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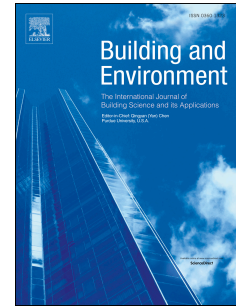
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Indoor Environmental Quality in Social Housing: A Literature Review.

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ABSTRACT

The unprecedented levels of urbanization in the last century have led to significant social housing populations in cities across the world. Housing conditions in social housing units are usually substandard, which often correlates with higher exposure to indoor pollutants, and ultimately negative health effects. We reviewed 49 articles in the literature documenting indoor environmental quality (IEQ) conditions in social housing which were focused on air pollutant concentrations, thermal comfort, or health effects associated with living in these units. We found evidence that social housing residents may be disproportionately exposed to higher levels of PM_{2.5}, which is heavily influenced by the presence of cigarette smoking in the building. However, we found no evidence that they are disproportionately exposed to higher levels of other pollutants such as formaldehyde and dampness. Poor thermal comfort was also found to be a prevalent issue in social housing, but there are not enough data on comparable non-social housing to make a definitive statement about relative prevalence. We also found that there are strong indicators that residing in social housing is associated with negative health effects, with high prevalence of respiratory problems. Lastly, we found that green retrofits have the potential to improve the IEQ conditions, but these retrofits must be tailored to the specific context of each building. Given the increasing importance of social housing to most urban areas, and the potential vulnerability of social housing inhabitants, it is imperative that we maintain healthy environments for these occupants.

KEYWORDS

Public Housing, Low income housing, Indoor air quality, Thermal comfort, Green retrofits, Health Impacts

HIGHLIGHTS

- Review encompasses 49 articles documenting IEQ in social housing
- High exposure to PM_{2.5} and poor thermal comfort were common issues reported
- Living in social housing was consistently associated with poor health
- Green retrofits offer an opportunity to improve the IEQ and the health of occupants

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