Obstetric Nurses' Perception and Assessment of Work-Related Musculoskeletal Disorder Risk: A Mixed-Methods Study

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Abstract

Introduction
The occupational health literature documents a high prevalence of work-related musculoskeletal disorders (WMSDs) among healthcare professionals, with nurses consistently identified as the occupational group at greatest risk. The etiology is recognized as multifactorial, combining biomechanical demands (such as patient handling and transfer maneuvers) and psychosocial factors (e.g., work pressure), often exacerbated by organizational constraints including understaffing and inadequate material resources. This synergy of risk factors constitutes a primary determinant of increased absenteeism, premature workforce attrition, and elevated turnover rates. Consequently, systematic ergonomic risk assessment, coupled with critical analysis of high-demand tasks, is imperative to inform evidence-based primary and secondary prevention strategies.

Objective
To analyze obstetric nurses' perceptions of WMSD risks and objectively assess the risk level of postures adopted during clinical practice.

Methods
A convergent mixed-methods study was implemented, integrating Photovoice and ergonomic analysis. Activities perceived as high-risk for WMSDs were photographically documented by obstetric nurses, followed by narrative interviews to extract their risk perceptions. The same photographic corpus was then subjected to objective ergonomic assessment using the REBA (Rapid Entire Body Assessment) tool to determine postural risk levels.

Results
Twenty obstetric nurses participated (95.8% female; mean experience 24.55 years). REBA analysis revealed that 65.3% of postures (10.5% very high risk; 54.8% high risk) required immediate intervention, with no low-risk postures identified. Confined spaces, inadequate equipment, work organization, and job demands were identified as key risks, reflecting nurses' expressed concerns.

Conclusion
The convergence between subjective perception and objective assessment confirms the high-risk nature of obstetric work. These findings underscore the urgent need for targeted ergonomic and organizational interventions to mitigate WMSD risks and confirm obstetric nurses' risk awareness.

Keywords
Nurse Midwives; Perception; Occupational Health; Ergonomic; Occupational Injuries.

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