

Dwellings For Mobile Identity : Perception And Awareness Of Mobile Dwellings Among Expats In The Arabian Gulf Region

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Abstract - Since the first primitive examples, dwellings in their designs, method of construction, and their characteristics, have always expressed the needs of their users and the style of their lives. And through the years dwellings have always gone through manifestations of change, development and transformation based on developments that occurred throughout history in technology, industry, and construction. At a time when mobility and relocating have become a clearer event due to several factors, one example being the search for job opportunities, it has become natural and necessary to search for dwelling options. This study aims to measure the perception and awareness of mobile dwellings among expats and immigrants in the middle east through two main countries: KSA and UAE. It also aims to study if increased awareness of mobile dwellings can cause more willingness to own mobile dwellings among the population sample. In order to achieve that aim the study defined concepts of dwelling, and mobility and understand the origins and characteristics of mobile dwelling concepts through literature reviews of previous research. It also identifies users of mobile lifestyles through their mobility in order to measure their perception of mobile dwellings as a positive factor for a mobile sense of belonging and identity. Using a cross-sectional survey, the sample responses were collected and analyzed in order to test the research hypothesis and answer research questions. The study found a certain misperception of mobile dwellings among respondents. Moreover, the study concluded that there is a relationship between the level of awareness of modern mobile dwellings and the willingness to own them. It was also established that expats and immigrants in the middle east are more likely to consider owning mobile dwellings when they have awareness of their qualities.

Keywords - Dwelling, Mobility, Mobile Dwellings, Home, Architecture

1. INTRODUCTION

Since the beginning of humanity, people had always found ways to live that was driven by a lot of factors , most importantly in search of opportunities whether these opportunities were in the form of food and water, as in the case of gatherers and hunters, or in a modern sense, in chasing career growth, a better future, or in some cases, a chance for survival. As relocating has its economical, mental, and social burdens, our dwellings are thought to make it easier. However, the change of dwelling becomes an additional challenge. With the limited resources , people in early times of history were able to find primitive convenient ways to move their dwellings as they moved . Afterwards, the transition from a nomadic, hunter-gatherer lifestyle to a settled agricultural lifestyle was a key moment in human history. This shift occurred around 10,000 to 12,000 years ago, and as a result allowed for a more reliable food supply and the ability to settle in one place.

Since then, a significant portion of the global population has led a lifestyle that is centered around a particular location where homes were always designed to cater to people who are settled and stable residents. Nevertheless, and as change is the nature of life , in recent decades there has been a notable increase in transnational work opportunities, a greater variety of highly mobile lifestyles, and a rise in temporary and unstable employment contracts (King, 2012, p. 16). With major and fast changes in the modern world, economically, digitally, and technologically, additional potential to experiment with different dwelling ideas are present, such as mobile dwellings. The term "mobile" was usually associated with social and urban context and not regularly associated with architecture, which is a more static structural field of study. However, that is being reconsidered with mobility and more frequent relocating becoming more evident in modern society.

In this regard, attention has started to be drawn to the possible available dwelling options that can be an advantage for these specific dwellers and different from traditional housing forms and living arrangements. The easy-to-assemble, disassemble, and move dwelling concept will enable us to replace, reuse, or reorganize it as needed, not forgetting the sustainable measures to be taken into consideration. Several previous research studied it as a form of "mobile dwelling," and different experimental projects were carried out in various countries around the world in that regard. While mobile prefabricated dwellings had and still have their popularity in some regions, the application of mobile architecture in the Arabian Gulf region has only been applied in commercial, healthcare, and temporary structures. The development of mobile dwellings as a potential housing option remains insufficient, and that is thought to be due to the lack of awareness of the mainstream society of these potentials, the misperception of what mobile dwellings and the dominant fixed image of the existing traditional dwelling architecture. As there is a noted increasing need in the Arabian Gulf for housing and especially affordable options and to understand the level of awareness of mobile dwelling in the region and willingness to consider it as a dwelling option, this studies these aspects on a specific population that have experiences relocating and are expecting to relocate at some point in the near or far future and those are the expats in the Arabian Gulf . Specifically, this , study will focus on two nationalities , Syrians, and Lebanese , in the Kingdom of Saudi Arabia and United Arab Emirates.

RESEARCH QUESTIONS AND HYPOTHESIS

The research questions are as follows:

- What is the perception of mobile dwellings among expats in the Arabian Gulf region?
- How does Awareness of modern mobile dwellings affect expats' willingness to own consider it as a solution?

Furthermore, into aiming to answer these questions and prove results scientifically the thesis sets two hypothesis is as follows:

H1 Expats and immigrants in the middle east are more likely to consider owning mobile dwellings when they have awareness of their qualities.

H2 There is a relationship between the level of awareness of modern mobile dwellings qualities and willingness to own them.

2. LITERATURE REVIEW

1.1 Mobile Dwellings

According to Oxford Dictionary, mobility means giving something the ability to be carried or moved, because it is often lighter and smaller than usual (Oxford learners dictionaries, 2023,para.1).

In relation, one can understand that mobile dwellings are dwellings that can move from one place to another . With dwellings being mainly structures we can also define mobile dwellings from Kronenberg's definition of movable structures as "the creation of a body whose internal space is usable in a man-made environment within a place and within the limits of a certain time, and that its impact is sustainable and for a long period." (Kronenberg, 2002,p.5). Based on the concept of mobility ,another study defines portable architecture as "movable buildings or structures that are easily transportable also known as movable, disassembled or temporary architecture" (Cerrahoglu & Maden, 2020, p. 154).

In his book houses in motion, Kroonenberg identifies three main categories of mobile architecture in general: Portable buildings, Relocatable buildings, and Demountable buildings (Kronenberg, 2014, p. 3). The difference between the three types appears mainly in the way they are transferred whether as a whole or as parts. Portable buildings are probably the closest to being actually mobile structures since it is the type that can be transported as a whole on wheels or hulls and according to Kroonenberg it even can be self-powered (Kronenberg, 2014, p. 3). However , these are generally restricted in size due to the limitations of transport of it as a whole. While all types of mobile buildings are also built to provide safety and comfort to users, Kroonenberg recognizes portable building in being specially the most useful in having a quick role in life saving situations and that is due to their dynamic characteristics. Examples of these situation would be medical, administrative, or rebuilding centers (Kronenberg, 2002, p. 6). Some dwellings that fall under this type of building are trailers (caravans) , modular prefabricated tiny homes as an example which will further be addressed in later sections of this chapter.

Relocatable buildings on the other hand are defined as "buildings designed to be readily moved, erected, disassembled, stored, and reused. This definition encompasses all kinds of structures or architectural designs that are intended to be movable or transportable. This type of mobile structure is moreover made to be transported as parts. The building parts would be assembled on site after being transported. The benefit that this type would give is how instant a dwelling space for example can be created without restrictions of moving a whole like portable building. The majority of contemporary manufactured mobile dwellings fall under this type of mobile structures which will further be addressed in later sections of this chapter.

Third type that can be considered mobile is the Demountable structures which is referred to as "a more flexible structure in terms of size and layout." (Kronenberg, 2002,p.3). Although they can also be transported as parts these cannot always be instantly available to users as their flexibility in customizing size and layout results in the complexity of the assembly process on site.

2.2 Historical background of mobile dwellings

Since ancient times and even earlier than any form of city that we know, the creation and use of mobile dwellings was found in search of proper land and water. The way these movable dwellings were built, and their general characteristics shaped and reflected the needs of their users as both individuals and groups, tribes, or communities. In order to serve a lifestyle with constant movement, those traditional dwellings were made from lightweight materials found in the habitat of access such as wood, wool, leather, and fabric. Few of the most notable examples are: The Hair Tent, The Yurt, The Tipi, The Carriage, and The Native American boat house.

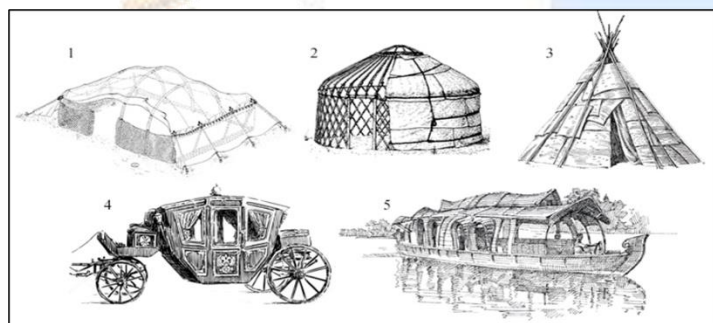


Figure.1 : Early history mobile dwellings: 1- Hair tent 2- Yurt 3- Tipi 4- Carriage 5- Boathouse

Over the following centuries and with the fast development socio-economically, the use of the mobile dwellings in their early concepts became very limited. Different classifications of residential structures had developed and those were identified by Kronenberg in his book and classified as: Temporary Dwellings, Mobile Dwellings, Seasonal Dwellings, Semi-permanent Dwellings, and Permanent Dwellings which all usually referred to as houses (Kronenberg, 2002,p.17).

After World War I, in the process of housing restoration and mass supply of housing, there was also a need to reduce the construction thus the dwelling space was minimized, and different concepts of space usage were appearing.

The Trailer was a concept of a leisure vehicle in the 1920s that had clearly developed fast into being a car and a mobile or semi-mobile home at the same time (Siegal et al., 2002, p. 8).



Figure .2 Trailer camp site in the United States in 1939 (Harris & Ewing ,1939)

However , the word “Trailer” was perceived as a temporary dwelling or housing for poor people and therefore had to be replaced. That is why in 1953 the term was changed to Mobile Home by what was called the Mobile Home Manufacturers’ Association. Starting the 1940s, the term "mobile home" had replaced the term "trailer." Mobile homes were dwellings usually given a rectangular shape, made from pre-painted aluminum panels, rather than the streamlined shape of travel trailers, which were usually painted after assembly. These types of dwellings were manufactured in different sizes units, the smaller being the 3-meter-wide mobile homes that could be moved simply with a car, and the larger, wider such as in 8x18 or 7x18 meter options. However , the wider and bigger these dwellings got the more restrictions appeared on moving them and the harder their mobility became . Due to the change in size that led to more acceptance and permanent use of these houses , the codes in the United States changed making mobile homes called Manufactured houses and sometimes modular homes .

At a very similar time where mobile homes had started and parallel to what the situation of mobile homes construction that happened in the United States at a prefabrication construction level, the most innovative architectural concept of a prefabricated portable mobile dwelling in the 20th century was early proposed by architect Richard Buckminster Fuller in his phenomenal Dymaxion House structure. What makes Fuller’s Dymaxion house an example of mobile dwelling are the characteristics that were clearer in the 1947 version of it built in Wichita, Kansas, USA. First, it was made of prefabricated lightweight duralumin aluminum material which makes it a standard characteristic of a mobile dwelling with a total weight of 3.5 tons. “The house weighed only 6,000 lb (2,722 kg) and all the components could be packed onto a single truck. It was estimated that a team of six men could assemble it on site in one day” (Davies, 2005, p. 30).

Another notable example of a mobile structure was the Japanese Nakagin Capsule Tower which is a type of research about capsule housing in Tokyo, that was designed by Kisho Kurogawa. This project is considered by several researchers as an example of mobile architecture dwelling in its prefabrication, flexibility, and lightness (Siegal, 2002, p. 24). The Capsule Singles Tower was actually sold and built in 1972. The Capsules are attached in a spiral way to two towers and are manufactured in the factory.

The planned Monsanto House in the United States after World War II was one of the most interesting projects back then introducing the concept of movability. While the Kitchen, bathroom and utility spaces were centered, the office space, the living room, and the bedroom are planned in the shape of a star. The house had a huge skylight that was made using durable glass. What’s interesting about Monsanto was how it was a free form having series of spaces that can be attached or detached from each other which made these easy to enlarge and reduce in size as much as move and relocate.

One of the later examples of a similar concept was by Matt Suuronen . Architect Matti Suuronen was an optimistic designer who believed in the future, something that his works also reflected specifically addressed here the Venturo House . Figure 2.11 He designed the Venturo house with its characteristically round corners in 1971 which marked the birth of Casa Finlandia, a series of buildings made from reinforced plastic. It was a modular futuristic portable dwelling that is versatile and easily transportable that could be quickly assembled in various locations.

In summary, the development of mobile manufactured homes throughout the 19th and 20th centuries was shaped by technological advancements, accessibility, and evolving consumer needs. From early prefabricated kits to mobile homes and contemporary manufactured houses, these dwellings have evolved to provide affordable, efficient, and well-designed housing options for a diverse range of residents.

2.3 Contemporary mobile dwelling examples

Mobile houses, wither called manufactured homes or tiny homes and whether relocatable portable or demountable , have continued to evolve in the 21st century, incorporating modern design, improved construction techniques, and advanced features.

These ongoing advancements in manufacturing processes and sustainable innovations continue to shape the future of manufactured mobile housing, making it a viable option for individuals and families seeking well-designed, customizable, and even environmentally conscious homes. “Every manufactured home today has been through vigorous wind safety tests.” (Baird, 2017).

In order to investigate examples of options and their characteristics that could be presented as a dwelling option for expats , this part of the thesis aims to study different mobile dwellings by different construction/design firms .

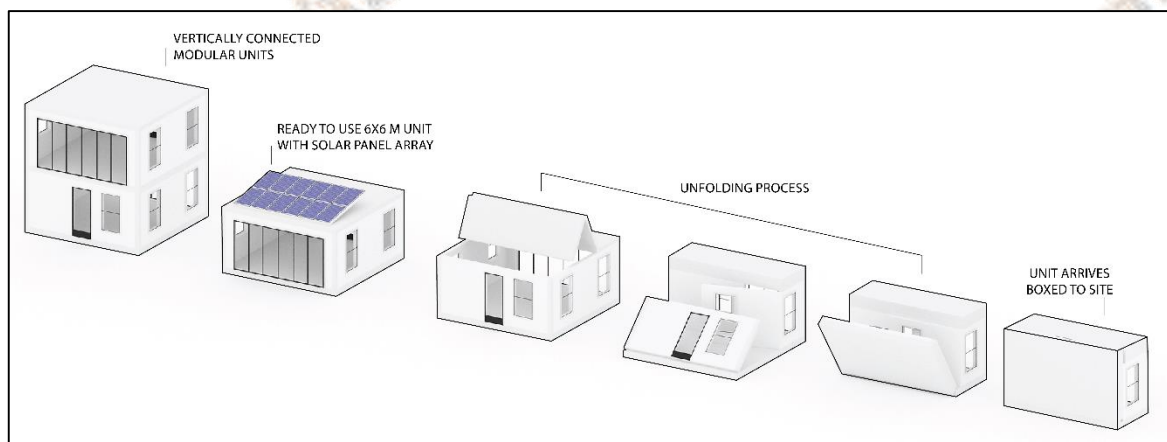
Boxabl: Foldable Dwelling

The Boxabl dwelling units are designed as portable mobile dwelling units. Manufacturers of this modular dwelling unit are a private housing design company that was founded in 2017 and started in January of 2022 a construction factory to create a small modular portable and foldable dwelling units in Las Vegas, USA.

The main panels are made of steel and concrete with high density insulation in between all compressed together in very high pressure making them efficient for different weathers either harsh cold or hot climates (Chang & Levin, 2022). These panels also have I beams buried into them with ready cuts for wall appliances and ceiling lights which makes the design easily foldable, unfold able, and quickly assembled as it arrives at site. (Boxabl Homes, 2021) The outside is made of steel- highly architecturally neutral and straightforward to customize. It has a flat roofing system, although according to the company once delivered these can be customized at pitched roof on site.

In terms of the size and possible customization of these houses, the panel sizes come in three types: 20ftX20ft, 20ftX30ft and 20ftX40ft. This sequence makes it very modular and allows for different layouts, different heights without compromising quality.

During transportation, the houses are folded and can take one hour to repack on-site as they unfold to around a 115-meter design. However, the company clarifies that with these designs they are able to stack and connect several modules to establish larger dwelling options that can still be shipped anywhere in the world by trains, trucks, air, and sea (Boxabl.com, 2022) The idea of folding panels not is intended to only solve problems in transportation but also strength, and material waste as it is very minimum footprint until assembled. Figure 2.14 shows how these units are transferred and Figure 2.15 shows the process of unfolding and modularity options of these units.



Coodo Modular Mobile Dwelling

The Coodo modular home is a dwelling unit-based idea that is considered a mobile dwelling as the unit is portable as a whole. It is described as an instant building solution first designed and developed by LTG Lofts to Go by Mark Dell Schmiedel in Berlin, in Germany in 2012. The Coodo modular units were then standardized certified and became mass produced in Germany, Denmark, Dubai, USA, and Estonia. The concept of the Coodo modular houses is to introduce block type dwellings that can be upgraded into becoming bigger in terms of each dwelling size and community of several dwellings. They have the general characteristic of any mobile dwelling discussed earlier in being mobile, flexible, and adaptable to human needs and urban or climate conditions.

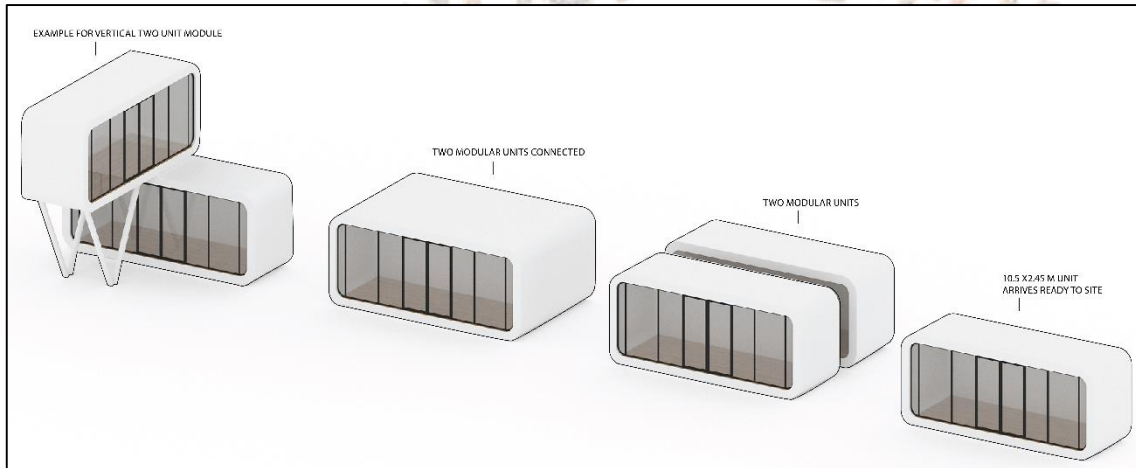
The modules have organic curved designs that are also implemented in their interiors, the kitchen unit and the bathrooms with no sharp edges or corners giving it a futuristic feel. This form and curvy lines are considered an innovation in the world of prefabricated houses that usually offers houses of rigid sharp straight lines designs. The dwelling units come in different models and each model is offered in construction of different sizes. As an example, the model Coodo Moon is designed in three main modular unit sizes: 32 m², 64 m² and 96 m². The modular preconstructed designs allow for configuration in different horizontal or vertical layouts and combined to be upgraded in scale. (Coodo, 2022)

When upgraded with other units, the dwellings can clearly occupy even extra bathrooms, bedrooms and even a staircase according to the designers. The most iconic concept of these dwellings is the attention to the different modular unit options that could be adjusted depending on the stage of life to allow for expanding and shrinking as needed by the homeowner.

According to the manufacturers, the smart aluminum cavity walls of these unit dwellings hold air conditioning, power outlets and lighting fixtures as well. (Coodo, 2022) In terms of energy, each dwelling unit can be customized and turned energy self-sufficient. In terms of transportation, these dwelling units are carried by crane and placed on a truck as these are transported to be again placed on site by crane again as can be seen in Figure 2.17. Several units can be connected to also achieve bigger living spaces as illustrated in Figure 2.18 below.



Figure 2.17 Coodo Unit Delivery on Site (coodo.com)



2.4 Mobile dwellings in the Arabian gulf

Mobile dwellings developed and gained popularity through the years as an affordable housing solution in some country specifically USA and established strong appearance in other countries such as Germany, Sweden, and other European countries . (Dave, Watson, & Prasad, 2017) The situation in the middle east is different. As offsite construction is actually getting developed and recognized for all its benefits both economically and environmentally, these prefabricated mobile dwellings are still being used in different functions but not as dwelling units keeping them away from being a living or housing solution. Specifically in medical and hospitality we have started seeing prefabricated mobile dwellings being used and have huge success and even as temporary dwellings for builders and labor workers on construction sites. The main issue that is thought to have kept these dwellings from being actually used as dwellings and offering possible solutions in the housing sector is the mainstream perception. There is a general misunderstanding or sometimes lack of awareness of these dwelling unit in their modern updated forms and qualities. A prefabricated mobile (portable or relocatable) dwelling is still perceived as looked at as a superior house , more of a shelter that is cheap or a temporary solution .

Firstly, in the report the Saudi Arabia prefabricated building industry was found expected to register significant growth by 2028 due to the vast constant demand for prefabricated homes witnessed in the last few years. According to Mordor Intelligence (2023), statistics indicate that this industry has been forecasted to grow at a compound annual growth rate (CAGR) of 8.53%. This anticipated growth is presumed to occur due to various reasons. For instance, there is a high demand for an effective intervention to address the country's shortage of affordable residential housing due to population increase (Mordor Intelligence, 2023). In addition, due to the increasing environmental conservation awareness in the nation, more eco-friendly construction materials and approaches, such as prefabricated buildings, will be in high demand since they do not generate on-site waste.

In the context of the UAE, the market is segmented and has other attributes as influenced by the nation, as described in a report on the UAE manufactured homes market prepared by Mordor Intelligence (2023). In this report, information on the market analysis, industry segments, market trends, competitor analysis, and recent developments in the market are analyzed and predicted.

According to Mordor Intelligence (2023), the UAE manufactured homes market is predicted to register a compound annual growth rate (CAGR) of 7% by 2028. Various evidence-based reasons support this prediction. For instance, due to adverse impacts that resulted from COVID-19, most manufacturing operations were halted. Specifically, the global pandemic discontinued global trade and construction processes; however, since the operations have been restored, there will be increased demand. In addition, there is an increased demand for energy-efficient homes that are better quality and consume less time. This will increase the demand for manufactured homes, which have been deemed 50% more efficient than on-site houses (Mordor Intelligence, 2023). Lastly, there is a potential market that is still untapped due to a lack of awareness of manufactured homes and their benefits; however, once explored, the market will increase the demand for the products.

Additionally, being the biggest economy in the Middle East, UAE has increased its spending in the construction industry; however, more investors are leaning towards more efficient housing solutions, increasing the demand for manufactured homes.

3. RESEARCH METHODOLOGY

To study and answer the main research questions, the study adopted a quantitative research design approach using a survey questionnaire design. In this descriptive correlational quantitative study, the aim was to measure two main variables:

- Perception of mobile dwellings and their qualities among the sample
- Willingness to own a mobile dwelling among the sample.

It also was designed in intention to describe averages, correlations between variables and test hypotheses about relationships between variables.

3.1 Targeted population

The targeted population was based on the number of expat populations of the two nationalities who lived at higher rates of mobility in the last decade: Syrians and Lebanese specifically those living in two countries: the Kingdom of Saudi Arabia and The United Arab Emirates. Moreover, the targeted population was intended for only registered expats in the countries and not refugees considering they have midrange to high-range incomes. The reasoning behind these choices was based on four factors:

- 1- The two chosen nationality populations are considered of the highest number of Arab expats, migrants, and immigrants in the two chosen countries (Saudi Arabia Population, 2022, para 7).
- 2- The two chosen nationality populations fall into the definition of users of mobile lifestyle identified earlier in this thesis.
- 3- Both chosen nationality populations' income rates are considered mid-range among expats in the two chosen countries.
- 4- KSA and UAE were chosen considering the available market of mobile dwellings and the availability of land.

3.2 Sampling method

The sampling method used is non-probability voluntary sampling method. It was determined as the best and the fastest way of collecting the data sets needed for the research required. The sample size was determined using Slovin's Formula ($n = N / 1 + N (e)^2$) for calculating the sample size since it is relevant to studies where non-probability sampling is used.

For this study, $N = 1,11$ m, and $e = 0.06$. At a 90% confidence level, this translated to a sample size of 200 respondents out of a target population of 1.112,000.

3.3 Survey design

The research data set was collected in this survey through a self-administered online questionnaire using an online survey tool. This method was chosen as it is considered best type in ease of use, reaching the largest amount of people, generating statistical and rich data in the limited time available.

The survey was composed of three different sections (A, B, C, and D) where:

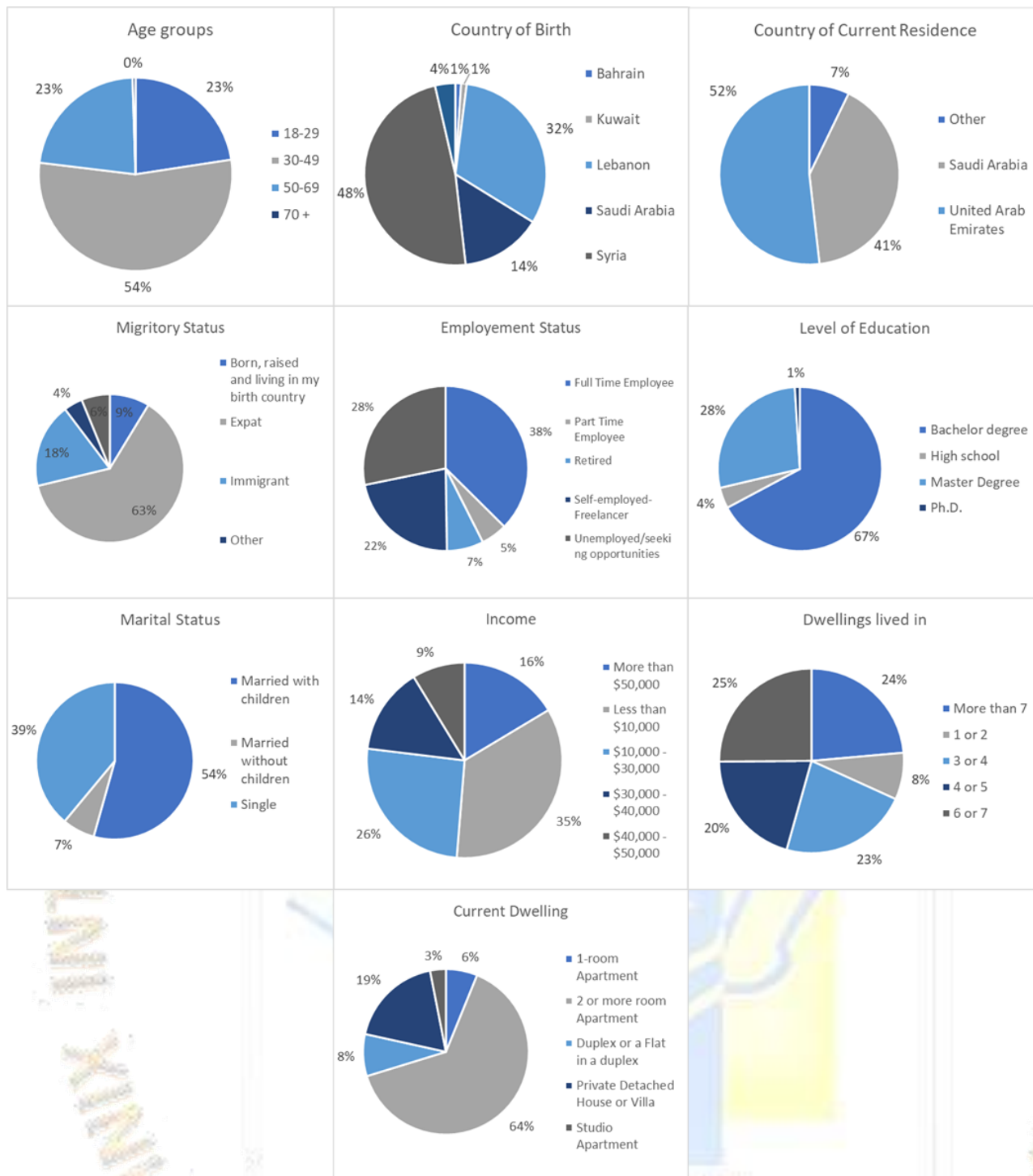
- A. Section is to collect Demographic Information
- B. Section is to measure Understanding Concepts of Home, Dwelling, and Mobile Identity
- C. Section is to measure the perception of Mobile Dwellings
- D. Section is to measure Willingness to Own or Use a Mobile Dwelling based on awareness of certain characteristics

The targeted sample was approached through their community pages, groups, and representatives in online social media platforms via a hyperlink embedded social media posts. The method is widely used by researchers due to easy accessibility to the population, cost reduction per questionnaire, speed of responses, the ability to expand the audience, and the process of organizing and analysing replies. Furthermore, this type of survey gives higher flexibility to users to reply and fill in a chosen preferred time and location and not all at once.

4. SURVEY RESULTS AND FINDINGS

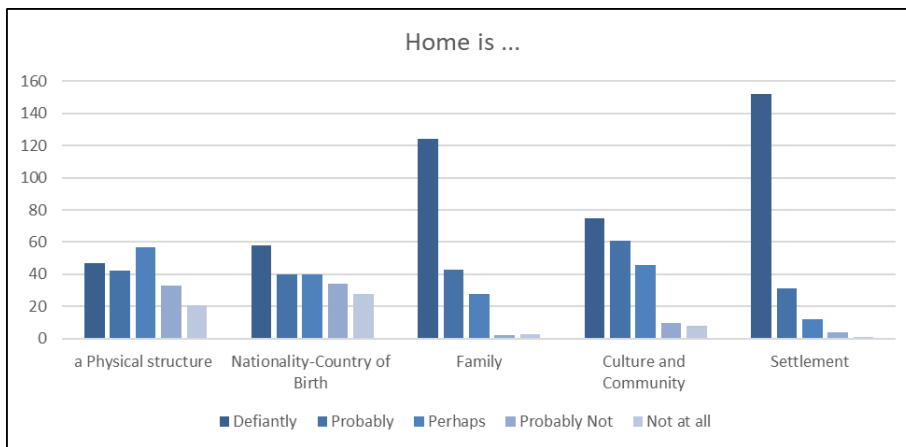
4.1 Demographics and Respondents' Profile

The demographic information of the respondents is considered very crucial not only for subsequent discussions of the findings but also for the authenticity and generalization of the results. This section, therefore, presents respondents' background information which is considered necessary for discussions in this study such as country of birth, age, marital status, migratory status, educational and employment status, and home hold income. The following charts illustrate results of the demographic information and data collected from the respondents.

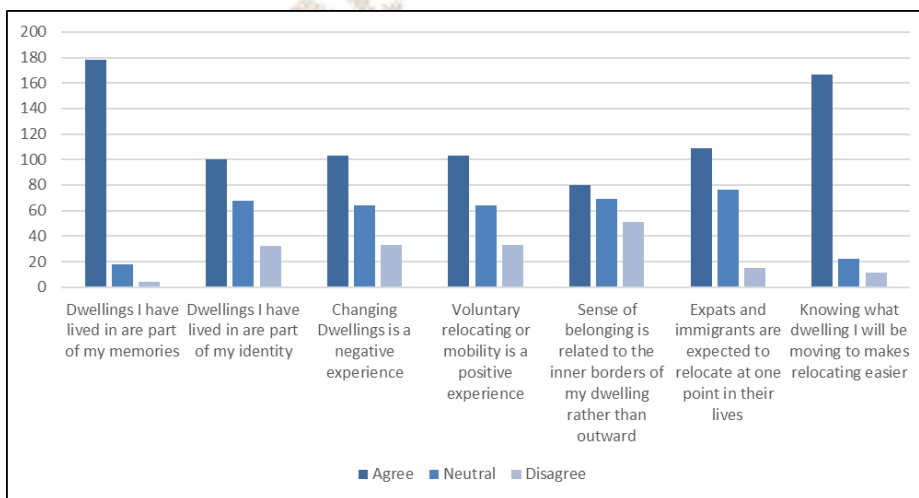


4.2 Understanding of concept of home and dwelling

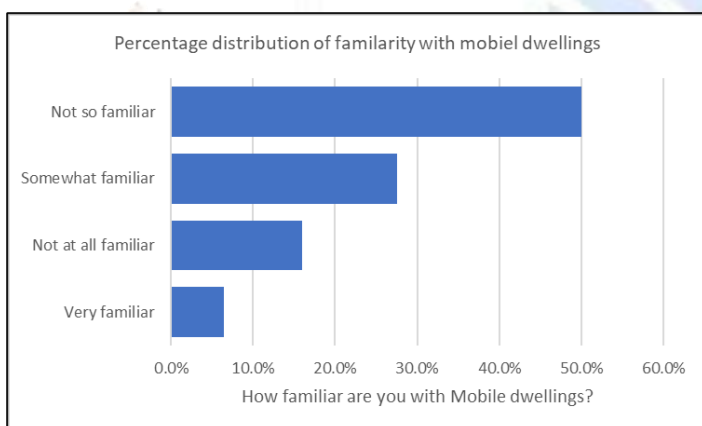
Although both concepts of home and dwelling are broad concepts related to a lot of different factors that can't easily be measured in close ended questions, the survey presented several statements that were conducted based on the studied literature and main ideas discussed and proved in it. The statements were intended to measure the respondent's agreement, disagreement, or neutral opinion regarding the given ideas. Chart 4.12 below shows the respondents feelings towards 5 statements.



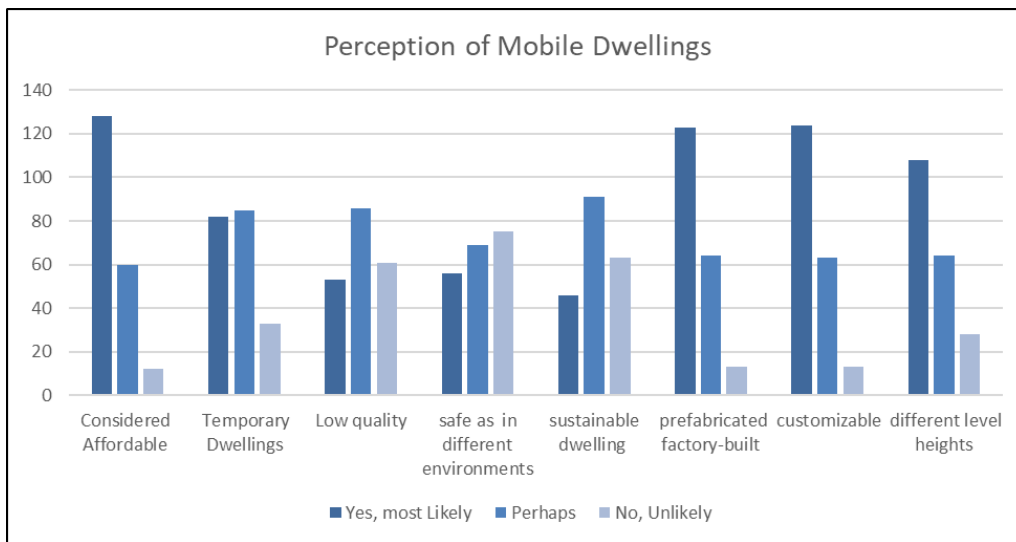
In the same approach and to measure the respondents understanding of concept of Dwelling, a set of seven statements were formulated based on literature review and definitions in previous chapters of this study. The respondents were asked to indicate the extent of agreement with each of the statements. The related results are presented in Chart 4.13 below.



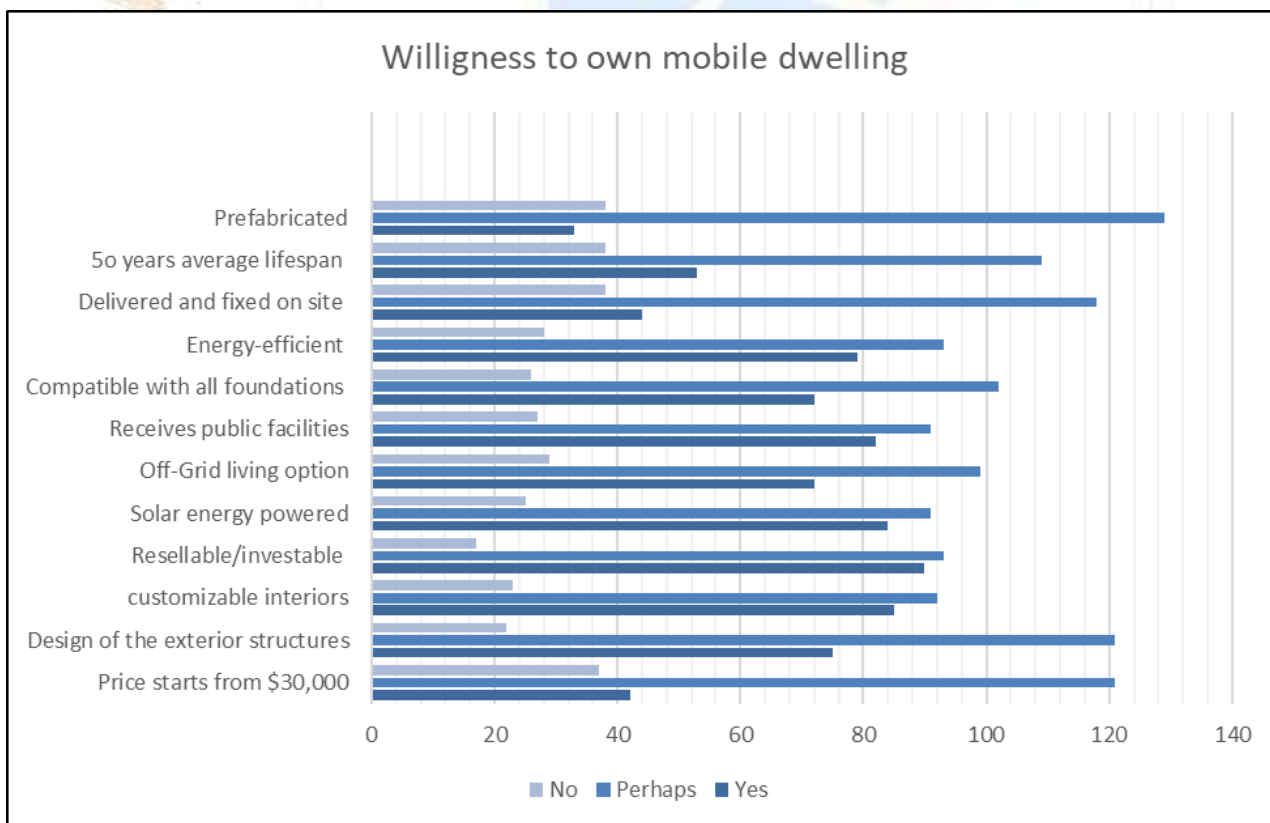
In section C of the survey respondent were presented with questions aiming to measure their perception of mobile dwellings which also indicated the perception and familiarity with mobile dwellings. Upon asking the whether they were familiar with mobile dwellings in general 50% responded not so familiar, 27.5% were somewhat familiar yet 16% were not at all familiar and only 6% were very familiar with what mobile dwellings are. The results are illustrated in Chart 4.14 below.



Following that, seven statements were presented to the participants and those statements were formulated based on characteristics and qualities of latest studied cases of modern mobile dwellings in chapter 2. Respondents were asked how likely they thought the statements are true for mobile dwellings in order to understand their perception of mobile dwellings and what certain general ideas they might have towards it. Based on the findings illustrated in Chart 4.15 below, around 80% of respondents thought it is most likely or probable for mobile dwellings to be temporary dwellings. Mobile dwellings were also perceived as perhaps of low quality by 43% of respondents and 26% thought that it most likely is. The majority of opinions however showed agreements that mobile dwellings are most likely prefabricated, customizable and can be of different heights. On the other hand, the results revealed a somewhat different perception whether mobile dwellings were safe in different environments.



At the last stage of the survey Section D, the participants were presented with statements of characteristics of mobile dwellings based on the literature review and cases studied in previous chapters of this study . The aim was to measure the respondents’ willingness to consider owning a mobile dwelling in relation to different characteristics and quality that these dwellings could have. In all of the given statements the majority of responds were on a middle range of agreement showing uncertainty yet possible willingness . Chart 4.16 below shows the different characteristics presented and the level of respondents’ willingness to own mobile dwellings based on them. The ability to invest or resell mobile dwellings had the highest consideration level with 45% choosing yes as to wither this fact was to be important in their choice of mobile dwelling and 46% choosing that they might consider it. Also , facts like being customizable , energy efficient and solar powered received higher levels of willingness to own levels of the respondents . On the other hand , mobile dwellings being prefabricated was the least to be of a positive characteristic when considering owning mobile dwellings with only 16% considering it an advantage .



5. CONCLUSION

The principle analytical study of this paper was through a survey questionnaire presented to Syrian and Lebanese nationals of expats living in two major countries of the Arabian gulf : KSA and UAE aiming to measure the level of awareness of mobile dwelling and willingness to own a mobile dwelling. Despite the greatly noticeable advantages and positive characteristics of mobile dwellings and the noticeable development and updated designs offered in the market in the last decade, the results of the study prove there is still lack of awareness and misperception of these dwellings. That is thought to have resulted in reduced interest or unwillingness to own mobile dwellings.

Within the target segment of the research, there was some acceptance of this type of house, or acceptance as an option. However, what was remarkable was the clarity of the importance of certain characteristics that these homes could provide among the respondents. Examples of these characteristics were: energy efficiency , design of the exteriors, customization of the interiors and the compatibility

with different foundations. The ability to invest and resell these dwellings feeds into the clear need of the sample in these dwelling have governmental and official regulations.

From the results of the study, correlation appears between the level of awareness of mobile dwelling characteristics and willingness to own them among sample. That provides evidence of hypothesis #1 of the thesis “There is a relationship between the level of awareness of modern mobile dwellings and the willingness to own them” as specified and explained in the analysis . It was also noted through the regression analysis that hypothesis #2 of the thesis study “Expats and immigrants in the middle east are more likely to consider owning mobile dwellings when they have awareness of their qualities” explained earlier in the results analysis .

Implications of the research

The research contributes and provides answer to questions not addressed before in research . The answer to this research helps in introducing the perception and awareness among certain population sample in the Arabian gulf region of a not very common dwelling solution in the area . The results of the study may help in several fields such as construction and housing. Construction companies would benefit from this study to understand the general perception of mobile dwellings and what characteristics users in the middle east find more important when willing to consider mobile dwelling as a dwelling idea . It may also contribute to creating awareness of mobile dwellings as an affordable dwelling option for expats and immigrants in the middle east.

The findings of this study have important implications for policymakers, urban planners, and expats living in the Middle East. Firstly, the results suggest that mobile dwellings are a viable housing option for expats in the region and can offer several advantages over traditional housing options. This has implications for policymakers and urban planners who may need to consider incorporating mobile dwellings as part of their housing strategies to meet the needs of a growing expat population. Secondly, the study highlights the importance of cultural factors in shaping perceptions of mobile dwellings among expats. This underscores the need for expats to be more culturally aware and sensitive when considering housing options in the region. Lastly, the study sheds light on the need for more research on the experiences of expats living in mobile dwellings in the Middle East. This has implications for future research, as there is a need for more in-depth studies that explore the factors that influence the experiences of expats living in mobile dwellings, and the ways in which these experiences may vary across different expat groups.

Overall, this study contributes to the understanding of the perception of mobile dwellings among expats in the Middle East, and provides valuable insights for policymakers, urban planners, and expats themselves. The results of this study have the potential to inform future policies and practices related to expat housing in the region and can help to create more inclusive and culturally sensitive housing options for expats in the Middle East.

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