# Evaluation of effectiveness of municipality actions toward making the surrounding areas of the subway stations into pedestrian-oriented spaces (case study: Sadeghiyeh subway station)

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#### **Abstract**

Urban spaces refer to the man-made spaces which possess a special order for human behavior and activities. One of these spaces is the surrounding space of public transportation stations. The subway stations, although potentially encompass many different groups of people; few social interactions take place in these spaces. In this regard, by making the surrounding areas of the subway stations be pedestrian-oriented, the potential for increasing the socialization capacity of the mentioned spaces will be provided. The Sadeghieh Subway Station can be considered as the most important subway station in Tehran, which on the one hand is the rail port of Tehran's western entrance, and on the other is the port for railway journeys inside the city. The main concern of this study is to assess the success or failure of the interventions made by the municipality for changing the surrounding area of the Sadeghieh Subway Station into a pedestrian-oriented space. The method used in this study is surveying, in which the data were collected using a questionnaire and interview. The study's population is all people who use Sadeghieh Subway, and the sample size for the study were considered 140 subjects. The results shows that after the municipality's actions to change the space into a pedestrian-oriented space the district have a progressive process in such cases as transportation, security, Pedestrian infrastructure, vitality and attractivity, rate to remain in the space, the amount of traffic crossing the sidewalk, walking group, the lighting, the vendors, the cleaning, pavement structure and climatic elements. but in such cases as mix use, recreational activity, readability and design furniture no significant change was seen, and in some cases the results were counterproductive.

**Keywords:** municipality action, Tehran, pedestrian-oriented spaces, Sadeghiyeh subway station, urban public space

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#### 1-Introduction

In modern time, the urban spaces are saturated with the vehicles and therefore these places cannot provide any psychological and physiological relaxations for human beings. According to the statistical information, in the transportation system of the vibrant cities around the world, a significant share of transportations for shorter distances – less than one mile - and for such purposes as shopping, work, leisure, visits, recreation, sports and combination of these activities, belongs to the pedestrians. However, in Iran, the inefficiency of transportation system has caused an increase in using the private vehicles and public tendency for on-foot transportation, except in cases of necessity, is less considered (Moeini, 1386, 16(. Therefore, much less social interactions are carried out in the public places. Hence, paying attention to the urban spaces, especially in terms of the social aspects, is essential since social interactions should be carried out in the social spaces. Urban planning should strive to match the environmental potentials and the needs of the citizens. Many walking streets have been constructed as a general solution to the problems of all the cities but usually have been failed, unless when the traffic-free zones, in a metropolitan administrative context, have been used to solve the problems. Moreover, such projects should take place at a specific time and place so that they can be functional. Some of these walking streets have been built very lately that is when the people and shops have been removed from the city center to other places. In such case, it is very difficult to restrict the vehicles' movements and traffic zones. The access routes to the subway stations, in terms of different people walking in them, have great potentials to be changed into pedestrian-oriented spaces. Therefore, an appropriate designing of such spaces may lead to much more sustainable activity and an increase of socialization capacity. The Sadeghieh Subway Station is considered as the most important subway station in Tehran, which on the one hand is the rail port of Tehran's western entrance, and on the other is the port for railway journeys inside the city. Therefore,

assessment of municipal interventions in changing Vali-Asr Street – that is one of the most important areas around the Sadeghieh Subway Station - into a pedestrian-oriented space is the main concern of the current study, and its purpose is to evaluate the factors influencing the area's being pedestrian-oriented. This article is formulated in 5 parts: the first part includes the theoretical framework; the second part involves the study's methodology and documentation criteria; the study's area will be analyzed in the third part; the forth part analyzes and summarizes the discussion; and finally the fifth part is rendered to discussion and conclusion. Some researches that has been done in this field has been written by "Vikas Mehta". He considers streets as a social space and studies the relationship between social behavior and the quality of space. In one of his researches, "Lively Streets: Determining Environmental Characteristics to Support Social Behavior", he notices to collect behavior datas of citizens, employed persons and tourists in 3 commercial streets, Massachusetts Avenue in the Central Square neighbourhood in the City of Cambridge (population: 101 355), Harvard Street in the Coolidge Corner neighbourhood in the Town of Brookline (population: 57 107), and Elm Street in the Davis Square neighbourhood in the City of Somerville (population: 77 478) that all of them are located in Metropolitan Boston and transportation line of Massachusetts, by using several case study methods and qualitative research methods.

He concludes that people consider land use, social and physical dimensions equally through measuring the criteria which support social activities. In another article as "Look Closely and You Will See, Listen Carefully and You Will Hear: urban design and social interaction on streets" he notices the value of commercial streets in supporting of social interactions and emphasizes more to user experiences of streets.

The findings point to the physical factors, land use and management that support social interactions. The three streets are considered from three quarters as US. Central Square Coolidge Corner and Davis Square that is commercial, cultural and recreational features. Materials and Methods were done by observation and questionnaires. Research shows that social interactions are not suitable for all blocks of the streets that Behavioral and cognitive maps are used to refer to the subject that is a relationship between land use and management systems and physical context.

### **Urban space**

Not only urban space is not the space between buildings but also It is a concept that encompasses the physical environment, activities, events, and relations between them (madanipour, 1389 (. One of the urban spaces is streets. From the point of Modernists, street space connects one place to another place Instead is a place to live (Fyfe, 1998), But on the other hand, other theorists argue the streets are public space instead a channel for pedestrians (appleyard1981, vernez moudon 1991, gehl 1987, hass-klau 1999). people are related in the streets

by functional, social, recreation and shopping aspects (jacobs1961,appleyard1981, gehl 1987, brower 1988, vernez moudon 1991, jacobs 1993 southworth and ben-joseph 1996, lofland 1998, hass-klau 1999,carmona 2003). Streets provide economic needs (florida 2002)., physical health (frank,engelke and schmid2003), and a sense of community(smith1975, whyte 1988, christoforidis 1994,langdon 1997).

# Walking street

Walking street is the most perfect of streets. In different countries it is defined by different words such as Pedestrian Zone, Car Free Zone, Traffic – Free Zone, Auto- Restricted Zone, Pedestrian Mall or Walk able Street. In the following table some of more important concepts about Walking street are explained

### Main concepts related walking street

Walking streets can increase the trade transactions of the shops in the commercial streets and extraordinarily enhance the amount of the transaction. There

Terms pedestrian-oriented	Explanation
Pedestrian Zone	-Some areas designed for pedestrians
	- Prohibition of motorized traffic in some or all parts
Car – Free Zone	-Residential zones or zones with mixed use
	-Europe, Italy, Belgium has the most car-free zone
./	-Spaces non-motorized traffic environment suitable for walking
151	-Vauban model is without automobiles
	-Pedestrian-oriented urban centers
Walkable Street	-Walkable Street and roads are the highest social role

fore, in many cities around the world, particularly in American cities, the main incentives for building the Walking streets have been to attract investment, enhance employability and economic boom, and thus the businessmen have been the main supporters who have welcomed the changing of the roadways into the Walking streets (Brambila and Longo1977). ). Nowadays, in many cities all around the world, the walking routes are widely used for exhibitions, social events, festivals, advertising, and tourist brochures (ibid, 1977). Walking routes in the cities can help to promote the individuals' image of the city.

According to Jane Jacobs, one can know a city based on its streets, and the increased presence of the pedestrians will improve the appearance of the street and consequently can help to improve the city's facade and people's image of the city. Pedestrian areas have increased the social events such as exhibitions and festivals as well as have helped to increase providing the art works, and are considered to be known as the urban symbols. In the past years, cities found their identities in the tall buildings, domes and single monuments, but now they are finding it in the walking routes (Ibid, 1977).

Many of researches about the city are done in large scale and based on the physical dimensions of the built environment and aesthetic criteria (zucker1959, sitte1945cullen1961" krier 1979) and often social

Pedestrian Mall	-Pedestrian-oriented shopping and entertainment centers	
	-An area consisting of one or more motor vehicle traffic on the	
	street is limited to all or part of it	
Pedestrianization	-The street with traffic-free spaces	
	-Change a region to use only for pedestrian	

studies is ignored (Roppoport 1999, 254). Some of social discussions notice that Presence of people in public space is more important than environment physical capability (Gibson1979, knowles and smith 1982, heft 1989, hester 1993, stokols1995). A lively street is defined as a street with presence of people who participate in sustainable and especially social activities that includes short-term activities and long-term activities too (jacobs1961, Gehl1987). A measure of social activities in public space is criterion of people satisfying of their environmental and there is a few studies about the social behavior of people in public space. More of this studies are about urban plazas (cooper-Marcus 1998, Dornbush and gelb 1977, joadar and Neill 1978, linday 1978, miles, cook,cameron1978,share 1978,whyte1980, liebermann1984, Banerjee and loukaitou-sederis 1993). But a few researches are about street and spaces which are residential (appleyard1981, Eubank-ahrens1991, Sullivan, kuo and Depooter 2004) which notices to environment physical dimensions or land use (joardar and neill1987, hass-klau 1999).

### **Approaches**

A review of the relevant literature in the last two decades reflects the fact that the major problems such as traffic jam, environmental problems in the cities, and reducing the quality and vitality of the urban spaces have increased insecurity in the cities. Accordingly, some theories and movements were merged in order to resolve these problems, all of which unanimously believed that through reducing the dominance of the cars on urban life and increasing the pedestrian-orientation capacity, as well as paying more attention to the pedestrian transportation, the urban areas have to be more humanized.

Among their most common goals, the improvement of life quality, access and movement, appropriate relationship between the uses and transportation, health, safety, and creating a sustainable environment can be referred. As in the resent decade walking has been considered as the safest, the most economical and dynamic method of transportation, the current study is an attempt to explain the conception of the walking routes, review the related literature, and analyze the importance of the pedestrian-orientation issue in the twenty first century.

Pedestrian- oriented approachesIn the recent years, according to the new approach of the world to the pedestrian-orientation issue, many cities in Europe and America have produced specific documents un

Comments	Criteria	Source
Sustainable Transport	-Creating spaces for walking and cycling	Williams Burton, Walter Hook , 1383
	Public transport	
	Optimized to enhance the pedestrian-ori-	
	ented urban morphology	
	Mixed use	
	Manage access for pedestrians	
New Urbanist		

Movement	Neighborhoods should be compact, pedes-	Grant, J. (2006) Planning the Good Com-	
	trian-oriented and mixed use	munity: New Urbanism in Theory and	
	The system of interconnected networks of	Practice. London: Routledge	
	routes		
	Streets and squares should be safe, com-		
	fortable and interesting for pedestrians		
	Pedestrian and bicycle travel must be with-		
	in the area with maximum range while car		
	dependency reduced.		
Smart Growth	Protection of mixed-use and Pedestrian-	SGN" Smart Growth Network" (2004),	
	oriented development with transportation	Getting to Smart Growth II: 100 More	
	access	Policies for Implementation	
	Creating bike paths and walking paths go-		
	ing through the neighborhood		
	Offers a variety of transportation, and de-		
	sign patterns of accessibility		
	Integrate land use and transport		
Walk 21	Developing pedestrian spaces in cities	Art, Michael E. (2010). Democracy and	
	To prevent a motor vehicle	the common wealth: Breaking the stran-	
	Proposed pedestrian approach as the saf-	glehold of the special interests golden ap-	
	est, most economical and most dynamic	ple media, pp. 120-139, 363-386.	
	urban mobility and transport		

der the title of "Pedestrian Master Plan". In these plans which possess some common objectives, policies and indicators, some shared guidelines can be offered for designing a city according to the pedestrian needs. The main purpose of this document is to establish a transportation system which can increase and encourage the attractions of such transportation methods as walking, cycling, and the use of public transportation. Pedestrian master plan, in terms of coordination with the green places and streets, gives identity to the network of walking routes and improves the specific policies related to the pedestrian mobility. Many cities have attempted to provide the pedestrian master plan as In many cities and towns in the U.S. and Europe, including Wisconsin, Maryland, Kamloops, New Jersey, London, Paris, Ottawa, Oakland, Denver, Portland and College Station, Delaware, Madison, Santa Barbara, and ... "pedestrian master plan" has been done. This plan in Paris (Schema Director de pieton) has been prepared by

the Paris Urban Planning Atelier (APUR). The results of some implemented projects in cities around the world, based on the plan goals, have presented in the following tables (1977, Osborn, Fedric).

### **Conceptual Framework**

In the recent years, according to the new approach of the world to the pedestrian-orientation issue, many cities in Europe and America have produced specific documents under the title of "pedestrian master plan". In these plans which possess some common objectives, policies and indicators, some shared guidelines can be offered for designing a city according to the pedestrian needs. The main purpose of this document is to establish a transportation system which can increase and encourage the attractions of such transportation methods as walking, cycling, and the use of public transportation.

City	An important result oriented walking Important actions	
	program	
Bangkok/ Malaysia	Social security- promoting a culture of	- Improve access to cultural areas through
	walking- access to cultural areas-to pro-	improved pedestrian routes
	mote public awareness	- Reorganizing vendors
		- Create green spaces in pedestrian spaces
		- Increasing the attractiveness of the
		environment
Istanbul/ Turkey	Social dynamics and the ability to recreate	-Ensure cleanliness, walking ability,
	the historic center	security
		-Creat Activities and events of the adsor-
		bent
		-Create a social interaction place as
		Sit and chat, like bars and
		Restaurants

### Social objectives of pedestrian oriented at global experiences

City	An important result oriented walking	Important actions
	program	
Portland/ USA	-Infill development, compact city, Envi-	-Improve sidewalks for pedestrians rather
	ronmental Protection, Reduce reliance on	- Increasing traffic safety
	private cars	- Networking Streets
Rotterdam/The Netherlands	Business growth, Promotion of man-made	- Use shops and small retail shops
	and natural environmental features	-Sense of unity
	/ Y \	-Human scale
		- Variety of functions and activities to
1, 2	وشكاه علوه إنالي ومطالعات في	reduce restrictions for users

Physical and environmental objectives of pedestrian oriented at global experiences

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City	An important result oriented walking program	Important actions		
Essen / Germany	Contribute to the revival of trade	-Variation in Commercial function -Several stations of public transportation		
Norwich / UK.	Helping establish a sustainable and commercial viability	<ul><li>Unify commercial areas with a network of pedestrian streets</li><li>Creating walkways to protect buildings</li></ul>		

# Economical objectives of pedestrian oriented at global experiences

Pedestrian master plan, in terms of coordination with the green places and streets, gives identity to the network of pedestrian routes and improves the specific policies related to the pedestrian mobility. An overview of the history and literature can help to identify

a large number of micro-scale elements of built environment (fixed, mobile and semi-displacement), and the behavioral environment (activity, performance, management) which are very important for the users of public spaces. The micro-scales and effective aspects

include micro-climatic factors, the environmental comfort, shade, wind and air temperature. (pushkarev and zupan1975, share 1978, cohen, moss and zube 1979, bosselmann 1984, libermann 1984, gehl 1987, arens and bosselmann 1989, whyte 1980, banerjee and loukaitou-sederis 1992, hass-klau 1999, zacharias, stathopoulos and wu 2001). the environmental comfort includes sitting area (Divette 1990, joardar and neill 1978, linday 1978, share 1978, whyte 1980, hass-klau 1999), urban furniture and fixtures physical (preiser 1971, cooper-marcus1975, joardar and neill 1978; gehl 1987), Sidewalk width (whyte 1980), trees (share1987,joardar and neill 1978; whyte1980; coley, kuo, sullivan1997,depooter2004), composition, setbacks, plantings (de jonge1967-1968 stilitz 1977: alexander 1977: whyte 1980: gehl 1987), constructional properties and shopping (ciolek1978, whyte 1980), personalized signs and shopping (gehl1987), Density and diversity of shapes, textures and colors of plants and trees (sullivan kuo: depooter2004 grey1970, joardar and neill 1978, 1978 share), and various aspects of land use such as a variety of shopping centers (jacobs1961: alexander1977: montgomery 1998 hass-klau 1999 loukai), retail presence (whyte1980,banerjee and loukaitou sederis 1992), and the third places and places of aggregation (oldenburg1981,hester1984,johnston2005,lofla nd1998).

Traffic slowdown is the basic key to improve pedestrian safety at different ages. This strategy, especially for the two age groups which their ability to respond to the distance and the speed is reduced is true. Reducing vehicle speed is related to reducing the number of accidents with vehicles. (Anderson et al. 1997: Jacobsen et al. 2000: Jensen 1998; Pasanen 1992, 1993; Pitt et al. 1990;. Wazana et a. 1997) some psychological aspects are related to interface and underground areas including access to stations (Passini, 1992; Galen, 1999), safety aspects (Korz et al., 1998; Boer, 1997; Galen,1999), and the impact of different dimensions. Security in urban spaces is Considered by theorists like Oscar Newman 1972: Nasar and fisher 1993: Skogan 1990: Taylor and

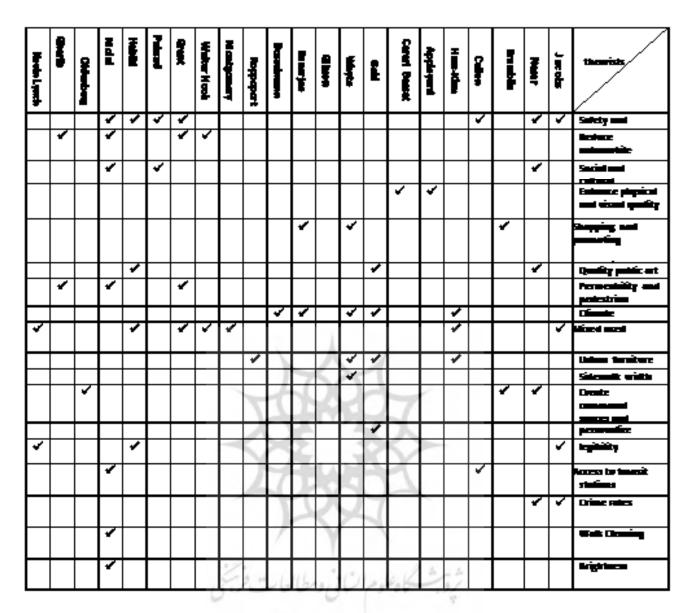
Harrell 1996 Wekerle and Whitzman 1995 Zelinka and Brennan 2001. A wide range of features of the built environment will reduce fear and increase security. This feature helps to make a neighborhood seems to be tenable that includes features such as a beautiful landscape and designed elements that prevents rout and chaos and makes opportunity to monitored by furniture near to outdoor public spaces and windows that overlooks street. Walking is one of the best ways to discover the city (Sinclair, 1997:4). Walking also has the advantage that we review urban spaces aesthetically and critically. (Basset, 2004; Careri, 2002).

Today in most cities around the world, active and attractive streets are distinguished by man-made aspects such as buildings and parks, exciting activities like festivals and celebrations (Nasar,1994). So today we have a comprehensive understanding of the various factors that make up a city distinct image (Jane Jacobs 1961and Kevin Lynch1960; 1976). Urban landscape consists of tangible and non-tangible elements.

Tangible elements are composed of urban morphology and daily events that is near to the Lynch's concept of readability in 1960.(Appleyard, 1979; Cosgrove and Daniels, 1988; Hull et al., 1994). And non-tangible elements that are highly dependent on the human mind, includes cultural, social and economical background (Yeung and Savage, 1995).

#### Methods and material:

The method used in this study is survey, in which the data were collected using questionnaire and interview. Both observation unit and analysis unit for this study are individuals. As the study's data have been collected during two specific periods of time, it can be considered a longitudinal study. In terms of its purposes, this study is an applied research, and in terms of analysis, it can be categorized as descriptive analytical research. The study's population has been all users of the Sadeghieh subway during the researcher's presence in the subway to complete the survey and make access to the desired responses. Given the



fact that the study's population is all the people who use Sadeghieh subway, and due to the unique characteristics of the population (such as the list of people, the number of the people referred to the subway, and so on), therefore the common sampling formulas cannot be used to determine the sample size. Thus, to determine the sample size of the study, the researcher referred to the operational organization for Tehran subway system and took the daily average number of the people using the subway, and according to this average number and using Cochran formula the sample size for the study were determined 140 subjects. Also, in order to do sampling randomly, it was trying to complete the questionnaires both before and after municipal actions and in three times of morning,

afternoon and evening. The data collection tool was questionnaire including closed questions using Likert spectrum. The questionnaires, through interviewing people and in three different times (morning, afternoon and evening) were directly completed by the researcher in order to minimize the errors caused by the interviewers' bias and other errors of these type.

### case study

Sadeghiyeh subway station is located in Tehran, region 5 in west south of Sadeghiyeh Square. The main access networks are Muhammad Ali Jinnah Highway in the East, Tehran - Karaj Freeway in the South, Sattari Highway in the West and Ayatollah Kashani in the north. In order to improve the quality of Sadeghiyeh subway station) is considered radius

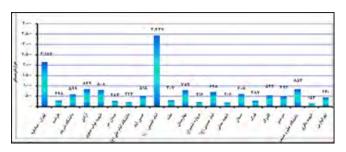
around 500-700 meters (approximately 10 minutes walk). The area is approximately 144/3 acres that 2/73% of region 5 in Tehran.

# Spatial aspect

the spatial arrangement and distribution of multi functional spaces and their relationship with the center and public transportation and other elements formed The spatial structure of the form. Spatial aspects is such as perception, legibility, activities and hierarchy of access

# physical aspect

In the studied area, based on the land uses and importance of the service units, different types of land uses were classified. The area's dominant use is residen-



tial and green space uses are also scattered around. The northern part of the area which is the southern edge of Ferdose Boulevard is dedicated to the commercial use and commercial-residential mix-uses, but the uses around Sadeghieh Second Square are generally commercial. The whole area is surrounded by moorland and the studied area's southern zone is dedicated to the subway station and its related infra-structures.

# visual aspect

The existing of signs and good visual sights will positively impact the area's readability. Sadeghieh Subway Station, because of its importance in the area and the city is considered as a focal point that its readability and its being as a symbol should be enhanced. The site currently suffers from visual disturbance and illegibility, and the filled questionnaires indicate that finding the entrance of the subway for the passengers who are using it for the first time, because of its illegibility, is quite difficult. Insufficiencies and ugliness in the area can be considered as the unintelligible and unidentified parts that cannot induce sense of the place to the residents. Improving the accessibility and readability of the area, and integration of the structural elements have undeniable roles in making a sense in the urban residents and

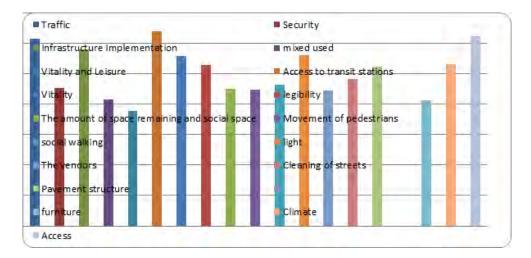
the induction of a continuous image from the urban spaces. Human activities and behaviors in the area and directing and controlling of them for improving the area's safety and health, the increased participation of the citizens in the urban activities, and a sense of belonging and identity, are key issues in designing the cities and urban areas.

# public space aspect

According to the studies conducted in the strategic areas and the following tables which have obtained through field studies, it can be concluded that the entrance of Sadeghieh Subway can potentially attract a large population. However, it has not considerable facilities to be considered as a collective space with high-efficiency.

# Survey results analysis

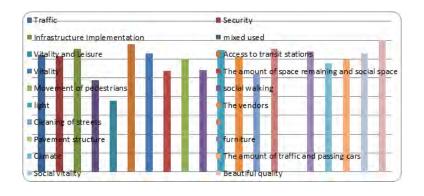
After analyzing the questionnaires from 140 randomly selected, the results of descriptive statistics before and after the changes are presented in the following table.



Descriptive statistics of the variables before changes

people opinion	mean	max	min	Skewness	Standard deviation
about before		\ \			
implementation of		IN			
the municipalities		700	17		
in pedestrain-ori-		1			
ented variables			75		
Traffic	3.07	5.0	1.0	-0.2	1.36
Security	2.27	5.0	1.0	0.59	1.12
Infrastructure	2.90	5.0	1.0	0.06	1.02
Implementation					
mixed used	2.08	5.0	1.0	0.79	1.15
Vitality and Leisure	1.89	5.0	1.0	0.96	1.03
Access to transit	3.19	5.0	1.0	-0.39	1.29
stations	0.		13 00 13	7	
Vitality	2.79	5.0	1.0	-0.08	0.98
legibility	2.65	5.0	1.0	-0.50	0.96
The amount of	2.25	5.0	1.0	0.19	1.27
space remaining					
and social space					
Movement of pedes-	2.24	5.0	1.0	0.70	1.17
trians					
social walking	2.32	5.0	1.0	0.19	1.27
lighting	2.80	5.0	1.0	0.23	1.03
The vendors	2.22	5.0	1.0	0.69	1.17
Cleaning of streets	2.41	5.0	1.0	0.19	1.02
Pavement structure	2.62	5.0	1.0	0.15	0.93
furniture	2.07	4.75	1.5	0.19	0.51
Climate Comfort	2.66	4.5	1.0	0.11	0.73
Access	3.11	4.5	1.0	-0.11	0.69

people opinion	mean	max	min	Skewness	Standard deviation
about after imple-	Incum	l india	111111	Site wheels	Standard de viation
mentation of the					
municipalities in					
pedestrain-oriented					
variables					
Traffic	3.12	5.0	1.0	-0.2	1.33
Security	3.07	5.0	1.0	-0.43	0.91
Infrastructure Im-	3.28	5.0	1.0	59	0.97
plementation					
mixed used	2.44	5.0	1.0	0.42	0.80
Vitality and Leisure	1.89	5.0	1.0	1.21	0.98
Access to transit	3.40	5.0	1.0	-0.14	0.89
stations					
Vitality	3.15	5.0	1.0	-0.0	1.01
The amount of	2.69	5.0	1.0	0.00	0.85
space remaining		- A	2		
and social space					
Movement of pedes-	3.00	5.0	1.0	-0.13	1.02
trians		700	107		
social walking	2.71	5.0	1.0	0.39	1.08
lighting	3.23	5.0	1.0	-0.15	0.92
The vendors	3.06	5.0	1.0	-0.26	1.17
Cleaning of streets	2.59	5.0	1.0	0.06	0.94
Pavement structure		TIX	77		
Pavement structure	3.28	5.0	1.0	-0.59	0.97
furniture	3.2	5.0	1.0	0.84	1.14
Climate Comfort	2.88	5.0	1.0	-0.24	0.90
The amount of	2.99	4.5	1.0	-0.51	0.74
traffic and passing	6.	الى ومقافات	19-00-19		
cars					
Social vitality	3.14	5.0	1.0	0.08	0.97
Beautification	3.50	5.0	1.0	-0.35	0.90
	3.50	3.0	1.0	-0.55	0.50
quality					



The analysis of descriptive information about the users about the quality of the environment before and after the municipalities obtained is illustrated that people opinion about Factors affecting pedestrian-oriented before implitation of the municipalities as The amount of traffic. Access to transit stations, which above 3 is positive and other factors like Security, Pavement structure, Infrastructure Implementation, Access to transit stations, Vitality, lighting,

The vendors, Social vitality, Beautification quality, The amount of traffic and passing cars, Cleaning of streets, furniture, The amount of space remaining and social space, Climate Comfort are averages above 3, are positive after the municipality implementation. After analysis the data in Spss software, with using a single parametric test, the following results are achieved. According to the results of the variables with one-sample t-test to the results, that se-

sig	t-student	pedestrain-oriented Variables
0.07	-0.3	Traffic
0.00	-6.47	Security
0.002	-3.12	Infrastructure Implementation
0.00	2.15	mixed used
1.00	0.00	Vitality and Leisure
0.00	4.1	Access to transit stations
0.003	-3.00	Vitality
0.00	-3.96	The amount of space remaining and social
	TOVOY	space
0.42	-0.79	Movement of pedestrians
0.5	-0.6	social walking
0.00	-3.6	lighting
0.00	-6.0	The vendors
0.00	-7.6	Cleaning of streets
0.00	-5.70	Pavement structure
0.00	2.2	Furniture
0.02	2.3	Climate Comfort

Table of inferential statistics variables

curity variable has with sig 0.00 is acceptable, in the other word the null hypothesis is rejected and there is a fixed relationship between the municipality's actions before and after with 0.3 Intensity has improved slightly. Pavement structure variable has with sig 0.002 is acceptable, in the other word the null hypothesis is rejected and there is a fixed relationship between the municipality's actions before And after with 4.1 Intensity has improved considerably. Access to transit stations variable has with sig 0.00 is acceptable, in the other word the null hypothesis is rejected and there is a fixed relationship between the municipality's actions before and after with 0.3 Intensity has improved considerably. Social vitality variable has with sig 0.00 is acceptable, in the other word the null hypothesis is rejected and there is a

fixed relationship between the municipality's actions before and after with 3.0 Intensity has improved considerably. The amount of space remaining and social space variable has with sig 0.00 is acceptable, in the other word the null hypothesis is rejected and there is a fixed relationship between the municipality's actions before and after with 3.96 Intensity has improved considerably. Factors such as vitality and leisure, social walking sig 1.00 and 0.5, respectively, are not significant and contrary hypothesis reject that there is not a significant relationship between these two factors before and after mixed used, furniture, Climate comfort with sig 0.00 is acceptable, in the other word the null hypothesis is rejected and there is a fixed relationship between the municipality's actions before and after but with 2.152.3 g. Inten

Overall Satisfaction	sig	t-student	Mean	Satisfaction
The overall satisfac-	0.042	1.31	2.97	Satisfaction before
tion rate of change is				changes
positive			3.26	Satisfaction after
				changes

Table inferential satisfaction

sity has declined.

Ultimately with assessment Users' comments about overall satisfaction from implementation of the municipalities, Average satisfaction of the municipality is 3.26 to 0.29 compared to before be considered positive.

### **Conclusion**

Attention to The difference between the perceptions of residents and experts in urban spaces, It is important to identify the factors influencing the pedestrian oriented. In other hand There is some mistake in the expert opinions that lead to inefficient projects implemented by attractive people for using urban space, So the citizen's perspective can be useful for solving the problem. In this regard, this study is to assess the success and failure of implementation by municipalities surrounding metro station. According to the results Traffic, Security, Pavement structure, Vitality, The amount of space remaining and social space, social walking, lighting, The vendors, Cleaning of streets, Climate Comfort variables have improved after implementation by municipalities and mixed used, Vitality and leisure, legibility, Furniture not change appreciably and in some cases have fallen down. In conclusion we were reached that response to functional and physiological needs such as Security, Pavement structure, lighting,

Cleaning of streets, Climate Comfort are affected on Vitality, The amount of space remaining and social space, social walking and Finally public satisfaction of the municipality is generally positive.

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