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## Perceptions on Thermal Comfort in General Wards for Malaysian Hospitals.

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### Abstract

Environmental Quality Perception (EQP) is constructed to help in environmental studies and as an assessment tool for the environment and behaviour field studies. Using EQP assessment method in the hospital environment studies helps to understand the relationship between people and the hospital environment. Achieving sufficient thermal comfort level in existing government hospital buildings were seriously considered especially in general wards where patients and staffs most spend time in. The assessments were completed by 120 respondents (i.e. patients and staff nurse) from five different general wards located in different blocks in a Malaysian public hospital. To assess perception validity, one is focusing on objective physical observation evaluating the hospital environment correlated with subjective evaluation through questionnaire on social environment. The main objective of this research is to investigate the users' perceptions of existing thermal comfort quality in the different department's general wards of existing government hospitals in providing comparative table showing the different performance of thermal comfort. Overall reliability on thermal satisfaction by the occupants shows significant differences in all identified variables that were influenced by location and characteristic of the buildings as well as the respondents demographic. Mixed method analyses were used whereby data responds were analysed by multivariate (MANOVA) and univariate (ANOVA) analyses of variance for quantitative and triangulation analyses were tabled down for qualitative between average responses of thermal comfort perceived with the hospital physical. The findings concluded with majority perceived moderation on most thermal comfort elements indicates that there were growing acceptance and tolerance with the space that are subjected to duration of admitted and hours of working. Therefore, further investigation should be carried out to enhance the probability in perceptions with multiple hospitals for clear comparisons.

**Key words:** Environmental quality perception, General wards, Hospital buildings, Users' perceptions

### 1. INTRODUCTION

Many studies have demonstrated that if people work or reside in good environmental conditions, their productivity and well-being will be improved (Huang et al., 2012; Indraganti & Rao, 2009). After numerous researches on physical environment in buildings, it is unavoidable to ignore the fact that it has an impact on the outcome of the users' perceptions (Andrade et al., 2012; Aripin, 2012; Baird, 2010). The importance of human comfort as an internal influence of the architecture and substance of sustainable building is essential in design criteria for creating a more sustainable interior design environment. However, for hospital buildings, despite the critical advantages on medical treatment and the advance of its medical procedure and medicines, it is crucial to look into the hospital environmental qualities that could enhance the health process in the long term which is being neglected (Abu Samah et al., 2012; Frumkin, 2007). Many patients and hospital staffs express their satisfaction level towards the condition of the indoor environment as unsatisfactory (Aiken et al., 2012; Hurst, 2008). Enduring long working hours for the staffs and uncomfortable conditions caused by illness which patients also have to abide; their perceptions on indoor environment quality (IEQ) in hospital buildings are different than other types of occupants. The need to investigate the perceptions of the hospital users regarding hospital environment quality are