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ARE AUSTRALIAN HOMES LIVEABLE AND ADAPTABLE FOR MUSLIM FAMILIES?- SIX CASE STUDIES IN BRISBANE

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Abstract- This paper investigates how Muslims living in Brisbane live within their current Australian homes and the liveability and adaptability of these homes from the perspective of home dwellers with respect to their Islamic faiths, cultural traditions and lifestyle. A qualitative case study approach was used to gather information about Muslims' use of domestic spaces through their lived experiences, within an Australian context. Six participants were interviewed, including: a) three Muslim families residing in one suburb of Brisbane and, b) three international Muslim students living in three different Brisbane suburbs. These cases indicate that apart from minor difficulties, case study participants were able to perform their daily activities within their current homes through various adaptations made to ensure their respective domestic domains provided their families with privacy and a sense of security and safety. Insight gained from these cases suggest the need for more research into the homes of Muslims homes within an Australian context and the development of culturally adaptable housing as a means of meeting the diverse needs of modern Australian multicultural society.

Keywords: Home, Muslim, Australia, liveability, adaptability, housing

I. INTRODUCTION

The home is characterised as the physical structure of a house, dwelling or residence where a person, family or household reside to achieve basic human needs, for instance, shelter, refuge, domesticity, comfort, self-identity, diversity and privacy (Heathcote, 2012; Lawrence, 1987; Rybczynski, 1987; Altman and Chemers, 1984; Hayward, 1975). Lawrence (1987) argues that a home is "*a complex entity that is defined by cultural, socio-demographic, psychological and economic factors*". Rapoport (2005, 2000) further theorises that the form of houses can vary tremendously and are shaped by a range of socio-cultural influences, including religion and customs. The differentiation in the architectural styles and facades, arrangement of furniture, the use of artefacts and decorations, the utilization of the interior spaces and dwellers' behaviours within the domestic domain, convey the importance and values of culture and its practices and how it personalizes the home (Rapoport, 2010; Rapoport 2005, Altman and Chemers, 1984). Thus, the home domain effectively acts as a mirror that reflects the manner in which diverse cultures relate to their physical environments (Altman and Chemers, 1984).

A. The Australian homes

Australian homes vary considerably with respect to architectural style as a result of numerous influences, including the era in which they were built, local government building codes and regulations, and the climatic conditions of a given geographical location within the country. There is a substantial collection of different residential architectural styles in different states of Australia (primarily influenced by climatic conditions) and many styles from the past have persisted through time (Stapleton and Stapleton, 2010). The traditional houses in Queensland for example, are famous for their "timber and iron" verandah houses built on stumps or stilts, with styles ranging from the Colonial (1880s - 1900s), Federation (1890s - 1910s), bungalow (1900s - 1920s), gable (1920s - 1930s), hybrid (1930s) to the conventional (1930s) (Rechner, 1998). The raised home, supported by steel or timber stilts or stumps, was a popular style during all of these periods because of its suitability for Queensland's subtropical climate and the many areas within the state that are prone to seasonal floods (Rechner, 1998).

The idea of home ownership or the 'Great Australian Dream', flourished during the 1950s and 1960s alongside the development of the country's major cities and the need for adequate housing for the increasing population during these periods ('baby boom' period) became more apparent (Cox et al., 2011). This period resulted in a population shift to suburban areas where affordable land and homes were available for purchase, thereby providing Australians with the means to achieve this dream (Cox et al., 2011). The move to suburbia enabled people to purchase larger detached homes on a quarter-acre block of land, with a landscaped garden (Archer, 1996). At present, home ownership is the most common housing tenure type in Australia, and Australia is also one of the countries with the highest rates of home ownership in the world (Australian Bureau of Statistics [ABS], 2011a). In recent years various approaches have been implemented by the Australian Government to assist with housing such as housing assistance for Aboriginals and Torres Strait Islanders, affordable housing, first home buyers, Commonwealth Rent Assistance and settlement services for refugees (Department of Social Services, 2014; ABS, 2011a).

The current 2011 Census indicates that between 2009-2010, 79% of Australians were living in detached homes, while 11% resided in apartments, units, and flats, and 10% in semi-detached, row or terrace houses or townhouses (ABS, 2012a). The high proportion of Australians living in detached homes is due to the fact they provide a greater number of bedrooms with adequate front and back yards, which are deemed to be more attractive and liveable for the typical Australian family (ABS, 2012a).

In 2009-2010, approximately 46.3% of Australian households lived in detached houses with the three bedrooms. Around 31.4% lived in dwellings with four or more bedrooms, 18.2% in two-bedroom dwellings (houses, terrace houses, townhouses, apartments, units or flats), and

just 3.7% in one-bedroom dwellings (predominantly apartments, units or flats) (ABS, 2012a). While household size is generally decreasing in Australia, dwelling size in terms of number of bedrooms is increasing (ABS, 2012a).

The rapid urbanisation and development within major cities in Australia over the last two decades, including inner city gentrification, have transformed the country's urban form. The increase in the number of mixed use developments, which include medium to high density multi-residential dwellings, are designed to meet housing demand and to reduce inner city traffic (Buys and Miller, 2012; Howley, 2009; Forster 2006). Recent developments in Brisbane, for example, include transit-oriented development (TOD) policies that incorporate a mixture of commercial, residential and offices which are well connected with street networking, pedestrian infrastructures and high frequency transportation systems, making them a more desirable and sustainable place to live (Kamaruzzaman et al., 2014; Shatu and Kamaruzzaman, 2014; Au-Yeung et al., 2009).

B. Towards a liveable and adaptable home and neighbourhood

In recent years, there has been an increase in concern with the liveability of neighbourhoods in order to ensure that their inhabitants are provided with a high quality standard of living and also have the capacity to adapt to their surroundings. In multicultural countries, such as Australia, cultural adaptability is important for people from other ethnic backgrounds in order to promote social inclusion and social cohesion within society (Stone and Hulse, 2007). The Australian local and state governments have recently provided guidelines to promote liveable and adaptable housing and neighbourhood systems for the ever-changing needs of the home dwellers (Australian Government, 2013). However, measurement of the liveability and adaptability of a home within its neighbourhood is a very complex in nature, with various definitions, dimensions and key indicators being used (Lowe et al., 2013).

Culture plays a significant role in influencing how people live within their home domains and adapt to the environment (Rapoport, 2005). It is one of the components that underpins the behaviours and activities of home dwellers and thus has implications for home design (Baleela, 1975)**.** The home forms a base from which its inhabitants are able to perform their daily activities and interact with the neighbourhood. For immigrants, the home also acts as a haven where they are able to maintain their own cultural identities while adapting to Australian culture and the wider community. Many attitudes towards the layouts of the homes and the use of interior spaces are culturally related; such as preferences for a separate partitioned kitchen, dining and living room rather than an open living or the installation of a shower cubicle instead of a bath tub (Heathcote, 2012; Baleela, 1976). Cultural behavioural norms can be used as measures of the liveabilty and adaptability of a home from the perspective of its inhabitants. In terms of the surrounding neighbourhood, Stone and Hulse (2007) argue that cultural diversity within a neighbourhood involving a mix of people from English-speaking and non-English-speaking backgrounds) has the advantage in promoting better social cohesion and connectedness through involvement in various community activities such as cultural and ethnic events.

C. The Australian Muslim population

Australia has had a long association with Islamic people since the early visits from Indonesian trepang (sea slugs and sea cucumbers) fishers (1500s to 1700s) and the arrival of the Macassan fishermen (from Southern Sulawesi) on northern Australian shores in the 1700s (DIMIA, 2009, DIC, 2004; Saeed, 2003). The Afghans then arrived and settled on Australian land around 1850 to the 1930s to assist in rail construction in the outback (DIC, 2009; Jones & Kenny, 2007; Scriver, 2004). During the post-1975 period, a large migration of Lebanese Muslims took place, with most taking up residence in Sydney and Melbourne (DIMIA, 2009, DIC, 2004; Saeed, 2003). Refugees as well as migrants from Africa, the Middle East, Europe (mainly Bosnia-Herzegovina and Albania) and South-East Asia (predominantly Indonesia and Malaysia) migrated to Australia during the 1990s (DIMIA, 2009, DIC, 2004).

Since the introduction of multiculturalism in Australia in the 1970s, the Australian Government has tried its best *"to deal with the increasingly complex nature of contemporary diversity"* (Koleth, 2010). Recent data from the 2011 Census indicates that the Muslim population within Australia increased by 69% during the ten-year period 2001-2011 (ABS, 2012b) and their numbers represent a combination of diverse cultures from more than seventy countries across the globe (ABS, 2012b). Most continue to practice their religious beliefs and rituals, as well and cultural traditions while adapting to the Australian way of life. The increasing numbers of Muslims making their homes in Australia highlights the importance of understanding the design and use of spaces in Muslim homes and the ways used by Muslims to adapt to a modern lifestyle with respect to both their cultural and religious traditions within the context of their homes. The literature related to home design and use of space by Muslims living in non-Muslim countries is limited. Most of the current research on Muslims concentrates instead on issues associated with post 9/11 discrimination (Nathie et al., 2011; CMMIPS, 2009), racism (Dunn et. al, 2004; Poynting and Noble, 2004), social exclusion (Yasmeen, 2010), Islamophobia (Bouma, 2011; Poynting and Mason, 2008), sense of belonging (Myhr, 2005) and social cohesion (Keddie, 2014 Colic-Peisker, 2009). Very little research attention has been given to people affiliated with a non-Christian religion like Islam, and their lives within the domestic domain. While recently published research by this paper's authors provide insight into the approaches used by international Muslim students (Othman et al., 2014a) and Muslim families (Othman et al. 2014b) living in Australian homes to abide by the traditional, Islamic principles of privacy, modesty and hospitality within the home domain, the main objective of this paper is to examine the adaptability and liveability of Australian homes for Muslims with respect to their religious and cultural traditions.

II. METHODOLOGY

A. Participants

Data for this study were derived from face-to-face, semi-structured interviews, which each lasted between 60 to 120 minutes. Two case studies were derived from six participants:

a. Case Study 1: three Muslim families residing in the same suburb of Brisbane and,

b. Case Study 2: three international Muslim students living in three different suburbs of Brisbane.

Participants were recruited through Islamic organisations in Brisbane. All participants were married and aged between 30 and 60 years. Three of the participants were Australian citizens (Case Study 1) with one being a fifth-generation Australian-born Muslim. Observation was also used as a method to obtain data related to participants' behaviours within their respective domestic settings. Pseudonyms are used to ensure anonymity and confidentiality of all information gathered from individuals.

A. *Data collection*

Participants were asked a range of open-ended questions (with prompts being used where necessary) about: a) the overall dwelling design and external features of current residences; b) activities within the surrounding neighbourhood and their relationships with neighbours; and, c) characteristics and utilisation of the interior spaces. Photographs of the exterior building facades and the interior spaces of the homes were taken (with consent from the participants) and copies of floor plans were obtained (from participants or sketched by researcher) as visual data information. In addition to that, observation was used as part of the data collection to gather information with regards to participants' behaviours and daily activities within their homes. Participants' demographic information was provided by them at the end of interviews (see Table 1 below).

Table 1: Demographic profile of Case Study 1 and Case Study 2 participants

Case Studies	**Case Study 1**			**Case Study 2**		
Participants	**Aishah**	**Amina**	**Ahmet**	**Dewi**	**Soraya**	**Farid**
Gender	Female	Female	Male	Female	Female	Male
Profession	Full time	Full time / Own business	Full time	Student	Student	Student
Age range	40-50	50-60	40-50	30-40	30-40	30-40
Ethnic background	Australian (Pakistan)	Egyptian	Palestinian	Indonesian	Iranian	Iranian
Spouse	Aziz	Ali	Sofia	Adam	James	Henna
Spouse's ethnic background	Pakistan	Egyptian	Australian/ Irish	Indonesian	Australian	Iranian
Years living in Australia	5th Generation Australian	31	27	3.5	3	3
Participant's highest level of education	BA	BA (Hons)	PhD	PhD (undertaking)	MA (undertaking)	PhD (undertaking)
Spouse's highest level of education	High School	BA(Hons)	BSc	BA	BA(Hons)	PhD
Number of children	0	3 (1 passed away = 4)	1	3 (2 living in Australia)	0	0
Total family income (AUD)	> $90,000	$50,000 -$60,000	> $120,000	$30,000 - $40,000	$70,000 -$80,000	$60,000 -$70,000

C. *Background information on dwellings in each case study*

1) Case Study 1

Aishah, Amina and Ahmet live within the same suburb in Brisbane, approximately 21 kilometres from Brisbane's Central Business District (CBD). Approximately 19.3% of this suburb's total population are Muslim (ABS, 2011b) and it is equipped with a local mosque, Islamic community centres, Islamic schools and halal shops. Aishah is a fifth-generation Australian Muslim, married and lives with Aziz, her husband, in a five-bedroom single storey detached home that is based on an open living concept and built by an Australian builder (see plan in Figure 1). Amina and her husband Ali reside in a six-bedroom, two-level brick detached home on a corner allotment, as reported in Table 2. The family made a few design changes during the early construction phase to meet her family's privacy needs and to gain outdoor views. The two-storey detached home that Ahmet is renting has five bedrooms and was designed and built by a Muslim designer/builder (see plan in Figure 1). The house was designed and built in consideration of some Islamic privacy requirements. Ahmet and his family are currently building their new home, designed and built to meet the family's spatial needs.

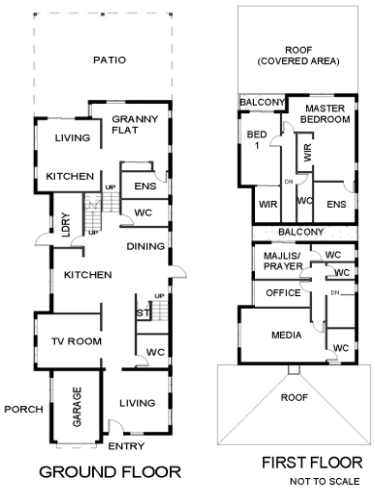
Participants	**Aishah**	**Amina**	**Ahmet**
Floor plans			

Figure 1: Floor plans of Case Study 1 participants' homes (not to scale)

2) Case Study 2

All three participants were international Muslim students undertaking postgraduate courses in the same university at the time of the interviews, but lived in three different suburbs within Brisbane. Dewi's rented property is an elevated timber conventional Queenslander home, located five kilometres away from Brisbane CBD (see plan in Figure 2). Dewi lives with her husband, Adam, their two children and Dewi's housemate, Andy and his family, who are non-Muslim Indonesians. Soraya and her husband, James, have been living in their rented townhouse for more than a year and they share the townhouse with a non-Muslim housemate, Jacob. The two-level townhouse is located near the Brisbane CBD and Soraya and her husband occupy the upper level (see plan in Figure 2). Farid and his wife Henna, on the other hand, share a two-bedroom apartment (see plan in Figure 2) with another Iranian PhD student, Ehsan. The apartment complex is situated in a quiet area, seven kilometres from Brisbane CBD.

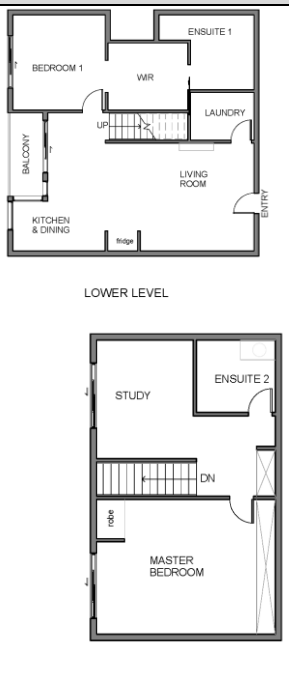
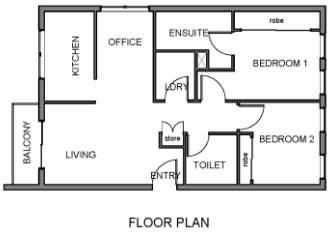
Participants	**Dewi**	**Soraya**	**Farid**
Floor plans			

Figure 2: Floor plans of Case Study 2 participants' homes (not to scale)

III. RESULTS

The following results provide insight into the overall design and the external features of the current homes of participants in each of the two case studies and householders' perceptions according to their own lived experiences. These perceptions include those held about neighbours and the surrounding neighbourhood, which form a key aspect of the liveability of an individual's home within the context of the surrounding environment and the people within it. Findings related to the utilization of spaces also provide information about the liveability of individual's homes and modifications made within homes help to illustrate the strategies used by home dwellers to shape the domestic domains in ways that suit their particular needs (adaptation).

A. Overall dwelling design and external features of current homes

Aishah and Amina from Case Study 1 were contented with the overall design of their current residences (as shown in Figure 1). Aishah's home, for example, is equipped with perimeter fences enhanced with landscaping when she purchased it, making it a private sanctuary for Aishah's family (as described in Table 2). The outdoor swimming pool (Figure 3) is secluded at the back of the house and not visible from adjacent neighbours:

> Aishah: *The pool was an added bonus. We use it all the time and the kids (nieces and nephews) too. All my friends have commented that they like to come and have the 'girls day' at the pool but we haven't organised it yet. My cousin came to visit us last year from Pakistan and we sat outside because it was in warm winter-time and made a cup of tea and enjoyed the fresh air. She enjoyed that because she wouldn't be able do that in Pakistan; she wouldn't go out and sit outside. She loved it and said how lucky we are.*

Amina loves her double storey brick home the family built twelve years ago. Her only regret was changing the design by reversing the floor plans during early construction stage, in the hope of gaining better views from her master bedroom. The design change resulted in direct afternoon sunlight into her master bedroom (Figure 4), forcing her to pull down the curtains to control the room temperature. Ahmet considers his current double-storey rented property as "average" and "not entirely satisfactory, but not entirely unsatisfactory", as illustrated in Table 2. Ahmet, his wife Sofia and his 15 year-old son, Jalil, have been living in their current home for the last eight years highlighted the best and worst features of their current home:

> Ahmet: *One thing, for example, that I don't like about this house is that I can't see outside. It's not open living. I love open living. It's very much enclosed. However, I like it because it meets our requirements for privacy, especially in the case of the separation between male members and female members.*

Dewi, of Case Study 2, considers her rented raised timber home serves as the most affordable option to accommodate her family and her Andy's family. Despite loving the style of the detached house, Dewi admits that they did not have enough time to look after the house since both Andy and herself spend most of the time at the university while Dewi's husband, Adam, is a shift worker who works in the evenings. Nonetheless, she appreciates the split level design, allowing her to occupy the upper level of the unit with James, her husband, while Jacob, her housemate, occupies the room downstairs. Farid commented on the lack of the quality of construction of his current apartment.

In summary, there were different views on the overall designs of participants' current homes between Case Study 1 and Case Study 2, as summarised in Table 2. Case Study 1 participants' homes were appraised more positively by their occupants than the homes in Case Study 2. Case Study 1 participants were able to conduct their daily activities outside their homes such as gardening, house cleaning or social gatherings without major difficulties. Only Dewi in Case Study 2, utilises her backyard as a children's play area. Soraya rarely uses the townhouse complex's pool because of its location.



Figure 3. Aishah's secluded outdoor pool (Source: Zul Othman, Author)



Figure 4. Amina's master bedroom windows (Source: Zul Othman, Author)

Table 2: Overall design and external features of current homes

	Case studies	**Case Study 1**			**Case Study 2**		
Housing demographics	**Participants**	**Aishah**	**Amina**	**Ahmet**	**Dewi**	**Soraya**	**Farid**
	Tenure status	Owner	Owner	Renter	Renter	Renter	Renter
	Years living in current home	1	12	8	2	2	3 months
	Number of bedrooms	5	6	5	4	2	2
	Number of household	2	2	3	7	3	3
Overall design	**Overall rating of home (out of 10)**	9	8	7	7	5	4
	General comments about overall home design	• no problems with current home • "most of it gears towards the climate: open plans, open verandah"	• very pleased with current home • "only regret is not using original plan"	• "average" • "not entirely satisfactory, and not unsatisfactory" • not open living • meets family's privacy requirements	• "can be cold in winter" because of timber home	• "it makes people lonely even though it is nice design" • townhouse design does not introduce communal activities • complex pool located at back area close to general rubbish bin	• 'old fashioned' apartment • no body corporate - common areas are dirty and unclean
External	**Architectural styles and features of current home**	• contemporary rendered home • barbecue areas • back patio with barbecue area • outdoor pool • car port instead of garage	• 1980s brick home • corner detached house • two-storey home • barbecue areas • front and back yards • back patio with barbecue area	• contemporary rendered home • detached house • two-storey home • back patio with barbecue area	• conventional Queensland timber home on steel stilts • detached house • one level (raised)	• post war brick multi-residential • townhouse • split level 2 bedroom unit	• 1980s brick multi-residential • apartment • 2 bedroom unit
	Safety and security features	• thick landscaping • fences • no opposite street neighbours • secluded backyard pool	• front & side hedges/shrubs	• rear fence • side fence (one side only)	• elevated home • front louvered screens • landscaping and side timber fences	• 3rd level unit location	• top level apartment unit location • streetscape

B. Activities within the neighbourhood and relationships with neighbours

All Case Study 1 participants live within the same suburb in Brisbane. It is a multicultural neighbourhood with almost one-fifth of the population being Muslim (see item 2.3.1 Case Study 1) living within the area. Ahmet described the neighbourhood as safe and peaceful and he also reported that he enjoys good relationships with his neighbours:

> Ahmet: *It is a quiet, friendly, clean, safe and co-operative neighbourhood. When we go away, we have one of the neighbours next door look after our house and feed our cats. When they go away, we look after theirs; so there is a neighbourhood spirit there but safety is very important. Our children can go outside and play in the street outside. It's a quiet street and everyone feels safe.*

Amina and Aishah too, have similar perceptions about the neighbourhood. However, both encountered one minor break-in caused by juveniles from other suburbs while they were at home, without anything being stolen. Aishah gets along with her neighbours and a neighbourhood watch was formed after the house break-in incident. Aishah further explained that she introduced herself to the neighbours when she first moved into the area and offered her help and assistance to them in the case of an emergency:

Aishah: When we first moved in, I made some biscuits and cookies and I went around visiting my neighbours and giving them away. I did that again around Christmas and Eid festivals. I go to the pub with my neighbours or friends. I don't drink but that doesn't stop me from not socialising or mixing or eating out and enjoying my life. If somebody turns up with at our place with a bottle of wine, I'll just accept it and say 'thanks'. I'll give it away to my neighbour next door. I don't make a big deal out of it.



Figure 5. View of a section of Ahmet's neighbourhood (Source: Zul Othman, Author)

Among Case Study 2 participants, only Dewi has a relationship with her next door neighbour. Dewi regularly looks after her neighbour's cat when the neighbour is away from home for work or on holidays. Soraya believes that the townhouse complex where she resides was badly designed because it does not encourage any form of social interactions among the tenants. Soraya argues that the communal space is located adjacent to other townhouse units, while the outdoor swimming pool is built at the back of the complex and close to the main bin area. Farid claimed that they have no connections with their adjacent neighbours since there are no proper communal facilities in their building complexes for such activities (see Table 3).

To sum up, the findings from Case Study 1 suggest the importance of harmony in a neighbourhood and of good relationships with other neighbours. All case study participants live within the same suburb (see Figure 5) and they hold similar perceptions of their neighbourhood (see Table 3), indicative of the success of the suburb in creating a peaceful and harmonious environment. Table 3 summarises the findings for the study in relation to neighbourhood and relationship of case study participants with their neighbours.

Table 3: Neighbourhood and relationship with neighbours

Case studies / Criteria	Case Study 1			Case Study 2		
	Aishah	**Amina**	**Ahmet**	**Dewi**	**Soraya**	**Farid**
Perceptions of neighbourhood/ suburb	• quiet and generally a safe neighbourhood • multicultural society adds richness in the suburb • close to sister's home • close to nieces' and nephews' schools • close to train station and bus stops	• peaceful and liveable neighbourhood • one of the earliest homes built during the development of area • close to mosque and halal shops • close to train station and bus stops	• quiet and safe neighbourhood • enjoy multicultural neighbourhood lifestyle • close to mosque and Islamic school • close to work • close to halal shops • close to train station and bus stops	• quiet and leafy neighbourhood • close to amenities and bus stop • safe and quiet area • very good relationship with local bus driver on way to university	• close to Brisbane CBD • easy access to public transportation • within walking distance to university • "it is important to live within multicultural community and talk to different people, than just living within Muslim community."	• quiet neighbourhood • close to train station • safe at night
Relationship with adjacent neighbours	• no Muslim neighbours but gets along well with them • made cookies and brownies for neighbours when first moved in and Christmas period	• gets along with most neighbours • minor dispute with next door neighbour regarding retaining wall division	• very close relationship with neighbours, visit each other daily • look after neighbours' pets and plants when they are away (vice versa) • wife tutors neighbours' children at home	• knows next door neighbour • quiet and peaceful neighbourhood • looks after neighbour's cats when he is away	• minor noise issue with other tenants • close to shops and restaurants • no relationship with neighbours	• "we have no relationship basically, just say hello and bye" • no issue on noise or break-ins

C. Characteristics and utilisation of interior spaces

Liveability and comfort level within a home were found to be especially important to case study participants as most of their time is spent within these domestic domains.

All Case Study 1 participants seemed to be content with the location of bedrooms in their homes, with the exception of one minor issue with Aishah's master bedroom. Her bedroom is located adjacent to the main entrance and exposed to the open living, dining and kitchen area (see plan in Figure 1). Aishah is thinking of adding wall screen or partition upon entry to her bedroom to stop direct visual into her bedroom in the future.

Guest rooms were available for short or extended stays in all Case Study 1 participants' homes. Aishah and Aziz only use two of their five bedrooms (one master bedroom and one set up as prayer or *namaz* room as seen in Figure 6) and the rest three are set up as bedrooms for Aishah's sister, cousins, nephews and nieces, who regularly visit them on a weekly basis (see plan in Figure 1). The open living concept (living, dining, kitchen) (Figure 6) in Aishah's home overlooks into to the back patio and landscaped backyard garden. There is a formal lounge room for meetings or discussions located next to the kitchen.

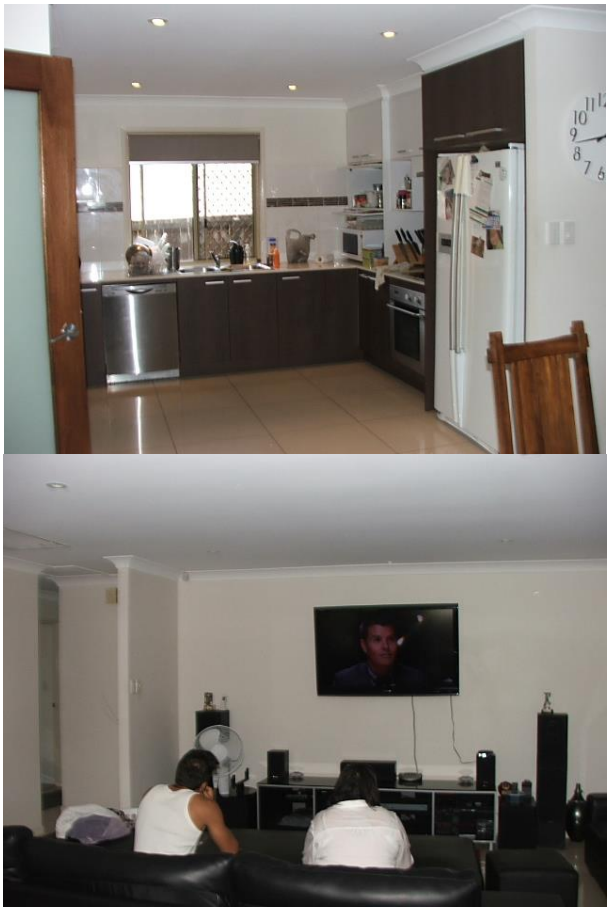


Figure 6. Kitchen and living space in Aishah's home (Source: Zul Othman, Author)

Aishah's home was renovated by a previous owner, including the purchase of new kitchen appliances (Figure 7) and toilet fittings. Amina's kitchen and main living room (Figure 7) were designed in a way that made them spacious enough to fit her family at the time when the house was built. All of her children are now married with children and own their own homes within Queensland. Table 4 summarises case study participants' views on the overall design and use of interior spaces.

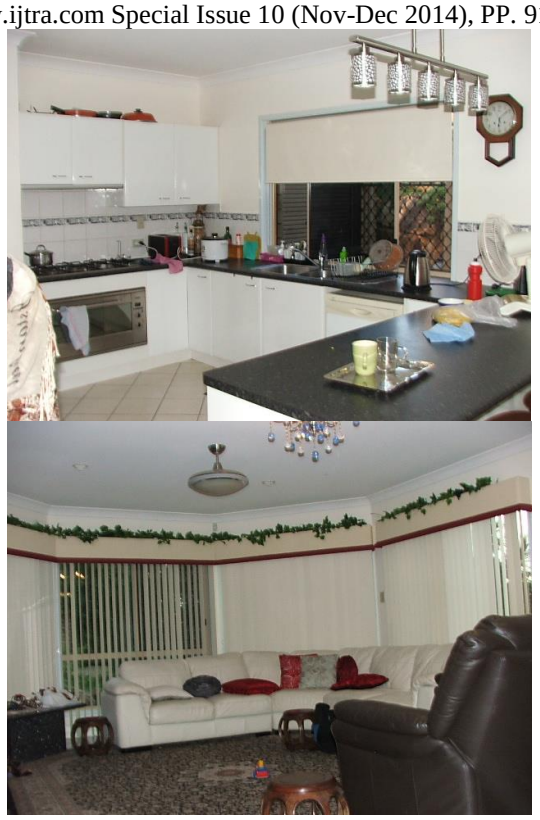


Figure 7. Kitchen and main living space of Amina's home (Source: Zul Othman, Author)

Participants in Case Study 2 admitted that the shared living situation is the only affordable option for their families while undertaking their studies. Dewi is limited to using her master bedroom to listen and recite the Quran using her headphone or when her housemate, Andy, and his family are not at home. This is to ensure that they are not disturbed in their own home. However, both Dewi and Andy are grateful that there is a spare guest bedroom with office available for their extended families from Indonesia when they come and visit them.

> Dewi: *We usually practice reciting Quran in my room because it is far from shared spaces. I usually use the laptop with Azan (call for prayer) in there and I have to make sure that it is not too loud. Andy and his family are Christians. When my son is playing with his son, and when it is time for prayer and I will call him in to pray and they understand.*

Dewi and Farid of Case Study 2 participants discussed briefly about the deteriorating conditions of the interior spaces and fittings of their homes. Farid complained about the quality of construction of his current residence in comparison with his homes in Iran. However, both agreed that these conditions did not affect their quality of life and that they managed to keep them tidy and of a liveable standard for their families.

Overall, all participants were able to utilise their available spaces efficiently with no rooms being left unused. Case Study 1 participants utilise some of their spare rooms as guest rooms. All participants from both case studies were able to live within their homes without major modifications being required. Aishah replaced the floor carpeting after purchasing the home for hygienical purposes. Dewi had minor problems in using dry toilets but managed to adapt and find another solution by bringing in a bucket of water and ensuring the toilet floor is mopped every time after the toilet is used.

Table 4: Characteristics and utilisation of interior spaces

Case Studies	**Case Study 1**			**Case Study 2**		
Participants	**Aishah**	**Amina**	**Ahmet**	**Dewi**	**Soraya**	**Farid**
General features of interior spaces	• open living concept • new appliances and fittings • all bedrooms located towards front side	• verandah living • modern style homes • public / private zoning vertically	• inward living concept with separate living, discussion/TV room in front living areas • open verandah living • barbecue areas at backyard patio	• conventional timber house converted for 2 student families • new back extension to accommodate new office and room (see plan in Table 3)	• new kitchen fitting and 'island' style kitchen bench/dining • small ironing and laundry area under staircase • every room with ensuite	• 1980s fittings and kitchen layout • dining area converted into study space • a separate laundry room and guest toilet • ensuite in master bedroom
Utilisation of interior spaces	• all rooms are used • one room used as prayer (*namaz*) room • open living concept allows flexibility to rearrange furniture if necessary	• spare bedrooms are utilised as for guests and families • front office converted as Ali's nursing room • separate guest and family living spaces	• all rooms are used • one room converted to men's guest room (*majlis*) • granny flat for guests • 2 media/TV rooms (see Table 2) • one room converted as office/tutoring room	• all rooms are used • back house extension used a guest sleeping area (see Table 3)	• all rooms in split levels are used	• all rooms are used
Liveability and adaptability of interior spaces	• main master bedroom next to front entrance and exposed directly to the open living and dining area • good cross ventilation • very liveable and comfortable • all fittings are adaptable and no modifications required • replaced carpet after purchased home	• main living room (ground)and master bedroom (first floor) facing afternoon sun • very comfortable with home • no modifications required	• inward living • no verandah except covered patio • no proper front yard • every room with ensuite	• dry toilet - difficult to use water for cleaning after toilet use (not using toilet paper) • old and worn out fittings but of liveable standard • feel 'isolated' from children while cooking (no TV in kitchen)	• small living area • dining on island kitchen bench • of liveable standard with no major difficulties • contemporary fittings (refurbished by landlord)	• compact spaces but liveable and adaptable home to suit tenants' needs • small balcony (unusable) old and worn out fittings • "nothing is good really" - complained about construction quality of Australian homes compared to Iranian homes

IV. DISCUSSION

Overall, the findings suggest that case study participants have managed to adapt and blend both Australian and Islamic cultures within the context of their homes without major problems and are able to carry out their normal indoor and outdoor daily activities. There are some differences in participants' relationship with their neighbours and interaction within the neighbourhood between Case Study 1 and Case Study 2 participants, particularly because of their profession and tenure status. Case Study 2 participants are full- time university MA and PhD students and spend most of their time at university with limited time to interact with others within the neighbourhood. Soraya and Farid claimed that communal areas of their building complexes were not designed to promote good social interaction among building tenants. No evidence of social exclusion or major neighbourhood disputes were found in either of the two case studies and participants said that they have managed to maintain peaceful relationships with neighbours and other tenants in the house.

Participants from both case study groups agreed that their current homes were liveable. Case study participants were able to utilise their interior spaces including arrangement of furniture and other artefacts, to suit with their families' needs. Australia's National Construction Codes (Australian Building Codes Board, 2014) and Brisbane City Council's House Code (Brisbane City Council, 2014) ensure that all homes should be built to required building standards that will "*provide an enduring legacy of liveability for future generations*", as part of ensuring the liveability qualities of these dwellings and neighbourhoods (Brisbane City Council, 2014; Part 7: Neighbourhood plans). Recent multi-residential housing around Brisbane suburbs and the CBD mostly include mixed-use developments with the integration of commercial and retail outlets to create a more vibrant culture and sustainable living environment that promotes social connectedness and social cohesion among residents and others (see Brisbane City Council, 2014; Kamaruzzaman et al., 2014; Shatu and Kamaruzzaman, 2014; Au-Yeung et al., 2009).

While the findings from this research cannot be considered generalisable to the wider Muslim population in Queensland or Australia, this study provides evidence of the liveability of Australian homes for Muslims families from their perspectives. Future research attention needs to be directed at exploring the various types of housing in which Muslims are living within other suburbs in Queensland as well as other Australian states and territories to further understand the liveability of Australian housing systems and the adaptability of Muslims to straddle both their own cultural traditions and Australian culture, while also fostering good relationships with their neighbours and playing their part in creating a cohesive and interactive community.

V. CONCLUSION

Individual appraisals of the liveability of a given home and neighbourhood are likely to depend on a range of factors including the type of housing tenure (owner occupier versus tenants/renters), types of dwelling (detached homes versus multi-residential units), time of construction of a dwelling (pre-war versus post-war homes), thermal comfort, the socio-economic status of each home dweller and whether they are permanent residents or only staying in the country temporarily for work, study or other purposes. Nevertheless, this research indicates that participants have been able to live in and adapt to Australian-designed homes and Australian culture while still maintaining their Islamic and cultural traditions, thereby being able to perform their daily activities and religious beliefs without any major difficulties. More research into the domestic spheres of Muslims within an Australian context is needed to ensure that architects and designers have a better understanding of their future Muslim clients' needs. This could simultaneously broaden understanding among the general Australian public of the true nature of Islamic teachings and the cultural traditions of Muslims living in Australia and thereby help to promote social inclusion and social cohesion within this multicultural society.

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