World Academy of Science, Engineering and Technology
International Journal of Mathematical and Computational Sciences
Vol:14, No:12, 2020

# A Review of Critical Framework Assessment Matrices for Data Analysis on Overheating in Buildings Impact

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**Abstract :** In an effort to reduce carbon emissions, changes in UK regulations, such as Part L Conservation of heat and power, dictates improved thermal insulation and enhanced air tightness. These changes were a direct response to the UK Government being fully committed to achieving its carbon targets under the Climate Change Act 2008. The goal is to reduce emissions by at least 80% by 2050. Factors such as climate change are likely to exacerbate the problem of overheating, as this phenomenon expects to increase the frequency of extreme heat events exemplified by stagnant air masses and successive high minimum overnight temperatures. However, climate change is not the only concern relevant to overheating, as research signifies, location, design, and occupation; construction type and layout can also play a part. Because of this growing problem, research shows the possibility of health effects on occupants of buildings could be an issue. Increases in temperature can perhaps have a direct impact on the human body's ability to retain thermoregulation and therefore the effects of heat-related illnesses such as heat stroke, heat exhaustion, heat syncope and even death can be imminent. This review paper presents a comprehensive evaluation of the current literature on the causes and health effects of overheating in buildings and has examined the differing applied assessment approaches used to measure the concept. Firstly, an overview of the topic was presented followed by an examination of overheating research work from the last decade. These papers form the body of the article and are grouped into a framework matrix summarizing the source material identifying the differing methods of analysis of overheating. Cross case evaluation has identified systematic relationships between different variables within the matrix. Key areas focused on include, building types and country, occupants behavior, health effects, simulation tools, computational methods.

**Keywords :** overheating, climate change, thermal comfort, health
**Conference Title :** ICSRD 2020 : International Conference on Scientific Research and Development
**Conference Location :** Chicago, United States
**Conference Dates :** December 12-13, 2020