Ensuring Patient and Workforce Safety Culture in Healthcare

Introduction

In 2020, the Institute for Healthcare Improvement (IHI) and the Agency for Healthcare Research and Quality (AHRQ) unveiled the National Action Plan to Advance Patient Safety.[1] Within this framework, four pillars were identified as critical to fostering a safer health care environment: Culture, Leadership and Governance; Patient and Family Engagement; Learning Systems; and Workforce Safety. This 2023 Year in Review Perspective highlights some of the research posted on PSNet in 2023 related to two of these elements: patient safety culture and workforce safety culture.

At a high level, organizational culture is the aggregated attitudes, norms, and perceptions of a team of workers. Although organizational policies certainly influence aspects of culture, the daily interactions that staff members have with each other and with managers are the lifeblood of an organization's culture. In healthcare organizations, patient and workforce safety culture are founded on how well teams work together, how supportive leadership and managers are of patient and workforce safety, how staff report events and near misses, and how teams and leaders respond to events.[2]

A positive patient and workforce safety culture has been shown to significantly improve a number of patient outcomes, including lower rates of surgical site infections, falls, and medication errors. In addition to specific health outcomes, patients report having better experiences with their care when the culture of patient safety is strong.

Although most organizations and healthcare workers (HCWs) agree on the importance of safety culture, research this year focused heavily on the psychological factors surrounding culture, such as psychological safety, how to support HCWs after an adverse event, and burnout. There was also a smaller focus on safety culture in nonacute care settings. Methodologically, the year's research predominantly centers on surveys capturing health care workers' perceptions of culture, with less emphasis on interventions to

improve safety culture. Researchers reviewed all relevant articles on PSNet in 2023 and consulted with Dr. John Murray, PhD, RN and Dr. Joann Sorra, PhD, subject matter experts in safety culture.

Psychological Safety and Employee Voice

The most prominent focus within the area of safety culture in 2023, based on the number of articles published on PSNet, was on the concepts of psychological safety and employee voice. These concepts are both related to how respected and comfortable employees feel speaking up and expressing their ideas, opinions, and concerns without fear of retribution. In a patient safety–specific context, this might entail a HCW raising a concern about a patient's safety (such as an HCW missing a contraindication when prescribing a medication or not washing their hands prior to a procedure) to their peers or leaders. The concern may be raised preemptively before an incident occurs, or after, and it may involve either the actions of the individual who is raising the issue or the actions of their teammates. If an organization or a team has a culture of blame and retribution, then HCWs may stay silent about concerns or safety events. Psychologically safe cultures focus more on learning and how system failures lead to safety events rather than on individual actions. However, a culture focused on system failures does not preclude individual accountability where appropriate. The concept of just culture seeks to balance this systems-based approach to safety events with appropriate individual accountability if the events are negligent or repeated regularly.

Various tools have been developed to measure psychological safety and employee voice, primarily through Likert scale–based surveys to rate items such as "If you make a mistake on this team, it is often held against you," "It is difficult to ask other members of this team for help," and "Working with members of this team, my unique skills and talents are valued and utilized."[3] However, objectively assessing these psychological concepts remains challenging. This reliance on self-reported data was listed as an evidence gap by a systematic review this year.

After reviewing the research on psychological safety and employee voice from the past year, we categorized the influencing factors into individual, team, and leadership factors. Although these factors are not mutually exclusive, this is a useful model for understanding what motivates an HCW to feel safe enough to speak up.

Individual Factors

At the most basic level, an individual's personality traits could make it more likely for them to speak up, regardless of the environment. For example, someone who is extroverted may be more likely to speak up than someone who is introverted. Research linking specific personality traits to psychological safety and employee voice is currently limited but starting to be explored. A systematic review this past year found that prosocial motivations, dominant traits, level of competence, and level of self-efficacy affected speaking-up behavior. Another qualitative study found significant but weak correlations between participants' emotional stability and level of abstract thinking and their feelings of psychological safety.

Despite the lack of evidence linking personality traits to psychological safety and employee voice, some studies in 2023 focused on improving individual psychological safety and speaking-up behavior. One pre-

post study found that a four-hour communication training did not increase psychological safety or communication, but it should be noted that there was no control group in that study and the sample size was relatively low (N = 137). However, a meta-analysis found that assertive communication training for nurses improved speaking-up behavior related to safety events. This difference may speak to the variance in quality of each training, but the meta-analysis results suggest that a well-designed training could improve employee voice and psychological safety.

Team Factors

The team that an HCW interacts with every day can impact their psychological safety and willingness to speak up. For example, seeing others on the team speak up and receive a negative reaction, a peer discouraging them from speaking up to the manager, or experiencing retribution after a mistake could all potentially negatively affect HCWs' psychological safety and suppress employee voice going forward. One large survey study in 2023 found the main factors that affected employee voice were the person's social capital within the team, such as rank or seniority; their exposure to unprofessional behaviors; and demographic features such as age and gender (with older and male respondents more likely to speak up). The authors concluded that healthcare organizations should combine interventions to improve culture with efforts to reduce hierarchical structures, reduce inequalities, and increase protection for staff who speak up.

Several studies in 2023 found that when psychological safety is high, event reporting rates and teamwork improve. One survey of 526 nurses found that those who report high psychological safety are more likely to share important information about patient safety, actively engage in teamwork behaviors, and report safety events and near misses.4 Similarly, another study with nurses found a correlation between high psychological safety and willingness to report safety events. A study using vignettes demonstrated that when an HCW has high personal psychological safety, they perceive colleagues who speak up as more helpful to the team. This finding suggests that high psychological safety can not only impact individual behavior but also improve teamwork and cohesiveness through increased positive affect. This observation is echoed by another study on psychological safety that found the more a team agrees on the level of psychological safety, the better their overall performance.5

Some intervention studies this past year on improving team safety culture, centered on the use of in situ simulation. This type of simulation takes place in the same clinical environment with the same equipment and with the same team members as a real clinical situation. One systematic review found that in situ simulation training increased ICU staff perceptions of safety culture and teamwork climate post training. This is reinforced by a qualitative study on anesthesia personnel, where participants reported that the realism of the in situ training helped clarify team roles and improve clarity in communication.

Leadership and Organizational Factors

Finally, the last set of factors shown to affect psychological safety and employee voice come from leadership and the organization as a whole. The importance of this aspect was delineated in the National Action Plan to Advance Patient Safety, which called for governing boards to understand importance of safety, get involved in safety, and promote a culture of safety.1 Studies on this topic on PSNet in 2023 covered many levels of leadership, from unit managers to executives.

A few studies this past year showed that when employees rate their leaders highly, employees' perceptions of safety culture and psychological safety improve, such as a study of infection preventionists during the COVID-19 pandemic. Another large survey study found that rating leadership highly on items like "provides useful feedback about my performance" and "is available at predictable times" correlates with a higher perception of safety climate and teamwork climate.

Other studies focused on what attributes and techniques leaders can have or use to improve their role in psychological safety and safety culture. A systematic review of employee's perceived ability to speak up found that leadership attributes (such as higher levels of inclusion, mediation, humility, and lower levels of narcissism), higher supervisor job security, and less top-down decision making were associated with more speaking up behaviors among employees. Another integrative review on Just Culture showed that leaders can demonstrate full commitment to Just Culture by being "visible, accessible, approachable and committed to providing the support and resources needed." One smaller survey study concluded that leaders should understand employees' unique skills and needs, express confidence in their abilities, and encourage them to share their ideas (safety related or otherwise) to create an inclusive and trusting work environment that facilitates psychological safety and ultimately reduces safety events. A qualitative study echoed that leaders should get to know the personalities of their employees.

Leaders can encourage psychological safety and employee voice in their responses to staff who bring up safety concerns. One qualitative study reported that nurses who tried to speak up about concerns during the COVID-19 pandemic often felt unheard, were treated with hostility, or experienced a lack of meaningful change. One reason for this may be that leaders and workers have different perceptions of how strong the safety culture is, as illustrated in one study of radiologist managers and staff. In an effort to address this, a qualitative study using simulation videos reported on various barriers to and enablers of receiving a safety message. These studies suggest it is important to train leaders on how to best receive a safety concern in addition to training staff members to speak up more often.

Few intervention studies posted on PSNet in 2023 related to leadership and psychological safety. One study demonstrated that when leaders capture and highlight proactive safety behaviors of staff daily, it can improve behaviors related to patient safety. This finding implies that a leader's role in building a culture of safety is not only responding to events but also regularly highlighting their employees' successes.

Supporting HCWs Who Are Involved in Adverse Events

In addition to fostering an environment of psychological safety, a strong safety culture creates an environment where HCWs feel support from their colleagues and leaders following an adverse safety event that may have caused preventable harm. Strong support of HCWs may decrease negative psychological symptoms, increase the safety awareness of that staff member and others they share the event with, and decrease staff turnover. Research posted on PSNet in 2023 examined how adverse events affect HCWs psychologically and how they hoped to be supported.

On the most recent AHRQ Hospital Survey on Patient Safety Culture (SOPS) report, 64% of respondents said a lack of support exists for staff involved in patient safety events. This finding is significant because of the serious effects an adverse event can have on HCWs. One scoping review on nurses who were involved

in adverse events indicated that nurses most commonly reported feeling a loss of confidence, anxiety, shame, guilt, exhaustion, depression, and fear of lost trust from colleagues and managers after adverse events. Some coped with these symptoms by becoming hypervigilant, sharing their experience with others, and taking leave. All studies included in the review identified a lack of emotional support after a safety event. Many nurses yearned for empathy from their peers, opportunities to debrief about the incident, and follow-up check-ins on their mental health. These findings were echoed in studies with other professions in 2023, such as surgeons, respiratory therapists, and pediatric ICU staff. The latter study quantified that 42% of pediatric ICU staff who had experienced an adverse event felt psychological distress, 22% reported absenteeism, and 23% considered leaving the ICU. The most commonly sought form of support was a respected peer with whom to discuss the details of what happened (86%), followed by taking time off of the unit (73%). In response to these findings, the authors suggested creating and maintaining a supportive, empathetic, and nonpunitive workplace culture, establishing a peer support program with debriefs and regular check-ins, and using near misses and adverse events to improve safety awareness and skills among all staff.

Stress and Burnout Among HCWs

The final psychological factor of safety culture explored in research posted on PSNet in 2023 was HCW stress and burnout. The healthcare profession is inherently demanding, and HCWs may be prone to burnout due to issues including a heavy workload, responsibility for the wellbeing of others, irregular hours, experiences of workplace violence, and high administrative burden. This feeling of burnout can be worsened if organizations don't provide adequate staffing, resources, and a positive workplace culture. A large hospital survey study in 2023 found that employees' ratings of safety culture are negatively correlated with stress and burnout. A systematic review of research among nurses also found a negative relationship between safety culture and job-related stress. Although it is important to note that the theoretical relationship between these two concepts is unclear and may not be unidirectional, a poor workplace safety culture can worsen stress, and stress and burnout can also worsen safety culture.

Burnout was shown to affect a significant proportion of clinicians in 2023. Two recent large survey studies, one on the AHRQ Workplace Safety Supplemental Item Set for Hospitals and one in military hospitals, reported the rate of HCW burnout at 34% and 35%, respectively. This high HCW burnout rate has a compounding effect: It negatively affects individual HCWs and it also potentially leads to more adverse events. The majority of studies in one systematic review on physicians found a link between burnout and clinically significant safety events. In addition to burnout increasing the risk of adverse events, the number of adverse events in a unit can cause burnout, leading to a downward cycle in HCWs' mental health and patient safety.

Several studies this year discussed factors that were associated with decreased stress and burnout. Strong teamwork, adequate staffing, and high-quality leadership were the most common themes. One study on military hospitals found that higher ratings of within- and across-unit teamwork significantly reduced the odds of burnout across all clinical areas studied. Another study in large academic medical centers found the same correlation. In addition, that study found a significant correlation between staffing levels and reported burnout. High ratings of leadership were also shown to be negatively correlated to burnout, such

as in a study among infection preventionists. A systematic review found that high scores of nurse leaders on leadership metrics (such as coaching, informing, and interacting) was correlated with higher job satisfaction and improved performance among employees.[6] Finally, another study found the strongest correlation between leadership and reduced burnout came from leaders providing regular useful feedback on performance. The authors posit that this regular feedback may be increasing psychological safety in employees, which, as previously noted, correlates with improved safety culture.

Safety Culture in Nonacute Settings

Historically, the majority of safety culture research has focused on hospital safety culture. However, some research in non-acute settings (specifically, nursing homes) was posted on PSNet in 2023. Very little research in 2023 focused on safety culture in other non-acute settings, such as primary care or medical offices.

Research into patient safety in nursing homes and long-term care settings has increased in the last decade. Research in 2023 built on this by focusing on safety culture in nursing homes. The most recent AHRQ SOPS Nursing Home Survey found that 54% of nursing home employees rated resident safety as very good or excellent, compared to 67% of employees in hospitals. While respondents rated nursing home culture highly on some measures, such as communication about incidents, only 39% of respondents agreed there were enough staff to handle the workload, meet residents' needs during shift changes, and keep residents safe. In addition, only 54% of respondents agreed that nonpunitive responses to mistakes were used. Interestingly, a different survey study focusing exclusively on licensed practical nurses (LPNs) compared their results with the AHRQ SOPS Nursing Home Survey (LPNs comprised only 18% of SOPS Nursing Home Survey respondents) and found that LPNs rated all measures of safety culture lower than the average reported in the SOPS Database. Similar to the overall SOPS Nursing Home Survey results, the lowest rated dimensions were adequate staffing (29%) and non-punitive responses to mistakes (31%). This survey also found that LPNs working in nursing homes were less satisfied with their jobs than LPNs working in other settings, and that their job satisfaction was significantly but weakly correlated with their ratings of safety culture. This low job satisfaction may lead to burnout, turnover, and increased staffing issues. According to AHRQ's pilot study on the Workplace Safety Supplemental Item Set for Nursing Homes, 33% of nursing home staff experienced burnout, similar to the rate in hospitals.[7] Two other studies on nursing home culture in 2023 were qualitative in nature. One study asked employees how they would improve safety culture. The most prominent themes included better staff orientation, with a focus on safety; better ongoing training; improvement of infrastructure (such as reducing stairs and increasing grip handles); and procuring more security staff. Another study among nursing home leaders asked what differentiates high-performing nursing homes from lower-performing ones. The main themes that emerged were communication about resident safety, particularly the important role of physician and manager accessibility, and leadership support for and responsiveness to resident safety issues raised by frontline staff. Although the amount of research on nursing home culture was low in 2023, the increased focus on this setting in recent years provides a solid foundation for future work to illuminate the challenges to and facilitators of building a culture of safety in this setting.

Conclusion and Future Directions

Research in 2023 on PSNet has predominantly focused on understanding the psychological aspects of safety culture. Studies delved into the factors influencing HCWs' perceptions of patient and workplace safety, including their willingness to speak up, as well as the support they received after being involved in adverse events, and the pervasive influence of burnout on safety culture. A key recommendation emerging from this research is for more proactive training aimed at empowering all staff members, irrespective of their seniority or role, to freely express their concerns and report safety events.[8,9] The research also emphasizes the need for leaders and organizations to respond supportively and actively, fostering a culture of psychological safety. In addition, the research underscores the importance of providing support structures, including peer and organizational support, for HCWs involved in adverse events to help rebuild their confidence. To address burnout, the research suggests strategies such as regular feedback from leaders, teamwork initiatives, and thoughtful consideration of working hours and staffing levels.

The field would benefit from more research in several areas in upcoming years. Future research areas include more studies on nonacute settings, and additional research exploring the links between safety culture, patient outcomes, and patient experience. Finally, more research on design, implementation, and evaluation of interventions to enhance safety culture would be beneficial as organizations strive to embed this foundational aspect of providing safe care.

References

1. Institute for Healthcare Improvement. National Steering Committee for Patient Safety. Declaration to advance patient safety. Boston: Institute for Healthcare Improvement; 2022. https://www.ihi.org/initiatives/national-steering-committee-patient-safety/declaration-advance-patient-safety

2. Agency for Healthcare Research and Quality. About SOPS. Accessed February 5, 2024. https://www.ahrq.gov/sops/about/index.html

3. Edmondson A. Psychological safety and learning behavior in work teams. *Admin Sci Quart*. 1999;44(2):350-383.

4. Lee SE, Dahinten VS, Lee JH. Testing the association between the enabling and enacting factors of patient safety culture and patient safety: structural equation modelling. *BMC Nurs*. 2023;22(1):32.

5. Fyhn B, Bang H, Sverdrup TE, et al. Safe Among the Unsafe: Psychological Safety Climate Strength Matters for Team Performance. *Small Group Research,* 2023; 54(4), 439-473. https://doi.org/10.1177/10464964221121273

6. Alsadaan N, Salameh B, Reshia FAAE, et al. Impact of nurse leaders behaviors on nursing staff performance: a systematic review of literature. *Inquiry*. 2023;60:469580231178528. doi:10.1177/00469580231178528

7. Agency for Healthcare Research and Quality. Workplace Safety Supplemental Item Set for Nursing Home SOPS. Rockville, MD: Agency for Healthcare Research and Quality; 2023. Accessed February 5, 2024. https://www.ahrq.gov/sops/surveys/nursing-home/supplemental-items/workplace-safety.html

8. Chen H-W, Wu J-C, Kang Y-N, et al. Assertive communication training for nurses to speak up in cases of medical errors: a systematic review and meta-analysis. *Nurse Educ Today*. 2023;126:105831. doi:10.1016/j.nedt.2023.105831.

9. Pavithra A, Mannion R, Sunderland N, et al. Speaking up as an extension of socio-cultural dynamics inhospital settings: a study of staff experiences of speaking upacross seven hospitals. *J Health Organ Manag*. 2022;36(9):245-271.