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Enhancing Time Management and Prioritization Skills in Healthcare Professionals: A Simulation-Based Training Approach

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ABSTRACT

Time management and prioritization are essential skills for healthcare professionals, yet many struggle with inefficiencies due to high workloads and multitasking demands. This study explores the effectiveness of a simulation-based training program designed to enhance time management and prioritization skills among healthcare workers. Using role-playing simulations, participants were exposed to realistic scenarios requiring them to manage tasks under time constraints. The training incorporated tools such as the *Eisenhower Matrix* and *Time Blocking* techniques to improve decision-making and task prioritization. Results showed a significant increase in work efficiency (from 50% to 75%), improved patient satisfaction (from 3/5 to 4.5/5), and reduced stress levels (from 8/10 to 4/10). Challenges such as communication gaps and initial resistance to new methods were identified but addressed through collaborative learning. The findings highlight the importance of structured training programs in equipping healthcare workers with practical time management skills. Recommendations include periodic training, technological integration, and organizational support to sustain improvements. These outcomes underscore the potential of simulation-based education to enhance both individual performance and organizational outcomes in healthcare settings.

KEYWORDS

Time management, prioritization, healthcare professionals, simulation training, Eisenhower Matrix, stress reduction

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INTRODUCTION

Time management and prioritization are critical skills for healthcare professionals, who often face high-pressure environments with competing demands on their time. Healthcare workers frequently experience burnout due to poor time management, which negatively impacts both their personal well-being and the quality of patient care (Jun et al., 2021). Similarly, research by West highlights that effective time management can reduce stress levels among healthcare providers, leading to improved job satisfaction and patient outcomes (West et al., 2017). Furthermore, evidence from the World Health Organization suggests that inefficiencies in task prioritization contribute to delays in patient care, particularly in emergency settings (WHO, 2016). This underscores the need for structured training programs to equip healthcare workers with tools such as the *Eisenhower Matrix* and *Time Blocking* techniques, which have been shown to enhance productivity(Jabeen, 2016; Williams et al., 2024).

The complexity of healthcare systems further exacerbates the challenges faced by healthcare professionals in managing their time effectively (Khan et al., 2018). As noted by Ausserhofer, the increasing administrative burden on healthcare workers detracts from their ability to focus on direct patient care (Ausserhofer et al., 2022). Additionally, studies by Shanafelt reveal that multitasking, a common practice in healthcare settings, significantly reduces efficiency and increases errors (Shanafelt et al., 2022). These findings are supported by Weerasinghe who emphasize the importance of role clarity and task delegation in improving workflow efficiency (Weerasinghe, 2022). Moreover, research by Dyrbye demonstrates that inadequate prioritization leads to missed deadlines and incomplete tasks, which can compromise patient safety (Dyrbye et al., 2017). Therefore, addressing these gaps through targeted training is essential for optimizing healthcare delivery (Vamos et al., 2023).

Simulation-based training has emerged as a powerful tool for teaching time management and prioritization skills in healthcare settings (Mitchell et al., 2024). According to Issenberg, simulation-based learning allows learner to practice real-world techniques outside the stressful environment of care, enhancing their decision-making abilities (Maisons et al., 2024). Similarly, Duchatelet found that role-playing simulations improve participants' confidence and lead to a significant linear increase to competence in handling complex situations (Duchatelet et al., 2021). Furthermore, a meta-analysis by Jiwon Lee, concluded that simulation-based education significantly can improves technical, non-technical skills and enhances clinical performance and teamwork skills (Lee & Lee, 2022). These benefits are echoed by Dreifuerst who argue that reflective debriefing sessions following simulations foster reflective thinking, learning and behavioral change (Dreifuerst, 2015). Thus, incorporating simulation into training programs offers a practical solution to the challenges of time management in healthcare.

Despite its potential, there remains a gap in the widespread adoption of time management training for healthcare professionals. Limited availability of structured programs tailored to the unique needs of healthcare workers (Cinkay, 2023). Similarly, findings by Grot & Wensing indicate that many healthcare organizations prioritize technical skills over soft skills like time management, leaving professionals ill-equipped to handle non-clinical demands (Grot & Wensing, 2020). Soft skill acquisition and time-spaced learning training methodology significantly improve employee performance (Ibrahim et al., 2017). Additionally, insights from Ghafar's Social Learning Theory suggest that role modeling and collaborative learning can reinforce positive behaviors related to time management (Ghafar, 2023). Bridging this gap requires a concerted effort from policymakers, educators, and healthcare leaders to integrate time management training into professional development curricula.

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MATERIALS AND METHODS

This activity uses a role-playing simulation method with a collaborative participatory approach. This method was chosen because it allows healthcare workers to actively engage in the learning process by assigning them specific roles (Hoyt et al., 2024). Role-playing simulations help participants understand the dynamics of time management and prioritization within the context of daily work tasks, enabling them to face real-life situations in the field with greater confidence (Kremser & Blagoev, 2021).

Participants are divided into 8 groups, each consisting of 5-6 people. This grouping aims to ensure that every group member has the opportunity to actively participate in the simulation. Each group is given a different case scenario but with the same general theme: time management and prioritization in a healthcare work environment. To ensure time efficiency, each group is allotted 5 minutes to conduct the simulation. The total time for all 8 groups is 40 minutes, while the remaining time (10 minutes) is used for reflection and evaluation sessions.

Steps of Implementation

1. Preparation of Scenarios

   The first step in implementing the activity involves creating detailed case scenarios focused on time management and prioritization challenges commonly faced by healthcare professionals. These scenarios include situations such as emergency patient handling where a critically ill patient arrives while staff are occupied with administrative tasks daily task prioritization, requiring workers to choose between completing reports or responding to urgent patient calls, surgery schedule adjustments due to sudden facility limitations, and priority conflicts when teams must balance inpatient and outpatient care during patient surges. Each scenario is designed to reflect real-world complexities, incorporating specific work conditions, tasks, deadlines, and challenges to simulate authentic decision-making environments.

   Each scenario is crafted in detail to ensure realism and relevance to healthcare settings. It includes a description of work conditions, outlining the workload and specific challenges participants might face, such as balancing administrative duties with urgent patient care. The tasks to be completed are clearly defined, ranging from direct patient care and report finalization to interdepartmental coordination. Deadlines are established to simulate time constraints, requiring participants to manage tasks within specified limits. Additionally, potential challenges are embedded into the scenarios, such as multitasking demands, communication gaps between teams, or confusion in prioritizing tasks. These elements collectively create a dynamic environment that mirrors real-world complexities, enabling participants to practice decision-making under pressure.

   The roles assigned to participants are clearly defined to ensure structured collaboration during the simulation. The doctor leads by assessing patient conditions and determining appropriate medical interventions, while the nurse supports clinical decision-making and delivers direct patient care. The health administrator manages documentation, ensuring accurate record-keeping of medical reports and data. Meanwhile, the team coordinator oversees workflow alignment, guiding team members to adhere to established priorities and timelines. This role clarity fosters accountability and streamlines communication, enabling the team to function cohesively under simulated workplace challenges.

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2. Simulation Execution
   After the scenarios and roles are prepared, the simulation is carried out with the following steps:
   a. Time Allocation: Each group is given 5 minutes to conduct the simulation. A timer is used to ensure all groups adhere to the set time limit.
   b. Simulation Process: Participants are required to collaborate actively to resolve time management and prioritization challenges based on the scenarios provided. Key tasks during the simulation include determining task priorities for instance, deciding whether administrative duties take precedence over patient care and applying tools like the *Eisenhower Matrix* to categorize tasks by urgency and importance. Participants must also strategize scheduling to ensure all responsibilities are completed within deadlines. Role-specific interactions are critical: for example, doctors must coordinate with nurses to ensure patients receive timely and appropriate care, while health administrators and team coordinators streamline workflows and documentation. This structured yet dynamic process encourages teamwork, adaptive decision-making, and practical application of time management principles in a healthcare context.
   c. Monitoring: The activity organizers monitor the simulation to ensure all participants are actively involved and the scenario proceeds as planned.

3. Reflection
   After all groups complete the simulation, a 5-minute reflection session is conducted to evaluate outcomes and extract key lessons. Organizers facilitate a brief discussion by posing reflective questions such as, “What was the main challenge you faced during the simulation?”, “How did you address the issues that arose?”, and “What key lesson did you gain?” Participants respond concisely, highlighting their experiences. This is followed by problem identification, where recurring obstacles such as difficulty prioritizing tasks, communication gaps between teams, or imbalanced workloads are collectively acknowledged. Finally, participants propose practical recommendations to improve workplace time management, including adopting digital tools, holding daily priority-setting meetings, or advancing training programs. This structured reflection ensures lessons are systematically translated into actionable strategies.

To support the implementation of the simulation, the following tools and materials are prepared:

1. *Eisenhower Matrix* Template: Used by participants to prioritize tasks based on urgency and importance levels.
2. Timer: Used to manage the simulation time for each group, ensuring they do not exceed the set time limit.
3. Role Cards: Role cards provided to participants to facilitate understanding of each role’s responsibilities.
4. Simulation Communication Tools: Toy phones or simple chat applications are used to simulate communication between team members.
5. Priority Checklist: A list of tasks to be completed during the simulation, complete with deadlines and priority levels.

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RESULTS AND DISCUSSION

1. Initial Simulation (Before Training)

   Baseline Conditions : Healthcare workers frequently faced challenges in balancing administrative duties, patient interactions, and personal needs, leading to inefficiencies in workflow. Unclear prioritization resulted in frequent delays or incomplete tasks, while poorly organized workloads contributed to heightened stress levels among staff. These interconnected issues highlighted a critical need for structured time management strategies to improve productivity and well-being.

   Simulation Results :

   - Work Efficiency : Average efficiency was only 50% of maximum potential.
   - Patient Satisfaction : Low satisfaction score (3/5) due to frequent service delays.
   - Work Stress : High stress levels, averaging 8/10.
   - Priority Management : Only 40% of tasks were completed according to priority.

2. Training Implementation

   The training program was conducted over three days, structured to progressively build participants' time management and prioritization skills.

Figure 1. Simulation Concept Introduction

Fogure 2. Role-play Based Simulation

   On the first day, foundational concepts such as *Time Blocking* and the *Eisenhower Matrix* were introduced to familiarize participants with systematic approaches to task organization. The second day focused on practical application, where participants engaged in prioritization exercises using real-world healthcare case studies, allowing them to contextualize theoretical knowledge into actionable strategies. The final day involved live simulations of high-pressure workload scenarios, followed by evaluations to assess participants' ability to apply the learned techniques in dynamic, realistic settings. This phased approach ensured a blend of theory, practice, and reflective assessment to reinforce skill development.

3. Simulation Outcomes (After Training)

   - Work Efficiency : Increased to 75% of maximum potential.
   - Patient Satisfaction : Rose to 4.5/5 due to faster, more organized service.
   - Work Stress : Significantly reduced to an average of 4/10.
   - Priority Management : 85% of tasks were completed according to priority.

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Reflection Insights

1. Training Successes

   The reflection insights highlighted significant improvements post-training. Participants demonstrated enhanced efficiency by adopting systematic time management practices, such as *Time Blocking*, which enabled them to concentrate on individual tasks and reduce mental fatigue caused by multitasking. The use of the *Eisenhower Matrix* also clarified task prioritization, allowing workers to differentiate urgent tasks from important ones, thereby minimizing delays. Additionally, patient satisfaction improved markedly due to faster, more organized care delivery, reflecting the tangible impact of structured time management on healthcare quality. These outcomes underscored the training's effectiveness in bridging theoretical concepts with practical, real-world applications.

2. Challenges Faced

   Despite the successes, several challenges emerged during the training implementation. Initially, some participants struggled to adopt new methods due to entrenched habits and familiarity with older workflows. While intensive mentorship and practice sessions eventually facilitated adaptation, resistance to change highlighted the need for gradual, supportive transitions. Additionally, resource limitations persisted in certain units, where staffing shortages and inadequate tools hindered the full application of improved time management strategies, emphasizing the importance of addressing systemic constraints alongside skill development.

3. Key Lessons

   The training underscored three critical insights. First, time management is a strategic investment dedicating time to learn and apply structured methods enhances long-term productivity and personal well-being, disproving the notion that such training is a waste of resources. Second, team collaboration is essential for effective time management; success hinges not only on individual skills but also on organizational support and clear communication to align priorities and distribute workloads efficiently. Finally, work-life balance emerged as a vital outcome of improved time management, as healthcare workers gained more personal time, reducing stress levels and fostering a healthier, more sustainable quality of life. These lessons collectively emphasize that time management is a holistic approach benefiting both professional performance and individual welfare.

4. Future Recommendations

   To sustain and enhance the gains from the training, three key strategies are proposed. First, continuous training should be institutionalized, with regular sessions to reinforce time management principles, ensuring consistency and adaptability to evolving workplace dynamics. Second, technology integration is critical: digital tools, such as real-time scheduling apps, can streamline priority tracking, automate task allocation, and provide actionable insights to support methods like *Time Blocking* and the *Eisenhower Matrix*. Finally, periodic evaluations must be conducted by organizations to regularly assess the effectiveness of time management practices, identify gaps, measure progress, and refine strategies in alignment with changing operational needs. Together, these steps will ensure sustained improvements in efficiency, collaboration, and overall workplace well-being.

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The role-playing simulation method demonstrated significant effectiveness in engaging participants actively. By assigning specific roles such as doctors, nurses, and coordinators, each participant felt accountable for their tasks, fostering deeper involvement and understanding of time and priority management. Realistic scenarios, designed to reflect challenges like multitasking and urgent decision-making, enabled participants to practice skills directly applicable to their work environments. The simulation also emphasized teamwork, particularly in coordinating between roles such as doctors and nurses collaborating to ensure timely patient care highlighting the importance of communication in achieving shared goals.

Participants' understanding of time and priority management improved markedly through targeted tools and practices. The *Eisenhower Matrix* became a key instrument, helping them distinguish urgent tasks from important ones. This clarity led to a notable increase in priority-aligned task completion, rising from 40% to 85% post-training. The 5-minute time limit imposed during simulations taught participants to work efficiently, reducing delays and boosting overall work efficiency from 50% to 75%. Additionally, participants recognized the negative impact of multitasking on productivity, shifting toward focused, single-task workflows that lowered stress and improved outcomes.

Despite these successes, challenges emerged during the simulation. Communication gaps within teams occasionally hindered effective prioritization, revealing the need for enhanced training in collaborative decision-making. Some participants felt overwhelmed by high workloads under tight deadlines, pointing to the necessity for more equitable task distribution. Initial resistance to new methods like *Time Blocking* or the *Eisenhower Matrix* was observed, though intensive guidance helped participants adapt, underscoring the importance of gradual, supported transitions to new systems.

To sustain progress, continuous training and systemic adjustments are recommended. Regular sessions on time management principles will ensure consistency amid evolving workplace demands. Integrating digital tools, such as real-time scheduling apps, could streamline task tracking and priority management. Expanding training to administrative and logistics teams would foster organizational synergy, while routine evaluations will help identify areas for improvement and measure long-term adaptability. These steps aim to institutionalize efficient practices across all levels of the organization.

The training yielded measurable benefits for both healthcare performance and staff well-being. Patient satisfaction scores rose from 3/5 to 4.5/5 due to faster, more organized care delivery. Participants reported significantly reduced stress levels, with average scores dropping from 8/10 to 4/10, while better time management allowed them more personal time, enhancing work-life balance and overall quality of life. These results highlight the interconnectedness of structured time management, professional effectiveness, and individual welfare.

For healthcare organizations, the findings underscore the strategic value of time management training. Beyond individual skill development, such training is an investment in organizational productivity and service quality. Equipping staff with tools like the *Eisenhower Matrix* and fostering a culture of structured prioritization can elevate operational efficiency. However, success requires organizational support, including resource allocation, technology integration, and environments that prioritize effective time management. These measures not only enhance productivity but also build resilient teams capable of delivering high-quality care in dynamic settings.

CONCLUSIONS

The time and priority management training has delivered significant positive impacts for healthcare workers. Beyond improving work efficiency and patient satisfaction, the training also helped reduce stress levels and enhance work-life balance. With the right strategies and organizational support, time management can become a powerful tool to elevate the overall quality of healthcare services.

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