

A STUDY OF OVERCROWDING FACTORS IN PUBLIC LOW-COST HOUSING IN MALAYSIA

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Abstract

The provision of affordable and quality housing has been a major focus of the Malaysian government in ensuring the overall well-being of households, especially for the B40 groups. Despite efforts by the government many of these buildings are overcrowded, and thus are inimical to people's health and wellbeing. Therefore, this study attempts to identify the contributing factors that cause overcrowding problems which affect the occupants' quality of life. A survey questionnaire has been conducted based on 122 households from two different public low-cost housing in the Federal Territory of Kuala Lumpur, Malaysia, examining the causes that lead to cramped living conditions. Using the quantitative Statistical Package for the Social Sciences (SPSS) software, the study demonstrates that proximity to workplace and expensive rental housing as the main factors that contribute to overcrowding problems. The result also shows that a majority of the residents disagree with the current standard of measuring overcrowding. This implies loophole in the existing mechanism of controlling overcrowding. This paper concludes with the recommendation that the approach to overcome overcrowding problems should seek not only the perceptions of the decision making groups but also from the public at large.

Keywords: low-cost housing, overcrowding, people housing project, regulation

Article history:

Submitted: 08/01/2018; Revised: 05/07/2018; Accepted: 27/08/2018; Online: 01/02/2019

INTRODUCTION

Malaysia has continued to improve the quality of life of the people especially the B40 households through various measures, one of which is by increasing the provision of affordable and quality housing with basic amenities (Economic Planning Unit, 2015). The Housing Aid Programme (PBR), People's Housing Project (PPR), 1Malaysia Housing Programme (PR1MA), and 1Malaysia People-Friendly Homes (RMR1M) are among housing programmes introduced by the government for poor and low income households in both urban and rural areas. In 2015, there were 102,200 units of affordable houses completed for low and middle income households. The rapid population growth together with massive immigration, however, has created undesirable overcrowding problems in these housing. As highlighted in the 1976 Vancouver Declaration on Human Settlements, the uncontrolled urbanization has led to crowding, pollution and general deterioration of living conditions in urban areas.

Residential crowding seriously affects people's health and safety as evident through a number of existing studies. Sullivan & Chang (2011) for example has described crowded settings as unfavourable places that can foster high levels of psychological distress, depression and anxiety. Similarly, Corburn (2015) has highlighted that congested living environment elevates the risks for infections, fires, and stress. Research conducted by Liu (2015) among rural migrants in Beijing, China has also revealed that people tend to feel unhappy and experienced psychological distress due to the problem of overcrowding. According to the Office of the Deputy Prime Minister (2004), living in cramped conditions has impact on both physical and mental health. As argued by Renalds et al. (2010) and Guite et al. (2006), the built environment is positively associated with health outcomes of the people.

An increasing number of overcrowded buildings has also been reported in Malaysia. For example, the Kajang Municipal Council (MPKj) had been receiving complaints of illegally-partitioned houses to accommodate more occupants, mostly foreign workers and students (Tan, 2012). More

recently, Nair (2014) has also reported that the same overcrowding problems are also prevalent in other areas such as Sri Hartamas and Sungai Way. According to Kuala Lumpur Fire and Rescue Department director, property owners are increasing the risks of fire in their buildings by allowing overcrowding, and consequently endangering the occupants (Priya, 2016).

Despite the numerous studies that have been conducted on overcrowding (Nazli & Omar, 2014; Zainal et al., 2012; Salfarina et al., 2011), the study on overcrowding in Malaysian public low-cost housing however is often overlooked. As argued by Ishak et al. (2016), public houses in Malaysia are very basic in nature and little attention has been paid to its quality. This is evidenced through a recent survey by the Consumer Association of Penang where overcrowding has been identified as one of the most severe problems in these housing (Kutty, 2016). According to Anker & Anker (2017) and Currie & Yelowitz (2000), overcrowding is the most common concept used for measuring housing quality not only in Malaysia but also across many countries. Sukumaran (2018) further criticises that the conditions of public housing in Malaysia, such as the People's Housing Projects (PPR), have become slum-like settlements and are often associated with the problem of overcrowding. As reported in PPR Sri Perak in Bandar Baru Sentul, Kuala Lumpur, some families have continued to live in their two-bedroom flat with up to 23 people (Metro News, 2015). Considering the seriousness of the problem which affects the people's health and well-being, this study attempts to examine the contributing factors that lead to the problem of overcrowding.

FACTORS OF OVERCROWDING PROBLEM

Overcrowding generally refers to the situation where too many people are present in a space. In particular, crowding is often measured in terms of the number of people in any given space or facilities, for example per room, per dwelling or per bedroom. As stated in Section 79 of the Local Government Act 1976 (Act 171), a house shall be deemed to be overcrowded if it is found to be inhabited in excess of the proportion of one adult to every 350 ft³ or 9.9 m³ of clear internal space. In such calculations every person over ten years of age or two children not exceeding ten years of age shall be counted as an adult. Gray (2001) however has argued that crowding can never be measured statistically and should not be confused with density since high density does not always imply overcrowding. The author has further highlighted that the interpretation should incorporate the people's psychological response to density, as the statistical measures of crowding often reflects the values of decision-making groups. Subjective emotional responses are difficult to generalise across situations and thus make it extremely tough to come to a conclusive standard of crowding. As questioned by Garcia-Guerrero & Marco (2012) and Sullivan & Chang (2011), how crowded is too crowded since there is no single universally accepted standard in measuring overcrowding.

This provides an explanation as to why the overcrowding problem becomes much more severe as claimed by Liu (2015) and the United Nations (2016). For example, in Malaysia, the Economic Planning Unit (2015) argues that the effectiveness of current provisions is declining as the problem still persists although action can be taken legally- under the Local Government Act 1976 (Act 171), if a building is found to be overcrowded. This exemplifies insufficient checking mechanism to ensure compliance of the buildings with the required standards (Ishak et al., 2016). Ch'ng (2015) on the other hand highlights the problem of Act 171 in terms of the crowding calculations, which includes any space within the premises that is clear including the kitchen and toilet space. Although overcrowding is not specifically mentioned, the Uniform Building By-Laws (UBBL) 1984 has also provided some degree of control on residential crowding. In particular, Part III of the by-laws provides the minimum area of rooms in residential buildings, minimum dimensions of bathrooms, and the height of rooms in residential and other type of buildings.

In addition to efficiency of the current policy in controlling overcrowding, Malaysia also encounters the problem due to extensive migration. As argued by Wei et al. (2016), the overcrowding problem is prevalent in areas where the migrant population grows fast. Increasing number of people moving into urban areas has created a severe housing problem. New immigrants to an area often lead to shortage of housing and schools places (Newman & Woolgar, 2014). Jayantha & Chi-Man (2012) and Reynolds (2005) have also highlighted housing stock as one of the key determinants of residential crowding. This is further exacerbated by the expensive rental and housing prices which force people, especially those in the low-income group, to live in crowded conditions. As highlighted by Krieger & Higgins (2002), people with low income tend to live in overcrowded houses. A building tends to be divided into more rooms to accommodate more people in order to keep the costs down (Corburn, 2015). According to Wenjie & Xinhai (2015), these people do not spend excessively on housing costs and therefore the problem of inaccessible rental price is manifested through a growing number of overcrowding problem.

Housing location near to the city center has also emerged as one of the main factors leading to the problem of overcrowding. A study that has been conducted among the Indigenous Australian demonstrates that there are more overcrowded households in non-remote areas as compared to remote areas (Australian Institute of Health and Welfare, 2014). According to Kim et al. (2001), people tend to live in urban areas as commuting costs to working areas and other services increase with distance away from the city. In Malaysia, such overcrowded premises can be found in Klang Valley especially those located near institutes of higher learning, industrial areas, and commercial centers (Ch'ng, 2015). Overcrowding therefore cannot be avoided and this severely affects people's health and life.

RESEARCH METHODOLOGY

Different methods are used, namely, a questionnaire survey, semi-structured interviews, and document reviews, which represent a mixed method research for this study. A combination of qualitative and quantitative strategies have been selected for this study as it is believed to create a stronger research outcome and enhances the validity as well as reliability of the research (Malina et al., 2011). The case study approach has also been applied as part of the study in identifying the contributing factors of the overcrowding problem in Malaysia. According to Zainal (2007), case study is an ideal method when a holistic and in-depth investigation is needed for the subject or study of interest. As multiple case studies offers strong findings and robustness of the cases (Amerson, 2011), two low cost People's Housing Project (PPR) in the Klang Valley area are chosen as case studies for this research. The selection of these cases is guided by the phenomenon being studied, and as recommended by Yin (2009).

In the first stage of the study, the understandings of overcrowding as well as the factors leading to the problem are studied through an extensive review of various documents such as journals, books, newspaper, and official documents published by government and private agencies. The review is subsequently complemented by a questionnaire survey on the occupants from two PPR projects using a standardised survey form. A total of two hundred set of questionnaires have been distributed to the PPR households and 122 questionnaires have been returned. This represents an acceptable response rate of 61 percent. As argued by Sapsford (2007), reliable results can be produced even with a response rate of 20 to 30 percent.

The questionnaire is prepared in two versions- in English and in Bahasa Melayu. An accompanied cover letter explains the purpose of the survey, assuring respondents how confidentiality will be maintained. The contact address of the researchers is also prepared to encourage the potential respondents to be involved in the study (Leedy and Ormrod, 2010). Accordingly, the questionnaire designed for the study consists of three main sections, (1) residents' demographic profile, (2) factors of residential overcrowding, and (3) residents' general opinion. The second part of the questionnaire evaluates the respondents' level of agreement concerning the four factors of overcrowding, as discussed in Section 2.0, on a continuum of 'strongly disagree' to 'strongly agree'. In the third part of the questionnaire respondents are also given the opportunity to express their views on the appropriate number of occupants for each household that they think are acceptable. Using a self-completion questionnaire, the intended respondents in this study answer the questions as posed by themselves. The self-completion or administered questionnaire is selected as it offers a better response rate, provides unbiased and accurate data through non-verbal actions, lowers the risk of having an incomplete questionnaire, is more convenient for respondents as they can ask the researcher about the questions that they find difficult to answer, provides the opportunity to collect additional information, and gives the assurance that the questionnaire is answered by the intended respondents (Awang, 2011; Blaxter et al., 2010).

The data collected has been summarised using descriptive analysis through the Statistical Package for Social Sciences (SPSS) software. The distribution of data are then shown in both tables and graphs as these are the easiest way to describe the basic pattern of numerical data for the variable in the questionnaire (Neuman, 2006). Following this, semi-structured interviews with two building control officers from the local authorities are conducted in order to obtain their recommendations in reducing overcrowding problems in Malaysia. According to Laforest (2009), interview allows the study to obtain an in-depth and rich information regarding the issues studied. Both interviewees are given an information sheet which provides information about the research and a consent form. The interviews are conducted face-to-face at the interviewees' offices, at a time convenient to them.

Background of Case Studies

People's Housing Programme or Projek Perumahan Rakyat (PPR) is a government programme that has been introduced in February 2002 for the resettlement of squatters and residence requirements for low-income earners (National Housing Department, 2018). Notable for their tendency to be overcrowded, Projek Perumahan Rakyat (PPR) Kerinchi, Lembah Pantai and Projek Perumahan Rakyat (PPR) Taman Muhibbah, Puchong have been selected as case studies for this research. Both are low-cost high-rise flats of 17-storey buildings, with each level containing 20 living units as demonstrated in Table 1.

Table 1: Details of the case studies

	PPR Kerinchi	PPR Taman Muhibbah
Blocks	6	5
Storey	17	17
Number of units per storey	20	20
Total number of units	More than 1,800	More than 1,800
Nearest LRT station	LRT University (1.7km, 22 minutes)	LRT Awan Besar (1.4 km, 18 minutes)

Situated in the largest city of Malaysia, PPR Kerinchi is also strategically located near the newly opened KL Gateway mall. The mall is a massive development which comprises residences, corporate towers and a retail mall. In addition to this, PPR Kerinchi has also become attractive because of its proximity to the Light Rail Transit (LRT) University station. Although this makes the flat more accessible, there has been a strong tendency towards overcrowding in this area. Similarly, PPR Taman Muhibbah also offers great rental potential with its strategic location in a major town in Puchong and its proximity to the LRT Muhibbah Station. As argued by Corburn (2015), nowadays people are more likely to live close to town although they have to live in an overcrowded area as a way to keep costs down.

FINDINGS AND DISCUSSIONS

Figure 1 illustrates the income distribution of the surveyed respondents. From the survey questionnaire, a majority of the respondents have a household income of less than RM3,000 with 75 percent in PPR Kerinchi and 72.2 percent in PPR Taman Muhibbah. The results demonstrate that more than 20 percent of the respondents in both PPR earn more than RM3,000 per month. This is surprising as RM3,000 is the maximum households income to qualify for a PPR unit. According to one of the interviewees, a plausible explanation is that the original residents may be subletting their units to other people including foreigners to make extra money. The interviewee further criticises their act as irresponsible as more than 100,000 people in need are waiting for these housing.

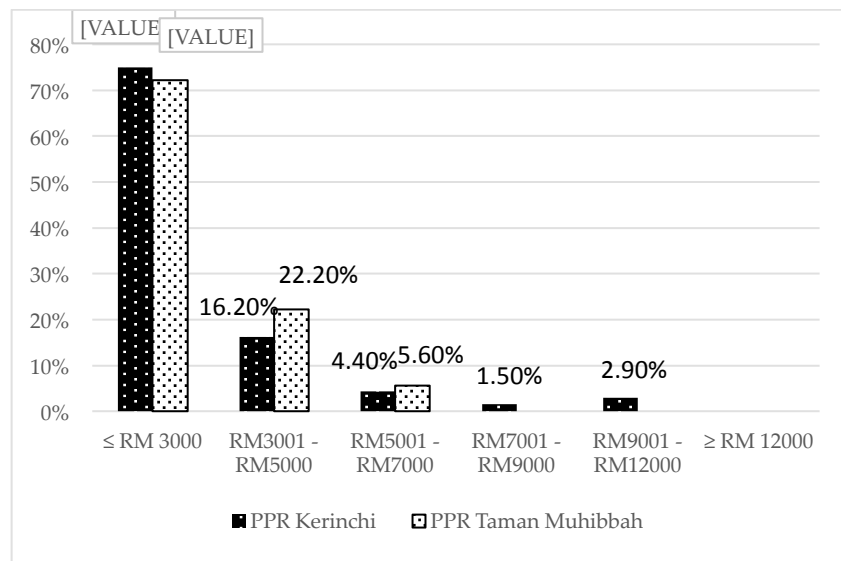


Figure 1: Distribution of monthly income

In terms of the household size, the majority of respondents in PPR Kerinchi and PPR Taman Muhibbah have mentioned that they have a household size of 5 to 8 people. As shown in Figure 2, this is represented by 58.8 and 50 percent of the respondents from PPR Kerinchi and PPR Taman Muhibbah respectively. With an area of 650 square feet and a height of 8.2 feet, both PPR units can accommodate up to 15 occupants (Government of Malaysia, 1976). The respondents have been briefed on this maximum allowable number of occupants- based on Section 79 of the Local Government Act 1976 (Act 171), however, a majority of them disagree with the figure, in particular 94.1 percent from PPR Kerinchi and 88.9 percent from PPR Taman Muhibbah (Table 2). The interviewees believe that there is a deficiency in the existing mechanism of controlling overcrowding, specifically Act 171. The loophole lies with the fact that Act 171 does not provide precise interpretation of the term 'clear internal space' of a building. As highlighted by Ch'ng (2015), the term does not limit the crowding calculations for bedrooms and includes any space within the premises including the kitchen and toilet space. This has resulted in the unreasonable allowable number of occupants per household.

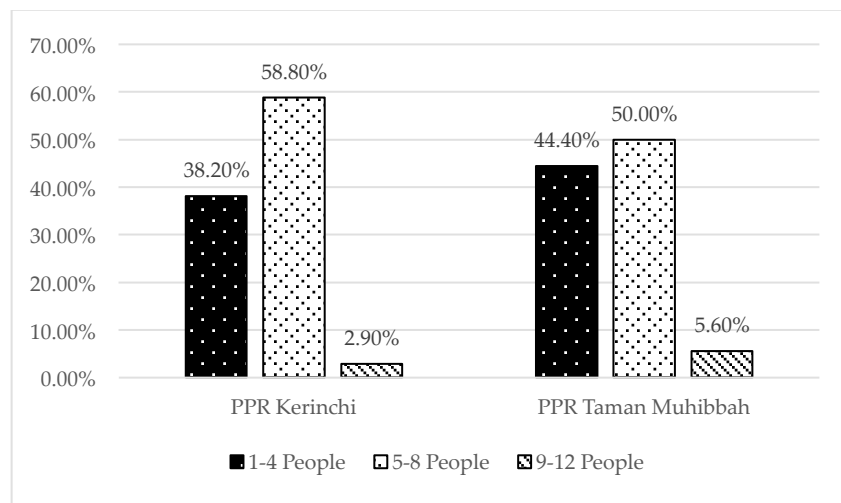


Figure 2: Household size

Table 2: Level of agreement with the provision of Act 171

	Percentage (%)	
	Yes	No
PPR Kerinchi	5.9	94.1
PPR Taman Muhibbah	11.1	88.9

Accordingly, the respondents have been asked to indicate a suitable number of individuals that they think is reasonable to occupy one housing unit. In line with the household size, the vast majority of the residents in both PPR prefer up to a maximum of 5 residents, followed by 4 and 6 residents. Surprisingly, it is found that some of the respondents (1.9 percent) from PPR Taman Muhibbah have suggested a household size of 15 occupants as reasonable for their respective units. As discussed in Section 2.0, different people may have different acceptable level of what constitute as crowded and therefore, possess different preferences on the total number of persons in a unit (Gray, 2011). To date, there is no research providing single standard point of overcrowding at which occupants feel crowded. According to the interviewees, those who give high priority to the quality of the house are more likely to have a low tolerance for overcrowding as compared to those who place proximity to their workplace as their top priority. This is in line with the results that are obtained in Table 3 where proximity to workplace and public transport are highly agreed upon as one of the overcrowding factors by the majority of the respondents in PPR Kerinchi and PPR Taman Muhibbah, with a percentage of 79.4 percent and an 81.5 percent respectively.

Table 3: Factors of overcrowding

Factors	PPR Kerinchi		PPR Taman Muhibbah	
	Mean	Percentage (%)	Mean	Percentage (%)
Migration	3.51	60.0	3.57	63.0
Expensive rental and housing prices	3.89	68.4	4.12	82.4
Proximity to workplace and public transport	4.03	79.4	4.19	81.5
Loopholes in the existing standards	3.32	53	3.22	50.0

*Percentages of agree and strongly agree

Results in Table 3 also revealed that expensive rental and housing prices were other factors of overcrowding, as agreed by the majority of the respondents- 82.4 percent in PPR Taman Muhibbah, followed by 68.4 percent in PPR Kerinchi. One of the respondents stated that he had to share the house with his parents as the monthly rental of RM124 was still considered to be expensive as he only earned RM1,200 a month. Furthermore, more than half of the respondents in both PPR have also agreed that migration is another factor that has created overcrowding problems. The survey has found that some of the owners are subletting their units to foreign workers at a much higher price. In some ways, this result has reconfirmed the finding presented in Figure 1 where some tenants are earning more than the maximum income to qualify for a PPR unit. In most of these units, the living and dining space have been converted into a sleeping area in order to house more workers. Subsequently, they are forced to live in a cramped condition. According to the interviewees, one of the approaches that can be taken by the local authorities in addressing this problem is to reward the PPR's residents who inform the authorities on owners who sub-let their units.

Among the factors that caused overcrowding, loopholes in the existing standards was the least agreed upon by the respondents, with a disagreement percentage of 53 percent in PPR Kerinchi and 50 percent in PPR Taman Muhibbah. A plausible explanation could be attributed to the fact that the respondents were mostly unaware and had never heard of the existing standards used to control overcrowding in Malaysia, such as the Local Government Act 1976 (Act 171). Therefore, it is recommended that the government plays an active role in educating and in building awareness about the dangers and the impact of overcrowding among public community. All the interviewees has also highlighted residents as the key stakeholders in addressing the issue as they may act as informants or contribute opinions in decision making processes, and hence yields wide and acceptable standards for overcrowding.

CONCLUSION

The impact of overcrowding on people's health and wellbeing is evidenced through many of the existing research. This study has demonstrated that migration, expensive rental and housing prices, proximity to workplace and public transport, as well as loopholes in the existing standards to be the contributory factors that lead to the problem of overcrowding. The congested housing problem has steadily got worst although it has already begun since World War II. In Malaysia, the current tool of governing and controlling overcrowding is still based on the Local Government Act 1976 (Act 171) which has been formulated four decades ago. This study has revealed that the provision seems unrealistic for present circumstances as the people's standard of living is constantly evolving. As such, it is imperative to incorporate the psychological needs and the perceptions of different groups of people in determining the acceptable standards, of what constitute as crowding. This is an important finding that needs to be investigated further as overcrowding has evidently been reflected as the most common concept that measures housing quality.

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