Developing Collective Mindfulness Skills in Nurse Leaders to Influence a Culture of Safety

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Learner Objectives

- Describe the nurse leader's core role accountabilities for creating an environment that ensures quality, safety, and performance excellence.
- Explain how to implement a workshop on collective mindfulness.
- Examine the cognitive process of collective mindfulness as a strategy for reducing patient harm and creating highly reliable healthcare organizations.
- Examine nurse leader's capability to influence safety culture within their current organization and correlate this to quality and safety performance outcomes.
- Evaluate their organization's current state of readiness to embrace safety improvement practices for optimizing safety culture.

Florence Nightingale (1863)

Flo recognized the patient safety dilemma when she stated,

"It may seem a strange principle to enunciate as the very first requirement in a hospital that it should do the sick no harm."

Background & Problem

- Core role accountabilities of nurse leaders are to create an environment that ensures quality, safety, and performance excellence.
- Nurse leaders are often inadequately prepared to advance safety culture.
- Local metrics (2019-2020) demonstrated a need for safety culture improvement:
  1) low scores in the AHRQ patient survey sub-section for supervisor, manager, or clinical leaders support for patient safety
  2) hospital-acquired infections, pressure injury, and medication errors failed to meet internal benchmarks
  3) only one-third of units met 95% compliance with regulatory documentation standards.

Significance

- Collective mindfulness: cognitive process used to increase awareness and discriminatory details to discover and correct errors, is associated with lower turnover rates, and improved quality and safety.
- It increases both individual and team abilities to quickly assess complex systems and identify alternative actions, thereby reducing patient harm risk.
- By focusing on collective mindfulness and high-reliability organizing principles, a 20-bed critical care unit achieved a 60% improvement in reliability for the process measure of discharging patients alive with stable vital signs, resulting in a savings of $100/patient/day.
- Level III B evidence supports this quality improvement project.

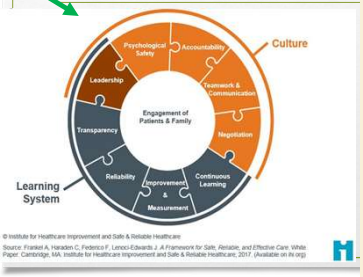
Project Purpose and Aim

- Demonstrate that formal training in collective mindfulness skills for nurse leaders influences their leadership effectiveness in advancing safety culture, as measured by the Safety Organizing Scale (SOS).
- Implement a structured leadership development workshop on developing collective mindfulness skills in nurse leaders and evaluate the intervention's effectiveness.

Methods

- Thirty nurse managers participated in a 10-week interactive, educational workshop to develop and apply collective mindfulness skills using high-reliability organizing principles.
- The SOS tool provided measurement of safety culture and insight into the collective mindfulness practices among nurse leaders.
- The Framework for Safe, Reliable, and Effective Care (IHI) provided a roadmap for organizing the project design and developing nurse leaders to practice collective mindfulness as a critical process for advancing safety culture.
- The Plan-Do-Study-Act model for continuous quality improvement supported project implementation and aligned with the IHI's method for leading quality improvement.

Conceptual Framework: The Institute for Healthcare Improvement Framework for Safe, Reliable, and Effective Care



- Within this framework, **leadership is a vital component** of the overarching domains of culture and the learning system.
- **Regardless of role or rank, leaders create environments that engage and inspire their teams to align around safe, effective, quality patient care.**
- This framework guides organizations in developing quality leadership processes through **effective training methods and clear, actionable goals.**

Methods: Instrument

Safety Organizing Scale (SOS) survey tool by Vogus & Sutcliffe (2007).

- Originated from the Mindfulness Organizing Scale (MOS).
  - A 9 item 7-point Likert scale unidimensional measure of safety culture, ranging from not at all (1) to a very great extent (7)
  - Chronbach's alpha 0.88.
  - SOS measures safety culture and the active process of collective mindfulness within teams.
- Dimensions of five high reliability organizing principles, that include (a) preoccupation with failure, (b) reluctance to simplify, (c) sensitivity to operations, (d) commitment to resilience, and (e) deference to expertise.

Findings: Key Points

- The One-way ANOVA test detected variance in SOS mean scores between and within the baseline (50.04), mid-point (54.52), and final end-point (58.86) and across time.
- Tukey post-hoc comparisons indicated that the SOS final end-point mean score (M=58.86, 95% CI [57.12, 60.59]) was significantly higher than the SOS baseline mean score (M=50.14, 95% CI [47.88, 52.40]) with a p-value of < 0.001.

Findings: Post-hoc Pair-wise Comparisons of SOS Overall Mean Scores

All Scores SOS Survey	N	Mean	Std. Deviation	Std. Error	95% CI Lower Bound	95% CI Upper Bound	Min	Max
Baseline	21	50.14	4.963	1.083	47.88	52.40	39	59
Midpoint	21	54.52	4.875	1.064	52.30	56.74	41	63
Final Endpoint	21	58.86	3.812	.832	57.12	60.59	51	63
Total	63	54.51	5.758	.725	53.06	55.96	39	63

Findings: Qualitative Data

Post-program debriefing session was completed by n=19 (90%) of sample with 81 narrative entries, resulting in common themes related to the impact of nursing leadership on safety and outcomes.

"I found this workshop to be very educational and eye-opening. There is so much that goes into creating a culture of safety, and once you start to peel the onion, you discover the many different layers you have. This program was spot on to its objective".

"I thought this was a great program, and I learned so much. There is a positivity involved in this when an organizational culture focuses on safety through collective mindfulness, which is truly caring about our patients with an honest and proactive approach".

"I think this course was a great way to examine our approach as leaders in regard to safety and quality. Self-awareness is important, and understanding how to interpret it, demonstrate it, and lead your teams to be self-aware is crucial for the overall culture to improve patient outcomes".

Results

- Measured by the SOS tool, twenty-one nurse managers' capability to influence safety culture with formal collective mindfulness training improved over three time points, baseline (50.04), mid-point (54.52), and end-point (58.86) by one-way ANOVA, $p<0.001$.
- Common themes from 81 narrative entries (n=19) included:
  1) heightened awareness of the impact of nursing leadership on safety culture and outcomes
  2) proactivity versus reactivity for addressing safety concerns
  3) the interactive workshop favorably impacted the learning process.

Discussion/Implications

- The results support a positive association between collective mindfulness practices and nurse leaders' influence on safety culture.
- The interactive workshop model provided the time investment necessary to engage leaders in developing their capabilities for advancing safety within complex environments.
- We learned that the in-person workshop method contributed to team building in addition to application of content.
- Healthcare organizations should develop nurse leaders' collective mindfulness skills and embrace practices and policies that optimize safety culture.

Discussion/Implications

- This successful nursing intervention aligned with the project's primary aim to demonstrate that formal training in collective mindfulness for nurse leaders influences their effectiveness in advancing safety culture, as measured by the SOS tool.
- All twenty-one participants learned over time and successfully heightened their leadership effectiveness for advancing safety culture after applying program concepts into their practice.

Discussion/Implications

- Workshop models and experiential learning opportunities, particularly among occupations with high emotional and cognitive demand, such as nursing, are the preferred method for teaching mindfulness practices (Ceravolo & Raines, 2019; Gebauer, 2012; Gilmartin et al., 2017; Hales & Chakravorty, 2016); Love et al., 2018).
- Nurse managers' perception of their skill improved for leading safety culture.
- Application to practice experiences enhanced the nurse manager's capability to create environments that consistently support safe, effective, and reliable care.
- This intervention provided nurse managers skills training for anticipating, preventing, and mitigating adverse consequences.

Limitations

- COVID 19 Pandemic
- Organizational strategic imperative work
  - EPIC installation
  - Triennial regulatory accreditation survey
  - NDNQI survey/Magnet Timeline
  - Service line growth
- Performance bias mitigation efforts
- IT cybersecurity restrictions

Recommendations

- Validate SOS sub-scale measures
- Compress workshop design from seven modules to four modules
- Add NDNQI RN survey as study measure
- Simulation technology to augment skill development

Conclusions

Intervention for collective mindfulness skill development for nurse leaders revealed:

- High level of importance to executive nurse leader accountability for nursing practice and governance of provision of patient care.
- Association between organizational readiness, collectively mindful leadership practices and safety culture.
- Offer revised program to all levels of nursing leadership.

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Thank you!