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RESIDENTS' SATISFACTION LEVEL ON MAINTENANCE WORKS IN GOVERNMENT QUARTERS IN TLDM BASE LUMUT, PERAK.

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Abstract:

Residents' satisfaction level on maintenance services for high rise building is vital to the facilities management in meeting the residents' expectation with their various maintenance services. Due to infrequent maintenance in public buildings, incidents such as lift fall in TLDM government quarters happened in 2013 and also water supply problem in government quarters in Peramu Jaya, Pahang in 2013. The aim of this paper is to determine the satisfaction level of residents with maintenance works in government quarters. Therefore, to support the aim of this paper, the objective are to determine the residents' level of satisfaction regarding the maintenance of the government quarters and to determine the activities preferred by residents to improve of maintenance management in the government quarters. In order to achieve the objective, questionnaires of over 200 copies have been distributed to the residents of TLDM Base Lumut quarters through face to face method. The respondents have been residents of the quarters in the range of 20 years. The questionnaire had been adapted from a previous study which is relevant to the objective of this study. The data were analysed using simple descriptive statistics where the result presented in mean for each variable by using SPSS of version 23. The results were shown based on raking given by the residents. The result concluded that the highest satisfaction shown by the residents were the internal wall repairs, air conditioning repairs and water tank repairs. In general, the performance shown by the maintenance works of the quarters was in the moderate satisfaction category. Only for garbage disposal repairs, residents showed dissatisfaction category.5 significant activities preferred by residents to improve of maintenance management. The result concluded that there are three significant activities to improve of maintenance management which are (i) scheduling on maintenance works, (ii) strict policy of maintenance works and (iii) response on client complaints. The outcomes indicate that the aspects of building maintenance practice and the effectiveness of the maintenance management in government quarters can influence the satisfaction of the residents. It can be recommended to the management team to help them improve in the management of the facility and maintenance management practices.

Keywords: Residents' Satisfaction Level ;Maintenance Works; Government Quarters;TLDM.

1.0 INTRODUCTION

Maintenance management in the private and public sectors have been rapidly changing throughout the years. This is due to several factors such as enhancement of modern technologies, globalization and economic changes (S.Ali, 2009). The needs of residential unit has increased in demand ,which is in tandem with the nation's population growth . Therefore, residential demand for government quarters is also experiencing the same phenomenon.It is because the number of government workers are increasing and also the land availability has become limited .In order to satisfy the residents, quarters are being built with a properly planned maintenance schedule .As a result ,the outcomes fulfill the resident's needs (Ahmadnia ,2010). According to Ahmadnia (2010),it was stated that the government buildings and physical facilities in the public sector must be managed and maintained efficiently and effectively so that it can provide key support services to achieve operational goals in the governmental organisation.

Maintenance of government buildings is important in order to minimise disturbance. Failure in maintaining government buildings and facilities in the public sector will affect the government's reputation.

1.1 **Problem Statement**

According to Khalil and Nawawi (2009), despite realizing the importance of management and maintenance of buildings and facilities, it has not been accentuated clearly and systematically, and this has resulted in over-budget costing for maintenance and remedial works. Due to infrequent maintenance in public buildings, incidents such as lift fall in TLDM government quarters happened in 2013 and also water supply problem in government quarters in Peramu Jaya, Pahang in 2013. In the same year, one room in a government quarters at Jalan Duta, Kuala Lumpur caught on fire because of electric current leakage. In 2016, at a Customs quarters located at Kota Bharu Kelantan, there was no clean water supply for four months. In 2017, a boy was found dead as he fell down 3 storeys high because the window grill was loose in a teacher quarters in Klang, Selangor. In the latest report, a crack on the building's column was discovered in a Bangi quarters. The reported cases are described in a chronological order starting from 2013 to 2018.

Table 1: Chronology of maintenance works problems in Government quarters

Year	Chronology of maintenance works problems
Year 2013	The woman died trapped in an elevator
Year 2013	Teachers were stressed because of disruption of water supply.
Year 2013	A room in a government quarters in Jalan Duta, KL was burned down.
Year 2016	No clean water supply at Customs quarters at Kota Bharu Kelantan, for four months.
Year 2017	A boy fell down from level three storeys high at a teacher quarters and died.
Year 2018	A quarter had a crack on a building's column.

These issues may have been due to inconsistent building maintenance practices. In a bid to fulfill the demands of the private and public sectors, there are many expected errors and defects that will occur during the construction and it will result in high maintenance costs. Furthermore, organization need effective maintenance officers and residents to maintain a smooth management.

1.2 **Aim**

To determine the satisfaction level of residents with maintenance works in government quarters.

1.3 **Research objectives**

- i. To determine the residents' level of satisfaction regarding the maintenance works of the government quarters.
- ii. To determine the activities preferred by residents to improve maintenance management in the government quarters.

1.4 **Research questions**

- i. How to determine the residents' level of satisfaction regarding the maintenance works of the government quarters?
- ii. What are the activities preferred by residents to improve maintenance management in government quarters?

1.5 Scope of works

This study is focusing to Block 'A' in the TLDM government quarters located in Lumut, Perak, which comprises of 30 blocks. The focus will be based on maintenance works of building components consisting of civil engineering services, services of mechanical equipment, electrical and maintenance management.

2.0 LITERATURE REVIEW

Literature review will present an overview of the resident's satisfaction level on maintenance works in government quarters. This literature review was done in line with the first objective of this research. This research will focus on resident's satisfaction level on maintenance works in government quarters in TLDM Base Lumut.

2.1 Residents' Satisfaction Level

As defined by Ogu (2002), housing satisfaction refers to the degree of gratification experienced by a household with reference to the current housing condition, and it is a non-economic and normative quality evaluation approach to assess the quality of housing units. Households judge their housing conditions based on the actual housing situation and housing norms, and they are likely to express a high level of satisfaction if the households' current housing situation meets the standard. An effective maintenance management will lead to some satisfied residents in high-rise buildings. The management body and residents must collaborate with one another to achieve maintenance management satisfaction (Noor, 2013) Nowadays, residents always blame the management when they are not satisfied with the maintenance work done. Residents do not recognise that to achieve maintenance management satisfaction. Residents should also look after their facility that includes the swimming pool, playground, and gymnasium, which belong to their place. Residents should not leave their things unattended in public areas, including the corridor, staircase, and other places that will make the maintenance work difficult (Kuo et al., 2011).

Therefore, awareness among users to guard their property is important to achieve maintenance management satisfaction in high-rise buildings. Noor agreed that knowledgeable people could manage their property well than those who are not knowledgeable (Noor, 2013). A significant relationship was found between resident involvements in management activities and maintenance management satisfaction. Thus, maintenance management fund, maintenance management efficiency, and maintenance management satisfaction are correlated with one another in ensuring the sustainability of high-rise buildings.

2.2 Maintenance Works

Yung Yau (2011) defined housing maintenance as upkeep and repair of the building fabrics such as reinforced concrete structures and windows, and services such as water supply systems and elevators to make the dwellings functional. He added that proper maintenance is important to protect people's health-being, prolong the housing structures' life and delay the need for new structure redevelopment. Yau and Ho (2008) stated that there is a need for some organisation for building management to manage the shared parts of a building.

2.2.1 Maintenance Factor

Maintenance has 3 dimensions namely service quality, health and safety quality, and maintenance quality. The aspect of building maintenance was one of the crucial tasks in facility management (Thompson 1994). It also carries a crucial role of providing sustainable housing. Theoretically maintenance can be seen from a 'hard' and 'soft' perspective.

2.2.2 Quality of Work

Maintenance activities need to be done in time. The failure of the Management Agent to ensure that the activities are being timely done can cause the dissatisfaction of residents in using the facilities. The other aspects regarding quality of work is the response time taken by the management in handling issues or complaints made by the residents (Hasnan, 1994). Due to poor workmanship, more defects will occur immediately or a short period of time after the maintenance work is done. Furthermore, additional remedies might be needed to treat such defects. As Love and Irani (2003) mentioned, direct cost is often quoted in evaluating quality of workmanship and represent a significant proportion of total project costs or total maintenance costs. Hence, the total maintenance costs are likely to be increased as a result of poor workmanship during the implementation of maintenance works.

2.2.3 Quality of Safety and Health

In maintenance operating activities, safety and health must not be neglected. Health and safety is a key factor that influences the planning of maintenance tasks (Lee and Scott, 2009). According to Thompson (1994) building maintenance is so important, whereby its role is not only to ensure the facilities and services in buildings are operating at the optimal standard of functions, but also to satisfy the performance to the requirements of the building's residents. In order to achieve the building maintenance's objective, maintenance staff must consider all residents to be compliant to the statutory health and safety regulations.

2.3 Quarters

The Quarters is an area that has a distinctive functional and social characteristics, and has an individual spatial imprint. High-rise residential is a unique property and it differs from landed property, such as bungalows and terrace houses. Its uniqueness presents itself during the management era after the properties have been occupied, this is where the facilities management becomes an issue (Linariza and Ashok, 2003). Besides that, the high-rise residential buildings always being developed near the city and giving easier assessment to the public utilities and work. Based on high-rise residential development, programmes are carried out by both the public and the private sector. The public sector attentions on public-housing (40 per cent on public housing flat and apartment) programmes while the private sector apart from complying on the 30 per cent low cost housing unit, distillates on medium and high cost housing programmes (60 per cent on apartment and condominium development) based on 9th Malaysia Plan. Currently, living in a residential high-rise is now becoming a regime or trend among the urban professional municipal in Malaysia. One of the reasons people prefer to stay in a high-rise residential is the facilities provided within the housing area.

3.0 METHODOLOGY

The case study involved 30 blocks of government quarters in TLDM and the respondents were the residents from each of the block. Aside from the questionnaire survey, some observations were also made according to the current condition of the buildings. The data obtained from the questionnaire survey were analysed for the research evaluation of the building maintenance practices and the systems that were applied. Observation is also an important step in meeting the objectives of this study. This is because it leads to a certain condition or behaviour that occurred in a particular environment.. The results were based on direct observations on these case studies. In the survey, 200 questionnaires were distributed to 30 quaters and 159 sets were returned for analysis. These questionnaires were randomly distributed to each block between 4 to 6 respondents in each block.

4.0 ANALYSIS AND FINDINGS

The analysis of this case study was with regard to the maintenance assessment practices by the management provided to the residents and to determine from the scores whether the residents 'strongly disagree', 'disagree', 'fair', 'agree', or 'strongly agree' with the performance assessment. The

features presented consist of an analysis on the survey. The data analysis was conducted using the SPSS software version 23. In order to interpret and clearly show the findings, the results from the analysis were presented through mean value.

Table 1: Description for range of mean value

1 until < 2.33	2.33 until < 3.66	3.66 <= 5.00
Low	Moderate	High

Source : Tuan Mat Zin et al., (2012).

Table 2: List of maintenance works performance.

Rank	Maintenance works of the government quarters	Mean	Satisfaction level
1	Internal wall repair	4.12	High
2	Air- conditioning repair	3.76	High
3	Water tank repair	3.70	High
4	Sewerage repair	3.65	Moderate
5	Cabinet repair	3.62	Moderate
6	Electrical repair	3.54	Moderate
7	Clean water pipe repair	3.53	Moderate
8	Window repair	3.53	Moderate
9	Ceiling repair	3.52	Moderate
10	Manhole repair	3.50	Moderate
11	Floor surface repair	3.48	Moderate
12	Balconies repair	3.48	Moderate
13	Door repair	3.47	Moderate
14	Lighting repair	3.46	Moderate
15	Sanitary fittings repair	3.44	Moderate
16	External wall repair	3.43	Moderate
17	Roof repair	3.41	Moderate
18	Staircase repair	3.35	Moderate
19	Garbage disposal repair	2.33	Low

Table 2 presents a result summary for overall blocks maintenance performances based on the 19 parameters in the questionnaire. The result from Table 4.1 shows that the highest satisfaction shown by the residents were the internal wall repairs, air –conditioning repairs and water tank repairs. In general, the performance shown by the maintenance works of the quarters was in the moderate satisfaction category (2.33 to 3.66). Only for garbage disposal repairs, occupants showed dissatisfaction category (1.00 to 2.33).

Table 3: List of activities preferred by residents to improve of maintenance management.

Rank	Activities preferred by residents to improve of maintenance management	Mean	Satisfaction level
1	Scheduling on maintenance works	3.84	High
2	Strict policy of maintenance works	3.76	High
3	Response on client complaints	3.66	High
4	Response to emergency defects	3.59	Moderate
5	Planning of maintenance works	3.58	Moderate

Based on the residents' opinion as stated in Table 4.2, the maintenance management must come up with a schedule on how often maintenance is being conducted and a strict policy on the maintenance protocol. The score was based on the 5 parameters in the questionnaire. The result from Table 4.2 shows that generally the performance of the sample blocks was in the moderate category (2.33 to 3.66). This might be due to the intention of the users to get a delivery system for the effective maintenance of buildings and aspects of effective performance maintenance practices to guarantee their environment is safe.

5.0 CONCLUSION

Effective maintenance works in quarters are can able to determine the level of residents' satisfaction and is perceived as are some aspects of good building maintenance practices. These approaches may increase the potential performance of maintenance works practices by using a strategic performance to achieve the best quality. The study is to determine the resident level of satisfaction regarding the maintenance works of the government quarters and to determine the activities preferred by residents to improve of maintenance management in government quarters.

The results of the study can provide some guidelines for key considerations and recommendations for future performance of building maintenance practices in government quarters and public buildings. Accordingly, the majority of the performance parameters or aspects of building maintenance practices (building elements, services and environment) are equally in demand for the satisfaction of residents.

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