

TO FIT URBAN SPACES WITH AN EMPHASIS ON THE NEEDS OF LESS-ABLE INDIVIDUALS (CASE STUDY: THE SIDEWALK OF ZAND STREET OF SHIRAZ)

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ABSTRACT:

Disablement, as a social and biological phenomenon, is a reality that apart from the rate of development, both industrial and non-industrial countries confront it. To assess public places considering the needs of the disabled people and self-sacrificing individuals and to program it is an essential requirement for every society especially for our country which has faced a large group of the disabled and self-sacrificing persons after the imposed war. To fit urban spaces for physically disabled people and passers-by is supposed to be one of the centered-justice approaches in contemporary planning and urban management. Many public places, although, such as pathways, parks, and urban centers in the majority of Iran's cities like Shiraz have the problem of places being unfit for the disabled people and passers-by. In doing so, this paper aims at assessing and studying this problem for the disabled, self-sacrificing and less-able individuals in Zand Street of Shiraz to pass and presenting guidelines to fit these places. The methodology of carrying out this research in the light of research purpose and from the viewpoint of research structure is functional and descriptive-analytical, respectively carried out through surveying method in one of the central streets of Shiraz (Zand Street).

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INTRODUCTION

Nowadays towns and cities have caused great problems with urbanism and urban difficulties. One of the most significant factors of forming, developing, and bringing towns and cities into existence is to pay attention to human needs, and among these, walking is supposed to be an essential, main need of humans that unfortunately, has been presently ignored or perhaps forgotten. A town or city is a place in which humans live and communicate with each other; this communication makes social life of a town or city in a place called sidewalk and the more this place is safe, secure, clear, varied, and heterogeneous, the more vigorous, clear and stable is the social life of a town or city. A city shouldn't be supposed to be just a habitation place of a group of individuals or a center of treaties but a city is a place in which individuals interact with each other having different and various abilities, spirits and characters, thoughts, manners, etiquettes, beliefs, emotions, and feelings [1]. A sound and healthy city, therefore, could be one that whole citizens may make use of its services. This urban environment should give further services to vulnerable groups of people so that this class not to be effaced from the scene of society or ignored. To fit urban spaces is considered to be a structural bed and

the requirements of society growth and development so as to provide equal opportunities for all individuals and groups of society in order to move in all parts of city and access to all urban places for each and every person. Based on The United Nation's assessment, more than 10% of the world's population suffers from some kind of disablement. In a society like ours that a considerable number of this group of the disabled people makes the imposed war's self-sacrificing persons- the individuals who fought in the war for our country and showed great courage and self-sacrifice- more and more, the necessity of considering this affair is felt [2]. To fit urban spaces and improving accessibility and movement of the disabled people have a significant part in the process of urban programming and planning. All the disabled people in developing countries especially in our country suffer from the outbreak rate of poverty and inaccessibility to equal opportunities in social and economic context and then unfitting urban spaces. One of the most significant urban spaces is public places which has mainly been used and responds to the most essential needs of citizens in various dimensions as a part of city. Suffice it to say that public places have such importance that these areas are considered to be as structural bed of social life and spatial crystallization



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of public places which is essential element of civic society [3]. In general, there is a temporary and permanent relationship between human and his surrounding areas both in a complete and incomplete form [4]. Based on the government's official statistics in the year 1386, the number of the disabled people has been 1012222 that 10 percent of country's population is supposed to be disabled [5] and Fars province's portion of this number has been 88853 individuals and Shiraz's taking up 31575 persons accordingly [6]. With respect to the above statistics and since Shiraz is a cultural- literary, historical and touristy city, being visited by a large group of tourists and the disabled people forming a part of tourists, the necessity of fitting sidewalks and urban spaces is being doubled, according to the needs of the disabled people and self-sacrificing individuals.

Theoretical bases and viewpoints

In surveying theoretical bases and viewpoints related to the Spreading Pedestrian Movement, the first work is a book titled "Pedestrian Planning and Design" published in the year 1971 in the United States [7]. In the year 1975, the publication of the book "Urban Space for Pedestrian" played an effective role in spreading and broadcasting the related issues of improving urban spaces [8]. Two years later, a book was written by Brambilla and Longo titled "For Pedestrians Only" on which the bases of planning and management of "Traffic Free Zones" in central areas of city were discussed and investigated [9]. Unlike Modernists, Apple yard insists that streets should have sport, social, and cultural functions besides urban function [10]. Jan Gehl also pays attention to discuss about sidewalks and the proper designing style of public spaces especially in Scandinavia emphasizing that vacant spaces of these activities should be filled with social and selective activities by improving the quality of public places so that life continues to move and flow in city spaces [11]. Simpson mentions spreading pedestrian approach in the book "City Center Planning and transport" as a guideline in commercial development of old cities centers [12]. In his book "the Pedestrian and City Traffic", Hass Klau analyzes and also compares different approaches of separating vehicle traffic from pedestrian in Britain and Germany, believing that it is necessary to provide safe, welcome and favorite sidewalks in order to attract people to urban centers [13]. The literature related to pedestrian planning and designing has been spread and varied in two recent decades, particularly the works concerning "Street" and how to revive it as an urban space, has been transformed itself into an issue being independent of urban planning and designing. Now that new traditional urbanization has been known as "New Urbanization", it has introduced many structural elements of stable city that the most essential

components highlighting passerby, synthesizing usages and emphasizing social performances as unifying factor of public spaces and buildings.

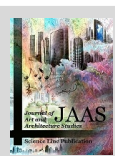
Definitions and concepts

Walking, the Disabled and Self- Sacrificing People

Access network used by non-driving persons in city is generally separated from roadway through green spaces, water canals, curbs, bridges, etc. In fact, sidewalk is not a defined place in cities and towns and every open space used for walking activities could be named as a sidewalk. Very often pedestrians are more observed to walk down in busy city centers and crowded streets than on sidewalks and sometimes even it is necessary to use street as sidewalk. To have an easy movement, it is required to consider the width of sidewalk, floor material, and its slope at the time of designing and implementing pedestrian network (system) and existent obstacles in the way should be removed. To have accuracy in designing and implementing this system has double importance especially at this time that the disabled people using this system [14].

Research history

The United Nations Declaration of Human Rights in 1934 included all human beings and extended the range of human regard for the disabled people. The United Nations passed the laws on equal opportunities for the disabled people in 1994 so that international structures were presented by the advocates of human rights to solve the problems of the disabled within these laws and some instructions were given to lead the programs concerning equal access for all individuals. Charities like the World Bank and the Development Bank loaning money have had a considerable part in the development and improvement of solving problems concerning the disabled people and putting forward policies related to public transport, especially various urban projects. This process and procedure continued by some organizations in Britain and Sweden [15]. To provide the disabled people with services is still largely under control of the government and civil society in developing countries. The human rights approach to the disabled people is exactly like every ordinary citizen who has a right to use cultural, social, and economical opportunities being existent in the society. This process has been gradually and slowly accepted by some developing societies. Some developing countries especially in Asia and Latin America have adopted some methods relating this approach, namely accepting the disabled people in a civil society and fitting urban spaces and public transport [16]. One of the most significant problems of urban spaces of country is their unfit spaces for the disabled people so that this case may be observable both in structural and behavioral aspects



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[17]. The first does originate from incorrect urban planning and urbanization practical actions and the second one is a cultural- social outcome, resulting from it [17]. From the urban planners' viewpoints, a healthy city is the one in which all citizens may use its spaces. This urban space should give further services to vulnerable groups of people so that this class not to be eliminated from the scene of society or ignored. That part of society which has been deprived of using urban spaces due to physically- bodily disablement, searching the cause not in "disabled city" but in "the disabled itself" and preventing itself from approaching urban spaces [14]. What has a great value in urban planning for urban spaces is an interactive- social role played by this space in citizens' collective lives [18]. By appropriate and adequate planning of urban spaces and fitting it, therefore, we may socially interact with the disabled people. To remove obstacles in city could be as important activities ensuring further participation by the disabled people in social activities and their presence in urban spaces [19]. To supply life conditions is considered to be as the most important factors of attracting the disabled people in society [20].

Research objectives and the reason for choosing the research subject in the center of city

Based upon investigation and on the strength of necessity and importance of research subject, the research objectives are:

- To assess sidewalk of urban space with respect to the disabled and self-sacrificing individuals' needs,

- The level of satisfaction of the disabled and self-sacrificing people with sidewalk in the studied space,

Many pedestrians do their walks in the center of city for the following purposes:

- To get educational, shopping, working centers and other centers of urban activities,

- To gain access to driving area(part) or public transport,

- To go on walking for relaxation, sport, and recreation (to spend leisure time).

The question and hypothesis of the research

Considering the described subjects and the existence of various problems of the disabled and self-sacrificing people concerning sidewalk, we try to answer the following question so as to fit urban spaces, especially sidewalk and positive presence of the disabled and self- sacrificing people in public places of Shiraz:

To what extent does fitting sidewalk and urban spaces of Shiraz conform to the needs and abilities of the disabled and self- sacrificing people?

Based on the objectives, necessity and importance of the research, it seems that the

sidewalks and urban spaces of Shiraz do not so fit the wishes and abilities of the disabled and self-sacrificing people.

To introduce the studied area

Shiraz, the center of Fars province, has been situated on a long plain with 120 kilometers in length, 15 kilometers in width and lying at longitude 52° east and 29 to 36 minutes and at latitude 29°north and 33 to 41 minutes, being at a distance of 900 Kilometers from Tehran [6]. To assess the rate of fitting the sidewalks of this city for the disabled and self-sacrificing people, Zand Street has been chosen and would be mentioned later.

Research statistical society

The statistical society of this research includes all the disabled and self-sacrificing people above 6 years and according to all kinds of disablements, the statistical society of this research has been divided into five groups: spinal cord disorders, partially blind, blind, movingly- bodily disabled, and deaf. Therefore, 80 questionnaires were randomly distributed among the target society so that 15 questionnaires among the disabled of spinal cord disorders, 15 questionnaires among the blind people, 15 questionnaires among the partially blinds, 20 questionnaires among the movingly-bodily disabled, and 15 questionnaires were distributed among the deaf according to their population. In this research, 30.4% of the respondents are self-sacrificing people and the disabled make 69.6% of the rest of respondents.

DISCUSSION

The Existent Conditions of Pedestrian from the Viewpoints of the Disabled and Self-Sacrificing People in the Center of Shiraz

The survey and study of the obtained results from the questionnaires show that the most principal problems of the disabled and self- sacrificing people in relation to pedestrian in Zand Street are firstly, the existence of wide grooves caused by concrete blocks and the low/high levels of the surface(ground), and secondly, the presence of building materials on the sidewalks and dusty paths so that the majority of the disabled and self-sacrificing people get into trouble when walking in this area. They explained that this area is not safe and suitable at all and hasn't been designed and planned with respect to their bodily conditions and there is a high probability of falling down to the ground. The process of repairing and building the surfaces of Zand Street's sidewalks are performed from time to time and this makes the sidewalk condition more heterogeneous than before. The whole sidewalk should be considered and then repairing and rebuilding should be performed. Among the problems and difficulties which have



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been mentioned by the disabled and self-sacrificing people is the messy condition of the hawkers and storekeepers on the sidewalk. The volume of crowdedness caused by the bothersome jobs in Zand Street's sidewalk is a reason for the disabled and

self-sacrificing people using less and less these spaces. The existence of steps on the sidewalk and the branches and leaves of the tress and other obtained information may be observed in table 1.

Table 1: to asses and fit Zand Street's sidewalk in 2012

The grouping of obstacles		Percent
Temporary obstacles	The existence of wide grooves caused by concrete blocks	26.2%
	Parking cars on the sidewalk and blocking the way	8.7%
	The existence of building materials and masonry on the sidewalks	22.4%
	The presence of hawkers	12.7%
	To drive motorcycles and bicycles on the sidewalk and reducing the safety of pedestrians especially the disabled people	11.5%
Permanent obstacles	The slippery surface	13.1%
	The dusty surfaces	20.9%
	The narrow width of the sidewalks	12.5%
	Unfit length and width grades	12.1%
	Diversity of used materials in covering the surface of a short route	18.1%
	Lowland and highland	23.3%
	Blocking passageways caused by public telephones	12%
	The existence of steps on sidewalk	7.6%
The presence of plants having wide branches around the sidewalks and blocking passageways	4.5%	

Source: the results of findings

The problems of the studied sidewalk have been described. The physical obstacles in the sample areas are divided into temporary and permanent obstacles. The temporary obstacles include the existence of building materials, the presence of hawkers, driving motorcycles and bicycles, parking cars on the sidewalk. The permanent obstacles are: the presence of grooves, low and high levels of surfaces, dusty surfaces, diversity of used materials, the slippery surfaces, the narrow width of sidewalks, unfit length and width grade, blocking passageways caused by public telephones, the existence of steps on the sidewalk and the presence of plants on the sidewalk.

Assessment of the Most Important Parameters of Walking With Participation of the Disabled and Self-Sacrificing People

To assess the existent condition of sidewalk of urban spaces is so essential because it is the most important urban access system. This system is significant for the simple reason that standing in the movement route of human and therefore the halt, vision, and escape points should be completely unimpeded from the viewpoint of easiness in moving [19]. Sidewalks are the pathways designed to supply pedestrian access and lying in parallel with roadway. To design sidewalks in a correct and proper way does have an effective influence on increment of usage, and pedestrian safety and access especially the disabled and self-sacrificing people because normal progress of individual's life being dependent

on pedestrian access system and the predominant moving pattern of the disabled is walking; whole elements of communication system are initially designed with going on foot for the disabled. The dimensions of required spaces for sidewalks are different among various regions and cultures and they are largely contingent upon population density and social, environmental, and cultural values. In general, the spatial dimensions of routes and squares should be in such a way that individuals feel comfortable and safe [21]. Some safety and comfort criteria on the sidewalks especially made for the disabled people are: proper slope for sidewalk; smooth, rigid, and firm surface; non-slip surface; enough width. Most of the sidewalks of the studied areas especially in the center of Shiraz have been designed not taking the comfort and convenience of the disabled people into consideration, so the majority of the streets have very narrow sidewalks and rough surfaces. These instances cause several problems for the disabled and self-sacrificing people, especially when moving in wheelchair occupying more space than ordinary people because they are forced to leave sidewalk and moving on roadway and consequently being exposed to various dangers. The obtained results of the questionnaires and field studies from the sidewalks of Zand Boulevard show obviously that this sidewalk is not only unfit and unsuitable for the sensory/movingly less-able people, children and women having babies, but also for ordinary citizens. Even sometimes it is impossible to move on it. While the aforementioned



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sidewalk is more than 3 meters in width, rough surface, level difference in various parts of the sidewalk, and the existence of several holes have caused an unfit and unusable condition. This condition has come into existence due to inattention to urban designing and planning. Absence of criteria and regulations of proper urban planning and urbanization and a lack of appropriate urban plans, inattention to the rights of citizens in using urban spaces for pedestrians and the priority of motorists

over pedestrians in most of sidewalks especially Zand's sidewalk, situated in the commercial center of the city, are clear and obvious. The problems concerning sidewalk and approaches to codify desirable condition of sidewalk in relation to the disabled and self-sacrificing people's needs with their own participation have been presented in table 2. The information has been obtained through field study in Zand Street.

Table 2: To assess the current situation and formulate an appropriate condition for sidewalks with partnership of disabled people in zand street of Shiraz

The existent problems	To codify favourite condition
<ul style="list-style-type: none"> • The narrow width of the sidewalk • Diversity of used materials on the sidewalk surface • The slippery surface of the sidewalk • Low and high levels of surfaces • The existence of wide grooves caused by concrete blocks • Parking cars on the sidewalk and blocking passageways • The existence of building materials and masonry on sidewalks • The presence of hawkers • To drive motorcycles and bicycles on the sidewalk and reducing the safety of pedestrians especially the disabled people • Dusty surfaces • Unfit length and width grades • Blocking passageways caused by public telephones • The presence of steps on the sidewalk • The existence of plants having wide branches around the sidewalks and blocking passageways 	<ul style="list-style-type: none"> • It is possible to widen very narrow sidewalks by removing its adjacent flowerbeds or adding some spaces of roadway to sidewalk. • To control the difference of surfaces covering on routes and level all covers for the disabled and self-sacrificing people to avoid getting slipped.–The existent sidewalks surfaces should be fitted with non-slip and rough surfaces. • To fill holes and level low and high levels of surface which causing the disabled people to fall down especially the disabled in wheelchairs. • To place metal bridges to cross over dug channels. • To prevent hawkers from selling goods and enforce a law concerning this matter strictly accurate. • To inhibit vehicles from moving especially motorcycles and bicycles and enforce a law on this subject. • To transform the existent steps into ramp. • To observe the required standards concerning length and width grades.

The Existent Problems of the Sidewalk of Zand Street

- Low and high levels of surface
- The disabled people need a lot of energy to move on the sidewalks having low and high levels. There is a high probability that the disabled people lose their balance and falling down on routes such as these.

- Dusty surfaces
- Dusty surface of the sidewalk of Zand Street causes wheelchair to move slowly. Very often these surfaces cause wheelchair to lose its balance and consequently the disabled person falling down.

- Diversity of used materials in surface covering of sidewalk

- Various coverings are different because of diverse material, slippery, low and high levels, and the existence of grooves on the surface on the route of sidewalk. The speed of wheelchair on these surfaces and covering is different because of those reasons and it is probable that a wheelchair overturns.

- Slippery

- Freeze in winter makes the surface of sidewalk slippery and wheelchair would fall down because of low friction of wheels and frozen surface.

- The existence of wide grooves caused by concrete blocks

The wide grooves caused by placing concrete blocks next to each other are the gaps in which the wheels of wheelchair going into, thus the disabled people losing their balance.

CONCLUSION

As society citizens, the disabled and self-sacrificing people have rights which should be considered. The issue of planning and fitting urban spaces for this class of people is the subject that should be viewed so that if the disabled and self-sacrificing citizen is not able to access his/her necessary places and spaces due to unfitness of urban various spaces, he/she would confront several problems and bad circumstances. According to the obtained information and results from field study, and then analyzing this information, the critical condition and inappropriateness of the situation could be



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explained in a final and general conclusion. Sidewalk is an important matter for the disabled people in urban spaces, having a direct influence on the life of whole people especially the disabled ones. By surveying the area of sidewalk, sidewalk as an unfit place and the existence of holes has been discussed. The inappropriate conditions and surfacing pathways incorrectly have caused the disabled and self-sacrificing people to get into trouble at the time of walking in this place. Through conducted investigations in the present research, it is clear enough that Shiraz is a backward city in planning and fitting urban spaces for the disabled and self-sacrificing people compared to developed cities of the world. By viewing the experiences of various cities of the world, we find that no activity of planning and fitting sidewalks has been done in Shiraz. The final results of this research show that the studied area of this research has been situated in the center of Shiraz, having a large number of problems in relation to critical conditions of sidewalk; total factors have created a messy, unhealthy, unsafe, and inconvenient environment for various social groups especially the disabled and self-sacrificing people and this situation needing accurate and unified planning so as to improve the existent condition and increasing safety / convenience , thus having a lively and happy social environment with the presence of the disabled and self-sacrificing people.

Recommendations

- To fill holes and level low and high surfaces which cause people to fall down from wheelchair;
- To level dusty surfaces of sidewalks and making them usable from the viewpoint of resistance in a temporary way;
- To control the difference of surface coverings on a short route and harmonizing surface coverings to avoid getting slipped;
- The sidewalks should have a non-slip and rough surface;
- Accurate pointing of concrete surfaces;
- To remove the masonry of building constructions from sidewalks;
- To transform the existent steps on the sidewalks into ramps or steps with low height;
- To displace public telephones;
- To prevent hawkers from selling goods on sidewalks and a law should be strictly enforced in relation to this case;
- To inhibit drivers from parking their cars on sidewalks and enforcing a law with regard to

REFERENCES

1. Morris R (1968) *Urban Sociology*, London: Allen & Unwin.

2. Karkonan Nasrabadi M (2007) Sociological analysis of the condition of the disabled people in urban space. *Monthly magazine of municipalities*, No: 82, pp: 21-34.

3. Habibi M (2000) civil society and urban life, *scientific-investigative journal of fine arts*, No.7, pp: 21-34.

4. Taghvaei M, Moradi g (2005) *Sepehr journal*, No: 57, pp: 9-13.

5. *Iran Statistical year book (2006)* publishing house of statistical centre of Iran.

6. *Fars province statistical yearbook (2006)* the publishing house of statistical center of Iran.

7. Fruin J (1971) *Pedestrian Planning and Design*, New York.

8. Pusharev B S, Zupon J M (1975) *Urban Space for Pedestrian*, Cambridge, Mass, MIT press.

9. Brambila R, Gianni L (1977) *For Pedestrians Only: Planning and Management of Traffic Free Zones*, New York, Whitney library of Design.

10. Appleyard D (1981) *Liveable Streets*, Berkeley: University of California Press.

11. Gehl J (1987) *life Between Buildings: Using Public Space*, New York: Van nor strand Reinhold.

12. Simpson B J (1988) *City Centre Planning and Transport*, England, Van strand Vein bold.

13. HassKlau C (1990) *the Pedestrian and City Traffic*, London: Belhaven Press.

14. Ghaaem G (1988) *urban spaces and the disabled*, Tehran: the research center for housing and building.

15. Stanburies J, Hugo J S (2000) *Formulation of policy for transportation of Special Needs Passengers*, Proceedings: CODATU IX, Mexico City.

16. DFID (2000) *Disability, Poverty and Development*, London.

17. Eghbali R (2006) to fit urban spaces with an emphasis on the possible productivity of pedestrian, the national conference on fitting urban environment.

18. Pakzad J (2004) *Node, Square, Plaza, To Survey the Meaning of Three Words in Urbanization*, the monthly magazine of municipalities, No. 67, pp: 8-17.

19. Saeidnia A (2004) *the planning of urban furniture and spaces*, Tehran: the publishing house the organization of municipalities and counties of Iran.

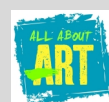
20. Tajoldini L, Shokouholsadate M (2006) to fit living environment for the physically disabled, Tehran: the conference on fitting urban environment.

21. Iranshahi A (2006) *the planning principles of sidewalk for the disabled and self-sacrificing people*, Sabzineh quarterly, No. 2, Tehran: the organization of municipalities and counties of Iran.



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