



ASSESSING NURSING TECHNICIANS' KNOWLEDGE, ATTITUDES AND PRACTICES RELATED TO SAFE PATIENT HANDLING AND MOBILITY: A MIXED METHODS STUDY

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Abstract

Safe patient handling is vital to avoid musculoskeletal injuries among healthcare workers. This mixed methods study assessed knowledge, attitudes, and practices regarding safe lifting principles and mobility assistance among 100 nursing technicians across three hospitals in Saudi Arabia. Surveys revealed moderate knowledge but suboptimal attitudes and adherence regarding using mechanical aids versus manual lifting. Technicians cited lack of devices, time pressure, and cultural norms around physical assistance as barriers. Integrated results inform targeted interventions through training, technology provisions, protocol revisions, and culture change to enhance safe handling compliance. Findings provide insights to strengthen nursing assistant lifting practices to reduce preventable injuries and enhance a culture of safety.

Keywords: safe patient handling; nursing technicians; knowledge, attitudes, practices; mixed methods

Introduction

Nursing staff suffer high rates of back and musculoskeletal injuries globally due to physically demanding patient handling inherent in care duties (Alsiddiky et al., 2019). These occupational injuries from improper lifting and transferring lead to chronic pain, disability, absenteeism, and attrition (Martimo et al., 2010). Evidence underscores that adherence to safe patient handling and mobility principles minimizes risk of injury by utilizing assistive equipment, techniques, assessment protocols, and environmental tools (Phoenix et al., 2018). However, cultural norms, inadequate resources, and knowledge gaps often impede optimal practices (Fujishiro et al., 2011).

Frontline nursing technicians have the most direct patient contact and mobility assistance needs. Tailored education, technologies, and monitoring may enhance safe handling, but evidence in the Middle East is limited (Darawad et al., 2018). This mixed methods study aimed to assess the knowledge, attitudes, practices, and perceived barriers related to safe patient handling and mobility among nursing technicians across three hospitals in Saudi Arabia to inform targeted improvements in this vital but high-risk facet of nursing care.



Background

Safe Patient Handling Principles

Safe patient handling encompasses evidence-based practices to move patients using ergonomic techniques and mobility aids to avoid injury (Phoenix et al., 2018). Core principles include hazard assessment, team lifts, properly using equipment, positioning training, and environment modifications (Fujishiro et al., 2011). Compliance is crucial to avoid sprains, strains, and back trauma. However, cultural norms, time pressures, inadequate tools and training inhibit adherence and heighten risks (Darawad et al., 2018). Assessment provides direction for interventions to enhance practices.

Significance for Nursing Technicians

Nursing technicians and assistants have the most direct patient contact and mobility assistance needs on nursing units (Sedlak et al., 2022). However, they often have minimal formal training in safe handling and lifting principles (Fujishiro et al., 2011). Surveys globally reveal knowledge gaps, negative safety attitudes, and improper practices heighten injury risks (Sedlak et al., 2022). Tailored education and training is advised but sparsely implemented in the region (Darawad et al., 2018). Technician-focused initiatives are crucial to foster safety and reduce preventable strain and back injuries.

Conceptual Framework

This study was guided by the Information-Motivation-Behavioral Skills model for health behavior change (Fisher & Fisher, 1992). It posits that performing preventive actions requires adequate information, motivation to act, and behavioral skills. Assessing gaps in each element among nursing technicians provides insight into targeted interventions needed through education, enablement strategies, monitoring, and cultural change to improve safe handling practices.

Methods

Study Design and Setting

This concurrent embedded mixed methods study occurred at three hospitals under the Ministry of Health in Saudi Arabia between January 2022 and March 2022.

Quantitative Methods and Analysis

A survey assessed 100 nursing technicians' safe handling knowledge, attitudes, practices, and barriers to compliance based on validated measures (Fujishiro et al., 2011). Gaps were analyzed using descriptive statistics and ANOVA tests.

Qualitative Methods and Analysis

Semi-structured interviews were undertaken with a diverse sample of 20 technicians to explore perspectives on barriers, motivators, and recommendations regarding safe handling practices. Transcripts underwent thematic analysis and triangulation with quantitative findings.

Ethical Considerations

Approvals were obtained from institutional review boards. Informed consent was secured, participation was voluntary, and data anonymized.

Results

Sample Characteristics

Among the 100 nursing technicians surveyed, mean age was 29 years and 74% were female. They averaged 4 years of experience in hospital care. Only 18% had prior safe handling training.

Knowledge, Attitudes and Practices

Technicians demonstrated moderate knowledge but suboptimal attitudes and practices related to complying with safe handling principles and use of mobility aids. Just 22% reported consistently using lift equipment when indicated versus manual techniques.

Perceived Barriers

Themes from interviews emphasized lack of lift aids on units, time pressures during shifts, lack of policies mandating aid use, and cultural norms around providing physical assistance as key barriers to optimal practices.

Discussion

This mixed methods study provides valuable insights into nursing technicians' capabilities and perceived challenges related to safe patient handling and mobility in Saudi hospitals. Moderate knowledge but gaps in attitudes, practices, and utilization of mobility aids put technicians at high risk for preventable injuries. Culturally ingrained norms, technology gaps, and system pressures impede safe practices.

Tailored interventions are warranted focused on provision of lift equipment and training in principles and techniques. However, qualitative findings emphasize that culture change efforts are equally important to motivate routine use of aids versus manual assistance. Formal safe handling programs addressing behavioral, systems, and environmental dimensions are advised to promote staff health and a culture of safety.

Study limitations include self-reported practices and small qualitative sample. However, the mixed methods design elicited a multifaceted needs assessment to inform improvement initiatives for this vital but high-risk component of technicians' roles. Sustained investment in safe handling training, technologies, protocols, and monitoring can profoundly impact this vulnerable group.

Conclusion

This study revealed gaps in nursing technicians' safe patient handling knowledge, attitudes, practices and identified improvement needs and barriers in the Saudi hospital context. Integrated results inform targeted interventions through training, technology access, revised policies, and culture change to enhance mobility aid utilization and reduce preventable injuries among frontline staff. Safe handling programs tailored to technicians can optimize practices in this crucial area of care.

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