

RESIDENTIAL SATISFACTION IN MILITARY FAMILY HOUSING

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Dedicated to military personnels of today and the future, whom put their country before their families back home.

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## ABSTRACT

Military family housing is a different yet important form of residential property asset in Malaysia. It is common that military family housing were found to be in dissatisfactory conditions by the government financial auditor. Residential satisfaction has been adopted in many research as a tool to assess housing inadequacies and advise housing policy improvements. However, studies in residential satisfaction for military family housing are scarce, in Malaysia there is none. Therefore this research explores the concept residential satisfaction in a military family housing complex known as Desa Setia Wira in Kuala Lumpur. This housing complex had with numerous problems during the construction phase. The focus of the research was to find the variables that affected the resident satisfaction and to understand the problems using the concepts residential satisfaction. Data obtained from 102 residents whom responded to an open ended questionnaire survey were analysed using content analysis and coding. Data set of 164 problems were uncovered. Analysis using contextual coding, axial coding and selective coding processes revealed that the problems can be categorised into 19 causes of the problems, 15 categories of the problems and finally the 4 themes. In final, representative diagram of the overall contextual problems were presented. The key implication of this study is that through the identifications of the problems in the residential environment, future improvements efforts will be better guided. This research also opens up the path to future studies in Desa Setia Wira and other military family housing in Malaysia as well as enriching the literatures in the world relating to residential satisfaction in military family housing.

## ABSTRAK

Rumah keluarga tentera adalah satu bentuk yang berbeza tetapi penting aset hartanah kediaman di Malaysia. Ia adalah perkara biasa bahawa perumahan keluarga tentera ditemui berada dalam keadaan yang dissatisfactory oleh juruaudit kewangan government. Kajian Kepuasan kediaman telah diterima pakai dalam banyak kajian sebagai alat untuk menilai kepincangan kelemahan perumahan dan nasihat penambahbaikan dasar perumahan. Walau bagaimanapun, kajian kepuasan kediaman bagi rumah keluarga tentera adalah amat kurang, di Malaysia tidak ada. Oleh itu kajian ini meneroka konsep kepuasan perumahan di kompleks perumahan keluarga tentera yang dikenali sebagai Desa Setia Wira di Kuala Lumpur. Kompleks perumahan ini telah berhadapan dengan pelbagai masalah semasa fasa pembinaannya. Fokus kajian ini ialah untuk mencari pembolehubah yang menjejaskan tahap kepuasan penduduk dan memahami masalah mereka menggunakan konsep kepuasan kediaman. Data yang telah diperolehi 102 penghuni yang memberikan respons kepada kajian soal-selidik telah dianalisa secara analisis kandungan dan pengkodan. Analisis menggunakan pengkodan kontekstual, pengkodan paksi dan pengkodan terpilih mendedahkan bahawa masalah ini boleh di kategorikan kepada 19 punca-punca masalah, 15 kategori masalah dan 4 tema. Akhirnya, gambarajah yang menggambarkan perkaitan keseluruhan masalah dan perkaitan masalah yang utama disampaikan. Implikasi penting dari kajian ini ialah melalui pengenalanpastian pembolehubah tepat mengenai masalah-masalah utama dalam persekitaran kediaman, usaha-usaha penambahbaikan pada masa depan akan dapat dipandu dengan lebih baik. Kajian ini juga membuka jalan bagi masa depan pengajian lanjut dengan lebih terperinci di Desa Setia Wira atau di lain-lain keluarga tentera perumahan di Malaysia dan seterusnya memperkaya dunia kesusasteraan yang berhubungan dengan kediaman kepuasan berkaitan rumah keluarga tentera.

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**LIST OF ABBREVIATIONS**

IAMP	Immovable Asset Management Procedure
DSW	Desa Setia Wira
EPU	Economic Planning Unit
GAMP	Government Asset Management Policy
MFH	Military Family Housing
TAMM	Total Asset Management Manual
US	United States of America

## CHAPTER 1

### INTRODUCTION

#### 1.1 Introduction

Housing to a person is a basic physiological need of a person according to Maslow (1943). According to Balestra and Sultan (2013) housing contributes to a person's health and the needs of their children's development. Housing also has a profound impact on quality of life and well being of a person as stated by (Campbell *et al.*, 1976, Erguden, 2001 & Brown *et al.* 2004).

In the military, housing supports the wellbeing of the military personnel and their families from the stressors of military lifestyle said Paulus *et al.*, (1996). Military family housing supports the military personnel psychiatry in the component of morale. Thus, influences their success in performing their duty and reinforces the overall readiness of a military service (Hoagland, 1940, Parks *et al.*, 2009 & Buddin *et al.*, 1999). The military occupational demand and lifestyle requires high level of commitment and dedication from its personnel. Military personnel are required to undergo military training and exercises and hazardous duty assignments that might causes injury, captivity and death. They are also expected to be frequently relocated to different duty stations sometimes enduring separations from their family. Some military bases are in remote areas, where communities do not have adequate housing. In some other locations, local housing is expensive or unavailable.

Governments of countries possessing military services recognised the importance of housing for the military personnel with families and pledged to

provide the quantity of housing that the military service needs, albeit financial limitations may limit its delivery. In comparison to 26,654 units of married family housing provision for the civil service personnel nationwide, the numbers of military family housing in Malaysia are 52,000 units according to Ministry of Defence's Housing Unit. Currently, the government is in the course of construction of another 30,000 units of military family housing in 11<sup>th</sup> Malaysia Plan. It will be expected that by its completion in year 2020, the military are responsible for the management of largest quantity of family housing created by government.

However, the military family housing in Malaysia were commonly found to be in unsatisfactory conditions. by the National Audit Department annual report for the year 2000, 2009 and 2011, revealed that the country's military family had problem housing that resulted the value of fully achieved and resident's to be dissatisfied.

According to Francescato *et al.* (1989) residential satisfaction is a concept that could be useful to improve unsatisfactory environments. Varady and Carrozza (2000) states that residential satisfaction could improve management performance. Meanwhile, Galster and Hesser (1981) states that residential satisfaction could be used as ad-hoc tool to measure the success of a housing program. In the literatures, many researchers operationalised the concept of residential satisfaction to contribute addressing issues related to housing problems. For example, researchers investigated residential satisfaction in relations to institutional housing, public housing, informal settlements, indoor environment quality, housing design, housing construction and tenure status. (Oladapo, 2006; Akinluyi, 2015; Ibem, 2013; Mohit, 2012; Guilderbloom, 2005; Opoko, 2016; Caldieron 2011; Zalejska-Jonsson, 2013; Sung, 2011; Chohan, 2011; Mehdi, 2012 & Pekkonen, 2015)

Similarly, the concept could be to address the residential satisfaction in relations to military family housing in Malaysia. Since, residential satisfaction of military family housing in Malaysia was non-existence, this research aimed to explore residential satisfaction problems in military family housing. It is hoped to provide meaningful understanding of the problems and contribute to enhance the

knowledge in residential satisfaction, especially regarding military family housing in Malaysia.

## 1.2 The problems statement

Similar to all other government buildings, the military family housing complex at DSW were classified as government physical assets. The management of all government physical assets were required to adhere the government's asset management policy and guidelines. The Government Asset Management Policy (GAMP) and Manual of Total Asset Management (TAMM) was enforced through the General Circular No. 1 Year 2009. Guidelines of the policy, the Immovable Assset Management Procedures (IAMP) was released through the General Circular No. 2 Year 2012.

There were many problems related to GAMP Backer *et al.* (2014) according Yusof, (2013) such as problems in the practice of property management Shardy *et al.*, (2011), competency of human resources (Yusof (2013), Mohamed, (2013) & Backer *et al.*, (2014)), management of maintenance Talib *et al.* (2014), procurement system (Othman *et al.*, (2010) & Hui *et al.*, 2011), strategic planning and commitment of top management added Mohamed, (2013).

A study by Shardy *et al.* (2011) identified five issues related to the government property management. Firstly, management processes involved too many government agencies and departments with no clear scope and functions. Secondly, organizational weakness that has not set up a dedicated organizational structure for managing government property assets. Thirdly, inadequate manpower, tools, equipment and financial resource levels. Fourthly, there were no strategy development such as goals, objectives and policies and implementation plans. Finally, government property information were not systematically administrated and preserved.



According to (Yusof, 2013; Mohamed, 2013; Backer *et al.*, 2014), there were also problems related with competency in government asset management practice. The study conducted by Yusof, (2013) revealed that the staff in government agencies undertaking in asset management functions lacked understanding of asset management. Mohamed (2013) further added several other issues related to GAMP were top management commitment, strategic asset management planning, people awareness and culture and capacity building of all the parties involved in the asset management process.

One of the main reason GAMP was to improve the maintenance problems in government physical assets. Eventhough the government had implemented planned preventive maintenance for government property buildings since the year 1995, according to Talib *et al.*, (2014) problems with government physical assets were relating to the government's preventive maintenance system. Maintenance problems were due to the factors such as insufficient funds and lack of building maintenance standard, environmental conditions and moisture from wet areas. In his research that analyzed the defects of government buildings, he concluded that preventive maintenance practice was poor and that the common practice of maintenance was reactive in manner.

Other related issues that contributed to the problems in the government physical asset arised from weaknesses in the government procurement system. According to Othman *et al.* (2010) corruption, inadequate internal control and inadequate risk management had affected the government procument system. Hui *et al.* (2011) added that the government procurement system also were hounded with issues such as accountability, transparency, integrity and cronyism.

Mohit and Al-KhanbashiRaja (2014) explained that the nature that residential satisfaction was a complex construct that involved different complex terms, different processes and theories such as housing and satisfaction terms, cognitive, affective and behavioral processes and housing need theories, housing deficit theories and psychological construct theories.

In addition, there are other factors that contribute to influence the complexity of residential satisfaction. Among the factors are resident's social background, habits, circumstances, experiences, expectations and needs and goals (Lepkova *et al.*, (2016) & Berkoz (2015), dwelling type Day (2000) & McCarthy *et al.* (1985), housing neighbourhood and community characteristics Gruber and Shelton, (1987) & Campbell *et al.* (1976) and the housing age Brackertz and Kenley, (2002). Mohit and Al-KhanbashiRaja (2014) had concluded that residential satisfaction is a complex construct.

Also, residential satisfaction may not be similar in different cultures or different countries. For example, Fang, (2007) proved that the housing satisfaction in western countries were different to China. Therefore, residential satisfaction in different country are not the same due to different physical, psychological and socio-cultural environment and other factors that made up the housing system.

In further to the complexity of residential satisfaction construct, researchers Furbrey & Goodchild (1985) and Onibokun (2007) criticised that in residential satisfaction studies, constructs of residential satisfaction were derived from nebulous of imprecise concept imposed by the researchers. Residential satisfaction researchers could overlooked some factors that influences the resident's satisfaction.

For example, in the past, there were two previous researches on residential satisfaction in military family housing. Parks *et al.* (2009) studied military personnel residential satisfaction in privatized US military family housing. Meanwhile, Robinson (2008) studied residential satisfaction in privatized US military family housing and non-privatized family housing. Both studies by Parks *et al.* (2009) and Robinson (2008) constructed their research from the causes of dissatisfaction identified through James III, (2007) and James *et al.*, (2008) research findings on civilian multifamily apartment household's dissatisfactions, which were found to be landscaping, safety, parking, maintenance, office staff and unit quality. These satisfaction or dissatisfaction variables formed the basis of their military family housing evaluation.

Both studies used a conceptual framework developed by Kahana *et al.* (2003) which she developed in her study to understand residential satisfaction in elderly homes. However, Robinson (2008) research findings discovered that the chosen conceptual framework did not have any congruence for military family housing residents.

It is worth to note that Parks *et al.*, (2009) discovered that residential satisfaction in military family housing form differs significantly to other housing forms. The military personnel lifestyle and military training conditioning to endure life in hardship of military missions scenarios, may have influenced their psychological construct relating to evaluation of satisfaction. In private or public housing, the residents have the option to move out or modify their dwelling to reduce incongruency with their needs, in subject to their economic capacity. In military family housing, this option is sometimes not in their freedom of choosing. Military relocations resulted high turnovers in the military family housing environment. Therefore, residential satisfaction in military family housing may differ from other populations in the society.

In addition to the above factors that showed the complexity of the residential satisfaction concept, Galster (1985) argued that residential satisfaction was not the best indicator for advising improvement in housing conditions improvement. He provided an evidence that a concept of 'marginal residential improvement priority' was a better alternative than existing residential satisfaction evaluation studies. 'Marginal improvement priority', is where the the resident ranked the factors (selected by the researcher) to which they would want to improve in accordance to their preferences. Therefore, variations of the implementation of residential satisfaction concept was possible an might be even better. This approach, was however, as what Furbrey & Goodchild (1985) and Onibokun (2007) criticised earlier.

The highlighted problems above indicated that the concept of residential satisfaction was complex construct and subjective in manner. Nevertheless, many researcher had applied the concept of residential satisfaction to many types of different residential environment, with the central purpose to understand what

constitutes of residential satisfaction and to provide insights to guide policy formulations that can achieve residential satisfaction for the dwellers. These benefits of residential satisfaction studies could be valuable to the military family housing if similarly applied. The military family housing management could use the research findings in residential satisfaction in military family housing as beneficial information to improve their housing governance and policy.

With the non-existence of residential satisfaction studies in military family housing in Malaysia, lack of understanding about residential satisfaction in military family housing and there evidence that alternatives and variations of residential satisfaction could also be considered as tool to improve residential satisfaction, an exploratory research in residential satisfaction at military family housing was necessary.

This research was focused at selected military family housing site known as Desa Setia Wira (DSW). This military family housing was complex acquired during the RMK9 plan (year 2006-2010). The project was a Design & Build project through restricted tender cost RM120.9 million, contract construction period was between 2003-2006. This project suffered delays and the project ceiling price was raised a further RM43million.

Audit 2011 report stated that completion date of this project was on 11 Feb 2010. This project registered high numbers of construction defects (2085 numbers) which were failed to be repaired by the contractor during the defects liability period. Certificate of making good defects were issued even though the defects works were not completed. Liquidified ascertained damages was exempted and approved by the Ministry of Defence. In order to complete the defects works, the government had to appoint 3<sup>rd</sup> party contractors and an additional RM81million was further incurred.

The audit report finally concluded that DSW housing project was unsatisfactory, construction contract and maintenance management were unprofessionally managed, substandard competency of inexperienced contractor,

the quality of the furnitures provided were poor. Upon construction completion the residential units were not fully occupied and residential satisfaction were poor.

The military family housing DSW experienced construction delay of 4-7 years, escalated constructions cost of 102% from the original contract (Audit 2011), annual maintenance cost of RM2,965,000.00 and there are units unoccupied in need of maintenance according to Kentonmen KEMENTAH. Unoccupied housing units resulted the government to further bear housing allowance of RM300.00 per unit according to the government Service Circular No. 8, 2015. Not only that the optimum value of the asset creation was not realized, it has created housing conditions that were dissatisfied (Audit 2011). Therefore, this research to aims to seek to understand from the perceptions of the residents to answer the following research questions:

What are the problems affecting residential satisfaction of DSW military family housing in the asset life cycle in-use phase from the perception of the resident?

What are the actual problems that currently the residential are experiencing which affected their satisfaction living at DSW MFH military family housing complex?

For the purpose of this study, the terms military family housing will be shortened to MFH. The terms housing, household, dwelling and residential in this paper are used interchangeably, as observed from previous researches relating to housing satisfaction, they refer to the same meaning.

### **1.3 Objectives of the research**

Based on the problems statement and research questions, the aim of this research is explore the residential satisfaction of the military personnel dwelling in

the DSW MFH. In order to achieve the aim of this research, the following research objectives are formulated :

- (a) To identify the problems affecting residential satisfaction at DSW MFH military family housing complex.
- (c) To generate a list of selected key problems which caused the highest impact to the overall resident's satisfaction.

#### **1.4 Scope of the research**

Military family housing are situated in different regional locations around the country. The types of buildings in military family housing are bungalows, semi-detached and multi-storey apartments. Since multi-storey apartments for the ranks private and corporal dominates the numbers of military family housing in Malaysia, the Malaysian Armed Forces Headquarter's military family housing known as Desa Setia Wira were chosen to be the setting of this study. To simplify the wordings, "Desa Setia Wira" will be shortened to DSW.

#### **1.5 Research methodology**

This study were aimed to identify the problems which have affected residential satisfaction at DSW. To achieve the stated objectives in paragraph 1.3, this research was carried out using the following methodologies:

- (a) Literature review / desktop research
- (b) Informal discussions with officers at Ministry's of Defence's housing Unit 's, military officers at Kentonmen KEMENTAH and military officers at Bahagian Perkhidmatan Kejuruteraan Pertahanan
- (c) Open ended questionnaire survey

Literature review / desktop research was a continuous activity throughout the beginning of the research until the completion of their research. Informal discussion with officers at Ministry's of Defence's housing Unit 's, military officers at Kentonmen KEMENTAH and military officers at Bahagian Perkhidmatan Kejuruteraan Pertahanan were sought to further understand the military family housing information which could not be found through literature review / desktop research. The literature reviews related to residential satisfaction were reviewed to provide a theoretical basis for the research. Finally, based on all the information a questionnaire survey was formulated to answer the research questions.

### **1.5.1 Flowchart of the research methodology**

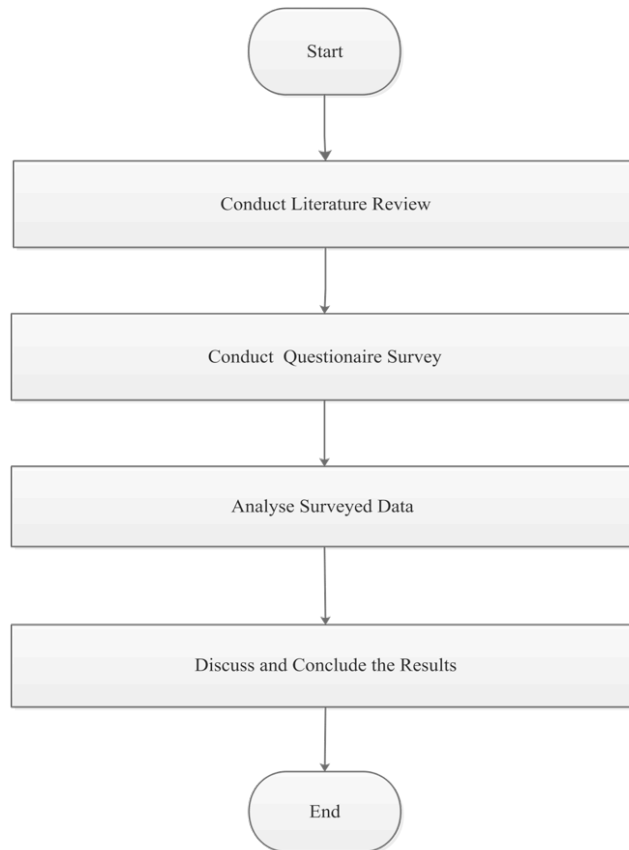
The methodology adopted for this research is shown as the following diagram in Figure 3.1.

### **1.6 Significance of this research**

Residential satisfaction at military family housing in Malaysia has never been explored before. This research to find out the variables that caused residential dissatisfaction in military family housing at DSW could provide the following significance:

- (a) To have a documented list problems experienced by the residents for further in-depth research as a precursor towards future in-depth researches to find the root cause of the problems.
- (b) The explicit research findings could be useful information in maintenance planning towards realizing housing conditions that satisfies DSW residents.

- (c) The research findings could act as a lesson learnt from DSW, to provide feedback to guide of improvement that may encompass all phases of the asset lifecycle in the military family housing.



**Figure 3.1: Flowchart of the research methodology**

## 1.7 Organisation of the Thesis

This thesis is divided into five chapters as follows:

Chapter 1 introduces the research and provides an overview of the thesis. This chapter consists the background information to the study, problems statement, research objectives, scope of the research, summary of the research methodology, significance of the research and outline of the thesis organization.

In Chapter 2, the background of the malaysian military family housing and the government asset management system were firstly provided. Later, the



constructs of the theories and concepts of residential satisfaction from previous studies that were adopted as the theoretical lens for this research were presented.

Chapter 3 describes the research method used in this research to identify the problems that give rise to the residential dissatisfactions in MFH at DSW.

Subsequently, Chapter 4 reports the research findings from the employed research methodology. The findings were analyzed in relation to the research question and discussed in further.

Finally, the main conclusions that were drawn from the research and highlights several points for further investigations were presented in Chapter 5.

This research is also a snapshot opinion and as as the residential satisfaction is a dynamic process, residential satisfaction of residents may change over time. As this research only uses frequencies analysis of the statement of problems by the residents, it did not study in depth about the causes of problem.

#### **6.4 Recommendations of future work**

To date, there are no previous research conducted on residential satisfaction for military family housing form of housing. Maybe due to little knowledge of its existence, or perhaps it is difficult access of information relating in the restricted military environment. Based on the limitations of this research, if future researchers are to be conducted, the following are the recomndations that can be made:

- Education of the residents about the variables of residential satisfaction so that they their responses the the residential satisfaction studies can provide better understanding of their problems.
- Development of a standardized coding agenda for analysis of military family housing problems statements.
- Future work on residential satisfaction research of can include more than one military family housing housing complex, at other government quarters or including private residential for comparison.
- Application of diaognistic tools such as ishikawa diagram, fishbone analysis or root causes analysis in future researches could address indepth understanding of the causes of the main problems toward refining the solotion suggestion of the residential satisfaction problems.

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