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OCCUPANTS' PERCEIVED PSYCHOLOGICAL PERFORMANCE ON BIOPHILIC DESIGN STRATEGIES IN MALAYSIA'S GREEN RATED OFFICE BUILDING

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MSc

July 2022

ABSTRACT

Biophilic design is a strategy to connect humans with nature into the built environment, such as the application of greens, natural light and ventilation, and water element. Malaysia's economy has been growing rapidly. Thus, this requires occupants to work diligently, resulting in spending most of their time working indoors. Maintaining personal psychology is very crucial to enhance their work performance. However, their work nature limits their interactions with the natural environment. Hence, this is where biophilic design comes to rescue, as there are massive impacts of biophilic design on occupants' psychological performance. This research aims to determine the relationship of biophilic design strategies and occupants' perceived psychological performance in Malaysia's green rated office buildings. Then, there are four objectives for this research: 1) To identify biophilic design strategies in Malaysia's green rated office buildings, 2) To determine occupants' perception towards biophilic design strategies in Malaysia's green rated office buildings, 3) To identify occupants' perceived psychological performance in Malaysia's green rated office buildings, and 4) To analyze the relationship between biophilic design strategies and occupants' perceived psychological performance in Malaysia's green rated office buildings. These objectives were achieved through an observation checklist on biophilic design strategies and questionnaire survey distribution to the respondents of Malaysia's green rated office buildings. Observation was done for two case studies which at the headquarters of Jabatan Kerjaraya and Suruhanjaya Tenaga Putrajaya. A five-point Likert scale questionnaire was distributed using an online platform and only 167 (60%) were returned out of 278 samples. The data gathered from observation were analyzed, tabulated, and graphed using Microsoft Excel. Moreover, the data obtained from the questionnaire survey were analyzed using descriptive analysis and multiple linear regression in SPSS version 24. The result from the observation of biophilic design strategies, the offices only have a general and basic application of the strategies. The findings on occupants' perception of biophilic design strategies and perceived psychological performance indicated that they agreed on each item of the questions. Also, there is a relationship between biophilic design strategies and occupants' perceived psychological performance. However, there is a lack of knowledge and no specific module framework to access the biophilic design strategies in Malaysia's built environment. Hence, it is hoped that this research can contribute to the biophilic design strategies, knowledge, and professionalism, especially in the office building.

ACKNOWLEDGEMENT

TABLE OF CONTENTS

CHAPTER ONE
INTRODUCTION

1.1   Research Background

Natural environment in the world is worsening day by day as many issues related to the environment continuously occur, such as climate change, global warming, increasing of sea water level, and flood. Due to this, the quality of people's life will be affected if these issues magnify constantly each day. Hence, this issue has given a rise to the concept of green environment, which has become the globe's main agenda to make sure that sustainability can be a standard of living while maintaining the nature from further damage that caused by the economic growth of rapid developments in cities (sirvadasan,2019).

At the present day, people are starting to be aware about the current environment situation, thus there is boundless of apprehension on protecting the environment all across the globe. The U.S. Green Building Council conducted a survey, and the result shows that many people believe sustainability design will become a more common practice and tradition in the world once humans realize the benefits of it. Principally, the productivity gains are believed to be linked with the arrangement of high-quality interior design, which is highly related to green building features that are likely to influence the indoor environmental quality includes:

    i.   Natural ventilation system and advanced mechanical ventilating system that can increase airflow and reduce occupants contact with air borne microbial agents

    ii.   Building material and furniture that have low toxicity

    iii.   Increased the usage of natural daylighting so that it can reduce energy demands and enhance interior lighting quality while maintaining visual comfort

    iv.   Heighten contact with the natural environment through opening window to the outdoors and inclusion of indoor plants for psychological reason and also for air quality enhancement