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## HEALTH BENEFITS OF INCLUDING NATURE WITHIN HOSPITALS

**Author's Title:** Evaluating a Children's Hospital Garden Environment: Utilization and Consumer Satisfaction

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**Year of Publication:** 2001

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### Design Issue

Conducted as a [post-occupancy evaluation](#) (POE), this study examined how [green space](#) (a garden area) within a hospital site affected users.

- Patients' stress levels increase in hospital environments, however exposure to natural settings has the ability to reduce stress and enhance the process of healing.

### Design Criteria

Author Identified:

When designing a garden area within a healthcare environment:

- Provide seating (chairs and benches) throughout the garden.
- Create screened-off areas within the garden for privacy and to provide calming scents from plants, such as rose bushes and jasmine.
- Provide areas and design features that are at a child's [scale](#); sandbox and potting area; a section for children to garden; and sensory stimulation such as water features and colorful surfaces (which will be [subject](#) to site location).
- Provide wheelchair access and post the locations of IV outlets.
- Consult the design review checklist for hospital outdoor spaces provided by Paine and Francis (1990).

### Key Concepts

- Hospitals can confuse and feel unfamiliar to new patients, causing stress for them and their families. Incorporating aspects of nature within this environment can be familiar and relaxing to these individuals (Kaplan & Kaplan, 1983).
- Gardens can help reduce stress by offering a place for individuals to be reflective (Cooper-Marcus & Barnes, 1999); they reduce health complaints by patients (Ulrich, 1984) and staff (Berderber, 1986).
- Ninety percent of adults who utilized the garden setting reported a positive change in mood after spending time there.
- The garden was a success for children with [autism](#) who found more visual interest in the natural environment than the hospital setting and was a positive distraction for children coming to the clinic for treatments of diseases such as cancer.

### Research Method

- A POE was conducted at the Leichtag Family Healing Garden at Children's Hospital and Health Center located in San Diego, California. Visual analysis, [behavioral observations](#), surveys, and interviews were used to gather [data](#).
- Visual analysis consisted of research into the history, description, and site plan of the garden.
- Behavioral observations of more than 200 people regarding: [demographics](#), [traffic](#) flow, activities, and time spent within the garden were observed and documented using [coding](#) sheets and the techniques of behavior tracking and [behavior mapping](#) (Cooper-Marcus & Francis, 1990).

- Eighty-three adults, 52 of which had either been to or heard about the garden, and 22 children, 13 of whom had been to the garden, were surveyed and interviewed, using measures previously developed by Cooper-Marcus and Barnes (1995).
- [Content analysis](#) determined the [frequencies](#) of specific answers given by adults that used the garden, both in the [survey](#) and [interview](#) procedures.

## Limitations

- Interview questions could have been open-ended, allowing for more in-depth responses related to why the garden was healing.
- The garden had a high concentration of hard surfaces, compared to vegetated areas.
- Warm weather at the site could have impacted garden users to prefer more shaded areas.
- Individuals who knew about the garden, but chose not to go there were insufficiently represented.
- Only a small percentage of chronically ill or handicapped individuals used the garden.

## Commentary

This study provides a look into human behavior within an existing green space at a healthcare setting, which might assist individuals who are interested in the benefits of gardens within hospitals.

## Adapted From

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**Article Title:** Evaluating a Children’s Hospital Garden Environment: Utilization and Consumer Satisfaction

**Publisher:** [Academic Press](#)

**Publication:** Journal of Environmental Psychology

**Publication Type:** Refereed Journal

**Date of Publication:** 2001

**Funder/Sponsor:** Intramural grant from Children’s Hospital and Health Center, San Diego

**ISSN:** 0272-4944

**Volume:** 21

**Issue:** 3

**Pages:** 301-314

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