

HINDU RESIDENTS' SATISFACTIONS ON RESIDENTIAL UNIT SPATIAL LAYOUT OF LOW-COST FLAT HOUSING

Mohammad Yazah Mat Raschid^{1*}, Roslina Sharif¹ and Ooi Siew Choong²

^{1*}Department of Architecture, Faculty of Design and Architecture, Universiti Putra Malaysia

²Physical Resources Department, Taylor's University College, Malaysia

*Corresponding author :
mohdyazah@upm.edu.my

ABSTRACT

Religious and cultural considerations of specific communities are usually overlooked in the design of low-cost flats (LCF) in Malaysia, likely due to a poor understanding of religious-cultural needs. The result is a spatial layout that is generic and purely functional, in which Hindu households are expected to be experiencing some degree of dissatisfaction, as well as emotional and psychological stress. The research methodology is a phenomenological study of interviews with 30 Hindu households in LCFs around Puchong, Selangor. The results indicate that Hindu residents make do with the accommodations given as they have few other housing choices. Improvements can be made, however, to the design of LCFs to enhance the living experience of Hindu families and improve residential satisfaction.

Key words: Architecture, cultural sensitivity, Hindu, housing, Indian, low-cost flat, Malaysia, religion and residential satisfaction.

1. INTRODUCTION

This paper focuses on the Low Cost Flat (LCF) planning and design and its impact towards the Hindus residents' satisfactions in Malaysia. Malaysia is growing rapidly to become a developed nation by 2020 and stretching the limits of urbanization. The World Bank (2012) asserts that Malaysian urbanization in Malaysia is at a critical stage and will have an impact towards the housing needs amongst the urban population. According to World Bank (2012) statistic, Malaysia has 19 urban areas with more than 100,000 people: one urban area of more than 5 million people (Kuala Lumpur), two between 1 million and 5 million people (George Town and Johor Baharu), five of 500,000 to 1 million people, and 11 urban areas of between 100,000 and 500,000 people. As of 2010, the Kuala Lumpur urban area was the eighth largest in the Asian region, larger than some megacity urban areas like Jakarta, Manila, and Seoul despite its smaller population. Furthermore, The World Bank also reported that the overall urban area grew from about 4 million inhabitants in 2000 to 5.8 million in 2010, a relatively high average annual growth rate of 3.8%.

The statistic shows future demand for housing. Limited land is another problem for planning and housing in addition to large population growth. According to Ward et al. (2001), lack of access to credit forces families to make do with inadequate resources, to live and work in multi-functional spaces combining makeshift shacks, partly finished rooms, and temporary partitions for walls (Jennifer 2005). The federal and state governments support public housing schemes in urban areas yet many families are not reachable through these programs as affordability is an issue. Land and housing costs are often too

high for the 4% of the population who live below the poverty level (IMF 2012). IMF also reported that the focusing on affordable housing for the poor has included the elements of the New Economic Policy (NEP) objectives of restructuring income and assets between the different ethnic groups, especially Malay, Chinese and Indian. Thus, the study on Hindus housing satisfaction on the LCF is based on the idea that culturally-sensitive housing has an effect on the identity and well-being of dwellers where the relationship between Hindu residents and LCFs in Puchong is the primary focus.

2. BACKGROUND

Traditionally, the Hindus housing environment is filled with negativities. Complaints against estates include them being “inhumane, harsh and forbidding in appearance”, “neglected, poorly funded and managed”, “reinforcing insecurity, low self-esteem and underachievement”, “marginalizing an increasingly welfare-dependent population – a new ‘under class’” and “stigmatized, as new residents protested against architecture and design faults, nuisance from children, vandalism and urination in common parts, noise, dampness and flooding of landings and walkways” (Stewart & Rhoden, 2003). The problems can probably be levelled against several LCFs in Malaysia.

Can similar riots break out from our low-income housing areas? Are Malaysian from the Indian community doing well in such environments? A literature search has revealed little information on how residents in LCFs are really coping. Visher and Travis (2001) described post-occupancy evaluation (POE) as any and all activities that originate out of an interest in learning how a building performs once it is built, including if and how well it has met expectations and how satisfied building users are with the environment that has been created. Meanwhile, Hashim and Rahim (2003) in his research provides an assessment of the relationship between social integration and residential satisfaction of residents in low cost housing in Malaysia. It was found that factors such as default in the physical structures of the house and poor social and physical environments could affect the social integration in the neighbourhood. The author is not aware of any POEs done on LCFs in the country.

The general trend in LCF designs appears to be a western style open-plan where walls between living, dining and kitchen spaces are minimized or removed entirely. (Refer to Figure 1)

Historically, Hadjiyanni (2009a) found that the modern open-plan layouts generally did not suit the needs of the Somali and Mexican immigrants who,



Figure 1: A Typical LCF Open Plan in Malaysia

although love good cooking, preferred to keep the smell of food within the dining or kitchen areas. Regarding such displaced groups in Minnesota, Hadjiyanni (2009b) further lamented that:

“Instead of having the choice to appropriate or adapt their living environments to support their way of life (perform religious rituals and customs, dress according to their cultural norms, eat foods with familiar tastes, decorate according to a preferred aesthetic, etc.), families often must choose between changing their behaviours to adapt to their spatial boundaries or doing nothing.”

Culturally responsive housing enhances physical and psychological wellbeing (Lee & Park, 2011). A literature search reveals that some research has already been conducted on the housing needs of the Malays. The general recommendation is that similar research be done for the other racial groups in the country. Hashim et al. (2009), for instance, suggested examining, “the culture core of the different community groups such as the Chinese and the Indians in relation to low-cost housing design in general and the building elements in particular. The findings could be used to formulate a set of design guidelines that could be beneficial and supportive of all Malaysians”. Tabb and Ali (2007) stated, “For research on built environment and human behaviour studies, further study on the importance of privacy concept and cultural needs from the user-behavioural perspectives of other races in Malaysian such as

Chinese and Indian is recommended to be conducted. This will give a more thorough picture on the views of the needs of end-users of mass-housing". Meanwhile, Hashim et al. (2009) proposed, "a comparative study on the privacy of other major ethnic groups in Malaysia in relation to the needs of Malaysians. Sufficiently similar needs among the different ethnic groups may help to generate conclusive housing design ideas and solutions which can be accepted by all. Measurement of the specific ethnic groups and the specifics of housing design attributes affecting the privacy of the family".

This research's intention, on the contrary, is to understand a minority community in order to better formulate universal policies applicable to all. As cultures change over time, Bowes and Lemos (1997) recommended that research be done on a continuing basis: To identify the meaning of housing and thus values toward housing, what influences the development of these and the conditions which their development is a most needed base of knowledge by which to perceive the housing problem and from which to formulate policy and programs. The phenomena of housing and its impact on people and their lives can never be fully understood until there is an ongoing research endeavour into both the social and physical aspects for all distinguishable groups in a population. The effect of good or bad housing can also last a long time because buildings are durable. Nearly 40% of houses in the UK today were built before the Second World War (Silva & Wright, 2009), which began for Britain in 1939. They are also more likely to be rehabilitated than replaced due to financial and logistical constraints (Zarecor, 2012). The greatest impact is on women and children because they spend the most time at home (Shrestha, 2000). Dwelling size and 4 overcrowding can hinder the cognitive development of children (McNamara, et al., 2010). Conditions such as overcrowding, poor ventilation, cold, heat, dampness, mould and pest infestation can also affect the health of dwellers directly or indirectly (Firdaus & Ahmad, 2013).

According to research done by Hadjiyanni (2007 & 2009) and Findlay (2011), culturally insensitive housing can lead to stress and alienation, among other things. There is therefore a need to find out if LCFs in Malaysia meet the cultural and religious needs of the Indian inhabitants. The problem arises because such housing is likely to be designed to meet very basic living requirements and not intended for any specific race or community. Cultural and religious considerations are probably not taken into account. Therefore this study will investigate the current LCF layouts and their physical design characteristics. Meanwhile, the views of Hindu households in LCFs will be solicited to determine their level of satisfaction and discover ways to improve future LCFs. The main aim is to ascertain the residential satisfaction level of Hindu residents in LCFs in connection with the appropriateness of the spatial layout for religious and cultural purposes.

3. LITERATURE REVIEW

3.1 *The Phenomenon and Trend in Malaysian LCF*

A culturally-sensitive housing design that understands end-user lifestyles would go far in providing a satisfying living environment for its inhabitants. When cultural needs are not met, the result can be social exclusion and isolation (Findlay, 2011). It can also be a source of stress (Hadjiyanni, 2007). A Muslim woman in such an environment, would be forced to wear her hijab while cooking in the kitchen if there are male guests in the living room (Hadjiyanni, 2007). This is both uncomfortable and unsafe. A culturally-sensitive housing design that understands end-user lifestyles would go far in providing a satisfying living environment for its inhabitants. When cultural needs are not met, the result can be social exclusion and isolation (Findlay, 2011). In addition, housing provides dwellers with a sense of identity that is important for community building. (Hadjiyanni, 2007; Findlay, 2011). People who have lost cultural connections tend to suffer mental, emotional and physical health problems (Hadjiyanni, 2008). Such problems can effect generations (Hadjiyanni, 2009).

In addition, housing provides dwellers with a sense of identity that is important for community building. (Hadjiyanni, 2007; Findlay, 2011). People who have lost cultural connections tend to suffer mental, emotional and physical health problems (Hadjiyanni, 2008). Such problems can effect generations (Hadjiyanni, 2009). Culturally responsive housing enhances physical and psychological well-being (Lee and Park, 2011). The greatest impact of housing is on women and children because they spend the most time at home (Shrestha, 2000). Dwelling size and overcrowding can hinder the cognitive development of children (McNamara, et al., 2010). Conditions such as overcrowding, poor ventilation, cold, heat, dampness, mould and pest infestation can also affect the health of dwellers directly or indirectly (Firdaus and Ahmad, 2013).

The Universal Declaration of Human Rights (United Nations, 1948) asserts that adequate housing is a basic human right. Likewise, the stated goals of the post-independence National Housing Policy, formulated by the Ministry of Housing and Local Government in 2011, included among others the following:

1. Adequate, comfortable and quality housing to enhance the sustainability of the quality of life of the people;
2. Comprehensive facilities; and
3. A conducive and livable environment.

In 1982, a 30 percent quota of low-cost units was imposed on private developers, with a price ceiling of Rm25,000 per unit. Although it is doubtful if the directive has any legal effect (Sufian and Mohamad, 2009), developers

have generally complied with the requirement. The price ceiling was found unprofitable (Tan, 2011; and Sirat, et al., 1999) for private developers due to the high cost of purchasing land and developing infrastructure in major cities and towns (Ariffin, et al., 2010). Several developments catered for certain minimum wage workers (Refer to figure 1 as examples of low cost flats in Puchong area to cater for minimum wage workers). Developers have had to cross-subsidize the low-cost houses by raising the prices of other types of houses (Sufian and Ibrahim, 2011).



Figure 2: Low cost Housing where certain minimum wage workers such as those in the construction industry are provided complimentary lodging in addition to their salary.

The standard build-up area per unit was between 45-56 m², with a minimum of two bedrooms (Sirat, et al., 1999). In 1998, the Construction Industry Development Board (CIDB) introduced new guidelines for low-cost houses called Construction Industry Standards (CIS) 1 and 2 to improve the quality of single- and double-story houses, and strata buildings, respectively. The standards complied with the existing Street, Building and Drainage Act and Uniform Building By-Laws (UBBL, 1984). The development of these standards was based on the needs for safety, infrastructure, health and physical development, and community development (Sufian and Rahman, 2008).

With the increase in floor area to 63 m² and the number of bedrooms to three, private developers were permitted to raise the selling price of LCFs in big cities from Rm25,000 a unit to Rm42,000 a unit, for sale to purchasers earning less than Rm1,500 a month (Sufian and Mohamad, 2009). Following the action by the CIDB, the Jabatan Perumahan Negara (JPN) introduced the

design for the standard Program Perumahan Rakyat (PPR) LCF that attempted to comply with the CIS (Sufian and Mohamad, 2009). The main objective of the PPR was the resettlement of squatters in Kuala Lumpur and Selangor (Agus, 2003; and Sufian, et al., 2009). A few conditions for land development were waived by the Ministry of Housing and Local Government (MHLG) to expedite the process. The following conditions were among those imposed on the PPR (source: JPN website 2012):

- Eligible for squatters earning under Rm1,500 a month
- Monthly rental at Rm124
- Minimum floor area to be 60m²

The success of government policy in providing satisfactory housing has been questioned (Tan, 2011). Squatters have shown reluctance to move into LCFs that are not suited to their culture and beliefs (Sufian and Mohamad, 2009). Cultural aspects have not been given enough consideration, compared to policy and economics in the design of mass housing in Malaysia (Hashim and Rahim, 2009).

The Selangor state government released its own planning guidelines in 2007 is labelled in Malay as the Manual Garis Panduan & Piawaian Perancangan Negeri Selangor, (MGPNS) which was revised in 2010. The unit area comparisons of the low cost apartment in this study is listed in Table 1. The Uniform Building by Law did not indicate the actual size of LCF while the MGPNS only provide standard size requirement for any low cost development in Selangor. Interestingly, there seems a lot of confusion on the actual size requirements for the LCF sizes.

As can be seen from Table 1, the CIS2 is an improvement upon the UBBL, while the PPR does not quite meet the standard set by the CIS2. The Selangor standard for low-cost housing is set even higher than that of the CIS2. From the table, the smallest floor area is for Pangsapuri Aman, built by profit-minded private developers.

3.2 Culturally Sensitive Housing

Finlay (2011), who studied the housing needs of three culturally diverse groups of immigrants in South Australia, namely from Sudan, Afghanistan and Iraq, opined that there is a need to discover whether the requirements of such displaced people are being met by the present supply of housing. He further asserted that social housing providers, including their consultant architects, draw on the form and layout of the current generic Australian house to suit all of the people they house. This has led to a standard design process based on policies, design guidelines and building specifications that primarily meet the needs of housing organizations, resulting in a product that may not suit all tenants.

In a report on the housing experience of Somalis in England, Cole and Robinson (2003) recommended that, “the development process must attend to culturally specific design considerations if new developments are to provide new housing opportunities for particular minority ethnic populations”.

Table 1 Comparison of Specified and Actual LCF Floor Areas (m2).

Space	UBBL 1984 (specified)	CIS2 1998 (specified)	PPR 1998 (actual)	P.puri Aman (actual)	Pangsapuri Enggang (actual)	Selangor 2010* (specified)
Living & dining	Not specified	Not specified	24.19	15.3	14.0	Not specified
Bedroom 1	11.0	11.7	10.82	10.4	11.8	Not specified
Bedroom 2	9.3	9.9	6.67	8.8	9.5	Not specified
Bedroom 3	6.5	7.2	6.51	6.7	6.6	Not specified
Kitchen	4.5	5.4	4.52	3.8	4.0	Not specified
Bathroom	2.0	1.8	3.07	1.4	1.6	Not specified
Toilet	1.25	1.8	1.71	1.4	0.9	Not specified
Yard	Not specified	Not specified	2.90	2.5	3.3	Not specified
Store	Not specified	Not specified	Nil	1.4	0.9	Not specified
Total (including circulation)	Not specified	63.0	60.38	58.6	60.7	65.1

*Manual Garis Panduan & Piawai Perancangan Negeri Selangor, Edisi Kedua, 2010

This is because housing that meets the needs of the target group are more likely to be used and more likely to result in a positive outcome in the long run (Cole and Robinson, 2003). In her interviews with Hmong, Somali and Mexican immigrants in Minnesota, Hadjiyanni (2009) discovered that despite their varied backgrounds, all respondents agreed “that it was very important to keep their traditions and cultural identity definition in spite of living in the US.” Among the reasons they gave for the need to personalize a dwelling space were to connect to a homeland, to pass on cultural traditions to future generations, to foster alliances with others from the same cultural group and to differentiate themselves from the mainstream and other cultural groups. In research on Native Americans, it was found that Indians preferred a home that “nurtures hope and energy and solidarity to get things done for individuals

and the tribe, a home that reinforces tribal values about culture and nonhuman environments” (Edmunds, et al., 2013).

Finlay (2011) listed the specific housing requirements of the Muslim immigrants from the Middle East and North Africa, which included squatting rather than sitting pans in toilets, visual isolation of the cooking area (as the kitchen is considered a woman’s private zone), a formal living room for the entertainment of outsiders (to double as a men’s prayer room or a space for celebrations and rituals), an additional bathroom (so that visitors and guests need not enter the private zone of the house) and bedrooms of equal sizes (to better accommodate different family configurations).

As Somali immigrants to England are also Muslims from the same geographic region, their housing concerns tend to be similar to that of their counterparts in South Australia (Cole and Robinson, 2003), including preference for showers rather than baths, preference for large kitchens as female family members socialize and help in the cooking, good ventilation in kitchens to exhaust food smells, preference for the living space to be divided into two (for the separate use by male and female, and young and old) and preference for numerous bedrooms to accommodate large families. Setting up the aesthetics - the look and feel - of a dwelling place with furniture, curtains, carpets, electronic equipment, decorations and foods is part and parcel of the process of home-making (Hadjiyanni, 2008).

Hadjiyanni (2009b) proposed that a culturally sensitive housing design should include flexible space plans that can be adapted to various uses and aesthetics, wall space that can be adorned, built-in display and storage areas and wall and floor surfaces that can be easily maintained. Immigrants generally are overcome by a feeling of powerlessness when faced with a limited choice of housing layout and size that are inadequate for their needs (Findlay, 2011). Furthermore, overcrowding can result in mental and physical stress among family members who desire private spaces for personal study or use (Cole and Robinson, 2003).

Finlay (2011) discovered that meeting the culturally-specific housing needs of immigrant groups did not involve substantial increases in building costs. The notion of Hindu cultural housing can be traced from Vaastu Shastra (VS). It is basically an ancient Indian knowledge of Architecture, with Vaastu meaning a human settlement (Patra, 2009) and shastra meaning knowledge. The purpose of VS is to assist in the attainment of “balance and harmony between man, nature and his building, in order to achieve peace, prosperity and happiness” (Patra, 2006). Attempts to do so is considered as by establishing an intricate doctrine to ensure the propitiousness of a Hindu house by directing beneficial and detrimental influences (Saavala, 2003).



Figure 3: Sri Kandaswamy Kovil Temple where most Hindus celebrate both social and religious belief

Hindus also believe that both man and building are reflections of the universe (Patra, 2006; and Khambatta, 1989) and this is celebrated in the Temple constructions (Refer to figure 3). Meanwhile Patra (2006) stated that are not ends in themselves but mediating objects through which we create a world for ourselves and enter into a dialogue with the world around us by defining and articulating our relationship to our fellow beings, nature and its phenomena, and 'the world beyond'. Describing the built forms in Nepal and South Asia, Gray (2009) stated: "In their everyday domestic practices of preparing, cooking and eating rice, as well as in the material and ritual construction of their houses, they build mandalas into their domestic space so that living in a house is at the same time an intimate experience and a tacit and embodied knowledge of the cosmos". For example, the kitchen in a house should preferably be placed in the South eastern corner, as this space relates to Agni, the god of fire. The worship room or pooja, on the other hand, is most auspiciously located in the north-east, the direction of Isha, the god of purity, knowledge and wisdom (Gray, 2009; & Saavala, 2003). Furthermore, to render a dwelling propitious, a cleaning ceremony is typically conducted before moving in. The threshold is then decorated with a geometric design which serves to demonstrate the presence of auspicious women in the household (Saavala, 2003).

3.3 Methodology

The qualitative research methodology offers a deeper understanding of the subject by listening to the voices of respondents within the context of their

experiences (Creswell, 2013). For Yin (2011), qualitative research covers the meaning of peoples' lives within its context, thus contributing insights to help understand human social behaviour. This is achieved by talking directly to people at their homes and allowing them to speak openly (Creswell, 2013). The case study is basically a bounded entity (Yin, 2012), such as a building, a phenomenon or a cultural event. It is a look at a subject in detail from many different angles to provide a rounded, richer and more balanced impression (Thomas, 2011). There is no formula for determining sample size but the more cases, the greater the confidence and certainty of the studies' findings (Yin, 2012).

According to Creswell (2013):

"Problems in qualitative research span the topics in the social and human sciences and a hallmark of qualitative research today is the deep involvement in issues of gender, culture and marginalized groups. The topics about which we write are emotion laden, close to people and practical."

This is supported by Gillham (2000) who believes that case study research is:

"Particularly appropriate to study human phenomena and what it means to be human in the real world 'as it happens'."

The Hindu Tamil community in Malaysia fits the description of a cultural group that has been marginalized, as established in the literature review. A study of their lifestyle in LCFs is expected to lead to better understanding of the main issue.

The type of problem best suited for phenomenology is one in which it is important to understand several individuals' common or shared experiences in order to develop practices or policies, or to develop a deeper understanding about the features of a phenomenon (Creswell, 2007). The phenomenon, in this case, is the experience of living in a low-cost flat for Hindu Tamils. The phenomenological studies, for Yin (2011), examine "human events as they are immediately experienced in real-world settings, resisting prior categories and concepts that might distort the experiential basis for understanding the events".

Data collection for phenomenological studies is conducted via in-depth interviews with as many as ten individuals who are open and willing to share their experiences (Creswell, 2013). Yin (2011) opines that sampling should be targeted at "those that will yield the most relevant and plentiful data". Upon completion of data collection, the researcher then writes his report in such a way as to allow the reader to feel as if he or she is at the scene of

the event: “The writing is clear, engaging and full of unexpected ideas. The story and findings become believable and realistic, accurately reflecting all the complexities that exist in real life. The best qualitative studies engage the reader” (Creswell, 2013).

3.3.1 Interviews

A Tamil-speaker asked open-ended questions from a fixed list during the interviews and the answers were translated for the author to record in writing. The interviews were also recorded on an audio device for checking later. The author wore his UPM nametag at all times and requested permission to record interviews as well as to take photographs. A small token of appreciation was presented at the end of each session.

10 interviews were conducted each at 3 case study locations, totally 30 interviews. A standard list of open-ended questions was employed. Hashim, et al. (2009) involved 30 respondents in their single-method interview research on privacy and spatial organization among urban Malays. In another single-method study on privacy regulation on Malay families in terrace housing, 11 interviews were conducted by Hashim and Rahim (2008). Lee and Park (2011) interviewed 27 respondents in a single-method research into the perception of visitors from Korea in US houses. Hadjiyanni (2009) interviewed 10 Hmong, 13 Ojibwe, 25 Mexican and 8 Somali households in numerous single-method studies of immigrants adapting to new homes in the United States.

Two low-cost private sector developments (Pangsapuri Enggang, Bandar Kinrara and Pangsapuri Aman, Taman Puchong Prima) were selected, primarily via introductions through the service centres of political parties in the Puchong area. One PPR flat was also randomly selected (Pangsapuri Kg Muhibbah, Bukit Jalil). Upon arriving at a development, the interviewer attempted to locate concentrations of Indian families by speaking to the locals. Households were selected on a random and snowball sampling basis, which means respondents introducing further respondents. Households were also identified by the small altars installed in the corridor immediately outside a Hindu flat. The interviewer first introduced us and then explained the purpose of our visit. There were no rejections. (The impending 13th Malaysian General Election held on 5 May 2013 may have been a factor.) In all cases, we found the Indian families humble, friendly and welcoming. Upon entry, the author presented the respondents with a gift of a bar of chocolate which was purchased at a price of Rm4.50 a bar at a local shopping center. We sat on whatever that was available, usually sofas or chairs in the living cum dining area. (On one occasion, there were not enough chairs and the author had to stand for the duration of the interview.)

The interviews started with the collection of general demographic data of the households which was written down in the prepared form. The author used this time to observe the environment of the flat, the quality and arrangement of the furniture, the cultural and religious artifacts on display, the personality and openness of the respondents, the apparent wealth or poverty of the households, and so on. Upon completion, the interviewer then proceeded to the open-ended questions. Our requests to record this section on a digital audio recorder were always granted. The interviewer asked the questions in Tamil. The respondents replied in Tamil. The interviewer then translated the replies verbally to the author in English, which were then recorded by the author in writing.

Upon completion of the interviews, we requested permission to take photographs of the flat, especially of the religious and cultural artifacts, such as the major Hindu altar. None of the households denied us this request. We then expressed our gratitude to the respondents and departed. Of the 30 respondents interviewed, 24 were women and 6 were men. This was unintentional and primarily because the author and his assistant encountered many single mothers, some whose husbands have either passed away, were incarcerated in prison or have simply disappeared. Ages of respondents ranged from mid-20s to mid-70s. All were married or have been married at some point in their lives. The smallest household consisted of only two persons, while the largest had ten persons – father, mother and eight children. 21 of the households contained at least five persons. 21 of the respondents have had at least six years of formal education, 9 of whom had finished Form 3. Among the respondents were office cleaners, housewives, tea ladies, stall operators, lorry assistants and general workers.

All the respondents were Hindus. Their faith was evident from the altars installed in the home and many had Hindu and cultural decorations attached to the living cum dining room walls, over the front door and on the floor near the entrance. They prayed at the altar twice a day, once in the morning and again in the evening. Rituals or ceremonies that are more elaborate are not conducted in the house due to space constraint.

The families we met at the Kampung Muhibbah flats were mostly from the Ladang Bukit Jalil estate relocated to free land for property development. Similarly, Aman and Enggang were constructed by private developers to resettle squatters. The older folk tended to be former rubber tappers or workers in rubber factories. Memories of childhood included living in rumah papan or timber board houses. None of the respondents owned their present premises, all were renting. Allocation of the units at Kampung Muhibbah was done via balloting, but a family with a senior member with movement difficulties could request for and normally was granted a unit closer to the ground.

4. DISCUSSION

The general shortage of space within the flat was a common problem. As described by a resident:

“We simply need more spaces. We cannot have a proper prayer in the house. All the spaces are used and we don’t have proper storage for our things”.

Respondents who expressed satisfaction with their flats were generally those who stayed in PPR units, probably due to the bigger area and greater spaciousness. One respondent said she was grateful for the flat because she had no place to stay previously. She addressed:

“Thank god I have a house to live. Big or small, it is better than being homeless. It is not easy to get loans on my salary”.

Those with smaller families also had greater satisfaction than those with big families. For the largest household the researcher encountered (10 members), the parents, four female children and the altar occupied one bedroom each. Four male children had to sleep in the living room at night. Brothers do not share bedrooms with sisters. For large families such as these, a move is inevitable as the children grow up. This view is shared by an interviewee:

“We came from big families, Even though we have 3 bedrooms (house), they are small and actually can only fit in only four to 5 persons. But what choice do we have?”

Lack of space in the kitchen, bathroom and yard was another source of dissatisfaction. This is the space many respondents said they would enlarge if they could. One respondent said she could not install wall-hung cabinets in the kitchen because it was so small. The yard, which is usually next to the kitchen, was commonly used as additional storage space or part of the kitchen. In some homes, the rice cooker and refrigerator had to be placed in the living cum dining area.

The yard was seldom used for the function it was designed for – the drying of clothes. When asked about the importance of having a yard, the residents’ responses are that they are used for extra kitchen spaces due to their good ventilations. One of the respondents view was taken as follows:

“As an Indian, my family cooked a lot of curries and everybody was complaining about the smells not just from inside but the neighbors

too. It (yard) is the only place I can get some privacy from others when cooking or if I want to be alone in my house.”

The design of yard which lacks of roof overhangs from every floors is a problem when drying clothes. One complaint was that dirty water dripped from the floors above. Instead wet clothing was often hung at the glass louver windows in the living room to dry. At the Muhibbah PPR flats, clothes could not be hung in the corridor due to scarcity of direct sunlight. Strong winds would also blow the clothes away. Rain ingress forced some families to place electronic equipment such as television and radio sets away from the louver windows.

Children were often found playing in the corridors, which became a source of disturbance for the neighbors. Corridors and staircase landings were sometimes used as storage space for bicycles and folding tables. Clothes were commonly hung out to dry in the corridors. This limitation also forced all elaborate religious-cultural activities that involve large numbers of people to be conducted elsewhere, usually at a rented multipurpose hall. The narrow corridors also restrict religious processions from happening there. Clearly, the Hindus residents also acknowledged the importance of having social interactions along the corridors but was prevented by lack of common spaces and furniture in the area as shared by a respondent:

“Even the corridors space are taken up by most of us for drying or storing our bicycles. Perhaps it is better if they provide special outdoor drying yard and makes the corridor size bigger for us to have more space to relax and talk to each other”

The orientation of the units in connection with the day lighting is also considered an issue affecting their comfort as stressed by a housewife:

“Our house is dull. There is no direct sunlight coming in the whole day. Our clothes cannot dry in time”.

The influence of Hindu culture are lacking in the interior unit design and practical for religious purposes. Only one respondent said the furniture was arranged according to Vaastu Shastra. Meanwhile, the furniture in the living cum dining area was mainly arranged for convenience of movement within a tight space and also with the safety of children in mind as they tend to run around the house. This is highlighted by an Indian Household as follows:

“Religion is important but I cannot afford to have a big space for prayer. You see that I try to maximize the space by having less

furniture. At least my children can move around. I try not to let them go out so much”.

The main altar was sometimes located in the living space, but more often in the smallest of the three bedrooms. This altar room cannot then be used simultaneously as a bedroom as any human occupant sharing the space would need to be undergoing a fast by Hindu rules. The room can however double as a storage space or even a study room if big enough. One respondent said she had deliberately positioned their altar to face east as per the Vaastu Shastra. Another said she was unaware of the best location and had placed the altar where the neighbors did.

Very little building modifications were done to the units as all were rented by the occupants. One household at Pangsapuri Muhibbah managed to get a Surat Rayuan or Appeal Letter approved by DBKL (Dewan Bandaraya Kuala Lumpur or Kuala Lumpur City Hall) to demolish the wall between the kitchen and the yard to enlarge the kitchen. It was thus impossible for residents to enlarge their units to accommodate religious or cultural activities than will normally be attended by large numbers of friends and relatives.

Most respondents said they had few visitors staying overnight. One however has a mother who spends a few weeks with each of her children on “rotational” basis and stressed the needs for additional space:

“It is a low cost unit but it will be nice if I could expand it if my kids come and visit me. At least they have a place to sleep”.

Many interviewees said that if given an extra room they would use it as a guestroom. When questioned why a guestroom is necessary, one lady replied that her children will be more likely to stay overnight if it wasn't a burden to her.

None of the respondents expressed privacy problems in their units. Visual privacy was enhanced using curtains at the windows. Some interviewees were bothered by the noise of children playing or neighbours quarreling. One family had to relocate as the neighbours were physically aggressive towards the children for playing in the corridors. Some respondents preferred privacy during meditation and prayers at the altar but it was not essential as there is no dedicated space for it.

“We pray mostly in the living area but sometimes we do it in the bedroom for more privacy”.

Most of the families interviewed said they have lost complete contact with relations in India and receive little cultural influence from south Asia. This

may explain why few of the respondents have any knowledge about Vaastu Shastra or its practice in India. Many do not believe that a house can have any effect on a person's happiness, luck or health. They feel that a person's well-being depends on one's “heart”.

Only one family has stayed in touch with relations in India. Interestingly, this family had also had the furniture arranged by a temple priest, apparently according to Vaastu Shastra principles. An interviewee said that the daughter she was very close to passed away 3 months after they had moved into the present flat. Yet she felt that the unit was “lucky” because her son had a stable career and no debts. Many of the respondents felt that whether a house suited a person depended on the individual. Some felt that Indians can adapt to any dwelling. A few thought that Indians deserve better than low-cost flats and a terrace house is at the minimum. Generally speaking, their religious-cultural worldview appears to have a bigger influence on Hindus than their physical surroundings.

The kitchen is essential component in celebrating their culture. Most households were vegetarian or semi-vegetarian. Families often cooked once for the whole day or even for two days. Perhaps a small kitchen discouraged elaborate cooking. Special food was usually produced to celebrate festivals like Ponggol and Diwali. Many respondents said that the scale of the celebration was dependent on the financial situation. They felt that such celebrations are more important for the children. Due to the space restrictions large religious-cultural meals were generally held elsewhere.

There appeared to be no standard colour scheme preferred by all Hindus. Many families had not bothered to repaint the unit as they were renting. A few had installed a colourful vinyl sheet over the grey cement screed floor. Decorations included Divali posters, family photographs and pictures of Hindu gurus that were thought to increase divine “blessings”. Another attractive decorative element commonly found in Hindu homes is the door curtain. They enhance privacy but tend to limit the flow of natural lighting and ventilation.

Crime was cited as a source of dissatisfaction. Interestingly, a few respondents felt there was less crime in the estates they came from. A father with eight kids related the incident of a depressed man wanting to commit suicide by jumping off the building. Such events were perceived to have a very negative effect on his children. Another respondent said that the neighbours always blamed the Indians for any problems.

“They looked down on us as if we are from outside. They always blamed us on any bad things happen here”.

The stereotyping is considered a barrier in integrating the Indians with other members of the community and should be addressed in the overall planning and design of LCF's. Respondents unhappy with the flats said they preferred to live in terrace houses. One lady said she wanted a house where she could rear dogs. Some said that although they were unhappy with the flat, they had no choice but to cope. Some of the older folk said they were already too old to move again.

5. CONCLUSION

Hindu families appear to be moderately satisfied with the spatial layouts of their LCFs. They try to make the most of the building environment they are given but do complain about small kitchens and bathrooms. They want more storage space, as well as space for children to study and play at home. Space limits also restrict the ways furniture can be arranged, as well as the type and scale of religious-cultural functions that can take place at home. It was found that the LCFs studied in Puchong do not cater to the religious nor cultural needs of Hindus. This leads to problems for Hindus, such as the utilization of a bedroom to house the main altar. As this room can no longer be used for sleeping, the unit has one less bedroom. A smaller altar is also usually hung on the wall outside the unit, which can become an obstruction in the corridor. The interviews conducted are also helpful in understanding the experience and phenomenon of living in LCFs for Hindus. Hindu families can be fairly large, some up to 10 members. Therefore space is a valuable commodity. Male members of the family do not sleep with female members upon achieving adolescence, unless they are married to each other. In cases where bedrooms are insufficient, male members can end up sleeping in the living room.

Religious rituals are performed twice daily at the main altar. Unless a Hindu is fasting, he or she may not share a room with the shrine. Hindu domestic rituals, such as baby naming or puberty ceremonies, are usually accompanied by many family members and friends. LCFs are too small to accommodate such functions. Many of the Hindu families in LCFs have little or no knowledge of Vaastu Shastra. Most believe that the house has no influence upon a resident's health, luck or happiness. Almost all the families rent the units. They thus do not have the power nor motivation to renovate the premises, except in very minor ways. Neighbours can be a source of dissatisfaction. The reasons include noise, crime, bad influence and discrimination.

5.1 Recommendations

A room or alcove, perhaps 1 m wide by 1.5 m deep, should be provided for Hindu families for the placement of a small family shrine. It should have an electricity supply at a convenient location. In the 3-bedroom standard LCFs, 1 bedroom was often taken up by the shrine. With the addition of this space,

the bedroom can then revert to its original use, or be a study for students or a playroom for children.

A little niche of about 450mm wide by 250mm deep should be provided for the placement of a small altar on the wall just outside the entrance. The altar can then be recessed into the wall and not obstruct the corridor. Both Hindus and Taoists can utilize this space for religious purposes. The yard is seldom used for the purpose intended - a place to dry clothes. It is often converted into an additional store or even an extension of the kitchen. Designers ought to provide a better space for the drying function or find alternative ways to achieve the same end.

This study indicates that residential satisfaction among Hindu residents in LCFs is neither very high nor very low but it can be raised by offering bigger kitchens and bathrooms. These two spaces have received the most complaints in the interviews conducted. Hindu families also require a space to place the altar within the LCF. The provision of such a space will prevent the use of a bedroom for this purpose.

This research study has attempted to investigate one type of house: accommodation for the Indian community in low-cost high-density high-rise flats. It is hoped that the findings and lessons learned will be useful for appreciating the religious and cultural needs of Hindu families. Information from the other races in Malaysia can also be compiled and combined into a single database to guide architects, designers and policy makers to create better living environments for all residents of LCFs.

REFERENCES

- Agus, M.R. (2003) The Impact of Government Intervention on the Housing Market in Malaysia. *Journal of Comparative Asian Development*, 2(1): 133-149.
- Ariffin, R.N.R., Nadarajah, S. And Zahari, R.K. (2010) Residential Satisfaction in Private Low-Cost Housing in the Urban Area: A Case Study of the Klang Valley, Malaysia. In: *Urban Dynamics & Housing Change – Crossing Into The 2nd Decade Of The 3rd Millennium, Proceedings Of The 22nd International Housing Research Conference*, 4-7 July: Istanbul, 2010.
- Arlikatti, S. And Andrew, S.A. (2012) Housing Design & Long-Term Recovery Processes In The Aftermath Of The 2004 Indian Ocean Tsunami. *Natural Hazards Review*. 13(1): 34-44.
- Bowes, E. And Lemos, G. (1997) *Reaching the Top*. London: Lemos and Crane.

- Cole, I. & Robinson, D. (2003) *Somali Housing Experiences in England*. Centre for Regional Economic & Social Research, Sheffield Hallam University.
- Creswell, J.W. (2007) *In Qualitative Inquiry & Research Design: Choosing Among Five Approaches* (2nd Ed.). Sage Publications.
- Creswell, J.W. (2008) *In Educational Research: Planning, Conducting and Evaluating Quantitative and Qualitative Research* (3rd Ed.). Pearson.
- Creswell, J.W. (2013) *In Qualitative Inquiry & Research Design: Choosing Among Five Approaches* (3rd Ed.). Sage Publications.
- Creswell, J.W. (2014) *In Research Design: Qualitative, Quantitative And Mixed Method Approaches* (4th Ed.). Sage Publications.
- Edmunds, D.S., Shelby, R., James, A., Steele, L., Baker, M., Perez, Y.V. & Tallbear, K. (2013) Tribal Housing, Code Sign and Cultural Sovereignty. *Science, Technology, & Human Values*. 38(6): 801-828.
- Finlay, M. (2011) Social Housing for Cultural Diversity. *Australian Planner*. 48(1): 2-11.
- Firdaus, G. & Ahmad, A. (2013) Relationship between Housing and Health: A Cross-Sectional Study of an Urban Centre of India. *Indoor and Built Environment*. 22(3): 498-507.
- Gillham, B. (2000). *In Case Study Research Methods*. Continuum International Publishing Group.
- Hadjiyanni, T. (2008). Kitchens as Cultural Mediums: The Food Experiences of Mexican Immigrants in Minnesota. *Housing & Society*. 35(2): 97-116.
- Hadjiyanni, T. (2009a) Re/Claiming the Past: Constructing Ojibwe Identity in Minnesota Housing. *Design Studies*. 30: 462-481.
- Hadjiyanni, T. (2009b) Aesthetics in Displacement: Hmong, Somali & Mexican Home-Making Practices in Minnesota. *International Journal of Consumer Studies*. 33: 541-549.
- Hashim, A.H. & Rahim, Z.A. (2003) The Influence of Privacy Regulation on Urban Malay Families Living in Terrace Housing. *International Journal of Architectural Research*. 2(2): 94-102.
- Hashim, A.H., Ali, H.M. & Samah, A.A. (2009) Urban Malays' User-Behavior and Perspective on Privacy and Spatial Organization of Housing. *International Journal of Architectural Research*. 3(1): 197-208.
- Jennifer, D. (2005) *Causes of Inadequate Housing in Latin America and Caribbean*. New York: UN Habitat for Humanity.
- Kaur, A. (2006) Malaysia. In B.V. Lal. *The Encyclopedia of the Indian Diaspora* (Ed Didier Millet) in Association with the National University of Singapore: 156-167.
- Lee, E. And Park, N. (2011) Adapting To Cultural Differences in Residential Design: The Case of Korean Families Visiting the United States. *Journal of Interior Design*. 36(2): 1-19.
- Library of Congress Country Studies: *India* (1995) Available @ <http://www>.
- Local government Assessed on March 31, 2015.
- Mcnamara R.K., Able, J., Jandacek R., Rider, T., Tso, P., Eliassen, J.C., Alfieri, D., Weber, W., Jarvis, K, Delbello, M.P., Strakowski, S.M. And Adler, C.M. (2010) Docosahexaenoic Acid Supplementation Increases Prefrontal Cortex Activation During Sustained Attention In Healthy Boys: A Placebo-Controlled, Dose-Ranging, Functional Magnetic Resonance Imaging Study. *Us National Library of Medicine National Institutes of Health E Publication*: 1060-67.
- Patra, R. (2009) Vaastu Shastra: Towards Sustainable Development. *Sustainable Development* 17 (4): 244-256.
- Saavala, M. (2003) Auspicious Hindu Houses. The New Middle Classes in Hyderabad, India. *Social Anthropology*. 11(02): 231-247.
- Shrestha, G. (2000) Gender Relations and Housing: A Cross-Community Analysis. *Gender Technology and Development*. 4(1): 61-86.
- Silva, S. And Wright, D. (2009) Displaying Desire and Distinction in Housing. *Cultural Sociology* 3(1). Sage Publication: 31-50.
- Sirat, M., Hamat, A.F.C., Aziz, A.R.A., Rahim, A., Salleh, H. & Yaakob, U.H. (1999) *Low-Cost Housing In Urban-Industrial Centres Of Malaysia: Issues & Challenges*. Universiti Sains Malaysia.Pulau Pinang.
- Stewart, J. and Rhoden, M. (2003) A Review Of Social Housing Regeneration in the London Borough of Brent. *Perspectives In Public Health March* 2003 Vol. 123(1): 23-32.
- Sufian, A. and Ibrahim, A. (2011) Equitable Distribution of Low-Cost Houses in Malaysia: Constraints and Challenges. *International Journal of Economics & Management*. 5(1): 251-265.
- Sufian, A. and Mohamad, N.A. (2009). Squatters & Affordable Houses in Urban Areas: Law & Policy in Malaysia. *Theoretical & Empirical Researches in Urban Management*. 4(13): 108-124.
- Sufian, A. and Rahman, R.A. (2008) Quality Housing: Regulatory & Administrative Framework in Malaysia. *International Journal of Economics & Management*. 2(1): 141-156.
- Tabb, P. and Ali, H.M. (2007) A Methodology for the Design of Sustainable Off-Grid Housing. *International Journal for Housing Science And Its Applications* 31 (1): 55-66.
- Tan, T.H. (2011) Sustainability & Housing Provision in Malaysia. *Journal of Strategic Innovation & Sustainability*. 7(1): 62-71.
- Tan, T.H. (2012) Housing Satisfaction in Medium- And High-Cost Housing: The Case of Greater Kuala Lumpur, Malaysia. *Habitat International*. 36(1): 108-116.
- Thomas, G. (2011) *In How To Do Your Case Study: A Guide For Students And Researchers*. Sage.
- United Nations (1948) *Universal Declaration of Human Rights*. Available @ www.un.org/en/documents/udhr. Assessed On Dec 21, 2015.

- Fisher, C. A. And Travis, J. (2001) Transitions from Prison to Community: Understanding Individual Pathways. *Annual Review. Sociology* 29: 89–113.
- Ward, C.A., Bochner, S., Furnham, A. (2001) *The Psychology Of Culture Shock*. Rutledge.
- Worldbank (2012) *Malaysia Most Urbanized Country in East Asia*. Available @ [Http://Www.Worldbank.Org/En/News/Feature/2015/01/26/Malaysia-Among-Most-Urbanized-Countries](http://www.worldbank.org/en/news/feature/2015/01/26/malaysia-among-most-urbanized-countries). Assessed On April 7 2016.
- Yin, R.K. (2009) *In Case Study Research: Design and Methods* (4th Ed.). Sage Publications.
- Yin, R.K. (2011) *In Qualitative Research from Start to Finish*. The Guildford Press.
- Yin, R.K. (2012) *In Applications of Case Study Research*. Sage.
- Zarecor, K.E. (2012) Socialist Neighbourhoods After Socialism The Past, Present, And Future Of Post-war Housing. *The Czech Republic East European Politics and Societies* 26 (3):486 - 509