Abstract
Previous studies suggest that home activities affect house design significantly. This paper aims at identifying roles and household activities of Malay wives and their relationship with house design preferences. A study was carried out on selected working and non-working Malay wives of Bandar Tenggara, Johor, Malaysia, using a combination of structured and semi-structured questionnaire survey. The results suggest that activities such as cooking and other day-to-day operations have some correlation with their sense of space. The results suggest that patterns of housewives’ home activities affect their house design preferences.

Keywords: Home activities; house design; women preferences; working and non-working housewives.
1.0 Introduction
Wives are regarded as home managers regardless of their working status. According to Smith (1994b), it is necessary to identify the behavioural, social, and psychological characteristics of its setting to relate the cognitions of its place. Previous studies on housing suggest there exist gender-relation on various design aspects. However, research on this kind of relationship in the context of women as wives, moreover housewives are scarce. It is a concern as improving the welfare and happiness of people is a process to achieve quality of life (Emmanuel, 2013). Even retailers are conscious with furniture designs to suit consumers’ lifestyle (Soltani et al., 2012). From a developer point of view, design is one of the important criteria to enhance the price of housing products (Rahadi et al., 2012). There is also an urgency to determine usable information on preferred attributes to scheme new housing units (Zavei & Jusan, 2012). The importance of quality design makes exploring wives’ behaviour and lifestyle at home, feasible and sustainable.

Another issue to note is the patriarchal system among Asian nations which are still practised, although women have equal rights in many parts of the world (Bih & Chen, 2011). It becomes problematic as women and men have different choice of house design due to differences in house-routines and time spent in each room (Ahrentzen et al., 1989). It was also found women tend to identify their home environment to a greater extent than men (Ghomeshi & Jusan, 2012). Previous studies suggested home and women’s experience can be an important subject for exploration (Roberts, 1991; Smith, 1994a). The more recent literature also maintains that style is a concern for house owners, particularly for women (Leslie, 2012; Omar et. al. 2012b). It stresses the importance of studying women’s influences in house design as they are the primary role player in defining housing style.

Thus, these objectives are formulated for the matter:
1. To establish the importance of wives’ voice in house design;
2. To determine their roles as home manager and decision maker; and
3. To explore their daily routine pattern that influence housing design preferences.

2.0 Literature Review
It is hard to trace the influence of women in current Malaysian mass house design. Some work on personalization (such as Jusan, 2010a; Rahim and Hashim, 2012) even indicated house owner’s concern towards appropriate spaces for women, and also men-women segregation in their personalised homes. However, depending on home alterations has its setbacks for house owners and the environment (Isnin et al., 2012). Unfortunately, personalization in Malaysia is inevitable no matter how efficient the architect’s design fit for individual’s needs (Bajunid et al., 2012). The remodelling works were carried out due to lack of space and inadequate rooms as well as to improve functional and psychological comfort (Omar et al., 2012a).

The main reason for such costly modifications undertaken by house owners is "culture" that has significant impacts on housing preferences. Jusan’s (2010) works on housing personalization suggest that user-values (an expression of culture) determine users' decision
in house remodelling. Religious belief has also been found to determine the spatial modification of the renovated houses, especially among Malay homeowners (Omar et al., 2012a).

One can assume women have a significant role in such extensive modification works, although not specifically covered in the research. For instance, Ghomeshi and Jusan (2012) discovered that design decision particularly the living room, dining room, and kitchen of the studied house remodelling in Tehran were made mostly by the housewives. It is an astonishing finding as Iranian communities are known for supporting patriarchal framework but they choose a family decision-making in certain aspects of house design.

In a wider context, studies on gender comparison discovered that women have a strong relationship with home activities, particularly in the kitchen and laundry areas (Amole, 2011). Women are also involved in these areas more than men even before reaching their marriage life (Ardener, 2000). Similarly in Taiwan, modifications of houses are claimed to design according to women’s taste by locating the kitchen at the centre rather than at the corner of the chambers (Bih & Chen, 2011). These facts have motivated the authors to investigate the possibility of injecting women’s influence to Malaysian house design. Such study is necessary likewise to the fact that the home manager of the house is these wives (Lemu, 2007). Additionally, for the state that the activity patterns and its tendency to influence house design are not rigorously studied in this country.

Another issue requiring particular attention is the working status of Malay wives. They may have a significant effect towards the design of a house. Malay women of Peninsular Malaysia in the history, were found contributing significantly to the household, including parental and economic activities (Abdullah, 1984). They participated in almost every aspects of family physiological as well as economic needs. Malay women in some communities are also taking part in the public economy as they are in several marketplaces in Kelantan and Terengganu. However, the attitude of the community towards women’s place was that women were expected to contribute mostly to the household. Therefore, their role and location were centred within their homes and the villages.

Attitude towards women’s role and their place in Malaysian Malay community, according to Abdullah (1984) had started to shift in the third quarter of the 20th century. It was the time when Malay communities sent their girls to schools and allowing the women to join professional services in an unprecedented number. Modern Malay women in the modern days involve in entrepreneurial and economic activities outside their houses more extensively compared to other Muslim countries in the world. Involvement of Malay wives in entrepreneurial and professional activities, at a micro level, is assumed to have an impact on their household routine and activities. It influences their expectation on the design of their houses.

Additionally, space utilisation tends to be varied among women of different working and marital status (Ahrentzen et al., 1989). Non-working mothers incline to spend more time in rooms with their family members, involved more in housekeeping and child-care activities in the room. Therefore, different time scheduling and daily routines of working and non-working wives can be considered as having effects on space usage, hence affecting design preferences.
3.0 Methodology
This article is a partial study of House Design Preferences of Malay Housewives, which is carried out at the only terraced residential area in Bandar Tenggara during the research was conducted. Bandar Tenggara is a small estate town in Johor, Malaysia, where 90% of the town are occupied by Malay residents (Department of Statistics Malaysia, 2010). The research uses a self-administered survey questionnaire consisting both structured and semi-structured questions. For this article, only 32 questionnaires collected were analysed. According to Salkind (2003), the number of samples is appropriate. The samples were selected randomly through a random number generator.

The respondents were requested to consider their answers as if they were buying a new two-storey terrace house by using a 5 Likert scale structured question. Spaces investigated were seven “essential spaces” suggested by Omar et.al. (2012a) which are front porch, bedrooms, dining area, kitchen, and toilet. A possible future addition of special spaces for the house was also identified. Some examples of the special spaces are guest room, children's study room, children's playroom, office and other complemental areas. A more in-depth study of the essential spaces was also investigated using semi-structured questions. The semi-structured questions encompassed some examples of categories such as "size", "style", "colour", "flooring", and others to ease respondents to understand the questions. These qualitative data (from semi-structured questions) were analysed using content analysis.

The mixed method of quantitative and qualitative data enables the triangulation of both data and gives confirmation on which preferences have added meaning. It helps as house design have significant and varying choices and preferences.

4.0 Findings and Discussions
Thirty-two (32) respondents discussed in this study are seventeen (17) full-time housewives and fifteen (15) part-time housewives. Part-time housewives are working wives, or involved in studying or business making.

Roles of wives at home
The results reconfirmed that women remain the primary caretaker of the house. All respondents, regardless of their working status, performed almost all of the housework at home, mainly performing laundry and tidying up rooms. Other tasks with high scores were cooking, cleaning up after a meal, cleaning toilets and folding clothes. It seems “the house” in modern days is still the primary place where their role as housewives is still central. These result, however, need to be rationalised within the geographical and sociological context of the studied community. The locality in this research is a new township that is populated predominantly by Malay communities with more inclination towards suburban lifestyle.

Another interesting finding is the similarity of the participation of husbands in home activities as to what has been reported by Ghomeshi & Jusan (2012). The results indicated that husbands were contributing highly, but only to gardening. Children’s contribution to housework were also observed to have the same pattern. These results suggest that
housewives mostly manage household activities within the interior spaces such as bedrooms, living rooms and kitchen. Meanwhile, the husband takes care of outdoor works.

Interestingly, ranking of respondent’s design opinions for each space was also parallel with Ghomeshi & Jusan’s (2012). Very high concerns of design opinion were found at the living area (100%), kitchen (100%) and master bedroom (97%). It strengthens the impression that the correct house design for wives is important to operate various household activities efficiently.

**Are wives decision makers at home?**

Despite being the main managers of the households, the results suggest that choosing the suitable type of house does not fall solely on the wives. Only half (56%) of the respondents admitted having a voice in the decision-making of house purchasing. It may be because buying a new house involves consideration of other aspects including finance, social relation, transportation and others, which require a significant contribution from the husband.

Surprisingly, the opposite goes for decision-making involving house renovation. 78% of respondents agreed they can decide renovation works for their homes. The results also showed 98% of respondents have desires to renovate their houses in the future. These findings suggest design preferences from housewives are relevant and vital to inculcate their meanings of home into the physical structure of their houses.

**Wives’ daily routine at home**

Full-time housewives tend to involve more in all households compared to part-time housewives. Although full-time housewives undertake more household works, it also indicated part-time housewives to commit and manage all household responsibilities, but to a lesser extent. Three activity patterns are discussed further to explore its relation to their house design preferences.

**Sleeping pattern**

Remarkably, respondents with less sleeping hour revealed preferring larger master bedrooms than respondents with longer sleeping duration. It suggests housewives with less sleeping time require bigger bedrooms as a comfortable sleeping area for a better place to retire at night. It expresses the capacity of a space to play its role by influencing the occupant’s senses and behaviour. This further support that behaviour and space are mutually dependent (Ardener, 2000).

**Pattern of performing prayer**

Performing obligatory prayer was also found as one of the most mentioned activity. A dedicated prayer area was also revealed to be the most preferred additional space that respondents were willing to pay. It demonstrates how a particular religious teaching can influence house design. Providing a proper praying area to some extent is vital for Malay homes. It is parallel with the general observation by previous research on religiosity and behaviour of Malay communities in Malaysia (Ariffin et al., 2012).
It is also evident from a study that one house owner in Klang Valley renovated their dining space into a prayer room (Omar et al., 2012a). Haghighi & Jusan (2012) agreed on how values determine a person’s evaluation in choosing a space. Values are life drivers that cause the person to function all his actions (Zinas & Jusan, 2012). The values of the respondents showed an inclination towards religion because of their active ‘praying’ activity. This notion suggests that it is feasible for housing developers to consider adding a dedicated praying area at homes, particularly for the Malay buyers.

Cooking pattern
Results demonstrated “cooking” as the third most mentioned activity after “resting” and “performing prayer”. Likewise, the kitchen is the most preferred space to be wider. It suggests behaviour (cooking) and space (kitchen) have a relatively positive correlation.

Another important finding highlighted is the attributes mentioned for the kitchen, particularly the “size’ and ‘colour’. A respondent stressed she needed a suitable colour scheme for her kitchen that can represent a ‘spacious kitchen’. Only the kitchen was mentioned to manipulate the size of the space using colours. Reasons for respondents to prefer certain kitchen attributes includes family events and “efficiency in cooking and maintaining the kitchen”. Both responses seemed to indicate the need for a bigger and proper kitchen. Previous literature also reported on the importance of kitchen to Malay women. The rear landscaped compound connected to the kitchen acts as an overflow space for kitchen activities (Huzeima, Hussain, & Ahmad, 2010).

Particular attention to the design of kitchen should be given because empirically the space is important for the respondents (Malay wives). In the context of an office environment, a study had found satisfaction of workspace design are more affected by female than male employees (El-zeiny, 2013). It was suggested the design of a space has considerable effects on performances of users (El-zeiny, 2013). This situation may impact similarly to the design of the kitchen, affecting the performance of wives in that space.

5.0 Conclusion
Understanding the roles and activities of wives at home is vital for a house to be a sustainable living environment. A systematic understanding of women housing needs in the modern world is essential as working wives and mothers are rapidly increasing in Malaysia and, their role as the main manager of their homes do not seem to change. This study shows that both groups of wives (full-time and part-time housewives) do have different time scheduling and routines at home, but their commitment to their home responsibility remains intact. This study confirms that roles and activities do correlate with house design preferences and support the importance of wives’ voice in house design.

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References


