



KEY POINT SUMMARY

OBJECTIVES

The objective of this study was to evaluate the impact of a changed ward environment on the levels of arousal and aggression in patients admitted to a PICU.

A study of agitation, conflict and containment in association with change in ward physical environment

Jenkins, O., Dye, S., & Foy, C. 2014 | *Journal of Psychiatric Intensive Care*. Volume 11, Issue 1, Pages 27-35

Key Concepts/Context

Patients in psychiatric intensive care units or PICUs can be a threat to themselves, staff, and other patients because of aggressive and agitated behavior. The authors allude to past research where such behavior has been attributed to age, gender, diagnosis, psychopathology, substance abuse, staff-patient interaction, as well as staff, patient, and environmental traits. After a new purpose-built PICU with single-patient rooms was opened in a new mental health hospital in the U.K., patients were transferred there from a 10-bed unit in an old psychiatric hospital. The purpose of this research was to evaluate the relation between a changed environment and levels of arousal and aggression among patients in a PICU. Data from the study suggested that the physical environment of the new unit impacted patient behavior.

Methods

A retrospective analysis of environmental and patient data before and after the move to the new unit was undertaken for this study. Patient data were collected for a period of three to six months preceding the move and for three to six months following the move. The physical environment of the old unit had been evaluated by the ward manager in 2006 and that of the new unit in 2012 using the Environment Assessment Inventory or EAI; EAI scores for both units were collected. Data collected included different indicators for arousal and aggression, seclusion data (number of incidents and number of patients), aggressive behavior data (number of incidents and number of patients involved) from the web-based DATIX database, and data on number of patients 'within eyesight' monitoring. Information pertaining to agitation and activity and conflict were obtained from the Nursing Observed Illness Intensity Scale (NOIIS), an objective measure of improvement in behavior and reduction in symptoms. Data were analyzed statistically (Mann-Whitney U-test, chi-square test, and univariate analysis of variance).



DESIGN IMPLICATIONS

It cannot be ascertained which physical design aspect(s) of the new unit contributed to the decrease in total duration of seclusion, number of seclusion incidents, number of patients secluded, and the number of reported aggressive incidents. However, the following four aspects were identified as critical factors affecting the unit's functioning: single patient rooms with en-suite bathrooms, separate areas for assessing patients in police custody, seclusion areas near nurse stations, and gender separate areas.

Findings

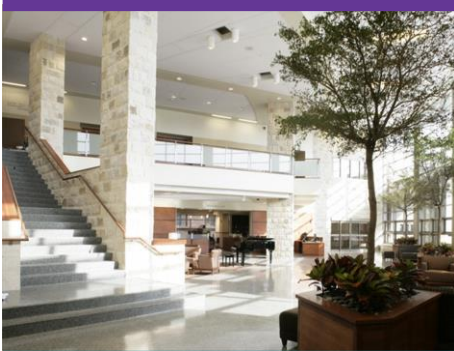
The study yielded the following findings:

Environment

The new unit, as assessed by the EAI, conformed to national minimum standards. The environmental features in the new unit included:

- Critical issues affecting unit functioning
 - Single-patient rooms with en-suite bathrooms
 - Separate areas for assessing patients held by the police
 - Separate seclusion area – closer to the nurses' station
 - Gender-separate areas
- Difficult issues – resolution difficult as major work to the building is required
 - All areas, including visitors' spaces observable from staff bases
 - Area for visiting children clearly designated
 - Spaces available to allow for more secure visiting
 - Access to activities room
- Serious issues – problematic, but require less funding
 - Solid doors – more than 50mm thick; opening outwards
 - All doors (other than toilets) have observation windows.
 - Observation windows for the bedrooms controllable from the outside for privacy
- Achievable issues – can be changed with fewer funds
 - Emergency buttons with audiovisual capability
 - Lockable bathrooms: can be overridden; fish eye panels
 - Quick release system for doors
 - Heat, light, and ventilation controllable by patients
 - Robust furniture and fittings

Patients:



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- There was a significant decrease in the total duration of seclusion, number of seclusion incidents, and the number of patients secluded in the new unit as compared to the old unit ($P < 0.001$).
- There was a significant decrease in the number of reported aggressive incidents in the new unit ($P < 0.001$).
- There was no significant difference in the data of the two wards when comparing the duration or number of patients under 'within eyesight' observation.
- The NOIIS data revealed that
 - There was no significant difference for conflict between the two units.
 - Agitation and activity - the new unit had lower scores for mornings, afternoons, nights, and overall, although the score was significant for mornings only ($P = 0.001$).

Limitations

The authors identify the following limitations in this study:

- Variable levels of NOISS data may have impacted the findings.
- Changes in the NOIIS data may not have been identified.
- There may have been differences in DATIX information and formally reported aggressive incidents.
- There was no scope within the study design to recognize which of the improved design features contributed to reducing aggression and arousal.

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