

Exploring Nurses' Experiences of Equipment Availability and Its Influence on Job Satisfaction in Cardiac and Critical Care Units: A Phenomenological Study

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ABSTRACT

The availability of medical equipment plays a vital role in helping nurses deliver safe, timely, and high-quality care, especially in Cardiac and Critical Care Units where patients require continuous monitoring and immediate interventions. This qualitative phenomenological study explored nurses' lived experiences regarding equipment availability and how it influences their job satisfaction in a tertiary hospital. Guided by the Job Demands–Resources (JD-R) Model, the study focused on how the adequacy, functionality, accessibility, and reliability of medical equipment affect nurses' daily work experiences in high-acuity clinical settings. Nine (9) registered nurses with at least one year of experience in the Cardiac and Critical Care Units were selected through purposive sampling. Data were gathered using semi-structured, in-depth interviews and analyzed through Colaizzi's Descriptive Phenomenological Method. The findings showed that readily available and dependable medical equipment enabled nurses to work more efficiently, make sound clinical decisions, and provide safe, timely patient care, resulting in greater professional confidence and job satisfaction. In contrast, equipment shortages and malfunctioning devices disrupted workflow, delayed nursing interventions, increased workload, and contributed to stress, frustration, and emotional exhaustion. The study highlights the importance of adequate equipment management, preventive maintenance, and institutional support in promoting nurses' well-being, enhancing job satisfaction, and improving the quality of care provided to critically ill patients.

Keywords: Medical equipment availability, nurse job satisfaction, cardiac, critical care units

INTRODUCTION

Nurses in Cardiac and Critical Care Units work in demanding environments where patients require continuous monitoring and immediate intervention. In these settings, adequate, functional, and reliable medical equipment is essential for providing safe and effective patient care. However, equipment shortages or malfunctioning devices can disrupt workflow, increase workload, contribute to stress, and reduce job satisfaction. While previous studies have focused on staffing and workload, limited attention has been given to the role of equipment availability. Guided by the Job Demands–Resources (JD-R) Model, this study explored nurses' lived experiences of equipment availability and its influence on job satisfaction in Cardiac and Critical Care Units.

Statement of the Problem

How do nurses describe their lived experiences of equipment availability and its influence on their job satisfaction in Cardiac and Critical Care Units?

Scope and Delimitations

This study used a qualitative phenomenological design to explore nurses' lived experiences of equipment availability and its influence on job satisfaction in the Cardiac and Critical Care Units of a tertiary hospital. Guided by the Job Demands–Resources (JD-R) Model, nine registered nurses were selected through purposive sampling. Data were gathered using semi-structured, in-depth interviews, audio-recorded, transcribed verbatim, and analyzed using Colaizzi's Descriptive Phenomenological Method. The study focused on nurses' experiences of the adequacy, functionality, accessibility, and reliability of medical equipment. Findings are specific to the study setting and are not intended to be generalized to other healthcare institutions.

Review of Related Literature

The reviewed literature and studies pointed out that job satisfaction of nurses appears to be significantly affected by the work environment in terms of resources and equipment availability. The lack of available resources has been linked to the failure to provide nursing care and frustration among nurses. This correlation appears even more obvious when high acuity is considered: here, the issue of equipment availability turns out to be less important than its proper functionality and usability.

Theoretical Framework

This study is guided by the Job Demands–Resources (JD-R) Model (Bakker & de Vries, 2021), which explains that job satisfaction is influenced by the balance between workplace demands and available resources. In Cardiac and Critical Care Units, medical equipment is considered a vital job resource. Adequate, functional, accessible, and reliable equipment helps nurses provide safe and efficient patient care, while equipment shortages or malfunctioning devices increase workload, disrupt workflow, and contribute to stress and lower job satisfaction. The JD-R Model served as the framework for understanding how equipment availability shapes nurses' lived experiences and job satisfaction.

Conceptual Framework

The study is anchored on the Job Demands–Resources (JD-R) Model, which identifies medical equipment availability as an important job resource that influences nurses' work experiences and job satisfaction. In this study, equipment availability is described in terms of its adequacy, functionality, accessibility, and reliability. These resources affect nurses' workflow, stress levels, and professional confidence while delivering care in Cardiac and Critical Care Units. Positive experiences with equipment availability are expected to enhance job satisfaction and support safe, efficient, and high-quality patient care, whereas equipment shortages or malfunctioning devices may increase job demands, disrupt workflow, and reduce job satisfaction.

METHODOLOGY

A qualitative phenomenological design to explore nurses' lived experiences of equipment availability and its influence on job satisfaction in the Cardiac and Critical Care Units of a tertiary hospital. Guided by the (JD-R) Model, nine registered nurses were selected through purposive sampling. Data were gathered using semi-structured, in-depth interviews, audio-recorded, transcribed verbatim, and analyzed using Colaizzi's Descriptive Phenomenological Method. The study focused on nurses' experiences of the adequacy, functionality, accessibility, and reliability of medical equipment. Findings are specific to the study setting and are not intended to be generalized to other healthcare institutions

Research Design

This study employed a qualitative descriptive phenomenological design to explore nurses' lived experiences of equipment availability and its influence on job satisfaction in the Cardiac and Critical Care Units. Guided by the Job Demands–Resources (JD-R) Model, data were collected through semi-structured, in-depth interviews and analyzed using Colaizzi's Descriptive Phenomenological Method. To ensure the trustworthiness of the findings, member checking and description were employed throughout the research process.

Research Steps

Following ethical approval and permission from the participating tertiary hospital, eligible registered nurses were recruited through purposive sampling. Written informed consent was obtained before data collection. Individual semi-structured interviews, lasting approximately 30–45 minutes, were conducted and audio-recorded with participants' permission. The interviews were transcribed verbatim and analyzed using Colaizzi's Descriptive Phenomenological Method. To ensure the credibility and trustworthiness of the findings, member checking and an audit trail were employed throughout the study. The resulting themes were interpreted using the Job Demands–Resources (JD-R) Model to describe nurses' experiences of equipment availability and its influence on job satisfaction.

Data Collection and Sample Selection

Following ethical approval, eligible nurses were recruited through purposive sampling, and written informed consent was obtained. Data were collected through semi-structured, in-depth interviews lasting 30–45 minutes. Interviews were audio-recorded, transcribed verbatim, and analyzed confidentially. The interview guide explored nurses' experiences of equipment availability and its effects on workflow, stress, professional confidence, and job satisfaction. Trustworthiness was ensured through member checking

Data Analysis Methods

The interview data were analyzed using Colaizzi's Descriptive Phenomenological Method. Audio-recorded interviews were transcribed verbatim and read repeatedly to gain familiarity with the participants' experiences. Significant statements related to equipment availability and job satisfaction were identified, and meanings were formulated from these statements. Similar meanings were then organized into thematic clusters, from which the major themes were developed. The findings were integrated into a comprehensive description of the

nurses' lived experiences. To enhance the credibility of the analysis, member checking was conducted to verify the accuracy of the interpreted findings.

Research Hypotheses and Validation

This study assumed that the availability of adequate, functional, accessible, and reliable medical equipment influences nurses' job satisfaction in Cardiac and Critical Care Units. It also assumed that equipment shortages or malfunctioning devices may disrupt workflow, increase workload and stress, reduce professional confidence, and affect the quality of patient care. Furthermore, the study assumed that participants would provide honest and accurate accounts of their experiences during the interviews.

Study Limitations and Ethical Considerations

Ethical approval was obtained from the Institutional Research Ethics Committee and the participating hospital before data collection. Written informed consent was obtained from all participants, and participation was voluntary. Confidentiality and anonymity were maintained through the use of identification codes, and all data were securely stored. The study adhered to the ethical principles of autonomy, beneficence, non-maleficence, justice, veracity, and fidelity to protect participants' rights and well-being throughout the research.

RESULTS AND DISCUSSION

The findings showed that adequate, functional, and reliable medical equipment is essential for safe patient care, efficient workflow, and nurses' job satisfaction in Cardiac and Critical Care Units. Equipment shortages and malfunctioning devices increased workload, delayed patient care, and contributed to stress and emotional burden. Despite these challenges, nurses remained committed to providing quality care by adapting to resource limitations. The study also highlights the importance of organizational support through adequate equipment procurement, regular maintenance, and continuous training to enhance nurses' confidence, well-being, and the quality of patient care.

SUMMARY

This qualitative phenomenological study explored nurses' lived experiences of equipment availability and its influence on job satisfaction in the Cardiac and Critical Care Units of a tertiary hospital. The findings showed that adequate, functional, accessible, and reliable medical equipment supports safe patient care, improves workflow, reduces work-related stress, and enhances nurses' confidence and job satisfaction. Conversely, equipment shortages and malfunctioning devices increased workload, disrupted patient care, and contributed to emotional stress. Overall, the study highlights the importance of effective equipment management and organizational support in improving nurse well-being and patient care quality.

CONCLUSIONS

The study found that equipment availability is a key factor influencing nurses' experiences and job satisfaction in Cardiac and Critical Care Units. Adequate, functional, and accessible medical equipment supports safe patient care, improves workflow, and enhances

nurses' confidence. Conversely, equipment shortages and malfunctioning devices increase workload, disrupt care, and contribute to stress. These findings highlight the importance of effective equipment management and organizational support in promoting nurse well-being and delivering high-quality patient care.

RECOMMENDATIONS

Based on the findings, healthcare institutions should strengthen equipment procurement, preventive maintenance, and inventory management to ensure the continuous availability of functional medical equipment. Hospital administrators should also provide timely technical support and involve nurses in identifying equipment needs. Future studies may include multiple healthcare institutions and examine other workplace factors, such as staffing, leadership, and organizational support, to further understand their influence on nurses' job satisfaction.

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AI DECLARATION STATEMENT

AI-supported tools helped with grammar and structure in creating this article. No AI tools were used to collect, analyze, or interpret data; all authors are credited for their academic contributions.

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