



KEY POINT SUMMARY

OBJECTIVES

The objective of this article was to outline the methods that were used to evaluate the project and its outcomes.

The researchers addressed three questions with regard to the old and new facilities:

1. Difference in nurse satisfaction
2. Difference in nurse workflow activities
3. Difference in the nurses' walking distance

Part 2: Evaluation and Outcomes of an Evidence-Based Facility Design Project

Krugman, M., Sanders, C., & Kinney, L. J. 2015 | *The Journal of Nursing Administration*. Volume 45, Issue 2, Pages 84-92

Key Concepts/Context

After a western academic hospital implemented the recommendations of an interdisciplinary team that combined the principles of Transforming Care at the Bedside (TCAB) and Evidence-Based Design (EBD), an evaluation was necessary. This article (Part 2) presents the evaluation of the project. A study of nurse satisfaction with their work environment, their activities and walking was examined in both the old and the new units. The authors conclude that the nurses were very satisfied with their new work environment even though there was no significant change in their activities and there was a slight increase in the distance they walked.

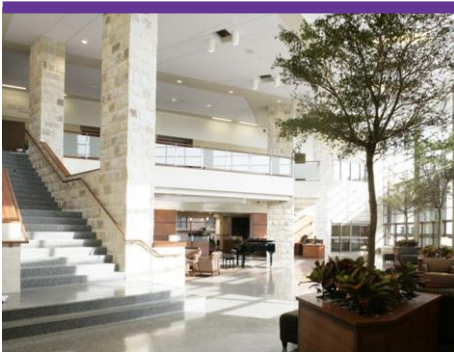
Methods

This study used three methods: survey, work sampling study (using PDA devices), and pedometer measurements to examine the above questions respectively. There were six study units. In the pre-move phase, 279 nurses participated, while in the post-move phase, 296 nurses participated.

Findings

Survey results indicated that the perceptions of the nurses about their work environment (post-move versus pre-move) had improved and these were statistically significant for 32 of the 41 items on the survey. According to survey data, nurses were more satisfied with the layout of the medication room, the design of the patient room, and separation of lockers (with shower facilities) from the break room in the new unit versus the old unit. However, nurses were not satisfied with the visibility in the hallway in the new unit and indicated they were walking more in the new units versus the older ones.

The PDA data compiled on nurse activity was divided into three broad categories – non-value-adding, value-adding, and necessary activities. The PDA data showed that there was very little change in nurse activity between the old and the new



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units. There was a slight decrease in non-value-adding activities units (the three ICUs), whereas in the two medical-surgical units and cardiac progressive care unit there was a slight increase in the non-value-adding activities. Only one unit showed a statistically significant decline in value-adding activities ($P=0.009$).

The pedometer data showed that between the old and new units nurse walking had increased, but not substantially.

Overall, the authors note the involvement of nurses and members from other departments in the design and building process of the project was very helpful and that combining EBD principles with those of TCAB brought strength and validity to the design decisions.

Limitations

The authors do not indicate their study to have any limitations. One limitation identified with the study pertained to the research participants; the article does not indicate whether the same research participants responded to both surveys – pre-move and post-move.

Design Implications

- Bathroom design to entail:
 - Shower benches and toilets capable of accommodating bariatric patients
 - Provision to communicate from inside the bathroom
 - Adequate lighting and counter space
- Patient room design to incorporate computers at bedside with seating facility for nurse
- Select carpets, soft tiles for floors, and noise-absorbing ceiling tiles for noise reduction and less staff stress
- Design of the medications room to consider:
 - Partial dividers to help reduce distractions
- Larger refrigerators
- Cabinets to have items for medications preparation
- Design staff locker rooms with shower and bathroom facilities and separate from break room

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