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ASSESSING RESIDENTS' SATISFACTION WITH THE MAINTENANCE AND FACILITIES IN LOW-COST HOUSING APARTMENTS IN KEDAH

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Abstract

Housing is a fundamental human necessity that plays a crucial role in improving living standards. In Malaysia, low-cost housing apartments provide affordable housing solutions for low-income groups. However, the effectiveness of these housing programs depends on various factors, particularly the adequacy of maintenance and facilities. This study aims to evaluate resident satisfaction regarding the maintenance and facilities in low-cost housing apartments in Kedah. The research objectives include identifying available maintenance and facility elements, assessing residents' satisfaction, and determining key improvement factors. A quantitative approach was adopted using survey questionnaires distributed to residents of two low-cost housing apartments. Data analysis was conducted using SPSS, employing descriptive analysis and rankings. Findings reveal that key facilities such as power supply, garbage disposal, and landscape and entertainment are well-maintained, leading to high satisfaction. Conversely, cleanliness and vertical transportation received lower satisfaction ratings. Regular monitoring and maintenance improvements were recommended to enhance resident satisfaction. This study contributes to housing policy development by providing insights into improving maintenance standards in low-cost housing.

Keywords: Facilities and Maintenance, Low-Cost Housing and Resident Satisfaction

1. INTRODUCTION

Housing remains a critical component of urban development, particularly in addressing affordability challenges for low-income populations (Wetzstein, 2017). The Malaysian government has introduced low-cost housing apartments as a solution to the rising demand in urban areas such as Kuala Lumpur, Selangor, and Penang. Despite their affordability, the success of these housing programs is largely determined by residents' satisfaction with their living conditions (Mohd-Rahim et al., 2019). Residential satisfaction encompasses various factors, including housing quality, facilities, and maintenance (Riazi & Emami, 2018). Maintenance plays a crucial role in ensuring functionality and quality of life in housing developments. This study assesses residents' satisfaction with facilities and maintenance in low-cost housing apartments in Kedah, identifying key elements affecting satisfaction and areas for improvement.

2. LITERATURE REVIEW

2.1 Overview of Low-Cost Housing Apartments

Public housing projects provide low-income individuals with homeownership opportunities while ensuring basic standards of living (Wahi et al., 2018). These developments enhance residents' quality of life, especially among the B40 group (Ismail et al., 2017). Low-cost housing apartments, typically multi-story structures, address urban housing demands caused by land scarcity, rising costs, and lifestyle changes (Shuid, 2016). Malaysia's housing delivery system is managed by both public and private sectors, with government subsidies to ensure affordability (Zaid & Graham, 2011). Developers are required to allocate 30% of their projects to low-cost housing.

2.2 Determinants of Resident Satisfaction

Residential satisfaction is influenced by the alignment between residents' expectations and their living conditions (Riazi & Emami, 2018). Factors such as repair and maintenance, security, utility services, cleanliness, and entertainment spaces impact overall satisfaction (Le, 2017). Studies highlight that poor maintenance, inadequate security, and inefficient waste management negatively affect resident satisfaction (Azimi & Esmaeilzadeh, 2017). Key aspects contributing to satisfaction include well-maintained power and water supply, proper waste disposal, and accessible recreational spaces (Mohit et al., 2010).

2.3 Elements of Maintenance and Facilities

Building maintenance ensures long-term functionality, safety, and aesthetic appeal (Dzulkifli et al., 2021). Critical components of the maintenance include:

- a. **Water Supply System:** Water is an essential requirement for human life, providing clean drinking water, sanitation, and hygiene (Lawal & Chandra, 2018). Proper maintenance prevents contamination and ensures uninterrupted supply. Common issues such as leaks, broken pipes, and inconsistent water pressure impact residents' daily activities. Regular inspections and repairs are necessary to maintain an efficient water distribution system (Park et al., 2015).
- b. **Power Supply System:** Reliable electricity supply is crucial for the operation of household appliances and essential services within residential buildings. Frequent power disruptions can impact residents' quality of life and create safety hazards (Au-Yong et al., 2019a). Regular maintenance of electrical wiring, transformers, and circuits minimizes risks of power outages, fire hazards, and electrical failures (Meng, 2013).
- c. **Structural Maintenance:** Deterioration of buildings due to environmental exposure, material aging, and structural weaknesses can lead to significant safety concerns (Abdul-Rahman et al., 2014). Cracks in walls, roof leaks, and foundation instability are common issues affecting low-cost housing. Preventative maintenance, including weatherproofing and material upgrades, ensures durability and reduces long-term repair costs (Ofori et al., 2015).
- d. **Vertical Transportation:** Elevators and staircases are essential for residents, particularly in high-rise buildings. Poorly maintained elevators increase the risk of breakdowns, delays, and accidents (Cheong et al., 2017). Regular inspections, lubrication of moving parts, and timely replacement of worn-out components help ensure safety and operational efficiency (Au-Yong et al., 2019a).
- e. **Cleanliness:** A clean living environment is crucial for health and well-being, preventing the spread of diseases and maintaining the aesthetic appeal of

- residential areas (Le, 2017). Effective waste disposal, pest control, and routine cleaning of shared spaces, such as hallways and stairwells, enhance residents' overall satisfaction (Ait et al., 2016).
- f. **Security:** Safety concerns significantly impact residential satisfaction. Security measures such as controlled access, CCTV surveillance, and security personnel help deter crime and create a sense of safety for residents (Wei Keat & Bava Mohidin, 2020). Well-lit common areas and emergency response systems further enhance security standards (Leung et al., 2019).
 - g. **Garbage Disposal:** Effective waste management systems prevent environmental pollution and health hazards (Hassan et al., 2019). Regular garbage collection, proper waste segregation, and designated disposal areas contribute to cleaner surroundings and reduce pest infestations (Maimoun et al., 2016). Delays in garbage collection can lead to unpleasant odors and unhygienic conditions, affecting residents' satisfaction (Ankita et al., 2017).
 - h. **Fire Protection System:** Fire safety measures are essential to protect lives and property. Regular maintenance of fire extinguishers, alarms, sprinklers, and emergency exits ensures compliance with fire safety regulations (Au-Yong et al., 2019a). Routine fire drills and proper signage increase preparedness and reduce risks in emergency situations (Festag, 2016).
 - i. **Landscape and Recreational Spaces:** Green spaces, playgrounds, and communal areas enhance residents' well-being and encourage social interaction (Olsen & Smith, 2017). Proper landscaping, tree maintenance, and upkeep of recreational facilities contribute to a healthier and more enjoyable living environment (Broekhuizen et al., 2014). Regular maintenance prevents deterioration and ensures the long-term usability of these spaces.

By addressing maintenance challenges and improving these critical areas, resident satisfaction in low-cost housing can be significantly enhanced.

3. METHODOLOGY

A quantitative research approach was used to collect data on residents' satisfaction with the facilities and maintenance. A survey questionnaire was distributed to 171 residents of two low-cost housing apartments. Due to the time constraints and pandemic-related limitations, 135 responses were received. The questionnaire assessed the availability of maintenance and facility elements using a Yes/No format and evaluated satisfaction levels using a 5-point Likert scale. Data analysis was conducted using SPSS version 28, employing descriptive statistics, mean values, and rankings to determine resident satisfaction levels. To interpret the Likert scale responses, the following classification was applied:

Table 1: Perception Level Classification

Mean Score Range	Perception Level
4.21 – 5.00	Highly Satisfied
3.41 – 4.20	Satisfied
2.61 – 3.40	Neutral
1.81 – 2.60	Unsatisfied
1.00 – 1.80	Strongly Unsatisfied

Source: (Joshi, 2015)

This classification method follows the interpretation guidelines suggested by Joshi et al. (2015), where perception levels are categorized based on mean score intervals to reflect satisfaction trends among respondents.

4. FINDING AND DISCUSSION

4.1 Availability of Facilities and Maintenance

Findings indicate that the majority of residents acknowledged the presence of essential facilities. The highest-rated available facilities included garbage disposal (99.3%), power supply (96.3%), and cleanliness (94.8%). However, security and cleanliness, while available, received lower satisfaction ratings, indicating a gap between provision and maintenance quality.

4.2 Residents' Satisfaction with the Facilities and Maintenance

Resident satisfaction levels varied across different facility and maintenance aspects. The highest-ranked elements included:

Variables	Mean Score	Perception Level	Rating
Power supply	4.24	Strongly satisfied	1
Landscape and entertainment	4.11	Satisfied	2
Garbage disposal	4.06	Satisfied	3
Fire protection system	4.03	Satisfied	4
Water supply	3.84	Satisfied	5
Structural building maintenance	3.40	Neutral	6
Vertical transportation	2.83	Unsatisfied	7
Security	2.56	Unsatisfied	8
Cleanliness	2.46	Unsatisfied	9

The analysis of resident satisfaction in low-cost housing apartments highlights both strengths and areas needing improvement. The highest-rated aspects include power supply (Mean = 4.24), landscape and entertainment (Mean = 4.11), and garbage disposal (Mean = 4.06). A reliable power supply is essential for daily living, ensuring efficiency and safety (Au-Yong et al., 2019a). Well-maintained green spaces and recreational facilities contribute to mental and physical well-being, fostering a sense of community (Olsen & Smith, 2017). Effective garbage disposal is crucial in preventing pollution and maintaining hygiene, aligning with Hassan et al. (2019), who emphasize the importance of sanitation in residential satisfaction.

Conversely, security (Mean = 2.56), cleanliness (Mean = 2.46), and vertical transportation (Mean = 2.83) received the lowest ratings. Inadequate security measures, including limited surveillance and lack of personnel, create safety concerns (Wei Keat & Bava Mohidin, 2020). Poor cleanliness, resulting from inconsistent

maintenance, negatively affects living conditions, reinforcing the importance of sanitation highlighted by Le (2017). Frequent elevator breakdowns cause inconvenience, particularly in high-rise buildings, necessitating regular inspections and maintenance (Cheong et al., 2017). Addressing these challenges through improved security systems, consistent cleaning schedules, and proactive elevator maintenance can significantly enhance resident satisfaction in low-cost housing apartments.

5. CONCLUSION

This study highlights the critical role of maintenance and facilities in determining residents' satisfaction in low-cost housing apartments. While power supply, garbage disposal, and landscape maintenance received high satisfaction ratings, areas such as security, cleanliness, and vertical transportation require significant improvements. Regular monitoring and proactive maintenance strategies are recommended to enhance resident satisfaction levels. Future research should explore additional factors affecting housing satisfaction and propose targeted policy improvements.

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