Appropriating the urban space for people with physical-motor disabilities
(Case study: Tabriz, Iran)

Negar Sahabi
Department of Urban Planning, Tabriz Branch, Islamic Azad University, Tabriz, Iran

Rasoul Darshkhan*
Department of Urban Planning, Tabriz Branch, Islamic Azad University, Tabriz, Iran
*Corresponding Author: darskhan.s@gmail.com

Abstract

A good city is not a big city. A good city is a city that everyone will remember and it has a place for everyone both healthy and disabled ones. An urban environment should have the ability to accept people and provide welfare services to all strata of society, otherwise it can be said that the environment has been inappropriate. Sometimes one step, a narrow passage or an earthen floor are among the factors hindering the communication of the disabled ones with the society and this problem is the most common cause of the isolation of the disabled. Unfortunately, especially Tabriz, East Azerbaijan province, according to the 2011 census, with 1.495 million people lacks appropriate standards for the ones with disabilities and veterans. The present study is descriptive and analytical and data have been collected from library resources. The present study is applied in terms of purpose and the results of the study can be used in Tabriz municipality, Social Welfare organization, and Department of Urban Roads for road improvements for the disabled and physically handicapped population.

Keywords: disabled, suitable for urban spaces, Tabriz.

http://www.ijhcs.com/index.php/ijhcs/index
Introduction

Because of that We ordained for the Children of Israel that if anyone killed a person not in retaliation of murder, or (and) to spread mischief in the land - it would be as if he killed all mankind, and if anyone saved a life, it would be as if he saved the life of all mankind. And indeed, there came to them Our Messengers with clear proofs, evidences, and signs, even then after that many of them continued to exceed the limits (e.g. by doing oppression unjustly and exceeding beyond the limits set by Allah by committing the major sins) in the land!. (Al-Ma’idah, verse 32).

Nobody is complete in nature which is not in harmony with life and when the life is in trouble, the object is disabled. When the body is incomplete, if no attempt is done to fix flaws, the life is over. If we accept that the city is a manifestation of the physical body where it lives, the city is the object and the society is the life of it. This is obvious that when the body of city is disabled, the life is caught in the confusion and chaos. Our present cities have some disabilities and therefore cannot meet the demands of the spirit in them which is the community. There are many physical defects present in the city which not only minimized the virtual the beneficial use of urban space which is impossible in many cases. The critical issue is that the segment of society with a physical motor disability has been virtually deprived from using urban areas and the cause is not in the disability of the urban area but the disability of the city and thus it prevents itself from approaching to the case.

One of the basic measures to help handicapped people with physical and motor disabilities is raising the urban environment. Out of this the appropriating the Urban services and facilities is done in order to make better use of them by an important segment of society (Etemad, 2011 ). While the veterans and the handicapped with physical and motor disabilities due to their shortcomings are experiencing these problems and suffer from poor design tracks more than other citizens (Alsadat Majidi and Timurid, 2011). Now the question is asked what the most important risk factors are for organization.

Research Objectives

Identifying those with physical and motor disabilities in the related place and improving the quality of urban environment and solving the problems as well as efforts to achieve the main slogan of the International Year of Disabled Persons in 1981: understand each other, live together, considering the human condition is one of the most important factors of absorption of disabled people in the society and makes it possible to have solidarity and support with disable people.
Methodology

The related data were collected using bibliographical and field studies.

Research Hypothesis

It seems that regulating the fixed and mobile elements of the urban environment in the metropolitan city of Tabriz is essential for its organization.

Research Background

Considering the topics discussed in the following articles and other references, the results showed that it is possible to make the proper condition from various perspectives for the physical-motor disabled people.

Table 1: Research background.

<table>
<thead>
<tr>
<th>Year</th>
<th>Author(s)</th>
<th>Title</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Etemad, Fatima</td>
<td>Design for the disabled</td>
<td>Urban equipment that must be inclusive and available for the disabled and veterans. The major issues of the use of urban furniture, urban furniture location and inaccessibility for disabled person, the size and quality of furniture and urban infrastructure, urban furniture on the sidewalk or street eaves height of urban poor equipment, lack of stability are reviewed and after examining the furniture's size and position.</td>
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<tr>
<td>2011</td>
<td>Bayad Sarmadi, Fatima</td>
<td>Disability; specific design or functional design</td>
<td>In other words it deals with city, only the place and space, and not only considers the development of proper space for disabled but the favorable conditions for disabled people and other pedestrians from traffic and arrive their destination will be benefited.</td>
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<tr>
<td>Year</td>
<td>Author(s)</td>
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<td>2014</td>
<td>Sarvar, R., et al</td>
<td>Analyzing urban public spaces for people with disabilities and low mobility</td>
<td>Authors after reviewing the limited space of Tehran makes the conclusion that appropriating the space for the disabled people and citizens are essential in urban environment, people with disabilities as an important segment of society must be considered in urban planning. And to provide solutions and suggestions for the road network, network solutions and proposals for mounted and dismounted, work and proposals for urban furniture, works and suggestions for key entrance has a ramp.</td>
</tr>
<tr>
<td>2012</td>
<td>Safdarzadeh, Zakia</td>
<td>The urban streets adapt to the needs of the disabled and veterans</td>
<td>The author after reviewing the city and the number of persons with disabilities, recommends some appropriate proposals for a network of pedestrian walkways, sidewalks and roadway rehabilitation of bridges and walls and street furniture.</td>
</tr>
<tr>
<td>2006</td>
<td>Sharifian Sani, Maryam</td>
<td>Girls and women with movement disabilities</td>
<td>It describes a variety of problems and needs of girls and women with movement disabilities is examined. Programs to provide services to people with disabilities with more detailed more affordable and more effective studies.</td>
</tr>
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</table>

**Theoretical Foundations of Research**

City in the official definition provided by the territorial divisions act of Iran that have been passed in July (1983) is defined as a place which is located with regulatory limits in a certain geographical area and has self-sufficiency and diversity in terms of special texture and in the field of municipal services and is the center of economic, political and cultural exchange and has more than 10,000 inhabitants (Beigi, 2009).
Public space is a combination of activities and buildings with different uses which must be able to embrace all the segments and groups of any age, physical characteristics and sexual abuse at any time. When a space for any reason is unable to fit the status quo of this role, it is necessary to do appropriateness (Rafi Zadeh, 1996). So urban spaces and public buildings, including schools, cultural, administrative, and commercial centers, that are used by the public should be appropriate for people with disabilities (Azan et al, 2012).

Appropriating means to provide the condition for the entire individual with all physical and psychological conditions in society to use the existing facilities in accordance with each individual’s needs such as welfare, social, economic, cultural and natural resources (Badla, 2004). Appropriating included the use of urban spaces, such as: Governmental and non-governmental organizations, parks, restaurants, banks, cinemas, clubs, sports and recreation, streets, sidewalks, buses, subways, hospitals, and even toilets (Beigi, 2009).

Disability is defined as any type of deficiency or lack of ability to perform an activity in a way it restrict what ordinary people can do or distort the scope of the activities (Hojati, 2007).

Disability can be divided into two components:
1. physical
   - Senses
   - Motor
   - internal members
2. Mental disabilities
   - Mental retardation
   - Mental illness (Zareie, 2009).

A person with disability is someone who is disabled due to physical problems (physical, motor, sensory), mental or psychological suffering or social restrictions on individual performance (Welfare Statistical Yearbook, 2011). The person with mobility impairment due to the absence of defects or deformation effect in muscle - skeletal building is limited in personal and social obligations (ibid.)
The causes of disability can be divided into two components:
- Acquired disabilities
- Congenital disabilities (Zareie, 2009)

There are elements that have somehow occupied the space and affect the behavior of the space users. There are two categories of elements

Fixed elements: the elements and components in this space have high variation.
Animated elements: the elements that have the properties of a barrier and prevent the correct and complete the actions around such as pedestrian fence front lines, a car that is parked on the sidewalk, vendor stalls and ... (Bahraini, 2012).

The statistics of the people with disabilities
Studies show that 75% of disabled people live in developing countries. Since our country is among such countries, we should pay more attention to issue (Panahi, 2007). However, according to the latest statistics provided by the world Health Organization and the Secretary of the United Nations, His Excellency Mr. Ban Ki-moon, now a billion of the world's population includes people with disabilities where 80% of the people with disabilities are living in the developing countries. Considering the fact that the population of Iran is over 75 million people, in fact more than 11 million people are suffering from a type of physical-motor disabilities (39%), mental disability (20%), hearing (16%), multi-disabilities (12%), eyesight (8%), and acute mental disorder (5%) (Akbarzade, 2014).

Urban design standards for veterans and the disabled:
Sidewalks:
1) At least 125 cm Width for sidewalks
2) Installation of vending highlighted mosaic in sidewalks to allow the blind with a minimum width of 80 cm
3) No difference in level between the pedestrian bridge and Main Street
4) Absence of obstacles on sidewalks
5) Parking for people with disability very 500 m along in the main street with installed mark
6) Minimum height of 210 cm for the obstacles like (boards - signs, etc.)
7) Lack of Pedestrian Island in the middle of the street in crosswalks
1) Lack of an appropriate barrier coating for sidewalks using non-slip floors and hard materials
2) Predicting a bridge between the sidewalk and the roadway at least every 50 m.
3) Distinct lines of traffic for the disabled and veterans especially the blind on pedestrian crossing

**Ramp**
1) The maximum slope of 8% for the ramps with a width of 120 cm
2) Predicting the landing ramp of 10 meters
3) A minimum width of 150 cm on the ramp with a screw
4) Installing the bars on either side of the ramp with a height of 80 cm and a diameter of 3.5 cm and 4 cm minimum distance to the wall bar
5) Covered and slippery ramp

**Public buildings**
1) A minimum width of 160 cm for door entry
2) The maximum threshold of the door as 2 cm
3) The minimum width of aisles as 120 cm
4) Non-slippery floor and corridors and halls
5) The doors of toilets opening out
6) The floor and the entrance should be at the same level
7) Predicting a maximum height of 105 cm at the counter of the bank, post office, shops and bribes ticket sales

**The study area**

Tabriz is located on the East of Azerbaijan province, at 46 degrees 25 minutes east longitude and 38 degrees north latitude and two minutes from the Greenwich meridian, its height is 1340 meters above sea level. With an area of approximately 11,800 km in the territory of Azerbaijan and in the eastern central region north of the Lake and 619 kilometers West of Tehran and 150 kilometers south of Jolfa, the Republic of Azerbaijan's border with Iran (http://m8.tabriz.ir).
According to the 2011 census, the metropolitan city of Tabriz has 1,495,000 people and 24,453 hectares, the ten districts, each about a certain area (Sahabi, 2015)

Figure 2. Classification of the 10 districts of Tabriz (http://www.google.com)

At the beginning of the study the goal was that the selected locations have necessary size, performance, diversity, distribution, etc. to constitute a comprehensive set of samples and it was possible to generate the results to the whole city.

In this way from the limited area of Tabriz "8" was selected for the study. The main area is one of the crowded regions of the city.

The study area was from north of Farabi Street, from the south to the streets of Imam Khomeini and Martyr Yaghchian and Martyr Ghazi, from East to Martyr Gholami Street and from West to Imam Khomeini Avenue, Palestine and South Shariati.

There are a range of applications in this site. These regional activities are in the fields of office work, business, service, insurance, traffic, and political-security and other areas connected somehow with other activities.

Site Analysis

There are obstacles in the space which are not appropriate in terms of design (dimensions, etc.) or are not in their place so they require the attention of authorities. Some examples of these barriers include:

1. No bridge or bridges inappropriate
2. Ditch, channel, etc.
3. The remaining straps and pipes in the ground
4. Bumps and dips of underground facilities
5. Floors inappropriate
6. Gap unbalanced
7. Service kiosks
8. Bus
9. Box utilities and public services
10. Lampposts
11. Boards pointers
12. overpasses base
13. Disproportionate Garden and tree

In addition to the obstacles listed on fixed obstacles, there are obstacles that emerged as a result of the behavior of users of the space and will impair the communication. The examples of such barriers are:
1. Vehicles and other vehicles parked in sidewalks
2. Occupation of the sidewalk space by shops and stores
3. Vehicles and other vehicles parked in the area of pedestrian crosswalks
4. There are jobs such as street vendors, beggars and...
5. The population density in one spot for any reason

In this section, we discuss some examples of fixed and moving obstacles:

Figure 3. inappropriate entrance of the public places
Figure 4. inappropriate urban furniture
Figure 5. The presence of vendors

Figure 6 – occupation of the sidewalk space by shopkeepers

Figure 7. Inappropriate bridge for pedestrian and vehicles ramp

Figure 8. Non-ramp
The survey area was 8 major issues are as follows:
1. Unauthorized use of public spaces by commercial centers and services
2. Unauthorized use of space by the vehicle
3. There are various obstacles on pedestrian spaces by urban furniture
4. Stop of the vehicle out of the parking lot
5. The overpass unusable for people with disabilities
6. Lack of appropriate Flooring
7. Insufficient public entry
8. Non-standard ramps
9. Non-standard installation of street furniture
10. Lack of access to persons with disabilities in the underground marketplace
11. The non-standard location pedestrian crosswalks
12. Lack of pedestrian in the roadway marking
13. The presence of motor vehicles on both sides of the pedestrian crossing
14. Some narrow passages
15. The presence of vendors

Region 8 of Tabriz with a historical and central background has selected as the top area among the 10 areas as the most suited urban space for people with disabilities and it is a pity that this part of population is removed from the city population unwantedly Therefore, some measures should be taken that will cause further participation of the group. Following we have provided some recommendations to improve the situation.

**Conclusions and Recommendations**
The results of the field visit revealed that the selection and the theoretical foundations generally have two major problems in terms of access for the disabled which include disability issues in relation to the finding the way into public spaces and the problems associated with movement within the public spaces, each with several sub-sections. Therefore, some recommendations are provided for the design of public spaces:

1. Complete removal of barriers and repairing the floors, tables, bridges, etc.
2. Construction of the island to stop public transport
3. In considering the appropriate street furniture
4. Taking the safe route for the passage of pedestrians and persons with disabilities
5. Collecting sales
6. For non-aggression law enforcement vehicles, especially motorcyclists space for pedestrians
7. Pedestrians using signal to determine the time
8. Powered by a pedestrian bridge to lift
9. Construction of ramps connecting roadway to walk
10. Proper input of complexes and public buildings
11. In terms of the dip in the access routes
12. Equip underpass to the elevator - escalator or considering one of the markets to the entry and exit of persons with disabilities
13. Design the barriers between the lanes of the street
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The Holy Quran, Surah Al-Maeda, verse 32
