ABSTRACT

The built environment and the built-in space are the ‘habitat’ that accommodates, organizes, and facilitates the user’s spatial needs and behavior within the built structure. In healthcare, the current building types show the healthcare built environment and built space causing stress, affecting the users’ (primarily the patients, accompanying relatives and medical staff treating the patients) physical and psychological needs and finally impinging on their behavior and medical recovery process. This effect caused by the building is more significant in cancer care specialty hospitals, where users with high emotional stress caused by the fatality of their illness, seek for support and salutary ambience within the built environment apart from the Medicare support provided by the physicians. This detrimental effect on the user imposed by the building is unfavorable and unmeasured, hence, this research deals with the issue to inquire and trace the users’ needs, their interface within the built environment in cancer care hospital facilities. The focus of the research was to understand users’ preference and need for a therapeutic building design trace their behavioral response and eventually produce guidelines and recommendations for therapeutic cancer care built environment in the context of Chennai, Tamil Nadu.

To achieve this, the initial review of literature enquired into the users’ perception of the built environment, the physical requirements and psychological perspectives of the users (patient, relatives and staff). The
review explored aspects of the notion of a healing environment in cancer hospitals and the relationship between design and well-being. The initial investigation of the research identified and classified the therapeutic design aspects as per the Indian user needs, derived from the novice techniques, interviews with the experts and finally the literature review. Nine therapeutic aspects are categorized by statistical validation and correlation and are used as the prime data to further enquire and to identify its level of significance in a cancer care built environment by the following research methods and stages. An inquiry on the therapeutic aspects of the users’ needs for was conducted using feedback questionnaires on the five cancer care institutes/departments selected from Chennai, Tamil Nadu. In these case studies, the research focused on the space perceived and experienced by the users, namely, the outpatient area, the diagnostic area and the inpatient area.

The next two stages in the research analysis, enquired firstly, the user needs and preferences for the therapeutic design aspects and secondly, the users’ therapeutic experience in the built environment of the case studies. The initial study included the quantitative preference analyses on the users’ attitude and perception (patients’, his/her friends / relatives and medical staff) on the built environment through a survey, by using a structured questionnaire, interviews and through visual observation at identifying the intensity and value of the therapeutic aspects in the Indian context. In the next stage, a combined qualitative and quantitative spatial study on the impact of building physical profile on patient perception and behavior with specific reference to the case studies was done. This stage contains the spatial analysis
and study on the building profile by using the Space Syntax Depth map software which is correlated and corroborated with the user perception and behavior within the case studies, through questionnaire survey and participant observation. The result showed that, the need for therapeutic design aspects by the user in the In-patient area is 60% and 20% each for the Diagnostic and Out-patient area in cancer care facilities. In the Outpatient Area, the patients need for privacy in waiting area and consultation rooms are required along with view to outdoor and presence of nature with respondents (patients) feedback score-value of 75% and 70%, respectively. In the Diagnostic Area, the diagnostic patient respondents essentially required good privacy and dignity of a score value of 75%, good appearance 74% and positive distraction (while in treatment) in terms of therapeutic indoor and outdoor elements with the preference value of 74% and 65%, respectively. In the Inpatient Area, the patient respondents staying in the hospital were sensitive to the built environment and required the ward layout to have high level of privacy with a need value of 75%, a good view of the outdoor 74%, physical comfort and control 78% and legibility of place 60%. The feedback stresses that the need for therapeutic design in cancer care healthcare building is vital and mandatory and it is to be integrated with the other design criteria.

The findings support the view that the psychological and physical needs of cancer patients demand the built environment to be supportive and therapeutic in nature and facilitate patient health and recovery. The empirical evidence examined in the research suggests that the notions of therapeutic or patient-friendly environments held by the respondents in the study confirm to
the three conceptual visions of the built environments of health care facilities. They are the notion of homeliness, the notion of physical perception (namely, visibility and accessibility in built space) and the notion of supportive environments. The research evidence also proved the need for supportive environments for the socio-cultural and socio-physical needs of a patient and his family in accommodating design facilities for religious communion, leisure and access to the environment to promote a sense of normality. Hence, as a recommendation for the future work, the therapeutic design outcomes of the research, can be a checklist or evaluation template to estimate the existing and newly constructed cancer hospitals for their competence and compliance to users’ therapeutic needs; they could serve as a therapeutic measure indicator by monitoring agencies and organizations of healthcare buildings, to check the compatibility and reliability of a building in creating a ‘humane’ environment. The research can extend to future research on a wider scale and further therapeutic need enquiry into other clinical /healthcare specialties (based on the illness or on the user types like children, older people, etc) in the Indian or the regional context.

The most evident conclusion to be drawn from the research study is that the physical design of the hospital environment is not simply a matter of functional purpose and specification; rather, it is a matter of symbolic and social meaning.