



**6th UNDERGRADUATE
SEMINAR ON BUILT
ENVIRONMENT
AND TECHNOLOGY
(USBET) 2023**

**SUSTAINABLE BUILT
ENVIRONMENT**

25 - 27 SEPTEMBER 2023

E-PROCEEDING

USBET 2023



e-Proceeding

**6th UNDERGRADUATE
SEMINAR ON BUILT
ENVIRONMENT
AND TECHNOLOGY
(USBET) 2023
SUSTAINABLE BUILT
ENVIRONMENT**

Published by,

Department Of Built Environment Studies And Technology
Faculty Of Architecture, Planning & Surveying
Universiti Teknologi MARA Perak Branch, Seri Iskandar Campus
usbet.fspuperak@gmail.com

Copyright @ 2023

Department Of Built Environment Studies And Technology
Faculty Of Architecture, Planning & Surveying
Universiti Teknologi MARA Perak Branch, Seri Iskandar Campus

This work is subject to copyright. All rights are reserved by the Publisher. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording or any information storage and retrieval system without permission in writing from the copyright owners.

eISSN 2821-3076



02 October 2023 | Perak, Malaysia
Universiti Teknologi MARA, Perak Branch, Seri Iskandar Campus

EDITORIAL BOARD

Editors-in-Chief

SR. NORAZURA MIZAL AZZMI (BS)

NADIRA AHZAHAR (BS)

Editors

TS. ZURAIHANA AHMAD ZAWAWI (BS)

SR. NAZHATULZALKIS JAMALUDIN (BS)

SR. SITI ZUBAIDAH HASHIM (BS)

NURHIDAYAH SAMSUL RIZAL (BS)

SR DR. NURUL FADZILA ZAHARI (BS)

NUR FADHILAH BAHARDIN (BS)

SR TS. DR. ALIA ABDULLAH SALLEH (BS)

SR TS. DR. SURIANI NGAH WAHAB (BS)

SR TS. DR. HASNAN HASHIM (BS)

SR NOORAZLINA KAMARUZZAMAN (BS)

SR MARIATY MOHD BAHARI (BS)

SR AIDA AFFINA ABDUL GHANI (BS)

DR. NOR DIANA AZIZ (BS)

SR AMIR FASHA MAT ISA (BS)

SR DR. NOR AMIN MOHD RADZUAN (BS)

PROF. MADYA SR DR. MOHD FADZIL YASSIN (BS)

SR TS. KHAIRUL AMRI RAMLY (BS)

SR. MOHD ASRUL HASIN (BS)

SR TS. MOHD KHAZLI ASWAD KHALID (BS)

SR MOHD DZULKARNAEN SUDIRMAN (BS)

SR DR. IRWAN MOHAMAD ALI (BS)

SR DR. MOHAMMAD HASZIRUL MOHD HASHIM (BS)

DR NURHASYIMAH BT AHMAD ZAMRI (BCT)

DR. PUTERI YULIANA SAMSUDIN (TP)

Editors-in-Chief

6th Undergraduate Seminar on Built Environment and Technology 2023

- E- Proceedings-

Organized by,

College of Built Environment (KAB) UiTM Perak Branch



BUILDING OCCUPANT'S PERSPECTIVE ON THE MAINTENANCE MANAGEMENT AT THE APARTMENT IN PUTRAJAYA

Nik Nur Aishah Binti Nor Affendi¹ , Nor Amin Mohd Radzuan^{1*}

¹Department of Built Environment Studies and Technology, College of Built Environment, Universiti Teknologi MARA Perak Branch, Seri Iskandar Campus, 32610, Seri Iskandar Perak, Malaysia

nuraishah2112@gmail.com , *noram185@uitm.edu.my

ABSTRACT

High-rise residential buildings are a specific kind of housing that are constructed on the same property. These days, people would choose to live in a high-rise apartment block because it would be quite convenient for them. The idea behind this residential building is that residents won't need to manage their own units because the property management would take care of things for them. Any concern relating to maintenance, security, or even access will be handled by the property management. The problem is most of them are still ignorant of their rights and responsibilities on the usage and maintenance of common property. These people will only realize the importance of knowing and understanding it when problem occurs regarding the facility management. To determine factors influencing the resident's perception of the property management for high – rise residential units. The method uses in collecting data for this research is through quantitative method. The finding of the research is collected from the respondent which are the case study's resident that answer the questionnaire distributed among them. It shown that there are factors that influence the building occupant's perspective on the maintenance management at the apartment. It is recommended to the apartment's maintenance management to consider the building occupant's opinion to improve the management of the building.

Keywords: apartment, maintenance management, high-rise residential

© 2023 USBET, JABT, UiTM Perak Branch, All rights reserved

INTRODUCTION

The erection of high-rise structures is becoming more popular all over the world as it creates open spaces, represents prestige for a nation, and accommodates a growing population on limited land. Both the public and private sectors are active in the creation of high-rise residential buildings in Malaysia, with the public sector concentrating on flats and apartments and the private sector on condominiums.

Living in high-rise residential buildings has become popular in modern society, because to the convenience and amenities they provide, such gyms and swimming pools. High-rise structures also offer better security and are situated close to bustling cities and public amenities, making it simpler for inhabitants to get to work.

As high-rise residential complexes to run efficiently and be properly maintained, property management is essential. Property managers monitor facility inspections, handle service provider agreements, collect rent and maintenance costs, and keep track of all property information. The Strata Management Act of 2013 requires renters and owners to pay fees and cash and penalises disobedience.

Despite the advantages of living in a high rise, there are difficulties that both residents and property management must deal with. Residents may experience maintenance concerns, and property management may run into problems with contractors and subpar property landscaping.

To fully comprehend high-rise residential property, Strata Law, and the functions of property management and renters, more research is required. In order to accomplish its goals, this research tries to identify the driving forces and causes of the problems associated with living in high-rise buildings.

LITERATURE REVIEW

Apartments now make up a sizeable portion of new home construction, accounting for more than one-third of all residential building approvals in 2015. Numerous of these brand-new apartments are placed in populated places, notably close to urban cores or transportation hubs. Compared to larger, lower-density dwellings, there are now more cheap housing options due to the increase in flat development. As evidenced in developments like Putrajaya, these apartments are frequently situated in convenient locations with access to amenities and employment centres (Shoory,2016). Life events like marriage, childbirth, employment status, and divorce can affect residential migrations (Clark, 2013).

Apartment or property management performance heavily depends on resident satisfaction. It is determined by how well-suited the living environment is rated by

occupants. Commercial and public facilities, a good urban environment brought about by redevelopment projects, interest in apartment living, the availability of medical and welfare facilities, and property effectiveness are all factors that affect residents' decision to live in an apartment (Mozammel, 2015; Tokunaga & Murota, 2022). Kennedy, Laurie, and Miller (2015) forecast that the share of multi-story apartment complexes in the housing supply will rise dramatically. Several variables, including environmental quality, facilities, their administration, accessibility, residential environment, security, and community, have an impact on resident satisfaction (Berkoz, 2019). A resident's level of dread may also depend on the style of building, such as high-rise apartments vs single-family detached homes, with high-rise apartment inhabitants being less scared (Rollwagen, 2016).

High – Rise Residential Building

Due to the rising cost of land, high-rise residential buildings are becoming more and more common in urban locations. These structures frequently include a variety of amenities including playgrounds, swimming pools, gyms, and cutting-edge security features like CCTV and access cards, all of which need for well-planned routine facility maintenance (Wahab et al., 2016).

Due to its height, high-rise buildings have specialised engineering systems that are characterised by their short footprint, small roof area, and tall facades (Ibrahim, 2007; Scott, 1998). According to Malaysia & MDC Legal Advisers (2000), a high-rise building in Malaysia is one that has four or more stories and is 15 to 18 metres or more. Professionally, a building that is at least 75 feet (23 metres) tall is frequently referred to as a high-rise.

The growth in population and urbanisation, which dispenses with traditional housing, are the main causes of the development in high-rise residential buildings. Housing demand is on the rise, bolstered by the working class's greater purchasing power, as their incomes continue to climb steadily (Housing Development (Control and Licencing) Act, 2003).

Maintenance Management

A residential building, especially one with a high floor, needs have maintenance management to oversee all building upkeep. Building maintenance will be able to operate effectively in the years to come because it is growing into a major activity and significant resources are being allocated as the government recognises the necessity for building maintenance. For residential buildings to increase in value and vice versa, proper maintenance should be invested in (Olanrewaju, 2008)

A key component of maintaining residential properties, especially high-rise structures, is maintenance management. To ensure the property's efficient operation and durability, it entails planning, organising, and supervising a variety of

maintenance chores. Effective maintenance management enhances property value, resident satisfaction, and cost effectiveness (Yahya, 2016)

Common areas like playgrounds, swimming pools, gyms, and sophisticated security systems in high-rise residential buildings require routine maintenance to remain in top shape (Wahab et al., 2016). In order to resolve any concerns quickly and prevent any hazards, timely maintenance is crucial for guaranteeing the safety and wellbeing of inhabitants.

Facilities Management

The amenities offered in a building have a big impact on how happy its tenants are. The comfort of residents is positively impacted by adequate housing facilities (Thomson & Petticrew, 2005). Customer satisfaction with these facilities is influenced by both the management's ability to communicate effectively and their technical performance (Mustafa & Maznah, 2012). Building tenants' attitudes towards maintenance management may be impacted by their dissatisfaction with the facilities, thereby increasing repair backlogs (Lateef, 2010). On the other hand, according to Mohit et al. (2010), having access to a variety of building amenities and services such power, water, lifts, security systems, swimming pools and gyms leads to increased resident satisfaction.

When choosing an apartment, building occupants often consider multiple options and prefer homes with value-added facilities like gyms, swimming pools, and landscaping, rather than those with basic amenities (Tiun, 2009). Landscaping and gardening, which are typically facilitated by property management and managed by maintenance management, contribute to the psychological well-being of residents due to their aesthetic value (Othman et al., 2015). However, it's essential to ensure that landscaping and gardening do not interfere with the performance of the perimeter drainage system (Wong, 2014). For these facilities, routine preventive maintenance and inspections are necessary to make sure there are no hidden dangers or extraneous elements that could cause harm (Broekhuizen et al., 2014).

Safety

People often choose high-rise residential buildings over low-rise ones as their preferred property due to the safety guarantee offered by high-rise structures. Safety encompasses various aspects, including access control measures that regulate who can enter the property compound. Additionally, safety is associated with residents feeling comfortable, untroubled, and free from fear while living and engaging in activities within the property compound (Therese, 2011).

Building access control plays a significant role in reducing crime by denying access to potential strangers who do not have permission to enter the property area (Coleman, 1985). Fences are also used to make access difficult for burglars, though they may also provide cover for them (Weisel, 2002). With technological

advancements, most high-rise residential buildings, including apartments, now provide each unit owner with an access card, enabling them to enter and exit the property compound. The presence of card access control systems and security guards are vital factors considered by building occupants. A well-operated central system database allows access to be granted at specific locations, emphasizing the importance of keeping this database current and updated (Williamson et al., 2013).

METHODOLOGY

Quantitative research is a method to know about certain group of people which in this case study, the group of people is the high-rise residential's tenant. Quantitative research gathers numeric data that could be obtained from questionnaires and the data could be analyse into percentages.

Doing literature review is the first method to determine the subject that has been discuss in the research paper and from there the possibility of the factors that influence the resident's perspective on the maintenance management at apartment could be produce. From the literature review, a set of questionnaires has been produced and distributed to the apartment's resident. From the respondent answer that will be analyse and conclude.

CASE STUDY

Table 1: Table of Case Study

Case Study	Apartment PR1MA
Location	Precint 11, Putrajaya
Year of Completion	2011
Number of units	560

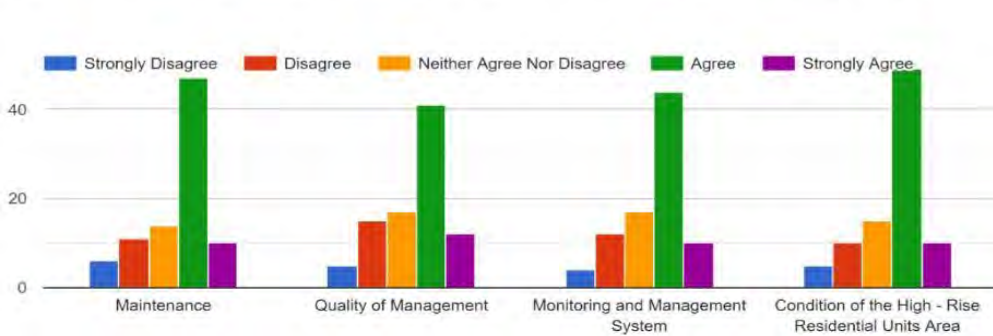
FINDINGS AND ANALYSIS

The outcomes and analysis of the quantitative findings of the study, and the outcomes and analysis of the quantitative data. The results are also given in the context of existing research findings and pertinent literature, when appropriate, to emphasise similarities and differences between this study and other studies and relevant material. A table and simple graphics like a bar chart were used to present the results.

The questionnaire was distributed to the occupants of the PR1MA, Precinct 11 apartments in Putrajaya through google form. A total of 86 respondents provided their valuable input.

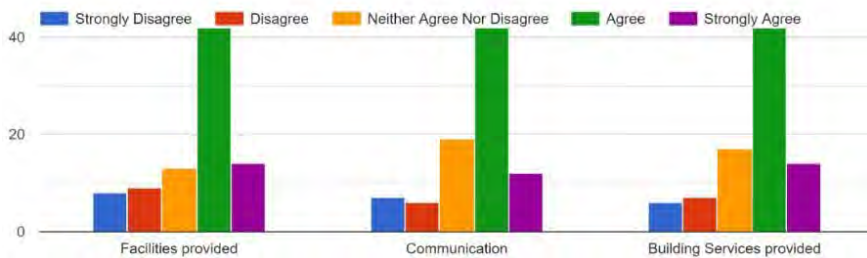
Below are some of the findings from the questionnaire distributed: -

5. From your perception, rate the following maintenance and management factors that influence the resident's perception of the management for hi...pengurusan untuk unit kediaman bertingkat tinggi.



To conclude, the majority of respondents agree that maintenance management significantly influences their perspective of high-rise residential management, considering factors such as maintenance, management quality, monitoring, and the condition of the residential area, which are all under the responsibilities of the apartment management. Regarding the condition of the residential area, 57% of respondents agree that it is a factor that influences their perspective of apartment management. 10.6% strongly agree, while 10.6% disagree. 16% feel neutral, and 5.8% strongly disagree.

8. From your perception, rate the following facilities management factors that influence the resident's perception of the management for high-rise residential management.



In conclusion, from the perspectives of the 86 respondents, facilities management factors, including the facilities provided, communication, and building services, play a significant role in influencing their perception of high-rise residential management. A substantial portion of the respondents agree or strongly agree that these factors have an impact on their perception, with a minority expressing disagreement or strong disagreement. Concerning building services provided as facilities management factors, 16.3% of respondents agree, and 16.3% strongly agree that they influence their perception of management. However, 19.8% feel neutral, 8.1% disagree, and 7% strongly disagree with building services as a factor.

CONCLUSION

From the analysis, it can be concluded that the building's occupant's perspective on the maintenance management at the apartment in Putrajaya are influenced by the factors of the maintenance management itself in managing the building and the factors of facilities management where the resident is very particular with the condition of the residential including the facilities and services provided to them as the building's resident. By knowing the factor, the maintenance management of the apartment will find a solution to improve their management to be better for the good of both management and building's occupant.

ACKNOWLEDGEMENT

The author wishes to express his or her profound gratitude to Universiti Teknologi MARA (UiTM) Seri Iskandar for all of their help and advice during the course of the author's academic career. The author would like to express his gratitude to the administration and faculty of UiTM Seri Iskandar for giving him the chance to pursue a quality education and for their dedication in helping to mould his knowledge and abilities.

REFERENCES

- Wahab, M. N. A., Yahya, K. K., & Said, I. (2016). *Determinants of High-Rise Building Maintenance Costs*. *Procedia-Social and Behavioral Sciences*, 222, 324-332.
- Thomson, H., & Peticrew, M. (2005). *Housing and health: Research, policy and innovation*. *Open University Press*.
- Mustafa, N., & Maznah, D. (2012). *Occupants' satisfaction with facilities management services in high-rise office buildings in Malaysia*. *Journal of Facilities Management*, 10(1), 54-69.
- Lateef, H. O. (2010). *Building maintenance practices in Nigerian public tertiary institutions: The facilities managers' perspective*. *Facilities*, 28(7/8), 310-326.
- Mohit, M. A., et al. (2010). *Residents' satisfaction towards facilities management services in high-rise affordable housing*. *Procedia-Social and Behavioral Sciences*, 50, 49-58.
- Broekhuizen, K., Scholten, A. M., de Vries, S. I., & Verhagen, E. A. (2014). *Physical activity is an important factor in playground design*. *Journal of Environmental and Public Health*, 2014.
- Caballé, S., Gómez, T., & Riera, J. (2015). *Integrated Model of Maintenance Management for Low-Income Housing*. *Journal of Construction*

Surat kami : 700-KPK (PRP.UP.1/20/1)

Tarikh : 20 Januari 2023

Prof. Madya Dr. Nur Hisham Ibrahim
Rektor
Universiti Teknologi MARA
Cawangan Perak



Tuan,

**PERMOHONAN KELULUSAN MEMUAT NAIK PENERBITAN UiTM CAWANGAN PERAK
MELALUI REPOSITORI INSTITUSI UiTM (IR)**

Perkara di atas adalah dirujuk.

2. Adalah dimaklumkan bahawa pihak kami ingin memohon kelulusan tuan untuk mengimbas (*digitize*) dan memuat naik semua jenis penerbitan di bawah UiTM Cawangan Perak melalui Repositori Institusi UiTM, PTAR.

3. Tujuan permohonan ini adalah bagi membolehkan akses yang lebih meluas oleh pengguna perpustakaan terhadap semua maklumat yang terkandung di dalam penerbitan melalui laman Web PTAR UiTM Cawangan Perak.

Kelulusan daripada pihak tuan dalam perkara ini amat dihargai.

Sekian, terima kasih.

“BERKHIDMAT UNTUK NEGARA”

Saya yang menjalankan amanah,

SITI BASRIYAH SHAIK BAHARUDIN
Timbalan Ketua Pustakawan

nar

Setuju.

27.1.2023

PROF. MADYA DR. NUR HISHAM IBRAHIM
REKTOR
UNIVERSITI TEKNOLOGI MARA
CAWANGAN PERAK
KAMPUS SERI ISKANDAR