

# Analysis of the Urban Spaces around the Holy Places on the Needs and Behavioral Patterns of Pilgrims; Case Study: Imam Reza (PBUH) Street, Mashhad City

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## ABSTRACT

The urban spaces around the holy and religious places and analyzing them based on the needs of the pilgrims and their behavioral patterns that occur in urban spaces is a subject that has been less addressed in the scientific research. The main research question is the adaptability of the urban spaces around the holy places to the needs and behavioral patterns of the pilgrims. Therefore, the theoretical foundations of the subject were first studied. Then, in the conceptual model of the research, the qualities that the urban street space should have regarding the adaptability to the needs of pilgrims were codified in six criteria. These criteria include access facility, safety and security, vitality and presence, environmental comfort and convenience, visual beauty and warning and authentication, and 20 sub-criteria. The research method is a survey study using statistical analysis. The case study is a part of Imam Reza (PBUH) Street in Mashhad City that is one of the main paths leading to the holy shrine. The behavioral patterns of the pilgrims were classified into five main behavioral patterns in the field studies. In the meantime, 12 inappropriate and dangerous were identified among the pilgrims, and 384 questionnaires were distributed among the pilgrims. In the first section, the satisfaction of the pilgrims using the mean concentration index showed that in more than half of the environmental criteria, the mean of the satisfaction level of pilgrims is at the improper level. Also, the correlation analysis (Chi-Square) shows that there is a significant and direct relationship between the low level of the urban space qualities and inappropriate and dangerous behaviors of the pilgrims. In the end, the paper presents the recommendations, suggestions, and requirements for the planning and design in the urban spaces around the holy places.

**Keywords:** Needs, Behavioral Patterns, Pilgrim, Quality of Urban Space, Imam Reza (PBUH) Street of Mashhad.

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## 1. INTRODUCTION

Every human's activity is to meet his demands. Human presence in urban spaces and his activities are also to meet a set of human needs. In the human-centered approach, urban spaces must be in such a way to meet the needs of different groups of people using it and have the capability of providing human needs and activities. However, the lack of attention to the environmental qualities in designing spaces has undesirable effects on the behavior of citizens. In recent decades, some studies were implemented on urbanism and environmental psychology. With different social and psychological approaches, they have studied how people interact with each other and the effect of the physical environment on the type of interaction, and how humans use the environment. Also, the studies mentioned different behavioral patterns of the urban space users, considering various factors, such as social conditions, lifestyle, cultures, and sub-cultures (Bahreini, 2005; Baker, 1968; Altman, 1975; Nasar & Yudakul, 1990), geography and different climates (Bahreini & Khosravi, 2015; Sholeh, Sadeghi, Najafi, & Khaksar, 2016), genders (Bromand, Togyani, & Saberi, 2017), time and periodicity (Rapaport, 1990; Lynch, 1972), and type and characteristics of behavior (Gehl, 1980; Reeve, 2005).

The results of these studies are to pay attention to a set of physical and spatial factors and elements in designing to create spaces that facilitate desirable activities and prevent undesirable activities. In the meantime, the urban spaces around the holy places are significant due to the great presence of pilgrims. In the urban spaces around the holy places, there are pilgrims with various cultures and customs. Different needs of pilgrims and their resulted behavioral patterns require research and study in the pilgrimage cities and analyzing them in the urban spaces around the holy places. Currently, few studies have been conducted particularly on the needs of pilgrims and their resulted behavioral patterns, and also what qualities such urban spaces should have. Also, the necessity of qualifying the urban spaces around the holy places and paying attention to the position of the pilgrim in the Iranian-Islamic culture is of importance. The case study is Mashhad city. Annually, millions of pilgrims travel to Mashhad city, and most of these pilgrims settle in the area of Imam Reza (PBUH) holy shrine, who have a great presence in the urban spaces around it. Imam Reza (PBUH) street is one of the most significant streets, leading to the holy shrine of Imam Reza (PBUH). On the other hand, the upstream documents and plans of Mashhad city have emphasized the place of pilgrims in the urban spaces and the necessity to provide high-quality service for the welfare of the pilgrims (Farnahad Urban Consulting Engineers, 2010; Khorasan Razavi's Park of Science and Technology, 2015; Khorasan Razavi's Governor, 2015).

The main questions of the research are that first of

all, what environmental qualities should the desired urban space around the holy places have in order to be adaptable to the needs and activities of the pilgrims? And secondly, what is the degree of adaptation of Imam Reza (PBUH) Street in the vicinity of the holy shrine in relation to the needs and behavioral patterns of pilgrims? In this regard, the research hypothesis is that it seems there is a significant relationship between the urban spaces around the holy and religious spaces and the low quality of the urban spaces and inappropriate and dangerous behavioral patterns of the pilgrims in the urban space.

## 2. THEORETICAL FRAMEWORK

This section reviews the literature review in several main sections, including the needs of pilgrims, types of activities of pilgrims in urban spaces, and the resulting behavioral patterns in urban spaces, as well as examining the qualities of urban spaces in accordance with the needs and activities of pilgrims and finally achieving the conceptual model of the research.

### 2.1. Human Needs, Behavioral Patterns

Every human activity is to meet a set of needs (material or in higher levels such as spiritual needs). Behavior includes the way and manner of any activity of action. Human behavior is the result of motivations and needs of the individual, environmental capabilities, mental image of the individual from the outside world and is a result of perception and meaning that this image provides for him (Lang, 1987). The behavioral patterns depend on and are influenced by the culture and determine and express the way people use the spaces, and indicate the people's behavior in the spaces. According to the urbanism perspective, urban environments must be designed to reinforce and encourage desirable behaviors by facilitating them, and to limit or stop such behaviors by creating obstacles to undesirable behaviors (Bahreini & Khosravi, 2005, p. 4; Pakzad, 2006, p. 49). There are four approaches to the effect of the environment on behavior, including the free-will approach, the possibilistic approach, the deterministic approach, and the probabilistic approach (Lang, 1987, p. 114). The current research is based on the probabilistic approach.

### 2.2. Activities and Behaviors of Pilgrims in the Urban Spaces

The pilgrimage in the Islamic culture and religious texts must be first studied to identify the type of activities and behaviors of pilgrims in the urban spaces. Pilgrimage originates in Arabic means going to the blessed martyrs and tombs and acquiring the grace from the divine saints that include the presence in the place along with customs and rituals and praying, called esoteric insight (Aminzadeh, 2014). In Islamic culture, the main reason for creation is spiritual growth and excellence. One of the ways to improve spirituality

and establishing a relationship with the creator is the pilgrimage (Daniali, 2006, p. 13). In the pilgrimage cities (particularly the metropolitan religious cities), it is required to pay attention to the needs of the pilgrims, considering the nature of the considered pilgrimage<sup>1</sup>. Also, urban spaces must be designed to be in accordance with the pilgrimage customs in addition to meeting the needs of the pilgrim. In Iran, the urban studies and research have less studied the needs of pilgrims and their corresponding qualities in the urban spaces around the holy places, and they often focus on the social and cultural aspects of the pilgrimage city (Azimi Hashemi, Shariati, & Kari, 2012). Two main groups of factors can be mentioned to codify the influential factors in the qualities of the urban space regarding the needs and activities of the pilgrims.

#### **A) Types of Pilgrims' Activities in Urban Space**

The studies show that the most important social behaviors of the pilgrims in the urban spaces around the holy places are influenced by several main activities. Among the activities of the pilgrims, the following activities can be seen: moving to reach and visit the holy place, shopping, participating in the ritual and religious ceremonies, meetings and conversations, recreation and enjoying and memorability, collective activities, walking and settling in the complexes around the urban spaces around the holy places (Rahimi & Khalili, 2014; Mousavi, 2015; Shinde, 2007). Accordingly, the types of activities of pilgrims in the urban spaces around the holy places can be classified into five main activities, including: A) Visiting the holy place (walking), participating in the religious rituals and ceremonies; B) Moving (by vehicle) and movement exchange between the vehicle and pedestrian; C) Standing and sitting and walking in the space, meeting; D) Shopping (supplies and souvenir) and E) Recreational and joyful activities.

#### **B) The Recommended Attributes for the Pilgrims to Pilgrimage**

In studying the behavior of pilgrims, the important point is that the rites of pilgrimage determine some behaviors, and these behaviors affect the needs and desires of pilgrims (Aminzadeh, 2014). Studying the literature relevant to the pilgrimage concept in the Islamic culture shows that three factors were emphasized in the customs of pilgrimage and affect the urban space and its design.

A) Among the rites of the visiting manner is the pilgrim walks calmly and with dignity (Mohadesi, 2007; Mousavi, 2015). Accordingly, the features and characteristics should not disturb this feature.

B) Among the pilgrimage rites mentioned in the religious texts is adornment. In this regard, the god states in Quran: Children of Adam, take your adornment when going to the mosque (A'raf, 31). This verse indicates a general rule which also counts in the holy shrines. This attribute is also influential in the urban spaces around the holy places and its design.

C) Also, the urban space around the holy place must provide the conditions for the mental and spiritual

readiness of the pilgrim for implementing the pilgrimage and must provide the ground for entering a holy and spiritual place.

### **2.3. Qualities of Urban Space in Accordance with the Needs and Activities of the Pilgrims**

The studies showed that there is a relationship between the quality of the urban environment and its activities. Also, by improving the environmental qualities, human activities in the environment increases (Gehl, 2011). The scholars have mentioned a wide range of factors in the qualities of urban spaces and the accordance of urban space with the needs and human behavioral patterns (Bently, Mcglyn, Smith, & Alcock, 1985; Bentley, 1995; Carmona et al., 2003; Carmona & Tiesdell, 2006; Golkar, 2014, p. 130). In the application of the proposed qualities, care must be taken to consider each of these qualities in accordance with its urban environment. On the other hand, most of the qualities in urban spaces are based on the opinions of Western thinkers. Limited studies have also explained the qualities of urban space with the conditions of Iranian culture and in accordance with urban space (Pakzad, 2005; Naghizadeh, 2016A). By reviewing these qualities and based on the two sections discussed in the previous section, which include the classification of various activities of pilgrims in the urban space and the attributes recommended to pilgrims for pilgrimage, the qualities that correspond to each of the topics can be considered. Thus, in the conceptual model of the research, the desired qualities were identified using the inferential method. This model has the necessary comprehensiveness with a wide range of qualities. These qualities are: "ease of access", "safety and security", "vitality and presence", "environmental comfort and convenience", "visual beauty" and "spiritual reminder and authentication". In the following, each of the considered qualities, along with the sub-criteria related to each is explained (Fig. 1).

**Ease of Access:** the quality of ease of access to space is one of the significant qualities of the urban spaces around the holy places as the most important destination of the pilgrims is to reach the holy place. The quality of access can be mentioned by the factors such as ease of movement in the space (private and public), the access to the public transportations (Bus, Taxi, etc.) in the urban space, and the construction of the proper sidewalks (Golkar, 2014, p. 130; Naghizadeh, 2016A, p. 201).

**Safety and Security:** safety is taken into account in the vehicle and pedestrian movement and their relationship (Golkar, 2014, p. 13; Naghizadeh, 2016A, p. 196). In the urban spaces of the religious and pilgrimage cities, the pilgrims are of different ages and genders, and creating a safe environment in the urban spaces around the holy places is significant. Also, social security is related to the sense of security in the urban space

and the lack of different kinds of crimes in the space. This factor is of great importance for the pilgrims and passengers who are strangers in a city.

**Vitality and Presence:** the urban spaces around the holy places must provide the possibility for the presence of the pilgrims in a vital space. The vital space can be defined by the following sub-criteria: 24-hours active land uses in the urban space, providing space for the presence of all the age and gender groups and providing the conditions for more presence in the urban space to attract the audiences and the time of pause in the space (Naghizadeh, 2016A, p. 145).

**Environmental Comfort and Convenience:** the urban spaces around the holy places must be designed to prevent factors such as noise and environmental pollutions that disturb the convenience and dignity of the pilgrim. Comfort and convenience of the pilgrims are considered by the following sub-criteria: healthy environment and without any tension, optimal density in terms of user, sense of environmental comfort (lack of air and noise pollutions), and the physical convenience in the urban design (Golkar, 2014, p. 131).

**Visual Beauty:** the surrounding spaces of the holy places are a kind of entrance joint, and the adornment and

scenic beauty must be considered in them. The quality of the visual beauty can be obtained by the following sub-criteria: unity and harmony in the elements and components of the façade, paying attention to the visual factors and strengthening the sensory richness, and increasing the visual permeability (Naghizadeh, 2016 A, p. 156).

**Warning and Authentication:** the urban space around the holy places must provide the ground for entering a sacred and spiritual place, and direct the pilgrim from the material spaces to the spiritual spaces, and remind the values and spiritual concepts to the pilgrim. The warning quality of the space is considered by the preference and the dominance of the spiritual elements and spirituality (elements with the mere materialistic functions) (Naghizadeh, 2016 B, p. 220). This quality can be defined by the following sub-criteria: applying the Islamic signs and symbols in the architectural façade of the buildings, lack of manifestation of the non-religious elements, providing the ground for the occurrence of the ritual ceremonies and religious events in the space. Table 1 represents the six main qualities along with 20 relevant sub-criteria.

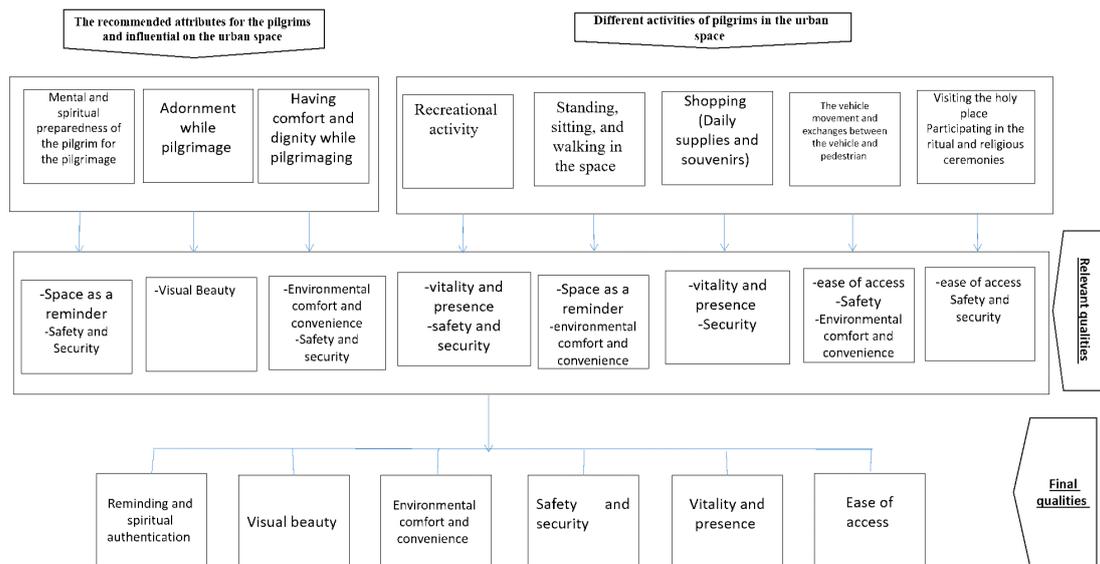


Fig. 1. The Conceptual Model of Research Based on the Different Classes of Main Activities of Pilgrims and the Influential Rites of Pilgrimage in the Urban Space

Table 1. Urban Space Qualities to Meet the Needs of the Pilgrims

| Quality (Criteria)    | Variable (Sub-Criteria)   |
|-----------------------|---|
| Ease of Access        | Ease of vehicle movement in the space (private and public)                        |
|                       | Access to public transportation in the urban space (bus, taxi, so on)             |
|                       | Construction of the proper sidewalks for the disabled and elderly                 |
| Safety and Security   | Separating the vehicle from the pedestrian  |
|                       | Providing a safe environment (especially for women and children)                  |
|                       | Sense of social security  |
| Vitality and Presence | 24-hours active land uses in the urban space                                      |
|                       | Providing a space for the presence of all age and gender groups                   |
|                       | Providing the ground for more presence in the urban space to attract the audience |
|                       | The duration of the pause in the public space                                     |

| Quality (Criteria)                    | Variable (Sub-Criteria)  |
|---------------------------------------|--|
| Visual Beauty                         | Unity and harmony in the elements and components of the façades<br>Paying attention to the visual factors (beauty, proportions in the architecture, the quality of buildings, and so on)<br>Enhancing the sensory richness by increasing the visual permeability |
| Environmental Comfort and Convenience | Having a healthy environment away from the environmental tensions<br>Having optimal density in terms of user<br>The comfort in the street in terms of physical elements in the space (shadings, drinking fountain, type of bench, floors, and so on)             |
| Warning and Religious Authentication  | Applying Islamic symbols and signs in the architecture of the buildings' façade<br>Lack of manifestation of the non-religious elements in the space<br>Providing the ground for the occurrence of the ritual ceremonies and religious events in the space        |

### 3. RESEARCH METHODOLOGY

Various methods have been proposed in relation to the method of conducting research related to the study and analysis of behavioral patterns (Rostamzadeh, 2010; Golicnik Marusic, 2011; Leary, 2014). The current research method is divided into two main parts. The first research method is a survey using statistical analysis, including information gathering and analysis of the quality of the urban space to the needs of the pilgrims. The second research method is the information gathering in relation to the behaviors of the pilgrims and identifying the inappropriate and dangerous behavioral patterns of the pilgrims in the urban space.

### 3.1. Introducing Study Area

Imam Reza (PBUH) street of Mashhad city is located in the historical and central part of Mashhad city. In this street, as we approach the holy shrine of Imam Reza (PBUH), the social role of the street is highlighted more. Imam Reza (PBUH) street is one of the main access paths to the holy shrine. Imam Reza (PBUH) street has thousands of pilgrims daily, considering its commercial-residential role, and leads to the formation of the various behavioral patterns of users in this urban space. In the current study, a part of Imam Reza (PBUH) street that is located adjacent to the holy shrine and is between the Beytol Moghaddas Square (Ab Square) and the holy shrine, and many pilgrims are present in that street. Therefore, this area has been considered as the study area. The length of this street before the square and to the entrance of the holy shrine is approximately 400 meters (Fig. 2).



Fig. 2. Imam Reza (PBUH) Street and its Connection to the Holy Shrine through Beytol Moghaddas Square and Bab al-Reza (Google Earth)

### 3.2. Investigation of Spatial Qualities

The first section studies and analyzes the quality of the urban space regarding the needs of the pilgrims. The questions of the questionnaire in this section are in correspond to the qualities in the main six components. According to this fact, the research criteria and sub-criteria were considered with proper items and understandable for the pilgrims. The responses were classified based on the five-point Likert scale.

### 3.3. Investigation of the Behavioral Patterns of Pilgrims

The second section studies and analyzes different

behaviors of the pilgrims in the street space and identifies the dangerous behaviors of the pilgrims. In the current section, the descriptive method was used by gathering information through observing the behavioral patterns of the pilgrims. In the field study that was done at the end of Imam Reza (AS) Street at different hours of the day and different and diverse behaviors of pilgrims in the urban space were photographed. According to the conceptual model of the research that considered the activities of the pilgrims in the urban spaces in five main classes, the set of the behavioral patterns resulted from the pilgrims' activities can be divided into five classes of main patterns (Table 2).

**Table 2. The Classification of the Behavioral Patterns of the Pilgrims in Imam Reza (PBUH) Street**

| Activity Class | Activity Title   | Different Behavioral Patterns of Pilgrims  | Undesirable and Dangerous Behaviors  | Images  |
|----------------|--|--|--|---|
| 1              | Visiting the Holy Place (Holy Shrine)                                | <ul style="list-style-type: none"> <li>- Pilgrims' walking in the urban space to reach the holy shrine</li> <li>- Returning from the holy shrine to the urban space</li> <li>- Participating in religious ceremonies and rituals</li> <li>- Movement of the mourning groups towards the holy shrine</li> </ul>   | <ul style="list-style-type: none"> <li>- The use of the vehicle-centered space as the pedestrian space</li> <li>- Fast and hasty crossing from the street</li> <li>- Creating physical encounters with each other due to the excessive density</li> </ul>  |   |
| 2              | Vehicle Movement and Movement Exchanges (the Vehicle and Pedestrian) | <ul style="list-style-type: none"> <li>- Different types of vehicle on the street level</li> <li>- Getting in and out of the motor vehicles (taxi, bus, and motorcycle)</li> <li>- Movement exchange between two spaces of the vehicle and pedestrian</li> <li>- Pilgrims' crossing from the width of the street</li> <li>- Pilgrims' crossing from the intersections and squares</li> </ul> | <ul style="list-style-type: none"> <li>- Creating traffic and blockade in the street</li> <li>- Parking car unconventionally overcrowding in the BRT stations</li> <li>- Crossing through the dangerous intersections</li> <li>- Commuting of the pilgrims between the BUS only lines</li> </ul> |  |
| 3              | Shopping   | <ul style="list-style-type: none"> <li>- Shopping</li> <li>- Viewing the stores' Windows</li> <li>- Vending in the sidewalks</li> </ul>  | <ul style="list-style-type: none"> <li>- Allocation more time for purchasing and recreation than the pilgrimage</li> <li>- Gathering in front of a particular land use</li> </ul>  |  |
| 4              | Standing, Sitting, and Walking in the Space                          | <ul style="list-style-type: none"> <li>- Individual and group standing and sitting</li> <li>- Gathering of the pilgrims in a group and talking to each other</li> <li>- Walking on the sidewalks</li> <li>- Beggary in the urban space</li> <li>- Sending regards to the Highness in the sidewalk space</li> </ul>   | <ul style="list-style-type: none"> <li>- Creating crowd and noise pollution</li> <li>- Sending regards to the Highness in the space between two lines of the vehicle path</li> </ul>   |  |

| Activity Class | Activity Title        | Different Behavioral Patterns of Pilgrims   | Undesirable and Dangerous Behaviors  | Images  |
|----------------|-----------------------|---|--|---|
| 5              | Spending Leisure Time | <ul style="list-style-type: none"> <li>- Watching the landscapes of the holy shrine and its surrounding</li> <li>- Watching the landscapes of the urban space</li> <li>- Walking on the sidewalks Shopping</li> <li>- Standing and sitting in groups or individually of the pilgrims</li> </ul> | <ul style="list-style-type: none"> <li>- Allocating more time for the purchasing and leisure time than the pilgrimage</li> <li>- Creating noise pollution and crowd</li> </ul> |  |

In the meantime, corresponding to each of the behavioral patterns of the pilgrims in the street space, the dangerous and inappropriate behaviors of the pilgrims in the space of Imam Reza (PBUH) Street were placed as opposed to those behaviors in case there is any. Thus, inappropriate and risky behavioral patterns of pilgrims were divided into 12 different behaviors. Also, in the continuation of the previous questionnaire, those who participated in the research survey were asked about these 12 behaviors. Participants' answers were categorized into an ordinal spectrum of the Guttman scale.

### 3.4. Statistical Sample

The statistical population of this research is the pilgrims and users of the urban space that visited the holy shrine and were divided into two main groups. The first group is the local people of Mashhad who are present in the street, and their destination is the holy shrine, and the other group is the pilgrims who came from other cities and regions, and their destination is also the holy shrine of Imam Reza (PBUH). The sampling method was considered random. To gather the statistical samples, the researcher was at the end of the street that connects to the Bab Al-Reza (PBUH), which is the entrance of the shrine and the control entrance. The distribution of the questionnaires was implemented in this place. Given that the exact number of pilgrims in this urban space is not available, the sample size was done using Cochran's formula with an unlimited population. At the confidence level of 95% ( $t=1.96$ ), and 5% error ( $p=q=0.5$ ), the sample size was estimated 384 (Hafeznia, 2008, p. 142). The field study was done in the summer of 2016. In the statistical sample, 61% (236) were male, and 39% (148) were female. 9.38% (36) of the samples were in the age group of 15-21 years old, and 97.24% (165) were between 21-40 years old, and 74.24% (95) were between 41-60 years old, and 92.22 (88) had more than 60 years old. Also, in terms of the origin of the pilgrims, 42% (145) were Mashhad citizens, and 58% (203) were non-native

pilgrims. The research validity was confirmed using the corrective opinions of experts in the questions of the questionnaire. The primary test of the questionnaire was also used. Furthermore, the test-retest method was applied for research reliability. In this regard, a smaller sample was selected, and the questionnaires were distributed among them. The obtained answers were the same as the original sample and had a high correlation coefficient. The questionnaire answers were analyzed using SPSS statistical software.

### 4. FINDINGS AND DISCUSSION

The results of the pilgrims' opinions in six main criteria of the environmental qualities are presented in Table 3. In the ease of access, its two sub-criteria are desirable in terms of the mean index, and one criterion has a medium level. In the safety and security of the space, the mean is at the undesirable level. Also, in the vitality and presence qualities, two of the sub-criteria are at the unfavorable level while another criterion is at the medium level among the pilgrims. In visual beauty, all the criteria are at an unfavorable level. In the criterion of the environmental comfort in the space, the sub-criterion of the comfort in the street is at a favorable level in terms of the physical elements in the space. Also, the sub-criterion of the optimal population density has a medium mean. Also, in the other two sub-criteria, the medium index is at an undesirable level. In the criteria of warning and spiritual authentication, pilgrims' evaluation shows that except for one sub-criterion (providing the ground for the occurrence of the ritual and religious ceremonies and events in the space with medium mean), the mean index is at an undesirable level in other sub-criteria. In the meantime, the quality of the visual beauty, in which the medium is at an unfavorable level in its all the sub-criteria, had the minimum score in the evaluation of the pilgrims. Therefore, according to the opinions of the pilgrims, in more than half of the environmental qualities in Imam Reza (PBUH) Street, their satisfaction is at an undesirable level.

**Table 3. Surveying the Pilgrims in Relation to the Qualities of Urban Space in the Urban Street Space of Imam Reza (PBUH) Street**

| Criterion (Quality) | Variable (Sub-Criterion)   | Totally Inappropriate | Inappropriate | Average | Appropriate | Totally Appropriate | Medium (P 50) |
|---------------------|--|-----------------------|---------------|---------|-------------|---------------------|---------------|
| Proper Access       | 1. Ease of movement of the vehicle in the space (private and public) | 18%                   | 21%           | 9%      | 33%         | 20%                 | Appropriate   |

| Criterion (Quality)                   | Variable (Sub-Criterion)  | Totally Inappropriate | Inappropriate | Average | Appropriate | Totally Appropriate | Medium (P 50) |
|---------------------------------------|---|-----------------------|---------------|---------|-------------|---------------------|---------------|
| Proper Access                         | 2. Access to the public transportation (Bus, taxi, etc.)  | 6%                    | 20%           | 18%     | 33%         | 23%                 | Appropriate   |
|                                       | 3. Constructing proper walking paths for the disabled and elderly   | 19%                   | 30%           | 11%     | 20%         | 19%                 | Average       |
| Safety and Security                   | 4. Separating the routes of vehicle and pedestrian  | 30%                   | 37%           | 12%     | 16%         | 5%                  | Inappropriate |
|                                       | 5. Creating a safe environment (especially for women and children)  | 24%                   | 28%           | 10%     | 22%         | 17%                 | Inappropriate |
|                                       | 6. Sense of social security   | 17%                   | 45%           | 18%     | 13%         | 8%                  | Inappropriate |
| Vitality and Presence                 | 7. 24-hour activities in the space  | 10%                   | 30%           | 18%     | 26%         | 17%                 | Average       |
|                                       | 8. Duration of pause in a public space  | 13%                   | 34%           | 18%     | 19%         | 17%                 | Average       |
| Vitality and Presence                 | 9. Providing the conditions for more presence to attract audiences  | 16%                   | 36%           | 15%     | 33%         | 0                   | Inappropriate |
|                                       | 10. Providing the space for the presence of all gender and age groups   | 24%                   | 28%           | 10%     | 22%         | 17%                 | Inappropriate |
| Visual Beauty                         | 11. Unity and harmony in the elements and components of space   | 24%                   | 35%           | 18%     | 17%         | 7%                  | Inappropriate |
|                                       | 12. Paying attention to the visual factors (beauty, proportions in architecture, quality of buildings, and so on) | 26%                   | 37%           | 17%     | 14%         | 6%                  | Inappropriate |
|                                       | 13. Improving the sensory richness by increasing the visual permeability  | 32%                   | 30%           | 11%     | 16%         | 10%                 | Inappropriate |
| Environmental Comfort and Convenience | 14. Having a healthy environment away from the tension  | 23%                   | 30%           | 21%     | 16%         | 10%                 | Inappropriate |
|                                       | 15. Having an optimal density in terms of user  | 14%                   | 32%           | %       | 22%         | 14%                 | Average       |
|                                       | 16. Sense of environmental comfort (lack of noise and visual pollutions and so on)                                | 24%                   | 38%           | 16%     | 14%         | 7%                  | Inappropriate |
|                                       | 17. The comfort in the street in terms of physical elements in the space  | 10%                   | 21%           | 12%     | 36%         | 21%                 | Appropriator  |
| Warning and Religious Authentication  | 18. Using Islamic symbols and signs in the architecture of the buildings' facades                                 | 26%                   | 37%           | 17%     | 14%         | 6%                  | Inappropriate |
|                                       | 19. Lack of manifestation of the non-religious elements in the space  | 31%                   | 35%           | 22%     | 8%          | 4%                  | Inappropriate |
|                                       | 20. Providing the ground for the occurrence of the ritual and religious events in the space                       | 13%                   | 26%           | 13%     | 27%         | 21%                 | Average       |

Analysis of the inappropriate and risky behavioral patterns of pilgrims in the urban spaces shows that in the safety component of the street space, more than half of the pilgrims mentioned three risky behavior classes (commuting of the pilgrims with the bus only

lines, crossing from the dangerous intersections, use of the vehicle space of the street as the pedestrian space). Also, in the component of the environmental comfort and convenience in the street space, more than half of the respondents mentioned two inappropriate

behavioral patterns among the pilgrims (physical encounters due to the excessive density and fast and hasty crossing of the street). Furthermore, 63% of the pilgrims stated that they allocated most of their time to

purchasing and leisure than the pilgrimage. It indicates that the behavior of the pilgrims eventually tends to shop and tourism in the lack of spiritual identity and warning of the urban space<sup>2</sup> (Table 4).

**Table 4. Surveying of the Pilgrims in Relation to the Inappropriate and Risky Behavioral Patterns**

| Component (Criterion)                 | Inappropriate Behavioral Patterns of the Pilgrim in the Space                       | I had it | I did not have it |
|---------------------------------------|---|----------|-------------------|
| Safety and Security                   | Pilgrims pass through the bus only lines  | 51%      | 49%               |
|                                       | Crossing dangerous intersections  | 52%      | 48%               |
|                                       | Use of vehicle space as pedestrian space  | 63%      | 37%               |
| Safety and Security                   | Unusual car park  | 45%      | 55%               |
|                                       | Creating a role in traffic and street traffic jams                                  | 32%      | 68%               |
|                                       | Greetings to the Imam in the space between the two lines of movement of the vehicle | 26%      | 74%               |
| Environmental Comfort and Convenience | Creating physical collisions with each other due to excessive density               | 56%      | 44%               |
|                                       | Overcrowding next to certain land use at one point                                  | 30%      | 70%               |
|                                       | The fast and hasty crossing of the street   | 57%      | 43%               |
|                                       | Overcrowding in the BRT stations  | 48%      | 52%               |
|                                       | Creating a crowd and noise pollution  | 33%      | 67%               |
| Warning and Spiritual Authentication  | Spend more time for shopping and entertainment than the pilgrimage                  | 63%      | 37%               |

In the following, the relationship between the urban space qualities and inappropriate and risky behaviors of the pilgrims in the street space is investigated. In the current study, H0 hypothesis is defined as follows: there is not a significant and direct relationship between the low quality of the urban space and creating the inappropriate and risky behaviors of the pilgrims. In other words, two variables are independent of each other. Chi-square was used to investigate the correlation and relationship between urban space quality and the unusual behaviors of the pilgrims (considering the type of the variables). Accordingly, given the 5% error and the confidence level of 95%, sig. should be lower than 0.05 to establish a relationship between the variables, and H0 is rejected. The analysis shows that there is a significant relationship between the quality of construction of the proper sidewalks for the disabled and elderly, affecting the ease of access to the space and the inappropriate behavior of crossing the dangerous intersections. Also, there is a significant relationship between separating the vehicle and pedestrian spaces and risky behavior of the use of the

street space as the sidewalk. There is also a significant relationship between creating a safe environment for the children and the elder and inappropriate behavior of crossing between the bus only lines. In addition, there is a significant relationship between the variables related to the environmental comfort, i.e., the quality of a healthy environment away from the tension with the behavior of fast and hasty crossing of the street. There is also a significant relationship between the quality of the exploited population density and inappropriate behavior of creating physical collisions with others due to the excessive density. It indicates that the lack of attention to the quality of warning and spiritual authentication makes pilgrims spend most of their time shopping and leisure in the street and pay less attention to the pilgrimage. Therefore, the results indicate that there is a significant relationship between the low quality in the urban space and the unusual behaviors of the pilgrims. Thus, the H0 hypothesis is rejected, and the main research hypothesis is confirmed and proven (Table 5).

**Table 5. The Correlation and Relationship between the Urban Space Qualities and The Risky and Inappropriate behaviors of the Pilgrims**

| Urban Space Qualities   | Variable (Inappropriate and Risky Behaviors of Pilgrims) | Sig.  | DF. | Chi-Square | Cramer's V |
|---|--|-------|-----|------------|------------|
| Construction of sidewalks suitable for the disabled and the elderly | Crossing dangerous intersections                         | 0.029 | 4   | 10.824     | 0.17       |
| Creating a safe environment for children and the elderly            | Crossing between the bus only lines                      | 0.000 | 4   | 23.145     | 0.248      |
| Separation of pedestrian and vehicle routes                         | Use of vehicle space as pedestrian space                 | 0.000 | 3   | 23.011     | 0.24       |

| Urban Space Qualities                              | Variable (Inappropriate and Risky Behaviors of Pilgrims)      | Sig.  | DF. | Chi-Square | Cramer's V |
|--|---|-------|-----|------------|------------|
| Has an optimal density in terms of user population | Creating physical contact with others due to overcrowding     | 0.000 | 4   | 25.144     | 0.262      |
| A healthy environment away from stress             | Fast and hasty crossing of street                             | 0.003 | 4   | 16.347     | 0.209      |
| Warning and spiritual authentication               | Allocating more time for shopping and leisure than pilgrimage | 0.006 | 4   | 14.365     | 0.1999     |

In general, the findings of this research confirm the previous Persian studies in this subject such as (Bahreini & Khosravi, 2015; Sholeh et al., 2017) and the western studies (Gonzalez & Madina, 2003; Gehl, 2011) that emphasize having the environmental qualities in the urban spaces leading to the development and improvement of the activities and the behaviors of the space users. Also, another achievement of the research is to provide specific theoretical foundations in relation to the quality of urban spaces around holy places, and it proves this hypothesis that there is a significant relationship between the low quality of urban space and the inappropriate and dangerous behavioral patterns of pilgrims in urban spaces.

## 5. CONCLUSION

The current research analyzed the urban space in relation to the needs and behavioral patterns of the pilgrims in Mashhad city, as one of the most significant pilgrimage cities in the world and one the most important urban spaces, i.e., Imam Reza (PBUH) street. Relation to the question of the desired urban space around the holy places should have what environmental qualities to be adaptable to the needs and activities of pilgrims, the answer is in the conceptual model of the present study, which is based on the needs, activities, and culture and customs of pilgrimage. Accordingly, the qualities of ease of access, safety, and security of space vitality and presence, visual beauty, environmental comfort, and spiritual identification, and authentication" should be considered in space. In connection with the question of the degree of adaptation of Imam Reza (PBUH) Street near the holy shrine in relation to the needs and behavioral patterns of pilgrims, the results of pilgrims' opinions on Imam Reza (PBUH) Street showed more than half of the environmental qualities in Imam Reza (PBUH) Street was not shaped according to the needs of the pilgrims. In the future, space undesirable qualities should be improved in street development plans. Also, the occurrence of many undesirable and sometimes dangerous behavioral patterns among the pilgrims should be avoided. Analysis of pilgrims' behavioral patterns showed that there is a direct and significant relationship between the low level of quality of urban space and the existence of inappropriate and dangerous behaviors of pilgrims. According to the results, the following suggestions, recommendations, and requirements can be presented. To improve the quality of space safety, one of the most significant measures in this street is the development

and expansion of sidewalks in a part of the street, and the vicinity of the holy shrine, and a clear separation of vehicle and pedestrian space. Also, in designing the urban space of the street, the quality of visual beauty and the quality of the warning space and the spiritual induction should be emphasized. This issue is crucial in recent years, due to the implementation of the plan to improve and renovate the texture around the shrine of Imam Reza (PBUH) and the extensive construction of commercial and residential spaces around the holy shrine. The requirement of a proper view of the holy shrine from the street area is emphasized by limiting the height of the buildings around the shrine, the use of Iranian-Islamic architecture in the architecture of the facades of buildings, and creating unity and proper harmony of the facades of buildings on the street wall. Findings indicate that in planning and designing urban spaces around holy places as well as in urban regeneration in these spaces, such spaces should be considered as an urban joint, and certain environmental qualities should be observed in them. It is suggested to develop and expand pedestrian areas so that the urban space can provide both the safety of pilgrims and be accountable for the high density of pilgrims (especially on particular days) to ensure the safety and security of the presence of pilgrims. Also, to revitalize the space, the emphasis is on expanding lively and 24-hour activities to meet the needs of pilgrims. Also, it is recommended to consider the principle of unity and harmony in the elements and components of the wall facades, observing the continuity in the skyline and proportions in the facades of buildings to improve the quality of visual beauty. In improving the quality of environmental comfort, paying attention to factors such as the required area for the presence and movement of pilgrims, preventing noise pollution by moving motor vehicles at the border between urban space and holy place, and considering furniture and physical elements located in space (such as suitable urban furniture) is emphasized for the comfort of the pilgrims. Also, one of the most vital qualities in such spaces is the quality of the warning. Lack of such quality causes the urban space not to have a spiritual identity, to have a negative effect on the mental satisfaction of pilgrims. Also, it causes the behavior of pilgrims to gradually tend to the category of shopping and tourism and pay less for pilgrimage. The following measures are emphasized to improve the space quality: the use of Islamic symbols and signs in the facade of buildings, physical dominance of the holy place and creating a sense of humility by

limiting the height of buildings around the sacred place, lack of non-religious elements, use of Iranian-Islamic architecture, the quantitative dominance of purely for the profit land uses (such as commercial spaces), and

the development of levels of cultural land uses and the importance of developing spaces for holding religious-cultural meetings, ceremonies and rituals in the urban space.

#### END NOTE

1. In these studies, the effects of religious tourism and pilgrimage on the creation of new spaces, the dynamics of the city economy, the quantitative expansion of pilgrimage spaces have been focused and the qualities of urban space in relation to the needs and activities of pilgrims have been less addressed. See for more: (Ascoura, 2013; Gonzalez & Medina, 2003).
2. Purchasing gifts and souvenirs are recommended and are one of the traveling customs. However, the commercial spaces should not dominate the pilgrimage space.

## REFERENCES

- Altman, I. (1975). *The Environment and Social Behavior, Privacy, Personal Space, Territory, Michigan, Crowding*, Brooks / Cole Pub.
- Aminzadeh, B. (2014). Strategies for Cultural Management with Looking to Pilgrimage Category in City Of Mashhad. *Mashhad Pazhoohi*, 8, 61-78. [www.rcmc.mashhad.ir](http://www.rcmc.mashhad.ir)
- Ascoura, I.E. (2013). Impact of Pilgrimage (Hajj) on the Urban Growth of the Mecca. *Journal of Educational and Social Research*, 3(2), 255-263. DOI: 10.5901/jesr.2013.v3n2p255
- Azimi Hashemi, M.S., Shariati, F., & Kari, A. (2012). Social-Cultural Elements in Sustainable Pilgrimage City, Case Study: Mashhad. *Social Study of Iran*, 6(4), 131-156. <https://jss-isa.ir>
- Bahreini, SH. (2005). *Urban Spaces Analysis*, Tehran, University of Tehran.
- Bahreini, SH., & Khosravi, H. (2015). Comparative Study of the Impact of Micro-Climate Features on Urban Behaviour Patterns, the Case of Urban Spaces of Yazd (Warm and Dry Climate) and Fuman (Moderate and Humid Climate). *Mohit Shenasi*, 41(2), 465-482. <https://jes.ut.ac.ir>
- Barker, R. (1968). *Ecological Psychology: Concept and Method for Studying the Environment of Human Behavior*, Standford, Standford University Prss.
- Bentley, I. (1995). Ecological Urban Design. *Architects Journal*, 192(24), 69-71. <https://www.architectsjournal.co.uk/>
- Bently, I., Mcglyn, S., Smith, G., & Alcock, A. (1985). *Responsive environments, Amanual for designers*, Oxford, Taylor & Francis.
- Bromand, M., Togyani, S., & Saberi, H. (2017). Evaluation the Impacts of Urban Elements on Formation of Behavioral Patterns by Emphasizing on Gendered Urban Spaces (Case Study: 2 Th Region of Tehran ‘S Municipality). *Urban and Rural Management*, 46, 241-260. <https://ijurm.imo.org.ir>
- Carmona, M., & Tiesdell, S. (2006). *The Urban Design Reader, USA*, Routledge.
- Carmona, M., Heath, T., & Tiesdell, S. (2003). *Public places, urban spaces, Dimensions of urban design*, Architectural Press.
- Daniali, M. (1996). *What is Pilgrimage? Who is Pilgrim? Mashhad*, Ferdooosi University of Mashhad.
- Farnahad Urban Consulting Engineers. (2010). *Summary Report of Mashhad’s Development and Civil Plan*, Mashhad.
- Gehl, J. (2011). *Life between Buildings: Using Public Space*, (J.Koch,Trans.). London, Island Press.
- Gehl, J. (1980). The Residential Street Environment. *Built Environment*, 6(1), 51-61. <https://www.jstor.org/stable/i23286078>
- Golienik Marusic, B. (2011). “Analysis of Patterns of Spatial Occupancy in Urban Open Spaces Using Behavior Maps and GIS”, *Journam of Urban Design International*, 16(1), 36-50. DOI: 10.1057/udi.2010.20
- Golkar, K. (2014). *Creating sustainable place*, Tehran, Shahid Beheshti Publications.
- Gonzalez, R., & Medina, J. (2003). Cultural Tourism and Urban Management in Northwestern Spain: The Pilgrimage to Santiago de Compostela. *Tourism Geographies*, 5(4), 446-460. <https://doi.org/10.1080/1461668032000129164>
- Hafez Nia, M. (2008). *Intoduction on Research Methodology in Human Science Tehran, Organization of Study and Codification Books in Human Science*.
- Khorasan Razavi’s Park of Science and Technology. (2015). *Summery Report of Study Project of Qualitive and Quantitive Development of Emam Reza Pilgrimage, Mashhad*.
- Khorasan Razavi’s Governor. (2015). *Summery Report of “Study Project of 5 Years Strategical Plan in Pilgrimage Economic Arena and Emam Reza Pilgrimage”, Mashhad*.
- Lang, J. (1987). *Creating Architectural Theory: The Role of Behavioral Sciences in Environmental Design*, Van Nostrand Reinhold Company.
- Leary, M.R. (2014). *Introduction to Behavioural Research Methods*, USA, Pearson Education Limited.
- Lynch, K. (1972). *What Time is This Place?* MIT Press.
- Mohadesi, J. (2007). Ceremonial of Pilgrimage. *Farhang Kosar*, 71, 72-86. [www.parsiblog.Farhang Kosar.com](http://www.parsiblog.Farhang Kosar.com)
- Mousavi, M. (2015). Looking to Pilgrimage City in Islamic Texts, Retrived 4/6/2015 from: <https://farhangi.aqr.ir/portal>
- Naghizadeh, M. (2016A). *Design Principles for Iranian Cities and urban Spaces*, Tehran, Khorshid Baran Publications.
- Naghizadeh, M. (2016B). *Theory of the Life of Taybee or the Ideal City of Islam*, Tehran, Olum Tahghight Publications, Tehran.

- Nasar, J.L., & Yurdkul, A.R. (1990). Patterns of Behavior in Urban Public Spaces. *Journal of Architectural and Planning Research*, 7(1), 71-85. <https://www.jst.or.org/stable/43028946>
- Pakzad, J. (2005). Design Guide for Urban Spaces in Iran. Payam sima Publications, Tehran.
- Pakzad, J. (2006). Thoritical Base and Urban Design Process, Shahidi Publications, Tehran.
- Rahimi, H., & Khalili, G. (2014). Study on Amount of Satisfaction on Pilgrimage and Travelers in Urban Scape, Procceding of Sixth Conference on Urban Planning, Ferdooosi University of Mashhad, Mashhad. <https://upmc6.um.ac.ir>
- Rapoport, A. (1990). History and Precedent in Environmental Design, Cambridge: MIT Press.
- Reeve, J.M. (2005). Understanding Motivation and Emotion, Hoboken, John Wiley & Sons.
- Rostamzadeh, Y., Rang azmaye Azari, M., Naderi, S., & Yeganeh, M. (2010). Methods of Evaluating Citizen's Behavioural in Urban Spaces in Ultra Analysis Approach. *Science and Technology of Environment*, 12(3), 175-190. <http://jest.srbiau.ac.ir>
- Shinde, K. (2007). Pilgrimage and the Environment: Challenges in a Pilgrimage Centre. *Current issues in tourism*, 10(4), 343-365. <https://doi.org/10.2167/cit259.0>
- Sholeh, M., Sadegi, A., Najafi, P., & Khaksar, Z. (2017). Evaluating Urban Public Realms Based on the Observation and Analysis of Behavioural and Activity Patterns. Case Study: Ahmadi Pedestrian in Shiraz. *Urban Studies*, 25, 45-62. <http://urbstudies.uok.ac.ir>
- Whyte, W. (1985). The Social Life of Small Urban Spaces, Washington D.C, The Conservation Foundation.
- [www.googleearth.com](http://www.googleearth.com) Retrived: 10/7/2018

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