

HOSPITAL FURNITURE: EXPECTATIONS OF PATIENTS TOWARD FURNITURE IN HEALTHCARE SETTING

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ABSTRACT

Furniture plays an important role in healthcare setting. It creates a welcoming atmosphere to the patients and families as they enter the building. Furniture influences the feelings of the patients and visitors both negatively and positively, therefore attention on high quality with good furnishing design is needed. A cross sectional descriptive study design conducted in Outpatient departments (OPDs) and Inpatient department (IPDs) in a tertiary care hospital, Bangalore. Using checklist and questionnaire- based survey which includes 110 OPD patients and 70 IPD patients. The data was analysed using descriptive statistics. After obtaining the result, it was identified that majority of the respondents of both OPD and IPD patients showed that aesthetic, ergonomics and cleanability features are required and expected to incorporate in these areas. The study concluded that high quality design is needed to consider while selecting hospital furniture to maximize the quality of facilities in the organization.



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1. INTRODUCTION

Furniture is an integral part in Healthcare setting it creates a welcoming atmosphere to the patient and family as soon as they enter the organisation building. It offers them a place to reflect and relax, based on their personal situation. Waiting areas, reception and wards influence the feelings of the patient and visitor's both negatively and positively. It is also facilitates the good communication between the patient and physician, or providing staff to complete the task in an extra support and comfortable way. (Rodriguez, 2016).

The hospital environment was not usually a pleasant experience as the patient ended up spending the

maximum of their time on beds which accounts 95% during his/her hospital stay. While outpatient areas made use/utilized by a larger number of visitors, families and patients who can also lead to spending lots of unwanted times in this facility.

As the quality penetrated the healthcare sector very broadly, therefore many organisations work hard to bring forth a peaceful and comfort environment. But hospital faced challenges while selecting the furniture, which is mostly considered for patient Comfort, which take less consideration to Visitors/ attendants comfort. While in Outpatient department is mostly considered only strong and durable, where patients and their families are waiting often unappealing and uncomfortable, which can increase the feelings of stress and negative mind sets.

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Hospital also does not consider much regarding the cleanability of the furniture “Most of the hospital furniture is difficult to clean. Stretton (1915) complained that, “On examining some specimens of hospital furniture it will be seen that the manufacturers have left angles and depressions which act as receptacles for dirt and germ. (Malone, 2011)

2. OBJECTIVE

The objective of the study was to assess the existing furniture in a selected hospital and to analyse the expectation of the patient towards furniture.

3. MATERIALS AND METHOD

A cross sectional descriptive study was conducted in OPD and IPD areas in Tertiary care Hospital Bangalore for a period of 5 months from March 2019 to July 2019. Observation method with the use of checklist to assess the existing furniture in IPD (6 IPD areas were considered) and OPD (16 OPD areas were considered), the checklist was divided in to four parts (1) Assessment of Hospital furniture features (2) Assessment of Aesthetic features (3) Assessment of Ergonomic features (4) Assessment of Cleanability features.

To analyse the expectation of patient towards furniture, 110 OPD patients and 70 IPD patients were included. The data was collected using a questionnaire

A questionnaire consisted of two types i.e. OPD and IPD questionnaire (5 points likert scale) was frame and validated by the experts. The pilot study was carried for 10 OPD patients and 10 IPD patients and reliability test was run using Cornbach’s alpha. The value of the OPD questionnaire was 0.87 and IPD questionnaire was 0.86, which is reliable. The questionnaire was consisted of three sections (Section A- Expectation of patient on Aesthetic features, Section B- Expectation of patient on Ergonomic features, Section C- Expectation of patient on Cleanability features). The data was analysed using descriptive statistics.

4. RESULT

4.1 Assessing of the existing furniture In OPD areas

The study was conducted In OPD areas in a tertiary care Hospital, to assess the existing furniture with the use of checklist. While assessing the hospital furniture feature, the finding was that the chair seat height was not adjustable, not able to tilt, did not create comfortable space, ward furniture did not create minimize distraction, absence of wide sized furniture, age variation furniture and unique functionality of the chair also was absent which state that all of the parameters were 100% Non-compliance.

While assessing the aesthetic features of the OPD areas, it was found that the colours and styles of the available furniture did not create a pleasant look in which both the parameters were 100% non-compliance while harmonious appearance was 85% non-compliance.

While assessing the ergonomic features of the available furniture in OPD areas, it was found that the chair was not adjustable, back height, back angle , soft arm rest, arm height arm width, knee tilt were absent in which all of the parameters were 100% non-compliance while cushion seat was 64% non-compliance.

While assessing the cleanability features, it was found that there were no manufactures recommendations for cleaning method and policy for cleaning of OPD furniture. There was also absence of frequently cleaning with disinfectant of the OPD chairs in which all the parameters were 100% non-compliance.

4.2 Assessing of the existing furniture In IPD areas

This was conducted in Inpatient department in a tertiary care Hospital, Bangalore. While assessing the hospital furniture features, the findings showed that there was an absence of adjustable patient chair, wide sized furniture, age variation and unique functionality of the patient’s chair in which all the parameters were 100% non-compliance. Electronic buttons to operate the beds and the tilting features was 60% non-compliance. The availability furniture did not create a comfortable space and minimize distraction in which all the parameters were 40% non-compliance.

While assessing the aesthetic features of the IPD areas, it was found that the colours and styles of the available furniture did not create a pleasant look as well as harmonious appearance in which all the parameters were 100% non-compliance.

While assessing the ergonomic features of the available furniture in IPD areas, it was found that the chair could not adjusted, back height, back angle, soft arm rest, arm height arm width, knee tilt, cushion seat were absent in which all of the parameters were 100% Non-compliance.

While assessing the cleanability features, it was found that there was no manufacture recommendation for cleaning method and policy of cleaning of IPD furniture in which both the parameter were 100% non-compliance.

4.3 Analysis the expectation of OPD Patients regarding furniture

To analyse the expectations of OPD patients in a selected tertiary care Hospital, Bangalore, the findings showed that majority of the respondents said that aesthetic feature, ergonomic feature and cleanability feature were

required or expected to incorporate in OPD areas (Table 1). The average percentage of each was taken where 68% of the respondents showed that aesthetic feature was required, while 19% was neutral and 13% not required. Majority of the respondents i.e. 79% showed that ergonomic feature was required, while 13% was neutral and 8% not required. For cleanability feature, 78% of the respondents showed that it was required, while 17% was neutral and 5% not required.

While analysing the acceptable of the available features of the furniture in the OPD areas, the findings showed that 45% of the respondent did not accept which the aesthetic feature of the available furniture, 47% respondents did not accept the ergonomic feature of the available furniture while 43% respondents accepted the cleanability feature of the available furniture in OPD areas (Figure 1).

Table 1. Analyse of expectation of OPD patient towards furniture, N=110

PARAMETERS	REQUIRED	NEUTRAL	NOT REQUIRED
AESTHETIC FEATURES			
Modern Style/design of seating	71%	12%	17%
Waiting lounge furniture should be pleasing	68%	19%	13%
Colour of the furniture should be pleasant	67%	21%	12%
Furniture should arranged to Provide easy accessible for seating	65%	23%	12%
Average percentage of expectation of the aesthetic features by OPD patient	68%	19%	13%
ERGONOMIC FEATURES			
Comfort Seating design is required in the waiting Lounge	88%	6%	5%
Adjustable seating design required in the waiting lounge	77%	14%	9%
Backrest is required for a seating areas	81%	14%	5%
Cushion seat is required for a seating areas	74%	17%	9%
Arm rest is required for a seating areas	73%	16%	11%
Average percentage of expectation of the Ergonomics features by OPD patient	79%	13%	8%
CLEANABILITY FEATURES			
Cleanliness of the seating areas is required	87%	9%	4%
Pleasant look furniture is required	85%	11%	4%
Non – Porous seating design is required	71%	25%	5%
Smooth or no apparent gaps in the furniture is required	73%	19%	8%
Stain free fabric is required for furniture	75%	20%	5%
Average percentage of expectation of the Cleanability features by OPD patient	78%	17%	5%

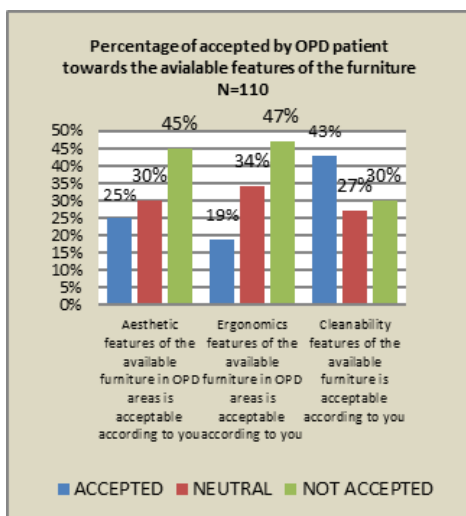


Figure 1. Percentage of acceptable OPD patient towards OPD furniture

Satisfaction of the OPD furniture

Out of 110 respondents 54% were not satisfied and 46% were satisfied with the overall OPD furniture.

4.4 Analysis the expectation of IPD Patients regarding furniture

The other findings for the expectations of the IPD patients in a selected tertiary care Hospital, Bangalore, majority of the respondents showed that aesthetic ergonomic and cleanability features were required or expected to incorporate in IPD areas (Table 2). The average percentage of each was taken i.e. 73% respondents accepted that aesthetic feature was required while 24% was neutral and 3% not required. For ergonomic feature, 83% respondents showed that it was required while 13% was neutral and 4% not required. For cleanability feature, Majority of the

respondents i.e. 92% showed that it was required while 7% was neutral and 1% not required.

While analysing the acceptable of the available features of the furniture in the IPD areas, the findings showed that 43% of the respondents were neutral to accept the

aesthetic feature of the available furniture in IPD areas. 41% respondents were also neutral to accept the ergonomic feature while 47% respondents were accepted the cleanability feature of the available furniture in IPD areas. (Figure 2)

Table 2. Analysis of expectation of IPD patient towards furniture, N=70

PARAMETERS	REQUIRED	NEUTRAL	NOT REQUIRED
AESTHETIC FEATURES			
Modern Style/design of is required in the Patient Room	74%	21%	4%
Patient room furniture should be pleasing	79%	20%	1%
Colour of the furniture should be pleasant	71%	27%	1%
Furniture should arranged to Provide easy accessibility for seating	69%	27%	4%
Average percentage of expectation of the aesthetic features by IPD patient	73%	24%	3%
ERGONOMIC FEATURES			
Adjustable patient bed is required	97%	1%	1%
Adjustable seating design required in patient room	93%	7%	0%
Comfort and flexible Seating design is required in the patient room	96%	3%	1%
Backrest is required for a design seating areas	91%	6%	3%
Cushion seat is required for a design seating areas	93%	4%	3%
well Function arm rest is required for a design seating areas	90%	6%	4%
Well function cardiac table is required?	87%	10%	3%
Does ages variation furniture required in IPD areas	59%	33%	9%
Does bariatric furniture required in IPD areas	43%	43%	14%
Average percentage of expectation of the Ergonomics features by IPD patient	83%	13%	4%
CLEANABILITY FEATURES			
Cleanliness of the seating areas is required	99%	1%	0%
Pleasant look furniture is required	94%	6%	0%
Non – Porous furniture is required	87%	11%	1%
Smooth or no apparent gaps in the furniture is required	89%	10%	1%
Stain free fabric is required for furniture	96%	4%	0%
Average percentage of expectation of the Cleanability features by IPD patient	92%	7%	1%

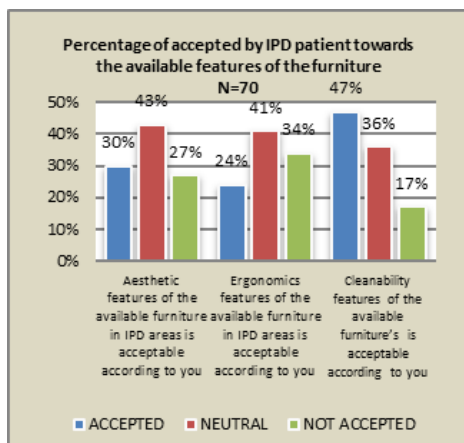


Figure 2. Percentage of accepted by IPD patient towards the available features of the furniture

Satisfaction of IPD furniture

53% of the respondents were satisfied with the available furniture in the patient’s room while 47% were not satisfied with the available furniture in patient’s room.

5. DISCUSSION

It was found that majority of the respondents of OPD areas showed that aesthetic, ergonomic and cleanability features were required to incorporate in OPD areas. It was found that 45% of the respondents did not accept the aesthetic feature and 47% did not accept the ergonomic feature in the OPD areas, while 43% of the respondents accepted the cleanability features. 54% of the respondents were not satisfied with OPD furniture. While comparing the study, An Evaluation of the Aesthetic

Surroundings in Hospitals by Patients conducted in Norway by Caspari (2007), the results in general showed that aesthetic surroundings are important for health and wellness according to the patients' opinion. The aesthetics in the hospital environment was evaluated and generally considered to be less than satisfactory by the patients. In another study conducted by Mogensen et al (2015) the findings where the patients' furniture preferences were diverse, although the majority prefer chair 1. From this preferred chair, the popularity dropped as the chair's home-like associations and the amount of textiles increase and it was also found that 79 % of the patients expressed an overall satisfaction regarding the existing Interior, while 21 % requested to have improvements.

The other finding from the study that was conducted in IPD areas in tertiary care Hospital, Bangalore to analyse the expectations of the patient toward furniture in IPD areas, were found that majority of the respondents in IPD areas showed that aesthetic, ergonomic and cleanability features were required to incorporate in IPD areas, 43% respondents were neutral in accepting the aesthetic features, 41% respondents were neutral in accepting for ergonomic features and 47% respondents accepted the cleanability features in IPD areas. 53% of respondent were not satisfied with IPD furniture, while comparing with the study conducted by Steelcase the researchers identified key issues that affect family wellbeing and engagement in a patient room i.e. Family Members Blocked From Critical Communications, Difficult Sleeping Conditions which Steelcase Health researchers

found that family members improvising their own "beds" using chairs, duffel bags and pillows.

6. CONCLUSION

The study was conducted in a selected tertiary care Hospital, Bangalore in OPD and IPD areas which included 110 OPD patients and 70 IPD patients. The major findings in the OPD areas was that majority of the respondents showed that aesthetic, ergonomic and cleanability features of the furniture were required to incorporate in OPD areas, most of the respondents were not accepted the available furniture in OPD and majority were not satisfied with the available furniture.

In IPD areas the findings was that majority of respondents showed that aesthetic, ergonomic and cleanability features were required to incorporate in IPD areas. Most of the respondents were neutral in accepted the available furniture in IPD and majority were satisfied with the IPD furniture.

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References:

- Antal, M., Domljan, D., & Horváth, P. (2017). Functionality and Aesthetics of Furniture - Numerical Expression of Subjective Value. *Drvna Industrija*, 67(4), 323-332. doi: 10.5552/drind.2016.1544.
- Caspari, S., Nåden, D., & Eriksson, K. (2007). Why Not Ask the Patient? An Evaluation of the Aesthetic Surroundings in Hospitals by Patients. *Quality Management In Health Care*, 16(3), 280-292. doi: 10.1097/01.qmh.0000281064.60849.a6
- The Impact Furniture And Ic+ Can Have On Infection Control. Retrieved 18 June 2019, from https://www.healthcentric.com/wp-content/uploads/downloads/2014/09/healthcentric_InfectionControl_web.pdf.
- Lorenzi, N. (2015). Trends in health care furniture. HFM. Retrieved 16 June 2019 from <https://www.hfmmagazine.com/articles/1567-trends-in-health-care-furniture>.
- Malone, E. (2011). Furniture Design Features and Healthcare Outcomes | The Centre for Health Design. Retrieved 9 May 2019 from <https://www.healthdesign.org/chd/knowledge-repository/furniture-design-features-and-healthcare-outcomes>.
- Mogensen, J. (2015). Interior design and healing architecture: A mixed method study on the patients' preferences for interior textiles and textile-based furniture for future hospitals. Retrieved from [https://research.shu.ac.uk/design4health/wpcontent/uploads/2015/07/D4H_Mogenson_et_al.pdf].
- Richards, T. (2018). Healthcare Design Trends Focus on Patient Experience. Retrieved 15 June 2019, from <https://www.chthealthcare.com/blog/healthcare-design-trends>
- Rodríguez, A. (2016). *Designing for Health: Insights for Selections of Furniture in Healthcare Spaces*. Retrieved 19 June 2019 from <https://www.contractdesign.com/practice/healthcare/designing-for-health-insights-for-selections-of-furniture-in-healthcare-spaces/>
- Selami Cifter, A., & Cifter, M. (2017). A Review on Future Directions in Hospital Spatial Designs with a Focus on Patient Experience. *The Design Journal*, 20(sup1), S1998-S2009. doi: 10.1080/14606925.2017.1352719

Steelcase. (2019). *How Patient Room Design Impacts Healthcare Environment - Steelcase*. Retrieved from <https://www.steelcase.com/research/articles/topics/healthcare/new-health-insights-family-face-unmet-needs/>

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