ORIGINAL RESEARCH

Workplace wellbeing in an urban emergency department in Aotearoa New Zealand

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Abstract

Objectives: Staff wellbeing is important for individuals and considered integral to the development and maintenance of high performing health systems. Unless baseline parameters of wellbeing are known, the effects of any interventions to improve staff wellbeing will remain uncertain. By clarifying staff perceptions and objective measures of important factors related to wellbeing, our primary goal was to assess the baseline wellbeing of staff in our central city ED.
Methods: A survey template, the WoWe@AED (Workplace Wellbeing at the Adult Emergency Department) was developed from several sources. Burnout was measured using the Copenhagen Burnout Inventory. Inclusion in the survey required that participants worked in our ED, all staff groups were eligible. The electronic survey was conducted between 22 January and 5 February 2018. Quantitative and qualitative data were analysed.
Results: Two hundred and seventy (71.1%) of 380 potential participants participated. All staff groups were represented. About 72.4% agreed/strongly agreed that Adult Emergency Department was an excellent place to work, 80.7% found their work meaningful. About 42.0% felt well informed regarding important decisions. One hundred and eighty-three (48.2%) out of 380 completed the Copenhagen Burnout Inventory. Overall, personal burnout was 42.1% (*n* = 77), work-related burnout was 35% (*n* = 64) and client-related burnout was 27.9% (*n* = 51). Females were significantly (<0.05) more likely to have burnout in some or all domains. Four key themes were identified: supportive teamwork and relationships; providing high quality patient care; resourcing; and workload issues.
Conclusions: Baseline indices of wellbeing of the frontline staff in a central city ED have been documented. These have informed wellbeing interventions. Future measures can be compared against these data.

Key words: *burnout, emergency service, hospital, quality, wellbeing.*

Key findings

- A survey of all staff groups within an urban ED demonstrated that while most found their work meaningful (80.7%) and were satisfied with their work-life balance (74.3%), only 42.0% felt well informed regarding important decisions and 58.5% felt comfortable bringing up problems or tough issues.
- Personal burnout was highest among females (47.9%) and nurses (50.9%).
- By focusing on system, culture and personal resilience factors, a quality improvement approach is being taken to address key findings.

Introduction

Shanafelt *et al.* explain that 'wellness goes beyond merely the absence of distress and includes being challenged, thriving, and achieving success in various aspects of personal and professional life'.[1] As well as being important for individuals, the wellbeing of staff is considered integral to the development and maintenance of high performing health systems.[2–4] If health systems are to achieve the goals of the 2008 'Triple Aim' of improving the health of the population they serve, improving the experience of care and reducing the costs of care,[5] workforce wellbeing requires deliberate consideration. The fourth dimension of the 'Quadruple Aim', 'improving the experience of providing care'[2] is worth pursuing from ethical,[6] fiscal[7] and patient outcome[8–10] viewpoints. This is common sense to those who work at the frontline of healthcare. How else can we achieve the best for our patients if we ourselves are not at our best?[11]

Unless baseline parameters of wellbeing are known, the effects of any interventions to improve staff

wellbeing will remain uncertain. Our primary goal was to assess the baseline wellbeing of medical, nursing and other frontline staff in our central city ED. We also sought to clarify staff perceptions and/or objective measures of the following: important components and concepts of staff wellbeing; factors associated with greater, or lesser, wellbeing; interventions that may improve staff wellbeing; staff burnout; understanding and willingness to participate in nurse mentoring and willingness to participate in a workplace-based meditation course. Because we are critically dependent on the functioning of the entire team in our ED, we included all members of our medical, nursing and other frontline staff.

Methods

Our department, Adult Emergency Department (AED), is an urban teaching ED with a 2017 annual patient census of approximately 72 000 and approximately 380 full- and part-time staff. This project arose from discussions among members of our multidisciplinary Healthy Workplace Group (HWG), made up of senior doctors and nurses, independent of management. Funding for a research assistant was obtained from the University of Auckland summer studentship programme.

On reviewing the literature seeking objective measures with which to achieve our aims we discovered that 'there is no single validated measure of joy in work'[12] and no single source perfectly suited our needs. We therefore utilised several sources from which we developed our own survey template, the WoWe@AED (Workplace Wellbeing at the Adult Emergency Department).

The concept underlying the choice of components with which to measure wellbeing were derived largely from Bohman *et al.*[13] (Fig. 1). The concept recognises that each of three domains are interdependent and critical to workplace wellbeing in healthcare: efficiency of practice; a culture of wellness; and personal resilience. We also noted advice from the authors of the Joy in Work
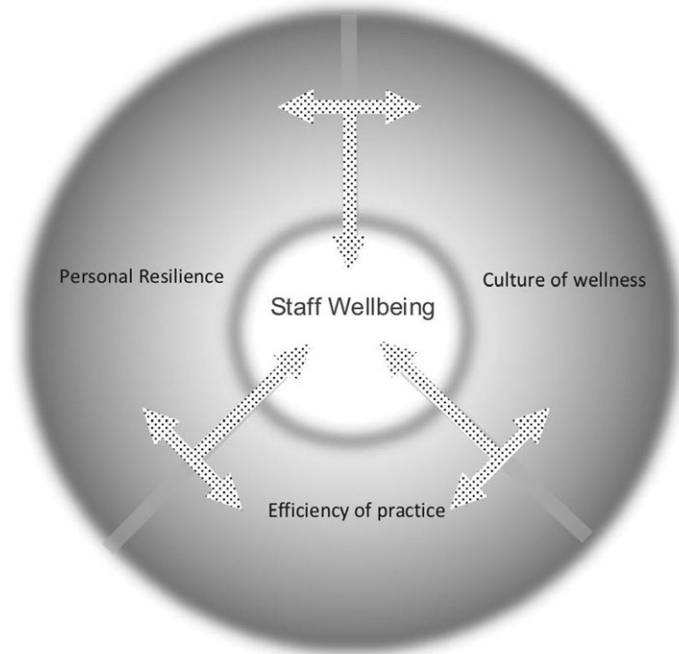

Figure 1.   *Reciprocal domains of staff wellbeing.*

White Paper who advocate an appreciative enquiry approach to improvement by asking staff what matters most to them, and what gets in the way of what matters to them in their work.[12]

From these two primary sources we derived five questions/statements that required a written response from which we generated data for qualitative analysis. The questions/statements were:

'What matters to me most in my work at AED is…'.

'What gets in the way of what matters to me is…'.

'What can we do to improve the culture of our department?'

'What can we do to improve the efficiency of our department?'

'What can we do to improve our personal resilience?'

In addition, participants were asked for further comment.

Further survey questions were derived from the Joy in Work paper, which provides a useful summary of potential wellbeing assessment tools.[12] We used the Net Promoter Score (NPS) as a single measure of employee satisfaction. Used in business to measure customer engagement, the Institute for Healthcare

Improvement authors suggest NPS may be used as a measure of internal team members' engagement and may be useful to track over time.

Burnout was measured using the Copenhagen Burnout Inventory (CBI), consisting of 19 questions divided into three subscales measuring personal burnout, work-related burnout, and 'client' (patient)-related burnout.[14] A high level of burnout is defined by scoring ≥50% in a domain of the CBI. Mean scores in each domain are measured for comparison between groups. We also posed our own in-house questions related to meditation, nurse mentoring and demographic data.

Colleagues reviewed the survey prior to its implementation. Minor adjustments were made as a result. There were 54 questions in total, but the survey was structured so that not all questions were answerable by all participants. For example, only nurses were able to answer questions relating to nurse mentoring. All ED employees at AED were eligible to participate. Those unwilling to provide consent were excluded. Eligible employees received face-to-face invitations to participate in the electronic survey. Approval from our

institution was granted and formal ethics committee approval was not required. The survey was conducted using SurveyMonkey (San Mateo, CA, USA) between 22 January and 5 February 2018.

Analysis

Standard descriptive statistics including means, standard deviations, ranges and frequencies and percentages were used to summarise the presenting and burnout features. The percentages meeting burnout criteria were compared between demographic groups using χ^2 tests. The mean burnout scores were compared using one-way ANOVA. A two-tailed P-value < 0.05 was taken to indicate statistical significance.

Qualitative data were analysed using the data analysis principles of constructivist grounded theory[15] by a qualitative researcher who works outside of emergency medicine (EM). The data were extracted from SurveyMonkey and imported into the software program NVivo Pro version 11. The analysis of the qualitative information was guided by the five key processes outlined in the constructivist grounded theory approach: (i) initial coding; (ii) line by line coding; (iii) focused coding; (iv) comparative methods; and (v) memo writing.[15] Each question was analysed individually using this process, initially resulting in many themes. These themes were then categorised 'under' overarching themes that described the overall frequently discussed ideas and concepts as perceived by the participants. Supporting quotations from staff were selected based on fit and how well it explained or added value to the themes.

Results

Of 380 potential participants, 284 individuals began the survey and 270 (71.1%) met the inclusion criteria and were willing to take the survey. The majority of staff identified as New Zealand (NZ) Europeans, 6.3% as NZ Maori (Table 1). The majority of participants were nurses (57.7%) and there were 40 doctors (20.4%). Almost half of

TABLE 1. *Demographics of participants*

	n	%
Ethnicity		
NZ European	114	55.6
NZ Maori	13	6.3
Pacific Island	13	6.3
Other	65	31.7
Total	205	
Age (years)		
Below 30	40	21.3
30–39	53	28.2
40–49	53	28.2
50–59	25	13.3
60 or above	10	5.3
Unknown	7	3.7
Total	188	
Gender		
Male	61	33.2
Female	123	66.9
Total	184	
Profession		
Doctor	40	20.4
Nurse	113	57.7
HCA	9	4.6
Cleaner	2	1.0
Orderly	6	3.1
Clerical	16	8.2
Other	10	5.1
Total	196	
Doctor grade (of those stated)		
Specialist	19	48.7
MOSS	2	5.1
House surgeon	4	10.3
Registrar	7	18.0
Fellow	7	18.0
Total	39	
Nurse grade (of those stated)		
CCN	7	6.7
NP/CNS	5	4.8
Nurse educator	3	2.9
Level 2/3/4	89	84.8
New graduate level 1	1	1.0
Total	105	

CCN, clinical charge nurse; CNS, clinical nurse specialist; HCA, healthcare assistant; MOSS, medical officer of special scale; NP, nurse practitioner.
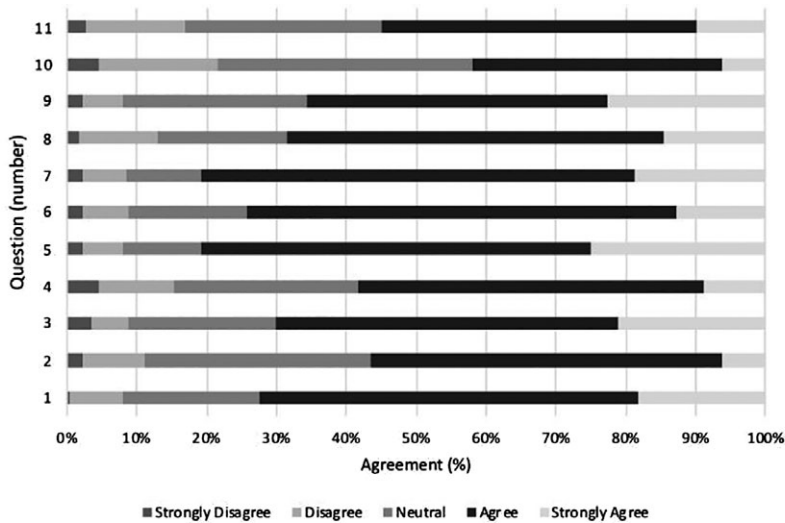
Figure 2. Selected Survey Questions.
1. Overall, AED is an excellent place to work.
2. I believe AED is going in the right direction.
3. At AED, my immediate supervisor cares about the work that I do.
4. At AED, I feel comfortable bringing up problems and tough issues.
5. My job makes me feel as if I am part of something meaningful.
6. I am satisfied with my work/life balance.
7. My current role at AED enables me to build my professional skills.
8. I feel like I have at least one person in a managerial/supervisory role at AED who looks out for professional development.
9. My immediate supervisor at AED cares about me as a person.
10. I feel well-informed about important decisions in AED.
11. In AED, I feel recognised for my contribution.

Figure 2. *Selected survery questions. (■), strongly disagree; (■), disagree; (■), neutral; (■), agree; (□), strongly agree. AED, Adult Emergency Department.*

the doctors who responded were specialists (48.7%), and most nurses were levels 2, 3 or 4 (84.8%). Security personnel and administration support were the majority of those in the 'other' profession category.

The cohort almost unanimously agreed or strongly agreed that it was important to have a healthy workplace (99.6%). Responses to most questions were positive (Fig. 2). Most agreed/strongly agreed that AED was an excellent place to work (72.4%), most were satisfied with their work-life balance (74.3%) and most found their work meaningful (80.7%). However, less than 50% felt well informed regarding important decisions (42.0%), just over half felt that they were recognised for their contribution (55.1%), believed that the AED was going in the right direction (56.5%) and felt comfortable bringing up problems or tough issues (58.5%).

The total number of respondents who answered enough of the burnout questions to be analysed was 183 (183/380, 48.2%). Personal burnout was the most frequent burnout domain ($n = 77$, 42.1%), 64 (35.0%) met criteria for work-related burnout, client-related was least frequent ($n = 51$, 27.9%) while 31 (16.9%) of respondents met criteria for burnout in all three domains. When comparing dichotomous outcomes (burnout *vs* not burnout) the only statistically significant association was with gender: 47.9% of females had personal burnout compared with 28.1% of males (Table 2).

Appendix S1 displays the top 10 themes and their frequency in response to the five questions listed in the methods. The four key themes identified were: supportive teamwork and relationships; providing high quality patient care; resourcing; and workload issues (Appendix S2).

The majority of respondents answered 'Yes' or 'Perhaps' when asked if they may attend a meditation course at work (157/189, 83.1%), and 88/102 (86.3%) nurses responded that they may be interested in a nurse mentoring programme. The NPS was −5.0% (Fig. 3).

Discussion

In EM literature,[16,17] at conferences, in social media (e.g. Wrap EM – https://wrapem.org/) and in the popular press, there is increasing attention being paid to worker wellbeing, although the concept and importance in healthcare has long been understood. However, there seemed to be a paucity of empirical data related to from Australasian EDs, including our own particular workplace. Hence, the current survey, which, in contrast to most[18,19] but not all previous surveys,[20] included all ED staff, except those in a purely managerial role.

We consider that our interest in wellbeing was worthwhile given the overwhelming number of participants who believed it was important to have a healthy workplace. This result is encouraging as we seek to undertake the sometimes considerable challenges required to improve wellbeing in our workplace. We were also encouraged by the high sense of meaning in work in our study (80%). Meaningful work is considered fundamental to achieving joy in work,[2] as illustrated by a study of Israeli emergency physicians.[16]

Our findings of high rates of burnout among healthcare professionals are consistent with earlier observations from studies that used the CBI. For example, a 2015 survey assessing burnout in senior doctors in New Zealand ($n = 1487$) found 50.1% reported high personal burnout, 42.1% work-related and 15.7% patient-related burnout.[17] Other studies, using the Maslach Burnout Inventory have found that physicians who work in EM had high rates of burnout (>60%).[18,19] This is considerably greater than our findings (30% of doctors met criteria for high personal burnout [CBI] in our cohort). It is not clear why there is

TABLE 2. *Number and percentage of staff who meet criteria for high burnout in personal, work-related and patient-related domains, related to gender and worktype*

	Personal		Work-related		Patient-related		
	n	%	*n*	%	*n*	%	Total participants
Gender							
Female	57	47.9	47	39.5	37	31.1	119
Male	16	28.1	15	26.3	12	21.1	57
P-value	0.012*		0.087		0.164		
Work type							
Cleaner	0	0.0	0	0.0	0	0.0	2
Clerical	3	25.0	2	16.7	0	0.0	12
Doctor	12	30.0	11	27.5	8	20.0	40
HCA	3	33.3	2	22.2	2	22.2	9
Nurse	56	50.9	47	42.7	39	35.5	110
Orderly	2	33.3	1	16.7	1	16.7	6
Other	1	25.0	1	25.0	1	25.0	4
Total	77	42.1	64	35.0	51	27.9	183
P-value	0.135		0.208		0.112		

*$P < 0.05$. HCA, healthcare assistant.

such a difference. We are not aware of any studies similar to ours that have aimed to assess wellbeing and burnout prevalence among all staff groups in an Australasian ED.

A strength of this survey is the inclusion of 'efficiency of practice' as an interdependent domain within the concept of wellbeing.[7,11] Scepticism and cynicism from staff may result if 'hospitals operate under the framework that burnout and professional satisfaction are solely the responsibility of the individual physician' and 'solutions to these issues are focussed solely at the individual or "cultural" level, for example, stress management workshops, "kindness" initiatives, or resilience training'.[7] Two in five (42.1%) participants in our cohort met criteria for high personal-related burnout. While it is insufficient to focus solely on individual rather than system-related solutions to address workplace wellbeing problems, these findings remind us that strategies that focus on individuals may be important.

A further strength of this study is that it originated from the workers themselves, hopefully fostering a sense of ownership among the participants.[20] This differs from previous observations from our organisation that came from 'top-down', an approach that risks being met with cynicism by frontline staff. A healthy workplace is 'one in which workers and managers collaborate to use a continual improvement process to protect and promote the health, safety and wellbeing of all workers and the sustainability of the workplace'.[20] Perhaps future efforts
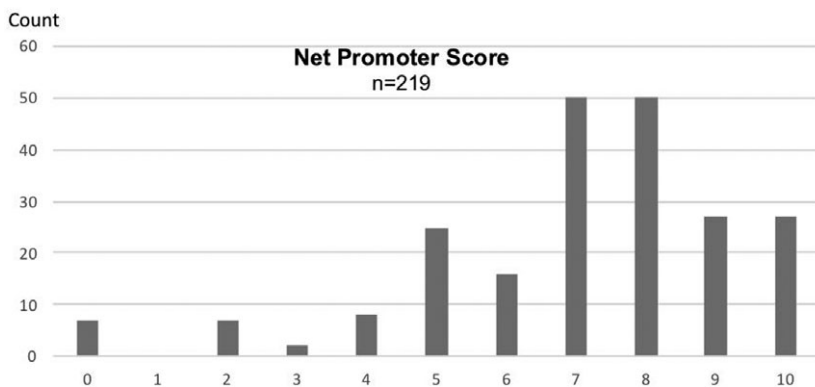

Figure 3. *Net Promoter Score (NPS). NPS = (54 − 65)/291 × 100 = −5%. To determine the NPS, the individual is asked, "On a scale of 0 to 10, how likely are you to recommend AED as a place to work?". A score of 0 suggests that they would warn people away from applying and a score of 10 suggests that they would advise everyone they know to apply immediately. Scores of 0 to 6 indicate detractors, 7 and 8 passives, and 9 and 10 promoters. NPS = (no, of promoters − no. of detractors)/total no. of respondents × 100, expressed as a percentage.*

in our institution can be more collaborative bringing together management and workers. As suggested by Shanafelt, 'it is necessary to measure physician well-being as a routine institutional performance metric',[7] a resource intense activity.

The NPS has been used in EM in the evaluation of patient experience,[21] as well as staff satisfaction with particular interventions;[22,23] however, as far as we know, not in the assessment of staff wellbeing. We were unable to find any assessment of reliability and validity of the NPS in EM literature. Further evaluation of the NPS as a single measure of workplace wellbeing may be worthwhile.[12]

This survey and analysis provide the basis for work in our department using a quality improvement (QI) approach.[12,24,25] A key to this method is deciding what may have the most meaningful impact and what is doable given finite resources. These data, especially from the qualitative section (Appendix S1) have helped inform several improvement projects in our department, for example, the implementation of a series of meditation courses, the improvement of information technology (IT) in an attempt to reduce frustration associated with IT limitations, an upskilling of staff in QI methodology and considering reliable safe approaches to 'hot' debriefing. Given that results indicated differences in burnout between sexes and types of workers, it is possible that tailoring specific interventions to different workers based on these characteristics may be worthwhile. For example, based on the results related to nurse mentoring, our department has pursued the implementation of a nurse mentoring programme. Others with an interest in quality in EM[3] may find this survey a useful 'off the shelf' tool, modified according to local needs, to assess the wellbeing of staff in their workplace.

Limitations

It was not possible to define our eligible population in terms of demographics (age, gender, ethnicity) nor, in some cases, absolute numbers. The denominators are a best estimate from the relevant leader of each workforce.

To ensure anonymity for our participants we opted to use our survey software so that a single link was available for all, rather than individualised electronic links to the survey. An advantage of this was that those with no email access could respond to the survey on any work computer. One disadvantage was that participants had to complete the survey in one attempt, being unable to save their answers and continue later. It was also possible that participants could complete the survey on multiple occasions. In future, individual links to the survey may be a better option.

Our survey was a pragmatic attempt to measure and, crucially, provide usable ideas and impetus to act on items identified by staff as being important locally. Other tools are more complex or require significantly more monetary resources.[7,11–13,18] However, although parts have been validated (e.g. the CBI), this survey overall is an untested and unvalidated instrument. Further use of the instrument to track quantitative results over time, and compare institutions will require the instrument be tested for validity.

We plan to conduct an annual survey of workplace wellbeing in our workplace. Future work would ideally include multicentre, and multinational studies.[4,19] Including patient viewpoints, satisfaction and other outcomes assessment of quality is important.[4,10] Linking staff overall health to wellbeing assessment may also be useful.[17]

Conclusion

We have documented baseline indices of wellbeing of frontline staff in a central city ED against which future measures can be compared. We have been informed of what are the particular contributors to wellbeing. This information has been used in several ongoing interventions seeking to clarify and address barriers and enablers of wellbeing. Others interested in EM quality and the wellbeing of their staff may wish to use local modifications of the survey. This may accelerate the improvement process, and the information can be used to compare departments over time.

Competing interests

None declared.

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Supporting information

Additional supporting information may be found in the online version of this article at the publisher's web site:

Appendix S1. Qualitative analysis.
Appendix S2. Four key themes with quotations.