

## Perception of Indoor Environmental Qualities in Residential Buildings: A Quantitative Case Survey for Turkey and Iran

**Authors :** Majid Bahramian, Kaan Yetilmezsoy

**Abstract :** Environmental performance of residential buildings been a hotspot for the research community, however, the indoor environmental quality significantly overlooked in the literature. The paper is motivated by the understanding of the occupants from the indoor environmental qualities and seeks to find the satisfaction level in two high-rise green-certified residential buildings. Views of more than 250 respondents in each building were solicited on 15 Indoor Environmental Qualities (IEQ) parameters. Findings suggest that occupants are generally satisfied with five critical aspects of IEQ, but some unsatisfaction exists during operation phase. The results also indicate that the green build certification systems for new buildings have some deficiencies which affect the actual environmental performance of green buildings during operation. Some reasons were suggested by the occupants of which the design-focus construction and lack of monitoring after certification were the most critical factors. Among the crucial criteria for environmental performance assessment of green buildings, energy saving, reduction of Greenhouse Gases (GHG) emissions, environmental impacts on neighborhood area, waste reduction and IEQs, were the most critical factors dominating the performance, in a descending order. This study provides valuable information on the performance of IEQ parameters of green building and gives a deeper understanding for stakeholders and companies involved in construction sector with the relevant feedback for their decision-making on current and future projects.

**Keywords :** indoor environmental qualities, green buildings, occupant satisfaction, environmental performance

**Conference Title :** ICHRBEI 2022 : International Conference on High-Rise Buildings and Environmental Impacts

**Conference Location :** New York, United States

**Conference Dates :** December 09-10, 2022