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The Role of Habit in Enhancing Efficiency and Reducing Errors in Nursing Practice: A Comprehensive Review (2019-2024)

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Abstract

Working in the healthcare field, nurses must complete many essential responsibilities without making too many mistakes. Formulating beneficial habits that are activated by surroundings can help nurses accomplish these goals more effortlessly. The latest studies (dating from 2019 to 2024) shed light on the significant impact of developing good habits on improving workflow productivity and reducing mistakes in nursing. It provides recommendations for promoting healthy habits and helpful ways to prevent or reduce undesirable habits.

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Introduction

Nursing in today's healthcare setting demands quick responses to an array of demands in dynamic and unforeseeable situations. Consistent delivery of excellent care relies on cognitive skills, technical skills and a discrete set of traits. Habits can alleviate cognitive load and allow nurses to focus on more complex thinking when appropriate. Without deliberative practice, habits can potentially hurt instead of help.

Research highlights the importance of habit for specialized jobs that demand decision-making under pressure. Within nursing practice, habit can either promote safety or lead to inaccuracies and mistakes. This article seeks to highlight the double-edged nature of habit in nursing and offer strategies for capitalizing on its advantages while controlling its pitfalls.

Mechanisms of Habit Formation in Nursing

Habits are learned sequences of acts that become automatic responses to specific situations. According to behavioral psychology, habit formation follows a cue-routine-reward loop. In nursing, the cue may be a clinical sign, the routine an intervention, and the reward the improved patient outcome or professional affirmation (Hamdan et al., 2024).

Multiple determinants influence habit development. These include repetition, simplicity, contextual stability, personal motivation, and environmental cues. Behavior that is frequently repeated and reinforced in stable settings is more likely to become habitual (Fathizadeh et al., 2024). Nurses working in consistent settings—such as intensive care units—are more likely to develop strong procedural habits due to the predictable cues in the environment (Tarver et al., 2024).

Neuroscientific evidence supports this behavioral understanding. As tasks become habitual, neural activity shifts from deliberate processing in the prefrontal cortex to more automatic processing in the basal ganglia, reducing cognitive effort (Nurses' adherence..., 2020). This shift allows for quicker execution of routine tasks and frees up cognitive resources for more complex problem-solving.

Enhancing Efficiency Through Habitual Practice

Task automation and habitual workflows allow nurses to complete routine procedures more efficiently. This reduces time spent on repetitive decision-making and increases availability for critical thinking tasks (Tarver et al., 2024). By automating well-defined processes, nurses can manage their time more effectively and handle a greater workload without compromising the quality of care.

For instance, habitual bedside shift reports streamline communication and decrease information loss between shifts. Repetition of this structured communication method ensures consistency in handoffs and has been associated with fewer adverse events (Patient safety culture in nurses'..., 2023). The standardized format and predictable flow of information in habitual shift reports minimize ambiguity and ensure all critical details are conveyed.

Moreover, habits help mitigate decision fatigue—a phenomenon where repeated decisions throughout a shift reduce mental clarity and judgment. Routine behaviors such as patient rounding, medication timing, and documentation can be habitualized to conserve cognitive resources (Abandi et al., 2022). Establishing a consistent schedule for these tasks transforms them into automatic behaviors, reducing the need for conscious deliberation and preserving mental energy for unexpected situations.

In addition to efficiency, habitual practices promote role clarity and interprofessional coordination. When habitual behaviors are synchronized among team members, it creates a rhythm in unit operations, thereby reducing conflict and redundancy (Lee et al., 2023). Shared habits around communication protocols, emergency responses, and interdisciplinary meetings foster smoother collaboration and a more cohesive team environment.

Reducing Errors Through Habitual Compliance

Error reduction, especially with medication administration, is one of the primary benefits of habit formation in nursing. Nurses that use verification-checklists and "five rights" of medication have lower risks of dosing errors and patient identification errors (Fathizadeh et al., 2024). When habitual, the use of these safety checks become part of the medication administration process - not as opt-in, but already included.

Moreover, hand hygiene and infection controls follow strong habitual practice. When a visual cue is placed at the entrance of a unit or near the rooms of patients, it resulted in automatic hand sanitation, reducing hospital-acquired infections (The implementation of patient safety culture..., 2019). This consistent association with the cue and behavior strengthened the habit and furthered adherence to infection control practices.

Cultivating a culture of error reporting, through digital systems, is effective in fostering increased error reporting regularity(s) and transparency as safety culture(s) are enhancing (Hamdan et al., 2024). These systems eliminate the mental process and logistical difficulties of reporting through routine workflow (Lee et al., 2023) while removing other barriers to reporting. Reporting errors through work flows helps normalize it and encourages taking proactive measures to minimize risk.

Additionally, embedding routines like pre-procedural time-outs and safety huddles allows errors to be identified before they cause patient harm. Performing these routinely increases the likelihood of following through in busy or stressful times, as they are automated. If staff are engaging in these safety pre-procedures automatically, it assures that everyone cross checks all the necessary information prior to completing important procedures.

Strategies for Cultivating Positive Habits

Ongoing training and simulation, feedback, and support aid in the development of safe habits. Having to repeat tasks as a form of simulation training allows nurses to take that skill into clinical practice. Nurses can repeat complex tasks and protocols through simulation, which helps their brain make resulting conation permanently in a stronger manner while ultimately resulting in automatic responses.

What nurses see and encounter daily drives the habits they build and the behaviours they engage in. Examples include colour-coordinated drug trays, standardized processes, or easily accessed and handwritten checklists that help to keep nurses on track with vital protocols. Structuring the workplace so that nurses see cues that supports the habits that nurses have been trained to develop through best evidence-based approaches helps them carry out the appropriate actions automatically.

Leadership is equally important. Transformational leadership inspires nurses to embrace standards of care and performance routines, so that it becomes automatic behaviour. Leaders who demonstrate a commitment to safety and provide the tools and resources for their staff encourage nurses to embrace developing good habits. Digital tools such as adaptive reminders and monitoring systems may also help develop and sustain safe habits to ultimately improve clinical outcomes. The use of technology to motivate behaviour and follow all standards and procedures is strong.

Additionally, peer modeling and mentorship provide powerful social reinforcement. When novice nurses observe senior staff consistently following protocols, they are more likely to adopt similar behaviors, accelerating their own habit formation. Mentorship programs can explicitly focus on the development of safe and efficient work habits.

Mitigating Risks of Maladaptive Habits

Despite their benefits, habits can become liabilities if not regularly assessed. Nurses may fall into patterns of taking shortcuts, skipping critical steps, or using outdated methods due to over-reliance on familiar routines (Patient safety culture in nurses'..., 2023). These ingrained but suboptimal practices can be difficult to identify and change without conscious effort.

Strongly ingrained habits can also create resistance to change. For example, when new protocols are introduced, nurses with long-standing routines may be reluctant to adapt, even when the evidence supports the change (Nurses' adherence..., 2020). Overcoming this resistance requires effective communication, education, and strategies to break old habits and form new ones.

To address these risks, regular audits and feedback mechanisms should be implemented. These tools enable early detection of unproductive routines and encourage ongoing professional reflection (Dirik & Intepeler, 2023). Performance evaluations and incident reviews can highlight areas where habitual practices may be contributing to inefficiencies or errors. Encouraging a culture of continuous improvement ensures that habits evolve in alignment with best practices. This involves fostering an environment where nurses feel comfortable questioning existing routines and suggesting improvements.

Moreover, integrating change management strategies—such as involving staff in the design of new

workflows—can ease transitions and prevent resistance. Facilitating open dialogue and reinforcing the rationale for change help reshape habits constructively. When nurses understand the evidence behind new protocols and have a voice in their implementation, they are more likely to adopt them as new, positive habits.

Implications for Nursing Education and Leadership

Educators must emphasize the importance of deliberate habit formation in clinical training. By embedding habit principles into curricula—such as through reflective journaling, skill repetition, and clinical debriefing—students learn to develop effective routines early (Dirik & Intepeler, 2023). Clinical placements should provide opportunities for students to practice essential skills repeatedly under supervision, fostering the development of safe and efficient habits. Reflective journaling can encourage students to consciously analyze their actions and identify areas for habitual improvement.

Nurse leaders should view habit development as a strategic priority. Institutions that align training, environment, and evaluation around behavioral consistency will see sustained improvements in both efficiency and patient safety (Hamdan et al., 2024). Leadership should invest in creating supportive environments with clear cues, providing ongoing training and feedback, and promoting a culture where positive habits are valued and reinforced.

Conclusion

Habits serve as powerful tools for enhancing efficiency and reducing errors in nursing practice. By understanding how habits form and implementing organizational strategies that promote beneficial routines, healthcare leaders can significantly improve care delivery. However, the risk of maladaptive habits necessitates continuous monitoring, training, and leadership support. A deliberate approach to habit management in nursing practice can lead to a safer, more efficient, and adaptive healthcare environment (Fathizadeh et al., 2024; Hamdan et al., 2024).

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