64- 1.14 |
| | MBI: | | | | |
| | EE | 32 (24.5 − 38.25) | 23 (17-28.25) | P = .009 | 0.27- 0.43 |
| | DP | 8.5 (6 − 11.25) | 8.5 (5.75 − 12) | P = 0.484 | 0.04 |
| | PA | 31.5 (27 − 34.5) | 32.5 (30.75 − 36) | P = .662 | -0.03 |
| Tarquinio et al. (2021) | HADS:A | 16.9 (2.01) | 9.1 (2.1) | P <.001 | 3.79 |
| | HADS:D | 14.9 (2.7) | 9.5 (1.5) | p<.001 | 2.47 |

| | | | | | |
|---|---|---|---|---|---|
| Yurtsever et al. (2022) | SUDS | 8.2 (1.10) | 1.1 (0.85) | P< .001 | 7.22 |
| | IES-R (frontline professionals only) | 47.92 (11.72) | 26.48 (11.97) | P<.0001 | 1.81 |

Note. Abbreviations: **CIAS**: Covid-19 Induced Anxiety Scale. **SDS**: Zung Self-Rating Depression Scale. **SQS**: Sleep Quality Scale. **ET**: Emotions Thermometer. **IES-R**: Impact of Event Scale-Revised. **PTG-I**: Post-Traumatic Growth Inventory. **ITQ**: International Trauma Questionnaire. **GAD-7**: Generalized Anxiety Disorder 7-item Scale. **PHQ-9**: Patient Health Questionnaire-9. **MIES**: Moral Injury Events Scale. **EQ-5D**: EuroQol-5 Dimension. **SUD**: Subjective Units of Distress. **ACE**: Adverse Childhood Experiences. **BCE**: Benevolent Childhood Experiences. **GSE**: General Self-Efficacy Scale. **DASSS-21**: Depression, Anxiety, and Stress Scale-21. **PCL-5**: PTSD Checklist for DSM-5. **HADS**: Hospital Anxiety and Depression Scale. **SPRINT**: Short PTSD Rating Interview Scale. **STAI-Y1**: State-Trait Anxiety Inventory Form Y-1. **BDI**: Beck Depression Inventory. **BAI**: Beck Anxiety Inventory. **MBI**: Maslach Burnout Inventory. **DP**: Depersonalisation. **EE**: Emotional Exhaustion. **PA**: Personal accomplishment. **SUDS**: Subjective Units of Distress Scale. **ITG**: Immediate Treatment Group. **DTG**: Delayed Treatment Group. Cohen's (1988;2013) guidelines for Cohen's $d$ = 0.20, 0.50, and 0.80 are used to interpret effect sizes as small, medium, or large, respectively.

**Narrative synthesis and Main Outcomes**

The data was synthesised narratively. The purpose of narrative synthesis is the organisation, description and interpretation of study findings, alongside the attempt to find explanations for the findings (Pope et al., 2007). The narrative synthesis is organised into the key themes below, supported by effect sizes calculated and reported in Table 3.

*Effectiveness of EMDR on PTSD Symptoms*

All studies measuring PTSD symptoms ($n$ = 10) showed that EMDR improved symptoms for HCPs during the Covid-19 pandemic. With the exception of Faretta et al (2022b), which found a small effect size ($d$ = 0.44), all studies measuring the impact of EMDR on PTSD showed consistently large effect sizes overall indicating practical significance (see Table 3). Significant improvements in PTSD symptoms were identified despite differences in EMDR protocols and outcome measures.

Several studies found that EMDR significantly improved PTSD scores as measured by the IES-R ($n$ = 7) with large effect sizes (Belvedere et al., 2023; Faretta et al., 2022a; Fernandez et al.,2022; Fogliato et al., 2022; Sağaltıcı et al., 2022*;* Yurtsever et al., 2022). Mean post-EMDR scores reduced to below the pathological IES-R score (>33) in several studies (Belvedere et al., 2023; Faretta et al., 2022a; Faretta et al., 2022b; Fernandez et al.,2022; Sağaltıcı et al., 2022; Yurtsever et al., 2022) and improvements were maintained from one to nine months post treatment, as demonstrated by the follow up measures in four of these studies (Belvedere et al., 2023; Faretta et al., 2022a; Sağaltıcı et al., 2022; Yurtsever et al., 2022). Three studies did not use follow up measures (Faretta et al., 2022b; Fogliato et al., 2022; Fernandez et al., 2022) therefore it was not possible to assess longevity of results. Despite overall positive findings, findings were not consistent for specific symptoms of PTSD and this warrants further investigation: Belvedere et al (2023), Faretta et al (2022a), Fogliato et al (2022), and Fernandez et al (2022) found significant reductions in intrusiveness, avoidance, and

hyperarousal subscale scores of the IES-R. Whereas, Sağaltıcı et al (2022) found that participants experienced significant reductions in the intrusion and hyperarousal subscales of the IES-R, at both post-test and the follow up, however the avoidance subscale showed no significant changes. In contrast, Faretta et al (2022b), showed that EMDR significantly reduced PTSD symptoms of avoidance and intrusion post-treatment, but not for hyperarousal. Yurtsever et al (2022) do not show a breakdown of the subscales.

Two studies used the PCL-5 to measure PTSD. Perez et al (2020) found that EMDR significantly reduced PTSD symptoms and symptom reduction was still observed at the 90-day follow up with no adverse effects reported. Similarly, Perri et al (2021) noted significant reductions in PTSD symptoms following EMDR treatment with a large effect size ($d$= 1.34) and post-hoc comparisons confirmed significant decreases in symptoms from pre-treatment to post-treatment and follow-up. In both studies, the PCL-5 post-EMDR scores fell below the clinical cut off for PTSD (<33). One study (Farrell et al, 2023) used the International Trauma Questionnaire (ITQ) which is specifically designed to measure PTSD and Complex PTSD (CPTSD) based on the criteria outlined in the International Classification of Diseases, 11th Revision (ICD-11), significant improvements were evidenced post-EMDR with a large effect size ($d$ = 1.04).

With the aforementioned studies, ethical considerations necessitated immediate treatment for HCPs during the Covid-19 emergency, meaning it was not ethical to use traditional control groups at this time. The absence of control groups limits the conclusiveness of the results. To mitigate against this limitation, several studies used alternative methodologies. Fernandez et al (2022) used a non-treated group who were provided a debriefing space with a psychologist instead of EMDR. Whilst the non-treated sample can't be used as a true control, it does provide a useful comparator. When compared with the non-treated group, there was a greater reduction in the IES-R scores in EMDR treated subjects, indicating a stronger effect of EMDR compared to debriefing alone. Perez et al (2020) used a delayed treatment group (DTG); in both the immediate treatment group (ITG) and the DTG, EMDR significantly reduced PTSD symptoms with large effect sizes (ITG, $d$= 2.49; DTG, $d$ = 1.34). Of interest, the DTG's PTSD symptoms worsened during the time they were waiting for the EMDR intervention whereas the ITG showed improvements immediately, highlighting the importance of an early intervention to minimise the impact of chronic trauma and prevent worsening of PTSD symptoms.

Only one study evaluated EMDR in comparison to another trauma focused therapy. Perri et al (2021) evaluated the efficacy of Online EMDR R-TEP and Online TF-CBT. Both treatments resulted

in significant reductions in PTSD symptoms over time, as measured by the PCL-5. Authors concluded that both EMDR R-TEP and TF-CBT were equally effective in reducing trauma-related symptoms.

In an effort to compare efficacy of EMDR in different groups, Yurtsever et al (2022)'s participants comprised of Covid-19 frontline HCPs, relatives of Covid-19 patients, Covid-19 patients, and relatives of individuals who died from Covid-19. They separated the results for each group and as such, found that whilst the EMDR protocol effectively reduced PTSD symptoms across all groups, frontline HCPs experienced the most significant and sustained reductions in PTSD symptoms ($d=$ 1.81), again highlighting the efficacy of EMDR for HCPs during crisis situations.

### *Effectiveness of EMDR on Anxiety and Depression*

Across studies, EMDR can be seen to reduce Covid-19 induced anxiety and depression in HCPs, highlighting the critical impact of EMDR as a non-pharmacological intervention for mental health difficulties among frontline HCPs during the pandemic. Significant improvements in anxiety and depression were identified despite the differences in EMDR protocols and outcome measures used and large effect sizes were evident in several studies highlighting practical significance.

Positive results were found by Farrell et al (2023), who noted significant decreases in anxiety and depression with large effect sizes ($d$ = 0.98; $d$= 0.98 respectively) using the GAD-7 and PHQ-9. Sağaltıcı et al (2022), also noted significant decreases in anxiety and depression, as measured by the BDI and BAI from pre- to post- EMDR, and at one month follow up. Due to the authors methods of reporting, effect sizes were calculated as a range, with results varying from small to large effect sizes for anxiety ($d$ = 0.46 -0.83) and medium to large for depression ($d$ =0.64- 1.14). Using the CIAS and SDS, El-Abbassy et al (2020) also found that EMDR significantly reduced anxiety and depression scores however, this study was rated as weak by the EPHPP and the authors did not report sufficient information to enable an effect size calculation, thus results should be interpreted cautiously.  Perri et al (2021) found that EMDR resulted in significant reductions in depression, as measured by the BDI-II with a large effect size ($d$ = 1.40) and anxiety symptoms, as measured by the STAI-Y1 with a large effect size ($d$ = 0.84), although generalisability of results is limited due to a mixed sample.

The Emotions Thermometer was the most used measure of anxiety and other emotional distress indicators (stress, anger, mood, sleep, help seeking). Using the anxiety subscale of the Emotions Thermometer, Belvedere et al (2023), Farreta et al (2022a;b) and Fernandez et al (2022) all noted significant decreases in participant levels of anxiety post- EMDR, with medium to large effect sizes ($d$ = 1.50; $d$ = 0.87; $d$ = 0.50; $d$ = 0.78 respectively). Whilst Belvedere et al (2023) noted overall

effects were maintained at follow-up, Farretta et al (2022a;2022b) and Fernandez et al (2022) did not complete follow up measurements, making it difficult to determine lasting impact on anxiety.

Perez et al (2020) found that the EMDR intervention significantly reduced anxiety and depression symptoms in HCPs as measured by the HADS in both the ITG and DTG, with large effect sizes in both conditions. Continued symptom reduction was observed at 90-day follow-up. This was later supported by Moench and Billsten's (2021) study, in which both ITG and DTG conditions showed significant decreases in depression and anxiety following EMDR, as measured by the GSE and DASSS-21. For both conditions, the study sample consisted of only EMDR-trained clinicians which limits generalisability as these HCPs have an existing understanding and experience with EMDR practices. Similar constraints are notable in Tarquinio et al (2021), results demonstrated significant improvements in anxiety and depression as measured by the HADS, after one EMDR session, which remained stable after one week. The large effect sizes for anxiety ($d$ = 3.79) and depression ($d$ = 2.47) demonstrate the practical application of remote EMDR for effectively reducing anxiety and depression in HCPs, even with only one intensive EMDR session. However, participants in this study were HCPs who were already in therapy with the therapist involved in the study and had therefore already established a therapeutic alliance and developed several EMDR stabilisation skills, e.g. the use of a 'safe space'. The researchers point out that the target memory in the study is limited to a traumatic memory during the pandemic and was in no way linked to previous therapy. However, this cannot negate the impact of the pre-existing therapeutic relationship and EMDR skills, which likely influence the participants experience of the study.

### Effectiveness of EMDR on other Covid-19 psychological symptoms

Several of the studies also reported on the positive impact of EMDR on other Covid-19 related psychological symptoms. As these constructs are only assessed by single studies, conclusions are more limited and are offered tentatively. Studies that used the Emotions Thermometer can be seen to show improvements in stress, anxiety, mood, anger, sleep and need for help. Correspondingly, in El Abassy et al (2020), EMDR significantly improved sleep quality for nurses. Similarly, in Faretta et al (2022a), participants reported substantial improvement in sleep problems following EMDR treatment, as well as a reduction in stress symptoms. Likewise, an improvement in stress scores was observed in Moench and Billsten's (2021) study alongside significant increases in general self-efficacy. Sağaltıcı et al (2022) assessed participants for burnout related to Covid-19 working conditions and results showed decreases in emotional exhaustion scores, a subscale of the Maslach Burnout Inventory (MBI), from pre- to post- EMDR intervention and follow up, however, no significant changes were found in the depersonalisation and personal accomplishment subscales of

the MBI. Participants in Tarquinio et al's (2021) study experienced significant decreases in their fear of going to work and fear for their safety. Lastly, in Belvedere et al (2023), participants experienced an increase in Post Traumatic Growth (PTG) attributed to EMDR, though there was some decline in PTG scores at follow up.  Whilst these measures were not central to the studies, and their constructs only assessed in individual studies which reduces reliability and limits conclusions, they do demonstrate the potential wide-reaching impact of EMDR on crisis and Covid-19-related psychological distress in HCPs.

***EMDR as an early remote intervention treatment***

Different remote EMDR protocols were used but all showed that EMDR was effective in reducing psychological distress among HCPs, with most studies demonstrating maintained benefits over time. However, due to the overall lower quality of studies, results are interpreted tentatively. All interventions were completed during the Covid-19 pandemic which contrasts with traditional EMDR which takes place after the traumatic event has occurred. The results from the included studies show that early remote EMDR intervention can provide immediate relief and prevent long-term psychological issues, even in HCPs who continue to work in the same traumatic environment, suggesting its utility as a rapid-response intervention. Moench and Billsten's (2021)'s study demonstrated the EMDR STEP intervention to be effective at reducing anxiety and depression after only one session, although it requires testing in larger and more diverse populations of HCPs to increase generalisability. Fogliato et al (2022) measured IES-R scores in two groups of participants; one group was offered EMDR during the first wave of Covid, the second group received EMDR in the second wave. Whilst PTSD scores in both groups decreased, the pre- and post-treatment scores were higher in the second wave group, indicating a greater severity of PTSD symptoms later in the pandemic. This was attributed to the stress accumulated across both waves, suggesting longer exposure to Covid-19-related trauma, without a psychological intervention, caused a more severe trauma presentation in the second wave group. This highlights the need for urgent interventions for HCPs working in chronic crisis conditions. Despite the higher severity, the risk of developing PTSD decreased significantly after treatment in both waves and HCPs treated in the first wave maintained improvements into the second wave, demonstrating resilience and reduced vulnerability. Similarly, in Fernandez et al (2022)'s study, 20% of the non-treated participants worsened after 12 weeks, in comparison to only 3% of the treated participants. Results from this study further highlight the potential for EMDR to provide immediate psychological relief and prevent worsening of distress. The effective use of remote EMDR protocols in 11 of these studies highlights the potential of remote EMDR, particularly for early intervention in crisis situations.

**Discussion**

This systematic literature review aimed to evaluate the use and effectiveness of EMDR for HCPs experiencing Covid-19 related psychological distress. According to the quality appraisal, overall quality of the studies was low, therefore tentative conclusions are drawn.

Different EMDR protocols were used across studies. Whilst it would be of clinical interest to understand the relative effectiveness of each of these protocols, the heterogeneity in methods and use of different outcome measures means that it is not possible to determine which protocol was most effective for this population. Results are therefore appraised as EMDR collectively. The findings were consistent across studies with results indicating that EMDR improved Covid-19 related psychological distress in HCPs. Findings of the current review are consistent with the extensive existing research which finds EMDR to be effective; several studies have highlighted the efficacy of EMDR in reducing symptoms associated with PTSD (Shapiro & Maxfield, 2019) and EMDR has been found to be beneficial in addressing trauma-related symptoms among different populations, including forcibly displaced individuals (Macgowan et al., 2022), first responders (Jarero et al., 2013; Morris et al.,2022), military personnel (Silver et al., 2008) and grieving individuals (Meysner et al., 2016) with meta-analyses demonstrating the efficacy of EMDR for treatment of PTSD symptoms in adults, children and adolescents (Moreno-Alcázar et al., 2017).

It is well recognised that the high number of Covid-19 cases and unprecedented challenges faced by HCPs led to a surge in their levels of psychological distress (Sandesh et al., 2020; Ruttmann, 2024), requiring rapid intervention. All included studies in this review offered EMDR to HCPs as an early intervention and results, though tentative due to quality issues, indicate that EMDR was an effective early intervention for HCPs during this time, improving psychological distress and enabling them to continue to work in these chronically stressful environments. In this way, EMDR has been evidenced to be an effective early intervention treatment for HCPs in a crisis situation. The use of EMDR as an early intervention is supported by similar studies which emphasise its role in providing timely and effective treatment for those exposed to traumatic events (Shapiro & Maxfield, 2019; Jarero et al., 2013a,b). The need for prompt psychological intervention during the pandemic meant that many of the studies evaluated in this review used online and group EMDR protocols, as a targeted, cost and time effective delivery option. The promising results of the included studies which evaluated EMDR delivered via telehealth services shows that delivering the therapy remotely is a viable and effective option, which has been particularly relevant in the context of Covid-19 (Tarquinio et al., 2020; Kaptan et al., 2021). The studies which used group EMDR interventions also found positive results, consistent with research which has found EMDR to be effective in group settings and demonstrating improvements in mental health related outcomes such as PTSD, anxiety and

depression (Kaptan et al., 2021), suggesting it's utility as an intervention which can support a high number of staff. Across studies, EMDR helped workers cope better with subsequent pandemic stressors, build resilience and adapt to the ongoing threat of Covid-19 without desensitizing them to the actual danger, maintaining their vigilance and ability to implement protective measures.

Overall, the findings underscore the potential of EMDR as a versatile and effective intervention for addressing psychological distress in HCPs during the Covid-19 pandemic and this likely extends to other crisis situations. Further longitudinal studies are needed to determine the long-term efficacy of EMDR for HCPs and higher quality studies are required to enable stronger conclusions to be drawn.

**Strengths of the review**

The review encompasses a broad search strategy to ensure no relevant literature was missed, and although none was identified, grey literature was searched to limit publication bias. Using the clearly defined inclusion criteria, the present review is the first to collate research exclusively examining the use of EMDR for HCPs during the Covid-19 pandemic and results may be applied to use with HCPs in future crisis situations. In addition, the majority of studies excluded participants if they were receiving other psychological support, meaning there is a reduced risk of results being attributed to synchronous treatment.

**Limitations of the review**

According to the EPHPP, no studies were rated as strong. Studies were limited by design, selection bias, small sample sizes, absence of follow up assessments, lack of blinding and presence of potential confounders. Only four of the thirteen studies used a RCT design with (non-traditional) control groups, most studies applied a pre-post cohort design. The lack of a control group means it is challenging to isolate the intervention effect from the effect of confounding variables or unrelated factors, and difficult to determine the true effect of the intervention. It is the norm in intervention research to use a control group, to justify the intervention by being able to ensure it is more effective than no treatment or than existing treatments, however, the nature of the Covid-19 pandemic nullified the requirement for a control group as it was unethical to withhold psychological support for staff members who required it in such traumatic circumstances. There was also a high heterogeneity across studies, with differences in design, samples, EMDR protocols and outcome measures used. Making it difficult to determine which EMDR protocols specifically were most effective. In addition, as participants had to provide informed consent to participate in the EMDR

intervention and research itself, there is a risk that their responses to the outcome measures changed due to the knowledge that they were being observed.

**Clinical implications**

This review, although situation specific, provides promising results for the use of EMDR for HCPs in crisis scenarios. In all studies that measured PTSD using the IES-R or PCL-5, participants post-EMDR scores fell below the clinical cut offs and improvements were significant. Levels of anxiety and depression in HCPs were also observed to fall below clinical cutoffs for severe symptoms in several studies when measured by the GAD-7, PHQ-9, HADS -A, HADS -D, BAI, BDI and STAI-Y1. Results demonstrate the clinical effectiveness of EMDR in this population of HCPs, with the predominantly large effect sizes suggesting practical significance, thus further investigation is encouraged.

Results tentatively show that EMDR is effective when delivered online and when delivered as a group intervention, these delivery methods enabled staff members who were isolated by social restrictions and infection control measures to continue to access psychological support, reaching a higher number of HCPs than would have been possible when facilitating fewer, in person 1:1 EMDR sessions. Notably, two studies used only one EMDR session and still showed positive results, suggesting EMDR is time- and cost-effective, which is particularly useful in situations where there is an immediate need for a psychological intervention. However, online or group EMDR protocols in which the participant must self-administer bilateral stimulation can raise concerns related to the correct and consistent application of the technique (Papanikolopoulos et al.,2022). This is a clinical consideration which needs to be addressed moving forward.

## Conclusion

There was a high prevalence of psychological distress among HCPs during the pandemic. The present review synthesised research which investigated the use and effectiveness of EMDR for HCPs experiencing Covid-19 related psychological distress. Taken together, the studies tentatively support the use of EMDR as an effective intervention for improving psychological distress in HCPs during the pandemic. The use of different EMDR protocols and delivery methods indicate it's adaptability, effectiveness in group and online settings, and potential as an early intervention therapy, making it a valuable tool in addressing mental health challenges, especially in crisis situations like the Covid-19 pandemic. However, strengths of the findings are limited by several methodological limitations including limited use of control groups and heterogeneity between studies.

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**Appendices**

**Appendix 1: EPHPP**

## QUALITY ASSESSMENT TOOL FOR
## QUANTITATIVE STUDIES

**EPHPP**
*Effective Public Health Practice Project*

### COMPONENT RATINGS

**A)  SELECTION BIAS**

**(Q1)  Are the individuals selected to participate in the study likely to be representative of the target population?**
   1  Very likely
   2  Somewhat likely
   3  Not likely
   4  Can't tell

**(Q2)  What percentage of selected individuals agreed to participate?**
   1  80 - 100% agreement
   2  60 – 79% agreement
   3  less than 60% agreement
   4  Not applicable
   5  Can't tell

| RATE THIS SECTION | STRONG | MODERATE | WEAK |
|---|---|---|---|
| See dictionary | 1 | 2 | 3 |

**B)  STUDY DESIGN**

**Indicate the study design**
   1  Randomized controlled trial
   2  Controlled clinical trial
   3  Cohort analytic (two group pre + post)
   4  Case-control
   5  Cohort (one group pre + post (before and after))
   6  Interrupted time series
   7  Other specify _____
   8  Can't tell

**Was the study described as randomized?  If NO, go to Component C.**
   No            Yes

**If Yes, was the method of randomization described? (See dictionary)**
   No            Yes

**If Yes, was the method appropriate? (See dictionary)**
   No            Yes

| RATE THIS SECTION | STRONG | MODERATE | WEAK |
|---|---|---|---|
| **See dictionary** | 1 | 2 | 3 |

1

## C) CONFOUNDERS

(Q1) **Were there important differences between groups prior to the intervention?**
1  Yes
2  No
3  Can't tell

**The following are examples of confounders:**
1  Race
2  Sex
3  Marital status/family
4  Age
5  SES (income or class)
6  Education
7  Health status
8  Pre-intervention score on outcome measure

(Q2) **If yes, indicate the percentage of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?**
1  80 – 100% (most)
2  60 – 79% (some)
3  Less than 60% (few or none)
4  Can't Tell

| RATE THIS SECTION | STRONG | MODERATE | WEAK |
|---|---|---|---|
| See dictionary | 1 | 2 | 3 |

## D) BLINDING

(Q1) **Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants?**
1  Yes
2  No
3  Can't tell

(Q2) **Were the study participants aware of the research question?**
1  Yes
2  No
3  Can't tell

| RATE THIS SECTION | STRONG | MODERATE | WEAK |
|---|---|---|---|
| See dictionary | 1 | 2 | 3 |

## E) DATA COLLECTION METHODS

(Q1) **Were data collection tools shown to be valid?**
1  Yes
2  No
3  Can't tell

(Q2) **Were data collection tools shown to be reliable?**
1  Yes
2  No
3  Can't tell

| RATE THIS SECTION | STRONG | MODERATE | WEAK |
|---|---|---|---|
| See dictionary | 1 | 2 | 3 |

## F) WITHDRAWALS AND DROP-OUTS

**(Q1)** **Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?**
1  Yes
2  No
3  Can't tell
4  Not Applicable (i.e. one time surveys or interviews)

**(Q2)** **Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).**
1  80 -100%
2  60 - 79%
3  less than 60%
4  Can't tell
5  Not Applicable (i.e. Retrospective case-control)

| RATE THIS SECTION | STRONG | MODERATE | WEAK | |
|---|---|---|---|---|
| See dictionary | 1 | 2 | 3 | Not Applicable |

## G) INTERVENTION INTEGRITY

**(Q1)** **What percentage of participants received the allocated intervention or exposure of interest?**
1  80 -100%
2  60 - 79%
3  less than 60%
4  Can't tell

**(Q2)** **Was the consistency of the intervention measured?**
1  Yes
2  No
3  Can't tell

**(Q3)** **Is it likely that subjects received an unintended intervention (contamination or co-intervention) that may influence the results?**
4  Yes
5  No
6  Can't tell

## H) ANALYSES

**(Q1)** **Indicate the unit of allocation (circle one)**
community    organization/institution        practice/office        individual

**(Q2)** **Indicate the unit of analysis (circle one)**
community    organization/institution        practice/office        individual

**(Q3)** **Are the statistical methods appropriate for the study design?**
1  Yes
2  No
3  Can't tell

**(Q4)** **Is the analysis performed by intervention allocation status (i.e. intention to treat) rather than the actual intervention received?**
1  Yes
2  No
3  Can't tell

3

**GLOBAL RATING**

**COMPONENT RATINGS**
Please transcribe the information from the gray boxes on pages 1-4 onto this page. See dictionary on how to rate this section.

| A | SELECTION BIAS | STRONG | MODERATE | WEAK | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | |
| B | STUDY DESIGN | STRONG | MODERATE | WEAK | |
| | | 1 | 2 | 3 | |
| C | CONFOUNDERS | STRONG | MODERATE | WEAK | |
| | | 1 | 2 | 3 | |
| D | BLINDING | STRONG | MODERATE | WEAK | |
| | | 1 | 2 | 3 | |
| E | DATA COLLECTION METHOD | STRONG | MODERATE | WEAK | |
| | | 1 | 2 | 3 | |
| F | WITHDRAWALS AND DROPOUTS | STRONG | MODERATE | WEAK | |
| | | 1 | 2 | 3 | Not Applicable |

**GLOBAL RATING FOR THIS PAPER (circle one):**

| 1 | STRONG | (no WEAK ratings) |
|---|---|---|
| 2 | MODERATE | (one WEAK rating) |
| 3 | WEAK | (two or more WEAK ratings) |

With both reviewers discussing the ratings:

Is there a discrepancy between the two reviewers with respect to the component (A-F) ratings?

No        Yes

If yes, indicate the reason for the discrepancy

1        Oversight
2        Differences in interpretation of criteria
3        Differences in interpretation of study

**Final decision of both reviewers (circle one):**          1        STRONG
2        MODERATE
3        WEAK

**Appendix 2:**

**Table 4**

Quality appraisal of included studies using the EPHPP

| Paper | A | B | C | D | E | F | Total |
|---|---|---|---|---|---|---|---|
| El-Abassy et al. (2021) | M | M | W | W | S | M | W |
| Beldivere et al. (2023) | W | M | S | M | S | S | M |
| Faretta et al. (2022a) | M | M | W | W | S | W | W |
| Farrata et al. (2022b) | M | M | W | W | S | S | W |
| Farrell et al. (2023) | M | S | W | M | S | S | M |
| Fernandez et al. (2022) | S | M | W | M | S | S | M |
| Fogliato et al. (2022) | M | M | W | W | S | N/A | W |
| Moench & Billsten (2021) | M | S | W | M | S | S | M |
| Perez et al (2020) | M | S | W | S | S | S | M |
| Perri et al. (2021) | M | M | W | W | S | W | W |
| Sağaltıcı et al. (2022) | M | M | W | W | S | S | W |
| Tarquinio et al. (2021) | W | M | W | W | S | W | W |
| Yurtsever et al. (2022) | M | M | W | W | S | W | W |

*Note*. Table headings A – F represent scores for A) Selection Bias, B) Study Design, C) Confounders, D) Blinding, E) Data Collection Methods, F) Withdrawals and Dropouts. Total score is the global rating according to the EPHPP. Abbreviations: **W** = Weak, **M** = Moderate, **S** = Strong

**Appendix 3**

**Journal Guidelines**

The Journal of EMDR Practice and Research is a quarterly, peer-reviewed publication devoted to integrative, state-of-the-art papers about Eye Movement Desensitization and Reprocessing. It is a broadly conceived interdisciplinary journal that stimulates and communicates research and theory about EMDR, and their application to clinical practice. The journal publishes experimental studies; theoretical, review, and methodological articles; case studies; brief reports; and book reviews. Examples of research areas include: randomized clinical trials; treatment outcomes with specific populations; investigation of treatment processes; evaluation of the role of eye movements and bilateral stimulation; and contribution of individual factors and personality variables to treatment outcome and/or process. Articles address theoretical issues and clinical challenges to broaden clinicians' understanding and skills; they discuss such complex issues as: strengths and weaknesses in the literature; impact of ethnicity and culture; and evaluation of client readiness for treatment.

**Manuscript Submission**

Submit manuscripts, in English, in MS Word format electronically at https://mc.manuscriptcentral.com/emdr. Manuscripts will be acknowledged on receipt. Following preliminary review by the Editors, to ensure compliance with required elements, manuscripts will be peer-reviewed by members of the Editorial Board.

**Manuscript Style**

The following are guidelines for developing and submitting a manuscript. Manuscripts that do not conform to these guidelines will be returned to the author without review, and with recommendations for changes needed to complete the submission process.

1. Manuscripts must be professionally prepared in accordance with the most recent edition of the Publication Manual of the American Psychological Association.

2. Manuscripts are generally expected to be 20-25 pages in length and double-spaced throughout; however, longer manuscripts may be considered. Brief reports will be 10-15 pages in length.

3. The title page must include authors' names, positions, titles, affiliations, full contact information (address, phone, fax, and e-mail). This information should not be included elsewhere in the manuscript, to ensure blind review.

4. The second page should contain the title of the paper and an abstract of no more than 125 words as well as 3 to 5 key words listed below the abstract. Key words should express the precise content of the manuscript, as they are used for indexing purposes.

5. All articles must contain a comprehensive literature review. For example, a manuscript describing EMDR treatment of a certain disorder would summarize the literature about the nature of that disorder, review research studies that investigated outcomes of other treatments, as well as studies that evaluated EMDR treatment of that disorder.

6. Articles that recommend a clinical approach that differs from EMDR's standard protocol or its foundational Adaptive Information Processing model (Shapiro, 2001) should explain these differences.

7. In order to promote critical thinking and an unbiased approach for the dissemination of ideas, recent advances, and current research, all articles must take an objective, scientific stance, and a respectful tone.

**Predictors of Vicarious Trauma and Burnout in Assistant Psychologists**


Amy Megan Harrison


This paper is written in the required style for Psychology and Psychotherapy.

Theory, Research and Practice.

**Abstract**

**Objectives:** Assistant Psychologists (APs) are early career professionals who often support clients with a history of trauma. Little is understood about the factors contributing to burnout and vicarious trauma in this group. This study aims to examine the presence of, and factors associated with burnout and vicarious trauma among APs working with traumatised populations.

**Design:** A quantitative, cross-sectional design using multiple regression analysis was applied.

**Methods**: A total of 265 APs completed the Vicarious Trauma Scale (VTS; Vrklesvski & Franklin, 2008) and the Maslach Burnout Inventory (MBI; Maslach and Jackson, 1981a) which measures the three constructs of burnout: emotional exhaustion, depersonalisation and personal accomplishment. Participants also completed measures of psychological flexibility, resilience, personal trauma history, supervision quality and quantity. Multiple regression analysis was used to examine the associations between resilience, psychological flexibility, personal trauma history, supervision hours and quality, and levels of vicarious trauma and burnout in APs.

**Results:** Moderate levels of vicarious trauma were identified, and burnout symptoms were present in APs. Higher psychological flexibility and greater supervision quality were associated with lower levels of vicarious trauma, emotional exhaustion and depersonalisation. Resilience positively predicts personal accomplishment.

**Conclusion:** APs are early on in their psychological careers and are likely to be increasingly exposed to trauma narratives and workplace stressors as they progress into qualified roles. It is imperative to provide opportunities to increase psychological flexibility and resilience, and to provide high quality supervision, to reduce the risk of vicarious trauma and burnout.

**Practitioner points**

- APs who are more psychologically flexible and who report their supervision is of higher quality, are less likely to experience vicarious trauma, emotional exhaustion and depersonalisation.
- Supervision quality, rather than quantity, was associated with outcomes. Therefore, prioritising high-quality supervision and improving the quality of supervisory relationships—rather than merely increasing the number of supervision hours—is crucial for reducing the risk of burnout and vicarious trauma in APs.

- APs with higher levels of resilience are likely to experience higher levels of personal accomplishment.

- Considering the presence of burnout and vicarious trauma symptoms in APs who are at the early stages of their professional careers, it is imperative to offer supportive supervision and opportunities to increase psychological flexibility and resilience, to reduce the risk of burnout and vicarious trauma as APs progress through their psychological careers, particularly when exposed to service user accounts of trauma.


**Introduction**

Assistant Psychologists (APs) are psychology graduates from British Psychological Society (BPS) accredited courses who work under the supervision of qualified psychologists. The AP role is highly valued, and the role itself offers valuable career progression opportunities (Hughes et al., 2015; Woodley-Hume & Woods, 2019), with many individuals seeking AP roles to gain necessary experience and meet requirements for entry onto the Doctorate in Clinical, Forensic or Counselling Psychology (BPS, 2024). The AP role typically includes working directly or indirectly with service users, with APs able to deliver 1:1 or group, protocol-driven psychological interventions under the supervision of a psychologist (BPS, 2024). Many service users supported by APs require support for their mental health as they have experienced a trauma.

**Vicarious Trauma**

Coined by Figley (1985) as the 'cost of caring', vicarious trauma is a psychological response resulting from indirect, or secondary exposure to distressing experiences (McCann & Pearlman, 1990) which accounts for cognitive and affective changes. Vicarious trauma is responsible for changes in the professionals' world view, self-identity and mental health (McCann & Pearlman, 1990), with individuals reporting suspiciousness, anxiety, intrusive thoughts, avoidance, emotional numbing, increased feelings of vulnerability and feelings of hopelessness about the future (Neumann & Gamble, 1995; Pearlman & Mac Ian, 1995; Steed & Downing, 1998). Existing research with qualified psychological professionals, healthcare professionals or human service providers working with traumatised individuals (e.g., in cases of abuse, grief, human trafficking, military combat, natural disasters) highlights that repeated exposure to service users' accounts of trauma, and empathetic engagement with their service users traumatic experiences, increases the risk of experiencing vicarious trauma (Jordan, 2010; McCann & Pearlman, 1990; Raunick et al., 2015; Sprang et al., 2019). Research has found trainee psychologists and trainee therapists are at risk of vicarious trauma when working with traumatised clients (Adam & Riggs, 2008; Makadia et al.,2017). Given their role in supporting service users as they try to make sense of, and recover from their trauma, APs are

frequently exposed to trauma narratives, which may increase their risk of vicarious trauma. Research suggests that mental health professionals with less experience and those of younger ages, are particularly vulnerable to vicarious trauma (Adam & Riggs, 2008; Bober & Regehr, 2006; Kadambi & Truscott,2004; McLean et al., 2003; Way et al., 2004), raising concerns that APs—who are typically early in their careers—may be at heightened risk.

**Burnout**

Burnout is a psychological condition characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach & Leiter, 2016). Maslach conceptualizes burnout as a multifaceted construct, emphasising that all three components interact to shape the experience of burnout (Maslach & Jackson, 1981b). Prolonged periods of stress lead to feelings of depletion and emotional exhaustion. To cope, individuals may distance themselves from clients through depersonalization and over time, this can result in a diminished sense of personal accomplishment (Leiter & Maslach, 1988). Burnout develops over time in response to chronic workplace stressors, excessive workloads, and perceived inequities in role expectations (Chamberlain & Miller, 2008). Research has already identified high rates of burnout among health care professionals, including psychologists and neuropsychologists (Lee et al., 2011; McCormack et al., 2018; Simionato & Simpson,2018). APs often report being overextended, working beyond their competencies (Douglas et al., 2018; Hughes et al., 2015; Ramsden et al., 2022;Rezin & Tucker, 1998; Snell & Ramsden, 2020) or conversely, feeling underutilized and that insufficient opportunities are afforded to the AP to work to their potential (Hughes et al., 2015; Ramsden et al., 2022), both of which have been linked to burnout (Douglas et al., 2018; Hughes et al., 2015; Rezin & Tucker, 1998; Woodruff & Wang, 2005). Reports indicate that 44% of APs regularly work beyond contracted hours (BPS, 2021), with burnout frequently cited as a cause of dissatisfaction (Snell & Ramsden, 2020; Ramsden et al., 2022). Thus, in addition to vicarious trauma, APs may also be at risk of burnout**.**

**Predictors of Vicarious Trauma and Burnout**

Burnout and vicarious trauma not only affect individual well-being but also impact service quality, contributing to increased staff turnover, higher sick leave rates, and potential disengagement from the profession (Ahola et al., 2008; Branson, 2019; Halbesleben, 2010; Pearlman & Saakvitne, 1995). If left unaddressed, affected professionals may struggle to maintain empathy and responsiveness (Maslach, 2003; McCann & Pearlman, 1990), ultimately reducing the effectiveness of psychological services.  Given the understudied nature of AP's, identifying the predictors of burnout and vicarious trauma for this group is crucial for developing early interventions to prevent this, and for promoting well-being, ensuring longevity in the AP's career.

***Previous Trauma***

Mental health professionals report disproportionately high rates of personal trauma compared to the general population, often citing these experiences as motivations for entering the field (Jenkins et al., 2011; Keesler, 2018; Leung et al., 2022; Sellers & Hunter, 2005) and research indicates that a significant proportion of psychologists and other mental health professionals have experienced adverse childhood events (Elliot & Guy, 1993; Pope & Feldman-Summers, 1992). Professionals with a trauma history may have an enhanced capacity for empathetic engagement but are also more vulnerable to vicarious trauma, maladaptive coping, and psychological distress compared to those without a personal trauma history (Barnett et al., 2007; Figley, 1999; Henderson et al., 2025; Pearlman & Saakvitne, 1995). This may be due to the reactivation of unresolved trauma when encountering similar experiences in their clients (Salston & Figley, 2003). Personal trauma has also been associated with burnout, with early maladaptive schemas and maladaptive coping modes, which can originate from personal trauma, serving as vulnerability factors in clinical and counselling psychologists (Simpson et al., 2019). Given these findings, APs—who often share similar motivations and early-career stressors—may also exhibit high rates of personal trauma, potentially increasing their susceptibility to both burnout and vicarious trauma.

***Resilience***

Resilience is the dynamic process of positive adaptation in the face of adversity (Luthar et al., 2000). It is the ability to 'bounce back' from stressful events, tragedy, or trauma and recover quickly from difficulties (Luthar et al., 200). Resilience is known to be protective against various mental health difficulties (Leys et al., 2021). Jordan (2010) described different factors, including resilience, which buffer symptoms of vicarious trauma in both military and civilian therapists working with combat veterans, whilst McCormack et al. (2018) found that resilience mitigates burnout in applied psychologists. Thus, if building resilience diminishes or buffers against these different forms of psychological distress, it is pertinent to study in the context of burnout and vicarious trauma in APs.

***Psychological Flexibility***

Psychological flexibility is an individual's ability to experience distressing thoughts, feelings and sensations in the present moment, whilst choosing to respond in ways that are consistent with their goals and values (Gordon & Borushok, 2017; Harris, 2019; Hayes et al., 2006). Being psychologically flexible allows individuals to adjust their behaviour to respond effectively to the demands of a situation, decreases stress and plays an important role in health and well-being (Ramaci et al., 2019; Wersebe et al., 2018). Existing research indicates psychologically flexible individuals show better mental and physical health outcomes (Dutra & Sadeh, 2018; Kashdan & Rottenberg, 2010). In addition, studies already demonstrate the effectiveness of Acceptance and

Commitment Therapy (ACT), an intervention centred on increasing psychological flexibility, in reducing burnout (Frogeli et al., 2015; Montaner et al., 2021; Puolakanaho et al., 2020) with a recent study finding hospital workers with higher levels of psychological flexibility were more able to remain open and deal with work related setbacks (Ramaci et al., 2019). Additionally, it is suggested that by fostering psychological flexibility, psychologists can better manage the emotional impact of their work and decrease the risk of vicarious trauma (Barre et al., 2024). Given the above evidence, psychological flexibility may also protect against burnout and vicarious trauma in APs and is pertinent to consider.

***Supervision Quantity and Supervision Quality***

The Association of Clinical Psychologists (ACP) recommends APs receive at least 1.5 hours of formal supervision per week (ACP, 2022). Similarly, the BPS and the Psychological Society of Ireland (PSI) recommends that APs are supervised for a minimum of 1 hour per week (BPS, 2024; PSI 2020). These practice guidelines stipulate that APs must be supervised by registered practitioner psychologists - and not other professionals - who can hold appropriate responsibility. Contrastingly, many APs report receiving inadequate levels of supervision; reporting receiving less than 1 hour per week, no supervision at all, or that their supervision is facilitated by a non-psychologist (Snell & Ramsden, 2020; Ramsden et al., 2022). Research has further indicated dissatisfaction in supervision, with APs not consistently receiving safe and appropriate supervision (Collyer, 2012; Ramsden et al., 2022; Wilkinson & Chin, 2022).

Supervision should provide a safe space for honest conversations about work related difficulties and relevant personal contexts, as well as confidential conversations about work with clients, and supervisors should promote opportunities for reflection and feedback (ACP, 2022). The benefits of adequate supervision are well documented. Receiving quality supervision reduces staff turnover (Slattery & Goodman 2009). Supportive work environments and those with structured protocols in place for case review and team reflection helps reduce or even counter the impact of vicarious trauma (Bell et al., 2003; Howlett & Collins 2014; Geller et al., 2004). Supervisory support has already been credited as a resource for reducing burnout in clinical psychologists (Hammond et al., 2017), psychotherapists (Van Hoy & Rzeszutek, 2022) and psychological wellbeing practitioners (PWPs; Westwood et al., 2017), with lower levels of burnout predicted by higher quality supervision in professionals working with traumatised clients (Iosim et al., 2021). Therefore, quality and quantity of supervision is imperative to investigate considering its role in mitigating against vicarious trauma and burnout in similar psychological professionals.

**Study Aims**

This study aims to assess to what extent APs experience symptoms of vicarious trauma and/or burnout and explore whether personal trauma, resilience, psychological flexibility, supervision quality and quantity are associated with vicarious trauma and burnout. Given the critical role of APs in mental health services, understanding these factors is essential for developing targeted interventions to enhance well-being and prevent burnout and vicarious trauma within this professional group, facilitating better support for APs in the workplace.

**Hypotheses to be tested**

It is hypothesized that 1) lower resilience, 2) less psychological flexibility, 3) a history of personal trauma, 4) fewer hours of supervision, and 5) poorer quality of supervision will each be associated with higher levels of vicarious trauma and burnout among APs.

**Materials & Methods**

**Participants**

Participants must have currently been working as an AP or have worked as an AP in the last 9 months (capturing those who have recently worked as an AP) to take part. Participants could not take part if they were not employed as an AP, e.g. PWPs or honorary APs, as these jobs have different roles and responsibilities. Participants must have worked directly with service users who have experienced trauma, with trauma defined as '*an exposure to a situation in which a person is confronted with an event that involves actual or threatened death or serious injury, or a threat to self or others' physical well-being*' (American Psychiatric Association, 2000;2022). Those who do not work directly with clients who have experienced a trauma e.g. their role is administrative rather than clinical, were not eligible to take part. A power calculation was completed using G* Power statistical power calculator (Faul et al., 2007**).** Based on previous similar research (Deveilly et al., 2009) a medium effect size of $f^2 = 0.15$ was deemed appropriate. An a priori power analysis was conducted using G*Power (Faul et al., 2007) to determine the required sample size to detect a significant overall regression model ($R^2$ deviation from zero) and the required sample size for each of the four multiple regression models. Based on a medium effect size ($f^2 = 0.15$), an alpha level adjusted for multiple comparisons (Bonferroni correction; $\alpha = .0125$), and power set at 0.80, a minimum of 104 participants was required.

**Procedure & Recruitment**

Ethical approval was granted from the University of Staffordshire. The study advert was advertised through LinkedIn and Instagram using professional accounts. Participants were directed to an online survey platform, Qualtrics, which hosted all the study materials. Participants were required

to acknowledge that they had read the information sheet, met the inclusion criteria and provide their consent via a form. Participants could withdraw their data through contacting the researcher. A debrief sheet was provided upon completion. No financial (or other) incentives were offered. See Appendices 9, 10, 11, 12 for study advert, information sheet, consent form and debrief sheet.

**Measures**

The following questionnaires were presented via the Qualtrics online survey:

***The Vicarious Trauma Scale (VTS; Vrklesvski & Franklin, 2008)***

The VTS is an eight-item scale used to assess subjective levels of distress associated with working with traumatized patients. Participants rate each item using a 7-point Likert-type scale (1 = *strongly disagree*, to 7 = *strongly agree*).  Statements include: 'I find myself distressed by listening to my clients' stories and situations'. Total score is the sum of all items and ranges from 8 – 56. Higher total scores indicate higher levels of vicarious trauma. The scale has demonstrated good internal validity across professionals exposed to trauma, including solicitors (a =.88; Vrklesvski & Franklin, 2008), criminal lawyers (Michalopoulos & Aparicio, 2012) and social workers ($\alpha$ = .77; Aparicio et al., 2013).

***The Maslach Burnout Inventory - Human Services Survey for Medical Personnel – (MBI-HSS (MP); Maslach and Jackson, 1981a)***

The MBI-HSS is a 22-item questionnaire used to assess Burnout with three subscales: emotional exhaustion, depersonalization and personal accomplishment. For each subscale, items are rated using a 7-point Linkert-type scale (0 = *never,* to 6 = *everyday*).  The emotional exhaustion subscale (nine items) describes feelings of exhaustion and feeling emotionally overextended due to work. Example statements include, 'I feel emotionally drained from my work'. Total scores range from 0 to 54. The depersonalisation subscale (five items) describes feeling disconnected from one's role and an impersonal response towards the client, namely a loss of empathy or regard for the individual receiving care. Scores range from 0 to 35 and statements include 'I don't really care what happens to some patients'. The personal accomplishment scale (eight items) describes feelings of competence, fulfilment and successful achievement in one's work, for example, 'I have accomplished many worthwhile things in this job'. Scores range from 0 to 48. The MBI-HSS subscale scores were calculated by summing responses to each respective item. The MBI suggests burnout is a continuum; higher scores of emotional exhaustion and depersonalisation indicate higher degrees of burnout, whilst lower scores for personal achievement indicate higher degrees of burnout. The Cronbach's alpha was .90 for emotional exhaustion, .79 for depersonalization, and .71 for personal accomplishment (Maslach et al., 1981) demonstrating good reliability.

### The Connor-Davidson Resilience Scale – 10 (CD-RISC-10; Connor & Davidson, 2003)

The CDI-RISC-10 is a 10-item scale assessing an individuals' level of resilience. It comprises of 10 of the original 25 items in the CD-RISC-25. Respondents rate items on a 5-point Likert scale (0 = *not true at all*, to 4 = *true nearly all the time*). Total scores are calculated from the sum of each item and range from 0-40. Higher scores indicate a higher level of resilience.  Statements include 'having to cope with stress can make me stronger'. The CD-RISC-10 has demonstrated good reliability ($\alpha$ = .84 to .86; Gonzalez et al., 2016; Notario-Pacheco et al, 2014).

### Personal Trauma History

Personal trauma history was collected using a list of traumatic experiences obtained from the Life Events Checklist for DSM-5 (LEC -5; Weathers et al., 2013), a self-report measure which assesses exposure to events known to potentially result in PTSD or distress. The LEC-5 consists of 17 traumatic experiences including physical and sexual assaults, life threatening illnesses, injury and natural disasters. For the purpose of the current research, two additional statements were included which were not accounted for in the LEC-5; 'racial trauma' and 'I have not experienced a traumatic event'. The 17 statements obtained from the LEC-5, and the additional two statements were listed and participants selected whether they had experienced any of the traumatic events. Participants were able to select all that applied to them.  For this study, the frequency of the different trauma types was collected.

### The Acceptance and Action Questionnaire (AAQ-II; Bond et al., 2011)

The AAQ-II is 7-item self-report scale that measures psychological flexibility, the willingness to experience (rather than alter the form, frequency or sensitivity of) unwanted events, and continue to pursue individual values. Participants rate statements on a 7-point scale (1 = *never true*, to 7 =*always true*). Statements include 'I worry about not being able to control my worries and feelings'. Scores range from 7 – 49 and higher scores indicate greater psychological inflexibility. The AAQ-II has shown good reliability ($\alpha$ = .84; Bond et al., 2011).  For the purposes of this study, the scale was negatively scored to aid interpretation, so psychological flexibility (rather than inflexibility) could be reported verbatim as a predictor variable.

### Supervision Quantity

Participants were asked to enter the number of hours of supervision from a Clinical Psychologist that they receive per month.

### The Supervision Evaluation and Supervisory Competence Scale (SE-SC8; Gonsalvez, 2020)

The SE-SC8 is a short form of the Supervision Evaluation and Supervisory Competence (SE-SC) scale which comprises of 31 items developed in recognition of the need for a short scale version

of the SE-SC (Gonsalvez, 2020). The SE-SC8 consists of 8 items. Six of these items capture the six supervisory competencies identified in the SE-SC, namely 1) openness, caring and support, 2) supervisors' knowledge and expertise as a therapist, 3) supervision planning and management, 4) goal-directed supervision, 5) restorative competencies; and 6) insights into and management of therapist-client dynamics and reflective practitioner competencies. The remaining two items measure satisfaction and effectiveness of the supervision experience. Items are rated on a 7-point Linkert-scale (1 = *not at all/strongly disagree* to 7 = *very much so/strongly agree*). All scores are combined to provide a single evaluation score; total scores range from 8-56 with higher scores indicating the supervisee perceives supervision to be of higher quality. The SE-SC8 has shown excellent reliability ($\alpha$ = .89; Gonsalvez, 2020).

**Data**

Online responses were transferred from Qualtrics to IBM SPSS Statistics for Windows Version 30.00, where analysis was conducted.

***Data screening***

A total of 349 individuals accessed the study link. Data integrity checks were completed. Of the 349 entries, 31 did not consent to participating and did not start the study, 41 individuals did not complete the full survey and therefore their data was removed in line with ethical procedures. Ten responses with the same IP address, completed within minutes of each other and with identical unique codes were removed as the validity of these responses could not be verified. Two data sets were removed which had completion times of less than two minutes. When compared to the completion times of the remaining participants, this was not deemed to be a reasonable completion time and would likely negatively impact the integrity of the data. As forced responses for each question were used, no other data was missing. The final sample consisted of 265 APs. All participants completed the survey between April and September 2024.

***Data management***

Due to a technical error, no responses were collected for one of the seven statements in the AAQ-II: 'I'm afraid of my feelings'. As the data was missing from this statement for all participants, statistical imputations could not be reliably used. The AAQ-II total score for each participant was therefore calculated by summing the six statements.

***Data analysis***

Correlational analysis and multiple regressions were used to explore relationships between the variables.

*Statistical Assumptions*

Four multiple regression analyses were conducted to examine the predictors of 1) vicarious trauma, 2) emotional exhaustion, 3) depersonalisation and 4) personal accomplishment. The five predictor variables for each multiple regression were resilience, psychological flexibility, trauma, supervision quantity and supervision quality. Predictors were entered at the same time.  Data checks were conducted to ensure the dataset did not significantly violate the assumptions required for multiple regression. This included verifying the absence of outliers, normality, linearity, homoscedasticity, multicollinearity, and the independence of residuals (Field, 2017). Assumptions were examined and found to be reasonably met in all four multiple regression models. There was no evidence of multicollinearity, as all correlation coefficients between predictor variables were < .70. Additionally, Variance Inflation Factors (VIF) were below the commonly accepted threshold of 10 (Field, 2005), and collinearity tolerance values were above .10, indicating that multicollinearity was not a concern. Residual analysis showed that no residuals were highly correlated, residuals were normally distributed on a P-P plot and histogram and randomly distributed on a scatter plot for 1) vicarious trauma and 2) emotional exhaustion.  Residual analysis for 3) depersonalisation and 4) personal accomplishment showed slight deviations. Regressions were repeated with Square-Root Transformations which dealt with non-normality (Field, 2017), results were consistent in identifying the same predictors as significant and the overall regression model remained significant. For ease of interpretation, and in line with central limit theorem which states that the sampling distribution will follow a normal distribution if the sample is sufficiently large (> 30; Kwak & Kim, 2017), original multiple regression models are reported, although the estimates for beta are interpreted with caution. Transformed regression models for 3) and 4) are included in Appendices 6 and 7.

## Results

**Participants**

A total of 265 participants completed the study.  A post-hoc power analysis conducted using G*Power (Faul et al., 2007) indicated that, with a sample size of 265 participants, five predictors, an effect size of $f^2 = 0.15$, and a Bonferroni-adjusted alpha of .0125, the study achieved a power of approximately .99. This indicates it was well-powered to detect medium effects in each regression model.

Demographics of the study sample are shown in Table 1. The demographic characteristics of the current sample largely correspond with existing data on APs and related psychological workforces in the UK. The sample was predominantly female in line with figures reported for APs (ACP, 2018) and trainee psychologists (Clearing House, 2020). Most participants identified as White or White British,

broadly consistent with the predominant ethnic composition reported in national psychological workforce datasets (HCPC, 2023). The majority were aged 18–34 reflecting the early career stage typical of APs (ACP, 2018) and similar to trainee psychologist cohorts (Clearing House, 2020). Nearly half of the participants had over two years of experience as an AP, indicating a blend of relatively recent and more experienced individuals within the sample.

**Table 1**

*Participant demographics (*N = 265)

| Demographics | *n* | % |
|---|---|---|
| Gender | | |
| Male | 22 | 8.3 |
| Female | 241 | 90.9 |
| Non-binary | 1 | 0.4 |
| Prefer not to say | 1 | 0.4 |
| Ethnicity | | |
| White/White British | 212 | 80.0 |
| Asian/Asian British | 31 | 11.7 |
| Black/African/Caribbean/Black British | 6 | 2.3 |
| Mixed/Multiple Ethnic Groups | 12 | 4.5 |
| Middle Eastern/Arab/North African | 2 | 0.8 |
| Any other Ethnic Group | 1 | 0.4 |
| Prefer not to say | 1 | 0.4 |
| Age | | |
| 18-24 | 95 | 35.8 |
| 25-34 | 162 | 61.1 |
| 35-44 | 5 | 1.9 |
| 45-54 | 3 | 1.1 |
| Time employed as an Assistant Psychologist | | |
| Up to 6 months | 19 | 7.2 |
| 6 months - 1 year | 36 | 13.6 |
| >1 – 1.5 years | 49 | 18.5 |
| >1.5 – 2 years | 42 | 15.8 |
| >2 – 2.5 years | 44 | 16.6 |
| >2. 5 – 3 years | 31 | 11.7 |
| > 3 years | 44 | 16.6 |

**Burnout in Assistant Psychologists**

The mean score for emotional exhaustion was 25.63, ($SD$ = 11.47) with scores ranging from 1 to 52. The mean depersonalisation score was 5.52 ($SD$ = 5.08) and scores ranged from 0 to 28. For personal accomplishment the mean score was 36.62 ($SD$ = 6.38) with scores ranging from 16 to 48. To allow comparison to existing research the cut-offs recommended by Maslach et al (1996) have been used. Based on these cut-off scores, the sample exhibited moderate levels of emotional exhaustion, low to moderate depersonalisation, and moderate levels of personal accomplishment. Considering Burnout as a continuum (Maslach et al., 2018), these scores evidence the presence of burnout symptom development in APs.  The internal consistency of the MBI was assessed using Cronbach's alpha. The overall MBI scale demonstrated good reliability ($\alpha$ = .805). Subscale reliability was excellent for emotional exhaustion ($\alpha$ = .904), acceptable for depersonalisation ($\alpha$ = .720), and good for personal accomplishment ($\alpha$ = .783).

**Vicarious Trauma in Assistant Psychologists**

The mean vicarious trauma score was 39.89 ($SD$ = 6.66) indicating a moderate level of vicarious trauma in this population. Scores ranged from 21 to 56. The internal consistency of the VTS ($\alpha$ = .865) was good.

**Psychological Flexibility in Assistant Psychologists**

Due to a technical error, only six of the seven items on the AAQ-II were recorded. Psychological flexibility was calculated using the six available items, therefore the total scores could range from 6-42 with higher scores indicating psychological inflexibility. The average score of the six items was 18.94 ($SD$ = 6.97), scores ranged from 6 to 38. The six-item AAQ-II showed very good reliability ($\alpha$ = .865)**.**

**Resilience in Assistant Psychologists**

The average score for resilience was 27.33 ($SD$ = 5.56) indicating a high level of resilience. Scores ranged from 13 to 40. The scale demonstrated good reliability ($\alpha$ = .833).

**Supervision Quantity and Quality**

APs received an average of 3.78 hours ($SD$ = 1.87) of supervision from a Qualified Clinical Psychologist per month, less than the BPS and ACP recommended minimum. The mean score from the SE-SC8 was 42.21 ($SD$ = 12.47) indicating APs receive high quality supervision.  The scale demonstrated excellent reliability ($\alpha$ = .954).

**Personal Trauma in Assistant Psychologists**

Rates of personal trauma were notably high among participants. A total of 681 trauma experiences were reported, with many APs endorsing more than one type of trauma. Overall, 87.2%

of APs (n = 231) reported experiencing at least one traumatic event, while only 5.0% (n = 34) indicated they had not experienced any trauma. The most commonly reported trauma was sexual assault or other unwanted or uncomfortable sexual experiences (n = 182). A full breakdown of trauma types is presented in Table 2.

**Table 2**

*Trauma type experienced by APs*

| Trauma type | Frequency |
| --- | --- |
| Natural disaster, fire or explosion | 16 |
| Transportation accident (e.g. car accident) | 78 |
| Serious accident at work, home, or during recreational activity | 24 |
| Physical assault, assault with a weapon | 106 |
| Sexual assault or other unwanted or uncomfortable sexual experience | 182 |
| Life-threatening illness or injury | 24 |
| Sudden violent death (e.g. homicide) or sudden accidental death | 43 |
| Racial trauma | 25 |
| Any other very stressful event or experience | 149 |
| I have not experienced a traumatic event | 34 |

*Note.* Participants could select that they had experienced more than one type of traumatic event.

**Predictors of Vicarious Trauma**

***Correlations***

Table 3 shows the Pearson correlation coefficients among the key study variables. Psychological flexibility ($r$ = -.44, $p$ < .001), resilience ($r$ = -.26, $p$ < .001), supervision quality ($r$ = -.22, $p$ < .001) and supervision quantity ($r$ = -.13, $p$ =.029) were negatively correlated with vicarious trauma.

**Table 3**

*Pearson Correlations Between Vicarious Trauma and Study Variables*

| Variable | Vicarious Trauma | Resilience | Trauma | Psychological Flexibility | Supervision Quantity | Supervision Quality |
| --- | --- | --- | --- | --- | --- | --- |
| Vicarious Trauma | — | | | | | |
| Resilience | -0.26** | — | | | | |
| Trauma | 0.12 | -0.04 | — | | | |
| Psychological Flexibility | -0.44** | 0.55** | -0.18** | — | | |
| Supervision Quantity | -0.13* | 0.18** | -0.06 | 0.16** | — | |

| Supervision Quality | -0.22** | 0.17** | -0.05 | 0.18** | 0.28** | — |
|---|---|---|---|---|---|---|

### Multiple Regression for Vicarious Trauma

The overall regression model for vicarious trauma was statistically significant, $F(5, 259)$ = 13.863, $p < 0.001$, indicating that the predictors collectively explained a significant amount of variance in the dependent variable. Approximately 21% of the variance in vicarious trauma was accounted for by the predictors ($R^2$=0.211). The adjusted R² value of 0.196 suggested the model generalizes well to the population. The Durbin-Watson statistic (2.220) suggested no significant autocorrelation in the residuals. The effect size was medium ($f^2$ = 0.267), according to Cohen's (1988) guidelines. Out of the five predictors, two variables were statistically significant contributors to the model: psychological flexibility (β=-0.395, $p$ <.001) and supervision quality (β =-0.136, $p$ = .020). Psychological flexibility had the strongest relative impact on vicarious trauma among the predictors, and the model suggests that for every one-unit increase in psychological flexibility there is an associated decrease of -.377 in vicarious trauma, whilst holding other predictors constant. For supervision quality, the model suggests that for every one-unit increase in supervision quality, there is an associated decrease of -.073 in vicarious trauma. The remaining predictors were not statistically significant, with p-values > 0.05, suggesting these variables do not explain a meaningful amount of additional variance in vicarious trauma when the other variables are included in the model. See Table 4.

**Table 4**

*Multiple Regression Analysis Predicting Vicarious Trauma*

| Predictor | B | SE | β | t | p | 95% CI (Lower, Upper) for B |
|---|---|---|---|---|---|---|
| (Constant) | 35.875 | 3.310 | — | 10.837 | <.001* | [29.356, 42.394] |
| Resilience | -0.011 | 0.080 | -0.009 | -0.140 | .889 | [-.169, .146] |
| Trauma History | 0.702 | 1.119 | 0.035 | 0.627 | .531 | [1.502, 2.905] |
| Psychological Flexibility | -0.377 | 0.065 | -0.395 | -5.834 | <.001* | [-.504, - .250] |
| Hours of Supervision per Month | -0.096 | 0.208 | -0.027 | -0.462 | .644 | [-.505, .313] |
| Supervision Quality | -0.073 | 0.031 | -0.136 | -2.339 | .020* | [-.134, -.011] |

*Note. B* = Unstandardized regression coefficient, *SE* = Standard error, *β* = Standardized regression coefficient, *t* = t-value, *p* = p-value, CI = confidence intervals. * *p* < .05

**Predictors of Burnout**

*Correlations*

Table 5 shows the Pearsons correlations between emotional exhaustion and predictors, depersonalisation and predictors, and personal accomplishment and predictors. Emotional exhaustion was negatively correlated with resilience ($r$ = -.32, $p$ <.001), psychological flexibility ($r$ = -0.52, $p$ <.001), supervision quality ($r$ = -0.39, $p$ <.001) and supervision quantity ($r$ = -0.17, $p$ = 0.004). Depersonalisation was negatively correlated with psychological flexibility ($r$ = -0.32, $p$ < .001), supervision quality ($r$ = -0.29, $p$ < .001), supervision quantity ($r$ = -0.16, $p$ = .006) and resilience ($r$ = -0.15, $p$ = .006). Personal accomplishment was positively correlated with resilience ($r$ =. 54, $p$ <.001), psychological flexibility ($r$= .34, $p$ < .001), supervision quantity ($r$ = .20, $p$ = .001) and supervision quality ($r$ = .20, $p$ = .001).

**Table 5**

*Pearson Correlations between Emotional Exhaustion and Study Variables, Depersonalisation and Study Variables, and Personal Accomplishment and Study Variables*

| Variable | Resilience | Trauma | Psychological Flexibility | Supervision Quantity | Supervision Quality |
|---|---|---|---|---|---|
| Emotional Exhaustion | -0.32** | 0.03 | -0.52** | -0.17** | -0.39** |
| Depersonalisation | -0.15** | 0.09 | -0.32** | -0.16** | -0.29** |
| Personal Accomplishment | 0.54** | -0.01 | 0.34** | 0.20** | 0.20** |
| Resilience | — | -0.04 | 0.55** | 0.18** | 0.17** |
| Trauma | -0.04 | — | -0.18** | -0.06 | -0.05 |
| Psych. Flexibility | 0.55** | -0.18** | — | 0.16** | 0.18** |
| Supervision Quantity | 0.18** | -0.06 | 0.16** | — | 0.28** |
| Supervision Quality | 0.17** | -0.05 | 0.18** | 0.28** | — |

Note. $N$ = 265. All values represent Pearson's $r$ correlations. $p$ < .05* (2-tailed). $p < .01$**(2-tailed).

**Predictors of Emotional Exhaustion**

*Multiple Regression for Emotional Exhaustion*

The overall regression model for emotional exhaustion was statistically significant, $F(5, 259)$ = 30.343, $p$ < 0.001. Approximately 37% of the variance in emotional exhaustion was accounted for by the predictors ($R^2$=.369). The adjusted $R^2$ value of .357 indicates that the model generalizes well to

the population. The Durbin-Watson statistic (2.204) suggested no significant autocorrelation. A large effect was observed ($f^2$ = 0.585). Out of the five predictors, two variables were statistically significant contributors to the model: psychological flexibility (β = -0.468, $p$ <.001) and supervision quality (β = -0.312, $p$ = <.001). The model suggests that for every one-unit increase in psychological flexibility there is an associated decrease of -.770 in emotional exhaustion, and for every one-unit increase in supervision quality, there is an associated decrease of -.287 in emotional exhaustion, whilst holding other predictors constant. The remaining predictors were not statistically significant ($p$ > 0.05). See Table 6.

**Table 6**

*Multiple Regression Analysis Predicting Emotional Exhaustion*

| Predictor | B | SE | β | t | p | 95% CI (Lower, Upper) for B |
|---|---|---|---|---|---|---|
| (Constant) | 26.372 | 5.100 | — | 5.171 | <.001* | [16.329, 36.415] |
| Resilience | -0.033 | 0.123 | -0.016 | -0.270 | .787 | [-.276, .209] |
| Trauma | -2.617 | 1.724 | -0.076 | -1.518 | .130 | [-6.012, .788] |
| Psychological Flexibility | -0.770 | 0.099 | -0.468 | -7.744 | <.001* | [-.966, -.575] |
| Supervision Quantity | -0.009 | 0.320 | -0.002 | -0.030 | .976 | [-.640, .621] |
| Supervision Quality | -0.287 | 0.048 | -0.312 | -5.994 | <.001* | [-.381, -. 193] |

*Note. B* = Unstandardized regression coefficient, *SE* = Standard error, *β* = Standardized regression coefficient, *t* = t-value, *p* = p-value, CI = confidence intervals. * *p* < .05.

**Predictors of Depersonalisation**

***Multiple Regression for Depersonalisation[1]***

The overall regression model for depersonalisation was statistically significant, *F*(5, 259) = 10.186, *p* < 0.001. The $R^2$ value was .164, meaning approximately 16% of the variance in depersonalisation was accounted for by the predictors. The adjusted $R^2$ value of .148 suggests that the model generalizes well to the population. The Durbin-Watson statistic (2.098) suggested no significant autocorrelation in the residuals. The effect size was medium ($f^2$ = 0.196). Out of the five predictors, two variables were statistically significant contributors to the model: Psychological flexibility (β = -0.306, *p* = <.001) and supervision quality (β = -0.227, *p* = <.001). The model suggests that for every one-unit increase in psychological flexibility there is an associated decrease of -.224 in

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[1] Regression analysis for depersonalisation was repeated with Square-Root Transformation, results were consistent with the original regression and therefore the original regression is reported here. The transformed regression model is included in appendix 6.

depersonalisation, and for every one-unit increase in supervision quality, there is an associated decrease of -.093 in depersonalisation, whilst holding other predictors constant. The remaining predictors were not statistically significant ($p > 0.05$). See Table 7.

**Table 7**

*Multiple Regression Analysis Predicting Depersonalisation*

| Predictor | B | SE | β | t | p | 95% CI (Lower, Upper) for B |
|---|---|---|---|---|---|---|
| (Constant) | 3.868 | 2.602 | — | 1.486 | .138 | [-1.257, 8.992] |
| Resilience | 0.058 | 0.063 | 0.063 | 0.923 | .357 | [-.066, .182] |
| Trauma | 0.306 | 0.880 | 0.020 | 0.348 | .728 | [-1.426, 2.039] |
| Psychological flexibility | -0.224 | 0.051 | -0.306 | -4.403 | <.001* | [-.323,-.124] |
| Supervision Quantity | -0.140 | 0.163 | -0.051 | -0.855 | .393 | [-.461,.182] |
| Supervision Quality | -0.093 | 0.024 | -0.227 | -3.793 | <.001* | [-.141,-.045] |

*Note.* B = Unstandardized regression coefficient, *SE* = Standard error, *β* = Standardized regression coefficient, *t* = t-value, *p* = p-value, CI = confidence intervals. * *p* < .05.

**Predictors of Personal Accomplishment**

***Multiple Regression for Personal Accomplishment [2]***

The overall regression model for personal accomplishment was statistically significant, *F*(5, 259) = 22.971, *p* < 0.001. The R² value was .307, meaning approximately 30% of the variance in personal accomplishment was accounted for by the predictors. The adjusted R² value of .294 indicates that the model generalizes well to the population. The Durbin-Watson statistic (2.062) suggested no significant autocorrelation in the residuals. The effect size was large (*f²* = 0.443). Out of the five predictors, resilience was a statistically significant contributor to the model (β =.478, *p* <.001). The model suggests that for every one-unit increase in resilience there is an associated increase of .549 in personal accomplishment, whilst holding other predictors constant. The remaining predictors were not statistically significant (*p*> 0.05). See Table 8.

**Table 8**

*Multiple Regression Predicting Personal Accomplishment*

| Predictor | B | SE | β | t | p | 95% CI (Lower, Upper) for B |
|---|---|---|---|---|---|---|
| Constant | 19.213 | 2.975 | — | 6.459 | <.001* | [13.355, 25.071] |
| Resilience | .549 | .072 | .478 | 7.637 | < .001* | [.407,.690] |

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[2] Regression analysis for personal accomplishment was repeated with Square-Root Transformation, results were consistent with the original regression and therefore the original regression is reported here. The transformed regression model is included in appendix 7.

| | B | SE | β | t | p | CI |
|---|---|---|---|---|---|---|
| Trauma History | .584 | 1.006 | .031 | .581 | .562 | [-1.396, 2.565] |
| Psychological Flexibility | .051 | .058 | .055 | .875 | .382 | [-.063, .165] |
| Supervision Quantity | .271 | .187 | .079 | 1.451 | .148 | [-.097, .639] |
| Supervision Quality | .043 | .028 | .085 | 1.552 | .122 | [-.012, .098] |

*Note. B* = Unstandardized regression coefficient, *SE* = Standard error, *β* = Standardized regression coefficient, *t* = t-value, *p* = p-value, CI = confidence intervals. * *p* < .05.

## Discussion

This study explored the associations between different psychological and workplace-related factors and vicarious trauma and burnout in APs. Hypotheses 1, 2, and 5 were supported, with supervision quality and psychological flexibility emerging as significant variables associated with lower levels of vicarious trauma, emotional exhaustion, and depersonalisation. Resilience was the only variable significantly associated with personal accomplishment. In contrast, Hypotheses 3 and 4 were not supported, as quantity of supervision and history of personal trauma were not significantly associated with burnout or vicarious trauma among APs.

### Predictors of Vicarious Trauma

APs experienced a moderate level of vicarious trauma. Among the five predictors, psychological flexibility emerged as a significant association, suggesting APs who demonstrate greater psychological flexibility are less likely to experience vicarious trauma. This aligns with research in ACT, which highlights psychological flexibility as a key protective factor in trauma-exposed professionals (Hayes et al., 2006; Kashdan & Rottenberg, 2010). The ability to adapt to distressing experiences and maintain cognitive and behavioural flexibility appears to buffer against vicarious trauma (Barre et al., 2024). Vicarious trauma tends to accumulate over time through continuous exposure to clients' trauma narratives, with research linking higher caseloads and cumulative exposure, to increased vicarious trauma risk (Baird & Kracen, 2006; Schauben & Frazier, 1995). Given that APs frequently work with traumatized clients—and are likely to continue encountering trauma throughout their careers — developing psychological flexibility early may be crucial for ensuring career longevity. This is important considering the research already highlighting the impact of vicarious trauma on qualified mental health professionals (Finklestein et al., 2015). As APs are in the early stages of their careers, these findings underscore the need for psychological flexibility training as part of professional development, to equip APs with effective coping strategies and mitigate the long-term risk of vicarious trauma.

Supervision quality was also negatively associated with vicarious trauma, with higher quality supervision contraindicating vicarious trauma. This finding reinforces existing research suggesting

that supervision acts as a protective factor, buffering the psychological impact of working with trauma-exposed clients (Joubert et al., 2013;Rønnestad & Skovholt, 2013). High-quality supervision likely provides a space for reflection, emotional processing, and skill development, which in turn reduces the psychological burden associated with vicarious trauma. The quantity of supervision was not significantly associated with vicarious trauma, highlighting the importance of quality over quantity in mitigating distress. Despite APs in this sample receiving supervision quantity below the recommended minimum, they still reported relatively high levels of supervision quality, again highlighting the importance of good quality supervision. As levels of vicarious trauma in the present sample of APs was already moderate, good quality supervision will be essential in mitigating the impact of vicarious trauma over time and endorsing recovery. Several qualitative studies have identified regular supervision as important in addressing vicarious trauma symptoms (Hunter & Schofield, 2006; Joubert et al., 2013; Killian, 2008) and have emphasised the importance of having a supervisor who 'acknowledged, validated or recognised' that these symptoms exist (Kapoulitsas & Corcoran, 2015). Findings from the present study suggest that rather than increasing supervision hours alone, efforts should focus on improving supervision quality, including by integrating strategies into supervision that foster psychological flexibility. Contrary to existing research (Jordan, 2010; Leys et al., 2021), resilience and previous trauma history were not significantly associated with vicarious trauma in this study, suggesting other factors may play a more central role in moderating vicarious trauma. It is also possible that the protective effects of resilience or the impact of prior trauma may be context-dependent, varying based on the type of trauma, professional experience, or other unmeasured variables in this sample.

**Predictors of Emotional Exhaustion and Depersonalisation**

The presence of moderate emotional exhaustion and low to moderate depersonalisation in the present sample of APs suggests that some participants may be at risk of developing burnout over time, particularly if work-related stressors persist. Psychological flexibility and supervision quality were significantly associated with both emotional exhaustion and depersonalisation. Psychological flexibility demonstrated the strongest association with emotional exhaustion, indicating that individuals with greater cognitive and emotional adaptability are likely to experience lower levels of emotional exhaustion. Similar studies exploring the impact of psychological flexibility on the three constructs of burnout have demonstrated similar patterns, including that psychological flexibility most highly predicts emotional exhaustion, followed by depersonalisation (Erdem et al 2024). Results suggests that APs who can regulate emotions and remain engaged in their work are less likely to experience emotional exhaustion or develop a detached attitude toward clients. This aligns with previous research suggesting that the ability to remain open to difficult emotions and maintain

values-based actions is a protective factor for burnout (Hayes et al., 2006; Sarabia–Cobo et al., 2021). Studies have also indicated that interventions which aim to increase psychological flexibility may prevent the development of burnout (Suleiman-Martos et al., 2019). As such, it is recommended that solutions to increase psychological flexibility and alleviate burnout, must begin with early detection, to prevent a negative progression of burnout (Sarabia-Cobo et al., 2021).

Supervision quality was also negatively associated with both emotional exhaustion and depersonalisation, highlighting the importance of high-quality supervision in mitigating burnout symptomology. Supervision provides an opportunity for emotional processing, validation, and professional guidance, which may act as a buffer against the overwhelming nature of clinical work (Bernard & Goodyear, 1998;2019). Results reinforce that clinicians who feel supported in supervision may be less likely to experience emotional detachment or disengagement from clients. As APs in this study rated their supervision as high quality and reported a low to moderate level of depersonalisation, it is possible that the high-quality supervision has already acted as a protective factor against the development of depersonalisation (Bernard & Goodyear, 2019). Notably, as with vicarious trauma, supervision quantity was not significantly associated with emotional exhaustion or depersonalisation, further strengthening the argument that quality, rather than quantity of supervision is key. Resilience and personal trauma history did not show a significant relationship with emotional exhaustion or depersonalisation, indicating personal resilience alone may not be sufficient to prevent burnout when other workplace stressors are present, and the emotional toll of professional work may be distinct from personal trauma history.

**Predictors of Personal Accomplishment**

Levels of personal accomplishment were moderate, indicating APs generally feel accomplished in their roles.  Resilience was uniquely associated with personal accomplishment, suggesting more resilient APs experience greater professional fulfilment and a stronger sense of competence in their roles. This aligns with existing research in healthcare professionals, where resilience has been identified as a key protective factor against burnout and job dissatisfaction (Jordan, 2010; McCormack et al.,2018). Resilient individuals tend to use adaptive coping strategies such as problem-solving, emotional regulation, and seeking social support (Kashdan & Rottenberg, 2010).  It is therefore possible that resilience helps APs manage stress effectively, allowing them to feel more competent and fulfilled in their roles, which may contribute to higher levels of personal accomplishment. Given the significant personal trauma history and high levels of resilience in this sample, it is possible that personal experiences with trauma and adversity may have already contributed to increased resilience and emotional insight in this group (Barrington & Shakespeare-Finch, 2013. Tedeschi & Calhoun,1996;2004), meaning they are more likely to experience a sense of

accomplishment rather than distress when working with trauma-exposed clients. While resilience is often considered a protective factor for burnout in its entirety, results from this study indicate it may be more relevant to the personal accomplishment construct of burnout, than to depersonalisation or emotional exhaustion. In addition, psychological flexibility and supervision quality were not significantly associated with personal accomplishment, although both were significantly associated with lower levels of emotional exhaustion and depersonalisation. Given that Maslach conceptualizes burnout as a multifaceted construct encompassing all three components (Maslach & Jackson, 1981b), resilience should be considered alongside the variables associated with emotional exhaustion and depersonalization. This is particularly important when examining burnout holistically and aligns with previous research indicating that burnout is not an all-or-nothing phenomenon, but exists along a continuum (Maslach & Leiter, 2016).

**Clinical Implications**

The findings of this study provide important implications for training and supporting early-career psychologists. The elevated level of vicarious trauma and burnout symptoms are concerning considering APs are early in their clinical careers. Results underscore the importance of quality supervision for APs, with quality of supervision more strongly related to outcomes than quantity. Results also highlight the importance of resilience and psychological flexibility in APs in reducing burnout and vicarious trauma. Recognising symptoms of vicarious trauma and burnout and implementing preventative measures at the early stages of their clinical psychology career pathway, is important for AP career longevity, especially considering the links between the years spent in healthcare settings and higher risk of burnout and vicarious trauma (Marcum et al.,2018; Martínez-Rubio et al., 2020).

**Recommendations**

High-quality supervision is a crucial protective factor in APs' professional well-being. Improving the quality of supervision and supervisory relationships - rather than merely increasing the number of supervision hours - may be crucial for reducing burnout and vicarious trauma. Supervisors should focus on enhancing reflective practice, emotional processing, and the development of psychological flexibility and resilience within supervision sessions. Organisations should prioritise training supervisors to a high standard, enabling high quality supervision to become standard practice. Interventions aimed at increasing psychological flexibility should be incorporated into AP training and onboarding programs to reduce risk of burnout and vicarious trauma. Numerous studies in other professional and individual groups have already reported good results of interventions based on ACT, an intervention centred on increasing psychological flexibility (Frögéli et al., 2015; Shafiabady et al., 2015). For APs, resilience appears to be a foundational trait that sustains

their sense of personal accomplishment, despite the challenges of working within mental health settings. Efforts to foster resilience through professional development programs, peer support networks, and embedding resilience-building strategies in both AP training and supervision models, could help APs maintain a sense of fulfilment. By fostering resilience, APs may not only reduce burnout risk but also strengthen their long-term capacity for meaningful and sustainable careers in psychology.

**Strengths**

The present study makes a novel contribution to the field by focusing on APs, a population underrepresented in burnout and vicarious trauma research. The methodological design of the study is itself a strength; the use of validated and widely recognised measures enhances the reliability and comparability of results to existing research. Additionally, the use of multiple regression analysis allowed for a comprehensive examination of predictors, which strengthens validity of the findings through the identification of significant contributing factors whilst controlling for others. The findings enable evidence-based recommendations to be made about the role of psychological flexibility, resilience and supervision quality in shielding APs from burnout and vicarious trauma. This can be used to inform institutional policies aimed at reducing levels of burnout and vicarious trauma in APs and promoting well-being throughout their professional psychological career.  Finally, the study took a holistic approach to measuring burnout. Though emotional exhaustion has been suggested to be most relevant to the role of psychologists (Rupert & Morgan, 2005), the inclusion of the three MBI component subscales in this research enables the consideration of the unique contribution of each predictor variable to each component of burnout, aligning with Maslach's conceptualisation of burnout as a multidimensional construct (Maslach & Jackson, 1981b;2016), and enabling a more nuanced understanding of burnout.

**Limitations**

The study is cross-sectional, capturing data at a single time point and therefore preventing any conclusions about causality being drawn. While multiple regression analyses identified significant associations between variables, it is possible that these relationships are bidirectional or influenced by unmeasured third variables. Another limitation of the study is that the sample was self-selected; participants were recruited online through study advertisements that specifically invited APs to take part. However, there was no independent method of verifying the AP's job role. It is possible that some respondents may not have met the inclusion criteria, and this may affect the generalisability of the findings, as responses may not fully represent the broader AP population.  Additionally, whilst the measures were of strong validity, all relied on self-report and therefore a risk of social desirability bias or inaccurate self-assessment exists. Finally, it is possible that APs might underreport vicarious

trauma and burnout due to stigma, professional expectations and the highly competitive nature of the field.

**Future research**

Future research should consider employing longitudinal or prospective designs to clarify the temporal relationships between study variables and vicarious trauma and burnout. Such designs would allow for a more robust examination of potential bidirectional effects and developmental trajectories over time. Since burnout and vicarious trauma develop over time, a longitudinal approach would provide further understanding of how these factors evolve as APs progress through their careers. Future research should explore additional workplace factors, such as caseload size, organisational climate and self-care practices, and explore interventions that enhance psychological flexibility, strengthen supervision quality, and build resilience in APs, to provide a more comprehensive understanding of factors influencing vicarious trauma and burnout. Mixed-methods or qualitative approaches may provide deeper insight into the lived experiences of APs, particularly in relation to how personal trauma histories interact with workplace factors. Verification of participants' professional roles could further strengthen the validity of future findings

## Conclusion

APs are at risk of burnout and vicarious trauma. The study examined factors associated with vicarious trauma and the three constructs of burnout. Supervision quality and psychological flexibility were significantly associated with lower levels of vicarious trauma, emotional exhaustion and depersonalisation, whilst resilience was uniquely associated with higher levels of personal accomplishment in APs. The findings provide practical implications for supervision and training while also highlighting the need for further longitudinal research. Given that burnout and vicarious trauma can develop progressively over time, early detection and prevention is important for these early career psychologists, particularly as APs transition into more demanding roles such as clinical psychology training or qualified roles. Enhancing psychological flexibility, building resilience and ensuring good quality supervision, are essential in reducing the risk of burnout and vicarious trauma in APs working with traumatised clients.

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**Appendices**

Multiple Regressions:

1) VT
2) EE
3) DP
4) PA

Square Root Transformations

5) DP
6) PA

Ethics and participant information

7) Ethical approval form
8) Study advert
9) PI sheet
10) Consent form
11) Debrief sheet

Permissions to use scales:

12) The Vicarious Trauma Scale (VTS; Vrklesvski & Franklin, 2008)

13) The Maslach Burnout Inventory - Human Services Survey for Medical Personnel – (MBI-HSS (MP); Maslach and Jackson, 1981 a)

14) The Connor-Davidson Resilience Scale – 10 (CD-RISC-10; Connor & Davidson, 2003)

15) The Supervision Evaluation and Supervisory Competence Scale (SE-SC8; Gonsalvez, 2020)

16) The Acceptance and Action Questionnaire (AAQ-II; Bond et al., 2011)

Journal guidelines

17) Journal Guidelines

## 1) MR for Vicarious Trauma

**Correlations**

| | | VTTotal | ResTotal | TraumaYN | PFT6total | Hours of Supervision per month | TotalSS |
|---|---|---|---|---|---|---|---|
| VTTotal | Pearson Correlation | 1 | -.255** | .116 | -.435** | -.134* | -.217** |
| | Sig. (2-tailed) | | <.001 | .060 | <.001 | .029 | <.001 |
| | N | 265 | 265 | 265 | 265 | 265 | 265 |
| ResTotal | Pearson Correlation | -.255** | 1 | -.036 | .548** | .183** | .170** |
| | Sig. (2-tailed) | <.001 | | .559 | <.001 | .003 | .006 |
| | N | 265 | 265 | 265 | 265 | 265 | 265 |
| TraumaYN | Pearson Correlation | .116 | -.036 | 1 | -.182** | -.058 | -.051 |
| | Sig. (2-tailed) | .060 | .559 | | .003 | .350 | .411 |
| | N | 265 | 265 | 265 | 265 | 265 | 265 |
| PFT6total | Pearson Correlation | -.435** | .548** | -.182** | 1 | .164** | .177** |
| | Sig. (2-tailed) | <.001 | <.001 | .003 | | .008 | .004 |
| | N | 265 | 265 | 265 | 265 | 265 | 265 |
| Hours of Supervision per month | Pearson Correlation | -.134* | .183** | -.058 | .164** | 1 | .283** |
| | Sig. (2-tailed) | .029 | .003 | .350 | .008 | | <.001 |
| | N | 265 | 265 | 265 | 265 | 265 | 265 |
| TotalSS | Pearson Correlation | -.217** | .170** | -.051 | .177** | .283** | 1 |
| | Sig. (2-tailed) | <.001 | .006 | .411 | .004 | <.001 | |
| | N | 265 | 265 | 265 | 265 | 265 | 265 |

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | R Square Change | F Change | df1 | df2 | Sig. F Change | Durbin-Watson |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .459[a] | .211 | .196 | 5.96825 | .211 | 13.863 | 5 | 259 | <.001 | 2.220 |

a. Predictors: (Constant), TotalSS, TraumaYN, ResTotal, Hours of Supervision per month, PFT6total
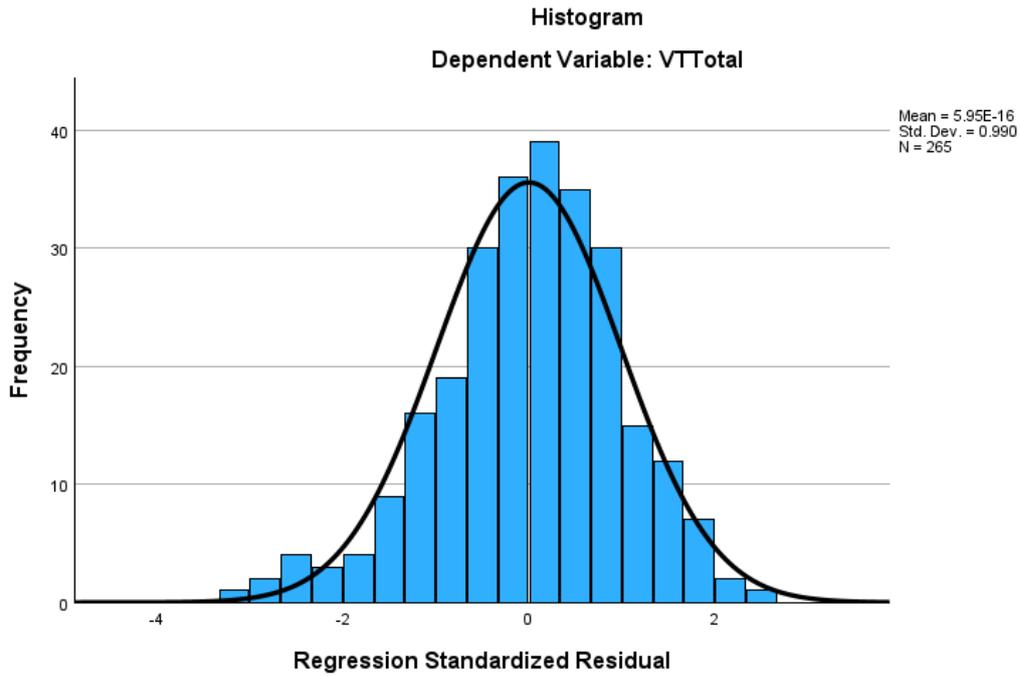
b. Dependent Variable: VTTotal

**ANOVA[a]**

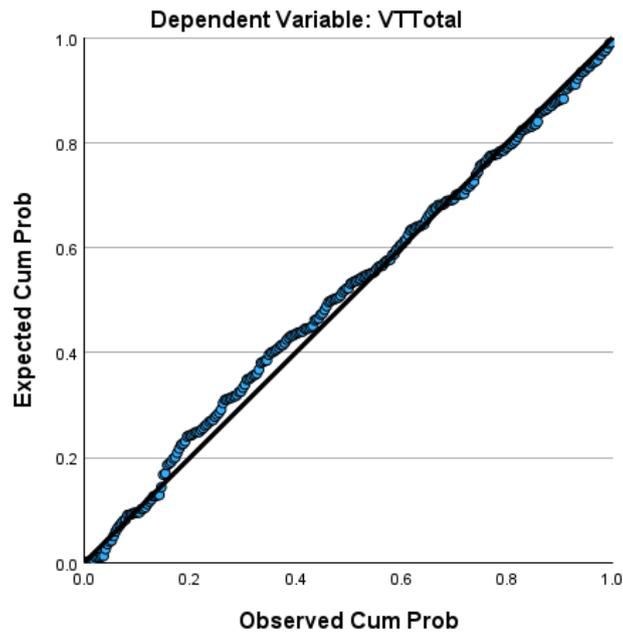| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 2469.019 | 5 | 493.804 | 13.863 | <.001[b] |
| | Residual | 9225.585 | 259 | 35.620 | | |
| | Total | 11694.604 | 264 | | | |

a. Dependent Variable: VTTotal

b. Predictors: (Constant), TotalSS, TraumaYN, ResTotal, Hours of Supervision per month, PFT6total
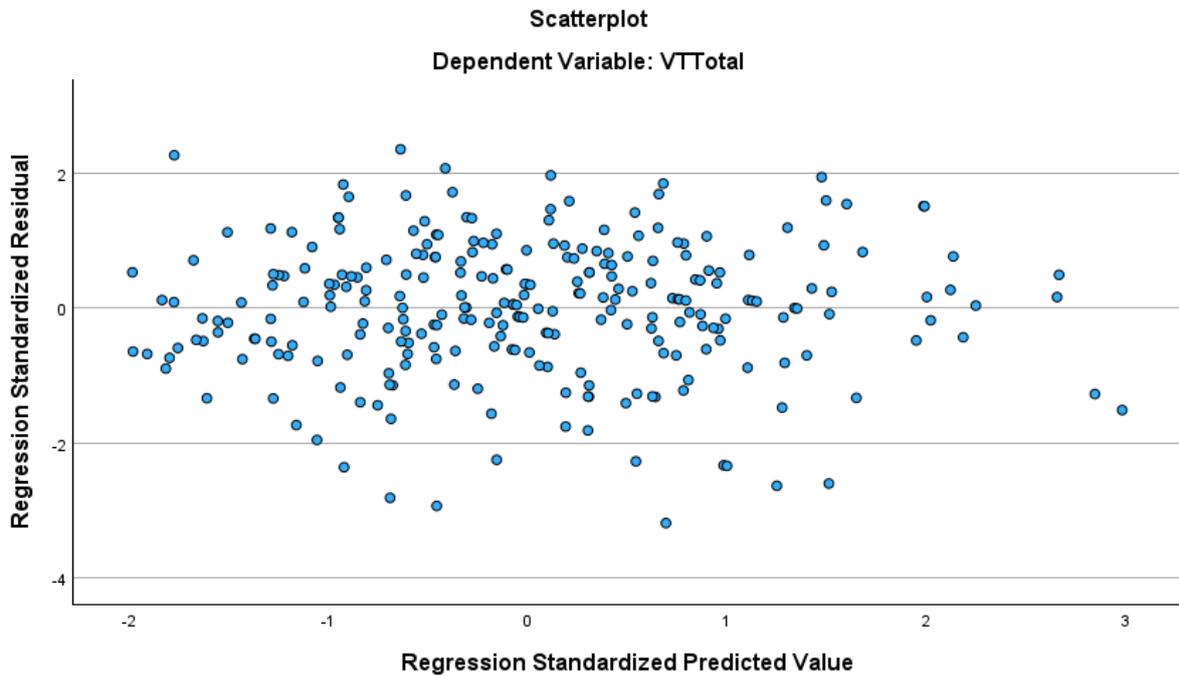
**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | 95.0% Confidence Interval for B | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Lower Bound | Upper Bound | Tolerance | VIF |
| 1 | (Constant) | 35.875 | 3.310 | | 10.837 | <.001 | 29.356 | 42.394 | | |
| | ResTotal | -.011 | .080 | -.009 | -.140 | .889 | -.169 | .146 | .683 | 1.464 |
| | TraumaYN | .702 | 1.119 | .035 | .627 | .531 | -1.502 | 2.905 | .960 | 1.042 |
| | PFT6total | -.377 | .065 | -.395 | -5.834 | <.001 | -.504 | -.250 | .666 | 1.502 |
| | Hours of Supervision per month | -.096 | .208 | -.027 | -.462 | .644 | -.505 | .313 | .898 | 1.114 |
| | TotalSS | -.073 | .031 | -.136 | -2.339 | .020 | -.134 | -.011 | .899 | 1.113 |

a. Dependent Variable: VTTotal



**Histogram**

**Dependent Variable: VTTotal**

Mean = 5.95E-16
Std. Dev. = 0.990
N = 265



**Normal P-P Plot of Regression Standardized Residual**

**Dependent Variable: VTTotal**

**Scatterplot**

**Dependent Variable: VTTotal**



## 2) Multiple regression for Emotional Exhaustion

**Correlations**

| | | EE2TOT | ResTotal | TraumaYN | PFT6total | Hours of Supervision per month | TotalSS |
|---|---|---|---|---|---|---|---|
| EE2TOT | Pearson Correlation | 1 | -.323** | .025 | -.519** | -.165** | -.394** |
| | Sig. (2-tailed) | | <.001 | .685 | <.001 | .007 | <.001 |
| | N | 265 | 265 | 265 | 265 | 265 | 265 |
| ResTotal | Pearson Correlation | -.323** | 1 | -.036 | .548** | .183** | .170** |
| | Sig. (2-tailed) | <.001 | | .559 | <.001 | .003 | .006 |
| | N | 265 | 265 | 265 | 265 | 265 | 265 |
| TraumaYN | Pearson Correlation | .025 | -.036 | 1 | -.182** | -.058 | -.051 |
| | Sig. (2-tailed) | .685 | .559 | | .003 | .350 | .411 |
| | N | 265 | 265 | 265 | 265 | 265 | 265 |
| PFT6total | Pearson Correlation | -.519** | .548** | -.182** | 1 | .164** | .177** |
| | Sig. (2-tailed) | <.001 | <.001 | .003 | | .008 | .004 |
| | N | 265 | 265 | 265 | 265 | 265 | 265 |
| Hours of Supervision per month | Pearson Correlation | -.165** | .183** | -.058 | .164** | 1 | .283** |
| | Sig. (2-tailed) | .007 | .003 | .350 | .008 | | <.001 |
| | N | 265 | 265 | 265 | 265 | 265 | 265 |
| TotalSS | Pearson Correlation | -.394** | .170** | -.051 | .177** | .283** | 1 |
| | Sig. (2-tailed) | <.001 | .006 | .411 | .004 | <.001 | |
| | N | 265 | 265 | 265 | 265 | 265 | 265 |

**. Correlation is significant at the 0.01 level (2-tailed).

## Model Summary[b]

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .608[a] | .369 | .357 | 9.19456 | 2.204 |

a. Predictors: (Constant), TotalSS, TraumaYN, ResTotal, Hours of Supervision per month, PFT6total

b. Dependent Variable: EE2TOT

## ANOVA[a]

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 12825.904 | 5 | 2565.181 | 30.343 | <.001[b] |
| | Residual | 21895.854 | 259 | 84.540 | | |
| | Total | 34721.758 | 264 | | | |

a. Dependent Variable: EE2TOT

b. Predictors: (Constant), TotalSS, TraumaYN, ResTotal, Hours of Supervision per month, PFT6total

## Coefficients[a]

| Model | | Unstandardized Coefficients B | Std. Error | Standardized Coefficients Beta | t | Sig. | 95.0% Confidence Interval for B Lower Bound | Upper Bound | Collinearity Statistics Tolerance | VIF |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | (Constant) | 26.372 | 5.100 | | 5.171 | <.001 | 16.329 | 36.415 | | |
| | ResTotal | -.033 | .123 | -.016 | -.270 | .787 | -.276 | .209 | .683 | 1.464 |
| | TraumaYN | -2.617 | 1.724 | -.076 | -1.518 | .130 | -6.012 | .778 | .960 | 1.042 |
| | PFT6total | -.770 | .099 | -.468 | -7.744 | <.001 | -.966 | -.575 | .666 | 1.502 |
| | Hours of Supervision per month | -.009 | .320 | -.002 | -.030 | .976 | -.640 | .621 | .898 | 1.114 |
| | TotalSS | -.287 | .048 | -.312 | -5.994 | <.001 | -.381 | -.193 | .899 | 1.113 |

a. Dependent Variable: EE2TOT

### Histogram

### Dependent Variable: EE2TOT



Mean = -7.54E-17
Std. Dev. = 0.990
N = 265
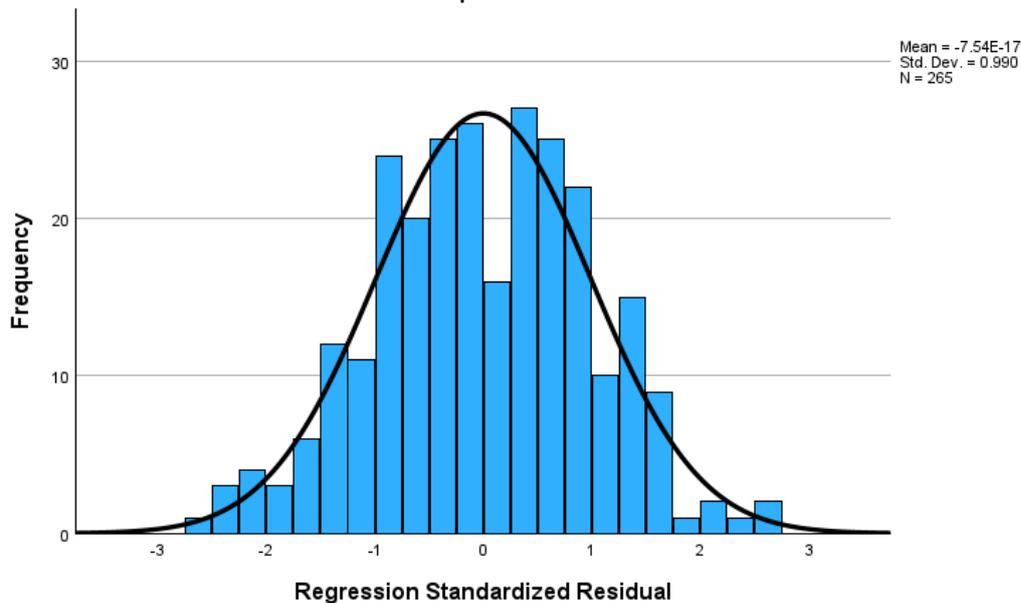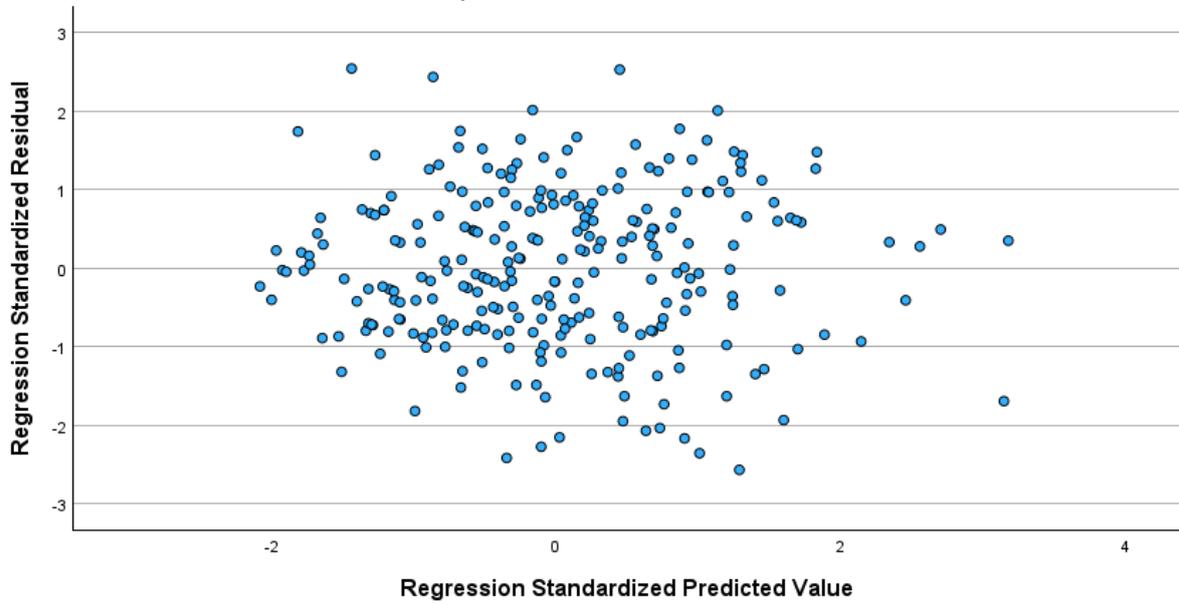
## Normal P-P Plot of Regression Standardized Residual

### Dependent Variable: EE2TOT
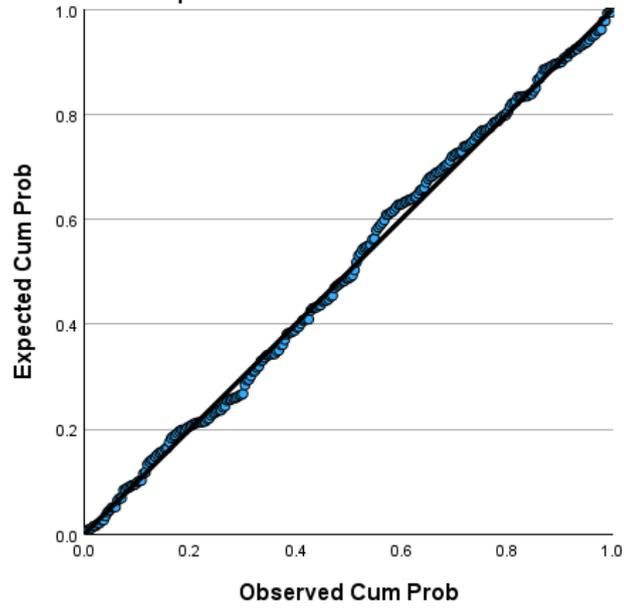


## Scatterplot

### Dependent Variable: EE2TOT

### 3) Multiple Regression for Depersonalisation

**Correlations**

| | | DP2TOT | ResTotal | TraumaYN | PFT6total | Hours of Supervision per month | TotalSS |
|---|---|---|---|---|---|---|---|
| Pearson Correlation | DP2TOT | 1.000 | -.153 | .088 | -.324 | -.155 | -.286 |
| | ResTotal | -.153 | 1.000 | -.036 | .548 | .183 | .170 |
| | TraumaYN | .088 | -.036 | 1.000 | -.182 | -.058 | -.051 |
| | PFT6total | -.324 | .548 | -.182 | 1.000 | .164 | .177 |
| | Hours of Supervision per month | -.155 | .183 | -.058 | .164 | 1.000 | .283 |
| | TotalSS | -.286 | .170 | -.051 | .177 | .283 | 1.000 |
| Sig. (1-tailed) | DP2TOT | . | .006 | .077 | <.001 | .006 | <.001 |
| | ResTotal | .006 | . | .280 | .000 | .001 | .003 |
| | TraumaYN | .077 | .280 | . | .002 | .175 | .206 |
| | PFT6total | .000 | .000 | .002 | . | .004 | .002 |
| | Hours of Supervision per month | .006 | .001 | .175 | .004 | . | .000 |
| | TotalSS | .000 | .003 | .206 | .002 | .000 | . |
| N | DP2TOT | 265 | 265 | 265 | 265 | 265 | 265 |
| | ResTotal | 265 | 265 | 265 | 265 | 265 | 265 |
| | TraumaYN | 265 | 265 | 265 | 265 | 265 | 265 |
| | PFT6total | 265 | 265 | 265 | 265 | 265 | 265 |
| | Hours of Supervision per month | 265 | 265 | 265 | 265 | 265 | 265 |
| | TotalSS | 265 | 265 | 265 | 265 | 265 | 265 |

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .405[a] | .164 | .148 | 4.69171 | 2.098 |

a. Predictors: (Constant), TotalSS, TraumaYN, ResTotal, Hours of Supervision per month, PFT6total
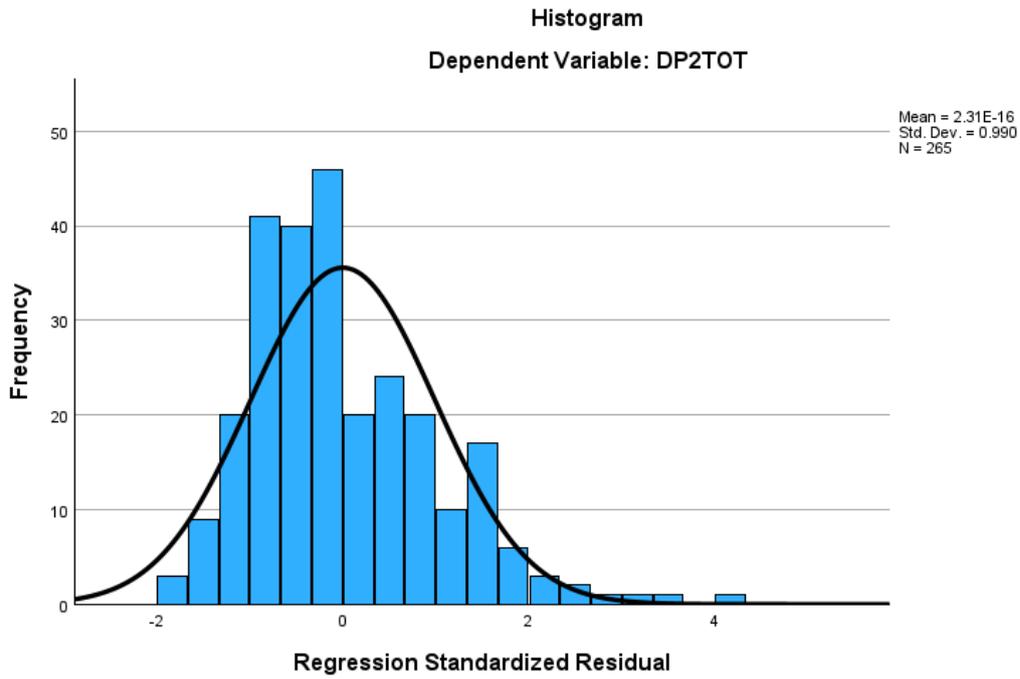
b. Dependent Variable: DP2TOT

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 1121.040 | 5 | 224.208 | 10.186 | <.001[b] |
| | Residual | 5701.134 | 259 | 22.012 | | |
| | Total | 6822.174 | 264 | | | |

a. Dependent Variable: DP2TOT

b. Predictors: (Constant), TotalSS, TraumaYN, ResTotal, Hours of Supervision per month, PFT6total

**Coefficients[a]**

| Model | | Unstandardized Coefficients B | Std. Error | Standardized Coefficients Beta | t | Sig. | 95.0% Confidence Interval for B Lower Bound | Upper Bound | Collinearity Statistics Tolerance | VIF |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | (Constant) | 3.868 | 2.602 | | 1.486 | .138 | -1.257 | 8.992 | | |
| | ResTotal | .058 | .063 | .063 | .923 | .357 | -.066 | .182 | .683 | 1.464 |
| | TraumaYN | .306 | .880 | .020 | .348 | .728 | -1.426 | 2.039 | .960 | 1.042 |
| | PFT6total | -.224 | .051 | -.306 | -4.403 | <.001 | -.323 | -.124 | .666 | 1.502 |
| | Hours of Supervision per month | -.140 | .163 | -.051 | -.855 | .393 | -.461 | .182 | .898 | 1.114 |
| | TotalSS | -.093 | .024 | -.227 | -3.793 | <.001 | -.141 | -.045 | .899 | 1.113 |

a. Dependent Variable: DP2TOT



Histogram

Dependent Variable: DP2TOT

Mean = 2.31E-16
Std. Dev. = 0.990
N = 265



Normal P-P Plot of Regression Standardized Residual

Dependent Variable: DP2TOT

**Scatterplot**

**Dependent Variable: DP2TOT**
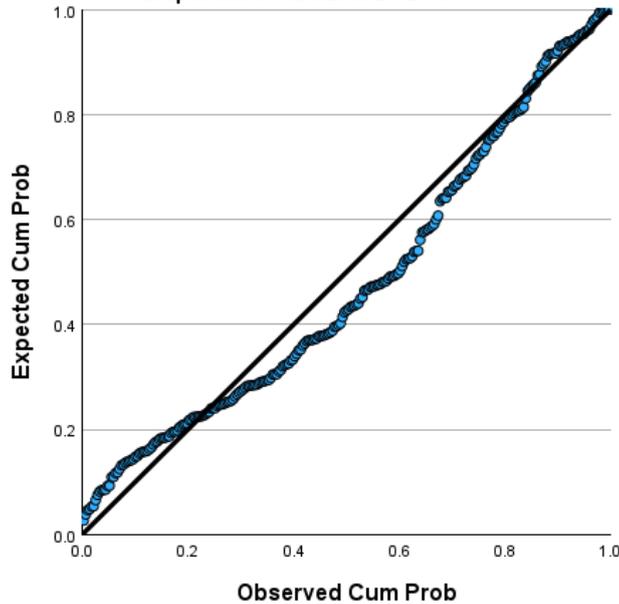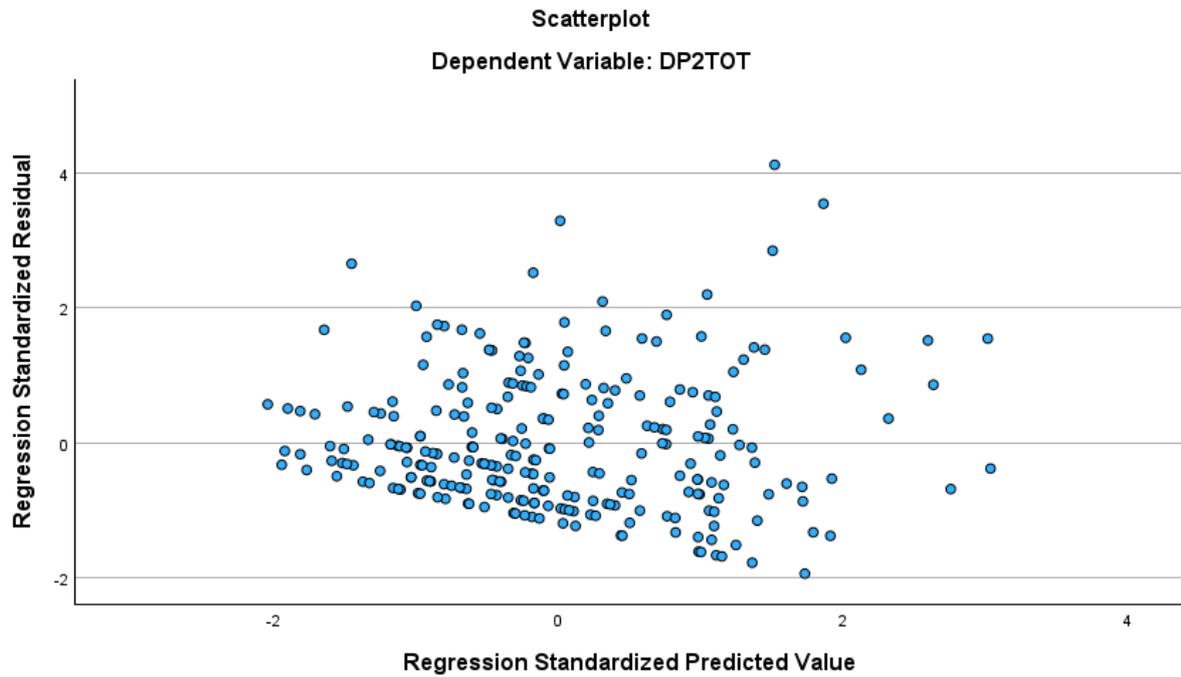


### 4) MR for Personal accomplishment

**Correlations**

| | | PA2TOT | ResTotal | TraumaYN | PFT6total | Hours of Supervision per month | TotalSS |
|---|---|---|---|---|---|---|---|
| PA2TOT | Pearson Correlation | 1 | .536** | -.005 | .340** | .198** | .197** |
| | Sig. (2-tailed) | | <.001 | .929 | <.001 | .001 | .001 |
| | N | 265 | 265 | 265 | 265 | 265 | 265 |
| ResTotal | Pearson Correlation | .536** | 1 | -.036 | .548** | .183** | .170** |
| | Sig. (2-tailed) | <.001 | | .559 | <.001 | .003 | .006 |
| | N | 265 | 265 | 265 | 265 | 265 | 265 |
| TraumaYN | Pearson Correlation | -.005 | -.036 | 1 | -.182** | -.058 | -.051 |
| | Sig. (2-tailed) | .929 | .559 | | .003 | .350 | .411 |
| | N | 265 | 265 | 265 | 265 | 265 | 265 |
| PFT6total | Pearson Correlation | .340** | .548** | -.182** | 1 | .164** | .177** |
| | Sig. (2-tailed) | <.001 | <.001 | .003 | | .008 | .004 |
| | N | 265 | 265 | 265 | 265 | 265 | 265 |
| Hours of Supervision per month | Pearson Correlation | .198** | .183** | -.058 | .164** | 1 | .283** |
| | Sig. (2-tailed) | .001 | .003 | .350 | .008 | | <.001 |
| | N | 265 | 265 | 265 | 265 | 265 | 265 |
| TotalSS | Pearson Correlation | .197** | .170** | -.051 | .177** | .283** | 1 |
| | Sig. (2-tailed) | .001 | .006 | .411 | .004 | <.001 | |
| | N | 265 | 265 | 265 | 265 | 265 | 265 |

**. Correlation is significant at the 0.01 level (2-tailed).

## Model Summary[b]

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .554[a] | .307 | .294 | 5.36302 | 2.062 |

a. Predictors: (Constant), TotalSS, TraumaYN, ResTotal, Hours of Supervision per month, PFT6total

b. Dependent Variable: PA2TOT

## ANOVA[a]

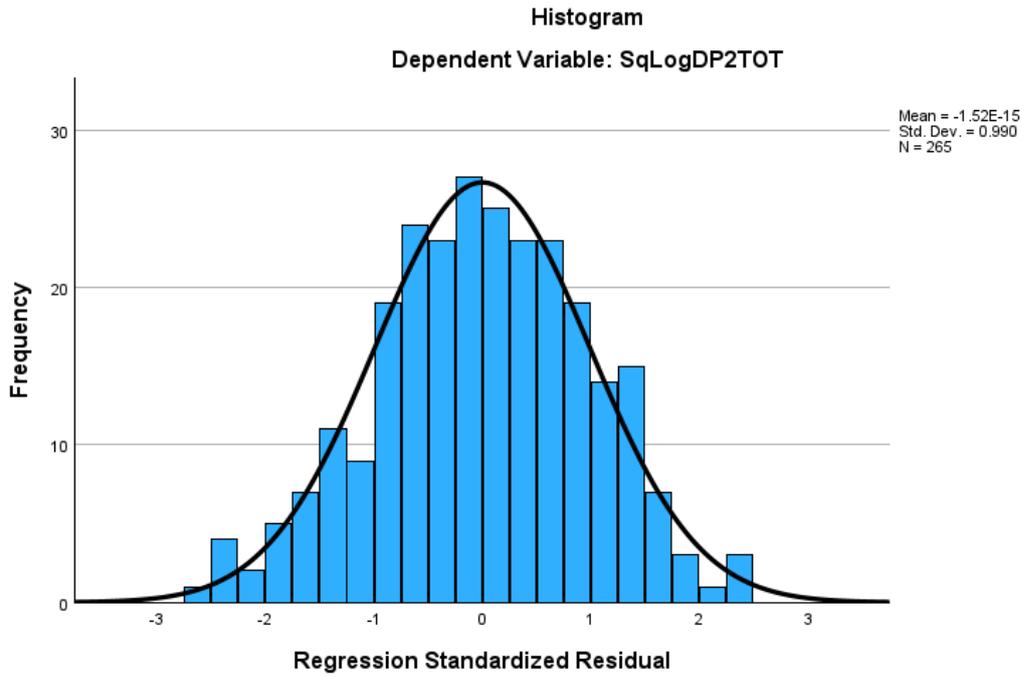| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 3303.398 | 5 | 660.680 | 22.971 | <.001[b] |
| | Residual | 7449.342 | 259 | 28.762 | | |
| | Total | 10752.740 | 264 | | | |

a. Dependent Variable: PA2TOT

b. Predictors: (Constant), TotalSS, TraumaYN, ResTotal, Hours of Supervision per month, PFT6total

## Coefficients[a]

| Model | | Unstandardized Coefficients B | Std. Error | Standardized Coefficients Beta | t | Sig. | 95.0% Confidence Interval for B Lower Bound | Upper Bound | Collinearity Statistics Tolerance | VIF |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | (Constant) | 19.213 | 2.975 | | 6.459 | <.001 | 13.355 | 25.071 | | |
| | ResTotal | .549 | .072 | .478 | 7.637 | <.001 | .407 | .690 | .683 | 1.464 |
| | TraumaYN | .584 | 1.006 | .031 | .581 | .562 | -1.396 | 2.565 | .960 | 1.042 |
| | PFT6total | .051 | .058 | .055 | .875 | .382 | -.063 | .165 | .666 | 1.502 |
| | Hours of Supervision per month | .271 | .187 | .079 | 1.451 | .148 | -.097 | .639 | .898 | 1.114 |
| | TotalSS | .043 | .028 | .085 | 1.552 | .122 | -.012 | .098 | .899 | 1.113 |

a. Dependent Variable: PA2TOT

### Histogram
### Dependent Variable: PA2TOT



Mean = 2.68E-16
Std. Dev. = 0.990
N = 265

## Normal P-P Plot of Regression Standardized Residual

### Dependent Variable: PA2TOT
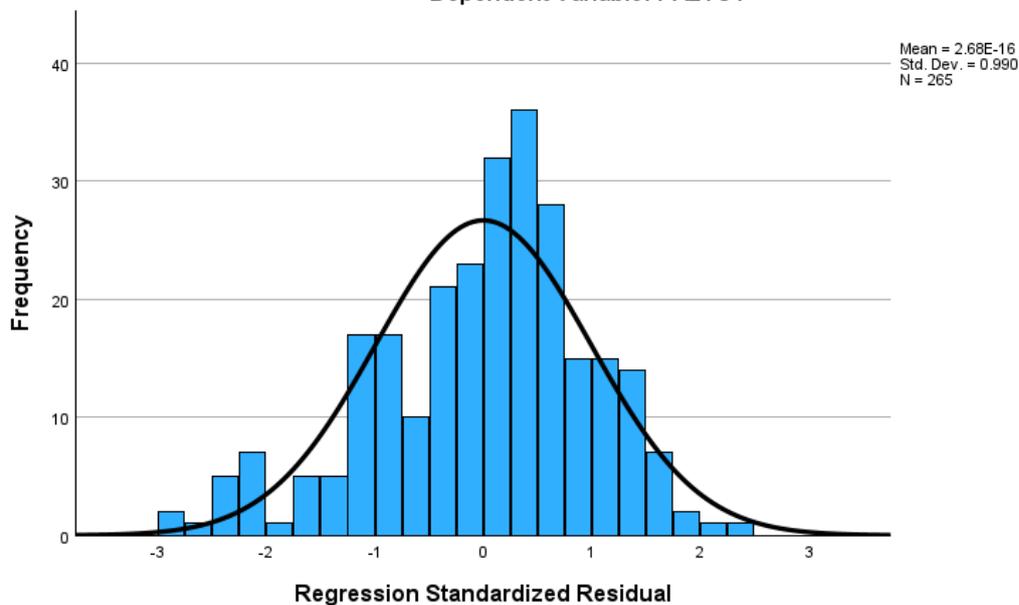


## Scatterplot
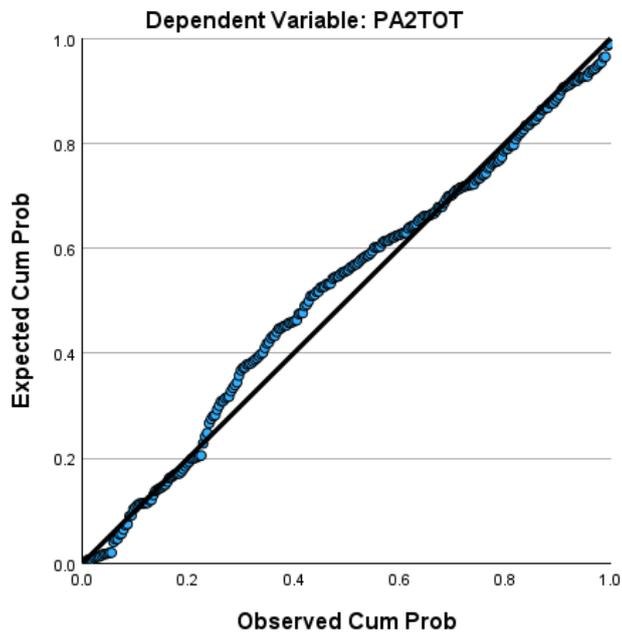
### Dependent Variable: PA2TOT
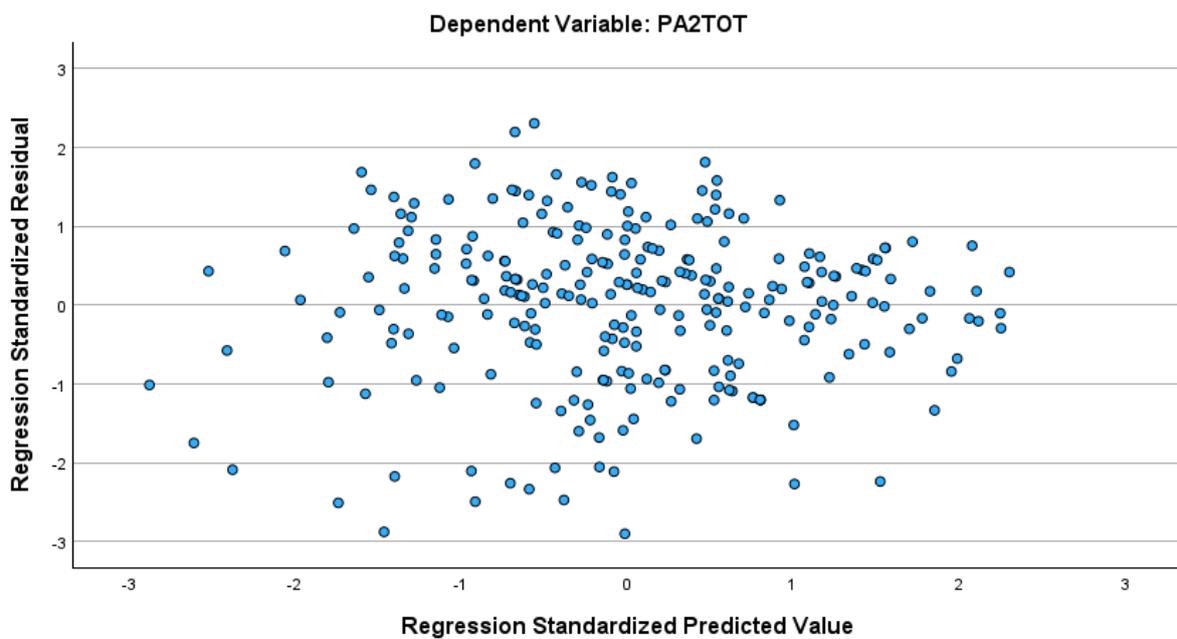


5) **Square root transformation for Depersonalisation**

## Model Summary[b]

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .377[a] | .142 | .125 | 1.08949 | 2.109 |

a. Predictors: (Constant), TotalSS, TraumaYN, ResTotal, Hours of Supervision per month, PFT6total

b. Dependent Variable: SqLogDP2TOT

## ANOVA[a]

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 50.800 | 5 | 10.160 | 8.560 | <.001[b] |
| | Residual | 307.429 | 259 | 1.187 | | |
| | Total | 358.229 | 264 | | | |

a. Dependent Variable: SqLogDP2TOT

b. Predictors: (Constant), TotalSS, TraumaYN, ResTotal, Hours of Supervision per month, PFT6total

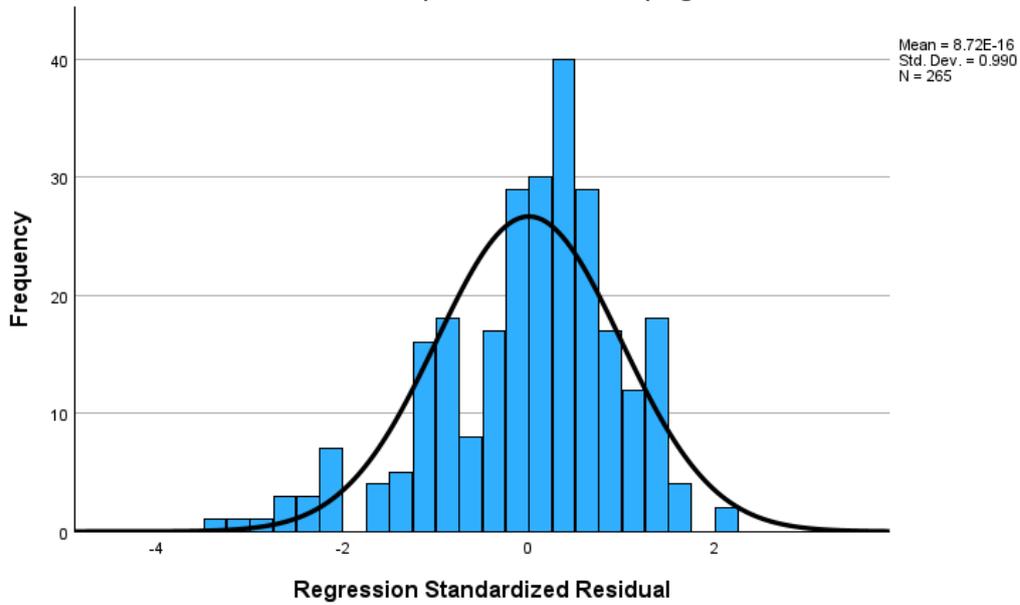## Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | 95.0% Confidence Interval for B | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Lower Bound | Upper Bound | Tolerance | VIF |
| 1 | (Constant) | 2.103 | .604 | | 3.480 | <.001 | .913 | 3.293 | | |
| | ResTotal | .003 | .015 | .014 | .196 | .845 | -.026 | .032 | .683 | 1.464 |
| | TraumaYN | -.089 | .204 | -.026 | -.438 | .662 | -.492 | .313 | .960 | 1.042 |
| | PFT6total | -.046 | .012 | -.273 | -3.864 | <.001 | -.069 | -.022 | .666 | 1.502 |
| | Hours of Supervision per month | -.019 | .038 | -.031 | -.504 | .615 | -.094 | .056 | .898 | 1.114 |
| | TotalSS | -.020 | .006 | -.216 | -3.562 | <.001 | -.031 | -.009 | .899 | 1.113 |

a. Dependent Variable: SqLogDP2TOT

## Histogram

### Dependent Variable: SqLogDP2TOT



Mean = -1.52E-15
Std. Dev. = 0.990
N = 265

## Normal P-P Plot of Regression Standardized Residual

### Dependent Variable: SqLogDP2TOT

Scatterplot
Dependent Variable: SqLogDP2TOT
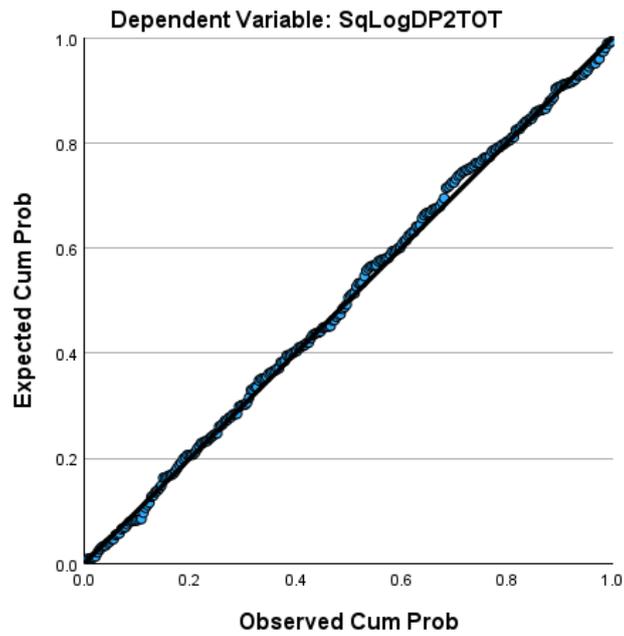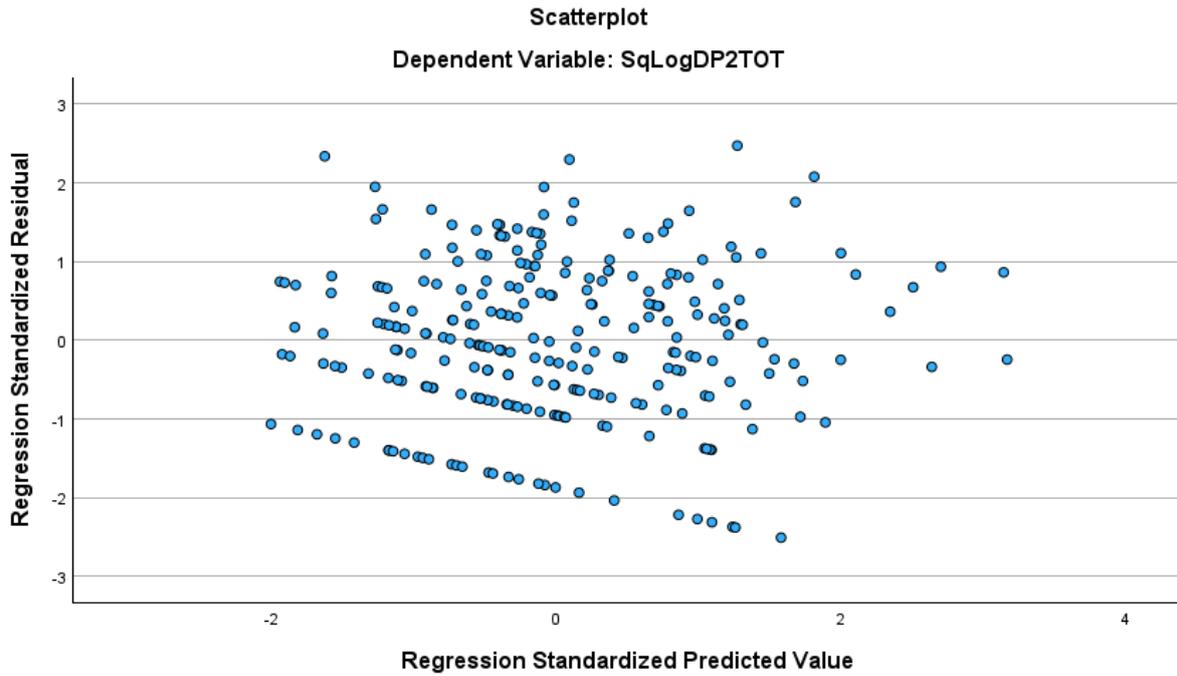
**6) Square root transformation for Personal Accomplishment**

### Model Summary[b]

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .550[a] | .302 | .289 | .46906 | 2.066 |

a. Predictors: (Constant), TotalSS, TraumaYN, ResTotal, Hours of Supervision per month, PFT6total

b. Dependent Variable: SqLogPA2TOT

### ANOVA[a]

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 24.667 | 5 | 4.933 | 22.423 | <.001[b] |
| | Residual | 56.984 | 259 | .220 | | |
| | Total | 81.651 | 264 | | | |

a. Dependent Variable: SqLogPA2TOT

b. Predictors: (Constant), TotalSS, TraumaYN, ResTotal, Hours of Supervision per month, PFT6total

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | 95.0% Confidence Interval for B | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Lower Bound | Upper Bound | Tolerance | VIF |
| 1 | (Constant) | 4.531 | .260 | | 17.414 | <.001 | 4.018 | 5.043 | | |
| | ResTotal | .047 | .006 | .473 | 7.539 | <.001 | .035 | .060 | .683 | 1.464 |
| | TraumaYN | .036 | .088 | .022 | .410 | .682 | -.137 | .209 | .960 | 1.042 |
| | PFT6total | .004 | .005 | .054 | .848 | .397 | -.006 | .014 | .666 | 1.502 |
| | Hours of Supervision per month | .024 | .016 | .080 | 1.468 | .143 | -.008 | .056 | .898 | 1.114 |
| | TotalSS | .004 | .002 | .085 | 1.544 | .124 | -.001 | .009 | .899 | 1.113 |

a. Dependent Variable: SqLogPA2TOT

**Histogram**

**Dependent Variable: SqLogPA2TOT**



Mean = 8.72E-16
Std. Dev. = 0.990
N = 265

## Normal P-P Plot of Regression Standardized Residual
### Dependent Variable: SqLogPA2TOT



## Scatterplot
### Dependent Variable: SqLogPA2TOT

**7) Ethical approval form**     **School of Health, Science and Wellbeing**
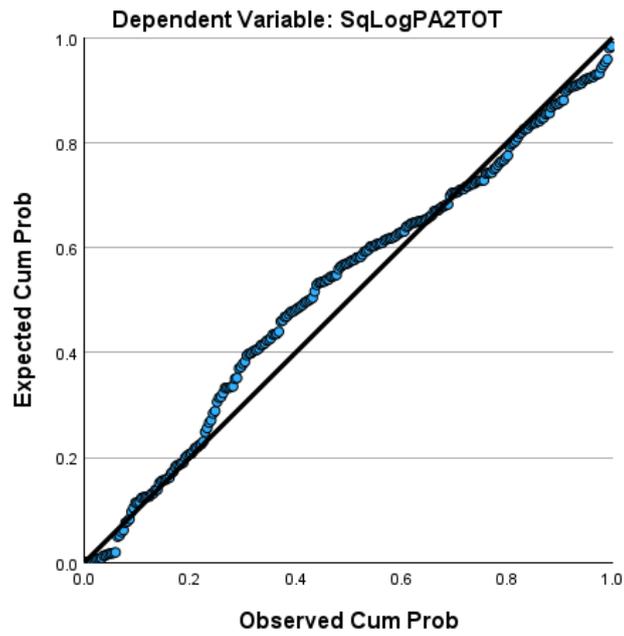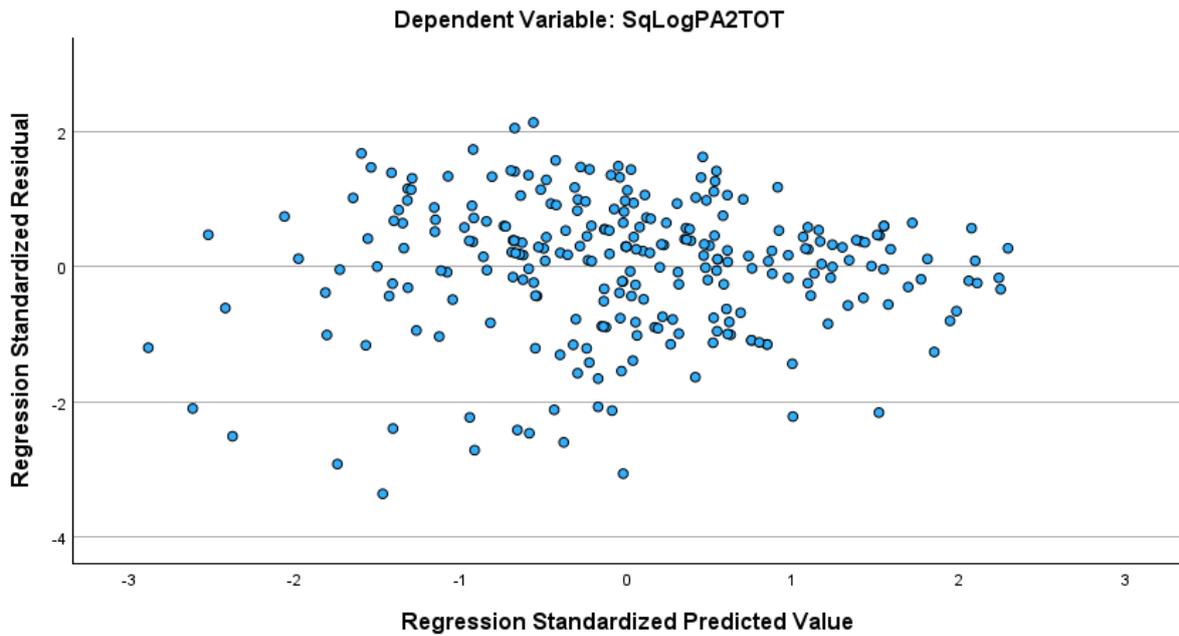


**ETHICAL APPROVAL FEEDBACK**

| Researcher name: | Amy Harrison |
| --- | --- |
| Title of Study: | SU_23_032 |
| Status of approval: | Approved |

Thank you for addressing the committee's comments. Your research proposal has now been approved by the Ethics Panel, and you may commence the implementation phase of your study.

Please note the following point –

*For the data storage process, following completion of the study, please refer to the point stated on the Ethics outcome letter dated 26th September 2023 (referring to storage on MS Teams).*

You should note that any divergence from the approved procedures and research method will invalidate any insurance and liability cover from the University.  You should, therefore, notify the Panel of any significant divergence from this approved proposal. This approval is only valid for as long as you are registered as a student at the University.

You should arrange to meet with your supervisor for support during the process of completing your study and writing your dissertation.

When your study is complete, please send the ethics committee an end of study report. A template can be found on the ethics BlackBoard site.

**Signed:**                                           **Date: 30.11.2023**
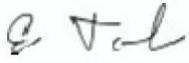
Dr Edward Tolhurst

Ethics Co-ordinator for Health

Study advert

**8) Study advert**



# Predictors of Vicarious Trauma and Burnout in Assistant Psychologists

**CAN I TAKE PART?**

Please consider taking part if:
- You are currently an Assistant or Senior Assistant Psychologist
- You have worked as an Assistant or Senior Assistant Psychologist in the last 9 months.
- You work in the NHS, private or charity sector.
- You have experience working with service users who have experienced trauma.

**WHY TAKE PART?**

Assistant psychologists are at risk of Vicarious Trauma and Burnout. This study will help understand what predicts this and help us to know how to better support Assistant Psychologists.

**WHAT DOES IT INVOLVE?**

A brief online questionnaire which will take no more than 20 minutes. It will ask about your role as an Assistant Psychologist and some factors which may predict Burnout and Vicarious Trauma.

**TO TAKE PART:**

🌐 LINK

📍 QR CODE

To request a paper copy or for more information, please email:
✉ h042171m@student.staffs.ac.uk

### 9) Participant information sheet

*Project Reference Number: [SU_23_032]*

### Title of study

Predictors of Vicarious Trauma and Burnout in Assistant Psychologists.

### Invitation

My name is Amy Harrison, and I am a Trainee Clinical Psychologist on the Doctorate in Clinical Psychology at Staffordshire University. I would like to invite you to participate in this research project which forms part of my Doctorate in Clinical Psychology. 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 if you wish. Please ask me (my contact details are at the end of the information sheet) if there is anything that is not clear or if you would like more information.

### What is the purpose of the study?

The aim of the study is to understand the factors which may predict vicarious trauma and burnout in assistant psychologists. Vicarious trauma is the process of change which results from working with trauma survivors. Professionals may experience changes in the way they view the world, themselves and others as a result of listening to the traumatic stories of their service users. Individuals experiencing vicarious trauma might report anxiety, intrusive thoughts and feelings, avoidance, and difficulty managing emotions, for example, feeling hopeless about the future, feeling more irritable and reactive than usual, and feeling more vulnerable. Burnout is characterised by feelings of emotional exhaustion, wanting to distance oneself from work, and/or feeling that you are no longer making a difference in your work. The present study will assess whether there is a relationship between resilience, psychological flexibility, whether you have experienced personal trauma, the amount of supervision you receive and how supportive this supervision is, and vicarious trauma and burnout. It is hoped that the results from this study will be used to influence policy and increase the support provided to assistant psychologists in the future.

### Why have I been invited to take part?

You have been invited to take part as you are an assistant psychologist or senior assistant psychologist working either in the NHS or private sector, are over the age of 18, and have experience working directly or via group interventions with individuals who have experienced a trauma*:

*Trauma is defined as 'an exposure to a situation in which a person is confronted with an event that involves actual or threatened death or serious injury, or a threat to self or others' physical well-being' (American Psychiatric Association, 2000). Assistant Psychologists are likely to work with clients who have experienced trauma and require support to process this and cope with mental health difficulties which arise as a result of this trauma. Clients may have experienced sexual abuse, violence, threats of violence, racial trauma, interpersonal abuse, tragic loss, natural disasters, life threatening illnesses or accidents, witnessing a death.

Unfortunately, you are not eligible to take part if you work as a psychological wellbeing practitioner (PWP), honorary or volunteer assistant psychologist as individuals working in these jobs may have different roles and responsibilities to an assistant psychologist. If you have not worked with clients who have experienced trauma, (for example, if your work is more administrative and you do not have contact with service users) you are also not eligible to take part, as in order to assess for vicarious trauma, exposure to another's trauma experiences is required.

**What will happen if I take part?**

If you would like to take part in the study online, please click on the link which will take you through to the Qualtrics survey. You will be asked to give your consent to take part by completing an online consent form. If you consent to take part, you will then click on a link to the survey. This survey will include questions which will ask you about your role as an assistant psychologist, your experiences of previous trauma, your levels of resilience, psychological flexibility and how much supervision you receive, as well as how helpful you find this. You will also be asked to provide some demographic information; age, gender, ethnicity and years working as an assistant psychologist. The entire survey will take approximately 20 minutes to complete. If you change your mind about taking part in the study, you can stop answering questions at any time during the survey by just closing the webpage.

If you would prefer to complete the survey using a paper copy, please contact me at my university email address on [h042171m@student.staffs.ac.uk](mailto:h042171m@student.staffs.ac.uk) and I can post a copy out to you with a stamped and addressed return envelope. After completing the questionnaires, you will see a participant debrief sheet.

You can download both the information sheet and debrief sheet to your device by clicking the available link.

**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 if you have any questions that will help you make a decision about taking part.

If you begin the study and decide that you no longer want to take part, simply close the webpage and your responses will not be counted.

**What are the possible risks of taking part?**

There are no direct risks to taking part, however, you will be asked about topics that may cause distress, for example, one question will ask if you have experienced any personal trauma and will ask you to tick the appropriate box.  If you experience any distress during the completion of this study, or you experience any difficult emotions following participation, we recommend that you seek support via your GP, your clinical supervisor or line manager. Alternatively, help and advice can be sought from the following professional organisations:

- **MIND:** A leading mental health charity in England and Wales. Tel. 0845 766 0163; website: www.mind.org.uk
- **Samaritans:** A national organisation offering support to those in distress who feel suicidal or despairing and need someone to talk to.  24-hour Helpline: 08457 90 90 90; website: www.samaritans.org.uk
- **The Campaign Against Living Miserably (CALM):** A leading a movement against suicide. Tel. 0800 58 58 58; website: https://www.thecalmzone.net/get-support
- **Shout:** Free 24/7 confidential support. Text SHOUT to 85258. Website: https://giveusashout.org/get-help/

The following link also provides resources which can be helpful to support you to manage distress and to demonstrate compassion toward yourself during difficult times: http://selfcompassion.org/category/exercises/#guided-meditations.

For lots of additional information about mental health and signposting to additional support, visit Mental Health UK. Website: https://mentalhealth-uk.org/

**What are the possible benefits of taking part?**

Whilst there are no direct benefits to taking part, some people find it an interesting and helpful process to share their views on topics that directly affect them. It is also hoped that the findings of this study will help to further an understanding of what might predict vicarious trauma and burnout in assistant psychologists and enable recommendations to be made to better support assistant psychologists.

**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).

The results of the survey will be received by me online. Your data will be assigned a code and added to a password protected spreadsheet held in a separate folder in password protected university laptop according to University GDPR Policy. Anonymised data will only be shared within the research team (myself and my two research supervisors), and only with your consent. Responses from paper copies of the survey will be added to the digital data base. The paper copy will then be securely destroyed. The anonymised data will be stored securely by the university for ten years and destroyed thereafter. Any paper copies of consent forms will be destroyed three months after study completion. Research completed at Staffordshire University is auditable and therefore the University may require access to the anonymised data for audit purposes.

**Data Protection Statement**

*Your data will be processed in accordance with the General Data Protection Regulation 2016 (GDPR):*

*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 GDPR 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. You have the right to access information held about you. Your right of access can be exercised in accordance with the GDPR. You also have other rights including rights of correction, erasure, objection, and data portability. Questions, comments and requests about your personal data can also be sent to the Staffordshire University Data Protection Officer. If you wish to lodge a complaint with the Information Commissioner's Office, please visit www.ico.org.uk*

**What if I change my mind about taking part?**

Prior to beginning the study, you will be asked to create a memorable code, this will be your unique participant ID number. You could create this code by using a structure, such as your house number and favourite animal e.g. '23Dolphin'. You will be advised to keep your own record of this code too. Should you wish to remove your data after you have completed the study, please email the lead researcher using the email address listed at the end of this information sheet, quoting your code number, and requesting for your data to be removed. If you wish to stop the study whilst you are completing it, simply close the webpage and your responses will not be recorded. You are free withdraw at any point of the study, without having to give a reason, up until 4 weeks after completion of the survey, after which withdrawal of your data will no longer be possible due to data being combined and analysed. Withdrawing from the study will not affect you in any way. If you choose to withdraw from the study, we will not retain any information that you have provided us as a part of this study.

**What will happen to the results of the study?**

The results of the study will be anonymised, and the study will be written up for a Doctoral Thesis. It is hoped that the research will be published in a peer-reviewed journal. A summary of the research will also be made available to participants, and you can contact me via the email

address below for a copy of the Executive Summary, which will be available from the end of September 2025.

**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:

Amy Harrison: [H042171m@student.staffs.ac.uk](mailto:H042171m@student.staffs.ac.uk)

You can also contact the research supervisors using the following contact details:

Dr Helen Scott, Study Supervisor and Research Director in Clinical Psychology at Staffordshire University: [H.Scott@staffs.ac.uk](mailto:H.Scott@staffs.ac.uk)

Dr Nina Shergill, Consultant Clinical Psychologist: [Nina.Shergill2@mpft.nhs.uk](mailto:Nina.Shergill2@mpft.nhs.uk)

**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 Chair of the Staffordshire University Ethics Committee for further advice and information.

Professor Nachiappan Chockalingam

Director of Research at Staffordshire University:

[n.chockalingam@staffs.ac.uk](mailto:n.chockalingam@staffs.ac.uk)

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

[* LINK TO STUDY HERE *](#)

### 10) Consent form

If you would like to download a copy of the consent form, you can do so by clicking the below link ' consent form' and saving to your device.

**CONSENT FORM**

Title of Project: Predictors of Vicarious Trauma and Burnout in Assistant Psychologists

Name of Researcher: Amy Harrison

**Please read the following statements, and tick the box if you agree:**

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

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected up until 4 weeks after completion of the survey, after which the data will have been combined and analysed.

3. I consent that data collected can be used for publication in scientific journals or could be presented in scientific forums (conferences, seminars, workshops) and understand that all data will be presented anonymously

4. I understand that the anonymised data collected during this study may be looked at by the researcher and their supervisors. Staffordshire University may also access my anonymised data for auditing purposes. I give permission for these individuals to have access to my data.

5. I understand that my data will be sorted safely on a password protected computer (electronic data) or locked away securely (paper copies of data) for 10 years before being destroyed.

6. I hereby give my consent to take part in the study.

Please enter you name in the box below:

**11) Debrief sheet**

## Disclosure and Debriefing Statement

Thank you for completing our survey.

By taking part in our study you have helped to inform research about the factors which might impact vicarious trauma and burnout in assistant psychologists, which could have implications for the development of policy documents, support programs and service improvements in the future.

Support for you:

Thinking about difficult experiences at work and in your personal life can bring up distressing emotion for everyone at times. If you have experienced any distress during the completion of this study, or you experience any difficult emotions following participation, we would recommend that you seek support via your GP, your clinical supervisor or line manager. Alternatively, help and advice can be sought from the following professional organisations.

MIND: Leading mental health charity in England and Wales. Tel. 0845 766 0163; website: www.mind.org.uk

Samaritans: National organisation offering support to those in distress who feel suicidal or despairing and need someone to talk to. 24-hour Helpline: 08457 90 90 90; website: www.samaritans.org.uk

Papyrus HOPELINE: For confidential suicide prevention advise for you or someone you know.

Telephone 0800 068 4141 (open 24 hours). Text 07860 039967.

The Campaign Against Living Miserably (CALM): A leading a movement against suicide. Tel. 0800 58 58 58; website: https://www.thecalmzone.net/get-support

Shout: Free 24/7 confidential support. Text SHOUT to 85258. Website: https://giveusashout.org/get-help/

The following link also provides resources which can be helpful to support you to manage distress and to demonstrate compassion toward yourself:

http://selfcompassion.org/category/exercises/#guided-meditations.

For lots of additional information about mental health and signposting to additional support, visit Mental Health UK. Website: https://mentalhealth-uk.org/

For any further information about the study please email: H042171m@student.staffs.ac.uk
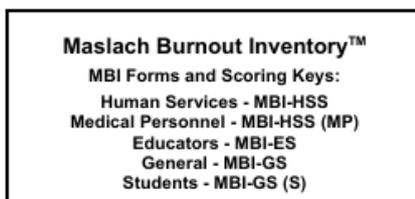
### 12) Permissions to use scales

### Vicarious Trauma Scale

Vrklevski, L. P., & Franklin, J. (2008). Vicarious Trauma Scale [Database record]. Retrieved from PsycTESTS. doi: 10.1037/t03119-000 Test Shown: Full Test Format: 7-point Likert-type scale, ranging from 1 (strongly disagree) to 7 (strongly agree). Source: Vrklevski, Lila Petar, & Franklin, John (2008). Vicarious trauma: The impact on solicitors of exposure to traumatic material. Traumatology, Vol 14(1), 106-118. doi: 10.1177/1534765607309961, © 2008 by SAGE Publications. Reproduced by Permission of SAGE Publications. Permissions: Test content may be reproduced and used for non-commercial research and educational purposes without seeking written permission. Distribution must be controlled, meaning only to the participants engaged in the research or enrolled in the educational activity. Any other type of reproduction or distribution of test content is not authorized without written permission from the author and publisher. PsycTESTS™ is a database of the American Psychological Association doi: 10.1037/t03119-000

### Maslach Burnout Inventory

**Maslach Burnout Inventory™**

**MBI Forms and Scoring Keys:**
Human Services - MBI-HSS
Medical Personnel - MBI-HSS (MP)
Educators - MBI-ES
General - MBI-GS
Students - MBI-GS (S)

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By Christina Maslach, Susan E. Jackson, Michael P. Leiter, Wilmar B. Schaufeli & Richard L. Schwab

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I feel emotionally drained from my work.
I have accomplished many worthwhile things in this job.
I don't really care what happens to some recipients.
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**MBI - Human Services Survey for Medical Personnel - MBI-HSS (MP):**
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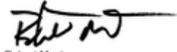
**MBI - General Survey - MBI-GS:**
I feel emotionally drained from my work.
In my opinion, I am good at my job.
I doubt the significance of my work.

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**MBI - General Survey for Students - MBI-GS (S):**
I feel emotionally drained by my studies.
In my opinion, I am a good student.
I doubt the significance of my studies.

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Sincerely,

Robert Most
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### Maslach Burnout Inventory™

**MBI Forms and Scoring Keys:**

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**Educators - MBI-ES**
**General - MBI-GS**
**Students - MBI-GS (S)**

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I feel emotionally drained from my work.
I have accomplished many worthwhile things in this job.
I don't really care what happens to some recipients.
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I have accomplished many worthwhile things in this job.
I don't really care what happens to some patients.
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**MBI - Educators Survey - MBI-ES:**
I feel emotionally drained from my work.
I have accomplished many worthwhile things in this job.
I don't really care what happens to some students.
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**MBI - General Survey - MBI-GS:**
I feel emotionally drained from my work.
In my opinion, I am good at my job.
I doubt the significance of my work.

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**MBI - General Survey for Students - MBI-GS (S):**
I feel emotionally drained by my studies.
In my opinion, I am a good student.
I doubt the significance of my studies.

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# Maslach Burnout Inventory™

## MBI Forms and Scoring Keys:

**Human Services - MBI-HSS
Medical Personnel - MBI-HSS (MP)
Educators - MBI-ES
General - MBI-GS
Students - MBI-GS (S)**

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By Christina Maslach, Susan E. Jackson, Michael P. Leiter,
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**MBI - General Survey - MBI-GS:**
I feel emotionally drained from my work.
In my opinion, I am good at my job.
I doubt the significance of my work.

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Sincerely,

Robert Most
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**Permission Letter**

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I feel emotionally drained from my work.
I have accomplished many worthwhile things in this job.
I don't really care what happens to some recipients.
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I feel emotionally drained from my work.
I have accomplished many worthwhile things in this job.
I don't really care what happens to some patients.
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I have accomplished many worthwhile things in this job.
I don't really care what happens to some students.
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## Connor Davidson Resilience Scale (CD-RISC-10)

**Jonathan Davidson, M.D.**<jonathan.davidson@duke.edu>

To: ⊗ Amy Harrison

Wed 21/02/2024 14:20

📄 Scoring the CD-RISC.pdf
254 KB

📄 a Manual 010124 FINAL RO.d...
436 KB

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618 KB
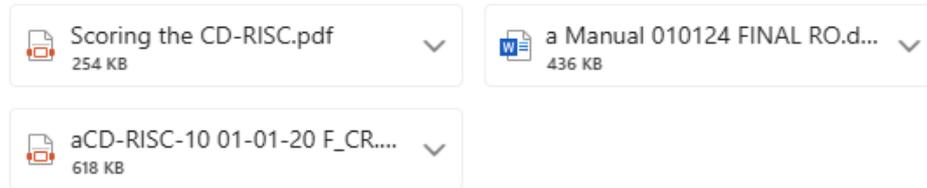
⌃ 3 attachments (1 MB)  ☁ Save all to OneDrive - University of Staffordshire  ⬇ Download all

You don't often get email from jonathan.davidson@duke.edu. Learn why this is important

Hello Amy:

Thank you for your reply and payment. Please find attached the RISC-10 and related documents.

Wishing you all the best of success,

Jonathan

## Supervision Evaluation and Supervisory Competence (SE-SC8)

**Craig Gonsalvez**<C.Gonsalvez@westernsydney.edu.au>

To: HARRISON Amy M <h042171m@student.staffs.ac.uk>

Wed 11/10/2023 23:04

Dear Amy
G'Day from Oz. Happy to give you permission to use the scale. Please keep me updated on research outcomes.
Kind regards

Craig Gonsalvez
Professor in Clinical Psychology
Research Leader, Psychological Health & Care
School of Psychology
Western Sydney University

[../../../../../wbartik/AppData/Local/Microsoft/Windows/INetCache/Content.Outlook/MIL4W42R/ORC

ID%20iD:%20https:/orcid.org/0000-0002-3294-6314]ORCID iD:0000-0002-3294-6314

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...

## Acceptance and Action Questionaire (AAQ-II)

Use of the AAQ-II: Permission is given to use the AAQ-II for research and with clients, and does not require additional author permission.  If, however, the AAQ-II was to be used in any type of money making enterprise (e.g., consultancy to organizations), seeking permission is requested by the authors. - Frank Bond, Goldsmiths College, London

## 13) Journal Guidelines: *Psychology and Psychotherapy: Theory Research and Practice*

### Aims and Scope

*Psychology and Psychotherapy: Theory Research and Practice* (formerly The British Journal of Medical Psychology) is an international scientific journal with a focus on the psychological and social processes that underlie the development and improvement of psychological problems and mental wellbeing, including:

• theoretical and research development in the understanding of cognitive and emotional factors in psychological problems;
• behaviour and relationships; vulnerability to, adjustment to, assessment of, and recovery (assisted or otherwise) from psychological distresses;
• psychological therapies, including digital therapies, with a focus on understanding the processes which affect outcomes where mental health is concerned.

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We welcome submissions from mental health professionals and researchers from all relevant professional backgrounds both within the UK and internationally.

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### MANUSCRIPT CATEGORIES AND REQUIREMENTS

- Articles should adhere to the stated word limit for the particular article type. The word limit excludes the abstract, reference list, tables and figures, but includes appendices.

Word limits for specific article types are as follows:

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- Qualitative papers: 8000 words

- Review papers: 6000 words

- Special Issue papers: 5000 words

### Parts of the Manuscript

The manuscript should be submitted in separate files: title page; main text file; figures/tables; supporting information.

### Author Contributions

For all articles, the journal mandates the CRediT (Contribution Roles Taxonomy)—more information is available on our site.

**Abstract**

Please provide an abstract of up to 250 words. Articles containing original scientific research should include the headings: Objectives, Design, Methods, Results, Conclusions. Review articles should use the headings: Purpose, Methods, Results, Conclusions.

**Keywords**

Please provide appropriate keywords.

**Acknowledgments**

Contributions from anyone who does not meet the criteria for authorship should be listed, with permission from the contributor, in an Acknowledgments section. Financial and material support should also be mentioned. Thanks to anonymous reviewers are not appropriate.

**Practitioner Points**

All articles must include Practitioner Points – these are 2-4 bullet point with the heading 'Practitioner Points'. They should briefly and clearly outline the relevance of your research to professional practice.

**Main Text File**

As papers are double-anonymous peer reviewed, the main text file should not include any information that might identify the authors.

Your main document file should include:

- A short informative title containing the major key words. The title should not contain abbreviations.

- Abstract structured (intro/methods/results/conclusion);

- Practitioner Points Authors will need to provide 2-4 bullet points, written with the practitioner in mind, that summarize the key messages of their paper to be published with their article;

- Main body: formatted as introduction, materials & methods, results, discussion, conclusion;

- References;

- Tables (each table complete with title and footnotes);

- Figure legends: Legends should be supplied as a complete list in the text. Figures should be uploaded as separate files (see below);

- Statement of Contribution.

**References**

This journal uses APA reference style; as the journal offers Free Format submission, however, this is for information only and you do not need to format the references in your article. This will instead be taken care of by the typesetter.

**Tables**

Tables should be self-contained and complement, not duplicate, information contained in the text. They should be supplied as editable files, not pasted as images. Legends should be concise but comprehensive – the table, legend, and footnotes must be understandable without reference to the text. All abbreviations must be defined in footnotes. Footnote symbols: †, ‡, §, ¶, should be used (in that order) and *, **, *** should be reserved for P-values. Statistical measures such as SD or SEM should be identified in the headings.

**Predictors of Vicarious Trauma and Burnout in Assistant Psychologists:  An Executive Summary**

Amy Megan Harrison

University of Staffordshire

**Abstract**

This report summarises the research findings from a project investigating the predictors of burnout and vicarious trauma in Assistant Psychologists (APs). This summary has been written for APs, as well as for professionals who employ, supervise or work alongside APs. It has been developed in consultation with an AP and a clinical psychologist who kindly gave their time to shape this report. It is hoped that this report and the research paper upon which it is based, will reach the appropriate stakeholders and executives, to help shape the support, supervision, training and employment of APs.

**Background**

Assistant Psychologists (APs) are psychology graduates from British Psychological Society (BPS) accredited courses working under the supervision of qualified psychologists, working directly and indirectly with service users, e.g. delivering 1:1 or group psychological interventions (BPS, 2024). Many service users with whom APs work require support for their mental health as they have experienced a trauma. Existing research in psychological professionals highlights that repeated exposure to service users' accounts of trauma can increase the risk of experiencing vicarious trauma (Adams & Riggs, 2008; Jordan, 2010; McCann & Pearlman, 1990; Raunick et al., 2015; Sprang et al., 2019). Vicarious trauma refers to the cognitive and emotional changes that occur in professionals following secondary exposure to traumatic material e.g. after listening to service users' traumatic experiences during therapy. It can have a significant impact on the professional's worldview, self-identity, and mental health (Lee, 2017; McCann & Pearlman, 1990), resulting in symptoms such as heightened anxiety, feelings of vulnerability, hopelessness about the future, and difficulties in professional and personal functioning (Neumann s& Gamble, 1995; Pearlman & Mac Ian, 1995; Steed & Downing, 1998).

Research has also identified high rates of burnout among psychologists (Kumary & Baker, 2008; Lee et al., 2011; Maslach et al., 2001; Simionato & Simpson,2018). Burnout is a psychological condition characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach & Leiter, 2016). Emotional exhaustion refers to feeling drained and overwhelmed by work, depersonalisation refers to feelings of detachment from service users, and reduced feelings of personal accomplishment refers to a diminished sense of effectiveness and achievement. All three of these components interact to cause burnout (Maslach & Jackson, 1981).

Both vicarious trauma and burnout are known to develop over time (Maslach & Jackson, 1981; McCann & Pearlman,1990; Newell & MacNeil, 2010) and considering the research which finds vicarious trauma and burnout to be prevalent in qualified psychologists, it is likely that APs are also at

increased risk of developing vicarious trauma and burnout, given they are at the earlier stages of their psychological career. There is also a growing body of research which finds that younger, more inexperienced professionals, are at higher risk of experiencing vicarious trauma and burnout (Adam & Riggs, 2008; Bober & Regehr, 2006; Kadambi & Truscott,2004; Makadia et al., 2017; McLean et al., 2003; Sprang et al., 2007; Way et al., 2004). Therefore, the study aimed to investigate the presence of burnout and vicarious trauma in APs, and understand what predicts this, in order to better support these early career psychologists.

**Predictors of Vicarious Trauma and Burnout in Assistant Psychologists**

Research has identified several predictors of burnout and vicarious trauma in clinical psychologists, neuropsychologists and other psychological and health care professionals. This existing research was critically reviewed and used to support the decision-making process of which predictors to examine in the present research. The selected predictors were evidenced in much of the existing research on qualified psychological professionals and were of further relevance to APs considering the BPS and Association of Clinical Psychology (ACP) guidance on employment of APs (ACP, 2022; BPS, 2024) e.g. the necessity of supervision for APs.  Supervision factors and personal factors were therefore included, to provide an individual and systems-level perspective. The following predictors were investigated in APs:

*Psychological Flexibility*

Psychological flexibility is an individual's ability to experience distressing thoughts, feelings and sensations in the present moment, whilst choosing to respond in ways that are consistent with their goals and values (Gordon & Borushok, 2017; Harris, 2019; Hayes et al., 2006). Interventions aimed at increasing psychological flexibility have shown success in reducing burnout (Frogeli et al., 2015; Montaner et al., 2021; Puolakanaho et al., 2020) and research finds by fostering psychological flexibility, psychologists can decrease the risk of vicarious trauma (Barre et al., 2024).

*Personal Trauma History*

Research indicates that a significant proportion of psychologists have experienced trauma (Barnett et al., 2007; Elliot & Guy, 1993; Pope & Feldman-Summers, 1992; Wise et al., 2012). It is therefore likely that APs have also experienced personal trauma. Research has found that individuals who have experienced a personal trauma are more likely to experience vicarious trauma and burnout (Barnett et al., 2007; Figley, 1999; Lueng et al., 2023; Pearlman & Saakvitne, 1995; Ryan, 1999; Simpson et al., 2019).

### Resilience

Resilience enables individuals to adapt to stress, overcome adversity, and maintain well-being despite job demands, it is the ability to 'bounce back' from stressful events, tragedy, or trauma and to recover quickly from difficulties (Tedeschi & Calhoun, 2004). Resilience is known to be protective against various mental health difficulties, including anxiety, depression and post-traumatic stress disorder (PTSD; Leys et al., 2021; Fossion et al., 2015).

### Supervision Quality

Supervisory support has been credited as a resource for reducing burnout in clinical psychologists (Hammond et al., 2017) and psychotherapists (Van Hoy & Rzeszutek, 2022) and as a protective factor against vicarious trauma (Bell et al., 2003; Howlett & Collins 2014; Geller et al., 2004). In contrast, research has found that APs are often dissatisfied with supervision, with many APs not consistently receiving safe and appropriate supervision (Collyer, 2012; Ramsden et al., 2022; Wilkinson & Chin, 2022; Williams, 2001). The impact of this is currently unknown.

### Supervision Quantity

The Association of Clinical Psychologists (ACP) and The British Psychological Society (BPS) recommends APs receive at least 1 - 1.5 hours of formal supervision from a clinical psychologist per week (ACP, 2022; BPS, 2024). A recent unpublished BPS survey found only 59% of APs were receiving the BPS recommended minimum supervision per week, with 37% reporting they received less than this, and 3% receiving no supervision at all (Snell & Ramsden, 2020; Ramsden et al., 2022). Receiving supervision is a protective factor against burnout and vicarious trauma (Bell et al., 2003; Howlett & Collins 2014; Geller et al., 2004; Hammond et al., 2017; Iosim et al., 2021), as such, this warrants investigation.

### Study Aims

The study aimed to determine whether APs experience symptoms of vicarious trauma or burnout and in line with previous research in psychological professionals, explore whether personal trauma, resilience, psychological flexibility, supervision quality and quantity, predict vicarious trauma and burnout. APs play a critical role in mental health services therefore, understanding these factors is essential for enhancing well-being and preventing burnout and vicarious trauma within this early career professional group.

### Hypotheses to be tested

Assistant psychologists reporting:

1) lower resilience,

2) less psychological flexibility,

3) a personal trauma history,

4) receiving less than the recommended hours of supervision,

5) receiving poorer quality supervision,

will report higher levels of vicarious trauma and burnout.

## Methods

The study was approved by University of Staffordshire Ethics Committee.

### Recruitment

A study advert was created and advertised online through LinkedIn and Instagram, using professional accounts. To take part in this study, APs must have worked directly with service users who have experienced trauma.

### Participants

A total of 265 Assistant Psychologists took part in the study. The majority of participants were female (90.9%), White British (80%), 25 – 34 years old (61.1%) and most had been employed as an AP for between 1 – 1.5 years (18.5%).

### Questionnaires

Participants were required to complete several standardised questionnaires:

***The Vicarious Trauma Scale (VTS; Vrklesvski & Franklin, 2008)***

The VTS is an eight-item scale used to assess subjective levels of distress associated with working with traumatised service users. Statements include: 'I find myself distressed by listening to my clients' stories and situations.' Higher total scores indicate vicarious trauma.

***The Maslach Burnout Inventory - Human Services Survey for Medical Personnel - MBI-HSS (MP) (MBI; Maslach and Jackson, 1981)***

The MBI is a 22-item questionnaire used to assess burnout. It is made up of three subscales: emotional exhaustion, depersonalisation and personal accomplishment. The emotional exhaustion subscale describes feelings of exhaustion and feeling emotionally overextended due to work. Example statements include, 'I feel emotionally drained from my work'. The depersonalisation subscale describes feeling disconnected from the client and can include a loss of empathy or regard for the service user. Statements include 'I don't really care what happens to some patients.' The personal accomplishment scale describes feelings of competence, fulfilment and successful achievement in one's work, for example, 'I have accomplished many worthwhile things in this job'.

Burnout is characterised by high scores on the emotional exhaustion and depersonalisation scales, and a low score on the personal accomplishment scale.

***The Connor-Davidson Resilience Scale – 10 (CD-RISC-10; Connor & Davidson, 2003).***

The CDI-RISC-10 is a 10-item scale assessing an individuals' level of resilience. Items include, 'Having to cope with stress can make me stronger'. Higher total scores show higher levels of resilience.

***Personal Trauma History***

Personal trauma history was measured using a list of traumatic experiences obtained from the Life Events Checklist for DSM-5 (LEC -5; Weathers et al., 2013). The LEC-5 is a self-report measure which assesses exposure to events known to result in PTSD or distress and consists of 17 traumatic experiences e.g. including physical and sexual assaults or life-threatening illnesses. Two additional statements were included which are not accounted for in the LEC-5; 'racial trauma' and 'I have not experienced a traumatic event'. This adapted LEC-5 was used to collect personal trauma history.

***The Acceptance and Action Questionnaire (AAQ-II; Bond et al., 2011)***

The AAQ-II is a 7-item self-report scale that measures psychological flexibility, the willingness to experience (rather than alter the form, frequency or sensitivity of) unwanted events, and continue to pursue individual values. Higher scores show psychological inflexibility.

***Supervision Quantity***

Participants were asked to enter the number of hours of supervision they receive from a clinical psychologist each month.

***The Supervision Evaluation and Supervisory Competence Scale (SE-SC8; Gonsalvez, 2020)***

The SE-SC8 consists of 8 items capturing a supervisees satisfaction with the quality of their supervision. It assesses 1) the supervisors' openness, care and support, 2) the supervisors' knowledge and expertise as a therapist, 3) supervision planning and management, 4) goal-directed supervision, 5) restorative competencies, 6) insights into and management of therapist-client dynamics and reflective practitioner competencies, 7) satisfaction with supervision overall and 8) perceived effectiveness of the supervision experience. APs who scored more highly on this scale were more satisfied with the quality of their supervision.

**How was the data analysed?**

Four multiple regression analyses were run to examine the predictors of 1) vicarious trauma, and the three constructs of burnout; 2) emotional exhaustion, 3) depersonalisation and 4) personal accomplishment. The five predictor variables for each multiple regression were resilience, psychological flexibility, trauma history, supervision quantity and supervision quality. A multiple regression model enables the researcher to see whether any of the predictors significantly influence the outcome variables: burnout or vicarious trauma. Correlations were also used to examine relationships between variables. Before running these tests, the data was checked to ensure it met the standards required for these types of statistical analyses.

**Key Findings**

**Levels of Burnout**

APs in this sample showed moderate levels of emotional exhaustion, low to moderate depersonalisation, and moderate levels of personal accomplishment. The moderate levels of emotional exhaustion are concerning considering the early stage of the APs career.  However, the moderate level of personal accomplishment shows that APs are sustaining their sense of accomplishment despite the challenges of working within mental health settings.

**Levels of Vicarious Trauma**

APs showed a moderate level of vicarious trauma; this is concerning considering they are at the earliest stages of their clinical career.

**Predictors of Vicarious Trauma and Burnout**

For emotional exhaustion, depersonalisation and vicarious trauma, the significant predictors were psychological flexibility and supervision quality. Results showed that APs who are more psychologically flexible and who are more satisfied with the quality of their supervision, are less likely to experience vicarious trauma, emotional exhaustion and depersonalisation. These can be considered protective factors. For personal accomplishment, resilience was the only significant predictor. Results showed that APs with higher levels of resilience are likely to experience higher levels of personal accomplishment. See Figure 1. Contrary to existing research, trauma history and supervision quantity did not predict outcomes. More research is needed to understand the relationships between these variables.

**Figure 1**

Infographic detailing the relationships between variables. Higher levels of psychological flexibility and supervision quality predict lower levels of Vicarious trauma, depersonalisation and emotional exhaustion in APs. Higher levels of resilience predict higher levels of personal accomplishment in APs.



| Psychological Flexibility | Supervision quality | Vicarious Trauma | Depersonalisation | Emotional Exhaustion |

| Resilience | Personal Accomplishment |
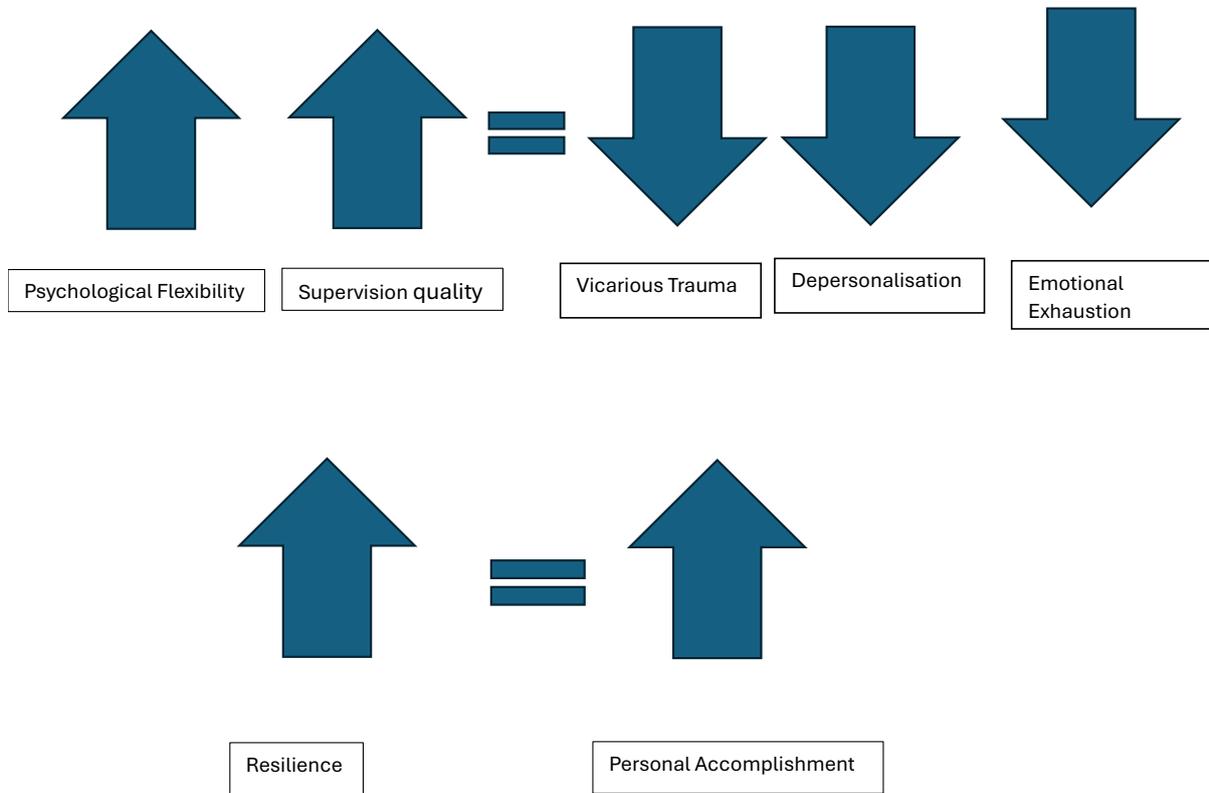
**Limitations**

The study is cross-sectional in its design, which means it captures data at a single point in time and therefore means that we can't draw any conclusions about causality or long-term effects. Since burnout and vicarious trauma are known to develop over time, a longitudinal approach (studying APs over a longer timeframe) would provide further understanding of how these factors evolve in APs, especially as they progress through their careers. The study also used self-report measures; this can increase the risk of social desirability bias. It is also possible that APs might have underreported vicarious trauma and burnout due to stigma, high professional expectations and the highly competitive nature of the field.

**Recommendations**

- Given the significant protective role of psychological flexibility against emotional exhaustion, depersonalisation and vicarious trauma, interventions aimed at increasing psychological

flexibility should be incorporated into AP training and onboarding programs to reduce risk of burnout and vicarious trauma.

- Resilience positively predicts personal accomplishment, therefore efforts to foster resilience e.g. through professional development programs, peer support networks, and embedding resilience-building strategies in AP training, will help APs maintain a sense of personal accomplishment in their role, ensuring longevity in their careers.

- High-quality supervision is a significant protective factor against emotional exhaustion, depersonalisation and vicarious trauma in APs. Improving the quality of supervision and supervisory relationships—rather than merely increasing the number of supervision hours—is crucial for reducing burnout and vicarious trauma.

- Supervisors should focus on enhancing the quality of supervision and facilitating the development of psychological flexibility and resilience within supervision sessions.

- Organisations should prioritise training supervisors to a high standard, enabling high quality supervision to become standard practice.

## Conclusion

APs are at risk of developing burnout and vicarious trauma. Supervision quality and psychological flexibility were significant protective factors for vicarious trauma, emotional exhaustion and depersonalisation, whilst resilience was the sole significant predictor of personal accomplishment in APs. Enhancing psychological flexibility, resilience and ensuring good quality supervision, is therefore essential in preventing burnout and vicarious trauma in APs working with traumatised clients. Given that burnout and vicarious trauma can develop progressively over time, early-career detection and prevention is particularly important as APs transition into more demanding roles. By fostering resilience and psychological flexibility, whilst prioritising high quality supervision, the risk of burnout and vicarious trauma will decrease, and APs long-term capacity for meaningful and sustainable careers in psychology will build.

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