Received: 29 February 2024 | Accepted: 30 April 2024

DOI: 10.1111/inm.13354

International Journal of Mental Health Nursing

ORIGINAL ARTICLE

Psychological distress, well-being, resilience, posttraumatic growth, and turnover intention of mental health nurses during COVID-19: A cross-sectional study

Kim Foster[1] | **Jane Shakespeare-Finch**[2] | **Ian Shochet**[2] | **Darryl Maybery**[3] | **Minh Viet Bui**[1] | **Michael Steele**[4,5] | **Michael Roche**[6,7,8]

[1]School of Nursing, Midwifery and Paramedicine, Australian Catholic University, Fitzroy, Australia

[2]Faculty of Health, School of Psychology and Counselling, Queensland University of Technology, Brisbane, Australia

[3]Monash Rural Health, Monash University, Warragul, Australia

[4]School of Allied Health, Australian Catholic University, Banyo, Australia

[5]Nursing Research and Practice Development Centre, The Prince Charles Hospital, Chermside, Queensland, Australia

[6]School of Nursing, Midwifery and Public Health, University of Canberra, Bruce, Australian Capital Territory, Australia

[7]ACT Government Health Directorate, Philip, Australian Capital Territory, Australia

[8]School of Nursing and Midwifery, University of Technology Sydney, Ultimo, New South Wales, Australia

Correspondence
Kim Foster, School of Nursing, Midwifery and Paramedicine, Australian Catholic University, Fitzroy, Australia.
Email: kim.foster@acu.edu.au

Funding information
Australian Nursing and Midwifery Federation; Australian Research Council, Grant/Award Number: LP180101112; Health and Community Services Union; Department of Health and Human Services, State Government of Victoria

Abstract

Mental health nurses (MHNs) experience a range of stressors as part of their work, which can impact their well-being and turnover intention. There is no prior evidence, however, on MHNs' mental health, well-being, resilience, and turnover intention during the COVID-19 pandemic. The aims of this online survey-based cross-sectional study, conducted during the pandemic, were to explore the psychological distress, well-being, emotional intelligence, coping self-efficacy, resilience, posttraumatic growth, sense of workplace belonging, and turnover intention of $n=144$ Australian mental health registered and enrolled nurses; and explore relationships between these variables, in particular, psychological distress, well-being, and turnover intention. There was a higher percentage of MHNs with high (27.78%) and very high psychological distress (9.72%) compared to population norms as measured by the K10. Emotional intelligence behaviours were significantly lower than the population mean (GENOS-EI Short). Coping self-efficacy was mid-range (CSES-Short). Resilience was moderate overall (Brief Resilience Scale), and posttraumatic growth was mid-range (Posttraumatic Growth Inventory; PTGI). Sense of workplace belonging was moderate, and turnover intention was low. Higher levels of psychological distress were associated with higher turnover intention, and lower workplace belonging, coping self-efficacy, well-being, resilience, and emotional intelligence behaviours. Despite the levels of psychological distress, nearly half the sample ($n=71$) was 'flourishing' in terms of well-being (Mental Health Continuum Short-Form). To help prevent staff distress in the post-pandemic period, organisations need to proactively offer support and professional development to strengthen staff's psychological well-being, emotional intelligence, and resilience skills. These strategies and group clinical supervision may also support lower turnover.

KEYWORDS
COVID-19, mental health nursing, posttraumatic growth, resilience, turnover intention, well-being

INTRODUCTION

Mental health nursing is well recognised as a challenging field of work, and nurses can experience a range of role-related and organisation-related stressors (Foster et al., 2021). The COVID-19 pandemic has added additional stress, heightened anxiety, and fear of infection in the community (Usher et al., 2020) and led to

unprecedented demands and workload pressures for healthcare professionals (Foye et al., 2021; Ward-Miller et al., 2021). Although there is some international literature on the practice concerns of mental health nurses during the COVID-19 pandemic (Foye et al., 2021; Ward-Miller et al., 2021), there is no prior evidence on their psychological distress, well-being, resilience, posttraumatic growth, and turnover intention during the pandemic in the Australian context. Understanding the well-being and resilience of this essential mental health workforce during a period of exceptional challenge can inform tailored support and strategies to help reduce workplace stress, enhance staff well-being, and improve workforce retention in the future.

BACKGROUND

Due to the interpersonal nature of their practice, mental health nurses (MHNs) use themselves as the therapeutic tool to partner with and deliver care to mental health consumers (Delaney et al., 2017). Key stressors MHNs face in their relational work with consumers and carers include bearing witness to others' distress, supporting consumers who are self-harming and/or suicidal, and managing aggression and conflict (Baby et al., 2014; Cranage & Foster, 2022). Colleague-related stressors include bullying, working with unmotivated or unsupportive staff, and conflicts in clinical decision-making (Foster et al., 2021; McTiernan & McDonald, 2015). At an organisational level, MHNs are often subjected to heavy workloads, inadequate staffing and poor skill mix, and lack of organisational support (e.g. training) and resources (hospital beds and functional equipment) (Cranage & Foster, 2022; McTiernan & McDonald, 2015).

Since the start of the global COVID-19 pandemic in 2020, in addition to increased care demands (Abbas et al., 2021), MHNs also needed to adapt to rapid service restructuring and changes related to social distancing guidelines, infection prevention control and personal protective equipment use, and modifications of workplace procedures (e.g. ECT) or consumer care policies (e.g. reduced consumer movement; Ward-Miller et al., 2021). The work setting nurses practiced in played a role, with MHNs in inpatient and community settings reporting different patterns of distress and working conditions. For instance, MHNs working in inpatient units reported increased workloads and concerns about exposure to COVID-19 (Foye et al., 2021; Rapisarda et al., 2020). Those working in the community struggled to provide good care due to reduced outreach frequency (Johnson et al., 2021) and the shift from face-to-face interactions to telemedicine (Foye et al., 2021).

In prior research, workplace stress has been identified to impact MHNs' health and well-being, resilience, and intention to leave. Nurses have reported burnout (McTiernan & McDonald, 2015), lower mental health (Delgado et al., 2021; Wang et al., 2022), reduced professional quality of life and job satisfaction (Itzhaki et al., 2018), and turnover intention (Kagwe et al., 2019). The negative impacts of workplace stress can also impact nurses' intention to remain in the workforce. Internationally, there is a current and predicted deficit of mental health nurses (Adams et al., 2021) that poses major challenges to maintaining a sustainable workforce. A study with $n = 7933$ Chinese MHNs, for example, revealed that 20.2% ($n = 1599$) of nurses intended to leave their jobs (Jiang et al., 2019). In the face of workplace stress, there is an urgent need to identify factors that support MHNs' well-being and improve workforce retention. Equally, the challenges presented by COVID-19 provide an opportunity to further examine the impact of an extraordinary public health stressor on the well-being and intentions of MHNs, including enrolled nurses (ENs) about which little is known.

In the context of workplace stress, resilience is a dynamic process of positive adaptation to adversity that leads to recovery of well-being (McLarnon & Rothstein, 2013). This process involves self-regulatory affective, cognitive, and behavioural factors, protective personal resources, and environmental resources. Personal resources include coping self-efficacy (feelings of competence against challenging tasks; Chesney et al., 2006) and emotional intelligence behaviours (ability to perceive, understand, and use self and others' emotions to regulate emotions; Gignac, 2010). Resilience has been positively associated with MHNs' psychological well-being and negatively associated with mental distress (Delgado et al., 2021; Foster et al., 2020), but there are no prior MHN studies investigating its relationship with emotional intelligence.

In respect to work, a sense of belonging is the extent to which a person feels acceptance, respect, inclusiveness, and support from others (Cockshaw & Shochet, 2010). In other stressful healthcare professions (e.g. ambulance clinicians), workplace belonging has been associated with higher resilience and psychological well-being (Shakespeare-Finch & Daley, 2017) and has the potential to mitigate job-related psychological distress (Cockshaw & Shochet, 2010; Shakespeare-Finch & Daley, 2017) and burnout (Somoray et al., 2017). The relationships between workplace belonging, resilience, psychological well-being, distress, and turnover intention, however, have not been explored in mental health nursing. Posttraumatic growth (PTG) is a related but distinct construct from resilience that involves positive psychological changes after a traumatic event which challenge a person's core beliefs and assumptions. This experience can lead to transformation and growth and changes in life priorities, better appreciation for interpersonal relationships, and a more positive view of personal strengths (Tedeschi et al., 2018). Mental health nurses that are exposed to occupational violence and traumatic events in the workplace (e.g. witnessing self-harm or suicidal

behaviours) may develop PTG (Itzhaki et al., 2015). Findings to date on the relationship between PTG, psychological well-being, distress, and resilience, however, have been inconclusive (Tedeschi et al., 2018), and further research is needed to establish the relationship of resilience to PTG and psychological well-being of MHNs exposed to traumatic events.

In respect to COVID-19, two prior studies have investigated the impact of the pandemic on the health and mental well-being of mental health nurses (Kameg et al., 2021; King et al., 2022). They found that mental health nurses (US, $n=151$; Kameg et al., 2021, Ireland, $n=161$; King et al., 2022) experienced psychological distress (i.e. depression, anxiety, and posttraumatic stress) during COVID. There is no other empirical literature on the direct impacts of other public health crises or disasters on MHN well-being, and no prior evidence internationally on MHNs' (registered and enrolled nurses) mental health, well-being, resilience, posttraumatic growth and turnover intention, or the relationships between these, during the pandemic. To address this gap in knowledge the aims of the study were to explore the psychological distress, well-being, emotional intelligence, coping self-efficacy, resilience, posttraumatic growth, sense of workplace belonging and turnover intention of $n=144$ Australian mental health registered and enrolled nurses; and explore relationships between these variables, in particular, psychological distress, well-being, and turnover intention.

METHODS

Research design

This study comprises the baseline findings from a randomised controlled trial of a resilience intervention with mental health nurses (ACTRN12620001052921). A cross-sectional, descriptive, correlational design was used. The design is suitable to analyse the characteristics of a sample and assess the association between measures at one point in time (Kesmodel, 2018). The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement (Vandenbroucke et al., 2007) guided the reporting of this study. The study received ethics approval from the Melbourne Health Human Research Ethics Committee (HREC/56912/MH-2020) and relevant University Human Research Ethics Committees (2020-127RC). Participants were provided with relevant information about the study, and completion of the online survey implied informed consent.

Study setting and participants

The study was conducted at a large tertiary metropolitan mental health service in Victoria, Australia. Nurses (enrolled or registered) working clinically at least 0.6 full-time equivalent were eligible to participate and were recruited using convenience sampling. An email invitation and online survey link via REDCap, with several reminders, were distributed to staff via their unit/team managers.

Data collection

Data were collected between February 2021 and March 2022. Data collection occurred throughout the COVID-19 pandemic and was affected by several lockdowns in Victoria, Australia between February and October 2021.

Instruments

Participants provided demographic information on gender, age, current work setting, years of experience in mental health and in nursing, registered or enrolled nurse role, and whether they had clinical supervision. *Psychological distress* was assessed with the 10-item Kessler Psychological Distress Scale (K10) (Andrews & Slade, 2001). This scale measures core dimensions of non-specific psychological distress based on anxiety and depressive symptoms. Feelings in the past 30 days are ranked from 'all of the time' to 'none of the time' on a 5-point Likert scale. Scores can range between 10 and 50, with scores between 10 and 15 representing low, 16–21 moderate, 22–29 high and 30–50 very high psychological distress. Strong reliability was reported in this study ($\alpha=0.88$). *Well-being* was assessed using the 14-item short form of the Mental Health Continuum (MHC-SF; Keyes et al., 2008). This form measures mental health and psychological, social, and emotional well-being. Frequency of feelings in the past month is ranked from 'never' to 'every day' on a 6-point scale. Scores range between 0 and 70. There are three dimensions: emotional, social, and psychological well-being. To be flourishing, individuals need to report 'every day' or 'almost every day' for 1 of the 3 hedonic well-being (i.e. emotional well-being) symptoms and 6 of the 11 positive functioning symptoms. Languishing is when 'never' or 'once or twice' are reported for 3 of the hedonic well-being symptoms and 6 of the 11 positive functioning symptoms. Individuals who are neither flourishing nor languishing are considered 'moderate' (Keyes et al., 2008). Strong reliability was reported in this study ($\alpha=0.92$).

Emotional intelligence behaviours were assessed with the 14-item Genos Emotional Intelligence Inventory – Short (GENOS-EI; Palmer et al., 2009) which measures typical emotional functioning and behaviour at work through self-awareness, emotional expression, emotional awareness of others, emotional reasoning,

emotional self-management, emotional management of others, and emotional self-control. Participants rank frequency of thinking, feeling, and action from 'almost never' to 'almost always' on a 5-point Likert scale. Scores range between 14 and 70. Higher scores reflect higher emotional functioning. Strong reliability was reported in this study ($\alpha = 0.83$). *Coping self-efficacy* was assessed using the 13-item Coping Self-Efficacy scale (Short; CSES) which measures perceived ability to cope effectively with life challenges (Chesney et al., 2006). Items are ranked from 'cannot do at all' to 'certain can do' on an 11-point Likert scale. Scores range between 0 and 130. Higher scores indicate higher levels of self-efficacy with implementing positive coping strategies. Strong reliability was reported in this study ($\alpha = 0.93$). *Resilience* was assessed with the 6-item Brief Resilience Scale (BRS) (Smith et al., 2013), where resilience is defined as recovering from stress and coping with stressors. Statements are ranked from 'strongly disagree' to 'strongly agree' on a 5-point Likert scale. Scores range between 1 and 5. Scores below 3.0 can be interpreted as low, from 3.0 to 4.2 as moderate, and above 4.3 as high. Strong reliability was reported in this study ($\alpha = 0.84$).

Posttraumatic growth was assessed with the 21-item Posttraumatic Growth Inventory (PTGI) (Tedeschi & Calhoun, 1996), which measures positive changes following highly stressful and traumatic events. Items assess personal strength, new possibilities, relating to others, appreciation of life, and spiritual change. Prior to completing the measure, participants are asked if they have experienced a traumatic event, to briefly describe the event, when it occurred, and the perceived severity of trauma (from 1 = moderate to 4 = very severe). They rank effects of the event from 'not at all' to 'very great degree' on a 6-point Likert scale. Scores range between 0 and 105. Higher scores reflect greater posttraumatic growth. Strong reliability was reported in this study ($\alpha = 0.94$). *Workplace belonging* was assessed with 6 items on the Sense of Belonging subscale from the Psychological Sense of Organisational Membership Scale (PSOM) (Cockshaw & Shochet, 2010). Items measure feelings of being accepted, valued, and needed by an organisation. Participants rank how they feel at work from 'not at all true' to 'completely true' on a 5-point Likert scale. Scores range between 1 and 5. Higher scores reflect greater sense of belonging. The Cronbach's α in this study was 0.87. *Turnover intention* was measured with the 4-item Turnover Intention Scale (TIS) (Kelloway et al., 1999). The TIS measures thoughts about leaving the current organisation and seeking job opportunities. Participants rank items from 'strongly disagree to 'strongly agree' on a 5-point Likert scale. Scores range between 4 and 20. Higher scores reflect greater turnover intention. Strong reliability was reported in this study ($\alpha = 0.90$).

Data analysis

Scale and subscale scores were calculated as per each tool developer's instructions. Continuous outcomes were described with means (Ms) and standard deviations (SDs). Categorical outcomes were described with frequencies (n) and percentages (%). Where required, chi-square goodness-of-fit tests were used. Independent samples t-tests were used to determine differences between two continuous variables, and one-way ANOVAs were used when there were more than two variables. One-sample t-test was used to test if a mean differed from a previously published mean. Spearman's correlation coefficients were conducted to assess the relationships between measures. Significance was accepted at $p \leq 0.05$. Imputation was only used in a small number of cases where the participant had at least 80% of their data. Quantitative data were analysed with SPSS Version 29. Descriptions of traumatic events were categorised into work-related or personal events, within Excel.

RESULTS

Demographics

Descriptive statistics for demographic variables are presented in Table 1. There were 144 participants with a mean age of 30.67 years (SD = 7.78). There were more females (72.22%) than males (27.08%), which is generally representative of this workforce, and most (86.81%) were registered nurses. Just over half the nurses had access to clinical supervision.

Descriptive statistics

Descriptive statistics for the measures are presented in Table 2. *Psychological distress*: The sample mean for the K10 was 20.22 (SD = 6.37). There was a significant difference between the observed percentage of MHNs categorised as having low, moderate, high, and very high psychological distress, compared to the expected percentages based on population norms (Australian Bureau of Statistics, 2017–2018; $\chi^2 = 121.44$, df = 4, $N = 144$, $p < 0.001$). Specifically, there was a lower percentage of MHNs with low psychological distress (24.31%) than expected (60.80%) and a higher percentage of MHNs with moderate psychological distress (37.50%) than expected (21.90%). There was a higher percentage of MHNs with high psychological distress (27.78%) than expected (8.90%). There was a higher percentage of MHNs with very high psychological distress (9.72%) than expected (4.00%), which is indicative of a severe mental disorder (Australian Bureau of Statistics, 2012). Note that the Australian Bureau of Statistics total percentage also

TABLE 1 Participant demographics ($n = 144$).

Descriptor	Category	*n* (%)
Gender	Male	39 (27.08)
	Female	104 (72.22)
	Other	1 (0.70)
Age	20–29	42 (29.2)
	30–39	48 (33.3)
	40–49	22 (15.3)
	50+	23 (16.0)
	Missing	9 (6.3)
Professional role	RN	125 (86.8)
	EN	19 (13.2)
Specialist postgraduate mental health qualification (RNs/$n = 125$)	No	64 (51.20)
	Yes	61 (48.80)
Years working in mental health nursing	<1	45 (31.3)
	1–4.9	49 (34.0)
	5–9.9	22 (15.3)
	10–19.9	16 (11.1)
	20+	10 (6.9)
	Missing	2 (1.4)
Workplace setting	Inpatient	91 (63.19)
	Community	42 (29.17)
	Unknown	11 (7.64)
Clinical supervision ($n = 135$)	Yes	79 (54.9)
	No	56 (45.1)

Abbreviations: EN, enrolled nurse; RN, registered nurse.

includes 6.34% whose K10 score was not able to be determined, and in our study, there were 0.07% without a K10 score.

Well-being: The overall mean was 47.98 (SD = 12.20). Nearly half the sample was categorised as 'flourishing' ($n = 71$; 49.3%), with fewer categorised as 'moderate' ($n = 57$; 39.6%) or 'languishing' ($n = 16$; 11.1%). We compared psychological distress levels between the three categories of well-being (i.e. flourishing, moderate, and languishing). Psychological distress significantly differed between the three groups ($F(2, 140) = 18.05$, $p < 0.001$) and was significantly higher in the languishing group (M = 26.26, SD = 5.2) than the moderate (M = 21.71, SD = 5.72) group ($p = 0.017$), which in turn had significantly higher psychological distress than the flourishing (M = 17.65, SD = 5.83) group ($p < 0.001$). *Emotional intelligence behaviours*: The sample mean was 53.90 (SD = 6.79), which is significantly lower ($p < 0.001$) than the general population mean (M = 55.88) provided by Gignac (2010). *Coping self-efficacy*: The mean was 82.18 (SD = 20.91), which indicates moderate levels of self-efficacy. *Resilience*: The mean was 3.45 (SD = 0.70; which indicates moderate resilience), which was lower than the population mean of 3.70 by Smith et al. (2013). *Posttraumatic growth*: The mean was 61.03 (SD = 21.28) which indicates a mid-range score. Of the described traumatic events, 5.8% were reported by MHN as moderately traumatic, 16.7% as highly traumatic, 31.4% as severely traumatic, and 46.1% as very severely traumatic. The types of traumatic events included work-related events (e.g. occupational violence, workplace bullying, and witnessing consumer suicide/self-harm)

TABLE 2 Means and Standard Deviations by Role and Workplace Setting.

	Total	RN	EN		Inpatient	Community	
	M (SD)	M (SD)	M (SD)	*p*-value	M (SD)	M (SD)	*p*-value
Kessler Psychological Distress Scale ($n = 143$)							
Total	20.22 (6.37)	19.91 (6.38)	22.21 (6.12)	0.144	20.19 (6.65)	20.60 (5.99)	0.736
Mental Health Continuum – Short Form ($n = 144$)							
Total	47.98 (12.20)	48.56 (11.91)	44.16 (13.65)	0.142	49.10 (11.10)	45.87 (14.62)	0.163
Genos Emotional Intelligence Inventory – Short ($n = 144$)							
Total	53.90 (6.79)	54.39 (6.51)	50.62 (7.82)	0.024	53.74 (6.77)	53.51 (7.06)	0.857
Coping Self-Efficacy Scale ($n = 142$)							
Total	82.18 (20.91)	82.94 (20.88)	77.00 (20.95)	0.262	81.86 (19.40)	80.27 (24.33)	0.690
Brief Resilience Scale ($n = 144$)							
Total	3.45 (0.70)	3.47 (0.70)	3.32 (0.71)	0.393	3.43 (0.69)	3.42 (0.68)	0.987
Posttraumatic Growth Inventory ($n = 100$)							
Total	61.03 (21.28)	60.89 (21.89)	62.00 (16.91)	0.867	58.77 (22.54)	62.43 (19.84)	0.438
Psychological Sense of Organisational Membership ($n = 143$)							
Sense of Belonging	3.58 (0.81)	3.64 (0.78)	3.20 (0.92)	0.027	3.69 (0.75)	3.37 (0.89)	0.032
Turnover Intention Scale ($n = 144$)							
Total	7.94 (3.71)	7.70 (3.58)	9.53 (4.30)	0.046	7.78 (3.58)	8.60 (4.06)	0.244

and personal events (e.g. catching COVID, COVID lockdown, relationship breakdown, family violence, health deterioration, and death in the family). *Sense of workplace belonging*: The mean was 3.58 (SD = 0.81; which was moderate on this scale). *Turnover intention*: The mean was 7.94 (SD = 3.71; which indicates low turnover intent).

Comparisons between groups

There is very limited prior literature on ENs in mental health and on differences between nurses in community and inpatient mental health settings. The findings are explored in Table 2 for differences between RNs and ENs, and work settings (inpatient vs. community). Significant differences between RN and ENs were found for Emotional Intelligence Behaviours (RN > EN, $p = 0.024$), Sense of Workplace Belonging (RN > EN, $p = 0.027$), and Turnover Intention (EN > RN, $p = 0.046$). MHNs working in inpatient settings had significantly greater sense of belonging than nurses working in the community ($p = 0.032$). Otherwise, there were no significant differences in any of the measures between nurses working in these settings.

Correlations between measures

All correlations are presented in Table 3. Resilience was not significantly associated with posttraumatic growth ($r = 0.08$). Significant correlations of psychological distress, well-being, and turnover intention are described below. *Psychological distress*: higher psychological distress was associated with lower coping self-efficacy ($r = -0.42$), well-being ($r = -0.55$), sense of belonging ($r = -0.20$), resilience ($r = -0.38$), and emotional intelligence ($r = -0.43$). Higher psychological distress was also associated with higher turnover intention ($r = 0.33$). *Well-being*: higher well-being was associated with higher coping self-efficacy ($r = 0.58$), sense of belonging ($r = 0.37$), emotional intelligence ($r = 0.45$), resilience ($r = 0.40$), and posttraumatic growth ($r = 0.38$). Higher well-being was also associated with lower turnover intention ($r = -0.30$). *Turnover intention*: higher turnover intention was associated with lower coping self-efficacy ($r = -0.19$), sense of belonging ($r = -0.31$), resilience ($r = -0.21$), and emotional intelligence ($r = -0.30$).

DISCUSSION

The aims of this study were to explore the psychological distress, well-being, turnover intention, emotional intelligence, resilience, coping self-efficacy, posttraumatic growth, and workplace belonging of Australian MHN; and relationships between these variables. This is the first in-depth study to report Australian MHNs' mental health and well-being in the context of the COVID pandemic – a significant public health crisis. The findings provide new evidence in the field and during the pandemic. The psychological distress of MHNs in this study was markedly higher than Australian population norms across all levels of distress severity, with nearly 10% of the sample (9.72%) reporting very high psychological distress, indicating the likelihood of a severe mental disorder (e.g. depression and/or anxiety; Australian Bureau of Statistics, 2012). This finding is generally consistent with the findings reported by Wang et al. (2022) from Chinese MHNs, and with King et al. (2022) from US nurses during the pandemic, and with prior studies where MHNs have

TABLE 3 Spearman's correlation coefficients for associations between measures.

	1	2	3	4	5	6	7	8
1. K10: Psychological distress								
2. MHC-SF: Well-being	−0.55 ($p < 0.001$)							
3. GENOS-EI: Emotional intelligence	−0.43 ($p < 0.001$)	0.45 ($p < 0.001$)						
4. CSES: Coping self-efficacy	−0.42 ($p < 0.001$)	0.58 ($p < 0.001$)	0.39 ($p < 0.001$)					
5. BRS: Resilience	−0.38 ($p < 0.001$)	0.40 ($p < 0.001$)	0.42 ($p < 0.001$)	0.49 ($p < 0.001$)				
6. PTGI: Posttraumatic growth	−0.12 ($p = 0.247$)	0.38 ($p < 0.001$)	0.19 ($p = 0.065$)	0.32 ($p = 0.001$)	0.08 ($p = 0.412$)			
7. PSOM: Sense of belonging	−0.20 ($p = 0.015$)	0.37 ($p < 0.001$)	0.44 ($p < 0.001$)	0.25 ($p = 0.003$)	0.33 ($p < 0.001$)	0.15 ($p = 0.141$)		
8. TIS: Turnover intention	0.33 ($p < 0.001$)	−0.30 ($p < 0.001$)	−0.30 ($p < 0.001$)	−0.19 ($p = 0.027$)	−0.21 ($p = 0.012$)	−0.18 ($p = 0.067$)	−0.31 ($p < 0.001$)	

reported low mental health (Delgado et al., 2021; Foster et al., 2020). However, the mean K10 scores of MHN in the current study (mean = 20.22, SD = 6.37, n = 144) were higher than those from Wang et al. (2022) (mean = 17.88, SD = 6.57, n = 812), and 75% of our MHNs (compared to 70.3%; Wang et al., 2022) experienced moderate to very high psychological distress. It is likely that COVID-19 was an additional factor in our sample group's distress as there is other evidence of MHNs' high psychological distress during the pandemic (see, e.g. King et al., 2022). The experience of multiple lockdowns for Melbourne-based MHNs may have also contributed to their high levels of psychological distress. During the COVID period, Victorian adults had a small but statistically significant decline in their mental health compared to the rest of Australia (Butterworth et al., 2022).

Nevertheless, while our sample reported a high level of mental health difficulties, at the same time almost half (49.3%) of nurses were flourishing. Flourishing (or positive mental health) involves having a balanced life, where a person feels good about their life (subjective well-being) and is functioning well (social and psychological well-being). This includes self-acceptance, having a purpose in life, a sense of mastery and sense of belonging, positive connections, personal growth, and making contributions (Keyes et al., 2008). While nurses may have experienced distress related to the stress of their work and the impacts of the pandemic, at the same time our findings also indicate they had personal characteristics and resources that enabled them to function well. This is consistent with other research reporting on the well-being of nurses during the pandemic. Jarden et al. (2023) found that enablers of nurse well-being included a positive workplace, social connections, and engaging in self-care. The moderate workplace belonging and low turnover intention findings in the current study indicate that staff felt valued by the organisation and did not intend leaving. These may have been enablers for their well-being in the midst of the adversity of the pandemic. The dual continua model of mental health holds that mental illness and well-being are connected but separate, distinct dimensions that can co-exist (Westerhof & Keyes, 2010). Our findings can be understood through this lens as inter-related yet distinct subcomponents within an overarching construct of mental health (Hides et al., 2019).

In respect to resilience and PTG, prior cross-sectional studies investigating the relationship between them have produced mixed results (Tedeschi et al., 2018, p. 70). We did not find any significant association between resilience and PTG, which is consistent with some prior studies on resilience and PTG in wider populations (Adjorlolo et al., 2022; Wilson et al., 2014) and with some studies with MHNs in other contexts (Israeli MHN; Itzhaki et al., 2015). Our findings were not, however, consistent with those of Dahan et al. (2022), who reported a significant positive association between personal resilience (measured with the CD-RISC-10) and PTG with a sample of MHN during the pandemic in Israel. Our findings lend support to the theory that the two constructs are distinct and not related.

In respect to emotional intelligence behaviours (typical emotional functioning and behaviour at work), the mean in this study was significantly lower than previously reported population means (Gignac, 2010). While no direct comparison of means with other MHN studies can be made due to differences in instruments used, Basogul et al. (2019) reported that emotional intelligence (using the Emotional Intelligence Evaluation Scale) of n = 103 Turkish MHNs was moderate. A further study reported that emotional intelligence (measured with Bar-On EQ-i scale) of n = 98 Dutch MHN fell within the average level but was significantly higher than the Dutch population (van Dusseldorp et al., 2011). Our finding was lower than these and has implications for the interpersonal work and emotional labour of MHNs. The ability to be self and other aware, emotionally self-regulate, and manage the emotional responses of others (Palmer et al., 2009), are key abilities for MHNs in their relational work with distressed consumers, and in their interactions with colleagues where there can often be conflict (Delgado et al., 2022). However, as Delgado et al. (2022) also found, when MHNs are in stressful work environments but receive limited supports from organisations, their ability to reflect and regulate their emotions can be impaired. This is a possible explanation for our finding on emotional intelligence behaviours in the context of the COVID pandemic and is consistent with the high levels of psychological distress our sample were also experiencing. These findings indicate that reduction of stressors where possible, and targeted proactive organisational supports for staff well-being and interpersonal practice, are particularly vital in the context of extraordinary workplace stress and challenge.

Sense of workplace belonging was a new variable measured in this population and not previously reported in the MHN literature. We found a higher sense of belonging for inpatient MHN compared to community MHN. Workplace belonging has been associated with higher resilience and psychological well-being (Shakespeare-Finch & Daley, 2017) and has the potential to mitigate job-related psychological distress (Cockshaw & Shochet, 2010; Shakespeare-Finch & Daley, 2017). Our findings may be explained in part by the nature of nurses' roles, where MHNs in inpatient units may feel more embedded in the organisation and work more closely together with other MHNs, while community MHNs work more independently. This finding also has implications for workforce well-being, as we found a lower sense of belonging was associated with higher psychological distress, lower well-being, and higher turnover intention. Increasing the workplace sense of belonging of all nurses, particularly community MHNs, through positive team cultures and manager recognition and support

of staff, is a priority in sustaining the workforce and in workforce retention.

Turnover intention in this study was low compared with those reported by Kelloway et al. (1999) (T1: M = 9.82, SD = 4.50, T2: M = 10.05, SD = 4.54; *n* = 236 primarily nurses, from Canada). Our sample mean was also lower than that reported by Pang et al. (2023) for a large (*n* = 6771) sample of South Korean nurses (M = 12.65, SD = 4.37). This result is a positive if somewhat surprising finding given the impact of the COVID-19 pandemic on nurses' work and the high levels of psychological distress of MHN in this study. Turnover intention was higher for ENs than RNs, and higher turnover intent was associated with lower sense of belonging, resilience, and emotional intelligence behaviours. These are a new set of findings in the literature. Kagwe et al. (2019) found that turnover intent for MHN was related to the quality of workplace relationships and opportunities for growth and education. Our findings suggest that strengthening staff's sense of belonging in their teams and offering professional development in emotional intelligence and resilience skills may support lower turnover.

There are several limitations to this study including the sample being from one metropolitan mental health service in Australia. Further limitations with the cross-sectional design are the inability to show cause and effect of key variables over time – reflecting a snapshot in time rather than illustrating causality. As a result, the findings may not be generalizable to other Australian samples or other countries and settings. However, the important findings from this study suggest several areas of future research. Multi-time and multi-setting research is warranted in future, as is the examination of these variables in general nurses and other healthcare professions, including in the international arena.

CONCLUSION

In conclusion, the psychological distress of MHNs in this study was higher than the Australian population and higher than in recent studies of MHNs, most likely due to the impacts of the COVID-19 pandemic. Nevertheless, nearly half the group was flourishing in respect to well-being and turnover intention was relatively low compared with other studies. These findings indicate opportunities to proactively support the MHN workforce and clinical practice in the future.

RELEVANCE TO CLINICAL PRACTICE

To support their mental health and well-being, it is vital that mental health services provide individual and collective well-being strategies and support for MHNs. The work demands placed on MHNs during COVID, in addition to existing and well-known stressors of the work, mean that in this post-pandemic era nurses have ongoing needs in relation to their well-being. The psychological distress experienced during COVID by nurses in this study is likely to have an enduring impact on their mental health and well-being (Frawley et al., 2021) and affect future workforce retention unless it is specifically addressed. Psychological support strategies such as psychological first aid, and Employee Assistance Programs, need to be made available to individual nurses. Active efforts are needed by managers and organisations to strengthen staff's sense of belonging and positive work cultures in teams. Nurses working in community settings may benefit from nurse-specific professional development opportunities and group clinical supervision. Offering professional development and support including resilience interventions to strengthen nurses' psychological well-being, emotional intelligence and resilience skills may support retention and lower turnover.

AUTHOR CONTRIBUTIONS

KF, IS, JS-F, MR, and DM conceived and designed the study; KF and VB collected the data; and MS and KF analysed and interpreted the data. KF drafted the manuscript, and all authors contributed to refining and critically reviewing the manuscript and are in agreement with the manuscript.

ACKNOWLEDGEMENTS

This study is funded by an Australian Research Council Linkage Grant (Project ID: LP180101112) and the Australian Nursing and Midwifery Federation (Victorian Branch), Department of Health and Human Services Victoria, and the Health and Community Services Union. The authors would like to acknowledge and thank Brian Jackson and the participants and staff at NorthWestern Mental Health for their support of the study; and acknowledge Jason He for contribution to statistical analysis and Kathleen Bagot for assistance with the final draft. Open access publishing facilitated by Australian Catholic University, as part of the Wiley - Australian Catholic University agreement via the Council of Australian University Librarians.

CONFLICT OF INTEREST STATEMENT

Kim Foster is an Editor of the International Journal of Mental Health Nursing. She took no part in the management, reviewer selection, or review outcomes of this paper.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ORCID

Kim Foster https://orcid.org/0000-0001-6931-2422

Jane Shakespeare-Finch https://orcid.org/0000-0003-4237-1320
Ian Shochet https://orcid.org/0000-0002-4666-2128
Darryl Maybery https://orcid.org/0000-0003-1038-9374
Minh Viet Bui https://orcid.org/0000-0002-9346-3332
Michael Steele https://orcid.org/0000-0001-9628-3057
Michael Roche https://orcid.org/0000-0002-3831-537X

REFERENCES

Abbas, M.J., Kronenberg, G., McBride, M., Chari, D., Alam, F., Mukaetova-Ladinska, E. et al. (2021) The early impact of the COVID-19 pandemic on acute care mental health services. *Psychiatric Services (Washington, D.C.)*, 72(3), 242–246. Available from: https://doi.org/10.1176/appi.ps.202000467

Adams, R., Ryan, T. & Wood, E. (2021) Understanding the factors that affect retention within the mental health nursing workforce: a systematic review and thematic synthesis. *International Journal of Mental Health Nursing*, 30(6), 1476–1497. Available from: https://doi.org/10.1111/inm.12904

Adjorlolo, S., Adjorlolo, P., Andoh-Arthur, J., Ahiable, E.K., Kretchy, I.A. & Osafo, J. (2022) Post-traumatic growth and resilience among hospitalized COVID-19 survivors: a gendered analysis. *International Journal of Environmental Research and Public Health*, 19(16), 10014. Available from: https://doi.org/10.3390/ijerph191610014

Andrews, G. & Slade, T. (2001) Interpreting scores on the Kessler psychological distress scale (K10). *Australian and New Zealand Journal of Public Health*, 25, 494–497.

Australian Bureau of Statistics. (2012) Chapter—K10 Scoring. Available from: http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/4817.0.55.001Chapter92007-08

Australian Bureau of Statistics. (2017–2018) *National Health Survey: First results*. Canberra: ABS. Available from: https://www.abs.gov.au/statistics/health/health-conditions-and-risks/national-health-survey-first-results/latest-release

Baby, M., Glue, P. & Carlyle, D. (2014) "Violence is not part of our job": a thematic analysis of psychiatric mental health Nurses' experiences of patient assaults from a New Zealand perspective. *Issues in Mental Health Nursing*, 35(9), 647–655.

Basogul, C., Arabaci, L.B., Buyukbayram, A., Aktas, Y. & Uzunoglu, G. (2019) Emotional intelligence and personality characteristics of psychiatric nurses and their situations of exposure to violence. *Perspectives in Psychiatric Care*, 55(2), 255–261. Available from: https://doi.org/10.1111/ppc.12358

Butterworth, P., Schurer, S., Trinh, T.A., Vera-Toscano, E. & Wooden, M. (2022) Effect of lockdown on mental health in Australia: evidence from a natural experiment analysing a longitudinal probability sample survey. *The Lancet Public Health*, 7(5), e427–e436. Available from: https://doi.org/10.1016/s2468-2667(22)00082-2

Chesney, M., Neilands, T., Chambers, D., Taylor, J. & Folkman, S. (2006) A validity and reliability study of the coping self-efficacy scale. *British Journal of Health Psychology*, 11, 421–437. Available from: https://doi.org/10.1348/135910705X53155

Cockshaw, W.D. & Shochet, I. (2010) The link between belongingness and depressive symptoms: an exploration in the workplace interpersonal context. *Australian Psychologist*, 45, 283–289. Available from: https://doi.org/10.1080/00050061003752418

Cranage, K. & Foster, K. (2022) Mental health nurses' experience of challenging workplace situations: a qualitative descriptive study. *International Journal of Mental Health Nursing*, 31(3), 665–676. Available from: https://doi.org/10.1111/inm.12986

Dahan, S., Levi, G. & Segev, R. (2022) Shared trauma during the COVID-19 pandemic: psychological effects on Israeli mental health nurses. *International Journal of Mental Health Nursing*, 31(3), 722–730. Available from: https://doi.org/10.1111/inm.12996

Delaney, K.R., Shattell, M. & Johnson, M.E. (2017) Capturing the interpersonal process of psychiatric nurses: a model for engagement. *Archives of Psychiatric Nursing*, 31(6), 634–640. Available from: https://doi.org/10.1016/j.apnu.2017.08.003

Delgado, C., Evans, A., Roche, M. & Foster, K. (2022) Mental health nurses' resilience in the context of emotional labour: an interpretive qualitative study. *International Journal of Mental Health Nursing*, 31(5), 1260–1275. Available from: https://doi.org/10.1111/inm.13037

Delgado, C., Roche, M., Fethney, J. & Foster, K. (2021) Mental health nurses' psychological well-being, mental distress, and workplace resilience: a cross-sectional survey. *International Journal of Mental Health Nursing.*, 30(5), 1234–1247. Available from: https://doi.org/10.1111/inm.12874

Foster, K., Roche, M., Giandinoto, J.A. & Furness, T. (2020) Workplace stressors, psychological well-being, resilience, and caring behaviours of mental health nurses: a descriptive correlational study. *International Journal of Mental Health Nursing*, 29(1), 56–68. Available from: https://doi.org/10.1111/inm.12610

Foster, K., Roche, M., Giandinoto, J.A., Platania-Phung, C. & Furness, T. (2021) Mental health matters: a cross-sectional study of mental health nurses' health-related quality of life and work-related stressors. *International Journal of Mental Health Nursing*, 30(3), 624–634. Available from: https://doi.org/10.1111/inm.12823

Foye, U., Dalton-Locke, C., Harju-Seppänen, J., Lane, R., Beames, L., Vera San Juan, N. et al. (2021) How has COVID-19 affected mental health nurses and the delivery of mental health nursing care in the UK? Results of a mixed-methods study. *Journal of Psychiatric and Mental Health Nursing*, 28(2), 126–137. Available from: https://doi.org/10.1111/jpm.12745

Frawley, T., Van Gelderen, F., Somanadhan, S., Coveney, K., Phelan, A., Lynam-Loane, P. et al. (2021) The impact of COVID-19 on health systems, mental health and the potential for nursing. *Irish Journal of Psychological Medicine*, 38(3), 220–226. Available from: https://doi.org/10.1017/ipm.2020.105

Gignac, G. (2010) Seven-factor model of emotional intelligence as measured by Genos EI: a confirmatory factor analytic investigation based on self-and rater-report data. *European Journal of Psychological Assessment*, 26(4), 309–316.

Hides, L., Quinn, C., Stoyanov, S., Cockshaw, W., Kavanagh, D.J., Shochet, I. et al. (2019) Testing the interrelationship between mental well-being and mental distress in young people. *The Journal of Positive Psychology*, 15(3), 314–324.

Itzhaki, M., Bluvstein, I., Bortz, A.P., Kostistky, H., Noy, D.B., Filshtinsky, V. et al. (2018) Mental health nurses' exposure to workplace violence leads to job stress, which leads to reduced professional quality of life. *Frontiers in Psychiatry*, 9, 59. Available from: https://doi.org/10.3389/fpsyt.2018.00059

Itzhaki, M., Peles-Bortz, A., Kostistky, H., Barnoy, D., Filshtinsky, V. & Bluvstein, I. (2015) Exposure of mental health nurses to violence associated with job stress, life satisfaction, staff resilience, and post-traumatic growth. *International Journal of Mental Health Nursing*, 24(5), 403–412. Available from: https://doi.org/10.1111/inm.12151

Jarden, R.J., Jarden, A.J., Weiland, T.J., Taylor, G., Brockenshire, N., Rutherford, M. et al. (2023) Nurses' well-being during the coronavirus (2019) pandemic: a longitudinal mixed-methods study. *Nursing Open*, 10(1), 24–35.

Jiang, F., Zhou, H., Rakofsky, J., Hu, L., Liu, T., Wu, S. et al. (2019) Intention to leave and associated factors among psychiatric nurses in China: a nationwide cross-sectional study. *International Journal of Nursing Studies*, 94, 159–165. Available from: https://doi.org/10.1016/j.ijnurstu.2019.03.013

Johnson, S., Dalton-Locke, C., Vera San Juan, N., Foye, U., Oram, S., Papamichail, A. et al. (2021) Impact on mental health care and on mental health service users of the COVID-19 pandemic:

a mixed methods survey of UK mental health care staff. *Social Psychiatry and Psychiatric Epidemiology*, 56(1), 25–37. Available from: https://doi.org/10.1007/s00127-020-01927-4

Kagwe, J., Jones, S. & Johnson, S.L. (2019) Factors related to intention to leave and job satisfaction among registered nurses at a large psychiatric hospital. *Issues in Mental Health Nursing*, 40(9), 754–759. Available from: https://doi.org/10.1080/01612840.2019.1611977

Kameg, B.N., Fradkin, D., Lee, H. & Mitchell, A. (2021). Mental wellness among psychiatric-mental health nurses during the COVID-19 pandemic. *Archives of Psychiatric Nursing*, 35, 401–406.

Kelloway, E., Gottlieb, B. & Barham, L. (1999) The source, nature, and direction of work and family conflict: a longitudinal investigation. *Journal of Occupational Health Psychology*, 4, 337–346.

Kesmodel, U.S. (2018) Cross-sectional studies – what are they good for? *Acta Obstetricia et Gynecologica Scandinavica*, 97(4), 388–393. Available from: https://doi.org/10.1111/aogs.13331

Keyes, C.L.M., Wissing, M., Potgieter, J.P., Temane, M., Kruger, A. & van Rooy, S. (2008) Evaluation of the mental health continuum-short form (MHC-SF) in setswana-speaking south Africans. *Clinical Psychology and Psychotherapy*, 15(3), 181–192. Available from: https://doi.org/10.1002/cpp.572

King, M., Farrington, A., Donohue, G. & McCann, E. (2022) Psychological impact of the COVID-19 pandemic on mental health nurses. *Issues in Mental Health Nursing*, 43(4), 300–307. Available from: https://doi.org/10.1080/01612840.2021.1978598

McLarnon, M.J. & Rothstein, M.G. (2013) Development and initial validation of the workplace resilience inventory. *Journal of Personnel Psychology*, 12(2), 63–73. Available from: https://doi.org/10.1027/1866-5888/a000084

McTiernan, K. & McDonald, N. (2015) Occupational stressors, burnout and coping strategies between hospital and community psychiatric nurses in a Dublin region. *Journal of Psychiatric and Mental Health Nursing*, 22(3), 208–218. Available from: https://doi.org/10.1111/jpm.12170

Palmer, B.R., Stough, C., Harmer, R. & Gignac, G. (2009) The Genos emotional intelligence inventory: a measure designed for workplace applications. In: Parker, J., Saklofske, D. & Stough, C. (Eds.) *Assessing emotional intelligence. The springer series on human exceptionality*. Boston, MA: Springer, pp. 103–117.

Pang, Y., Dan, H., Jeong, H. & Kim, O. (2023) Impact of workplace violence on south Korean nurses' turnover intention: mediating and moderating roles of depressive symptoms. *International Nursing Review*, 70, 211–218.

Rapisarda, F., Vallarino, M., Cavallini, E., Barbato, A., Brousseau-Paradis, C., De Benedictis, L. et al. (2020) The early impact of the covid-19 emergency on mental health workers: a survey in Lombardy, Italy. *International Journal of Environmental Research and Public Health*, 17(22), 8615. Available from: https://doi.org/10.3390/ijerph17228615

Shakespeare-Finch, J. & Daley, E. (2017) Workplace belongingness, distress, and resilience in emergency service workers. *Psychological Trauma*, 9(1), 32–35. Available from: https://doi.org/10.1037/tra0000108

Smith, B.W., Epstein, E.M., Ortiz, J.A., Christopher, P.J. & Tooley, E.M. (2013) The foundations of resilience: what are the critical resources for bouncing back from stress? In: Prince-Embury, S. & Saklofske, D. (Eds.) *Resilience in children, adolescence and adults*. New York, NY: Springer.

Somoray, K., Shakespeare-Finch, J. & Armstrong, D. (2017) The impact of personality and workplace belongingness on mental health workers' professional quality of life. *Australian Psychologist*, 52, 52–60. Available from: https://doi.org/10.1111/ap.12182

Tedeschi, R. & Calhoun, L. (1996) The posttraumatic growth inventory: measuring the positive legacy of trauma. *Journal of Traumatic Stress*, 9, 455–471. Available from: https://doi.org/10.1002/jts.2490090305

Tedeschi, R., Shakespeare-Finch, J., Taku, K. & Calhoun, L. (2018) *Posttraumatic growth: theory, research, and applications*. New York, NY: Routledge.

Usher, K., Durkin, J. & Bhullar, N. (2020) The COVID-19 pandemic and mental health impacts. *International Journal of Mental Health Nursing*, 29(3), 315–318. Available from: https://doi.org/10.1111/inm.12726

van Dusseldorp, L.R., van Meijel, B.K. & Derksen, J.J. (2011) Emotional intelligence of mental health nurses. *Journal of Clinical Nursing*, 20(3–4), 555–562. Available from: https://doi.org/10.1111/j.1365-2702.2009.03120.x

Vandenbroucke, J.P., von Elm, E., Altman, D.G., Gøtzsche, P.C., Mulrow, C.D., Pocock, S.J. et al. (2007) Strengthening the reporting of observational studies in epidemiology (STROBE): explanation and elaboration. *Epidemiology (Cambridge, Mass.)*, 18(6), 805–835. Available from: https://doi.org/10.1097/EDE.0b013e3181577511

Wang, J., Zheng, Z., Tang, Y., Zhang, R., Lu, Q., Wang, B. et al. (2022) Psychological distress and its influencing factors among psychiatric nurses in China: a cross-sectional study. *Frontiers in Psychiatry*, 13, 948786. Available from: https://doi.org/10.3389/fpsyt.2022.948786

Ward-Miller, S., Farley, E.M., Espinosa, L., Brous, M.E., Giorgi-Cipriano, J. & Ferguson, J. (2021) Psychiatric mental health nursing in the international year of the nurse and COVID-19: one hospital's perspective on resilience and innovation - past, present and future. *Archives of Psychiatric Nursing*, 35(3), 303–310. Available from: https://doi.org/10.1016/j.apnu.2020.11.002

Westerhof, G.J. & Keyes, C.L.M. (2010) Mental illness and mental health: the two continua model across the lifespan. *Journal of Adult Development*, 17(2), 110–119.

Wilson, B., Morris, B.A. & Chambers, S. (2014) A structural equation model of posttraumatic growth after prostate cancer. *Psycho-Oncology (Chichester, England)*, 23(11), 1212–1219. Available from: https://doi.org/10.1002/pon.3546

How to cite this article: Foster, K., Shakespeare-Finch, J., Shochet, I., Maybery, D., Bui, M.V., Steele, M. et al. (2024) Psychological distress, well-being, resilience, posttraumatic growth, and turnover intention of mental health nurses during COVID-19: A cross-sectional study. *International Journal of Mental Health Nursing*, 33, 1543–1552. Available from: https://doi.org/10.1111/inm.13354