

Safety Culture and Workforce Well-Being Associations with Positive Leadership WalkRounds

J. Bryan Sexton, PhD; Kathryn C. Adair, PhD; Jochen Profit, MD; Jonathan Bae, MD; Kyle J. Rehder, MD; Tracy Gosselin, PhD, RN; Judy Milne, RN; Michael Leonard, MD; Allan Frankel, MD

Background: Interventions to decrease burnout and increase well-being in health care workers (HCWs) and improve organizational safety culture are urgently needed. This study was conducted to determine the association between Positive Leadership WalkRounds (PosWR), an organizational practice in which leaders conduct rounds and ask staff about what is going well, and HCW well-being and organizational safety culture.

Methods: This study was conducted in a large academic health care system in which senior leaders were encouraged to conduct PosWR. The researchers used data from a routine cross-sectional survey of clinical and nonclinical HCWs, which included a question about recall of exposure of HCWs to PosWR: “Do senior leaders ask for information about what is going well in this work setting (e.g., people who deserve special recognition for going above and beyond, celebration of successes, etc.)?”—along with measures of well-being and safety culture. *T*-tests compared work settings in the first and fourth quartiles for PosWR exposure across SCORE (Safety, Communication, Operational Reliability, and Engagement) domains of safety culture and workforce well-being.

Results: Electronic surveys were returned by 10,627 out of 13,040 possible respondents (response rate 81.5%) from 396 work settings. Exposure to PosWR was reported by 63.1% of respondents overall, with a mean of 63.4% (standard deviation = 20.0) across work settings. Exposure to PosWR was most commonly reported by HCWs in leadership roles (83.8%). Compared to work settings in the fourth (< 50%) quartile for PosWR exposure, those in the first (> 88%) quartile revealed a higher percentage of respondents reporting good patient safety norms (49.6% vs. 69.6%, $p < 0.001$); good readiness to engage in quality improvement activities (60.6% vs. 76.6%, $p < 0.001$); good leadership accessibility and feedback behavior (51.9% vs. 67.2%, $p < 0.001$); good teamwork norms (36.8% vs. 52.7%, $p < 0.001$); and good work-life balance norms (61.9% vs. 68.9%, $p = 0.003$). Compared to the fourth quartile, the first quartile had a lower percentage of respondents reporting emotional exhaustion in themselves (45.9% vs. 32.4%, $p < 0.001$), and in their colleagues (60.5% vs. 47.7%, $p < 0.001$).

Conclusion: Exposure to PosWR was associated with better HCW well-being and safety culture.

The number of burnout prevalence studies continues to grow,^{1–3} yet relatively few well-documented and scalable interventions offer relief from burnout in health care. The October 2019 release of the National Academy of Medicine report *Taking Action Against Burnout: A Systems Approach to Professional Well-Being* emphasizes the need for scalable interventions at the institutional level.⁴ Leader WalkRounds (WR) have been used by health care leaders since 1999 as a strategy to encourage health care workers (HCWs) to identify and resolve issues related to the safe delivery of care. Evidence increasingly suggests that patient safety leadership WR not only improve patient safety, quality improvement readiness, and perceptions of leadership^{5–10} but are also associated with improvements in workforce well-being metrics such as emotional exhaustion (an important component of burnout) and work-life balance.^{5,7,9}

The link between WR and workforce well-being was timely, as HCW burnout is increasingly recognized as common,^{11,12} consequential for the workforce,^{13–17} consequential for patients,^{18–21} expensive,²² and treatable.^{23–26} Traditional WR frameworks had senior leaders asking “How are we going to harm the next patient in this work setting, and what can we do to prevent that?” These interactions helped to surface issues, discuss context, and allocate attention/resources toward resolution. The fact that this was associated with less emotional exhaustion and better work-life balance was a serendipitous by-product, but not a planned result or outcome.

To be more deliberate about the impact of WR on HCW well-being, we modified WR to elicit more positive emotions, in addition to building the essential elements of traditional safety WR—trust, psychological safety, and meaningful connections. For example, senior leaders asked HCWs to “please share three things that are going well in this work setting, and one thing that could be better.” This new focus on what is going well was intended as a shift away from deficiencies and fear, toward successes that might

elicit positive emotions such as pride and hope. This new form of WR was termed “Positive Leadership WalkRounds” (PosWR).

Increasing opportunities to experience positive emotions has been recognized as a key component for interventions to enhance well-being in HCWs. Rigorous psychological research has consistently shown that experiencing positive emotion is a causal link in the chain of feeling greater purpose²⁷ and that, during times of stress, positive emotions facilitate adaptive coping.²⁸ Positive emotions, such as pride, hope, gratitude, and serenity, can be likened to little engines that recharge our depleted batteries.^{29,30} Meta-analyses show that trait levels of positive affect predict health in the short term (for example, immune system response, pain tolerance), and long term (for example, cholesterol),³¹ in addition to predicting mortality.³² Multiple studies of diverse interventions have demonstrated that increasing access to positive emotions through pausing and reflecting on something positive increases mental health outcomes.^{23,26,33,34}

The aim of the current study was to determine whether exposure to PosWR is associated with better HCW well-being and safety culture. We examined this aim using a safety culture and well-being survey administered across a large academic health care system. We hypothesized that work settings reporting greater exposure to PosWR would also report higher levels of safety culture and well-being.

METHODS

Design

This is a cross-sectional study of survey data collected in 2016 from 13,040 HCWs across 440 work settings within one academic health system as part of the Safety, Communication, Operational Reliability, and Engagement (SCORE) survey.^{9,13,17,35–37} This study was approved by the Duke University Health System Institutional Review Board (IRB Pro00083427).

Participants

All individuals with 50% or greater full-time equivalent commitment to a specific work setting for at least four consecutive weeks were eligible to participate in the SCORE survey. Participants were invited to participate in the confidential survey via e-mail in the spring of 2016. Senior and local leaders sent e-mails encouraging participation in the survey (for example, “We want to hear from you”), with the goal of increasing the response rate. There were no incentives or requirements to complete the survey.

Training Leaders to Conduct PosWR

All managers, directors, and above across the health system were invited to two-day off-site trainings as part of a leadership development series offered multiple times. More than 1,500 leaders participated, and, notably, senior health system leaders were present and engaged in all-day trainings.

The training was led by a consultant group with expertise on positive interactions and rounding. This was a significant enterprisewide attempt to refocus communication and feedback on not just deficits but also on what is going well. PosWR was not required of these participating leaders, but it was strongly recommended, modeled by health system executives, and in essence crafted as the most straightforward takeaway of the two-day training. The justification for asking about strengths and what is going well was specifically reinforced by clinical and human resources executives, and there were numerous interactive demonstrations and table activities to highlight the concepts. Opportunities to shadow more experienced positive rounders were encouraged and offered, and goals with time lines were developed and discussed. Although size and frequency varied across work settings, typical PosWR visits would occur monthly, lasted 30 to 60 minutes, and involved 3 to 10 HCWs, a local leader, and a senior leader. PosWR were generally scheduled between the senior leader and local leaders in the units identified. Staff were not always aware that senior leaders would be rounding. Managers and directors were enrolled to help coordinate and socialize these efforts, while senior leaders such as vice presidents and assistant vice presidents coordinated with managers and directors in advance when and where they would arrive to conduct the PosWR. PosWR prompts to elicit positive interactions were generic and open to modification but included the following kinds of questions:

1. From your perspective, could you share three things that are going well in this work setting, and one thing that could be better?
2. Is there anyone you would like to give a shout-out to today, and can you elaborate with specific examples?
3. Are there any celebrations of success, in your opinion, that you could share?
4. Who do you think deserves special recognition for going above and beyond in their role? Please provide specific examples that I can quote, as I will handwrite a letter to this person detailing the glowing comments from their colleagues.

Measures

The SCORE survey is a widely used safety culture, engagement, and well-being instrument designed to identify areas of concern, as well as strengths, in a variety of medical settings.^{9,17,35} The precursor to the SCORE survey was the Safety Attitudes Questionnaire (SAQ).³⁸ The SCORE built on the strengths of the SAQ, while adding and editing questions based on the input of expert collaborators in the areas of safety culture, teamwork, quality improvement, engagement, and well-being. Items were further refined using psychometric analyses. The result is a psychometrically robust scale that offers actionable approaches to improving safety culture,

engagement, and well-being. The SCORE scale psychometrics from this sample have been published³⁵: Work-Life Balance (WLC; $\alpha = 0.83$), Burnout Climate ($\alpha = 0.90$), Emotional Exhaustion ($\alpha = 0.92$), Improvement Readiness ($\alpha = 0.93$), Local Leadership ($\alpha = 0.94$), Teamwork Climate ($\alpha = 0.76$), and Safety Climate ($\alpha = 0.87$).

Six of the seven SCORE domains (excepting WLC, described below) use a 5-point Likert scale ranging from “disagree strongly” (1) to “agree strongly” (5), and a “not applicable” response option, which is not included in the analyses. Work settings are defined as units or teams (clinical or nonclinical) that regularly work together. Individuals’ mean scores were transposed to a 0 to 100 scale. We used standard published techniques for calculating domain scores at the individual and work setting levels.^{9,13,23,35} Specifically, to assess work setting levels of Improvement Readiness, Local Leadership, Teamwork Climate, and Safety Climate, we calculated aggregate “percent positive” climate scores. These scores are the percentage of respondents in each work setting who, on average, “agreed slightly” or “agreed strongly” to items in these domains (that is, scoring ≥ 75).

Work setting levels of Emotional Exhaustion and Burnout Climate use a lower percent positive threshold to capture the percentage of respondents who, on average, did not disagree with the negatively worded Emotional Exhaustion or Burnout Climate items (for example, “I feel burned out from my work”).⁹ This percentage reflects those who, on average, responded “neutral,” “agree slightly,” or “agree strongly” across the items, and therefore had a score ≥ 50 . Higher percent positive Emotional Exhaustion and Burnout Climate scores reflect worse levels for both domains.

The WLC scale assesses work-life balance using a frequency scale containing eight items to capture how often respondents report infractions between their work and personal lives. The response options were “rarely or none of the time (less than 1 day);” “some or a little of the time (1–2 days);” “occasionally or a moderate amount of time (3–4 days);” “all of the time (5–7 days);” and “not applicable.” WLC was calculated at the respondent level using the mean of the eight items, such that higher scores reflect worse WLC. At the work setting level (that is, local WLC norms), it was assessed using the standard published technique that computes the percentage of respondents within each work setting with a mean score ≤ 2 (averaging ≤ 2 days per week of poor WLC). Aggregated scores are described as percentage positive or percentage reporting good work-life balance. More information on SCORE domains has been previously published.^{9,13,23,35,39,40}

Positive Leadership WalkRounds Exposure Variables

PosWR exposure was assessed with a single item. Because many HCWs were unaware of the PosWR intervention, the

item did not explicitly name the PosWR program to avoid confusion:

“Do senior leaders ask for information about what is going well in this work setting (e.g., people who deserve special recognition for going above and beyond, celebration of successes, etc.)? (Yes; No; Not Sure).”

Exposure was assessed by comparing respondents reporting “Yes” to those reporting “No.”

Analysis

Responses among groups were summarized as means and standard deviations (SDs). To account for nesting of HCWs within work settings, we computed the percentage of individuals who reported PosWR exposure within work settings. To understand the relationships between PosWR exposure and other SCORE domains, we divided work settings into quartiles based on percentage exposed on the PosWR item; *t*-tests compared first and fourth quartiles across SCORE domains of safety culture and workforce well-being.

RESULTS

Respondents

Electronic surveys were returned from 396 work settings, by 10,627 out of 13,040 possible survey respondents (overall response rate 81.5%). Table 1 presents respondent demographics and descriptive results. The top three respondent groups were registered nurses (31.7%; $n = 3,367$), attending physicians (9.7%; $n = 1,036$), and technologists (8.2%; $n = 869$). A subset of respondents (3.2%) did not identify with one of the listed HCW roles. Respondents were predominantly day-shift workers (68.1%), with diversity in years of experience in their specialty and shift length. Overall, PosWR exposure percentage reporting “yes,” “no,” and “not sure” was 63.1%, 21.2%, and 15.7%, respectively.

Positive Leadership WalkRounds Across Work Settings

Across 396 work settings, the percentage of HCWs reporting PosWR exposure ranged from 0% to 100% (Figure 1), with one work setting reporting 0% exposure. The mean (SD) percentage of people reporting PosWR occur in their work setting was 63.4 (20.0). For mean percent agreement by quartile, fourth was 37.0% (0.0% to 50.0%), third was 57.3% (50.0% to 64.9%), second was 71.6% (64.9% to 78.3%), and first was 87.6 (78.3% to 100%) (Figure 1).

Associations Between Positive Rounding Exposure, Safety Culture, and Well-Being

Analysis of work settings by quartiles of percentage of staff reporting PosWR and their associations with safety culture and well-being domains are represented in Figure 2. Comparisons of work settings in the fourth ($< 50\%$) vs. first ($> 88\%$) quartiles for PosWR exposure revealed significant

Health Care Worker Role	<i>n</i>	% of Total	% Reporting Exposure to PosWR
Registered Nurse	3,367	31.7	63.5
Attending/Staff Physician	1,036	9.7	66.0
Technologist (Surg., Lab, Rad., etc.)	869	8.2	57.7
Other	689	6.5	56.5
Technician (PCT, Surg., Lab., EKG, Rad.)	567	5.3	62.0
Admin. Support (Adm. Asst., Unit Coordinator, etc.)	542	5.1	62.9
Advanced Practice Provider (PA, NP, CRNA)	503	4.7	53.8
Clinical Support (CMA, EMT, etc.)	500	4.7	68.7
Nurse's Aide	489	4.6	60.0
Therapist (RT, PT, OT, Speech)	462	4.3	68.8
Administrator/Manager/Supervisor	388	3.7	83.8
Resident Physician	275	2.6	58.5
Pharmacist	198	1.9	64.6
Fellow Physician	157	1.5	54.5
Clinical Social Worker/Case Manager	130	1.2	56.7
Dietitian/Nutritionist	51	0.5	60.0
Environmental Services	41	0.4	47.5
Psychologists	20	0.2	36.8
Missing	343	3.2	63.0
Shift			
Days	7,235	68.1	
Nights	1,269	11.9	
Swing	1,000	9.4	
Other	946	8.9	
Missing	177	1.7	
Shift Length			
8 hours	4,320	40.7	
10 hours	1,402	13.2	
12 hours	3,482	32.8	
Flex	321	3.0	
Other	941	8.9	
Missing	161	1.5	
Years in Specialty			
< 6 months	404	3.8	
6–11 months	877	8.3	
1–2 years	1,264	11.9	
3–4 years	1,410	13.3	
5–10 years	2,423	22.8	
11–20 years	2,184	20.6	
≥ 21 years	1,974	18.6	
Missing	91	0.9	
Total	10,627	100%	

PosWR, Positive Leadership WalkRounds; PCT, patient care technician; Surg., surgical; Lab., laboratory; Rad., radiologic; Adm. Asst., Administrative Assistant; EKG, electrocardiogram; PA, physician assistant; NP, nurse practitioner; CRNA, certified registered nurse anesthetist; CMA, certified medical assistant; EMT, emergency medical technician; RT, respiratory therapist; PT, physical therapist; OT, occupational therapist.

differences for Safety Climate ($t = 7.95, p < 0.001$; 49.6% vs. 69.6% reported good patient safety norms), Improvement Readiness ($t = 6.59, p < 0.001$; 60.6% vs. 76.6% reported good readiness to engage in quality improvement activities), Local Leadership ($t = 6.75, p < 0.001$; 51.9% vs. 67.2% reported good feedback from and accessibility of leaders), Teamwork Climate ($t = 5.79, p < 0.001$; 36.8% vs. 52.7% reported good teamwork norms), Emotional Exhaustion ($t = -5.29, p < 0.001$; 45.9% vs. 32.4% reported emotional exhaustion), Burnout Climate ($t = -4.28, p < 0.001$; 60.5% vs. 47.7% reported emotional exhaustion in their colleagues), and Work-Life Climate ($t = 2.98, p = .003$; 61.9% vs. 68.9% reported good work-life balance norms).

DISCUSSION

In this study, we assessed associations between exposure to PosWR and safety culture and HCW well-being in a large academic health system. Exposure to PosWR was common, with 63.1% of individual HCWs reporting exposure. Every domain of the SCORE safety culture and workforce well-being survey was robustly associated with exposure to PosWR. To our knowledge, this is the first study to show that leadership efforts at pausing and reflecting on what is going well with HCWs (PosWR) is associated with better safety culture and workforce well-being.

As a society, and particularly in health care, we have glorified exhaustion as a badge of honor. Well-intentioned HCWs hustle to show their worth, and the act of pausing

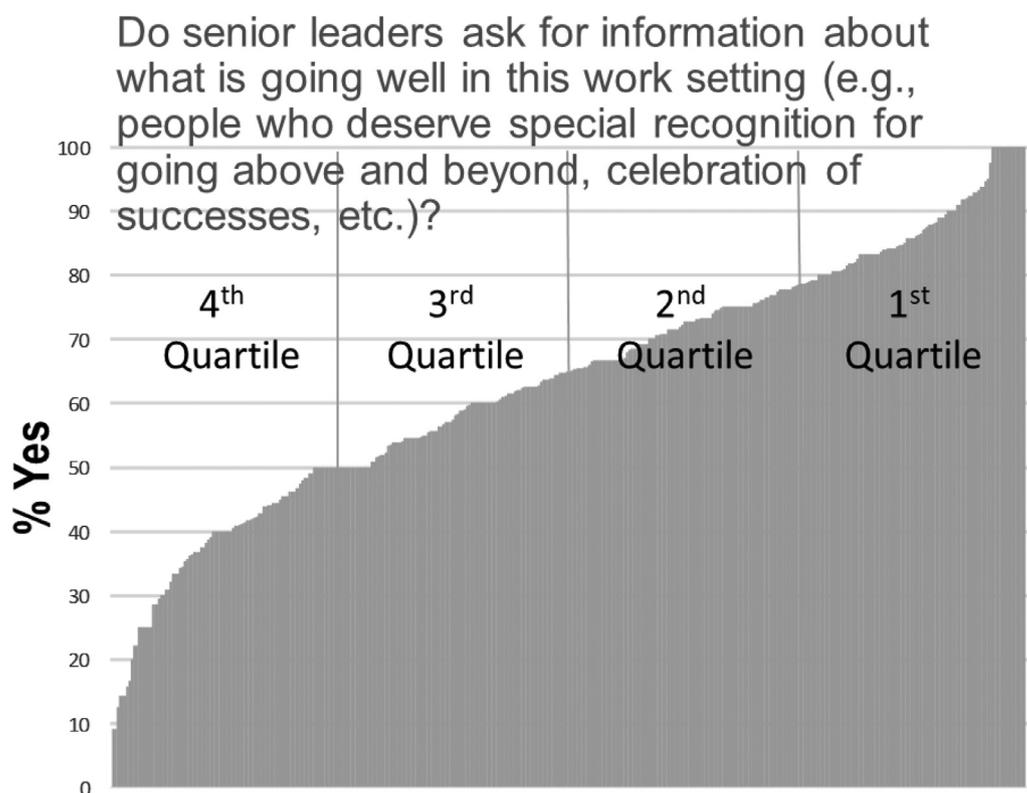


Figure 1: The graph shows responses for Positive Leadership WalkRounds (PosWR) exposure across work settings.

and reflecting on what is going well stands in contrast to the norms of obsession with deficits and the relentless grind of work. To this end, we need leaders to role model and acknowledge what is going well at work as a path to greater safety, well-being, and sustainable quality. Indeed, HCWs exposed to PosWR reported not only better well-being (emotional exhaustion and work-life balance), but intriguingly, better safety climate. Our results are conceptually similar to research by Shanafelt et al.⁴¹ demonstrating the link between positive leadership and lower levels of burnout (for every 1-point increase in a composite leadership score, there was a 3.3% decrease in likelihood of burnout). Better well-being and safety culture are important for, and have been linked to, better workplace norms (for example, fewer disruptive behaviors, less bullying),^{17,42} better clinical outcomes (for example, lower infection rates and medication errors),^{20,43,44} and better operational outcomes (for example, lower turnover, higher patient satisfaction).^{22,40,43,45}

Feedback from PosWR

Anecdotally, discussing PosWR with HCWs and rounders suggests broad appreciation of this approach. Staff are consistently pleasantly surprised when a chief nursing officer shows up on a night shift or weekend to ask about what is going well in that work setting. Rounders are adamant that this activity revitalizes them and that it is one of the bright spots in their crowded calendars. HCWs who re-

ceive handwritten letters from senior leaders are remarkably proud, grateful, and hopeful about their future in the organization. HCWs who share positive stories about their colleagues report feeling more connected to their work setting, their leaders, and their colleagues. In other words, PosWR are opportunities to imbue an otherwise dull update with greater meaning and positive emotions that appear to benefit the HCW, the rounder, and the colleagues witnessing the interaction.

Using the 100-point scale, there was a 20-point difference between safety climate scores in the first and fourth quartiles of PosWR exposure. Ten points would already be enough to indicate a meaningful difference, so this finding is a strong signal of the substantial risk differential for those quartiles.^{45,46} The percentage of HCWs reporting emotional exhaustion (burnout) in the first (32.4%) and fourth (45.9%) quartiles is a relatively large difference compared to recent studies that target emotional exhaustion differences of at least 5 points.^{23,24,26,47}

Some of the largest differences in SCORE domains were between the work settings in the first vs. the second WR exposure quartiles. Prior research suggests a herd immunity threshold for WR at 60% exposure, such that work settings at and above that level confer a protective factor on the remaining HCWs unexposed to WR.^{5,7-9} In the current study, the 60% threshold for exposure to PosWR was in the second quartile. Indeed, when we compared work settings where less than 60% report PosWR exposure to

Safety Culture and Well-Being by Positive Rounding Quartiles

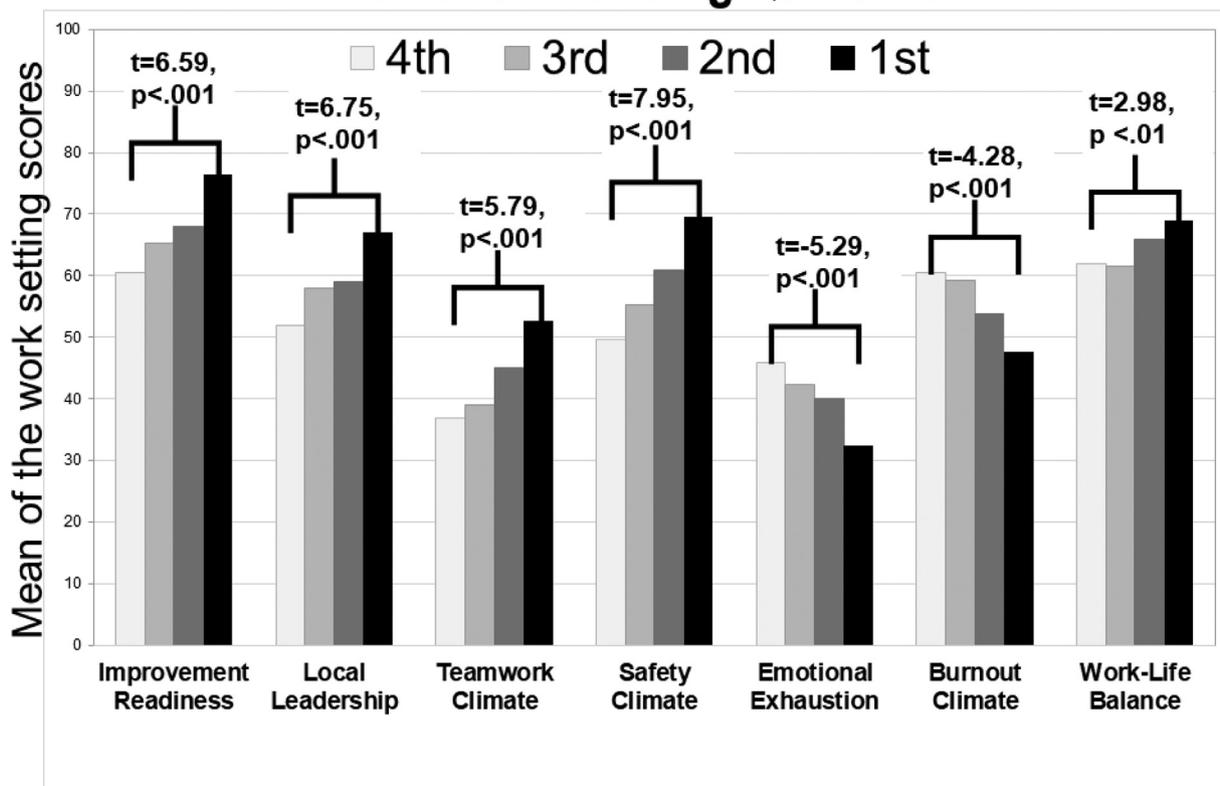


Figure 2: Shown in the graph are SCORE (Safety, Communication, Operational Reliability, and Engagement) domains by quartile of percentage reporting that senior leaders ask for information about what is going well in this work setting; t-tests compare first and fourth quartiles across SCORE domains of safety culture and workforce well-being.

those reporting more than 60% exposure, the results are unchanged. We have previously reported on the 60% threshold and the dose-response effect of WR,^{5,7-9} and this appears to hold for PosWR as well, suggesting that leaders strive to engage with at least 60% of workers in each work setting.

We also note that 63.1% of HCWs reported exposure to PosWR in this study, which is above the 42.0% in this same data set (and 34.5% in a large Midwestern data set, $N = 16,797$) reporting exposure to traditional patient safety leadership WR.⁹ These rates suggest that positive rounding was more widespread in the current sample than even safety WR, which is historically a much more widely used intervention. The details regarding rates of exposure by HCW role are reported in Table 1. While physicians and nurses reported similar rates of exposure, it is notable that administrators/managers/supervisors report the highest exposure, while environmental support services and psychologists report the lowest. Nevertheless, there is a significant plurality of HCWs across roles who report exposure to PosWR.

Prior research suggests that an active ingredient in PosWR are the positive emotions HCWs might have ex-

perienced during interactions with leaders. In controlled experiments, exposure to positive emotions demonstrably improved objective measures of physical health (cardiac vagal tone).⁴⁸ Improvements in well-being after randomized controlled trial of meditation show that it facilitates opportunities to experience positive emotions.²⁷ The COMPASS program, designed to facilitate meaningful conversations among HCWs and foster connections (including increased potential for positive emotions) with colleagues, improved workplace empowerment and engagement.²⁴ Similarly, the Three Good Things intervention,^{23,26,33} a gratitude letter writing intervention,^{26,33} and an intervention to cultivate positive feelings about the future (“Looking Forward”),²⁶ all intentionally cultivate moments to reflect on events that generated positive emotion and were associated with better well-being at follow-up. A recent randomized clinical trial of 3.5 hours’ worth of HCW coaching (five sessions) whereby participants were guided to pause and reflect on their goals, their progress, and what was going well, also found reductions in emotional exhaustion.⁴⁷ These interventions target individuals, providing them with choices and options. We believe that the 35% to 45% of HCWs reporting burnout¹² before the pandemic is a significant

underrepresentation of current levels of burnout, which one study recently found to be 66%.⁴⁹ Despite the 2019 National Academy of Medicine report on burnout almost exclusively emphasizing system-level interventions,⁴ we suggest that more is needed than just institutional strategies like PosWR or clever updates to the electronic health record. HCWs view institutional and individual interventions as important,⁵⁰ and both will likely play significant roles in the efforts to recover well-being that will unfold over the next decade,⁴⁰ as there is a strong need to improve the system and a need to help those already struggling with well-being due to the system.

Limitations

This study should be viewed in light of its design. PosWR was an operational priority, so the intervention was not rolled out in a randomized fashion. No causal claims should be made with regard to our findings. It is possible that an unmeasured confounder could be contributing to the results. Different leaders may self-select to certain work settings, potentially introducing bias. We do not have information on implementation fidelity of the PosWR intervention, although lack of fidelity would be expected to bias our results toward the null. Self-report data are at risk for response, selection, and social desirability biases. The confidential nature of the survey, good psychometric results for SCORE, and the high response rate provide a buffer against some of these biases. The PosWR exposure item was created for this study and has not been used previously (though similar items for patient safety WR have been used previously).^{5,9,51} Future studies should consider adding a time frame component, such as “In the past year, how often have you participated . . .” Another limitation is that these data reflect a single large academic health system, so generalizability is not known. Leadership training prior to onset of PosWR was a significant two-day commitment in our study setting. Although this may be a barrier to entrance for other sites, the training could be decoupled from the comprehensively large scale of the leadership development series and in the future be delivered through less intense means, targeting specific leaders of specific work settings.

CONCLUSION

This study demonstrated compelling associations between exposure to PosWR and better safety culture and workforce well-being. The field would benefit from future studies on PosWR using randomized controlled designs to replicate and further elucidate the potential benefits of this practice. Given moderately high levels of burnout in health care, these results should offer reassurance and motivation to health care leaders that their presence and interest in recognizing individuals, celebrating successes, and inquiries about what is going well are associated with better safety culture and workforce well-being.

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Conflicts of Interest. All authors report no conflicts of interest.

J. Bryan Sexton, PhD, is Associate Professor, Department of Psychiatry, Duke University School of Medicine, and Director, Duke Center for Healthcare Safety and Quality, Duke University Health System, Durham, North Carolina. **Kathryn C. Adair, PhD**, is Assistant Director of Research, Duke Center for Healthcare Safety and Quality. **Jochen Profit, MD**, is Associate Professor, Department of Pediatrics, Division of Neonatal and Developmental Medicine, Stanford University School of Medicine. **Jonathan Bae, MD**, is Associate Professor, Departments of Medicine and Pediatrics, Duke University School of Medicine. **Kyle J. Reider, MD**, is Associate Professor, Department of Pediatrics, Duke University School of Medicine, and Medical Director, Duke Center for Healthcare Safety and Quality. **Tracy Gosselin, PhD, RN**, is Chief Nursing & Patient Care Services Officer, Duke University Hospital. **Judy Milne, RN**, is Patient Safety Officer, Duke University Medical Center. **Michael Leonard, MD**, is Principal, Safe & Reliable Healthcare, LLC, Evergreen Colorado. **Allan Frankel, MD**, is Managing Partner, Safe & Reliable Healthcare. Please address correspondence to J. Bryan Sexton, bryan.sexton@duke.edu, kathryn.c.adair@duke.edu.

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