SYNOPSIS

# KEY POINT SUMMARY

## OBJECTIVES

This study assessed the changes in nurse perceptions of their job, hospital, and building features after the opening of a new hospital wing. It also assessed the impact on the nurses who remained in the existing facility. Finally, it examined ways that nurses could more effectively contribute to facility design decisions, particularly in areas that directly affect them. The researchers looked at four facets of the physical environment—quality of patient areas, quality of nurse workspaces, safety, and pleasantness of the facility—using three outcome variables—job stress, job satisfaction, and perceived service quality. They included three control variables (supervisor support, communication openness, and teamwork) to isolate the influence of the environmental variables.

# The Impact of Facility Improvements on Hospital Nurses

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## Key Concepts/Context

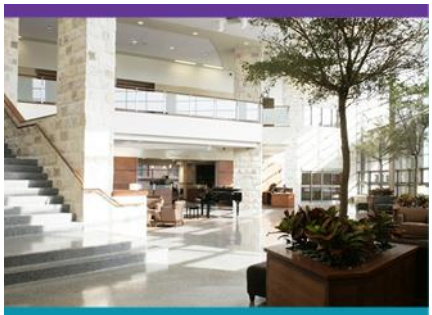
Despite the increase of research related to the design of healthcare facilities, studies of the impact of facility features on hospital staff are far less common than those that examine the impact on patients. Yet it is important to design healthcare facilities based on the best available evidence, especially given that hospitals require a significant capital investment and are the foundation for life-saving work.

## Methods

The researchers surveyed the hospital's nurses 6 months before (N = 235) and 6 months after (N = 238) some of the nurses (N = 65) moved to a new wing. Response rates were 49% and 55% for rounds 1 and 2, respectively. The investigators also conducted a test study 2 months postmove (N = 206) to examine the novelty effect. Finally, the researchers conducted focus groups after the second round of data collection.

## Findings

The design of the hospital impacts nurses and could affect their job satisfaction and stress, even whether or not her or she remains a hospital nurse. The researchers found that analysis of variance (ANOVA) using the pre- and postmove data showed that the nurses who moved to the new wing perceived a number of key variables more positively (based on mean scores) than did those nurses who remained in the existing facility. The investigators also reported significant differences in the quality of patient rooms, safety, pleasantness, quality of workspace, job stress, job satisfaction, and service quality.



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## Limitations

The authors point out that, because this study looked at only one hospital, generalizability of the results is limited. Further, in order to keep the responses anonymous, the nursing samples were not matched from round 1 to round 2, so the researchers could not track individual pre/postmove reactions. Finally, the authors state that measuring objective data—both nurse outcomes (e.g., turnover, absenteeism, medication errors, back injuries) and patient outcomes (e.g., falls, infection rates)—would support the perceptual data of this survey.

## Design Implications

The focus group interviews conducted with those who moved to the new wing (movers) and those who stayed were revealing in demonstrating the need for hospitals to obtain and use nurses' input in the design of new facilities. The beauty of the space is diminished when it does not function as needed. Movers in the focus group complained that the equipment storage space was poorly designed, that doors were difficult to open when their hands were full, and that the exit ramp for patients in wheelchairs was too steep. Facilities design research can include observing nurses' work habits in existing facilities and asking them about design features that facilitate or hamper their work and about what they need that is missing. Predesign research also can include staff preference surveys as well as creating drawings, physical models, and actual-size mockups of spaces (such as a patient room) and obtaining reactions and suggestions. Nor should research cease when a new facility opens, because at least some design mistakes are correctible. Most of the design concerns expressed in the movers' focus group could have been rectified early in the postoccupancy period.