Liveable Muslim Settlements: A Systematic Literature Review to Understand Current Factors and Challenges

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Abstract. Liveable settlement refers to living environment. In the context of Muslim settlements, while people situated in homogenic culture and religious traditions, there was quite confuse how to improve them in better qualities of physical conditions despite the density in their own settlements. This paper tries to find any current factors and challenges of liveable Muslim settlements. Muslim settlements indicated where research did and liveable factors and challenges analysis from literature data stated about the experiences of liveability aspects. The systematic literature review used by analysis 19 paper in last ten years from ScienceDirect online databases from 2010 until 2021. Descriptive analysis did by grouped the key words from all papers, indicated theme of research and conclude it to factors and challenges of research topic. Literature data indicated physical, non-physical, and socio-culture factors as important factors to make settlement will liveable. Challenges from design and planning phases until implementing phase can confirm the fulfil of ideal indicators of liveable Muslim settlements.

1. Introduction
Liveability refers to the condition which is suitable for human living [1]. Conceptually, liveability refers to the state of the living environment, which must offer an acceptable quality of life to the inhabitants of a particular locality [2]. Some liveability factors are economic development, housing environmental quality, community development, transportation, and mobility Equity [3]. Tools to assess liveability also using Liveability Index System. In that index, safety, infrastructure and public services, recreation and amenities, cleanliness and natural environment, community spaces, distinct characteristics, housing options and good connectivity as the leading indicators to assess the view of inhabitants and professional assumptions about the liveability of their settlements [4] are the indicators. The recent version for liveability refers to healthcare, culture and environment, education and infrastructure [5]. These key indicators will be used as a baseline to develop indicators for Muslim settlements and see the changes in which aspect needed to improve. For designing liveable settlements, the physical part of the neighbourhood is regulating parameters to enhance the social environment, which is indicated by communal open space, visibility and spatial linkage between communities, building typology and form. These physical attributes can influence the amount of social activity as part of liveable settlements [6].

Ten points indicated Muslim settlement based on Al Qur’an and Hadith [7]. It is mainly about places for worship, direction to mosque, open space availability and support for a clean and healthy environment. For a specific type of settlement, while Muslims are the dominant inhabitant, it is essential to see the important factors and challenges to assess how liveable their environment is in the current context. Sunni Islamic principle divided public and private sphere, women and men’s sphere, and street
and home space in the traditional life of Muslims [8]. This basic concept was important in Muslim settlements. It can compare to the idea of mahremiyet in Turkey, the idea of privacy and intimacy. Its protection is an essential fundamental aspect of Islam to arrange the spatial configuration for some activities. Muslim settlements are indicated by the community with mosques for congregational Friday and a nearby market or bazaar. There is a public bath as the third type of Muslim settlement [9]. In created newly society, Muslim settlements reflected multi aspects in socio-cultural, economic structure and politics. This condition detected in natural law, religious and cultural belief; design principle stemmed from sharia law and social regulations [10]. This paper tries to discover factors and challenges in Muslim settlements to settle the liveable target for their situation and condition.

2. Method

This research used a systematic literature review method. Last ten years, research articles were collected from ScienceDirect databases from 2010 until 2021 and used the Liveable Muslim Settlements keyword. Nineteen papers were analysed to see the current factors and challenges to assess how liveable Muslim settlements are.

The systematic literature review (SLR) method used in this research refers to 8 steps, from formulating the problem to report findings in figure 1 [11]. A successful SLR indicated three crucial stages: planning, conducting, and reporting review [12]. This method is a secondary study and a well-defined process to identify, analyse and interpret available research questions.

![Image](https://example.com/image.png)

**Figure 1.** Systematic Literature Review Method

Source: (Xiao and Watson, 2019)

Below are data filtering steps as the research method to analyse factors and challenges in liveable Muslim settlements. This method is simplified from the SLR method. Firstly 30 papers were collected from primary data in ScienceDirect 2010-2021. 11 irrelevant papers consist of paper from outside architecture discourses. Nineteen eligible papers were used as main data to answer research objectives about liveable Muslim settlements. Figure 2 draw the steps of the research method.
3. Results and Discussions

3.1. General description from selected literatures data

Keywords of Muslim settlements used in literature search steps did not indicate specifically the Muslim inhabitant by all papers. All papers draw about sustainable research that could draw in which aspect which can draw liveable factors. As a more significant area of study, Iran's context may only mark the location or specific state as the Muslim settlement. But this data can give any impression that research in Iran, which Muslim people as the majority in that country and as the prospective area of study to capture the Muslim settlement in the global context.

From 19 papers, many of them used the qualitative research method when seeing the factors and challenges of liveable settlements (know a variation of the method in figure 3). The quantitative method used the GIS method in the traditional walled city of Alwar India [1], the experimental approach [13], and using the OLS and ordinal probity regression models [14].

The researcher used qualitative research to assess liveable factors like the descriptive qualitative method in the sustainable Qanat system [15]. Mental map and interview method used to track the history and importance of the Qanat system in the past. Field experiences from 2 support programs by UN-Habitat [16] and exploratory study on ‘integration’ activities and migrant welfare with local authorities, civil society actors and asylum seekers by an interview [17] did in some countries. Some research used comparative case studies and content analysis data to assess the development of settlements [18] [19]. Research also did focus group discussion as a qualitative method [4] and field research in urban festivals.
[20]. Questionary survey of urban spaces [21], descriptive analysis [22] [23] and in-depth interview [24] and Delphi method [25] is the combination qualitative research method to find factors and the challenges.

For the mixed-method approach, two research did by using quantitative data and explain deeply by qualitative data. Mix method approach by analysing socioeconomic indicators of social need for ES in the neighbourhoods surrounding green spaces [26] [27].

Figure 4. Area of Research

Some research did in Asia: India [1] [4], Iran [15] [19] [26], [23] [25], Chittagong, Bangladesh [28], Singapore [13], Karachi, Pakistan, and Ho-Chi-Minh City in Vietnam [21]. Another research did in Kosovo [16], Baku, Azerbaijan [18], Bat-Yam, Israeli City [20] Modern Beersheba, a desert city in the south of Israel [22]. Two areas in Africa are Nigeria [27] and Ghana [14]. For settlements in Europe, research did last ten years in Mashhad city, Wales, England, and Scotland [24], Sweden [17] and collaborative governance of integration in rural Europe [17].

Figure 5. Research Interest

From papers, there were many research interests in urban revitalization [15] and urban design scale. Like research of Qanats sustainable water system in Iran that can create green space for community, it can also make linear urban park demonstrations and visualized an old hydro city [15]. Research interest in the special case of restoration of municipal urban planning practice in a post-conflict context [16], research interest in urban development and how the process of the city to major city and impact to an informal settlement in larger number in Baku Azerbaijan was the variation that collected from papers.
Research in Iranian cities discussed how traditional urban patterns could inspire planners to create integrated urban environments which are more sustainable socially [19]. Liveability factors also interest the liveability approach [4], spatial planning and masterplan [28]. Implementation of culture-led urban strategies by urban festival [20] and different strategies of space creation [13] and spatial setting in green spaces [21] are research interests in spatial aspects. The primary planning phases of the city emphasized the initial signs of changing development patterns and the heavy burdens that the city has yet to overcome [22] and explored more in some research. From the socio-culture aspect, cultural sustainability [27] in urban green areas [26] and urban liveability [23] with the relationship between rural space and settlements [24] also the variation of research interest in the last ten years. The determinants of subjective wellbeing in rural communities [14] and the process of regeneration of historical urban fabrics [25] and tried to see the new landscape of collaborative governance about migrant reception and integration [17] were any the research interest variation from papers.

3.2. Important factors about livability
For the important factors about liveability, some research draws from micro to macro scale. Some cases in research detected that local government role, people participation and urban design policy as some of the main factors about liveability in settlements. Details of essential factors of liveable settlements indicated by:
1. The local citizen participation and their opinions [1]
2. Build the expertise in policy maker first [16].
3. A strong leadership and support program to increase capacity building among expert. [16] [22] [24] [25]
4. Presence of grassroot organization. [18]
5. Accommodate inhabitant needed [18] [24] [25]
6. Build sustainable infrastructure and technological innovation [15] [19] [28] [13] [26] [25]
7. Social sustainability [19] [25]
8. Social, economic, cultural and psychological parameters are now driving the change in liveability with an increased pace [4] [27]
9. Employing multiple physical forms to urban space, including maps, plans, models and designs has been an important objective of activities of urban remaking to make more sustainable mechanism in the settlements. [20] [21]
10. Traditional town planning strategies useful for architecture in the new age and sustainable patterns [23]
11. Happiness of rural residents [14]

3.3. Challenges to make livable Muslim settlements
The challenges as the keys consideration should improve, develop, and maintain to make liveable settlements started from adjusting the past model system of sustainable settlements to the current context in densely population. The Qanat system needs some consideration about contemporary urban design because it stands in a densely populated metropolis. It can be still exploited in urban regeneration, creating urban landscape, and creating vivid and attractive open space for urban residents [15] in a post-conflict area. The recent challenge is how to convert emerging societal momentum into policy [16]. How to minimize random lack of construction that can cause environmental degradation and continue to harm the image of settlements is more critical. Policymaker should pay attention to making the city and its territories more cosmopolitan, tolerant, and vibrant. [18]. In Iran, the challenges to make town and settlement liveable is how to make appropriate mechanisms in place to improve the employment rates and economic conditions to fill the increasing gap in the community [19].

In India, professionals perceive successful liveability performance and how inhabitants judge the identified indicators of liveability. [4]. The research saw another challenge in how to make a new conceptualization of planning to optimize the allocation of industrial, residential, commercial, and public lands to create an environment-friendly city [28] and how to support socio-economic activities.
of the town [13], how to understand the spatial site conditions and importance of urban green spaces in rapidly urbanizing Asian areas and economies in transition [21].

Implementing urban revitalization policies and how the master plan of the settlements will apply in practice [22] in the various levels of local, state, and federal government need to manage and regulate public space activities [27] appropriately. How to link ecological knowledge and social needs with the medium of analysis has the potential for improving land use planning and management [26].

It is possible to find ways to make the environment responsive to contemporary needs while keeping its continuity and integrity with the historical structure and spaces [23]. For some reason, the extent and depth analysis in social and economic need for and reliance on diverse, multicultural rural populations [24] still challenge the new effort to make liveable settlements. The improvement of physical facilities tends to contribute substantially to the overall wellbeing of rural dwellers in [14].

To change the current trend, the public and private stakeholders, including local citizens, need to move in the same direction. A management structure involves the representatives of all relevant stakeholders and has been proposed as an initial solution to improve the present governance model for the regeneration of historical urban fabrics [25]. On the other hand, how external participants can participate locally to be part of a conversation on belonging to a place and its development is crucial because the context has already changed [17] to make the liveable settlement.

From 19 selected papers, the research found that factors and challenges to make liveable settlements depend on many aspects, from micro-scale to macro-scale, in physical, non-physical and socio-culture factors.

**Table 1. Important Factors for Liveable Muslim Settlements**

| Physical Factors | Non Physical Factors | Socio Cultural Factors |
|------------------|----------------------|------------------------|
| Build sustainable infrastructure (6) | Local citizen participations (1) | Citizen opinion (1) |
| Geographical situation (8) | Expertise policy maker (7) | Inhabitant needed (8) |
| How to preserve historical moments (8) | Governmental policy (8) | Strong ties based on kinship, religion, and (8) |
| Accessibility, housing (9) | Financial resources (8) | Sense of community and mutual support (8) |
| A civic and open spaces (9) | Economic needs (8) | Privacy (9) |
| Infrastructure, utility, spatial planning, and city master planning and town planning strategies (21) (16) | Consensus orientation (9) | Social relations (9) |
| Physical form to urban space (10) | Strong leadership, implementation and supporting policies (13) | Collective actions (9) |
| Technological innovation (11) | Local authorities, experts, NGO’s (19) | Attachment and sense of community concepts (14) |
| Green Spaces and facilities (12) | | Socio-cultural services (15) |
| Environment and housing (13) | | Happiness of rural residents (18) |
| Ecological production (15) | | Belonging and hostility (20) |

Based on table 1, factors that Muslim settlements can categorize in liveable aspects are indicated by physical factors. Non-physical factors dominantly consist of the factors from governmental policy and the actors who have an important role in running the policies. And for socio-cultural factors, some indicated by people participating in making the policy is quite important to make liveable Muslim settlements. Religion and kinship factors are important factors to consider besides the sense of community. For physical factors, facilities in the settlements, including how it accelerates technology innovation which can impact to environment and housing. These are some important considerations except the natural condition of settlements.
For the challenges to make liveable Muslim settlements, the research found big challenges in adjusting the top-down policies to the grassroots needed. Some details about the allocation of the challenges draw in Figure 6.

Figure 6. The Challenges of Liveable Muslim Settlements

The research divided the challenges of liveable Muslim settlements in a group of design and planning phase and a group of implementing phase that refers to ideal indicators for settlements. Every challenge faced in all papers indicated that issues related to liveable Muslim settlements were complex and comprehensive and needed more effort to implement in ideal indicators.

If we see eight indicators of liveability from The Global Liveability Index from the research result and compare it to the concept of Muslim settlements, there are challenges to making measurable liveability parameters in detail. The general concept of Muslim settlements by spatial configuration between men and women zone, division of religious and economic area and also how to design space by privacy and intimacy consideration can elaborate as the specific parameters from liveability index in part of recreation and amenities parameters, cleanliness and natural environment and housing option. One specific parameter that can calculate for the liveability of Muslim settlements is how the relation of spatial configuration has good connectivity to the settlements around it.
4. Conclusion
The important factors in liveable Muslim settlements are physical, non-physical, and socio-cultural factors. For the challenges to make Muslim settlements in liveable conditions can start by considering about design and planning phase until implementing phase. These successful phases can confirm how they connect and fulfill to ideal indicator for liveable Muslim settlements. One strategic parameter that can improve and develop specifically for Muslim settlement from Global Liveability Index is in three aspects: recreation and amenities, cleanliness and natural environment and housing option. Further studies are needed to examine more how far these factors and challenges match with the real condition in some Muslim settlements. For Asia countries, especially Iran and Southeast Asia countries, the socio-culture factor seems to be more dominant than governmental policy.

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