



Center for Advanced Design Research & Evaluation

Relationships Between Exterior Views and Nurse Stress: An Exploratory Examination

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ABSTRACT:

Objective: Examine the relationships between acute stress and alertness of nurse, and duration and content of exterior views from nurse work areas.

Background: Nursing is a stressful job, and the impacts of stress on performance are well documented. Nursing stress, however, has been typically addressed through operational interventions, although the ability of the physical environment to modulate stress in humans is well known. This study explores the outcomes of exposure to exterior views from nurse work areas.

Methods: A survey-based method was used to collect data on acute stress, chronic stress, and alertness of nurses before and after 12-hour shifts. Control measures included physical environment stressors (that is, lighting, noise, thermal, and ergonomic), organizational stressors, workload, and personal characteristics (that is, age, experience, and income). Data were collected from 32 nurses on 19 different units at two hospitals (part of Children's Healthcare of Atlanta) in November 2006.

Results: Among the variables considered in the study view duration is the second most influential factor affecting alertness and acute stress. The association between view duration and alertness and stress is conditional on the exterior view content (that is, nature view, non-nature view). Of all the nurses whose alertness level remained the same or improved, almost 60% had exposure to exterior and nature view.

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In contrast, of all nurses whose alertness levels deteriorated, 67% were exposed to no view or to only non-nature view. Similarly, of all nurses whose acute stress condition remained the same or reduced, 64% had exposure to views (71% of that 64% were exposed to a nature view). Of nurses whose acute stress levels increased, 56% had no view or only a non-nature view.

Conclusions: Although long working hours, overtime, and sleep deprivation are problems in healthcare operations, the physical design of units is only now beginning to be considered seriously in evaluating patient outcomes. Access to a nature view and natural light for care-giving staff could bear direct as well as indirect effects on patient outcomes. Key Words: Nursing, acute stress, alertness, natural light, nature view, patient safety, evidence-based design, healthcare architecture.

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