



KEY POINT SUMMARY

OBJECTIVES

The objective of this study was to assess the perspective of patients on the waiting environments of outpatient areas in two hospitals.

Patients' Perspectives on the Design of Hospital Outpatient Areas

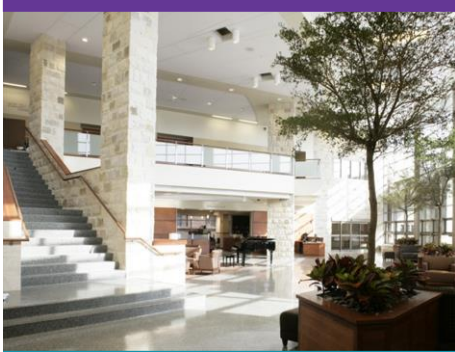
Zhao, Y., Mourshed, M., 2017 | *Buildings*, Volume 7, Issue 4, Pages 117

Key Concepts/Context

More and more designers and other stakeholders are emphasizing that the design of healthcare facilities need to be informed by patient perspectives. Authors indicate that even though the intent in the architecture and construction industry is to incorporate patient-centered design, there is little research reflecting the perspectives on the design factors in healthcare facilities. In this research a survey was administered to 400 patients in the waiting areas of the 22 outpatient departments of two hospitals in Qingdao, China. Statistical analyses found that patients consider all 16 aspects addressed in the questionnaire to be important to their waiting experience, with sensory aspects being particularly important.

Methods

This study involved a survey of patients using the waiting area in the outpatient department of two hospitals in Qingdao, China. The survey was developed after an extensive review of literature, interviews with patients, focus group sessions with patients, nursing and administrative staff, and a pilot survey administered to 19 outpatients. It asked patients to respond to questions on a 5-point Likert-type scale on cleanliness, air freshness, noise, thermal comfort, seating sufficiency, adequate illumination, spaciousness, daylight, seating comfort, architectural design, color scheme, indoor plants – interior/ exterior landscape, exterior view, art, furniture layout, and entertainment facilities. Of the distributed 400 surveys administered between August 12 and 26 of 2009, 337 were completed and returned. The hospitals' outpatient departments (where surveys were passed out) serves a daily average of 1500 patients. The waiting rooms in these departments were always packed with patients and families, necessitating some patients to wait in the corridor. Patients queued up to meet their care provider and had to focus on listening for their names to be called. The surveys were collected from patients visiting 22 outpatient departments. Principal Components Analysis (PCA), chi-



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square and non-parametric tests, and descriptive statistics were used to analyze the data.

Findings

The analyses of the responses revealed patients' perspective on individual aspects of physical design and five broad groups (which were determined using PCA) in the waiting area. The five principal factors identified were sensory, lighting and thermal, facilities, spatial, and seating design. Non-parametric tests revealed that perspectives on these five principal factors were impacted by gender, age, and number of visits:

- Female patients rated sensory aspects of air freshness, cleanliness, and noise higher (mean=4.45) than male patients (mean=4.15) Significance: p=0.046.
- Younger patients (18-25 years) considered seating to be more relevant (mean=4.14) than patients older than 50 years (mean=3.69) Significance: p=0.002.
- Patients who had visited the hospital more often rated seating design lower than patients who had visited fewer times. Significance: p=0.010.
- All five principal factors received a higher mean score by younger patients than patients over age 50.
- Older patients rated the sensory design factor (mean score=4.19) higher than the facilities design factor (mean score=3).

Female patients rated most of the 16 aspects higher than the male patients. Architectural design of the space, indoor plants, interior/ exterior landscaping, and seating comfort were aspects rated higher by men.

Patients rated all 16 aspects on the questionnaire (cleanliness, air freshness, noise, thermal comfort, seating sufficiency, adequate illumination, spaciousness, daylight, seating comfort, architectural design, color scheme, indoor plants – interior/ exterior landscape, exterior view, art, furniture layout, and entertainment facilities) higher than 3 (on a scale of 1- 5), indicating that these aspects did impact/ affect patient experience in the waiting area. The six aspects that received a mean rating of 4 or higher were:

- Cleanliness (mean=4.55)
- Air freshness (mean=4.53)
- Noise (mean=4.32)
- A thermally comfortable environment (mean=4.20)
- Seating sufficiency (adequate number of seats) (mean=4.18)
- Adequate illumination (natural and artificial lighting together) (mean=4.03)

Patients considered the following three aspects to be the least important; the mean being a little over 3:



- Entertainment facilities (mean=3.10)
- Furniture layouts (mean=3.17)
- Presence of coordinated art objects (mean=3.18)

Limitations

Authors identified the following limitations to their study: 1. It excluded respondents younger than 18 years; 2. The questionnaire excluded demographic information pertaining to education and income; 3. This study focused on urban hospitals and the findings cannot be generalized to hospitals in rural areas; 4. The responses from the incomplete surveys could not be included even though they may have included crucial information; 5. Bias cannot be completely ruled out in the survey responses.

Other limitations include: 1. The study was conducted in two hospitals, but the findings do not indicate this. 2. The tables list 22 outpatient departments; the authors do not mention the similarities or dissimilarities in these waiting areas; 3. It is mentioned that many of the patients were waiting in the corridor outside the waiting area, but the study does not tell how many of the respondents were waiting in the designated waiting area and how many in the corridor.

Design Implications

Given the exploratory nature of this study, it is difficult to infer concrete design implications. However, it may be noted that patients in outpatient departments of urban Chinese hospitals consider cleanliness, air freshness, noise, thermal comfort, sufficient seating, and adequate lighting (both natural and artificial) as important to their experience in waiting areas.

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