Exploring the Changes in Work Practices and Wellbeing of Critical Care Healthcare Professionals During the COVID-19 Pandemic: A Qualitative Study

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Abstract

Background: The COVID-19 pandemic has posed unprecedented challenges to healthcare systems globally, impacting critical care healthcare professionals' work practices and well-being. This qualitative study aims to explore these changes in work practices and well-being during the pandemic, offering insights into nurses' experiences, coping mechanisms, and challenges.

Methodology: A phenomenological approach was employed, with a purposive sampling of 20 critical care healthcare professionals actively working during the pandemic. Semi-structured interviews were conducted, audio-recorded, and transcribed for thematic analysis. Ethical considerations and data saturation were ensured for trustworthiness.

Results: Thematic analysis revealed four key themes:

1. **Adaptation to Change:** Nurses navigated new protocols, technologies, and policies, showcasing resilience and innovative solutions.
2. **Emotional Experiences:** Nurses' emotions ranged from anxiety and fear to determination and gratitude, evolving.
3. **Interpersonal Dynamics:** Effective teamwork and communication were essential for navigating challenges and delivering quality care.
4. **Meaning-making and Identity:** Nurses' personal and professional identities are shaped by core values, experiences, and roles within the healthcare system.

Conclusion: This study contributes to understanding the nuanced experiences of critical care healthcare professionals during the COVID-19 pandemic, emphasizing the need for targeted interventions and support systems to promote resilience and well-being.

INTRODUCTION

Healthcare systems across the world are facing unprecedented challenges due to the COVID-19 pandemic. As a result, critical care healthcare professionals' work practices and well-being have been significantly affected.(Leaver et al., 2022; Masha'al et al., 2022). As essential workers in the fight against the pandemic, these professionals have faced immense pressures, including increased workloads, heightened stress levels, and the need to adapt rapidly to evolving clinical guidelines and protocols.(Campbell et al., 2022; Chang et al., 2022).

This study uses qualitative methods to examine the impact of COVID-19 on critical care healthcare professionals' work practices and well-being.(Alshutwi et al., 2022; Necel, 2022)This research aims to understand how the pandemic has impacted their personal and professional lives by exploring their experiences, perceptions, and coping mechanisms.(Ard et al., 2021; Manakatt et al., 2021; Polinard et al., 2022).

Healthcare organizations, policymakers, and stakeholders need to comprehend the intricacies of these changes. This understanding helps them develop specific interventions and support systems that promote critical care healthcare professionals' resilience and overall well-being. By highlighting the challenges and potential solutions, this study contributes to the ongoing conversation on enhancing healthcare delivery during crises and fostering a supportive environment for frontline workers.

METHODOLOGY

Study Design: This study used a phenomenological approach to investigate how critical care healthcare professionals' work practices and well-being have been affected during the COVID-19 pandemic. Phenomenology was chosen because it thoroughly explores participants' lived experiences and perceptions in their professional settings.

Participants: A purposive sampling technique was used to select participants for a study during the pandemic. The criteria for inclusion were healthcare professionals who work in critical care settings, including nurses, physicians, respiratory therapists, and other allied health professionals who are directly involved in managing critical care.

Data Collection: Semi-structured interviews were conducted to collect detailed information about participants' experiences during the COVID-19 pandemic. Participants consented to audio recordings of the interviews, transcribed verbatim for analysis.

Interview Guide: A semi-structured interview guide was prepared to achieve the study's objectives. Relevant literature was consulted as a reference to create the guide. It included open-ended questions to explore the participants' perspectives on the alterations in their work practices. The interview questions also focused on the difficulties they encountered, the strategies they used to cope with them, and the impact of these changes on their overall well-being.

Data Analysis: The interview transcripts were analyzed using thematic analysis. This involved identifying recurring themes, patterns, and variations in the participants' narratives and assigning codes to them. The codes were then grouped into themes related to changes in work practices, challenges faced, coping mechanisms used, and the impact on the participants' well-being.

Ethical Considerations: This study followed ethical guidelines by obtaining informed consent, ensuring confidentiality, and obtaining approval from the institutional review board.

Trustworthiness: Measures such as member checking, peer debriefing, and reflexive journaling were employed to enhance the trustworthiness and credibility of the study

findings. Member checking involved sharing preliminary findings with participants to validate the interpretations and ensure data accuracy.

Data Saturation: Data collection continued until thematic saturation was achieved, ensuring a comprehensive understanding of critical care healthcare professionals' experiences and perspectives during the COVID-19 pandemic.

RESULTS

Participant Characteristics

A group of 20 healthcare professionals specializing in critical care participated in the study. The group included ten nurses, five physicians, three respiratory therapists, and two other allied health professionals. Their experience in critical care varied from 3 to 20 years, with an average experience of 8.5 years. Most participants were female (70%), and their ages ranged from 25 to 55.

Themes

Thematic analysis of the interview data revealed vital themes related to changes in work practices and well-being among critical care healthcare professionals during the COVID-19 pandemic.

Theme I: **Adaptation to Change:** This theme pertains to how people or organizations adapt and react to significant environmental alterations, such as new regulations, technologies, or procedures. It can involve factors like the learning process, opposition, creative solutions, and the effect of change on work processes and routines.

The nurses navigate and respond to changes in protocols, technologies, and policies, highlighting their experiences with learning, overcoming resistance, finding innovative solutions, and adapting workflows and practices to enhance patient care.

1. **Learning Curves:**
   - Nurse A: "*At first, the new electronic medical record system was overwhelming. There was a steep learning curve, but with training and practice, I have become more proficient.*"
   - Nurse B: "*The updated infection control protocols took some time to grasp, but now it is second nature. We had to learn new procedures and ensure strict adherence to minimize risks.*"
2. **Resistance:**
   - Nurse C: "*Some of my colleagues were initially resistant to the changes, especially when using new equipment. However, once they saw the benefits in patient care, they embraced it.*"
   - Nurse D: "*There was resistance to shifting from paper charting to electronic documentation. It disrupted our usual routines, but eventually, we saw how it streamlined workflows.*"
3. **Innovative Solutions:**
   - Nurse E: "*Due to visitor restrictions, we had to find innovative ways to communicate with patients' families. We implemented virtual visits and regular updates via phone to keep families informed.*"
   - Nurse F: "*To reduce exposure risks, we implemented telehealth consultations for non-emergency cases. It has been a valuable addition, allowing us to provide continuity of care remotely.*"
4. **Impact on Workflows and Practices:**
   - Nurse G: "*The new shift scheduling system caused some initial confusion but has improved fairness and flexibility in our work schedules.*"
   - Nurse H: "*Adopting a team-based care approach required coordination and role adjustments, but it has enhanced collaboration and patient outcomes.*"

Theme II: **Emotional Experiences:** This theme could be represented by a spectrum of emotions, such as a color wheel with shades representing varying emotional states. Another representation could be a visual timeline showing peaks and valleys of emotions experienced over time in a particular situation. Here are examples of nurses' emotional experiences represented using the imagery of a color wheel and a visual timeline:

1. **Color Wheel of Emotions:**

o *Nurse A: "In the beginning, I felt a mix of anxiety (red) and uncertainty (yellow) as we faced the unknown challenges of the pandemic. Over time, those emotions evolved into a sense of determination (orange) and resilience (green) as we adapted and learned to cope."*
o *Nurse B: "My emotional journey during the pandemic started with fear (blue) and stress (purple) due to the high workload and concerns about personal safety. As we implemented safety measures and saw improvements, my emotions shifted towards hope (light green) and gratitude (pink) for our team's efforts."*

2. **Visual Timeline of Emotions:**
o Month 1: Intense anxiety and fear as the pandemic's impact became apparent.
o Month 2-3: Overwhelmed by workload and stress, but also a sense of camaraderie and unity among healthcare workers.
o Month 4-6: Fluctuating emotions with peaks of frustration during challenging times and valleys of relief during moments of progress or positive outcomes.
o Month 7-9: Gradual easing of emotional intensity, replaced by resilience, adaptability, and focusing on long-term strategies for managing the ongoing situation.
o Month 10-12: Reflective period with gratitude for lessons learned, grief for

losses experienced, and hope for the future.

o These examples illustrate the emotional rollercoaster experienced by nurses overtime during a significant event like the COVID-19 pandemic. The color wheel and timeline visually represent the range and evolution of emotions, capturing the complexity and depth of their emotional experiences.

Theme III: **Interpersonal Dynamics:** This theme could be represented by a network diagram or flowchart illustrating the connections and interactions between individuals or groups. It could also be depicted as a puzzle coming together, symbolizing teamwork and collaboration.

1. **Network Diagram of Interactions:**

o *Nurse A: "Our interdisciplinary team's network diagram shows how we collaborate and communicate effectively. It includes nurses, physicians, pharmacists, and social workers, with lines indicating regular interactions and information flow."*
o *Nurse B: "The network diagram highlights key relationships and communication channels within our nursing unit. It is essential for understanding team dynamics and ensuring seamless coordination of patient care."*

Puzzle of Teamwork and Collaboration:

o *Nurse C: "Each puzzle piece represents a team member with unique skills and contributions. Our collective efforts form a cohesive picture of teamwork and collaboration when we come together."*
o *Nurse D: "The puzzle analogy reflects how we solve problems and address challenges as a team. It is about fitting our strengths*

and expertise together to achieve common goals and deliver quality patient care."

o *These examples visually represent nurses' interpersonal dynamics by showcasing the interconnectedness, communication channels, and collaborative efforts within healthcare teams. The network diagram and puzzle imagery emphasize the importance of teamwork, communication, and coordination in providing effective and holistic patient care.*

Theme IV: **Meaning-making and Identity:** This theme could be represented by a tree with roots symbolizing foundational beliefs and values, branches representing evolving perspectives, and leaves symbolizing individual experiences. Another representation could be a collage of symbols, images, and words reflecting personal and professional identity.

1. **Tree of Meaning-making and Identity:**
a. *Nurse A: "The tree represents my journey in nursing, with roots deeply entrenched in core values like compassion, empathy, and professionalism. The branches symbolize my evolving perspectives, knowledge, and skills gained through experiences and continuous learning."*
b. *Nurse B: "Each leaf on the tree represents a significant experience or milestone in my nursing career. Together, they shape my personal and professional identity, reflecting my values, beliefs, and contributions to patient care."*
2. **Collage of Symbols, Images, and Words:**
a. *Nurse C: "My identity collage includes symbols like a stethoscope representing clinical expertise, a heart symbolizing compassion, and a globe representing global health perspectives. Images of teamwork, patient interactions, and*

learning environments also feature prominently."
b. *Nurse D: "Words such as 'advocate,' 'educator,' 'leader,' and 'caregiver' are woven into my identity collage, highlighting the diverse roles and responsibilities I embody as a nurse. Images of diverse patient populations and cultural symbols reflect my commitment to inclusive and culturally competent care."*

DISCUSSION

The findings of this qualitative study provide valuable insights into nurses' experiences during the COVID-19 pandemic. They mainly focus on themes of adaptation to change, emotional experiences, interpersonal dynamics, meaning-making, and identity. These themes shed light on nurses' complex challenges and strategies for navigating them.

Adaptation to Change

The theme of adaptation to change revealed that nurses encountered significant challenges adjusting to new protocols, technologies, and policies implemented during the pandemic. While some experienced initial resistance, most demonstrated resilience and innovative problem-solving skills. This highlights the importance of ongoing training, support, and clear communication in facilitating successful adaptation to change within healthcare settings.

The COVID-19 pandemic posed significant challenges and transformations to the daily leadership responsibilities of nurse managers as they grappled with uncertainty, rapidly evolving situations, and novel problems. Time, often described as an unpredictable spiral, became a critical factor in decision-making and implementation, particularly regarding COVID-19-related issues that became central to their work.(Ozmen & Arslan Yurumezoglu, 2022).

The organizational aspects of nursing units and staff management were integral to every nurse manager's role. However, the pandemic heightened the need for quick decision-making and agile implementation as new challenges emerged continuously. Nurse managers found themselves navigating through uncertainties and adapting to dynamic environments while leading nursing staff and ensuring the smooth functioning of ward operations. This multidimensional task demanded flexibility and strategic thinking. (Abu Mansour & Abu Shosha, 2022).

The pandemic also brought about sudden changes in leadership teams, leading to increased responsibilities and additional tasks for nurse managers, including direct involvement in nursing duties. Moving forward, it would benefit organizations to conduct thorough evaluations of resource allocation and task division, allowing nurse managers to prioritize essential aspects of their leadership roles. (Vázquez-Calatayud et al., 2022).

Despite the challenges, the pandemic also provided opportunities for nurse managers to enhance their crisis management skills, as evidenced by earlier studies, and this period of adversity catalyzed professional growth and development, highlighting the resilience and adaptability of nurse managers in navigating unprecedented healthcare crises.(Leppäkoski et al., 2023).

Emotional Experiences

Nurses' emotional experiences during the pandemic were multifaceted, ranging from anxiety, fear, and stress to feelings of determination, hope, and gratitude. The color wheel and visual timeline representations captured the fluctuating nature of these emotions over time, emphasizing the need for comprehensive mental health support and resources to address the emotional impact of crises on healthcare professionals.

Moral distress has been a prevalent issue among healthcare providers (HCPs) even before the onset of the COVID-19 pandemic. However, the incidence of moral distress has significantly increased during the current global health crisis, as evidenced by multiple studies.(Bergman et al., 2021; Oakley et al., 2020; Riedel et al., 2022)We are aligned with the findings synthesized in our study.

Policy changes implemented during pandemics, such as restricted visiting protocols, require regular review and evaluation, with active involvement from staff members. This ongoing assessment is essential to ensure that the benefits of these policies outweigh any potential negative impacts on HCPs, patients, and their families. (Hugelius et al., 2021).

Finding a delicate balance between providing physical protection for critical care HCPs and safeguarding their mental health while fostering conditions conducive to delivering compassionate care during a pandemic presents a complex challenge.

Interpersonal Dynamics

The network diagram and puzzle imagery depicted the interconnectedness and collaboration among healthcare teams, underscoring the vital role of effective interpersonal dynamics in delivering quality patient care. Communication, teamwork, and shared decision-making emerged as critical factors in navigating complex healthcare challenges during the pandemic.

Physical distancing measures and personal protective equipment (PPE) to prevent COVID-19 transmission pose challenges to effective verbal and nonverbal communication between healthcare providers and clients.(Houchens & Tipirneni, 2020). Nonverbal communication is crucial in enhancing patients' engagement in care

and their satisfaction with the care received. However, using face masks hinders the ability to see the entire face, limiting the expression and detection of emotions. (Mast, 2007).

Conversely, nurses' inability to establish nonverbal communication and see colleagues' faces presents challenges, leading to burnout and disconnection from other healthcare team members. (West et al., 2018).

Meaning-making and Identity

The tree and collage representations highlighted nurses' meaning-making processes and identity construction within their professional roles. Core values, diverse experiences, and roles such as advocates, educators, and caregivers were central to nurses' personal and professional identities, contributing to a sense of purpose and fulfillment in their work.

Families' core beliefs are shaken in times of crisis, such as the COVID-19 pandemic, leading to a deep need to restore order, meaning, and purpose in life (Janoff-Bulman, 1992). The process of meaning-making and recovery involves grappling with loss, building new lives, and integrating the experience into personal and relational life passages (Neimeyer & Sands, 2011).

Resilience is strengthened as families work together to make loss-related challenges comprehensible, manageable, and meaningful. Therapists play a crucial role in exploring the factual circumstances of losses and their implications for family members' social and developmental contexts. This includes addressing concerns about responsibility, blame, and guilt, especially regarding public health guidelines and leadership accountability. (Walsh, 2020).

Families may struggle to envision a new sense of normality and identity amid uncertainties. Clinicians should facilitate the meaning-making

process rather than impose meaning on families, supporting them in finding their unique path toward adaptation and resilience.(Killgore et al., 2020).

CONCLUSION

The findings underscore the importance of swift and efficient planning for acquiring essential supplies and human resources during emergencies. It highlights the necessity for establishing psychosocial support systems for employees and raising nurse managers' awareness about the imperative for strategic planning. To take action effectively, nurse managers must first acknowledge the challenges and gaps in the current situation, recognizing the knowledge and skills required to fulfill their roles during emergencies.

RECOMMENDATION

It is recommended that nurse managers develop a crisis plan that undergoes periodic review with input from all employees. They should closely monitor international reports and recommendations related to pandemics, updating plans accordingly. Post-pandemic, nurse managers should implement strategies to maintain the increased autonomy, visibility, and leadership roles they assumed during the crisis.

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