# Ranking of Mashhad Urban Areas Quality Based on Area Separation

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**Abstract:** In the world today, one of the management indices, including urban management, is the stakeholders' levels of satisfaction from the received services. Therefore, citizens' opinion about these services is an important issue. In this article, it is trying to rank Mashhad urban areas based on factors such as cultural and securityindices, citizens' access to daily services andpedestrian movements. Research method is quantitative and results are presented in the form of an arena plan on quality of urban services. Results indicate that areas of 11, 5, 9, and 12, have the highest-rankings, areas of 4, 8, 6, 10, and 7 have the average-rankings and finally areas of 1, 2, 3, and Samen region have the lowest-rankings of Mashhad urban quality and are considered as improper areas for citizens' use.

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**Key words:** Quality, Urban, Ranking, Mashhad

## 1.1. Introduction

No structure or space can fully satisfy all individuals' needs (Chapman, 19996). In order to satisfy these needs, human beings always try to make changes in their environments; however, these changes are not always suitable and in some cases, they are even damaging to the environment. Accordingly, during the history, urban areas and settlement boundaries decreased considerably and made many previous urban areas as unlivable regions for their present and future inhabitants (Fakhruddin, 1991). The importance of this becomes more obvious when we know that more than half of the world population live in urban areas and by the year 2020, this will even reach to 60 % of the world population (UNPE, 2007).

## 1.2. Significance of the study

As it is indicated in the literature, many scholars and planners believed that further investigation of the quality of life in urban areas is a need. These studies are mostly concerned with issues such as citizens, social groups, and policy makers' awareness of life quality procedures. The results coming from studies about life quality can be operational in evaluation of policies, ranking of areas, construction of management strategies and, urban planning. They can facilitate the processes of understanding and prioritizing social issues for planners and urban managers to promote life quality of the inhabitants. They can also be helpful in identification of previous political strategies and designing future planning policies (Lee, 2008).Moreover, life quality studies can be supportive in describing problematic areas, causes of people's dissatisfaction, citizens' priorities in life and, social factors influences on life quality and, in evaluating the effectiveness of planned policies and designed strategies in promoting inhabitants' life quality. In this regard, Santos and Martinez (2007) believe that the cooperation of the local society can play a supportive role in forming long-term policies and objectives. While in about a century ago, only 10 percent of Iran population lived in cities, now urbanizationis growing rapidly. However, essential opportunities, resources, and facilities needed for development and provision of human needs are not properly established. In addition, very few studies are conducted about the quality of urban life in Iran that is one of the motives of the current investigation.Therefore, results of this study can be instructive in improving the methodology of urban life quality research in Iran, in order to promote Iranian urban society's life quality.

## 1.3. Principals of the theory

Literature shows that the concept of life quality focuses on two main issues: personal welfare and quality of urban life. While personal welfare relates to a person, quality of life is related to the environment (Levent & Nijcamp, 2006). Environmental quality is this article's key word but perhaps because of its developing nature, there is no general definition for that. However, its general characteristics are as follows:

a) It comes from people's perception (it is a personal feeling)
b) It is dependent on variables such as social or economic status, gender, age, etc.
c) It is multi-dimensional
d) Each of environmental dimensions has its own quality and characteristics.
e) The effectiveness of each qualities and characteristics in general perception of environmental quality is different.
f) Each of these environmental dimensions and characteristics must be viewed as a general

idea to recognize the concept of the environment as a perceived whole.

g) It can be evaluated through individuals' satisfaction levels.
h) Indices are used for its evaluation.
i) It is one of the most important factors of life quality.
j) Other than being influential in people's lives, it influences city's economy and social environments (Van Kamp et al., 2003, Kaili, 2003).

Despite all efforts that have been done in line with the quality of life, no measure has been presented which can cover all its dimensions. As many researchers believe that, none of these investigations has measured the dimension of environmental quality and many of factor selections and variable weightings are optional (Rahman et al., 2003).

In fact, the concept of life quality is multifactorial that takes effect from many mechanisms such as, people's levels of income, life conditions, health, environment, spiritual or psychological pressure, leisure time, family joy, social relations, etc. which describe the notion of life quality and its changes (Rahman et al.,2003). Considering different effective factors in life quality, each study can examine part of these factors and their totality specifies environmental quality profile of the area under investigation. This profile constitutes a quick and easy outlook of environmental condition (Van poll, 1977) that prepares the context for planning and programming study-associated strategies for development.

Based on what is mentioned about constituents of environmental quality, it is concluded that its debate is multi-dimensional as well as hierarchical. There are two identifiable indices for evaluation of environmental quality: Master Indices and Axles Indices. Master indices are based on actual characteristics of the environment that can be measured through physical procedures, while Axles indices are cognitive and emotional reactions stimulated by current environmental conditions and are measurable through evaluation of individual's satisfaction or resentment level with his/her existing life condition (Van poll, 1977).

### 1.4. Objectives of the study

The following hypotheses are made:

1) Citizens' satisfaction levels with their environmental quality are different in different areas of the city.
2) This satisfaction is gradable.

With regard to these assumptions, other objectives of the present investigation are evaluating citizens' satisfaction levels with their life condition, evaluating and rating effective factors on their satisfaction levels, attracting the attention of planners , decision-makers, executives and even consumers (citizens) to the important issue of environmental quality and finally, sounding alarm for quality crisis in urban areas.

### 1.5. Methodology

Objectives of the current study are both applied and developmental; its methodology is descriptive-analytic, and, analysis of the results is quantitative (as the nature of this research indicates). The theoretical framework is tested through library investigation and the hypotheses testing procedure was conducted by using questionnaire and survey analysis. Finally, to analyze the data, normalizing process was applied.

### 1.6. Literature review

Life quality approach roots in the United States social movements of 1960s. At the beginning and mid-1970s, the significance of social indices increased. Following a series of social demands Identity Movement, occurred in Great Britain in 1970s. Different elements of life quality such as housing, environment, and public security were inserted in United States and Britain indices reports. During this period, many researchers put objective indices, coming from governmental (state) records, under question because they believed that those figures are not the only existing social indices. Consequently, they proposed mental indices, which reflect life quality or individual psychological well-being. In previous decades, issue of satisfaction was considered as an influential element in studies of environmental quality in urban areas. In a study conducted by Lansing and Marans (1996), satisfaction was presented as one of the key factorsin evaluation of environmentalquality; they defined environmental quality as follows:

"A high-quality environment, transfers feelings of satisfaction and welfare to its population through characteristics which may be physical, social or even symbolic (Lansing & Marans, 1996)."

In the first United Nation Habitat Conference in 1976, concept of quality of urban environment proposed for the first time in an international official meeting (Marans, 2003).At this conference, quality of environment was considered as equivalent to satisfying human basic needs and social justice. These basic needs are food, housing, jobs, freedom, honor, health and, the possibility of a fair distribution of income (Bahraini, 1377).

After that using indices as a means for comparing urban spaces and publicizing the outcomes, become more popular and life quality indices sparked a vast interest among scientists and governments.

In 1990s, attention to urban environment spread surprisingly. Parallel with new waves of sustainable

development, many of international, national, regional or local institutions arranged programs about quality of life in the cities.Many international institutions like OECD and UN have accepted improvements of environmental quality indices of stable city as a prerequisite to plan for operative environmental management (Baycan Levent, 2006). In Table.1, a number of studies carried out in this field - in 1980s-are summarized.

Table.1. Urban quality factors based on urban researchers (edited by the writer)

| | |
|---|---|
| Kevin Lynch (1981) | vitality, meaning (feeling), access, control and surveillance, and two ultra criteria: applicability ultra criterion and justice ultra criterion |
| Professor Duhel (1984) | existence of high level of health based on accepted health indices, appropriate health services and their accessibility for every citizens, high quality of physical environment, housing, healthy environments, meaningful and active localities, meeting every citizens' basic needs, suitable social relationships, self-efficient and varied economy, miscellaneous cultural activities and, appropriate urban modeling based on the above-mentioned nine factors |
| Bently (1985) | permeability, variety, readability, flexibility, visual compatibility, richness, individualization, and three more applicability criteria which were added in 1990 to compensate for previous deficiency which are: energy consumption, cleanliness, and supporting wildlife |
| Alan Jacobs & Donald Appleyard (1987) | liveliness, control and identity, access to opportunities, fantasy and happiness, meaning and originality, social life, self-reliance and a public environment |
| Michael Southwest (1989) | structure, readability, form, sense of place, identity, points of view, human or pedestrian indices |
| Romana Siddiqui(2003) | water pollution, air pollution, noise, waste, traffic and crowd |

### 1.7. The study limits

Mashhad city is located in northeastern Iran, and is the center of Khorasan Razavi province. The total population of Mashhad in the year 1996 was 1,866,300 and in the year 2006, was 2,542,837. The cosmopolitan of Mashhad has historical, political, economic, cultural, and intellectual centrality; in addition, it has border and transnational significance. Almost 15 million tourists visit Mashhad annuallyand this makes this city the second populous city of Iran as well as the second religious city of the Islamic world.This cosmopolitan city has 13 urban areas that arecovering about 29000 hectares (Quoting from Mohammadi et al., 2010).

### 1.8. Studied indices

In order to evaluate Mashhad urban quality better, numerous indices are selected that through their normalization and accumulation of their scores, it becomes possible to rate different urban areas. The total number of these indices is 19, which can be examined in 4 groups:

1. Status indicator of sidewalks and streets including indices ofnarrow sidewalks, rugged sidewalks, streets improper form, and dirty streets
2. Index of access to the public necessities including indices of access to the bakery, food and fruit markets
3. Index of access to the cultural facilities including indices of access to the playgrounds and sport fields, cultural and recreational centers, libraries, local cultural house, newsstands, …
4. Index of citizens' security including indices of access to treatment centers, and fire and police stations.

### 1.9. Results and Discussion

In Table.2, status of 13 urban areas of Mashhad is presented.

Table. 2. Measures of quality in Mashhad city areas (designed by the writer)

| Areas | Citizen Security | | | Sidewalks and Passages | | | | Cultural Necessities | | | | | Access to Public Needs | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Medical Centers | Fire Station | Police Station | Narrow Sidewalk | Uneven Sidewalk | Inappropriate Passages | Dirty Lanes and Streets | Play Grounds | Cultural - Recreational Center | Library | Local Culture Community | Newsstand | Bakery | Food Market | Fruit Market |
| 1 | 13.20 | 2.18 | 16.10 | 22 | 61.50 | 56.60 | 7.60 | 70.80 | 69.4 | 58 | 51.9 | 21.4 | 23.90 | 14.30 | 25.50 |
| 2 | 18.60 | 17.50 | 27.00 | 29.40 | 55.80 | 44.50 | 31.20 | 46.9 | 49.6 | 51.8 | 53.6 | 39 | 22.50 | 17.20 | 23.40 |
| 3 | 28.50 | 44.40 | 36.10 | 26.00 | 50.00 | 41.90 | 22.30 | 73.30 | 71.3 | 53.8 | 66.2 | 38.6 | 23.7 | 29.7 | 37.6 |
| 4 | 23.00 | 44.80 | 52.10 | 35.30 | 71.4 | 59.9 | 18.3 | 82.8 | 86.7 | 68.9 | 93 | 61.6 | 22.7 | 29.8 | 45.7 |
| 5 | 43.5 | 61.6 | 55.7 | 47.2 | 67.2 | 56.2 | 26.00 | 80.4 | 88.6 | 83.6 | 83.2 | 83 | 17.6 | 50.30 | 57.40 |
| 6 | 37.60 | 64.00 | 54.8 | 40.00 | 66.00 | 63.8 | 21.4 | 81.8 | 75 | 62.2 | 79.6 | 70.1 | 8.70 | 38.00 | 57.10 |
| 7 | 37.30 | 52.7 | 51.2 | 32.0 | 61.3 | 47.6 | 38.3 | 73.1 | 75.6 | 59 | 69.2 | 67 | 42.1 | 34.6 | 39.2 |
| 8 | 20.4 | 46.5 | 29.8 | 28.8 | 64.1 | 41.5 | 7.5 | 79.4 | 77.6 | 70.7 | 73 | 29.1 | 30.5 | 38.9 | 54.2 |
| 9 | 50.3 | 76.4 | 69.1 | 32.3 | 65.9 | 43.4 | 50.1 | 89.2 | 90.4 | 78.6 | 86.0 | 64.4 | 37.3 | 58.9 | 63.9 |
| 10 | 36.0 | 40.8 | 45.8 | 32.8 | 46.3 | 34.5 | 33.2 | 59.3 | 64.1 | 64.8 | 68.2 | 59.5 | 31.5 | 42.5 | 48.4 |
| 11 | 50.5 | 43 | 53.4 | 15.7 | 52.4 | 26.2 | 21.3 | 67.6 | 68 | 69.6 | 69.5 | 47.9 | 37.7 | 41.6 | 45.9 |
| 12 | 73.3 | 93.0 | 73.3 | 3.0 | 12.7 | 8.3 | 12.2 | 71.7 | 61.3 | 41.7 | 23 | 5.3 | 50.7 | 64.0 | 61.7 |
| Samen | 17.0 | 43.3 | 17.5 | 60.10 | 76.20 | 69.3 | 33.2 | 82.6 | 81 | 60.7 | 84.2 | 38.1 | 31.5 | 43.8 | 46.5 |

Table. 3, shows downward ranking results of Mashhad areas.

As it is obvious, the highest score belongs to area number 9 and the lowest score belongs to area number 2. If chart of these scores is being delineated -like Nomogram.1-it will become possible to divide these areas in 3 groups.

Nomogram.1. Classification of Mashhad areas based on environmental quality (by the writer)

Table. 3. Quality rating of Mashhad areas (by the writer)

| Areas | scores |
|---|---|
| 9 | 10.087 |
| 12 | 9.525 |
| 5 | 5.595 |
| 11 | 4.049 |
| 4 | 1.199 |
| 8 | 0.843 |
| 6 | 0.413 |
| 10 | -0.317 |
| 7 | -0.395 |
| 3 | -3.751 |
| Samen | -6.076 |
| 1 | -11.572 |
| 2 | -14.824 |

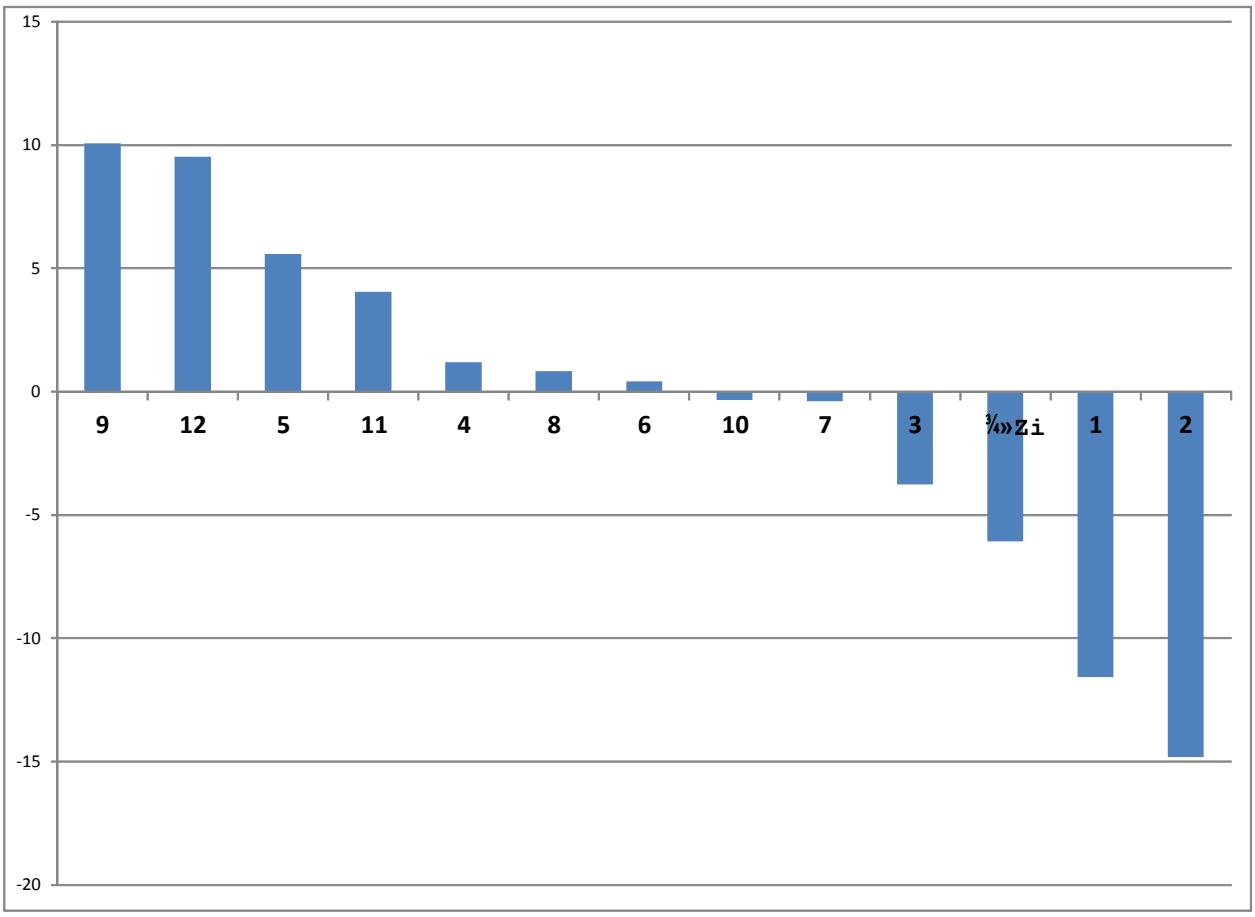


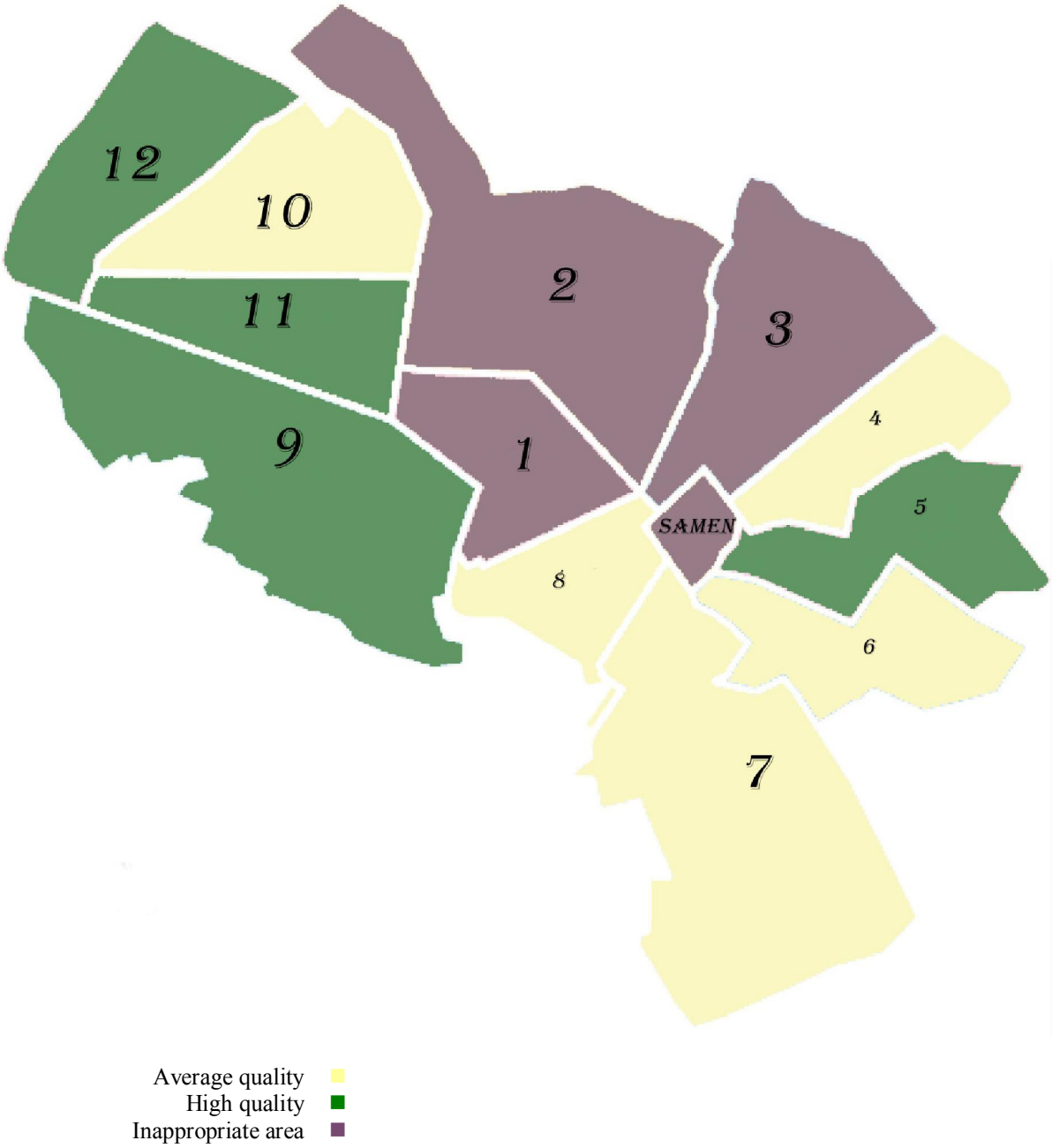

Table. 4. Classification of Mashhad area based on environmental quality (by the writer)

| Status of Urban Quality | Areas |
|---|---|
| High Quality | 5-11-12-9 |
| Average Quality | 4-6-7-8-10 |
| Low Quality | 1-2-3-Samen |

**1.10. Conclusion**

As it is clear, areas of 11, 5, 9, and 12, have the highest rates of urban quality in Mashhad city. Areas number 4, 8, 6, 10, and 7 have average urban quality while areas of 1, 2, 3, and Samen are assessed as unsuitable urban areas. These classifications are summarized in Table. 4.

Comparing these results with Mashhad city map, it comes to be apparent that low quality is associated with central parts of the city. Below is the geographical plan of quality distribution.

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