Keywords Coronavirus/Pandemic/Respiratory nursing/Mental health

This article has been double-blind peer reviewed

In this article...

- The impact of the pandemic on front-line respiratory nurses' mental health
- How nurses coped with the effect of the pandemic
- What support should be offered as services recover from the pandemic

Mental health of respiratory nurses working during the Covid-19 crisis

Key points

The pandemic has been challenging for the NHS, particularly for critical care and respiratory staff

A survey of respiratory nurses showed around a fifth experienced anxiety or depression as a result

Resilience has been good in general, but is lower in respiratory nurses with less experience

Although support was available, provision was inconsistent and staff did not always access that support

Tailored support is needed for all staff, particularly for those at high risk

Authors Nicola Roberts, senior lecturer; Kareena McAloney-Kocaman, senior lecturer; both at School of Health and Life Sciences, Glasgow Caledonian University. Kate Lippiett, research fellow; Emma Ray, research fellow; Lindsay Welch, lecturer; all at School of Health Sciences, University of Southampton. Carol Kelly, reader in respiratory care, Respiratory Research Centre, Edgehill University.

Abstract The Covid-19 pandemic has had a significant impact on all healthcare staff, particularly nurses who have been working on the front line. This article discusses the published findings of an online survey of 255 respiratory nurses that examined levels of resilience, anxiety and depression, and the experiences of these nurses during the first wave of the pandemic. The analysis showed that younger nurses who had less experience had higher levels of anxiety and depression, and lower levels of resilience. Participants highlighted concerns about the working environment, personal protective equipment, the quality of care they were able to deliver and the impact on mental health. Support for staff is essential, both throughout and after the pandemic, and must be tailored for individuals; it should also be targeted at those at higher risk of mental ill health.

Citation Roberts N et al (2021) Mental health of respiratory nurses working during the Covid-19 crisis. *Nursing Times* [online]; 117: 12, 26-28.

The impact of the Covid-19 pandemic on the delivery of healthcare has been challenging, putting a significant strain on the NHS, particularly in critical care and respiratory services. During the first wave of the pandemic, there was an increased rate of sickness absence among health professionals (West, 2020), which could be attributed to factors including increased infection among staff (Bird et al, 2020) and the psychological impact of the pandemic (Lai et al, 2020). A recent UK survey on nurses' mental health during the pandemic (Ford, 2020) found that >80% of participants experienced increased levels of stress and a third described their mental health and wellbeing as bad or very bad.

In this article, we summarise our programme of work to date on the experiences of nurses working in respiratory clinical areas during the pandemic, outlining two published studies, on:

- Levels of resilience, anxiety and depression (Roberts et al, 2021a);
- Experiences of nurses during the first wave (Roberts et al, 2021b).

Our survey was conducted online and was promoted using professional respiratory societies.

The survey

The survey received 255 responses, mostly from women (89%) and those aged >35 years (79%, mean age 45 years). In all, 58% usually worked in an acute setting, 57.3% had changed their role due to the pandemic, and 48.6% were undertaking aerosol-generating procedures – for example, spirometry or non-invasive ventilation – which carry a higher Covid-19 infection risk than non-aerosol-generating procedures.

Nearly 29% experienced mild anxiety and 20.9% moderately severe to severe anxiety. Scores were similar for depression, with 17.2% experiencing moderate-to-severe symptoms. The survey found that 65% had a moderate or moderately high resilience score; this suggests that individuals may possess some of the characteristics of resilience but these need strengthening (Wagnild, 2009).

QUICK FACT
80%
Proportion of nurses whose stress levels increased during the pandemic

Regression analysis

Several variables were identified as potentially of significant importance in influencing anxiety, depression and resilience scores:

- Ethnicity;
- Age;
- Years of experience;
- Usual clinical setting;
- Undertaking aerosol-generation procedures;
- Providing support to their own household.

Three models were designed to assess the variables that would predict depression score (with a score of >10 equating to moderate depression); model one, which included both age and years of qualification, was the best fit. The ability to provide support to the household (financial support, heat, food, and emotional support) was shown to be important in all three models (p<0.01) (Roberts et al, 2021a).

For predictors of anxiety, three models were developed. Of these, models one and three were the best fit, both of which included age as a key variable. Across all three models there was a consistent association between scoring above the threshold (>10) for anxiety and not being able to support the household. Those indicating difficulties in household support were more than six times more likely to meet the criteria for anxiety than those with no such difficulties (Roberts et al, 2021a).

Working environment

Most respondents (65.5%) were worried their job put them at increased risk of passing on the virus. Fewer than half were worried about getting the virus (45.5%) or becoming exhausted (29.8%). Just over 28% were concerned about personal protective equipment and 27.8% were worried about long-term stress.

Some reported that family members were worried about them working in a "dangerous environment" (ID 79) and one respondent reported her daughter asking "if I will die or if she will die" (ID 48). A few respondents (n=12) reported changes in their working pattern or job role potentially causing "social isolation from family" (ID 103), and increased working "impacting on family life" (ID 172).

Mental health services and support

Many participants stated that they had been provided with access to mental health services – such as self-referral to services, email support or signposting services, telephone support, counselling services, chaplaincy, huddles/hubs, occupational support and webinars – but had not necessarily used that support.

Respondents also reported that they had received:

- Some management support including flexible working patterns (32.5%);
- Emotional support (29.4%);
- Clear leadership (28.6%).

A minority (n=17) reported little or no support.

Anxiety, depression and resilience

Resilience is an individual's ability to 'bounce back' in difficult circumstances (Tugade and Fredrickson, 2004). It has been shown to be important in the ability to cope in crisis situations.

Resilience levels we found were comparable to those of other studies – such as Callegari et al (2016) and Wagnild (2009) – with just under half (46.7%) having a moderate or a lower resilience score. Resilience is influenced by some personal characteristics as well as environmental factors (Alkaissi et al, 2019). Several studies have shown that resilience increases with age and work experience (Purvis and Saylor, 2019; Ang et al, 2018; Sull et al, 2015). Personal characteristics can help build resilience; these include:

- Hope;
- Self-efficacy;
- Work-life balance (Hart et al, 2014).

Around a fifth of the participants experienced moderate-to-severe depression (17%) or anxiety (20.9%) – higher than levels reported in the general population and general medical practice (Spitzer et al, 2006; Martin et al, 2006). The regression analysis identified the following factors as important factors for predicting depression and anxiety:

- Age;
- Experience;
- Ability to provide support to their household.

Around half of participants felt adequately prepared for the pandemic, although many still had concerns about catching the virus themselves. Studies have shown increased risk for healthcare workers (Mutambudzi et al, 2021) and nurses in respiratory wards (Bird et al, 2020).

Participants expressed concerns about their own mental health and it is worth noting that one study by Havaei et al (2020) has reported a higher prevalence of suicidal thoughts in nurses during the pandemic compared to national suicide statistics. In our study, the majority of respondents were aware of available mental health services but did not report accessing them; this could be due to issues such as those highlighted by Missel et al (2020), including;

- Stigma;
- Lack of access;
- Not recognising symptoms.

Participants set up their own informal networks to get and provide peer support, which has been highlighted by others as crucial for self-care (Hu and Chen, 2020; Teoh and Kinman, 2020).

Covid-19 psychological support is a key component to staff recovery in the wake of the pandemic. This needs to be available to all members of staff in a format that works for them (Tracy et al, 2020). Fewer than a third of the nurses surveyed felt they had additional support from their management team – management visibility has been highlighted as a problem elsewhere (O'Halloran, 2020).

Accessible strategies that individuals can use to manage psychological distress have been recommended (Heath et al, 2020). The World Health Organization (2020) also provides guidance for healthcare workers and team leaders to minimise the impact on mental health.

Support for staff is essential, both throughout the pandemic and afterwards. Building resilience and reducing anxiety and depression among staff should be

"Around a fifth of the participants experienced moderate-to-severe depression (17%) or anxiety (20.9%) – higher than levels in the general population and general medical practice"

"An overwhelming fear was related to the spread of infection to families and friends, and the impact of adjusting working patterns to respond to demand from clinical responsibilities"

Box 1. **Survey results and implications for practice**

Results

- A significant proportion of nurses experienced moderate-to-high levels of anxiety and depression during the first wave of the pandemic
- Younger nurses and those with less experience were more likely to report anxiety and depression
- Most participants did not report accessing organisational support for mental health but many had set up informal support groups in their teams

Implications

- Tailored psychological support is needed for all staff, and should particularly be aimed at those at higher risk of mental ill health (ie, younger/less-experienced staff)
- A multipronged approach is needed to support staff at individual, team, departmental and organisational levels to make sure that all employees feel supported, and that resilience and wellbeing is improved

prioritised through organisations, NHS management and professional bodies (Aiello et al, 2011). Psychological support needs to be available and tailored to the individual (Lai et al, 2020; Huang et al, 2020; Smith et al, 2020). Some interventions have been implemented as part of the response to Covid-19 but, as expected, NHS mental health services are already overburdened while we continue to recover from the pandemic.

Conclusions

The findings from this programme of work so far have highlighted the experiences of nurses who were caring for patients in respiratory units/areas during the first wave of the Covid-19 pandemic. The nurses who responded were, overall, fairly resilient and had considerable nursing experience. However, a proportion of respondents experienced considerable symptoms of anxiety or depression, and some had difficulties providing support to their households.

Concerns were raised over the working environment, the supply and availability of adequate personal protective equipment, and the quality of care that individuals were able to deliver. An overwhelming fear was related to the spread of infection to families and friends, and the impact of adjusting working patterns to respond to demand from clinical responsibilities.

Participants acknowledged having concerns about their own mental health but, although both formal and informal support was available, provision appeared to be inconsistent. This highlights the importance of social support mechanisms, and the organisational and management signposting to resources and support on self-care that can be used by healthcare staff and their families if necessary.

Key findings of the survey and the implications for practice that were subsequently ascertained are summarised in Box 1. **NT**

References

Aiello A et al (2011) Resilience training for hospital workers in anticipation of an influenza pandemic. *Journal of Continuing Education in the Health Professions;* 31: 1, 15–20.

Alkaissi A et al (2019) Personal characteristics and behavioral factors that promote resilience among nurses: a cross-sectional study. *Palestinian Medical and Pharmaceutical Journal;* 4: 2, 73-87.

Ang SY et al (2018) Association between demographics and resilience: a cross-sectional study among nurses in Singapore. *International Nursing Review;* 65: 3, 459–466.

Bird P et al (2020) High SARS-CoV-2 infection rates in respiratory staff nurses and correlation of Covid-19 symptom patterns with PCR positivity and relative viral loads. *Journal of Infection;* 81: 3, 452–482.

Callegari C et al (2016) Reliability and validity of the Italian version of the 14-item Resilience Scale. *Psychology Research and Behavior Management;* 9: 277–284.

Ford S (2020) Nursing Times survey reveals negative impact of Covid-19 on nurse mental health. *nursingtimes.net,* 29 April.

Hart PL et al (2014) Resilience in nurses: an integrative review. *Journal of Nursing Management;* 22: 6, 720–734.

Havaei F et al (2020) *A Provincial Study of Nurses' Covid-19 experiences of Psychological Health and Safety in British Columbia, Canada: Final Report.* Vancouver: University of British Columbia/BC Nurses' Union.

Heath C et al (2020) Resilience strategies to manage psychological distress among healthcare workers during the Covid-19 pandemic: a narrative review. *Anaesthesia;* 75: 10, 1364–1371.

Hu Z, Chen B (2020) The status of psychological issues among frontline health workers confronting the coronavirus disease 2019 pandemic. *Frontiers in Public Health;* 8: 265.

Huang J et al (2020) Care for the psychological status of frontline medical staff fighting against coronavirus disease 2019 (Covid-19). *Clinical Infectious Diseases;* 71: 12, 3268–3269.

Lai J et al (2020) Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. *JAMA Network Open;* 3: 3, e203976.

Martin A et al (2006) Validity of the Brief Patient Health Questionnaire Mood Scale (PHQ-9) in the general population. *General Hospital Psychiatry;* 28: 1, 71-77.

Missel M et al (2020) A stoic and altruistic orientation towards their work: a qualitative study of healthcare professionals' experiences of awaiting a Covid-19 test result. *BMC Health Services Research;* 20: 1031.

Mutambudzi M et al (2021) Occupation and risk of severe Covid-19: prospective cohort study of 120,075 UK Biobank participants. *Occupational and Environmental Medicine;* 78: 5, 307-314.

O'Halloran J (2020) I'm a nurse in a Covid-19 unit. My hospital's leaders frighten me more than the virus. *statnews.com,* 6 May.

Purvis TE, Saylor D (2019) Burnout and resilience among neurosciences critical care unit staff. *Neurocritical Care;* 31: 2, 406–410.

Roberts NJ et al (2021a) Experiences of nurses caring for respiratory patients during the first wave of the Covid-19 pandemic: an online survey study. *BMJ Open Respiratory Research;* 8: e000987.

Roberts NJ et al (2021b) Levels of resilience, anxiety and depression in nurses working in respiratory clinical areas during the Covid pandemic. *Respiratory Medicine;* 176: 106219.

Smith GD et al (2020) Covid-19: emerging compassion, courage and resilience in the face of misinformation and adversity. *Journal of Clinical Nursing;* 29: 9–10, 1425–1428.

Spitzer RL et al (2006) A brief measure for assessing generalized anxiety disorder: the GAD-7. *Archives of Internal Medicine;* 166: 10, 1092–1097.

Sull A et al (2015) Resilience of health-care workers in the UK; a cross-sectional survey. *Journal of Occupational Medicine and Toxicology;* 10: 20.

Teoh K, Kinman G (2020) Looking after doctors' mental wellbeing during the Covid-19 pandemic. *blogs.bmj.com,* 26 March.

Tracy DK et al (2020) What should be done to support the mental health of healthcare staff treating Covid-19 patients? *British Journal of Psychiatry;* 217: 4, 537–539.

Tugade MM, Fredrickson BL (2004) Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of Personality and Social Psychology;* 6: 2, 320-333.

Wagnild G (2011) *The Resilience Scale User's Guide: For the US English Version of the Resilience Scale and the 14-item Resilience Scale (RS-14).* Worden, MT: The Resilience Center.

Wagnild G (2009) A review of the Resilience Scale *Journal of Nursing Measurement;* 17: 2, 105-113.

West D (2020) One in 10 hospital nurses absent due to coronavirus. *hsj.co.uk,* 13 April.

World Health Organization (2020) *Mental Health and Psychosocial Considerations during the Covid-19 Outbreak.* Geneva: WHO.