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College of
Built Environment

Poster Book

IIIDBEE X 2023
20 JANUARY 2023
*International Invention, Innovation & Design Exposition
for Built Environment and Engineering 2023*

**College of Built Environment
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INVESTIGATING THE INFLUENCE OF GENDER AND BODY-MASS INDEX ON THERMAL SENSATION

IIIDBEE
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College of
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Environment
(CBE)

INTRODUCTION

Thermal comfort is an essential aspect of human well-being and can be defined as a state of satisfaction with the thermal environment. It refers to an individual's perception of the temperature and airflow in their surroundings and can be influenced by a range of factors such as personal characteristics, clothing, activity level, and the physical characteristics of the environment.

ISSUES/ PROBLEM STATEMENT

Thermal comfort is a personal experience that can vary greatly from person to person. Some individuals may prefer warmer temperatures while others may prefer cooler temperatures, and these preferences may be influenced by factors such as gender and body mass index (BMI). It is important to take these differences into consideration when designing indoor spaces and considering thermal comfort.

OBJECTIVES

To understand the relationships between thermal comfort, gender, and BMI.

METHODOLOGY

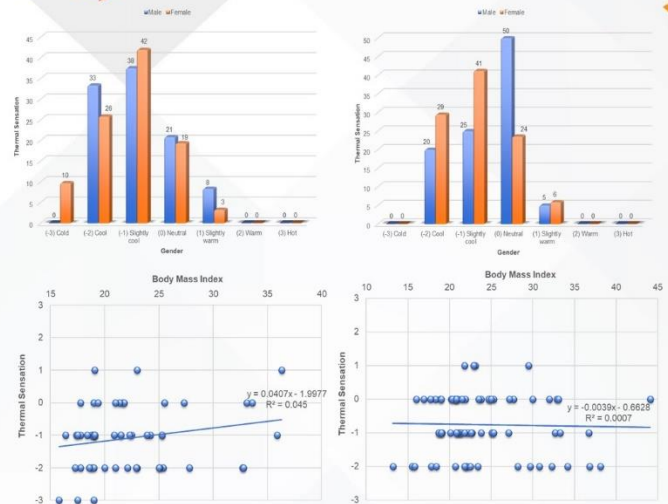
A questionnaire was used to collect their responses on thermal comfort, which was administered through a Google Form. The questionnaire contained questions about the students' thermal comfort sensations as well as their personal information, including gender, height, weight, and BMI. Both male and female students were invited to participate in the study and were asked to complete the questionnaire in person at the study location.

FINDINGS

The results of this study showed that, even though both genders reported similar temperature settings at two different sites, females tended to perceive the temperature as colder than males did in a particular location. While obese and extremely obese BMI groups' respondents generally did not show a clear preference for any specific temperature in the air-conditioned building, but they tended to feel more comfortable in a slightly cool environment. Based on the linear regression, BMI did not have a strong contribution to thermal sensation as only 4.5% and 0.7% for each site were reported in this study.

COMMERCIALIZATION

This study give a better understanding of career and education path especially in the process of collecting the data where I can apply the knowledge that I gain from the study in my future career in this course. A good publication research helps secure a job and also help in collaborating with other to earn some profits and benefits



CONCLUSION

This study found that gender and BMI can influence an individual's sensitivity to temperature, with female respondents being more sensitive to lower temperatures and individuals with higher BMIs potentially having some issues with temperature.

NOVELTY

The objective of this paper was to understand the relationships between thermal comfort, gender, and BMI. This study provided data and a better grasp of the idea and the meaning of thermal comfort on gender and BMI. There were explanations about the responses of the students that use air-conditioned building in university on thermal comfort and give the understanding on why gender, BMI, and thermal sensation were linked to each other. This research was since it improved knowledge on how to use the indoor environmental instrument as well as how to effectively use and apply the survey results.

RECOGNITION

Perpustakaan Tun Abdul Razak (PTAR) 1, Faculty of Applied Sciences (FSG) UiTM Shah Alam, Faculty of Architecture, Planning and Surveying (FSPU) UiTM Shah Alam, the students

CONFERENCES & PUBLICATION

Conferences: CBE, UiTM Puncak Alam during the programme of International Invention, Innovation & Design Exposition for Built Environment and Engineering 2023.