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Research Paper

A multidisciplinary, cross-sectional survey of burnout and wellbeing in emergency department staff during COVID-19

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ABSTRACT

Background: Emergency department (ED) staff are at-risk of burnout, poor wellbeing and increased stress that can impact patient satisfaction, staff morale and retention. The aim of this survey was to determine level of burnout, stress and satisfaction with current employment role in ED during COVID-19.
Methods: A multisite cross-sectional survey captured ED employment data, wellbeing, burnout (Maslach Burnout Inventory), stress (Health Professions Stress Inventory), work environment (WES-10) and Caring for COVID-19 Patients questions.
Results: The response rate of 44.2% (n = 177) represented all healthcare disciplines. Only 58.8% (n = 104) of participants were happy in their role, satisfaction was low, burnout was high (*M* 71.0, SD 17.1) as was level of stress (*M* 90.6, SD 16.5). Nurses and allied health staff were more stressed than their medical or support staff colleagues. Participants perceived discriminatory behaviours from friends and family in caring for suspected or infected COVID-19 patients.
Conclusions: ED staff are a vulnerable group. Programmes to promote wellbeing, personal resilience, and self-care together with personal and professional growth are needed to build individual capability and a culture of organisational resilience, particularly in the context of the COVID pandemic.
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Introduction

Staff wellbeing is deemed integral to the development and maintenance of a high performing healthcare system [1]. It is a shared responsibility of both organisation and practitioner to maintain staff wellness [2]. There is a considerable body of evidence supporting research related to wellbeing in patient and carer populations. In contrast, there is a concerning gap in evidence describing the problem of clinician burnout and factors influencing wellbeing for staff practicing in Australian Emergency settings, nursing staff in particular [3,4]. Existing evidence highlights the fact that clinicians who work in emergency settings are an at-risk population for burnout, poor wellbeing, poor mental health and substance abuse issues [5]. Poor staff wellbeing contributes to higher rates of patient dissatisfaction, medical error and a reduced standard of patient care [6].

Fortunately, global pandemics are rare. They are, however, a source of immediate and persistent stress for emergency department (ED) staff. Respiratory infectious diseases, such as SARS and MERS-CoV have been associated with severe levels of stress and an increased desire for healthcare staff to leave their workplace [7]. Without baseline parameters of burnout and wellbeing being clearly identified, the effect of interventions to improve staff wellbeing remain uncertain [1]. COVID-19 will persist for some time to come and pandemics such as this are expected to occur again. The aim of this study was to explore burnout, stress, perceived work environment and satisfaction with current employment role for staff working in ED in the context of COVID-19. Findings provide evidence to improve our understanding of resilience and well-being from the perspective of clinicians delivering emergency care at this challenging time. This evidence has the potential to assist in sustaining the physical and mental well-being of the emergency workforce now and beyond COVID-19.

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Methods

Design and setting

We designed a multisite cross-sectional exploratory descriptive study, using an on-line REDCap (Research Electronic Data Capture) survey, hosted by XXX [8]. Ethics approval was granted by the XXX HREC (2020/ETH00949). A participant information form was initially emailed on the 15th June 2020. The email contained an embedded link to the survey. A reminder invitation email was distributed two weeks later. Consent to participate was implied. The survey was distributed to three EDs within the XXX. The XXX EDs treat over 200,000 patients per year at three sites. Site 1, XXX, is an 850-bed acute care tertiary referral hospital that provides healthcare to around 1 million residents in XXX, Australia, and many more across the state of New South Wales (NSW) and internationally. The XXX ED is a Level 6 [9] ED and is the third busiest in NSW, treating over 76,000 adult patients annually. Level 6 delineation equates to a service having the availability of neurosurgery and cardiothoracic surgery, specialty medical Registrars, onsite trauma services and out of hours ED staff specialists 24 h a day, 7 days a week. This type of service provider also provides advice and stabilisation for complex cases transferred from other networks, the option for regional retrieval services and an active programme of multidisciplinary research. Site 2 XXX offers a combined service with a total of 543 beds in 2 co-located centres and cares for approximately 91,000 patients in their ED annually. Site 3, XXX, is a 155-bed hospital that provides emergency services to over 29,000 patients per year. At the time the survey was available for staff to complete presentations to the EDs were reduced by 13.9% [10].

We hypothesised that during COVID-19 staff in EDs would have high levels of burnout and stress. The primary aim of the survey was to determine level of burnout, stress and satisfaction with current employment role in ED during COVID-19. Secondary aims were to:

a) Explore the relationship between staff satisfaction with their working environment and burnout;
b) Explore the relationship between staff satisfaction with their working environment and stress; and
c) Explore perceived work environment, burnout, stress and satisfaction levels according to healthcare worker role in the ED.

Outcome measures were level of burnout as measured by the Maslach Burnout Inventory (human health services edition, MBI-HSS) [11,12], level of stress using the Health Professions Stress Inventory (HPSI) [13], the Working Environment Scale (WES-10) [14], satisfaction according to a 100 milli-metre numerical rating scale and COVID-19 Caring for Patients questions based on a previous study exploring ED clinicians caring for MERS-CoV patients [7].

Sample

The survey was accessible to multidisciplinary staff in the EDs including Nursing staff (Enroled nurses, Registered Nurses, Clinical Nurse Consultants, Transitional Nurse Practitioners, Nurse Practitioners, Clinical Nurse Unit Managers, Nurse Manager, Clinical Nurse Educators); Medical officers (Interns/JMO's Registrars, VMO's & Staff Specialists); Clerical Staff; Orderly's; Pharmacists; Social Workers; Physiotherapist's; Radiographers; General Domestic Services staff and Security staff. At the time of the survey there were approximately 400 staff involved in patient facing care. There were no specific exclusion criteria and all staff working in the EDs were encouraged to participate. The College of Emergency Nursing Australasia (CENA) and the Australian College for Emergency Medicine (ACEM) were approached as avenues for distribution but not pursued following correspondence that indicated that there were other survey initiatives underway. Being cognisant of professional members' workload and capacity to participate the decision was made to focus on the EDs within our local health district instead.

Methods and measurements

Non-identifiable data were collected using REDCap electronic data capture tools, hosted at the XXX. REDCap is a secure, web-based software platform designed to support data capture for research studies that provides an intuitive interface for validated data capture, audit trails for tracking data manipulation and export, automated export procedures for seamless data downloads and procedures for data integration with external sources. The REDCap survey had five sections. Section 1 had questions designed to collect descriptive participant characteristics; age in years, sex, marital status, number of children, categories of children's age, carer responsibilities e.g. family members that are elderly, immunocompromised or have chronic illness, name of workplace and workplace characteristics relevant to role; highest level of education, ED location, professional discipline, discipline role, satisfaction with current role and intention to remain in current role.

Sections 2–5 had instruments to measure primary outcomes, the MBI-HSS and the HPSI; and secondary outcomes, the WES-10 and COVID-19 Caring for Patients questions. The MBI-HSS is a reliable and well validated instrument [15], commonly used to measure burnout in healthcare professionals [4,12]. This inventory assesses three key burnout constructs; emotional exhaustion (9 items), depersonalisation (5 items) and personal accomplishment (8 items). Personal accomplishment counteracts emotional exhaustion and depersonalisation. Each item has seven scaled response options ranging from 0 = 'Never' to 6 = 'Everyday'. Table 1 illustrates Maslach [11] criteria for defining burnout levels.

Level of stress in healthcare staff working in ED was measured using the HPSI developed by Wolfgang [13]. This scale is comprised of 30 items each reflecting a workplace situation and each with a 5-point Likert scale where 0 = Never and 4 = Very Often. Total scores may range from 0 to 120. This instrument has been used in a range of health professional groups to assess relative levels and sources of stress with demonstrable reliability and validity.

The Working Environment Scale (WES-10) developed by Rossberg et al. [14] was used to assess staff perception of their working environment. Comprised of four clinically meaningful subscales this instrument measured self-realisation, workload, conflict and nervousness. Originally developed for use in a mental health ward, the WES-10 has since been tested in a variety of settings. In this study the term 'on the ward' was replaced with 'in ED'. There are 7 items with responses reported using a 5-point Likert scale where 1 = 'Not at all' and 5 = 'To a very large extent' and 3 items in reverse order. Responses for reverse order items were scored in descending order. The range of scores for this scale were 0–50. Self-realisation measures the extent to which staff feel supported, confident and can use their knowledge. Workload reflects the number of tasks imposed on staff and the extent to which they feel they are expected to be in several places at the same time. Conflict measures the extent to

Table 1
Maslach Burnout Inventory scoring guide.
Source: Maslach D, Jackson S, Leiter M, Schaufeli W, Schwab R. Maslach burnout inventory manual, general survey, human services survey, educators survey and scoring guides. Menlo Park, CA: Mond Garden; 1986.

Burnout level	Burnout constructs		
	Emotional exhaustion	Depersonalisation	Personal accomplishment
High	> 27	> 10	0–33
Moderate	19–26	6–9	34–39
Low	0–18	0–5	> 40

which staff experience conflict and loyalty challenges and nervousness addresses whether staff are worried about going to work and to what extent they feel tense or nervous at work. We also asked questions specific to caring for patients with COVID-19. Kim and Choi [7] asked ED staff to rate 14 questions about MERS-CoV in their original study focused on ED clinicians. We have modified these questions by replacing the terms MERS-CoV with COVID-19. Each question has a 5-point Likert response scale. Evidence of this instrument being tested elsewhere was not able to be located and as such response categories are reported rather than findings as a scale measure.

Data analysis

Data were extracted from REDCap in IBM SPSS® Statistics Version 27.0 (Armonk, NY: IBM Corp.) file format for analyses. Scale responses were reviewed to determine normality. Where continuous data were normally distributed, mean and standard deviation (*M,* SD) were used and median and quartiles (*Med, Q*1 *Q*3) were used for the description of abnormally distributed data. Categorical data was analysed using frequency counts and proportions (N, %). There were no instrument items that required ordinal response reversal. Scales scores were created using variable transformation in SPSS®. Relevant items from the MBI-HSS were summed to generate the Emotional Exhaustion, Depersonalisation and Personal Accomplishment subscale scores and total score. The Self-Realisation, Workload, Conflict and Nervousness subscale scores were generated using response items recommended by Rossberg et al. [14]. Univariate statistics were used to determine associations (Chi-Square) or relationships (correlation, ANOVA) between variables when relevant assumptions were met. When assumptions were violated the relevant non-parametric alternative was employed.

Results

There were 177 responses to the invitation to participate from WSLHD staff that equates to an estimated response rate of 44.2%. Participant characteristics are shown in Table 2. Responses were from Site 1 (n = 119, 67.2%), Site 2 (n = 50, 28.2%) and Site 3 (n = 8, 4.5%) staff, respectively. Nursing (n = 101, 57.1%), Medical (n = 40, 22.6%) and Allied Health (n = 8, 4.5%) were well represented as were support staff (n = 28, 15.8%) that included, clerks, security, cleaners and porters. Nursing staff were primarily Division 1 registered nurses (RN) involved in direct patient care (n = 77, 76.2%) or supervisory and leadership roles within the ED such as Clinical Nurse Educator (n = 4, 4.0%), Clinical Nurse Consultant (n = 4, 4.0%), Clinical Nurse Specialist (n = 5, 5.0%) or Nurse Unit Manager (n = 7, 6.9%). Medical staff were senior staff specialists (n = 13, 32.5%), specialists in training referred to as registrars (n = 15, 37.5%) or junior medical officers (n = 12, 30%).

Table 2
Participant characteristics.

Characteristic	n, *Med*	%, *Q1 Q3*
Age	31	26, 41
Gender		
Male	46	26.0
Female	129	72.9
Marital Status		
Single	81	45.8
Married	78	44.1
Divorced/Widowed	18	10.2
Carer Responsibilities	32	18.1
Children < 5 years	15	8.5
Children 5–12	23	13.0
Children 12–18	12	6.8
Children > 18 at home	6	3.4
Non-Dependent Children	20	11.3
Education Level		
Bachelors Degree	88	50.0
Post Graduate Certificate	30	17.0
Masters Degree	25	14.2
Doctoral Degree	3	1.7
Hours worked per week	36.6	8.9
Years worked in ED	3.0	1.65, 8.0
Full time work (38 h per week)	132	74.6
Fractional Employment	35	19.8
Casual Employment	9	5.1

NB: Figures may not equal 100% due to missing data.

Nursing and Allied Health (NAH) (*M* 32.6, SD 10.3) and Medical (*M* 33.2, SD 8.1) staff were of similar age and younger than Support Staff [*M* 49.3, SD 13.7; F (2, 176) = 29.6, $p < 0.01$]. Support Staff (n = 13, 46.4%) were more likely to be in part time or casual roles than NAH (n = 19, 17.4%) or Medical staff [n = 12, 30.7%; χ^2 (4, 176) = 15.7 $p = 0.003$] but at the time of the survey all three groups worked a similar number of hours per week; Medical (*M* 36.5, SD 8.0), NAH (*M* 37.0, SD 9.1), Support staff [*M* 35.2, SD 9.3; F (2, 169) = 0.41, $p = 0.66$] respectively. Although these groups had worked in the ED for a similar average length of time [NAH *M* 6.9, SD 7.3, Range 36.0; Medicine *M* 4.0, SD 4.5, Range 22.7; Support Staff *M* 5.2, SD 4.3, Range 14.7; *K* (2, 173) = 3.2, $p = 0.20$] some colleagues had been in the ED for many years. Only 58.8% (n = 104) of participants were happy in their current role. Some participants were thinking about leaving the ED but had not made plans to leave (n = 51, 28.8%) or had made plans to leave within the next 12 months (n = 17, 9.6%). A higher proportion of Support Staff (n = 20, 71.4%) were happy in their role than Medical (n = 24, 60.0%) or NAH [n = 60, 55.0%; χ^2 (2, 177) = 2.5 $p = 0.286$].

The mean level of satisfaction with working in the ED was 62.5/100 (SD 24.2) and this was not significantly different when comparing discipline groups; [Medical *M* 62.4, SD 19.2; NAH *M* 60.3, SD 26.1; Support staff *M* 71.6, SD 21.1; F (2, 175) = 2.45, $p = 0.08$]. The MBI-HSS summary score was 71.0 (SD 17.1, Range 93) indicative of being at very severe risk of burnout and did not differ between groups. There was a moderately strong negative correlation between level of satisfaction and burnout ($r = -0.480$, n = 166, $p < 0.001$) with higher levels of burnout associated with lower levels of satisfaction. Burnout explained only 23% of shared variance in satisfaction. Average sub-scale scores for MBI-HSS components were 31.9 (SD 8.4) for emotional exhaustion, 15.5 (SD 5.4) for depersonalisation and 23.6 (SD 6.0) for personal accomplishment. Nurses (*M* 33.3, SD 7.9) reported higher levels of emotional exhaustion than other groups [Medical *M* 30.2, SD 8.3; Support staff *M* 29.1, SD 10.5; F (2, 169) = 3.48, $p = 0.03$].

Analysis of the Health Professions Stress Inventory (HPSI) revealed stress level was on average 90.6 (SD 16.5) from a scale of zero to 120. Support staff (*M* 81.2, SD 19.6) were less likely to be stressed than NAH (*M* 93.2, SD 14.6) who had similar stress levels to Medicine; *M* 89.9, SD 14.6; F (2, 167) = 6.02, $p = 0.003$. As with burnout, there was a moderately strong negative correlation between level of satisfaction and stress ($r = -0.417$, n = 168, $p < 0.001$) where higher levels of stress were associated with lower levels of satisfaction but stress only explained 17% of shared variance in satisfaction. The Working Environment Scale (WES-10) was used to assess staff perceptions of their working environment, specifically self-realisation, workload, conflict and nervousness. The mean subscale scores, range and number of items for each were as follows; 12.4 (SD 2.5, Range 13) for the 5-item self-realisation score; 5.9 (SD 0.9, Range 5) for the 3-item workload score; 5.8 (SD 1.1, Range 6) for the 3-item conflict score and 6.7 (SD 1.3, Range 8) for the 2-item nervousness score. Correlations between WES-10 sub-scale scores, level of satisfaction, level of stress and MBI-HSS according to discipline group are shown in Table 3.

There was a moderately strong positive correlation between self-realisation and satisfaction for medical staff ($r = 0.325$, n = 40,

Table 3
Correlations between Work Environment Score sub-scales and level of satisfaction, stress and burnout according to discipline group.

Sub-scale	Nursing & allied health	Medicine	Support staff	Total sample
Satisfaction Level				
Self-Realisation	0.052	0.325*	-0.086	0.066
Conflict	0.021	0.067	-0.256	0.033
Workload	-0.093	0.029	0.136	-0.022
Nervousness	-0.095	-0.033	-0.091	-0.099
Stress Inventory Score				
Self-Realisation	0.298**	0.079	0.264	0.282**
Conflict	0.083	-0.161	0.248	-0.071
Workload	0.232**	-0.226	-0.235	-0.036
Nervousness	0.271**	0.028	0.435*	0.325**
Maslach Burnout Inventory				
Self-Realisation	0.278**	-0.053	0.255	0.207**
Conflict	-0.028	-0.320	-0.149	-0.124
Workload	0.111	-0.129	-0.096	0.003
Nervousness	0.292**	0.394*	0.554**	0.342**

NB: *Correlation is significant at the 0.05 level (2-tailed). **Correlation is significant at the 0.01 level (2-tailed).

$p = 0.043$). Exploring the relationship between stress as measured by the HPSI and the WES-10 revealed a weak positive correlation with self-realisation ($r = 0.282$, n = 168, $p < 0.001$) and a moderate correlation with nervousness ($r = 0.325$, n = 168, $p = < 0.001$). Support staff ($r = 0.435$, n = 27, $p = 0.023$) and NAH had a positive correlation between stress and nervousness ($r = 0.271$, n = 125, $p = 0.002$). NAH also had weak positive correlations between stress, workload ($r = 0.232$, n = 125, $p = 0.009$) and self-realisation ($r = 0.298$, n = 125, $p < 0.001$). Nervousness was associated with increased levels of burnout for all discipline groups, particularly Support Staff ($r = 0.554$, n = 28, $p = 0.002$). As level of self-realisation increase so too did NAH burnout ($r = 0.292$, n = 101, $p = 0.003$).

To further explore the association between self-realisation and increased levels of stress and burnout that were unique to the NAH group, Nurses in Junior and Senior (leadership) roles were compared. Levels of stress and burnout did not differ, but Junior Nurses (*M* 62.2, SD 26.5) were more satisfied than Senior Nurses (*M* 49.3, SD 26.3; *t* − 1.94, $p = 0.05$). Senior Nurses also reported higher levels of conflict (*M* 6.15, SD 1.09) than Junior Nurses (*M* 5.52, SD 0.96; t (99) 2.51, $p = 0.013$). There was no evidence of a correlation between stress and satisfaction for Senior Nurses, but stress was strongly positively correlated to nervousness ($r = 0.516$, n = 20, $p = 0.020$) and self-realisation ($r = 0.449$, n = 20, $p = 0.047$). In contrast Junior Nurses level of satisfaction had a strong negative correlation stress ($r = -0.519$, n = 81, $p < 0.001$); the greater the stress the lower the level of satisfaction. Not unlike Senior Nurses, there was evidence of a weak positive correlation between stress and self-realisation ($r = 0.264$, n = 79, $p = 0.019$). In addition, workload ($r = 0.290$, n = 79, $p = 0.009$) also increased Junior Nurses level of stress. There was no evidence of association between burnout and WES-10 sub-scales for Senior Nurses, but Junior Nurses had weak positive correlations between burnout and self-realisation ($r = 0.291$, n = 74, $p = 0.012$) and nervousness ($r = 0.242$, n = 74, $p = 0.038$).

Participants were asked to rate their level of agreement (1 = Strongly Disagree, 5 = Strongly Agree) with 14 questions focused on caring for patients with COVID-19 (Table 4). There were 5 (14.7%) Medical, 16 (15.2) NAH and 4 (14.8%) Support staff who had previous pandemic experience. When responses were compared between discipline groups responses to four questions revealed group differences. Level of agreement was highest from Support Staff when asked whether they thought they would be avoided by friends if friends knew they had cared for COVID-19 patients Support Staff [*M* 3. 78, SD 1.3; $F(2, 166) = 7.25$, $p < 0.001$] compared to Medical (*M* 2.6, SD 1.2) and NAH (*M* 2.9, SD 1.3) staff. Similarly, Support Staff also thought their family would avoid them if they knew they had cared for COVID-19 patients [*M* 3. 37, SD 1.5; $F(2, 166) = 5.25$, $p = 0.006$] when compared to Medical (*M* 2.3, SD 1.1) and NAH (*M* 2.8, SD 1.3) staff. NAH had the highest level of agreement with the statement that their family would support them caring for COVID-19 patients [*M* 3.96, SD 0.9; $F(2, 166) = 5.31$, $p = 0.006$] when compared to Medical (*M* 3.8, SD 0.9) and Support staff (*M* 3.3, SD 1.2) staff. NAH also had the highest level of agreement regarding being concerned for their level of safety in public during COVID-19 [*M* 3.20, SD 1.2; Medical *M* 2.61, SD 1.2; Support staff *M* 2.48, SD 1.1; $F(2, 165) = 5.46$, $p = 0.005$].

Discussion

This study identified key facilitators, challenges and opportunities in multidisciplinary emergency staff wellbeing. Findings highlighted staff were unhappy, satisfaction was low, stress and burnout were high. The greater the level of stress, the greater the level of burnout and subsequently the lower the level of satisfaction which is in keeping with international studies [16,17]. However, our study reported that stress and burnout only explained a small proportion of variation in level of satisfaction. We identified contextual and social influences including workplace culture and environment as key determinants of emergency staff workplace wellbeing. When work environment was explored, sub-scale differences revealed discipline specific features. Nervousness, conflict and self-realisation factors were perceived poorly in this ED setting. Staff satisfaction with their working environment was relatively low and certain disciplines (e.g. nursing) were more dis-satisfied than others. Self-realisation, or the extent to which staff feel supported in the workplace was positively correlated with satisfaction in medical staff but contributed to stress and burnout in nursing staff. Nervousness, where staff were worried about going to work and felt stressed or anxious at work, was positively correlated with burnout for all discipline groups. It also contributed to increase stress for nursing and support staff. In addition, senior and junior nurses had significantly different levels of satisfaction. Conflict was problematic for senior nurses and stress was linked to nervousness and self-realisation. In contrast junior nurses stress was linked to workload and self-realisation. This study also examined the impact of COVID 19 on frontline staff wellbeing. Support staff described a higher perception of COVID 19 discrimination, social exclusion and/or rejection by family and friends while nurses and allied health staff reported increased safety concerns from the community due to coronavirus.

Staff burnout and the working environment

EDs are chaotic unpredictable settings that expose staff to a broad variety of stressors including heavy workloads, interpersonal conflict and high acuity patients. Our study reported on the impact of this environment on the wellbeing of its multidisciplinary team members. Participants feelings about their workplace had a stronger influence on job satisfaction than workload. This differs from some published literature on burnout where workload is identified as the major factor affecting job [18]. Our study identified emotional exhaustion, a component of burnout, as a key challenge to staff wellbeing. Participants expressed a fear of going to work. This reaction to the work environment can lead to emotional exhaustion which is a significant predictor of job satisfaction [19]. It is caused by feelings of stress and frustration associated with the job; the more stressors in the work environment, the more emotional exhaustion is caused and the lower the level of job satisfaction. Additional workplace factors that influenced emotional exhaustion in our study included lack of support for professional development (for nurses) and conflict. These findings support past research that has shown a relationship between exhaustion and the nature of the work environment

Table 4
Caring for patients with COVID-19.

Question	*M*	SD	95% CI	
I have past professional experience with pandemics	1.9	1.2	1.7	2.0
I am afraid of caring for patients with suspected COVID-19	2.6	1.1	2.5	2.8
I am afraid of being infected by COVID-19	3.2	1.2	3.0	3.4
I am afraid of infecting my family due to my job	3.9	1.2	3.7	4.1
I am afraid of being an asymptomatic carrier	3.8	1.2	3.6	3.9
My hospital is equipped with facilities sufficient for preventing the spread of COVID-19	3.3	1.1	3.1	3.5
My hospital applies the best infection control guideline for preventing the spread of COVID-19	3.4	1.0	3.2	3.5
My hospital discusses how to prevent COVID-19 spread regularly	3.7	0.9	3.6	3.9
My friends will avoid me if they find that I have cared for COVID-19 patients	2.9	1.3	2.8	3.2
My friends will support me caring for COVID-19 patients	3.6	1.0	3.5	3.8
My family will avoid me if they find that I have cared for COVID-19 patients	2.8	1.3	2.6	3.0
My family will support me caring for COVID-19 patients	3.8	0.9	3.7	3.9
I am concerned for my safety in public during COVID-19 when people find out I am a healthcare worker	2.9	1.3	2.8	3.2
I have experienced negativity by members of public during COVID-19 when people find out I am a healthcare worker	2.7	1.4	2.5	2.9

NB: 1 = Strongly Disagree, 5 = Strongly Agree.

[20,21]. Improvements to the environment are required to reduce the level of stress and burnout and thereby increase the level of job satisfaction. Access block, ED over-crowding and chronic understaffing erode staff resilience and contribute to staff feeling unsafe and unsupported [22]. This finding builds on other research that identified environmental and social factors such as organisational culture and the nature of work as key factors influencing job satisfaction of staff in ED [18,23]. Designing a multifaceted approach to staff wellbeing must include interventions at an organisational level to reduce the relentless workplace conditions that take a substantial toll on staff wellbeing, mental health and morale. To enhance wellbeing and decrease burnout organisational change is required to mitigate these stressors.

Professional characteristics and job satisfaction

Our findings show that the level of job satisfaction was not especially high amongst the multidisciplinary emergency team, being lower among doctors and nurses than administrative staff. Nurses perceived significantly different reasons for their dissatisfaction. Senior nurses suffered from job dissatisfaction because of high work pressure associated with conflict, nervousness and lack of support while juniors were dissatisfied because of excessive workload and the extent to which they felt supported in the workplace. Changes in job characteristics for senior nurses (job demands, job control and support to perform senior roles) might explain the reason for their decreased job satisfaction. Further research should look at factors that contribute to junior nurses' vulnerability to suffer job dissatisfaction such as ED nurse patient ratios and education support. These results highlight the importance of addressing the wide range of stressors ED staff are subjected to and to consider them when designing wellbeing strategies to correct and prevent dissatisfaction. Education for all ED staff needs to be expanded to include training in leadership and other 'non-technical' skills in addition to clinical skills. Research is needed to identify how to train staff to deal with pressure at work such as building on self-awareness of stress and time management skills.

Impact of COVID-19 on staff wellbeing

In the present study, participants reported that they believed friends and/or family were afraid of them because they were involved in the care of suspected and/or patients infected with COVID-19. Support staff and doctors perceived higher levels of discriminatory behaviours from friends and family. Nursing and allied health staff were concerned about their personal safety in the community. These findings are in accordance with previous research in which health care workers in designated COVID-19 hospitals perceived higher levels of discriminatory behaviours from the community [24,25]. COVID-19 was identified as a source of increased stress and anxiety for emergency clinicians in Australia and New Zealand with concerns about transmission of the disease to family members [16,26]. The direct influence of COVID-19-associated discrimination on ED staff is an important finding of this study. It suggests that staff members personal support structures (family and friends) are threatened by COVID-19-associated discrimination and underscores the need to prioritise supportive organisational leadership to reduce the impact of discrimination on staff's wellbeing. Staff require support as working in a pandemic has significant challenges. It requires the emergency team to be more agile than ever, to work in different ways with others who have different skill sets and to use human and physical resources effectively. The rate of change is enormous. Effective leadership with a focus on staff wellbeing is the cornerstone to supporting the ED multidisciplinary team to cope with the challenges of COVID-19.

There are several limitations to this study. Survey methods commonly have low response rates and although greater than 44% in total, the third study site response rate was low. Reminders were sent to try and optimise response rate and site champions encouraged multi-disciplinary participation. We did not set out to compare findings between sites in this study as all three are within a single local health district but site-specific nuances in practice and patient cohort may have revealed differences in satisfaction, stress and burnout levels for discipline specific groups. The survey was distributed during a time of increased patient acuity because of COVID-19 that could in turn also impact on level of satisfaction, stress, burnout, and the work environment. Baseline data pre-pandemic would have been useful as a reference point and we will endeavour to re-evaluate these measures post pandemic to improve our understanding of temporal trends in these factors.

Conclusions

This exploration of burnout, stress, perceived work environment and satisfaction for staff working in the ED in the context of COVID-19 provides evidence to inform our understanding of resilience and well-being from the perspective of clinicians delivering emergency care at this challenging time. This evidence has the potential to assist in sustaining the physical and mental well-being of the emergency workforce now and beyond COVID-19. Staff were unhappy, satisfaction was low, stress and burnout were high. In this cohort stress and burnout only explained a small proportion of variation in level of satisfaction. Findings emphasis the importance of contextual and social influences, including workplace culture and environment, as key determinants of emergency staff workplace wellbeing. Multifaceted programmes to promote wellbeing, personal resilience,

self-care together with personal and professional growth are needed to build individual capability and a culture of organisational resilience. The effect of COVID-19 is to be felt for some time to come. In protecting the community, organisational leaders must not lose sight of caring for the healthcare team that deliver services in order to ensure future systems remain robust. To make recommendations for healthcare organisations to embed structures and processes that improve employee wellbeing it is essential for executives and senior management to listen to feedback from frontline staff about what works and to have a clinical voice at the discussion table reminding them what it is really like at the frontline.

Provenance and Conflicts of Interest

There are no conflicts of interest to declare.

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