KEY POINT SUMMARY

OBJECTIVES

This study sought to understand the relationship between the level of physical activity among different user groups and garden design characteristics within pediatric hospital healing gardens.

DESIGN IMPLICATIONS

This research suggests that to facilitate physical activity within pediatric hospital gardens, the design of these spaces should include amenities for children, shading options, full plantings, and accessible walkways.

Research Note: Physical Activity in Pediatric Healing Gardens

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Key Concepts/Context

Research has shown that frequency and duration of garden use within urban and hospital settings can be hindered through barriers such as uncomfortable seating and lack of shade. However, once barriers like these are removed, it is unknown if an increase in frequency and duration of garden use has an impact on the level of physical activity during garden visitation.

Methods

For this study, five pediatric hospitals were selected based upon criteria for minimizing barriers to garden visitation found in literature. Using an exploratory data analysis strategy, this research utilized the Children Hospital Garden Audit Tool, shade maps, observation, and surveys to collect data. The Children Hospital Garden Audit Tool was used to assess the garden design characteristics through 92 items within the following seven categories: seats, location, amenities for children, design details and layout, planting, maintenance, and atmosphere. Each design category had a possible total of five points, and a standardized score was calculated for each. Garden shade maps were obtained on a sunny, spring day from 10 a.m. to 6 p.m., using two-hour intervals, on the same day observations took place. Observation was conducted relating to the level of physical activity observed in 82 staff, 53 children (32 patients and 21 visitors), and 49 adults, using categories derived from both the System for Observing Play and Leisure in Youth (SOPLAY) and the System for Observing Play and Recreation in Communities (SOPRAC). Level of physical activity was measured by the following three categories: (1) vigorous activity, (2) moderate physical activity, and (3) sedentary behavior. Observation for level of physical activity consisted of approximately 30 hours, scattered across weekday and weekend daytime hours, for each hospital, and was recorded by one observer. A survey questionnaire distributed to staff and visitors provided quantitative scores for garden use based on criteria of frequency and duration.

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Garden rankings based upon observation were obtained through Principal Component Analysis (PCA).

Findings

Descriptive analysis revealed gardens B and D supported more sedentary activities, while gardens A, C, and E supported more active behaviors. Gardens B and D were utilized mostly by staff on lunch breaks, and garden C reported the highest number of active family and patient visitors. Gardens D and E reported the least amount of use. Garden rankings based on visitor surveys aligned with rankings generated from observations. However, garden rankings based on staff surveys aligned with rankings generated from garden design scores. These findings support that gardens with greater amenities for children support higher levels of activity for longer durations.

Limitations

One limitation to this study is the small number of gardens compared to the large number of variables. Also, all of the gardens were located within the same geographic area (east Texas) and therefore may limit generalizability across other climates.