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Moral Distress Among Nurses During the COVID-19 Pandemic: A Cross-Sectional Survey

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ABSTRACT

Aim: To examine factors related to moral distress among registered nurses and nursing students during the severe acute respiratory syndrome COVID-19 pandemic.

Design: Cross-sectional survey study.

Methods: 287 registered nurses and nursing students in Wales, UK were invited to participate in an online survey between 26 October 2021 and 11 April 2022. Outcome measures used were Moral Distress for Health Professionals (MMD-HP), Patient Health Questionnaire (PHQ-9), Generalised Anxiety Disorder Questionnaire (GAD-7) and International Trauma Questionnaire (ITQ). Free text responses were collected, which allowed for exploration of moral distress, support received, pandemic preparedness and career intentions.

Results: Moral distress was significantly associated with depression; high moral distress scores were reported by those who had been redeployed; those with 2–6 years post-registration experience who cared for > 40 patients with suspected or confirmed COVID-19; and those who did not intend to remain in the nursing workforce. Qualitative findings identified: (1) an interplay between trauma experienced at home and work; (2) unhealthy coping strategies; (3) feeling unprepared and unsupported; (4) changes to roles or careers; and (5) renewed commitment to the nursing profession.

Conclusions: High levels of moral distress and an association with depression were found among nurses working during the pandemic in Wales. Exceptional workforce pressures and their impact during this period cannot be ignored. As these pressures have not abated and sequelae likely continue, interventions that address moral distress and depression among the nursing workforce remain necessary.

Impact: Working during the pandemic had an impact on nurses and nursing students. The link between moral distress and depression was observed as well as unanticipated impacts of moral distress.

Reporting Method: This paper adheres to the STROBE Statement guidelines for reporting cross-sectional studies.

Patient or Public Contribution: No patient or public contribution. However, registered nurses who were deployed during the first Covid-19 wave contributed to the study design.

1 | Introduction and Background

Moral distress is rooted in inner conflict. It describes the cognitive dissonance and anguish felt when individuals experience moral events or ethical situations where their personal and professional values are compromised because of either internal or external environmental constraints (Morley et al. 2020). While moral distress may be an understandable response to morally difficult encounters in healthcare, a recent systematic review suggested it can have a profound negative effect on individuals who experience it, harming mental health and wellbeing (Watts et al. 2023). Negative emotions including frustration, anger, anxiety, guilt, sadness, powerlessness and helplessness are associated with nurses' experiences of moral distress (Epstein et al. 2019). Physical health problems including insomnia, exhaustion, nausea and anorexia may also be manifest (Wiegand and Funk 2012). Repeated exposure to morally challenging situations can intensify the experience of moral distress, and when unresolved, lead to adverse mental health outcomes including compassion fatigue, burnout, depression, and Post Traumatic Stress Disorder (PTSD) (Riedel et al. 2022).

Concern has been expressed about moral distress among nurses for many decades (Watts et al. 2023). The COVID-19 pandemic has brought moral distress to the forefront of attention due to the concomitant pressure it placed on nurses and others providing care in a high risk, uncertain situation. International studies have reported that nurses confronted several pandemic-related moral stressors, including the perceived inability to provide optimal person-centred care, insufficient knowledge and information about the virus (Trachtenberg et al. 2023), inadequate staffing (Liu et al. 2022), scarcity of personal protective equipment (Liu et al. 2022), and problems balancing the demands of work with personal needs, particularly in relation to infection transmission risk (Trachtenberg et al. 2023) and the potential to endanger not just their own health, but also their families (Riedel et al. 2022).

Whilst the World Health Organisation (WHO) has declared that the global public health emergency has ended (WHO 2023), the effects of the pandemic have not abated (Riedel et al. 2022). In the United Kingdom (UK), the Royal College of Nursing has recognised the unprecedented challenges and pressures nurses face, including continuation of deployments to outbreak settings, started during the pandemic, which precipitated stress and anxiety (Ballantyne and Achour 2023). The UK's National Health Service (NHS) is facing unprecedented financial pressures, leading to inability to employ staff or fund short-term staff through agencies, and nurses have been balloted for industrial action, and other healthcare professionals have been involved in industrial action over terms and conditions (Garratt 2024). Insufficient staffing levels could lead to failures in care and detrimental effects on both nurses and patients and may leave nurses unable to provide care that aligns with their moral intentions. Hence, nurses continuing to experience the changed working practices and increased pressures that commenced during the pandemic may result in higher intention to leave the nursing workforce, failure to complete nursing education, and exacerbate deleterious effects on patient care and safety (Riedel et al. 2022). To proffer solutions to prevent and mitigate moral distress in the wake of COVID-19, evidence of its effects and association with other psychological outcomes on registered and nursing students during the pandemic is required; these have not previously been considered. This study aimed to identify and examine factors related to moral distress among registered nurses (RN) and nursing students during the COVID-19 pandemic.

2 | Methods

2.1 | Design

Cross-sectional national survey design. This paper adheres to the STROBE Statement guidelines for reporting cross-sectional studies, ensuring clarity, transparency, and reproducibility of the research findings.

2.2 | Setting

This study was conducted in Wales, UK between October 26 2021 and April 11 2022. In the United Kingdom, devolution means that different legislatures and executives exist. Devolved government in Wales means that Welsh Government has powers to independently make decisions about Welsh health care services delivered by NHS Wales. As such, service organisation and delivery in Wales may differ from the other UK nations.

2.3 | Participants

Registered Nurses (RNs) and nursing students in Wales were invited to participate. We recruited through professional organisations, forums, and networks. Targeted social media posts advertising the study were also placed on Twitter (X), Instagram, LinkedIn, and Facebook. These posts included a link to the survey for those able and willing to participate.

2.3.1 | Inclusion Criteria

- RN status (all fields of practice) or nursing students (all fields of practice) working clinically in Wales during the COVID-19 pandemic. Nursing students were included as at different points in the pandemic in the United Kingdom, and to support the pandemic response, second and third year students were given the opportunity to undertake extended rostered deployment for which they were financially remunerated. In Wales, students who opted out of supporting the pandemic response were required to suspend their studies and their financial support.

- Able to communicate in English

- Willing and able to give written consent and participate

2.4 | Data Sources

Data were collected using Jisc secure online surveys V2. Constructed by the research team, the survey instrument comprised seven sections, 89 questions and 25 sub questions. The first two sections focused on initial screening and consent

(questions 1–4) and socio-demographic and professional information (questions 5–22). The latter included free text questions inviting participants to share their experiences, where relevant, of pandemic preparedness, Personal Protective Equipment (PPE) provision, workplace support, career intentions and any additional comments they wished to make. Participants were invited to complete four validated self-report measures as follows:

- Used to measure moral distress, the Measure of Moral Distress-Health Professionals (MMD-HP) (Epstein et al. 2019) (questions 23–51) is comprised of 27 items which relate to morally difficult situations in healthcare. The items are rated on a five-point rating scale ranging from 0 (not at all) to 4 (very frequently/distressing) for two dimensions: frequency and level of distress. A final question focuses on whether the respondent has considered leaving or left their position due to moral distress. Scores range from 0 to 432 with higher scores indicating higher levels of moral distress. The MMD-HP has been used previously to investigate moral distress among nurses.

- The Patient Health Questionnaire-9 (PHQ-9) (Kroenke et al. 2001) (questions 52–61) is a measure of depression during the past 2 weeks through nine items (Spitzer et al. 1999, 2000). Items are rated on a four-point scale, ranging from 0 (not at all) to 3 (nearly every day). PHQ-9 scores range from 0 to 27, with high scores indicating high levels of depression. As a screening tool, scores indicate no (0–4), mild (5–9), moderate (10–14), moderately severe (15–19), and severe depression (20–27). For this study, the Cronbach's alpha was $\alpha = 0.89$.

- The Generalised Anxiety Disorder Questionnaire-7 (GAD-7) (Spitzer et al. 2006) (questions 62–69) assesses anxiety through seven items with a two-week recall period. Items are rated on a four-point scale, ranging from 0 (Not at all) to 3 (Nearly every day). GAD-7 scores range from 0 to 21, with higher scores indicating greater severity of anxiety. Scores of 5, 10, and 15 are taken as the cut-off points for mild, moderate, and severe anxiety, respectively. The Cronbach's alpha for this study was $\alpha = 0.93$.

- The International Trauma Questionnaire- (ITQ) (Cloitre et al. 2018) (questions 70–88) assesses self-reported symptoms of PTSD and Complex PTSD (CPTSD), divided into two factors ITQ—PTSD and ITQ DSO (Fresno et al. 2023). The ITQ- PTSD and ITQ-DSO both include six items measuring each PTSD symptom from the three clusters. In addition, three items measure associated functional impairments in social, occupation, and other important areas of daily life. ALL ITQ items are rated on a five-point scale, ranging from 0 (Not at all) to 4 (Extremely). PTSD and DSO scores range from 0 to 24. CPTSD scores range from 0 to 48 (Cloitre et al. 2021). The Cronbach's alpha for this study was calculated and demonstrated strong internal consistency (ITQ-PTSD $\alpha = 0.9$; ITQ-DSO $\alpha = 0.9$).

2.5 | Data Analysis

Quantitative data were analysed using SPSS 27 (IBM, Armonk, NY). Data were extracted from the online survey platform and cleaned. Participants who completed the survey but did not meet inclusion criteria were removed from analysis. Since the survey was completed online, most measures had to be fully completed before moving on; the ITQ was the only exception, as participants were asked to complete this measure in relation to their COVID-19 experience specifically. Omissions of individual items (up to a total of four across the whole measure) were computed and imputation of the mean in that section was used. Greater than four missing items resulted in the measure score being omitted for that participant. Categorical data were summarised by n (%). Continuous data were summarised by mean, standard deviation (SD) and range if data were normal, and median, IQR and range if data were skewed. Minimum and maximum values were also calculated for continuous data. Separate linear regressions explored the relationship between (a) moral distress (MMD-HP), (b) depression (PHQ-9), anxiety (GAD-7) and (c) PTSD (ITQ). Assumptions of independence of residuals (Durbin-Watson statistic within 1.5 to 2.5), homoscedasticity (scatterplot of standardised residuals against standardised predicted values) and normality of residuals (histogram of residuals and normal probability plot) were tested.

Qualitative data were analysed using thematic analysis (Braun et al. 2019) to identify, describe and interpret patterns within and between participants' qualitative data. Data were extracted and anonymised from the online survey free text manually; analysis was undertaken by three members of the research team independently (B.J., R.P., R.H.); differences in interpretation were discussed and resolved. NVivo was used to assist with data management.

2.6 | Ethical Considerations

Ethical approval was obtained from Cardiff University Research Ethics Committee. Participation was voluntary and consent was obtained in line with Health Research Authority (HRA) guidance.

3 | Results

3.1 | Participants

287 participants completed the survey with nine participants (3%) excluded as they did not meet the study inclusion criteria. There were non-completed surveys that were not included; 287 surveys were completed but the survey was started 5641 times. Most participants were RNs (68%) practicing in the adult field (75%). Half were employed as nurses without management roles. Of the RNs, 42% ($n = 81$) had more than 17 years' nursing experience and 8% ($n = 16$) had < 1 year's experience. Most participants (91%) identified as white British with only 11 participants (4%) identifying as belonging to black and minority ethnic groups. Most participants (74%) practiced in hospitals, with a smaller number working in community settings (21%). 71% needed to self-isolate at some point during the pandemic and 59% of the sample had tested positive for COVID-19 at some point. 17% reported that they considered themselves to have had Long COVID. Of the sample, 75% intended to remain in the nursing workforce, 4% did not intend to, and 22% were unsure.
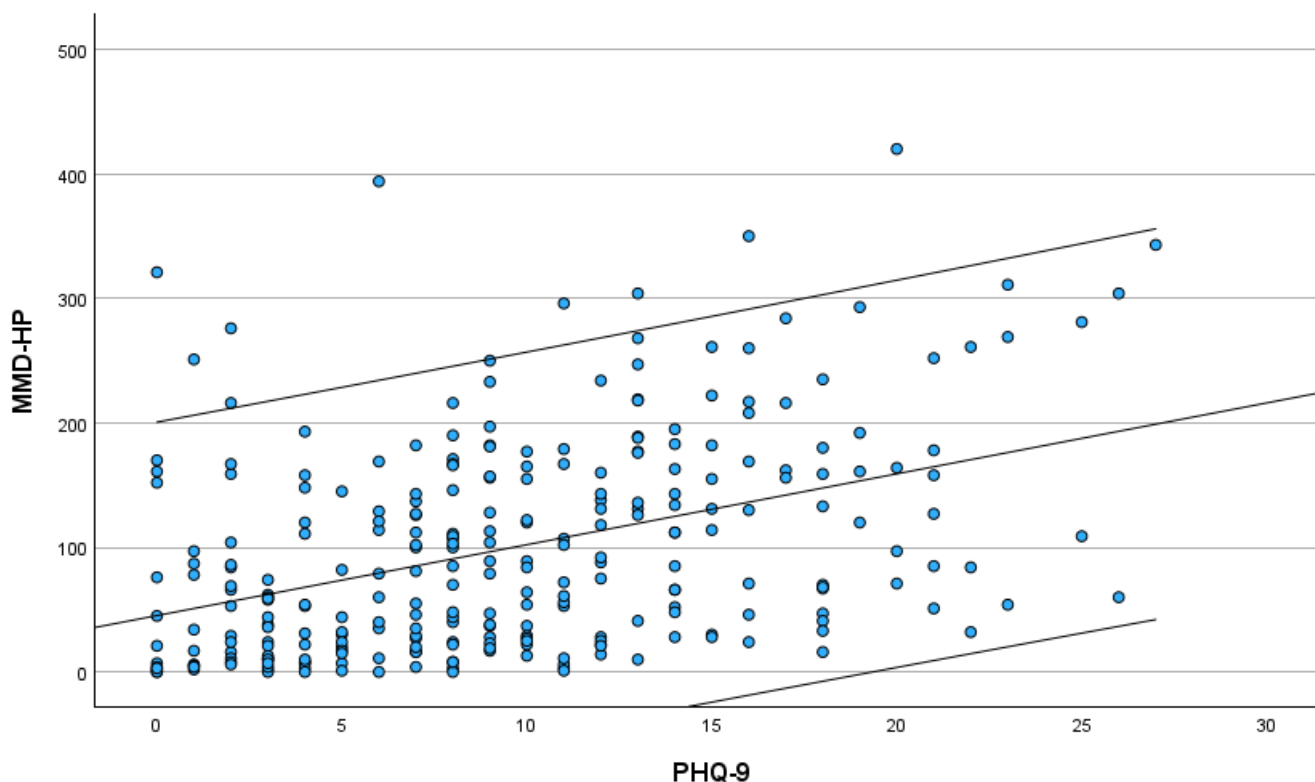
FIGURE 1 | Scatterplot of simple linear regression of moral distress and depression with line of best fit and upper and lower confidence intervals.

3.2 | Post Traumatic Stress Disorder and Complex Post-Traumatic Stress Disorder

Of the participants who completed the ITQ, 15 met the classification criteria for PTSD and 26 met the classification criteria for CPTSD. The relationship between both GAD-7 and ITQ with MMD-HP violated the assumptions of linearity and independence of observations and therefore linear regression was not conducted on these variables. GAD-7 showed a Durbin-Watson statistic of 0.26, ITQ-PTSD 0.26, and ITQ-DSO 0.5. PHQ-9 scores met all assumptions.

3.3 | Associations Between Moral Distress and Depression

High moral distress scores were reported by those who had been redeployed, with 2–6 years post-registration experience who cared for > 40 patients with suspected or confirmed COVID-19, and who did not intend to remain in the nursing workforce. Average PHQ-9 scores significantly predicted MMD-HP scores, $F(1, 276) = 56.01$, $p < 0.001$, accounting for 16.9% of the variance in moral distress scores with adjusted $R^2 = 16.6\%$, a medium size effect according to Cohen (1988). Predictions were made to determine mean MMD-HP scores for people with mild, moderate, moderately severe, and severe depression. For mild, the mean MMD-HP score was predicted as 73.74 (95% CI, 62.27 to 85.21); for moderate it was predicted as 102.21 (95% CI, 92.92 to 111.5), for moderately severe it was 130.67 (95% CI, 118.3 to 143.040); and for severe 159.13 (95% CI, 140.92 to 177.35). Figure 1 presents the results of the simple linear regression graphically using a scatterplot.

3.4 | Qualitative Findings

Free text data was provided by 253 participants. Five themes were derived during the qualitative thematic analysis: (1) interplay between trauma experienced at home and work; (2) unhealthy coping strategies; (3) feeling unprepared and unsupported; (4) changes to roles or careers; and (5) renewed commitment to the nursing profession.

3.4.1 | Interplay Between Trauma Experienced at Home and Work

Participants reported experiencing trauma in both their work and home lives during the pandemic. Moral distress due to an inability to deliver care of the desired quality during the pandemic was a key source of work-based distress. A lack of resources was identified as a reason for this.

> I attended a residential home where 28 out of 30 residents were covid positive. All but two of the homes staff were off with covid. Due to low staffing numbers the patients' basic needs were neglected. They were asking us for food and drink, they hadn't been washed or changed and were really ill. It was heart breaking to see so many people in such pain and distress.
>
> (Participant 18)

> Understaffed- I was the only nurse for 17 patients with covid. I had to ask another staff member from

another ward to countersign everything for me. I had a man who was palliative and on a syringe driver with his family present. When I checked the syringe driver it was broken and hadn't been quality checked for a year. Meaning he wasn't receiving adequate pain relief. I was rushing around everyone. I didn't tell the family that the device was broken, and I quickly went to see if I could find another one - I couldn't. I then heard the relative scream from the cubicle and the man had died. It was quite distressing to witness that. And I felt as though I'd personally failed him and them.

(Participant 252)

This distress was exacerbated by personal circumstances, including the death or illness of family members, domestic abuse, miscarriage, relationship breakdown and subsequent change of living arrangements.

Feeling so low from work seriously affected my libido and put a strain on my relationship. He felt it was him. It never was and it was so hard trying to explain it was because I was so lost and down

(Participant 77)

I found out I was 4 weeks pregnant during my 3rd week in my ITU re-deployment (Red Zone) and requested my manager to take me back to my normal place of work where I could feel safer. But he said that nobody else will take my place for the re-deployment, so I had to finish my one-month re-deployment. (...) I did not feel safe at all. I lost the pregnancy at 6 weeks (After a heartbeat was detected) as I was spotting all throughout my shifts in the ITU. Felt helpless really

(Participant 159)

For some, the trauma experienced because of dealing with frequent Covid-19 deaths, initially not knowing what to do for the best and managing the bodies of many people who died with Covid-19 in line with strict infection control procedures had lasting, even haunting impacts. This is richly encapsulated in the following words of one participant:

I watched 16 people die in 4 weeks, the two I remember the most were screaming for me to save them... I had recurrent nightmares and was afraid to fall asleep because they would terrorise my dreams. We didn't know what to do in the beginning (...) When they pass, we put them into a body bag, they ran out of white bags so then they were black. I couldn't touch a black bag or take out the rubbish for months without having a panic attack.

(Participant 81)

3.4.2 | Unhealthy Coping Strategies

Our participants reported both psychological and physical effects of working during the pandemic. Sleep disturbance, anxiety, depression, and PTSD were commonly reported.

[I] Suffered severe exacerbation of anxiety and depression, with PTSD from the work and workload during the pandemic. Already starting to feel burnt out.

(Participant 205)

Seeing people die due to covid made me so mentally ill. I stopped eating and had to start medication for depression.

(Participant 35)

I have had a course of therapy within the last year for PTSD after the second wave. Despite not currently working with COVID patients, the effects are still widespread, and I feel that me and most of my colleagues are burnt out and have been for a while.

(Participant 232)

Participants also reported experiencing exacerbations of long-term inflammatory conditions for the first time in decades, amenorrhea and miscarriage in early pregnancy. Some participants reported unhealthy coping behaviours, including increased reliance on caffeine, unhealthy food, or alcohol.

A lot of us were drinking alcohol quite heavily as a means of coping.

(Participant 242)

I worked 5/6 12 hour shifts a week because we all struggled so much, and I didn't want shifts with my colleagues shorter staffed than they could be. I stopped sleeping and got through shifts on 1/2 hours sleep, I lived off Monster ultra [caffeinated soft drinks] and coffee and McDonald's on the way home. My period stopped for 5 months, and I became a complete shell of a person.

(Participant 94)

For this participant maladaptive coping strategies combined with a significant morally distressing event was the tipping point for poor psychological wellbeing and a period of sick leave.

Nobody understood other than my friends and colleagues that were going through the same thing. I kept going until early February. Things started to quiet down on the ward but one day something gave and when two of my patients were desaturating at the same time. I just began to cry in my hood because there was nothing more I could do. I had a

panic attack trying to take my PPE off. I spoke to my manager and friends and accepted I needed to take some time off: I had a month off.

(Participant 94)

Participants expressed negative emotions associated with their experiences of moral distress, including frustration, anger, anxiety, guilt, sadness, powerlessness and helplessness. These seemed to result in physical health symptoms for some whilst for others this resulted in crisis and a need to take time away from work.

I left my permanent role as an emergency nurse because senior nurses showed a lack of compassionate leadership and poor management. (...). On every shift, I assessed patient safety as high risk, as there was a significant compromise in the quality and efficiency of care I could give (an emergency unit on 1 nurse!). The whole team was acutely aware that a never event could happen on any shift, were escalating via incident reports, and seeing no change. I could not continue to work in those conditions due to my moral compass and professional passion for high quality and safe patient care.

(Participant 111).

3.4.3 | Feeling Unprepared and Unsupported

Some participants indicated that they felt well supported by their organisations, managers and colleagues during the pandemic.

My workplace was very supportive during the pandemic, always being able to talk to someone when needed and to take a break if pressures were getting too much.

(Participant 143)

The Chaplin service offered amazing mental and emotional support.

(Participant 81)

Immediate management were present and supportive, and people worked flexible throughout e.g., band 8s covering wards or delivering PPE.

(Participant 238)

Effective teamwork, colleagues empathic understanding and a sense of collegiality were identified as core facilitators of workplace support.

I've spent since March 2020 working on a covid ward. I wouldn't have got through this time without my teammates. Management support above my ward managers has been non-existent.

(Participant 84)

It was pretty hard watching and caring for the patients, who were so ill, but working with such a great team, made the experience a lot better. The support from the ward team was fantastic.

(Participant 24)

Nonetheless, while working in the most challenging of circumstances, there was a strong sense of perceived abandonment in many participants' accounts. Many participants unfortunately articulated that they experienced insufficient practical and psychological support, particularly from their organisations and senior managers.

I don't feel we were supported at all- no senior nurses seen, no email/text/phone checks to see if we were ok.

(Participant 121)

I feel as though MH services were forgotten, the health board offered little to no support, we were told we did not need things like PPE or wellbeing support and we were the first port of call when other areas needed staff, our HCAs and many of our RMNs were redeployed to work in areas they were not trained to work in which caused great distress and anxiety for those involved.

(Participant 238)

Nursing dying covid patients in high dependency situations with no staff and no support from management and then moving us to other ward areas to support when we are short staffed ourselves. Jeopardising patient care and staff wellbeing.

(Participant 156)

Participants accounts indicated that support varied across clinical settings.

I felt [support] varied hugely between hospitals I worked at. One was incredibly supportive, the next was awful.

(Participant 86)

Some participants reported that they felt better supported at the outset of the pandemic, but that this changed over time.

I consistently asked senior nurses for more support and then to look at the risk assessment to provide more staff. This only happened when I went over their heads and emailed [names Director] who then came to the ward and worked with us to understand what we were going through. This was extremely helpful and supportive and lead to an increase in staffing numbers. However, at the start of the second wave this was all forgotten.

(Participant 81)

I felt during the first and second wave there was support. But during the third wave currently I feel

we have been let down and forgotten about. We cannot get the numbers of staff needed to safely look after patients and their individual ailments and illnesses.

(Participant 83)

Community nurses felt particularly unsupported and isolated, with one participant, a community nurse, describing themselves as the '*invisible nurses*' (participant 10) and another claiming that community nurses were the '*forgotten workforce*' (Participant 25).

I feel that as community nurse we were left to deal with pandemic alone with very little support. Almost felt like the invisible nurses.

(Participant 10)

We were the forgotten workforce. No adequate changing facilities or red/green zones as using own vehicles travelling from patient to patient.

(Participant 25)

The support experienced by nursing students was variable. Some reported good levels of support both from practitioners and their universities.

University was very supportive with finances, support in placement and counselling services that were offered.

(Participant 230)

However, others reported that their experience of support was less than optimal.

I was a student in wave one and two. The university gave us next to no support and left us for dead.

(Participant 79)

I gave everything possible during my two Covid placements. I saw and experienced things that will stay with me forever and things I think about every day. I did not feel supernumerary and feel that I carried far more responsibility than I should have. I felt insulted when student's like myself, who spent many weeks on Covid wards, we're not included when a thank you payment was given. As I have said before, I was far from supernumerary and this made me worthless. I really felt undervalued and had no thanks for the extra responsibility.

(Participant 33)

Furthermore, while some participants were aware of supportive services either within the workplace or externally, they reported that they often did not engage with them due to inaccessibility, work pressures or because they did not feel ready to discuss their experiences.

Occupational health take months to get back and no support is given unless asked or suggested, even if issues have been identified.

(Participant 41)

Online support offered but hard to access due to massively increased clinical workload.

(Participant 168)

After the wave we were offered wellbeing support. This wasn't for me as too difficult to talk about it.

(Participant 126)

3.4.4 | Changes to Roles and Careers

The mental and physical strain of caring for people who had and who did not have Covid –19 during successive pandemic waves had taken its toll on participants. Several reported that they felt 'broken'.

I feel broken from it. I'm disillusioned. This isn't the profession I came in to.

(Participant 86)

It broke me. Thought I was quite resilient after 16 years, but the second wave completely broke me. So much death, being spread too thin, I never thought I would end up needing treatment for PTSD.

(Participant 215)

Many now doubted the longevity of their nursing careers or shared that they had or were considering changing roles, careers or retiring early.

Am keen to now retire at 55 as changes to the pension scheme mean it will be feasible, was looking at 60 pre pandemic, but don't feel valued.

(Participant 114)

I am counting down the years until I can retire but also looking at job opportunities in private healthcare.

(Participant 121)

Participants who had changed roles reported that they now felt safer, more supported, and more valued.

I now work in primary care and can honestly say, the treatment from managers and other staff is much better and I feel much safer and listened to.

(Participant 166)

The mental health impacts of working during the pandemic conjoined with insufficient managerial support, not feeling valued by their organisation, the government, families or the public, and aspects of the workplace culture, including staff shortages and associated pressure, contributed to intention to leave.

I will continue to work bank shifts in clinical areas but plan to resign from my substantive post. Nurses are treated as disposable and there is an expectation that we should sacrifice ourselves for our work.

(Participant 168)

I intend to leave nursing after Christmas. After 20 years in ITU and A and E there has been little support from management. Public are now aggressive towards staff and being so short staffed at all times is horrendous.

(Participant 99)

Emotional impacts of the pandemic, particularly self-doubt, were also shared as a reason for wanting to leave.

I have nursed in the NHS for many years and since the pandemic feel I have no more to give, physically or psychologically.

(Participant 231)

Currently working in the emergency unit, I can't see myself remaining a nurse for much longer. I cannot sustain the energy to do a good job under such immense pressure. Just need to find a new career path that I am happy with.

(Participant 98)

Participants who were nursing students expressed concern about whether they wanted to continue their education due to workplace pressures experienced during the pandemic. One indicated that they may join the private sector due to the workplace pressures in the NHS, specifically around staff shortages.

I do intend on continuing with my studies and staying in the nursing workforce. However, if the resourcing and severe (at times) staff shortages are indicative of the future in the profession I may opt to work in the private sector.

(Participant 94)

Whilst another had considered different leaving for a different career.

I had a look at Post Office jobs, did you know that a post person is starting on the same wages as a band 5, and they get exercise...everyone loves the postie. I considered leaving, but....am at least staying until I get kicked off or fail...

(Participant 14)

3.4.5 | Renewed Commitment to Nursing

Working during the pandemic renewed some nurses' commitment to nursing. Despite sharing that the pandemic had been the hardest, most challenging, demanding, exhausting, and daring period of their careers, for a smaller group of nurses it had

increased their sense of pride, love, and engagement with the nursing profession. Working in effective and supportive teams was a common thread in these nurses' experiences.

I love nursing and love my team. We helped and supported each other and that is why I wouldn't leave nursing. If I didn't have them, I would have left nursing altogether.

(Participant 203)

Although the past two years have been the most demanding, exhausting and daring of my nursing career I am still proud of being a nurse.

(Participant 131)

Whilst these positive experiences were neither ubiquitous nor common, their existence demonstrates factors that supported some nurses in feeling positive or continuing in their profession.

4 | Discussion

Levels of moral distress were high among nurses in our study; similarly high levels have been previously reported in health workers when working in disaster situations (Gustavsson et al. 2020). This has included nurses working during other pandemics including HIV and Ebola whilst the 2003 SARS outbreak was linked to emotional distress (Wong et al. 2005) and anxiety.

In this study high levels of moral distress were related to having been redeployed, having cared for > 40 patients with COVID-19, and intention to leave the nursing workforce. Qualitative findings add context to these relationships. Participants recounted how moral distress experienced, especially when attempting to maintain dignified death in the face of significant constraints associated with infection control, resulted in trauma that was frequently compounded by experiences at home, often associated with the death or illness of relatives. The interaction between moral residue (from previous moral distress) and ongoing moral distress has been described as a 'crescendo' (Epstein and Hamric 2009). This was alluded to by participants who discussed the interaction between their home and work lives and the traumatic situations they faced in both. The high levels of moral distress and depression were noted. Moreover, the incidence of PTSD and CPTSD combined was 41; this demonstrates a potentially harmful psychological legacy for nurses and nursing students serving during the COVID-19 pandemic. This incidence of PTSD had varied impacts including sleep disturbance and unhealthy coping behaviours, to amenorrhea and miscarriage. This is consistent with other studies that considered the impacts of moral distress on nurses during the COVID-19 pandemic (Lee et al. 2024).

4.1 | Moral Distress Linked to Intention to Leave

Experiences of moral distress were linked to intention to leave the nursing workforce. Nursing students also expressed their

TABLE 1 | Participant characteristics.

Variable	Options	Frequency
Role	Registered nurse	189 (68%)
	Nursing student	89 (32%)
Age	19–25	59 (21.2%)
	26–30	39 (14.0%)
	31–35	41 (14.7%)
	36–40	31 (11.2%)
	41–45	30 (10.8%)
	46–50	29 (10.4%)
	51–55	25 (9%)
	56–60	20 (7.2%)
	60+	4 (1.4%)
Field	Adult	209 (75.2%)
	Mental Health	43 (15.5%)
	Child	24 (8.6%)
	Learning disabilities	2 (0.7%)
Gender	Female	251 (90.3%)
	Male	21 (7.6%)
	Transgender	1 (0.4%)
	Non-binary	4 (1.4%)
	Gender non-conforming	1 (0.4%)
Relationship status	Married	116 (41.7%)
	Single	85 (30.6%)
	Divorced	14 (5%)
	Co-habiting	56 (20.1%)
	Civil Partnership	4 (1.4%)
	Other	3 (1.1.%)
Have children	Yes (live with)	110 (39.6%)
	Yes (don't live with)	5 (1.8%)
	No	163 (58.6%)
Home schooled children	Yes	88 (31.7%)
	No	69 (24.8%)
	Not applicable	121 (43.5%)
Consider self to have disability	Yes	25 (9%)
	No	245 (88.1%)
	Prefer not to say	8 (2.9%)

(Continues)

TABLE 1 | (Continued)

Variable	Options	Frequency
Years of practice as RN	0–1	16 (5.8%)
	2–6	38 (13.7%)
	7–11	32 (11.5%)
	12–16	21 (7.6%)
	17+	81 (29.1%)
	Not applicable	90 (32.4%)
Agenda for Change band (denotes seniority, a newly qualified nurse is band 5- band 8 are senior and specialist nurses)	5	73 (26.3%)
	6	66 (23.7%)
	7	39 (14%)
	8a	17 (6.1%)
	8b	5 (1.8%)
	8c	2 (0.7%)
	Other	76 (27.3%)
Location of practice	Hospital	208 (74.8%)
	Community	59 (21.2%)
Redeployed	Yes	31 (11.2%)
	No	247 (88.5%)
Nursing student year of study	1	14 (5%)
	2	45 (16.2%)
	3	29 (10.5)
	4	1 (0.4%)
	N/A	189 (68%)
Number of patients with suspected Covid-19	None	38 (13.7%)
	1–5	42 (15.1%)
	6–10	21 (7.6%)
	11–15	19 (6.8%)
	16–20	26 (9.4%)
	20–40	26 (9.4%)
	41+	106 (38.1%)
Number of patients with confirmed Covid-19	None	49 (17.6%)
	1–5	57 (20.5)
	6–10	27 (9.7%)
	11–15	15 (5.4%)
	16–20	12 (4.3%)
	20–40	31 (11.2%)
	41+	87 (31.3%)
Have needed to self-isolate during pandemic	Yes	200 (71.9%)
	No	78 (28.1%)

(Continues)

TABLE 1 | (Continued)

Variable	Options	Frequency
Tested positive for Covid-19	Yes	115 (41.4%)
	No	163 (58.6%)
Consider self to have Long Covid	Yes	46 (16.5%)
	No	232 (83.5%)
Provided with appropriate PPE	Yes	230 (82.7%)
	No	48 (17.3%)
Provided with adequate training in PPE	Yes	205 (73.7%)
	No	73 (26.3%)
Provided with any other training	Yes	82 (29.5%)
	No	196 (70.5%)
Intention to stay in the nursing workforce	Yes	208 (74.8%)
	No	10 (3.6%)
	Unsure	60 (21.6%)

concerns about their academic progress and the impact of their changed working on their progress. Our findings were congruent with those of other studies underway simultaneously (Brett et al. 2024; Henshall et al. 2023). Moral stressors have been found to exist on many levels for nurses, relating to patient care, relationships (at work and at home), and organisational issues (Riedel et al. 2022), and distress and lack of support leave nurses feeling disregarded. We identified findings on all of these levels, including the synergy between home and work stressors. Moreover, our study also confirms findings reported elsewhere that nurses with less clinical experience were found to be more vulnerable to the impact of moral distress during the COVID-19 pandemic (Riedel et al. 2022).

Participants reported being unprepared for a pandemic and were not given the training that they required to provide the care they wished to. Pandemics, although unpredictable, should be expected, and there was a lack of preparedness for a pandemic both among staff, pointing to future training needs, and in the health and social care system, highlighting the need for better planning and co-ordination within and between services. Riedel et al. (2022) identified specific moral stressors in the context of COVID-19 that could potentially be mitigated by more effective planning and preparation. These stressors included increased exposure to the pathogen due to insufficient PPE and the inability to facilitate a dignified death for patients due to pre-existing staffing shortfalls (Riedel et al. 2022). These factors were also identified in our survey (Tables 1 and 2).

4.2 | Depression Associated With Moral Distress

Whilst our study has identified an association between depression and moral distress, the direction of this relationship is unclear. Moral distress may increase depression or, alternatively, depression may influence an individual's propensity to become distressed by morally distressing situations they face. Other research has considered depression and its antecedents in nurses (İlhan and Küpeli 2022) and wider issues such as financial difficulties were found to contribute significantly. This suggests that the 'crescendo' effect of many different situations may be contributing to nurses' coping abilities. There is also evidence in our study that some nurses coped and felt a renewed commitment to nursing. Yet, it is not clear why this was possible for some nurses and not others. The impact of stress is affected by perceived ability to cope and feelings of control and external stressors that do not create fixed outcomes (Goh et al. 2010). Hence, coping strategies may be effective in some situations for some individuals and not others. Further research through a longitudinal study is needed to assess causation in the relationship between depression and moral distress identified and to determine the direction of this relationship.

There is a lack of research into interventions available to address moral distress in nurses following a pandemic. However, the level of moral distress among nurses and nursing students observed in our study indicates that there is a pressing need to provide and prioritise effective support to mitigate the long-term effects and impact of moral distress, particularly as high levels of distress were linked to intention to leave the nursing profession. Independent, skilled and easily accessible psychological support is essential. Moreover, development or revision of organisational strategies designed to mitigate the impact of moral distress on nurses may also help support registered and student nurses. These strategies might, for example, include a renewed focus on shift patterns and the physical needs of staff given the unhealthy coping strategies reported by nurses in our study, as well as holistic consideration of their emotional well-being. Interventions and strategies should be publicised among staff and help seeking needs to be normalised. This will include managers and senior managers addressing their own needs as well as those of their staff. The inevitable occurrence of future pandemics should catalyse and accelerate preparations and those working at the front-line may be well placed

TABLE 2 | participant characteristics with Moral distress scores.

Variable	Options	MMD-HP score mean (SD)	MMD-HP score median (IQR)
Role	Registered Nurse	107.13 (90.68)	86.0 (29.0 to 165.0)
	Nursing student	83.24 (72.53)	64.0 (22.0 to 136.5)
Age	19–25	100.51 (86.93)	70.0 (32.0 to 161.0)
	26–30	131.18 (83.45)	127.0 (67.0 to 176.0)
	31–35	98.68 (90.17)	79.0 (24.5 to 144.0)
	36–40	93.58 (75.03)	58.0 (24.0 to 166.)
	41–45	118.67 (105.0)	98.5 (23.0 to 185.0)
	46–50	114.38 (89.69)	97.0 (30.0 to 174.5)
	51–55	59.44 (53.96)	44.0 (19.5 to 90.5)
	56–60	54.85 (62.73)	31.0 (4.5 to 105.0)
	60+	50.75 (55.93)	36.0 (6.75 to 109.5)
Field	Adult	109.39 (88.55)	92.0 (33.5 to 162.5)
	Mental Health	67.56 (71.08)	40.0 (15 to 100)
	Child	74.96 (70.72)	38.5 (16.25 to 156.5)
	Learning disabilities	44.0 (16.97)	44.0 (N/A)
Gender	Female	98.26 (84.58)	79.0 (25 to 158)
	Male	114.67 (105.22)	120.0 (29 to 165)
	Transgender	22.0 (N/A)	22.0 (N/A)
	Non-binary	123.25 (80.03)	98.5 (63.25 to 208)
	Gender non-conforming	70.0 (N/A)	70.0 (N/A)
Relationship status	Married	94.13 (78.02)	79.5 (28.25 to 151)
	Single	99.27 (89.68)	70.0 (26.0 to 162.5)
	Divorced	103.50 (101.16)	59.5 (18.75 to 196.75)
	Co-habiting	107.09 (94.96)	88.0 (28 to 156.75)
	Civil Partnership	141.75 (70.96)	151.5 (69.5 to 204.25)
	Other	95.33 (69.41)	104.0 (N/A)
Have children	Yes (live with)	94.0 (85.61)	66.0 (24.0 to 146.5)
	Yes (don't live with)	79.0 (81.37)	76.0 (2.5 to 157.0)
	No	103.81 (86.41)	88.0 (28.0 to 161.0)
Home schooled children	Yes	95.44 (86.24)	66.0 (24.0 to 154.0)
	No	88.75 (82.25)	67.0 (21.0 to 134.5)
	Not applicable	108.54 (87.42)	92.0 (35.0 to 162.5)
Consider self to have disability	Yes	116.72 (102.76)	109.0 (15.0 to 212.5)
	No	98.87 (85.03)	79.0 (27.5 to 157.5)
	Prefer not to say	64.25 (34.08)	65.5 (32.5 to 87.75)

(Continues)

TABLE 2 | (Continued)

Variable	Options	MMD-HP score mean (SD)	MMD-HP score median (IQR)
Years of practice as RN	0–1	98.5 (81.11)	85.5 (41.0 to 129.0)
	2–6	147.42 (101.57)	132.0 (66.75 to 220.75)
	7–11	112.31 (76.76)	109.5 (38.75 to 177.5)
	12–16	121.19 (96.15)	120.0 (22.5 to 186.0)
	17+	85.77 (85.74)	58.0 (18.0 to 128.0)
	Not applicable	83.03 (72.12)	63.0 (23.5 to 136.25)
Agenda for Change band	5	113.12 (90.88)	104.0 (31.0 to 168.0)
	6	124.74 (91.20)	111.5 (50.0 to 181.25)
	7	86.61 (91.89)	53.0 (7.0 to 129.0)
	8a	55.71 (55.49)	41.0 (15.5 to 85.5)
	8b	37.80 (28.22)	21.0 (16.0 to 68.0)
	8c	24.00 (31.11)	24.0 (N/A)
	Other	86.88 (72.71)	66.5 (28.0 to 136.75)
Location of practice	Hospital	109.62 (87.21)	100.0 (32.0 to 165.0)
	Community	61.85 (69.36)	38.0 (11.0 to 84.0)
Redeployed	Yes	156.23 (96.85)	152.0 (81.0 to 247.0)
	No	92.36 (81.89)	70.0 (24.0 to 146.0)
Nursing student year of study	1	53.0 (53.73)	42.0 (10.25 to 69.25)
	2	90.24 (69.28)	85.0 (28.0 to 140.5)
	3	90.76 (82.20)	53.0 (26.5 to 149.0)
	4	22.0 (N/A)	22.0 (N/A)
	N/A	106.87 (90.88)	86.0 (28.5 to 165.0)
Number of patients with suspected Covid-19	None	45.03 (65.89)	20.0 (3.75 to 53.5)
	1–5	68.10 (56.25)	55.5 (22.0 to 100.0)
	6–10	67.67 (53.99)	54.0 (22.0 to 124.5)
	11–15	78.42 (60.93)	72.0 (14.0 to 138.0)
	16–20	76.73 (79.36)	57.0 (31.5 to 106.7)
	20–40	111.12 (85.73)	91.0 (41.0 to 178.75)
	41+	144.24 (91.21)	147.0 (73.7 to 201.75)
Number of patients with confirmed Covid-19	None	50.41 (78.49)	25.0 (7.5 to 53.5)
	1–5	72.82 (54.08)	67.0 (29.5 to 119.0)
	6–10	69.15 (53.65)	54.0 (21.0 to 122.0)
	11–15	99.67 (84.46)	85.0 (16.0 to 159.0)
	16–20	73.33 (55.40)	61.0 (26.0 to 108.25)
	20–40	115.29 (78.96)	100.0 (60.0 to 167.0)
	41+	151.94 (93.36)	160.0 (81.0 to 217.0)

TABLE 2 | (Continued)

Variable	Options	MMD-HP score mean (SD)	MMD-HP score median (IQR)
Have needed to self-isolate during pandemic	Yes	109.31 (86.29)	100.0 (33.25 to 164.75)
	No	74.29 (80.00)	44.0 (14.5 to 111.25)
Tested positive for Covid-19	Yes	119.29 (88.77)	109.0 (38.0 to 170.0)
	No	85.51 (81.19)	56.0 (23.0 to 131.0)
Consider self to have Long Covid	Yes	121.32 (90.72)	108.0 (46.5 to 177.25)
	No	95.15 (84.43)	71.5 (24.0 to 155.75)
Provided with appropriate PPE	Yes	90.68 (81.13)	66.5 (23.75 to 147.5)
	No	141.65 (95.98)	126.5 (70.25 to 189.5)
Provided with adequate training in PPE	Yes	90.22 (81.09)	70 (22.5 to 150.0)
	No	125.49 (93.90)	111.0 (50.5 to 181.5)
Provided with any other training	Yes	106.52 (86.87)	90.5 (27.0 to 160.25)
	No	96.53 (85.52)	73.0 (27.0 to 155.75)
Intention to stay in the nursing workforce	Yes	85.53 (82.42)	55.5 (21.25 to 143.0)
	No	183.50 (119.02)	151.0 (86.25 to 307.75)
	Unsure	133.85 (74.51)	123.5 (76.7 to 186.5)

to have input in co-designing the educational, organisational or environmental changes required. Yet, setting aside lessons for future pandemics, our study confirms that there is a need to better understand and address the psychological harms of COVID-19 on the current workforce in terms of moral distress and depression to prevent premature workforce exit.

Further research on the factors that contribute to individual and organisational responses and the factors that exacerbate moral distress would help to guide provision of support to the future workforce. Moreover, qualitative studies that examine how nursing leaders and managers exert influence or control over the conditions that create morally distressing situations would be useful to pinpoint environmental factors that might exacerbate or mitigate moral distress, thereby limiting the frequency and duration of nurses' exposure to morally distressing events.

4.3 | Strengths and Limitations

This study provides a snapshot of nurses' and student nurses' experiences of working through a pandemic. This is important as the situation is likely to arise in some form again; maintaining a healthy workforce of healthcare professionals is essential in managing disease outbreaks and caring for those affected. Including qualitative data enabled consideration of the issues that were important to each participant.

The study was limited by its small sample; a high number of non-completion of surveys was observed. This was possibly related to survey fatigue, the exceptionally difficult circumstances faced by nurses and nursing students, or the number of measures that made completion time consuming. While results reported here

are not generalisable to the population of nurses and nursing students, they do shed light on experiences during the pandemic and the impact of these on individuals.

5 | Conclusions

The results of this study are of global significance as they illustrate the extent of moral distress in a population of nurses working during the COVID-19 pandemic as well as the impact of working in distressing conditions on every aspect of nurses' lives. These findings add contextual detail in the form of qualitative comments.

High levels of moral distress were found in registered and student nurses in Wales during the COVID-19 pandemic. Moral distress was associated with depression in linear regression models and with intention to leave the nursing workforce in thematic analysis. Nurses reported that several aspects of their work and home lives contributed to or exacerbated the impact of moral distress, and nursing students noted the impacts on academic study and premature exit from education. Our study therefore highlights the need to develop and enhance psychological support for nurses practicing clinically or studying academically to ameliorate the impact of moral distress. Providing this support should be an essential pre-requisite for the creation of a psychologically healthy and safe nursing workforce given the pre-existing challenge of moral distress in the nursing workforce that has been exacerbated by the COVID-19 pandemic. Owing to the increasing challenges facing the nursing workforce internationally, these strategies should be considered essential for the sustainability of healthcare delivery rather than extra provision during exceptional situations.

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.

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