



KEY POINT SUMMARY

OBJECTIVES

This study sought to determine if a scheduled quiet time in a pediatric acute care medical–surgical setting would reduce noise levels and the perceived level of parent and staff fatigue.

DESIGN IMPLICATIONS

Designers need to be aware of noise levels created in healthcare facilities and ways to mitigate this through space planning, equipment selection and location, as well as interior materials used.

Quiet Time in a Pediatric Medical/Surgical Setting

Cranmer, K., Davenport, L.
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Key Concepts/Context

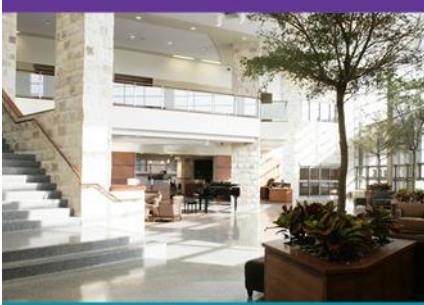
Despite being places for rest and healing, hospitals often are noisy places. These rising sound levels can be harmful and stressful for patients, caregivers, and staff, as well as contribute to an unsatisfactory environment in which to work and heal. In response, some intensive care units now have quiet time to reduce noise levels. However, little is known about the benefits of quiet time in a pediatric medical–surgical setting.

Methods

The researchers used a descriptive–correlational study design to explore the relationship between quiet time and noise levels as well as between quiet time and parent fatigue. Phase 1 included routine care and no quiet time. In Phase 2, staff implemented quiet time for 8 weeks.

The study used a convenience sample of 22 nurses and 52 parents. Because this was a descriptive pilot study, the researchers did not perform a power analysis. They set the parent sample size by the average length of stay at the hospital, which is 3 days. Since the study monitored three rooms over the course of 12 weeks, the investigators determined a sample size of 84 parents. There were three noise-monitoring rooms on a 29 bed medical–surgical floor. The researchers invited parents who were admitted to these rooms to take part in the study.

The researchers measured noise levels with a Spark 706RC noise dosimeter. They placed one dosimeter in the middle of the nurses' station and in each of the three patient rooms. They established baseline noise levels during Phase 1, four weeks before quiet time started. The research team recorded the decibel level every 60 seconds between 2:00 p.m. 4:00 p.m. The nurses completed the the Multidimensional Assessment of Fatigue (MAF) scale to establish baseline fatigue



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levels. In addition, at admission and discharge, a member of the research team asked the patient's parent to administer the MAF scale. Staff learned about the quiet time during regular staff meetings a week prior to Phase 1. On the fifth week of the study, Phase 2 began with quiet time that ran for 8 weeks. The research team collected data the same way as Phase 1. The nurses completed the MAF at the start of Phase 2 and at the end of Phase 2.

Findings

The researchers report that there were no statistically significant results from the MAF scale in the level of fatigue between Phase 1 and Phase 2. However, the authors found that parent fatigue levels decreased with quiet time. Staff fatigue levels also decreased throughout the length of the study.

Finally, the authors note that, although quiet time did reduce the average noise level in the nurses' station from 71.96 dB(A) in Phase 1 to 68.22 dB(A) in Phase 2, levels still measured above 40 dB(A), the recommended ranges established by the Environmental Protection Agency for day time.

Limitations

The authors note that the small sample size was the principal limitation of the study. They could not get adequate numbers due to low patient census on the floor as well as a length of stay that averaged only 3.4 days.

Another limitation was getting the parents to complete the discharge MAF scale because they didn't have enough time at discharge, forgot, or did not feel like filling out the scale.