

Reimagining Public Spaces of Peshawar through Urbanity

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for

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in

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Dedication

This thesis is dedicated to my beloved Parents;

Allauddin Bangash and Hussanara Bangash,

To my Uncle;

Hussamuddin Bangash

And my Husband;

Syed Usman Ijaz

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(Mishail Khan)

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Abstract

Public spaces are the most important spaces of the city from the economic and social point of view. They are less focused in the planning practices of Pakistan. Urbanity is the new concept; it has been in discussions for last two decades. The urbanity mainly focuses on the interactions of people and built environment and also on amalgamation of different factors that make up the image and character of the city through public spaces. . The city of Peshawar that was once called “the city of gardens” now thrives for the positive identity and image. The spaces that were used by the large demographics are now barely in use. On the other hand large commercial developments are taking place and less focus is given to making them user friendly and accessible to all the portions of the demographics.

This study focuses on the concept of urbanity in public spaces and the importance of public spaces, by focusing on different types of public spaces. The study first provides a theoretical framework for understanding the concept of urbanity and its importance in improving the public spaces through studying different aspects of urbanity. Secondly it focuses on the field surveys of the different types of public spaces in Peshawar city. The field survey and observatory survey are based on different dimensions of urbanity like pedestrian space/ walkability, land use, legibility and clarity, quality of public spaces, visibility and contact, green spaces and vitality and social aspect. These dimensions are further divided in indicators and those indicators are used to assess the present situation of public spaces and also public opinion regarding the public spaces. The data collected through those two surveys is further analyzed through descriptive analysis and the user satisfaction is analyzed through yeh’s index of satisfaction. The link between urbanity and sustainable development is also established

through expert opinion survey and the results from this survey are analyzed through descriptive analysis, one way ANOVA and correlation.

The study concluded that the public spaces were not gender inclusive, male dominance was prominent. From all the surveys and literature it has been concluded that the city has lost its urbanity in the course of time due to increase in population and changes in the dynamics of the society and culture. Master plan of the city should be revised by the inclusion of public spaces policies and the goals and objectives of urbanity to help in achieving inclusive and sustainable public space.

Chapter 1: Introduction

Public spaces are the most important spaces of the city from the economic and social point of view. These spaces contribute in building the identity and image of the city. Public spaces are spaces, where a great amount of human contact and interaction takes place, which makes it one of the main constructors of city life (Janša, 2011).

On September 25th 2015, a new sustainable agenda was adopted by countries, which included different goals to end poverty, protect the planet, and ensure prosperity for all. Each goal has a specific target which will be achieved over the next 15 years (United Nations Organization, 2015). One of the goals is sustainable cities and communities which is the 11th goal of sustainable development goals. One of the target of this goal is to provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities (United Nations Organization, 2015). This target mainly focuses on the public spaces and there are also other initiatives by United Nations which are focusing on public spaces.

Over the past two decades 'urbanity' has been the part of new urban planning deliberations (Lees, 2010). The perception of urbanity is very subjective. It had been defined in many contexts and the approaches used to define this concept are also very different in nature. But the common crux of this concept deals with the socio-cultural and physical features of the city. Internationally many cities are redeveloped using this concept, the HafenCity in Hamburg, Germany, is redeveloped using this concept and more used the spaces are monitored in a regular manner to review whether the spaces designed for a specific activity are used in that manner. If not, what future changes are required to make them and diverse? It is one of the largest projects of regeneration and redevelopment in Europe (Lees, 2010).

If one focuses on the latter part of the argument, which it can be incorporated in the planning practices can help in making the city. In most of the studies it is found that the concept of urbanity grasps on the activities that takes place in the public places. It can be used to judge the public places of the city and determine the needs and improvements required to change or make the city image and identity.

Internationally a lot of emphasis is made on making the concept the part of the planning processes, but on the other hand no effort regarding this concept is found in Pakistan. Cities are planned and redeveloped but using the conventional and old practices. This country need to review and reconsider its practical approaches towards planning. The aim of this research is, to understand the concept of urbanity, and to provide strategies based on the concept of urbanity for the management of public spaces.

The case study area of this research is Peshawar city, which is the capital city of Khyber Pakhtunkhwa province of Pakistan. It is situated near the Afghan border. The expansion of the city happened in different periods: that is the walled city, the Cantonment, the university area, development of slum areas and planned township of Hayatabad, rest of the city is the amalgamation of different villages in its suburb (Ahmad, 2015).

1.1 Problem Statement

Public spaces are the most important entities in making the city. They are less focused in the planning practices of Pakistan. The city of Peshawar that was once called “the city of gardens” now thrives for the positive identity and image. The spaces that were used by the large demographics are now barely in use. On the other hand large commercial developments are taking place but less focus is given to making them user friendly and accessible to all the portions of the demographics. The main issue which prevailed in deteriorating the city environment is urbanization. The increased population increased the demand for urban land.

The other issue is the absence of appreciation of the role played by the city's existing parks and public spaces in the overall city system and excessive and indiscriminate littering throughout the city, especially along its roads and canals. Issues like indiscriminate encroachment upon public areas and utilities such as roads, canals and parks and poor management and lack of maintenance for physical urban features such as fountains, street lights, curbs and landscaped areas also contributing to the below par quality of the public spaces in the city. In the recent years due to urbanization the city of Peshawar has become very diverse culturally. But the public spaces are not diverse in nature; they don't cater the diverse population of the city.

1.2 Objectives

Following are the research objectives of the study:

1. To develop a link between sustainable urban development and urbanity.
2. To review the changing trends of urbanity in Peshawar.
3. To identify the barriers and drivers posed to study area.
4. Developing strategies to reclaim urbanity.

1.3 Research Questions

Following are the research questions of the study corresponding to each of the research objectives.

1. How is urbanity associated to sustainable urban development?
2. What is the existing situation of the public spaces in Peshawar city?
3. What strategies can be used to reclaim urbanity in Peshawar city?

1.4 Scope and limitation

In order to understand the situation of urbanity in the city, it would have been better to perform a comprehensive study of all the types of public spaces in Peshawar city. However, due to limitation of time, human and financial resources only four types of public spaces in central hub of the Peshawar City had been selected. Sample size was set as minimum due to availability of limited resources.

1.5 Thesis Structure

A standard structure was followed while writing this thesis. It is divided into 5 Chapters. First Chapter is the introduction including the problem statement, research objectives and research questions. The second chapter is the literature review and detailed explanation of urbanity, public spaces and sustainable urban development. Third Chapter is about the methodology followed for the research. Fourth chapter includes all the results of the data collected, its analysis and discussion. The final fifth chapter concludes the research with Conclusions and Recommendations. Annexure are attached in the end, which include the questionnaires.

Chapter 2: Literature Review

2.1 Urbanity

Urbanity is the new concept; it has been in discussions for last two decades. It has been defined in many contexts. A convincing description is very difficult to find, there are different opinions and derivations of urbanity (Schneider, Achilles, & Merbitz, 2014). For Lefebvre urbanity was about encounter — the meetings of different people in the city and the everyday life of a city. The city's physical environment and its populations were the main components in this process. Urbanity then is both a sociocultural and a physical environment concept. As the former urbanity is a lifestyle or way of living or being in the city. Through this point of view urbanity is radical middle-class rhetoric about quality of life in the city. In the end urbanity is something that the built environment brings through its physical fabric — its architecture and public spaces, its densities and connections (Merrifield, 2006). With regard to the particular case of the European city, 'urbanity' is as a rule associated with at least three qualities: firstly centrality, secondly compactness and density, and thirdly a mixture of land-uses (walter, 2000).

The urbanity mainly focuses on the interactions of people and built environment. The urban space is a set of spatial sequences where the people and their activities are as important as the physical features. The way the people and buildings interact and perform with each other in an urban space is the representation of the concept of urbanity (Lynch, 1960). John Montgomery elaborates the concept of creating successful place, the concept includes activity, and image and form as three important aspects for creating successful place, these aspects combined creates urbanity. Montgomery outlined the principles for achieving urbanity (Montgomery, 2007).

Table 1 Principles for achieving Urbanity

Activity	
Principle 1	Generating pedestrian flows
Principle 2	Seeding people attractors
Principle 3	Achieving a diversity of primary and secondary uses
Principle 4	Developing a density of population
Principle 5	Varying opening hours and stimulating the evening economy
Principle 6	Promoting street life and people watching
Principle 7	Growing a fine grained economy

Image	
Principle 8	Legibility
Principle 9	Imageability
Principle 10	Symbolism and memory
Principle 11	Psychological access
Principle 12	Receptivity
Principle 13	Knowledgeability

Form	
Principle 14	Achieving development density
Principle 15	Zoning for mixed use
Principle 16	Building for a fine grain
Principle 17	Adaptability of built stock
Principle 18	Scale
Principle 19	City blocks and permeability
Principle 20	Streets: contact, visibility
Principle 21	The public realm
Principle 22	Movement
Principle 23	Green space and water space
Principle 24	Landmarks, visual stimulation and attention to detail

Principle 25 Architectural style as image

For the purpose of this research urbanity is defined as the amalgamation of different factors that make up the image and character of the city through public spaces. The factors defined for this research are influenced from the principles mentioned in table 1 from the work of John Montgomery.

2.1.1 Urban Vitality and social Aspect

Studies have shown that spaces and land uses that are well-integrated with each other have more urban vitality as compared to those spaces that are not as integrated because more people can be seen in the well-integrated spaces as they make use of the public spaces provided to them in their urban setting (Aguilar, 1991). Although urban vitality and urbanity are two dissimilar concepts, but the presence of individuals in open public spaces is the basic form of urbanity which co-relates urbanity with urban vitality. Conditions of urbanity are different from that of urban vitality but still, it is a part of the broader concept of urbanity which has numerous different types, intensity, and characteristics (Jalaladdini & Oktay, 2011).

Studies have shown that as far as the social context of the city is concerned, people prefer spaces that encourage interaction and are vibrant. Green open spaces are preferred by the users of public spaces but they are most often not very well-maintained. Study of the physical aspect of public spaces has shown that users are attracted towards spaces that are comfortable, tidy, well-maintained, and easily accessible, especially green open spaces with toilets that are away from heavy traffic. Memorials and other historic landmarks are also well-liked by users of public spaces (Carmona & Wunderlich, 2012).

2.1.2 Pedestrian Space / Walkability, visibility and contact, Land Use

Another important feature of accessible public spaces is that it encourages walkability in the city and puts 'eyes on the street' which also enhances that safety and security of the street and other public spaces. Public spaces like squares and plazas also serve the purpose of meeting places for users of public spaces (Carr, Francis, Rivlin, & Stone, 1992). When different land uses are combined and are intermixed with the provision of different public spaces, this encourages public interaction and creates a sense of community which also results in an increase in street activity. By making the public spaces walkable, it discourages the use of vehicles and encourages pedestrianisation which is another important aspect of urbanity and a type of public space. This feature promotes passive engagement, relaxed environment on the street, active engagement amongst the people, comfort, and security (Francis, 2003).

2.1.3 Legibility / Clarity

The term legibility means the degree to which the different aspects of the city are organized in recognizable manner i.e. landmarks, paths, nodes etc. The clarity of the place is to have memorized the different aspects of the city and make a frame of reference (Montgomery, 2007). This organization of city elements helps to improve the clarity of the city and eventually helps in building the image of the city.

2.2 Public Spaces and Its Types

Public spaces are the most important entity of the city. They make the character of the city and the activities taking place in those spaces helps in creating an image of the city. Public space is any space that is used by public and is easily accessible to all, and is generally open, within the city fabric. Following are the types of public spaces and their characteristics:

Table 2 Typologies of Public Open Spaces (Francis, 2003)

Type	Characteristics
Public Parks	Publically developed and managed open space with city-wide importance, usually bigger than neighborhood parks.
Commons	Large green spaces located in communities for leisure.
Neighborhood Parks	Open space located in residential area, it may include playgrounds, sports facilities, etc.
Playgrounds	Play area developed in residential area, mostly includes play equipment's like swings and slides, it may also include amenities for adults like walking tracks and benches.
Pedestrian Malls	It's a street which is closed for automobiles and facilities for pedestrians are provided like benches, plantation and it is often located in downtown area.
Squares/ Plazas	Open space established as a part of a historic building in city Centre, managed and developed privately.
Memorials	Public space that memorializes local or national event of importance.
Community Open Spaces	Neighborhood space designed, developed, owned, and managed by local residents on an empty land; it may consist of play grounds, viewing gardens, etc. They are mostly developed on private land and are most vulnerable to be changed by other uses as such housing.
Neighborhood Open Spaces	Open space located in neighborhoods near to privately owned space; mostly used by children and teenagers; important space for environmental learning and social interactions.
Streets	The most easily accessible public open space in cities; increase in awareness regarding the use of streets and impact of traffic on children; changes can be made in streets in the form of improving pedestrian amenities, plantation, sidewalk widening and so on.
Transit Malls	Development of improved transit access to downtown areas; it may replace traditional pedestrian mall with bus or light rail mall.
Farmer's Market	Open spaces used for farmer markets; mostly temporary in nature and are developed in parks, parking lots and streets.
Town Trails	They connect the parts of the cities through integrated urban trails.
Vacant/ Undeveloped Open Spaces	The vacant open spaces in redeveloped areas or in undeveloped areas; holds a great potential for being urban open space and can be used for urban forestation or natural areas in cities.

Waterfronts	Increased awareness is needed regarding waterfronts; Public access can be increased by developing waterfront parks.
Found Spaces	Those spaces in the cities where informal social life takes place; it may include streets, sidewalks, paths connecting buildings, bus stops, steps to public buildings, and so on.

2.2.1 Public Spaces and their significance

Considerable work has been done regarding the design and research of public spaces. The concern for the quality of public life has led to improving public spaces and many resources have been devoted to achieving successful public spaces. Public space is any space that is used by public and is easily accessible to all and is generally open, within the city fabric. To achieve inclusive healthy, functional and productive cities is a most important problem faced by most of the cities in the world. The solution to this problem is not easy. The answer to this problem lays in the most important spaces of the city i.e. public spaces.

Healthy public spaces, the ones that are thriving with street activities form the foundation for a stimulating community as it rejuvenates the economic and development of that community through well-functioning, active and attractive public spaces. This phenomenon is being recognized and accepted all around the globe. Cultural diversity, civic identity and a sense of community; all of these factors are a product of urbanity which can be achieved through active public spaces (UN-HABITAT, 2012). The essence of public space is for the people to intermingle and interact with each other who belong to a different age, gender, race and ethnic backgrounds. This element of public space presents the opportunity for the local people to communicate with each other and interact on a personal level (Lofland, 1998).

2.2.2 Importance of public spaces

Urban populations and their living conditions are highly affected by the quality and standard of the public spaces of the urban setting, its architecture, landscape as well as the level of urban development in that region. Public spaces play a significant role in creating a 'Baukultur' which can be described as a combination of ecological, cultural, social, technological and economic features of a city and influences process as well as the quality of urban planning and construction. That is why urban planning, infrastructure planning, and architectural features must complement each other to achieve a high standard of living that promotes user-oriented and attractive public spaces. The attraction of tourism, competent and innovative workforce, and industry businesses is also highly dependent on overall image of the city which can be improved by improving public spaces of the city (UN-Habitat, 2015).

2.3 Sustainable Urban Development

Cities around the world are working towards to accommodate increasing populations. Urbanization is playing a major role in increasing the population globally and has given rise to the different dimensions of challenges in urban development. Cities in East Asia, South Asia, Sub-Saharan Africa, and other regions will play an important role to achieve sustainable development (Why the world needs an urban sustainable development goal, 2013). On September 25th 2015, a new sustainable agenda was adopted by countries, which included different goals to end poverty, protect the planet, and ensure prosperity for all. Each goal has a specific target which will be achieved over the next 15 years (United Nations Organization, 2015). One of the goals is sustainable cities and communities which is the 11th goal of sustainable development goals. One of the target of this goal is to provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities (United Nations Organization, 2015). This target

mainly focuses on the public spaces and there are also other initiatives by United Nations which are focusing on public spaces.

The ethos of the city is determined by its streets and public spaces. The connection of streets and public spaces lay the foundation for the city form on which other aspects of the city depends. Providing public spaces improves social cohesion and urban identity, which ultimately contributes to the environmental and economic aspects of the sustainable cities. UN-Habitat has been working on public spaces for nearly 20 years. At 23rd Governing Council of UN-Habitat in 2011, United Nations member states asked UN-Habitat to place a larger focus on public space and how it can contribute to sustainable urban development. The main objective of the Global Programme on Public Space is to promote public space as an important aspect for creating sustainable cities, in order to improve the quality of life of urban citizens and it will play a major role in implementing the New Urban Agenda. (Westerberg, 2016)

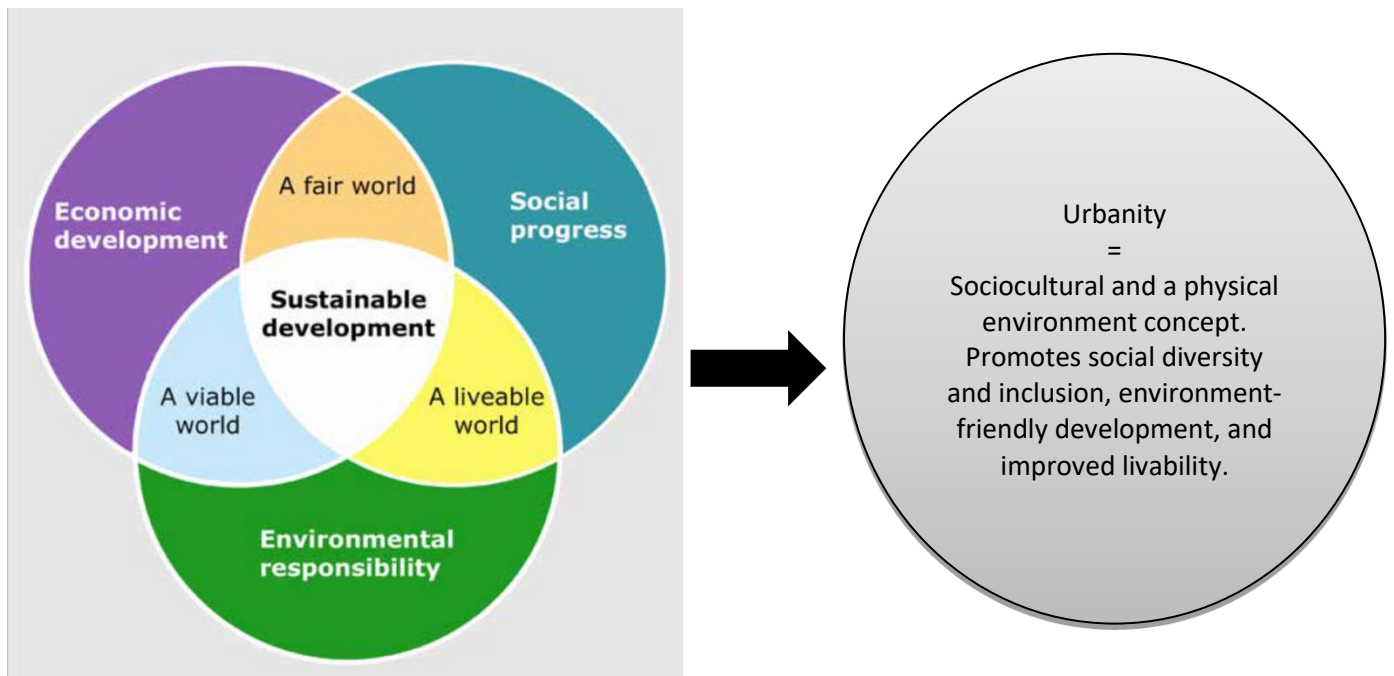


Figure 1 Relating Sustainable Urban Development and Urbanity (Science for Environment Policy, 2015)

Chapter 3: Research Methodology

The aim of this research was, to establish the concept of urbanity in association with sustainable urban development and the existing situation of urbanity in the study area and to recommend strategies to reclaim urbanity. The first step of data collection was to review the literature available regarding this research. The data was collected through significant published sources such as academic journals, research papers, national and international publish reports, and the documents produced by urban unit Peshawar and Peshawar development Authority. The next step was the collection of primary data, which was done through field surveys, using questionnaires, structured interviews, and reviewing the Master Plans produced over the years. The approach used during the process of the research included the following steps:

3.1 Selection of the Study Area

Peshawar city is the capital of Khyber Pakhtunkhwa province of Pakistan. It is situated near the Afghan border. Peshawar is the single metropolitan city in the province. Different public and open spaces were selected to carry out the study in different zones of the city. Following are the zones from which the public spaces and open spaces were selected:

Table 3 Selected Study Area

Zones	Public Spaces in Study Area
Residential	Tehsil Park, Gor Khatri (Neighborhood Park)
Commercial	Chowk Yaadgaar (Square) Bazaar Kalaan (Commercial Sreet)
Parks	Wazir Bagh (Public Park)

3.2 Research Design and Method:

3.2.1 Research Design:

The research design that was used to address the research problems as clearly as possible, consists of two types:

- Descriptive Design
- Exploratory Design

3.2.1.1 Descriptive Design

The descriptive research is applicable to know the current situation in hand and to add additional information about the problem, and give information about the existing situation of the problem. The current research is also focused on assessing the current situation of public spaces.

3.2.1.2 Exploratory Design

The exploratory research is conducted on problems that are new, or using new approaches or ideas to deal with the problem in hand. The current research is also focused on using the new approach of urbanity to reimagine the public spaces.

3.3 Indicators for Public Spaces to Create experience of Urbanity:

To create a good experience of urbanity in the public spaces, a number of indicators have been devised from the literature review. Following are the indicators to be considered for this research:

Table 4 Research Indicators

Parameters	Indicators	Dimensions	
Pedestrian Space Walkability	Availability of Pedestrian Paths	<ul style="list-style-type: none"> ▪ Width ▪ Continuity of Path ▪ Accessibility of path 	(Buchwach, 2012) (Harrop, 2014)
	Quality of Pedestrian Paths	<ul style="list-style-type: none"> ▪ Material ▪ User satisfaction with the condition of the Path ▪ Condition of the Path 	
Land Use	Type of buildings	<ul style="list-style-type: none"> ▪ Commercial, Non-Commercial, Residential 	(Achmad Delianur Nasution, 2014)
	Mix of uses	<ul style="list-style-type: none"> ▪ Is the development mixed used or not? 	(Azam Sadat Razavizadeh, 2015)
	Density	<ul style="list-style-type: none"> ▪ High ▪ Medium ▪ Low 	(Harrop, 2014)
	Accessibility	<ul style="list-style-type: none"> ▪ Distance ▪ How easy to enter ▪ How easy to access it from home 	(Buchwach, 2012)
	Connectivity	<ul style="list-style-type: none"> ▪ Street connectivity ▪ Context 	
Legibility Clarity	Entrance Accessibility	<ul style="list-style-type: none"> ▪ Number of entrances and exits ▪ Gates or without gates entrances ▪ Number of constricted entrances ▪ 	(Buchwach, 2012)
	Orientation Accessibility	<ul style="list-style-type: none"> ▪ Entrance level and orientation from sidewalk 	
	Sign announcing public space	<ul style="list-style-type: none"> ▪ Signs posted to direct to the public space 	
	Hours of operation	<ul style="list-style-type: none"> ▪ Closing time of Public Space 	

		<ul style="list-style-type: none"> ▪ Opening Time of Public Space 	
Quality of Public Spaces	Facilities	<ul style="list-style-type: none"> ▪ Dimension ▪ Parking Lot ▪ Public toilet ▪ Sport Area ▪ Playing Area ▪ Praying Area ▪ Sitting Area ▪ Eating Area ▪ Street Vendor 	(Azam Sadat Razavizadeh, 2015) (Buchwach, 2012)
	Lighting	<ul style="list-style-type: none"> ▪ Type of Lights ▪ Number of Lights ▪ Availability 	
	Diversity of seating types	<ul style="list-style-type: none"> ▪ Stationary or Permanent Seating ▪ Movable Seating 	
	Restrooms	<ul style="list-style-type: none"> ▪ Availability of toilets and waste bins ▪ Condition ▪ Hygienic Condition 	
	Art/ Visual enhancement	<ul style="list-style-type: none"> ▪ Minor Installation ▪ Interactive installation ▪ Statues, monument, and fountains 	
	Shaded area	<ul style="list-style-type: none"> ▪ Permanent or temporary ▪ Type of Shade 	
	Visibility and contact	Security Cameras	<ul style="list-style-type: none"> ▪ Availability ▪ Number of Cameras ▪ Operational and Non Operational
Security Guards		<ul style="list-style-type: none"> ▪ Availability of Security Personnel ▪ Number of Personnel ▪ Number of secondary security personnel 	
Visual Barriers		<ul style="list-style-type: none"> ▪ Number of billboards ▪ Encroachment ▪ Check posts 	

	Rules display regarding the use of public space	<ul style="list-style-type: none"> ▪ Electric wires contributing to visual pollution ▪ Set of Rules displayed ▪ Restricted areas rules displayed
Green Space	Natural Elements	<ul style="list-style-type: none"> ▪ Percentage of green space (Achmad Delianur Nasution, 2014) ▪ Trees ▪ Gardens
Vitality and social Aspect	Function and Activity	<ul style="list-style-type: none"> ▪ Recreation (Harrop, 2014) ▪ Sport ▪ Political Activity (Azam Sadat Razavizadeh, 2015) ▪ Social Interaction
	Diversity of Uses	<ul style="list-style-type: none"> ▪ Purpose of the visits ▪ Available facilities
	Social Interaction	<ul style="list-style-type: none"> ▪ Person to Person ▪ Person with environment ▪ Users: Single person, with family, with friends, with children , elderly, and with pets

3.4 Research Method:

The method used for this study is mixed method. For most of the objectives of this study qualitative data collection techniques are used. So, mixed data collection method is used to enhance the clarity of the research.

3.4.1 Data Collection

Data collection for this research is divided into two types:

- Secondary data
- Primary data

3.4.2 Secondary Data

The main sources for the secondary data were the literature available regarding this research. The data was collected through published papers, reports, academic journals, national and international publish literature. The literature was used in literature review and for the development of questionnaires and also for the checklist development used in observatory survey. The literature also helped in providing information regarding the objectives of this research and also in developing the strategies and recommendations for the problem in hand.

Secondary information regarding the situation of urbanity in Peshawar over time was collected by reviewing master plans of Peshawar. Other information regarding public spaces was collected from Urban Unit Peshawar, Peshawar Development Authority, and University of Peshawar.

3.4.3 Primary Data

The collection of primary data was done using different surveys and interviews. Following are the types of surveys and interviews that were conducted in order to collect primary data.

- Public Opinions
- Observatory Survey
- Structured Interviews

3.4.3.1 Public Opinions:

Field survey was conducted in order to gather the public perception regarding the public spaces. In order to do so, 156 questionnaires were collected from the public spaces. The questionnaire consisted of both open ended and close ended questions.

3.4.3.2 Sample size

In order to calculate sample size population of Peshawar has been projected from 1998 census to 2017 using a growth rate of 3.29. To determine the sample size Slovin's Formula has been used.

$$n = \frac{N}{1 + Ne^2}$$

Where: n = sample size

N = population size

e = margin of error

n=156

Sample size is 156 using 5% margin of error.

Table 5 Peshawar Population census

Year	Population	Growth Rate
1998 (census 1998)	982816	3.29 %
2017 (Census 2017)	1,970,042	

3.4.3.3 Observatory Survey:

Checklist of different dimensions was prepared in order to collect information regarding the existing situation of the public spaces.

3.4.3.4 Structured Interviews:

To establish a relationship between urbanity and sustainable urban development, a questionnaire was developed to obtain opinion of experts associated with architecture, urban planning, urban design and civil engineering. The experts belonged to different institutes like

Urban Policy Unit Peshawar, Peshawar Development Authority and professionals from other private institutes. The professionals approached for an expert opinion were asked questions related to the indicators of urbanity in relationship to sustainable urban development. The questions asked were divided in seven categories i.e. pedestrian path or walkability, Land use, legibility or clarity, Quality of public spaces, visibility and contact, Green space and vitality and social aspect. The responses from the interviews reflect that most of the professionals responded that there is a relation or strong relation among urbanity and sustainable urban development.

Table 6 Sample of Experts for Expert Opinion Survey

S.No.	Type	Number	Information Needed	Method
1	Architects	5	Link between SUD and urbanity	Structured Interview
2	Town Planners	5	Link between SUD and urbanity	Structured Interview
3	Engineers	5	Link between SUD and urbanity	Structured Interview
4	State Managers	5	Link between SUD and urbanity	Structured Interview
5	Development Authorities Personnel	5	Link between SUD and urbanity	Structured Interview

3.5 Data Compilation and Analysis

The primary and secondary data collected from different sources was analyzed using different software like SPSS and Microsoft Office.

3.5.1 Qualitative Data Analysis

Data collected through public opinion survey, observatory survey and expert interviews was analyzed using SPSS. Descriptive analysis and central tendencies were applied on data

collected through public opinion and observatory survey, and inferential statistics was applied on the data collected through expert interviews regarding the relationship between urbanity and sustainable urban development.

3.6 Work Flow Diagram

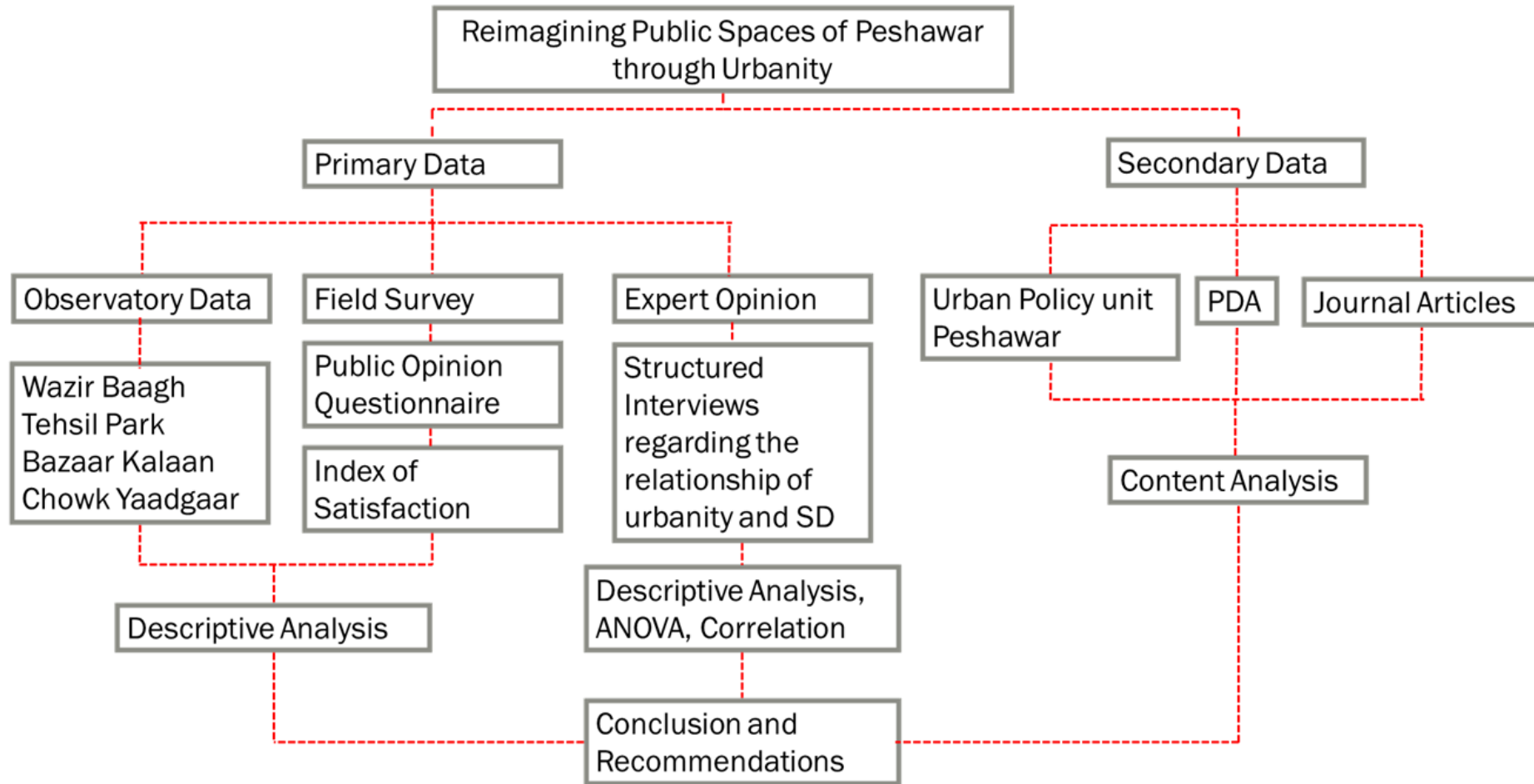


Figure 2 Work Flow Diagram

Chapter 4: Analysis and Discussion

4.1 Urbanity and Sustainable Development Nexus

The data collected from the professionals was first analyzed based on gender division. There were total of 11 female respondents and 19 male respondents. As seen in the figure 2 the results of the analysis shows that the percentage for strongly related and related options are higher than the other options. So, in the opinion of most of the respondents male and female the variables of urbanity are related to sustainable urban development.

The data was further analyzed based on occupation division. There were three categories of professionals i.e. architect, town planner and engineer. As seen in figure 3 the results for three categories of professionals are presented and the chart shows that there is opinion difference among the professionals mostly on the options whether the variable is related or strongly related. Other than that there is no major opinion difference among the professional. The charts clearly represent the relationship between urbanity and sustainable urban development.

Reliability statistics was performed on the overall data to check the internal consistency reliability for the scale with this sample and values above 0.7 are acceptable. The Cronbach's Alpha coefficient reported for this study is 0.84 which projects the reliability of urbanity variables. This shows that the relationship of urbanity scale shows good internal consistency with the sample.

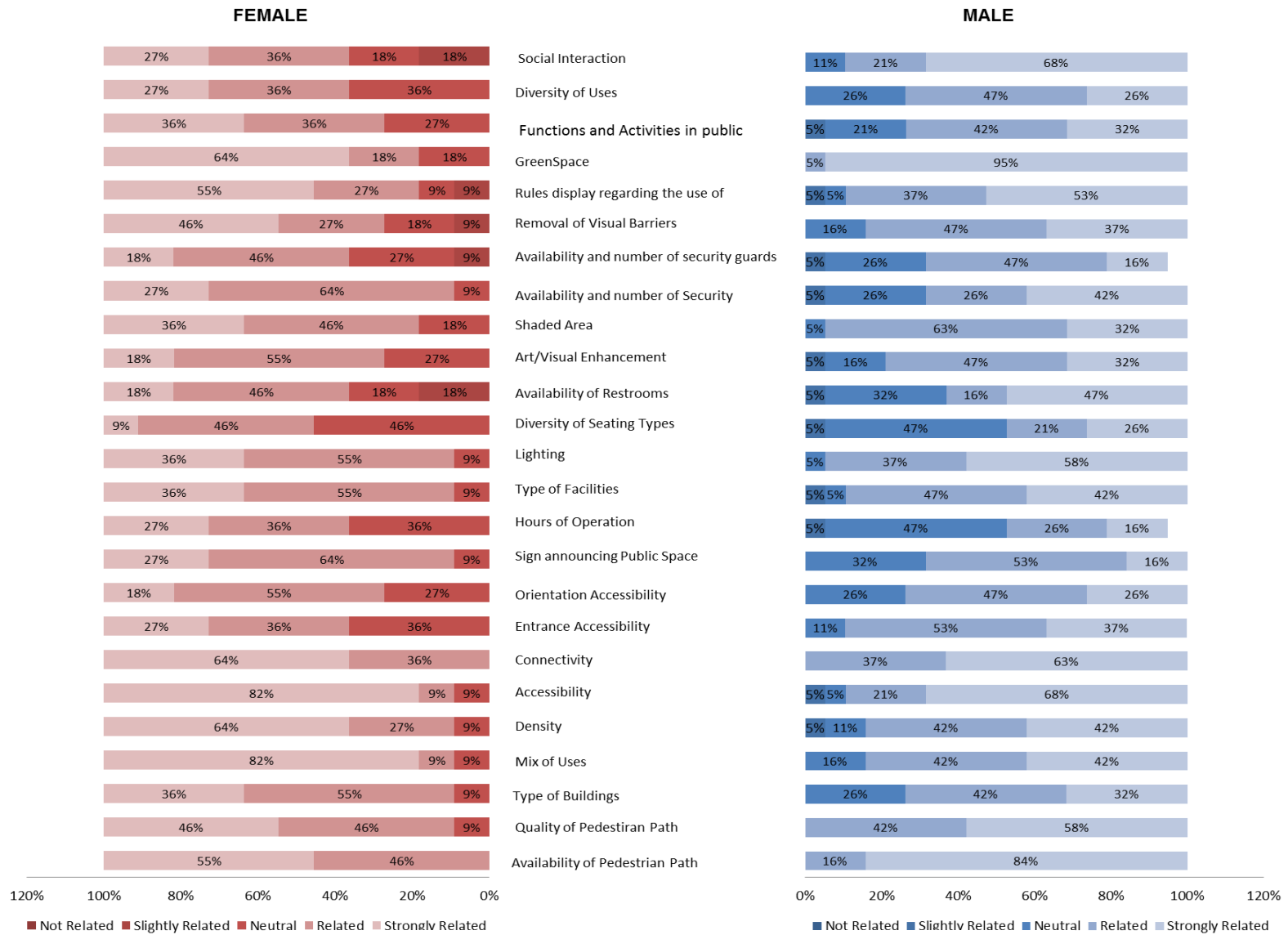


Figure 3 Urbanity and Sustainable Urban Development nexus

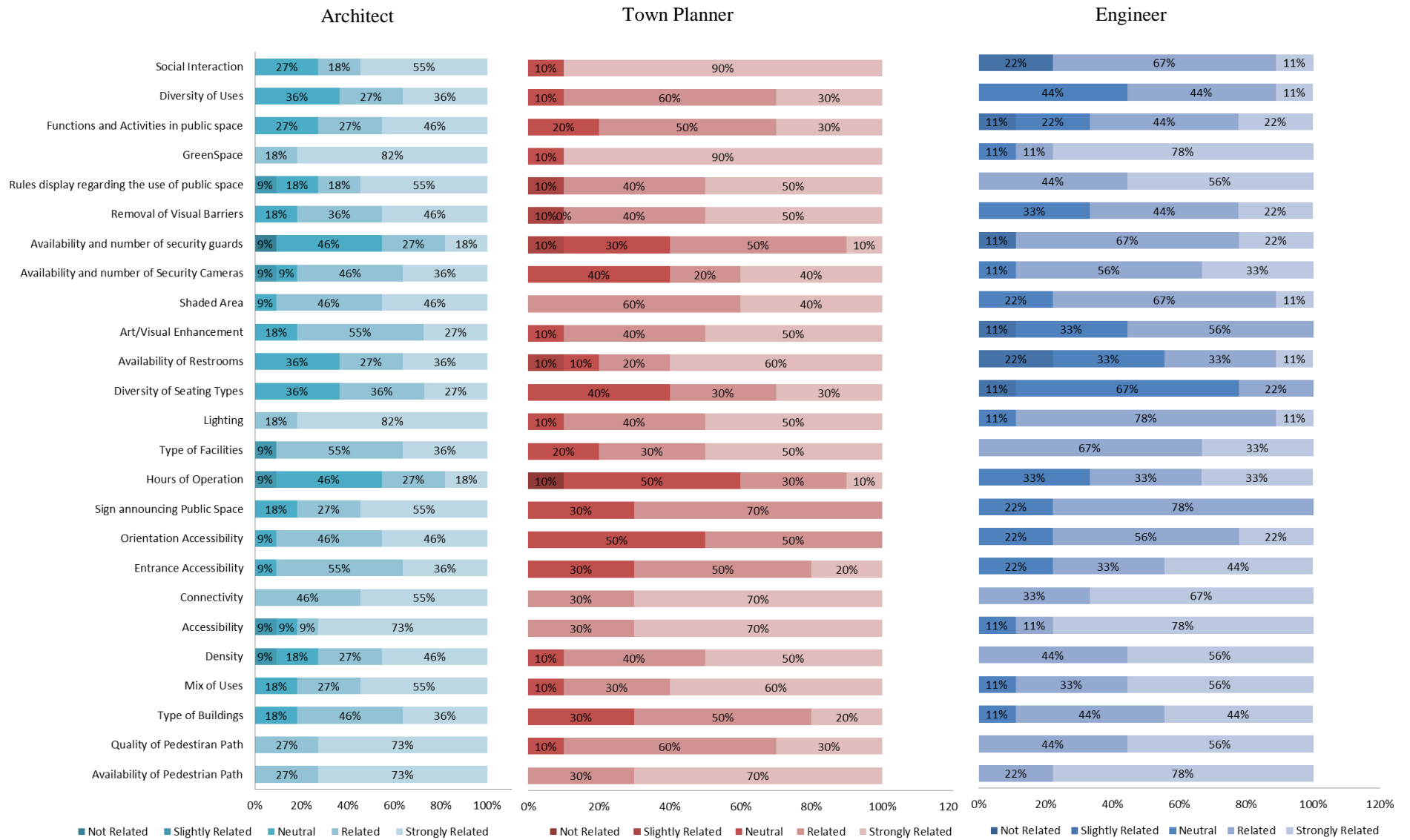


Figure 4 Urbanity and Sustainable Urban Development nexus

4.2 One-Way Analysis of Variance of Urbanity Variables in Relation with Sustainable Urban Development

A one way ANOVA between the seven categories of urbanity variables and occupation of the professionals was conducted to explore the opinion difference of different professionals regarding the relationship of urbanity and sustainable urban development. The variables were divided in seven groups as seen in table 5. There was statistically significant difference at the $p < .05$ level in two categories for urbanity variables i.e. legibility/ clarity and quality of public spaces. Post Hoc comparisons using the scheffe test indicated that the variance that exists in the two groups. In the legibility/ clarity variable the p value for architect and town planner is $p < .05$ ($p = 0.42$) and in the quality public spaces variable the p value for architect and engineer is $p < .05$ ($p = 0.35$) and the p value for town planner and engineer is also $p < .05$ ($p = .022$).

Table 7 One-Way Analysis of Variance of Urbanity Variables in Relation with Sustainable Development

			<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Green Space	Between Groups	2	.130	.065	.190	.828	
	Groups Within	27	9.236	.342			
	Total	29	9.367				
Pedestrian Walkability	Between Groups	2	.435	.217	1.196	.318	
	Within Groups	27	4.907	.182			
	Total	29	5.342				
Land Use	Between Groups	2	.213	.106	.561	.577	
	Within Groups	27	5.126	.190			
	Total	29	5.339				
Legibility / Clarity	Between Groups	2	1.596	.798	3.784	.036	
	Within Groups	27	5.695	.211			
	Total	29	7.292				

Quality of Public Spaces	Between Groups	2	2.055	1.027	5.382	.011
	Within Groups	27	5.154	.191		
	Total	29	7.208			
Visibility and Contact	Between Groups	2	.142	.071	.155	.857
	Within Groups	27	12.350	.457		
	Total	29	12.492			
Vitality and Social Aspect	Between Groups	2	2.150	1.075	2.886	.073
	Within Groups	27	10.057	.372		
	Total	29	12.207			

4.3 Correlation

The relationship between the seven categories of urbanity variables was investigated using Pearson product-moment correlation coefficient. There is a strong negative relation between land use and pedestrian space/ walkability $r = -.055$, $p < .05$. This shows that land use and pedestrian space/ walkability are inversely related which means if the relationship of land use increases with sustainable development and the relationship of pedestrian space/ walkability with sustainable development decreases. All the other variables show positive relationship. Green space has significant relationship with pedestrian space, legibility/ clarity, visibility and contact and vitality and social aspect. Green space has a strong and positive relationship with visibility and contact. Pedestrian space has medium correlation with green space and small correlations with other variables. Other than the negative relation of land use with pedestrian space, land use has a very strong relation with visibility and contact and very small relation with other variables. Legibilit/ clarity has very strong relation with green space and visibility and contact, and very small relation with other variables. Quality of public spaces has very strong relation with visibility and contact and vitality and social aspect which reflects if quality of public spaces increases there will be increase in visibility and contact and vitality and social

aspect. Visibility and contact has very strong positive relation with green space, land use, legibility/ clarity and quality of public spaces. Vitality and social aspect has very strong positive relation with green space and quality of public space and medium relationship with visibility and contact. All these positive relationships represent that increase or decrease in one variable will bring a positive change in another variable.

Table 8 Correlation

	1	2	3	4	5	6	7
1. Green Space	1						
2. Pedestrian Space Walkability	.398*	1					
3. Land Use	.253	-.055	1				
4. Legibility / Clarity	.413*	.247	.235	1			
5. Quality of Public Spaces	.294	.235	.220	.201	1		
6. Visibility and Contact	.528**	.247	.667**	.417*	.439*	1	
7. Vitality and Social Aspect	.463**	.106	.297	.156	.557**	.350	1

** . Correlation is significant at the level 0.01 level (2-tailed)

*. Correlation is significant at the 0.05 level (2-tailed)

4.4 Observational Analysis of Public Park and Neighborhood Park

Wazir Bagh is one of the oldest and historical public parks in city of Peshawar. It was built in 1810 and has great historical value. It covers approximately 16 acres of area. It is located outside and near walled city of Peshawar. The park consists of four enclosures and has a pavilion, mosque, football ground, two spacious lawns, and pond along with fountains, and old trees planted in it. Gor Khatri is a historical place in the walled city of Peshawar. It covers approximately 6.56 acres of area. The place includes a museum, cells, temple, ancient wall, fire brigade station, archeological excavation pit, new mosque and a park. The Tehsil Park is located inside the Gor Khatri, which is a historical site and it enjoys a lot of visitors from the surrounding neighborhoods. The Gor Khatri excavation work is currently not in progress due

to lack of funds. The site is rich in history with the presence of an ancient Hindu temple i.e. Gorak Nath Temple.

Both the parks are located in the urban area of the city. Wazir Bagh is a public park while Tehsil Park is a neighborhood park. The surrounding buildings are residential and commercial at the location of Public Park and most of the development is mixed used and is a high density area in the city while the surrounding development near Neighborhood Park is residential and connected to commercial area and as it is located in the walled city, it is also a high density area. Both the parks are very well connected to their neighboring residential areas through surrounding streets. The Public Park has three entrances and exits, in which two are gated and there are barriers on the entrances and entrances are not adequately lit, which makes the accessibility of the park below par. While on the other hand the neighborhood park has total of two entrances to the park and the exits are the same, and one of the entrance is constricted and the entrances are gated and the entrance is not adequately lit and there is no barrier blocking the entrance of the Park. The entrances of Neighborhood Park are on the street level but oriented away from the side walk .It was observed that there were no signs to give directions regarding the location of both the parks and also there were no signs announcing the public spaces while entering them. The operation hours of the Public Park are 24 hours but it is not accessible in the evening due to the poor lighting and poor security of the park, while the opening time of the neighborhood park is 8:30 am and closing time is 10:00 pm that is because of the availability of lighting and security. The museum and commercial activities in the Neighborhood Park closes at 5:00 pm.The pedestrian path leading to the Public Park is 8 feet wide and with less barriers which contributes to the better path continuity. The surface material of the path is brick and the condition of the path is fair with minor surface problems and minor obstacles. The pedestrian path leading to the Neighborhood Park was easily accessible but not adequately lit. The width of the path was not continuous it changed due to the building

encroachments. The surface material of the path was brick and the condition of the path was poor with major surface problems and significant obstacles. The continuity of the path was disturbed due to many barriers and construction debris lying on the path created many barriers. Both pedestrian paths do not meet the needs of all the users as it is not feasible for the people with physical disabilities.

The facilities that are available in the Public Park include mosque, playing area, sports ground, and sitting area and in neighborhood Park there are gardens and a mosque, but there is no proper ground for sports and no playing area for kids. There is no eating area in both the parks but street vendors are available outside the park which facilitates the visitors with snacks. There was no parking lot in both the parks which explains the on-street parking of motor bikes and bicycles. The seating type which is installed in both the parks is permanent seating. As far as the waste management of the parks is concerned there are wastes bins installed in every garden of the park and are in very good condition. But the overall cleanliness of the public space is very poor, due to the poor waste management and people littering in the gardens and there is no checking system to control the littering in the gardens. The public park cleanliness condition was worse than the neighborhood park. The major issue which has been observed during the observatory survey in both the parks is that there were no public toilets available. In neighborhood Park the male visitors used the toilets of the mosque but there was no facility for female visitors. The only visual art available in the Public Park was fountain in the pond, which was not functional and the pond was filled with litter which created very unpleasant environment in the park.



Figure 5 Condition of Fountain in Wazir Bagh

There are two fountains in the neighborhood park which are not operational but were clean and the condition was quite satisfactory. The Public Park is quite protected from the weather, there are shaded areas available and also the old peepal trees provide a natural shade while in Neighborhood Park there is no shaded area to get protection from weather. As far as the lighting of the public park is concerned there was not any type of lighting installed in the park due to lack of lighting visitors tend to leave the park in the evening while in neighborhood park the light poles are installed in the garden but not adequate for the park and half of them are not operational but there was some lighting so visitors tend to stay in the park in the evening.



Figure 6 Fountain in Tehsil Park was not operational but was in good condition

The security and visibility of the public park is below par as there were no security cameras in the park and only two security personnel were available. The security of the Public park was very low due to which families don't visit the park and the visitors usually don't stay till evening. The security of the neighborhood park was better than that of the public park because, there were five security personnel but security cameras were absent. Lighting and visibility of both the parks also played a major role in the security of spaces. The rules regarding the use of the public space were not displayed in both the parks but both the parks being historical places the information regarding the history of the places were displayed. The entrance of both the parks was clear from any visual barriers; there were no billboards and electric wires to create an unpleasant visual barrier. There were no restricted areas in Public Park but there was one garden restricted in Neighborhood Park, the information regarding the area was not displayed but it was locked down so no one could use it. The restricted area was only used by the community for funeral prayers and was sometimes opened for female visitor.

Wazir Bagh was popular for its old peepal trees and overall greenery of park. But with time the beauty of the park got destroyed due to less awareness regarding the heritage. There were many types of fruit trees in the park but very few of them are left in the park. The most prominent types of trees present there are date palms and peepal trees, along with many other types of plants. The greenery in the neighborhood park was quite enough, there was an old historical Banyan tree. The ground cover of some gardens had deteriorated with use and was not well kept. Other than that maintenance of plants and trees was required and there was a need for some more plantations.



Figure 7 Garden in Teshsil Park

4.5 Observational Analysis of Commercial Area and Square

The Cunningham Clock Tower in Peshawar, was constructed in 1900. The tower was named after Sir George Cunningham, former British governor and political agent in the province. The clock tower is connected to different commercial streets. The street selected for this study is bazaar Kalan and its total length is 447 meters. The other end of the street is connected to Gor Khatri. Chowk Yadgaar “the square of remembrance” is a historical place and is situated in the

heart of the walled city of Peshawar. Its total area is 0.57 acres. It was first built in 1892 AD in the memory of Colonel C. Hastings the first British Commissioner of Peshawar (Jaffar, 2008). The structure of the memorial has changed many times in the past and has been dedicated to many heroes and victims of different incidents in the past. The current structure of the memorial is a dome shaped structure and the surrounding area is designed for sitting.

The development in commercial area is mixed use. The surrounding development is mostly commercial, residential and institutional in both commercial area and square. The Major Street and bazaars converge at the square. The commercial street and square are located in the walled city of Peshawar which is the high density part of the city. The street is easily accessible and connected to other streets through secondary streets. The Commercial Street and square are located in the urban context. The memorial being in the center is easily accessible from the surrounding streets.

There is facility for pedestrians in the commercial street, but the condition of the sidewalk is poor with major problems and significant obstacles. The width of the pedestrian path is 7 feet but due to encroachments on the path, it is very difficult to walk on the path. There are many barriers on the path in the form of waste disposal and shop vendors encroachment. The surface material of the path is brick but the surface is in very poor condition. The pedestrian path does not fulfill the needs of all the pedestrians. To reach the square users has to cross heavy traffic road without any zebra crossing and the pedestrian paths in the neighboring streets are not directly connected to the square. Only one side of the square is connected to the pedestrian street.



Figure 8 Encroachment on Pedestrian path in Bazaar Kalaan



Figure 9 Parking on the pedestrian path in Bazaar Kalaan

There are two entry point in the memorial square and are not adequately lit. The commercial area and square are not adequately lit and the overall lightning of the street square is below par. There is a parking lot in the basement of the memorial square and different steps have been provided for sitting while there is not any type of seating available in Commercial Street. The commercial street and square are operational 24 hours with no blockages at the entrance .There

are no waste bins and public toilets available in the commercial street. The overall cleanliness of the place is very poor and the waste is disposed on the street, which creates a bad smell in the area. There is not any kind of waste bins available in the square and the garbage from the surrounding commercial area is disposed in the square creating foul smell and unpleasant visual experience. The only visual attraction present is the clock tower in the commercial street, there is no other visual enhancement. The dome shaped structure in memorial square which represents the monument at center is vandalized with the graffiti on the structure. The square is also a center for many political activities.



Figure 10 Vandalised memorial and cleanliness condition of Chowk Yadgaar

The overall visual quality of the square and commercial street is being disturbed by the electric wires passing through the street and square. There is no shaded area to get protection from the weather in Commercial Street while the only shaded area present in the square is the dome

shaped structure which provides shade to some extent. There is a lot of encroachment on the side walk of the commercial street which makes it impossible for the pedestrians to use the sidewalk. There is no sign announcing the space nor any rules regarding the use of the space are displayed. There is no greenery in the street, not a single plant or tree. There are few plants in the square but due to negligence and vandalism the greenery of the square has been destroyed. The overall security of the place is very low, there are no security cameras and security guards to take care of the place and maintain the behavioral control. The place of such significance needs maintenance and authorities needs to take action to revitalize the actual sense and value of the space.

Table 9 Observatory Data Results

Parameter	Indicator	Public Park (WazirBagh)	Neighborhood Park (Tehsil Park)	Commercial Street (Bazaar Kalan)	Square (Chowk Yadgaar)
Pedestrian Space / Walkability	Pedestrian path availability	●	●	●	○
	Is the path easily accessible?	●	●	●	○
	Is the pedestrian path adequately lit?	●	○	○	○
	Do pedestrian facilities address the needs of all pedestrians?	○	○	○	○
Land Use	Type of buildings in study area?				
	Commercial	●	●	●	●
	Residential	●	●	●	○
	Institutional	○	○	○	●
	Corporate	○	○	○	○
	Recreational	●	●	○	○
	Is the development mixed used?	●	●	●	●
	What is the density of the Study area? High	●	●	●	●
	Is the public space easily accessible?	●	●	●	○
	Is the study area easy to enter?	●	●	●	○
	Is the study area easily connected to surrounding streets?	●	●	●	●
What is the surrounding context of the study area? Urban	●	●	●	●	
Legibility / Clarity	Do the entrances and exits have gates?	●	●	○	○
	Are the entrances adequately lit?	○	○	○	○
	Is there any barrier blocking the visibility of the entrances?	●	○	○	○
	Is there sign announcing the public space?	○	●	○	○
	Are there signs posted to direct to the public space?	○	○	○	○

Quality of Public Spaces	Are the following facilities available?				
	Parking Lot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
	Public toilet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Sport Area	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Playing Area	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Praying Area	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
	Sitting Area	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
	Eating Area	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
	Street Vendor	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	Is the lighting of the public space adequate?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Is there any type of seating available?	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Are there any waste bins available?	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Is there any art or visual enhancement (Minor Installation, Interactive installation, Statues, monument, and fountains)?	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	Is there any permanent or temporary shaded area?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Visibility, Contact and Security	Is there any security cameras?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Are the available cameras operational?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Are there any security personnel?	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Are there any visual barriers?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	Is there any encroachment?	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
	Are there any electric wires contributing to visual pollution?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	Are the rules displayed regarding the use of public space?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Is there any Restricted areas?	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
	If yes, are the rules regarding restricted area displayed?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Green Space	Are there any trees and plants?	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Vitality and social Aspect	What type activities are taking place in the study area?				
	Recreation	●	●	○	○
	Commercial	○	●	●	○
	Sport	●	○	○	○
	Political Activity	●	○	○	●
Social Interaction	●	●	●	●	
<p>● Means 'YES'; ○ means 'NO'</p>					

4.6 Activity, Usage and Proximity of Public Park and Neighborhood Park

Wazir Bagh being the only park in that location has quite high visitors flux. As seen in Table 1 there is a high percentage of male visitors which accounts for 100%. The reason for such high percentage is that Peshawar has a male dominant society and also the security of the place is below par and there are no amenities for female visitors. There is a high percentage of 20 to 30 and 31 to 40 age ranges which accounts for 58% and 18% respectively and a very low percentage of people aged 60 and above were seen and interviewed in the study area. The reason for younger age groups to visit is that it is easy for them to walk through heavy traffic and poor pedestrian path condition and it's difficult for 60 and above aged people to walk or cross the road through heavy traffic and walk on poor quality pedestrian path.

Tehsil Park being in high density development enjoys high flux of visitors. There are 81% of male visitors and 19% female visitors. As seen in the previous location there is a good percentage of female visitors the reason for that is in tehsil park there is a separate garden for females only and they feel comfortable in places specially designated for females, keeping in mind the social dynamics of the city. But still the percentage of the female visitors can be increased with provision of more amenities for women. As far as the age ranges are concerned there is a high percentage of 20-30 and below 20 age ranges i.e. 44% and 23% and a very low

percentage of below and above 60 age range. This analysis of age groups justifies the poor provision of pedestrian amenities.

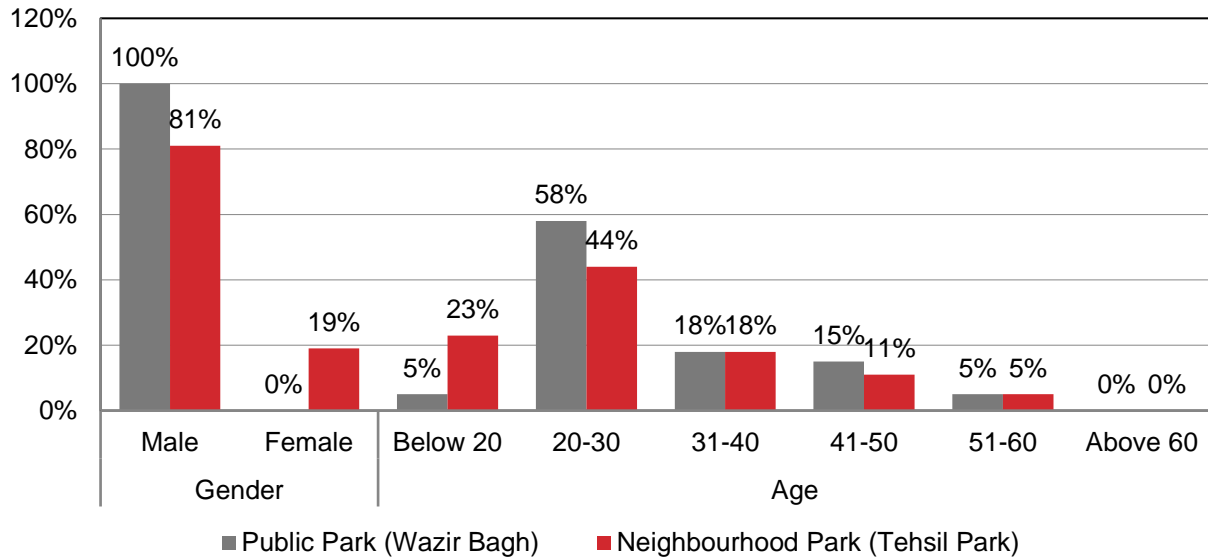


Figure 11 Demographic data of Visitors in Wazir Bagh and Tehsil Park

The public interviews and questionnaire revealed that in Public Park 98% of the visitors live nearby, and the maximum travel distance travelled by the visitors is less than 5 km, 88% visitors travel less than 5 km. Only 13% visitors travel 5-10 km distance. The results revealed that the most favorable choice of mode for the visitors is by foot, 90% of the visitors walk to the park. The main reason for this choice of mode is a lot of respondent use this mode for recreation and also they live nearby.

The result shows that in Neighborhood Park 91% people visiting the park live near the park. 83% had to travel less than 5 km distance and 14% travel 5-10 km distance. The results revealed that 81% come to the park by foot and 7% uses bike. The choice of mode is related to the proximity of the park which is located in the residential area and most of the visitors live nearby.

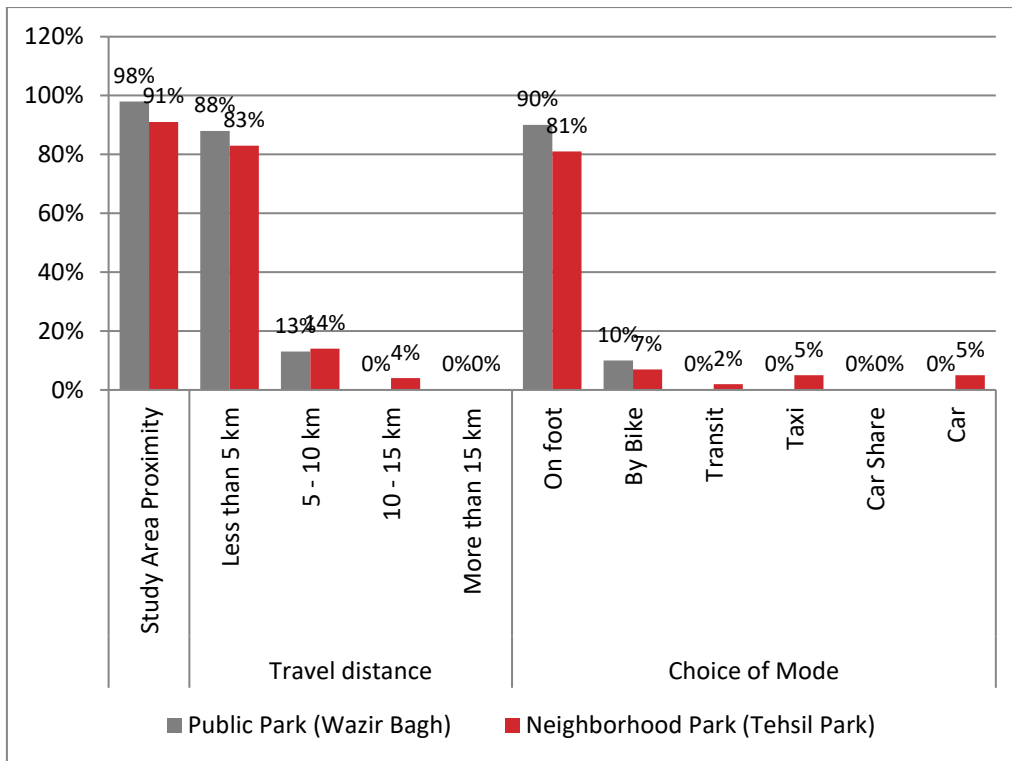


Figure 12 Catchment area of Wazir Bagh and Tehsil Park

As far as the usage of the Wazir Bagh is concerned, 60% of the visitors visit it weekly and only 35% are daily visitors. The reason for visiting weekly is that most of the people visit the park on weekends and people with jobs can't visit it on working days because of low security and poor lighting of the park. 48% visitors visit the park with friends. People visit the park to get entertain themselves by hanging out with their friends, which can be reflected from the high percentage of entertainment i.e. 65%. 27% of the visitors were visiting for recreation and socializing and 18% were there for sports. There is separate ground for sports in Wazir Bagh and a lot of teenagers and adults were seen playing cricket and footfall in the park.

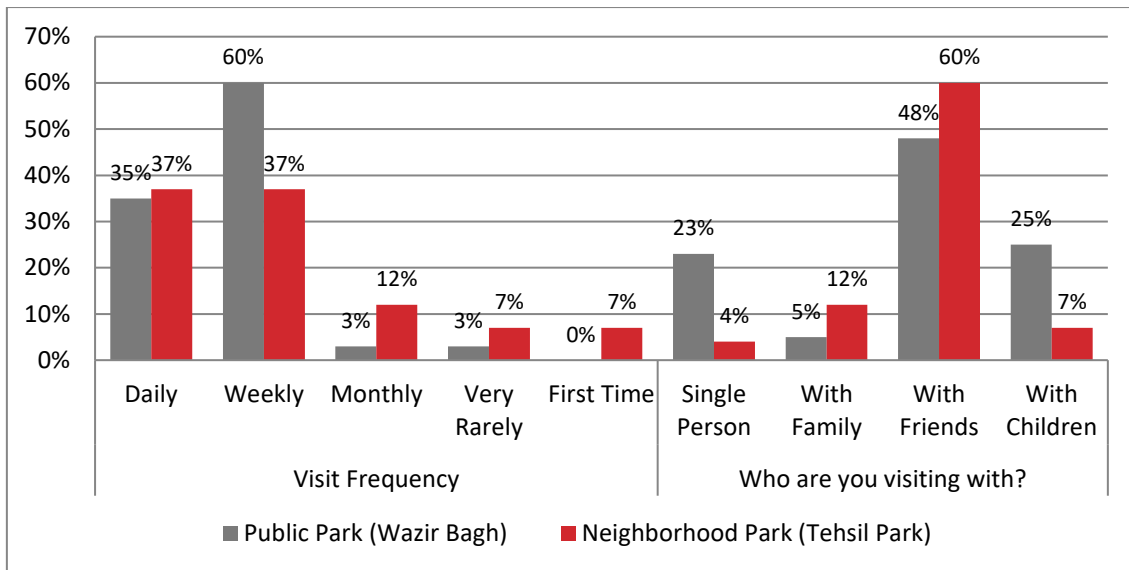


Figure 13 Visit Frequency (Wazir Bagh and Tehsil Park)

As seen in the figure above the visit frequency of daily and weekly visitors in Neighborhood Park is same i.e. 37%. The main reason for that is due the flexible timings of the park and also the security and lighting of the park. Although the lighting is below par and need improvement. The other reason is it being located in the close proximity of the neighborhood development. 60% of the visitors were visiting with their friends and only 12% with their family members. The reason for high percentage of people visiting with friends also justifies the high percentage of people visiting for the purpose of recreation and socializing i.e. 79%. Other than that some people visit the park because they live nearby i.e. 30% and 35% were there for entertainment.

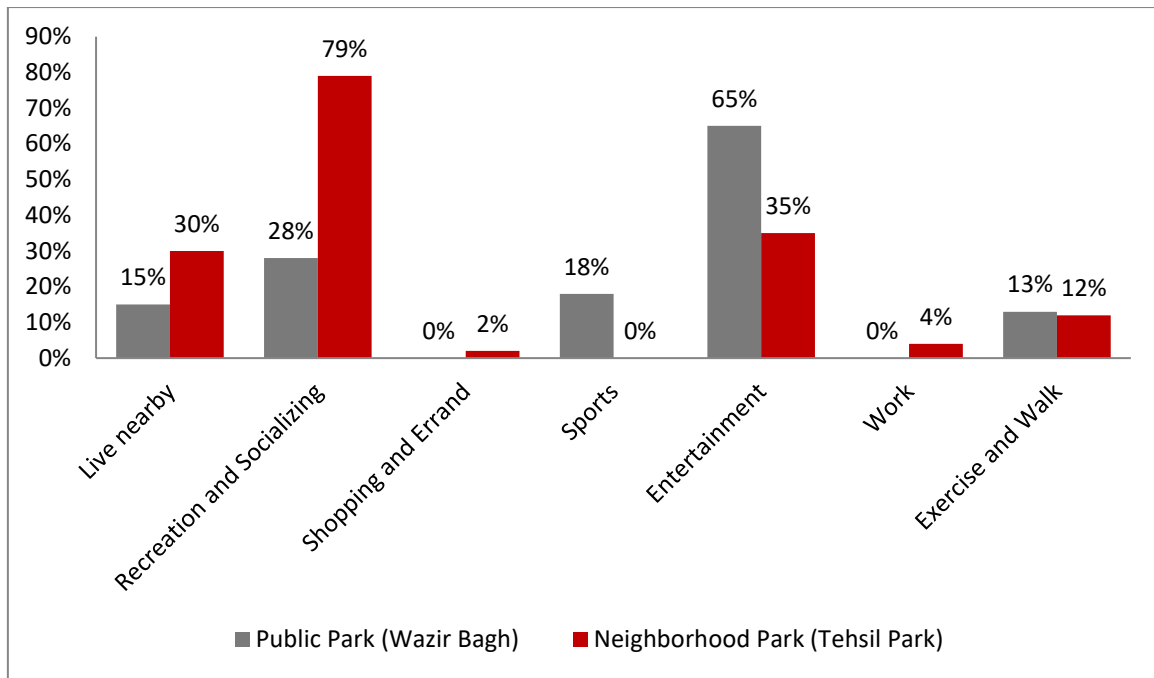


Figure 14 Purpose of Visit (Wazir Bagh and Tehsil Park)

Many visitors who were visiting the public park to relax and socialize and enjoy the gardens were disturbed by the people playing sports in the gardens instead of the designated sport ground. After interviewing the visitors playing cricket and football, it was revealed that the ground provided for sports is a plain dirt ground while playing there they get irritated by the dust and the ground does not meet the requirements of a sports ground.

4.7 Satisfaction level of community towards existing facilities in Public Park and Neighborhood Park

The satisfaction level of the respondents with the existing facilities was determined by Yeh's Index of Satisfaction developed by Yeh (Yeh, 1972). The index score of +1.00 represents the high level of satisfaction; 0.00 stands for very low level of satisfaction and -1.00 and below values indicates dissatisfaction of the respondents. This index has been used in many studies and has been proven very efficient in establishing the satisfaction level of respondents in the studies (Abdu, et al., 2014). The index of satisfaction is calculated as follows:

$$YIS = \text{Satisfies cases (X1)} - \text{Dissatisfied cases (X2)} / \text{Total cases (X)}$$

$$YIS = X1 - X2 / X \text{ (Abdu, et al., 2014)}$$

Wazir Bagh (Public Park) is situated in the high density area of the city and have a high flux of visitors. It is being in the oldest part of the city have single roads and quite narrow streets and there is traffic congestion on the roads. It's quite hard for the people to maneuver through those roads and there are no zebra crossings. As depicted in Table below participants are highly dissatisfied regarding the safety from vehicles, parking, and very low level of satisfaction regarding pedestrian path. The quality of pedestrian path is not up to the mark and does not meet the requirements of all the users. The visitors are also dissatisfied with the cleanliness of the park which can be seen in the form of poor quality of fountains in ponds, and also litter was lying in the gardens. As shown in the Table 4 visitors were very dissatisfied with almost all the attributes of the park which were are observed in the observatory survey that due to lack of maintenance and operational deficiencies park is in a bad condition. Wazir Bagh being popular for its greenery has lost its greenery due to lack of maintenance and the participants showed a very low level of satisfaction with the overall greenery of the park.

Tehsil Park is located in the walled city of Peshawar, in the oldest part of the city. This part of the city has high density development as compared to other parts of the city. Tehsil park surrounding development is mostly residential, which is why it enjoys the high flux of visitors. The users were dissatisfied with the maintenance of the park that is because there were broken benches and lights. The visitor were dissatisfied with the protection from weather, shading and toilets, because there was not any kind of shading or space to get protection from weather, and one major problem was that there were no public toilets. They showed medium level of satisfaction with the cleanliness of the park that was due to the usual littering done by the kids and some adult; otherwise the park authority was quite efficient regarding the cleanliness of

the place. As far as the security of the park is concerned users showed a very low level of satisfaction, which can be improved with the provision of security cameras. The park is in residential area, so, there is very low traffic, users showed very high level of satisfaction in this regard. Pedestrian path had many barriers and construction debris created barriers on pedestrian path and the width of the pedestrian path was not continuous due to building encroachments, that's why users showed medium level of satisfaction. The visitors of the park showed very high level of satisfaction with the greenery of the park, because most of the gardens were well kept and there were some old historical trees which created a beautiful visual experience. There were no praying area for women, eating area, parking, and public toilets, which is why users showed dissatisfaction with available facilities and parking.

Table 10 Yeh's Index of Satisfaction (wazir Bagh and Tehsil Park)

Indicators	Yeh's Index of Satisfaction (Public Park)	Level of Satisfaction	Yeh's Index of Satisfaction (Neighborhood Park)	Level of Satisfaction
Cleanliness	-0.65	Dissatisfied	0.425	Medium level of satisfaction
Maintenance	-0.825	Dissatisfied	-0.025	Dissatisfied
Security	-0.725	Dissatisfied	0.1	Very low level of satisfaction
Protected from weather	-0.7	Dissatisfied	-0.6	Dissatisfied
Safe from vehicles	-0.2	Dissatisfied	1.05	Very High level of satisfaction
Parking	-0.975	Dissatisfied	-1.075	Dissatisfied
Lighting	-0.95	Dissatisfied	-0.3	Dissatisfied
Available Facilities	-0.6	Dissatisfied	-0.575	Dissatisfied
Greenery	0.25	Low level Satisfaction	0.8	Very High level of satisfaction
Pedestrian path	0.05	Very low level of satisfaction	0.5	Medium level of satisfaction
Street Furniture	-0.9	Dissatisfied	0.2	Low level of Satisfaction
Shading	-0.725	Dissatisfied	-0.775	Dissatisfied
Furniture	-0.975	Dissatisfied	-0.025	Dissatisfied
Public Toilets	-1	Dissatisfied	-1.3	Dissatisfied

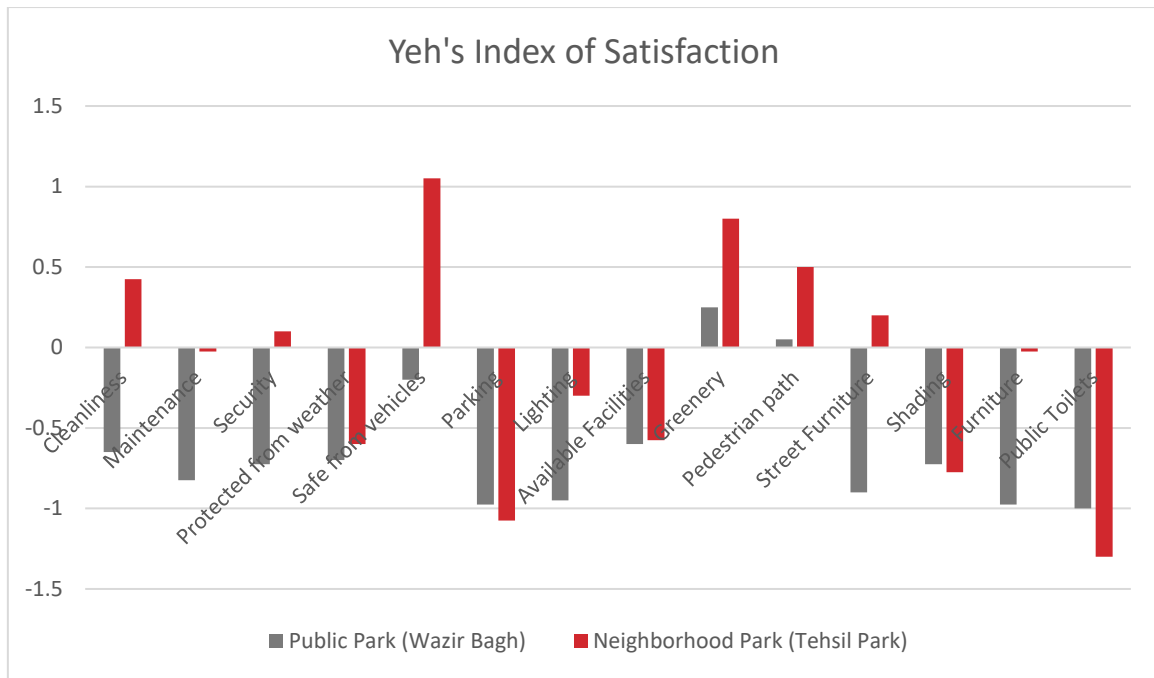


Figure 15 Yeh's Index of Satisfaction (Wazir Bagh and Tehsil Park)

4.8 Activity, Usage and Proximity of Commercial area and Square

Bazaar Kalan is located in a high density area of the city. This quite busy street in this part, the street has food shops, small restaurants, pharmacies, utility stores. The gender distribution in the commercial street is 100% male and 0% female. The reason for the 0% of female is that there were female on the street but they were not willing to talk and they were very few in number. The age ranges that is 20-30 and 31-40 has highest percentage i.e. 42% and 40% respectively and low percentages of older age ranges. The reason for low percentage of older people is due to the below par quality of the pedestrian path, and it is hard to walk through the traffic and encroachments.

Chowk Yadgaar is at the center of the walled city and many major streets merge there. Most of the people rest and some passerby's enjoy sitting there. According to the public opinion survey it has been revealed that 100% users are male, and even in observatory survey it was observed that there were not a single female visitor in the square. Women don't visit the place due to the

cultural and societal dynamics of the city and also there are no amenities to cater the needs of the female users. The age ranges that has highest percentage are 20-30, 31-40, and 41-50 with 32%, 34% and 24% respectively. The age ranges discussed previously are in high percentage because some of them work in the surrounding areas and for older age ranges it is hard to walk on the roads with heavy traffic and with no pedestrian facilities.

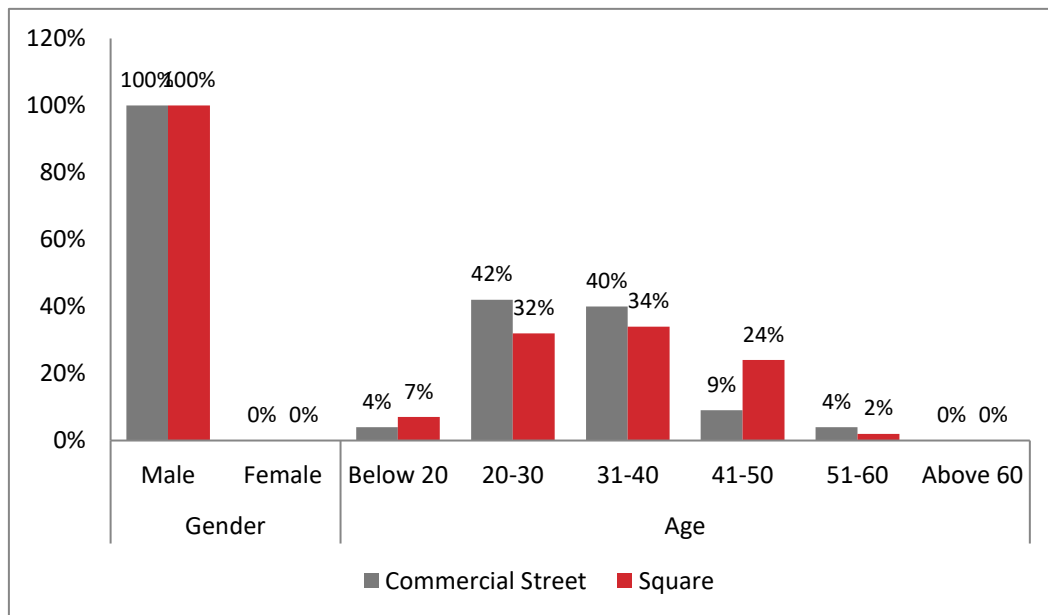


Figure 16 Demographic data of Visitors in Bazaar Kalaan and Chowk Yadgaar

The commercial street is located in mixed use development. There the surrounding development is residential and Table 10 shows that 62% visitors live nearby. The field survey revealed that 36% users travel less than 5 km distance and 29% travel 5-10 km distance and 27% travel more than 15 km. the results show that some people travel long distance to visit the street that is because this street is popular for its food. The results for the choice of mode revealed that 36% users visited the place by foot and 22% by bike and 20% used taxi (Rickshaw) to visit the place. Some users who visited from far used car share and car. The percentage of pedestrians can be increased by improving the pedestrian facilities. The percentage for bikes is more than cars because there is a private parking lot for bikes on this street and it is also easy for bike to maneuver through such a busy and narrow street.

The field survey revealed that 83% of the visitors live in the close proximity of the square. Beyond these commercial streets the most of the development is residential and the residential areas connected to commercial areas through secondary streets. The travel distance also shows that visitors don't travel long distances to visit the place, i.e. 66% travel less than 5 km and 25% travel 5-10 km distance. Due to heavy traffic and proximity to the place 61% visits the place by foot and 27% uses bike as it is a faster mode to travel.

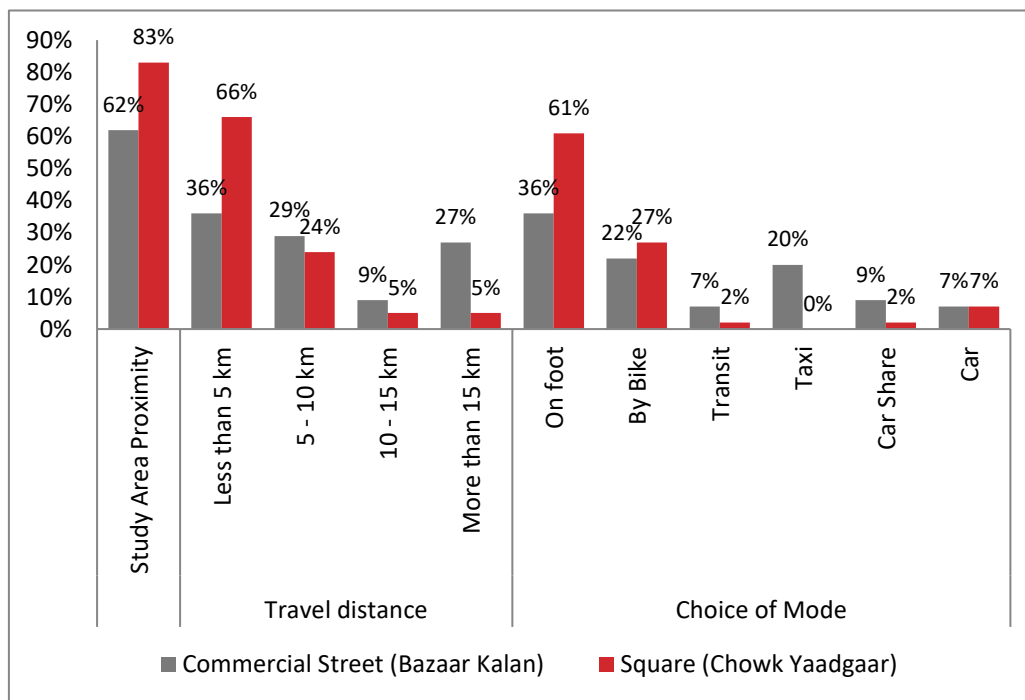


Figure 17 Catchment area of Bazaar Kalan and Chowk Yadgaar

As far as the visit frequency of the visitors is concerned 36% are daily user and 33% are weekly visitors of Commercial Street. There are some visitors who visit the street several times per month and some were visiting it for the first time. People visit the street because of it's a heritage site and located in the oldest part of the city. Table 11 shows the high percentage of visitors visiting alone i.e. 44 %, that is because some people work in this street and some were there for shopping and 36% users visited with friends and 31% with family.

The survey conducted revealed that Square has 73% are daily visitors and 22% are weekly visitors, and some visit it monthly and very rarely. Among these visitors 56% are visiting alone because either they work in the nearby commercial area or they are there for shopping. As far as the activities in the square are concerned user visit there for sitting and relaxing, users visiting with friends are there to get entertain and socialize. 37% visitor’s purpose of visit is to entertain them and 34% are visiting for shopping purpose, 22% visit the place just because they live nearby and work nearby.

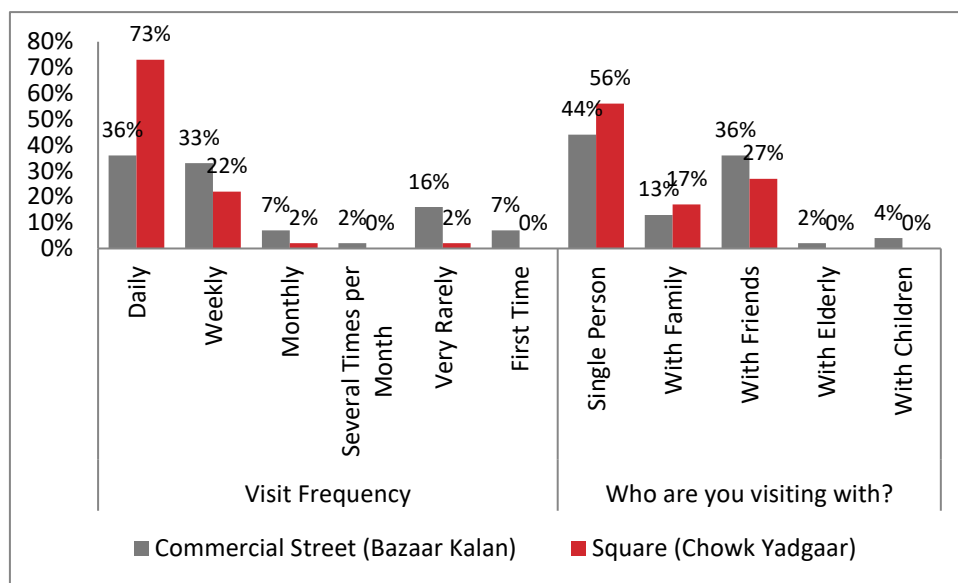


Figure 18 Visit Frequency (Bazaar Kalan and Chowk Yadgaar)

The purpose of visit results for commercial street revealed the highest percentage of shopping i.e. 71% that is clearly because it is commercial area, but some people were there for shopping and also visiting with friends to socialize i.e. 47% for recreation and socializing. Some of the users visited the place just because they live nearby and some were there for entertainment. But there is a very low percentage of exercise and walk that is because the poor pedestrian facility and the cleanliness of the place was also very poor.

The activity in the square can be increased with maintenance and introducing new and better facilities. The square is also used for political activities before and during elections many

political processions takes place in this square because it is located in the center of the city. The major problem that people face there is the absence of public toilets in the neighboring commercial area due to which people use the square as a public toilet. This creates a foul smell in the area and the place is not cleaned on the daily basis, the square is cleaned after two or three days. The authorities need to take action to preserve and maintain such historical and most famous place of the city.

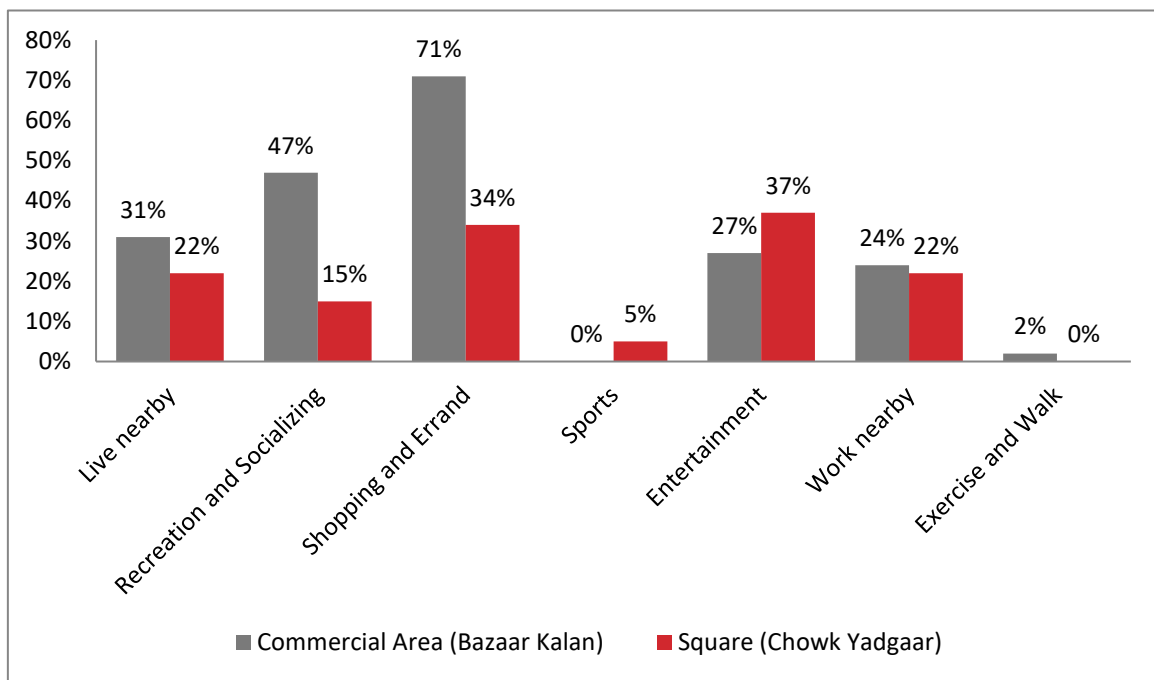


Figure 19 Purpose of Visit (Bazaar Kalan and Chowk Yadgaar)

4.9 Satisfaction level of community towards existing facilities in Public Park and Neighborhood Park

Bazar Kalan is popular street among the residents of the Peshawar city. It being located in the walled city and oldest part of the city it also enjoys a lot of tourists. The public opinion survey regarding the satisfaction level of the users with the street revealed that the users are highly dissatisfied from the place. The cleanliness of the place is very poor and waste disposed on the street creates bad smell and a very unpleasant visual view. There is no lighting in the street, the only light present in the night from the shops and food shops are open late in the night people

visit the street for food and dining in the night, so the lighting is very important aspect of the street. The pedestrian path is in poor condition and it is almost impossible to walk on the path due to the encroachments and the user had to walk on the road along the moving traffic, which is highly unsafe. Overall the users are dissatisfied with the current condition of the street and it needs maintenance and introduction of some new facilities.

The current situation of the square is below par and needs complete maintenance and behavioral control. The results from observatory survey revealed that the overall condition of the place is very poor. As far as the user satisfaction is concerned the results are shown in the Table 16 users are highly dissatisfied with almost every aspect of the place.

Table 11 Yeh's Index of Satisfaction (Bazaar Kalan and Chowk Yadgaar)

Indicators	Yeh's Index of Satisfaction (Commercial Area)	Level of Satisfaction	Yeh's Index of Satisfaction (Square)	Level of Satisfaction
Cleanliness	-0.95	Dissatisfied	-1	Dissatisfied
Maintenance	-1.05	Dissatisfied	-0.85	Dissatisfied
Security	-0.15	Dissatisfied	-0.375	Dissatisfied
Protected from weather	-1.075	Dissatisfied	-0.55	Dissatisfied
Safe from vehicles	-0.8	Dissatisfied	-0.125	Dissatisfied
Parking	-1.1	Dissatisfied	-0.3	Dissatisfied
Lighting	-1	Dissatisfied	-0.825	Dissatisfied
Available Facilities	-0.925	Dissatisfied	-0.75	Dissatisfied
Greenery	-1.125	Dissatisfied	-0.3	Dissatisfied
Pedestrian path	-0.575	Dissatisfied	-0.15	Dissatisfied
Street Furniture	-1.125	Dissatisfied	-0.45	Dissatisfied
Shading	-1.125	Dissatisfied	-0.7	Dissatisfied
Furniture	-1.125	Dissatisfied	-0.65	Dissatisfied

Public Toilets	-1.1	Dissatisfied	-0.8	Dissatisfied
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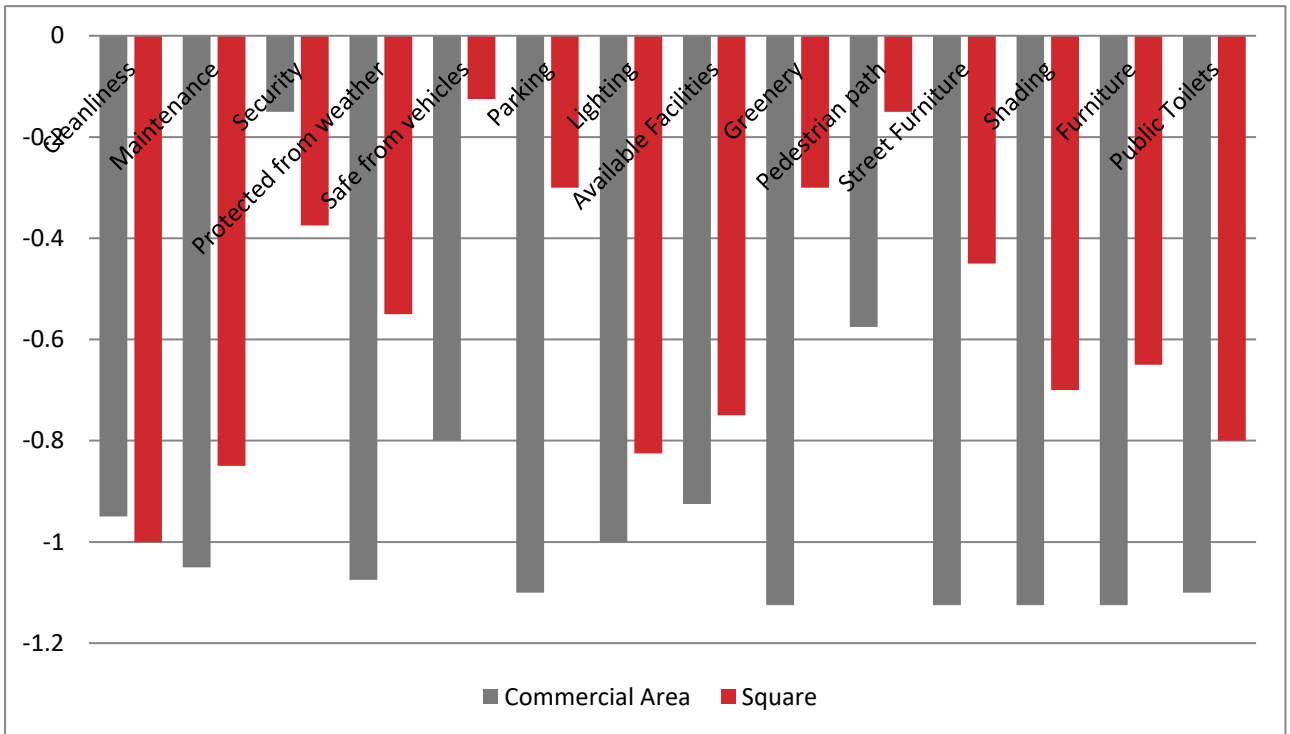


Figure 20 Yeh's Index of Satisfaction (Bazaar Kalan and Chowk Yadgaar)

Chapter 5: Conclusion and Recommendations

5.1 Conclusion

Public spaces play a major role in developing the image of the city. They are most important aspect in effecting people's quality of life. Public spaces are now the part of sustainable urban development which shows that now globally and collectively this issue should be put forward. After reviewing literature it was revealed that the concept of urbanity which deals with many aspects of public spaces and the concept focus on developing the character of the city and also improving the quality of life. New developments are very automobile oriented and less focus is being given to the pedestrian facilities and eventually making the public spaces more congested with traffic. Peshawar the city once was popular for its gardens have now lost this identity due to negligence of authorities towards public spaces.

The current study assessed the present situation of the public spaces which can help in improving the situation of the public spaces through policy measures. The major gaps that were identified in this study were the lack of pedestrian facilities, lack of maintenance of public spaces, lack of basic facilities of drinking water and restrooms and lack of sense of security. The other major issue which was quite dominant in all the study areas was that the public spaces were not gender inclusive, male dominance was prominent.

In the analysis of Wazir Bagh and Tehsil Park, both the parks have historical value and can be great people attractors lacked some basic amenities, the most important thing that has been concluded from the analysis is that Wazir Bagh is not a gender inclusive park. Wazir Bagh is Public Park and lacked the most basic amenities for women. The Chowk Yadgaar and Bazaar Kalan analysis revealed the lack of some very important amenities. The public opinion survey shows that citizens are dissatisfied with the current situation of the places.

From all the surveys and literature it has been concluded that the city has lost its urbanity in the course of time due to increase in population and changes in the dynamics of the society and

culture. People are the most important entities of the public spaces. They bring life, culture, and build the character of the space. So, it is important that public spaces should cater the needs of all the users and should be inclusive in nature. By implementing urbanity will help in shaping the image of the city and will also help in improving the environmental conditions and will ultimately help people in reclaiming the public spaces and the city of Peshawar can also reclaim its image as “the city of gardens” once again.

5.2 Recommendations

The concept of Urbanity can help in achieving quality public spaces and more inclusive public spaces. Following are some of the recommendations for reclaiming urbanity in study area:

1. The public spaces should be monitored in a regular manner to review whether the spaces designed for a specific activity are used in that manner; the monitoring of spaces will help in providing future measures.
2. Removal of encroachments from pedestrian paths and improve the surface quality of the path and removing any kind of barriers that are blocking the pedestrian paths in Bazaar Kalan.
3. Traffic management is very important in bazaar kalan to ease the congestion in the street.
4. Pedestrian crossings are required near chowk yadgaar so it can become easier for pedestrians to access the square.
5. Removal of visual barriers like electric wires and advertisements on the building facades and enhance the visual quality of the street by conserving and maintaining the historical building facades in the streets.
6. The provision of adequate lighting in all the study areas to improve the visibility and safety of the public spaces.

7. Provision of amenities for female is also required in all the study areas like restrooms and praying areas so, that the places can become more inclusive.
8. Provision of security cameras is required in all the public spaces in order to increase the safety and sense of security in the public spaces.
9. Revision of master plan of the city is required to update it with inclusion of public spaces policies and with the goals and objectives of urbanity to help in achieving inclusive and sustainable public space.
10. Inclusion of green elements like plants and trees is required in the commercial area and near chowk yadgaar and also preserve and maintain the present green elements in both the parks.
11. Provision of signs and signs announcing the public spaces is required to increase the clarity in navigating through the city. Navigation of the city is very important and the signs and different landmarks will help in improving the clarity of public spaces.

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ANNEXURE – A

		Public Park (Wazir Bagh)	Neighborhood Park (Tehsil Park)
Gender	Male	100%	81%
	Female	0%	19%
Age	Below 20	5%	23%
	20-30	58%	44%
	31-40	18%	18%
	41-50	15%	11%
	51-60	5%	5%
	Above 60	0%	0%

		Public Park (Wazir Bagh)	Neighborhood Park (Tehsil Park)
Study Area Proximity	Yes	98%	91%
	No	3%	9%
Travel distance	Less than 5 km	88%	83%
	5 - 10 km	13%	14%
	10 - 15 km	0%	4%
	More than 15 km	0%	0%
Choice of Mode	On foot	90%	81%
	By Bike	10%	7%
	Transit	0%	2%
	Taxi	0%	5%
	Car Share	0%	0%
	Car	0%	5%

		Public Park (Wazir Bagh)	Neighborhood Park (Tehsil Park)
Visit Frequency	Daily	35%	37%
	Weekly	60%	37%
	Monthly	3%	12%

	Several Times per Month	0%	0%
	Very Rarely	3%	7%
	First Time	0%	7%
Who are you visiting with	Single Person	23%	4%
	With Family	5%	12%
	With Friends	48%	60%
	With Elderly	0%	0%
	With Children	25%	7%
Purpose of visit	Live nearby	15%	30%
	Recreation and Socializing	28%	79%
	Shopping and Errand	0%	2%
	Sports	18%	0%
	Entertainment	65%	35%
	Work	0%	4%
	Exercise and Walk	13%	12%

		Commercial Street (Bazaar Kalan)	Square (Chowk Yadgaar)
Gender	Male	100%	100%
	Female	0%	0%
Age	Below 20	4%	7%
	20-30	42%	32%

	31-40	40%	34%
	41-50	9%	24%
	51-60	4%	2%
	Above 60	0%	0%

		Commercial Street (Bazaar Kalan)	Square (Chowk Yadgaar)
Study Area Proximity	Yes	62%	83%
	No	38%	17%
Travel distance	Less than 5 km	36%	66%
	5 - 10 km	29%	24%
	10 - 15 km	9%	5%
	More than 15 km	27%	5%
Choice of Mode	On foot	36%	61%
	By Bike	22%	27%
	Transit	7%	2%
	Taxi	20%	0%
	Car Share	9%	2%
	Car	7%	7%

		Commercial Street (Bazaar Kalan)	Square (Chowk Yadgaar)
Visit Frequency	Daily	36%	73%
	Weekly	33%	22%
	Monthly	7%	2%
	Several Times per Month	2%	0%
	Very Rarely	16%	2%
	First Time	7%	0%

Who are you visiting with	Single Person	44%	56%
	With Family	13%	17%
	With Friends	36%	27%
	With Elderly	2%	0%
	With Children	4%	0%
Purpose of visit	Live nearby	31%	22%
	Recreation and Socializing	47%	15%
	Shopping and Errand	71%	34%
	Sports	0%	5%
	Entertainment	27%	37%
	Work	24%	22%
	Exercise and Walk	2%	0%

ANNEXURE – B



NUST
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National Institute of Transportation (NIT)

The Questionnaire is designed for interviewing the general public in for study areas in Peshawar. It will be helpful in completing MS research thesis titled “Reimagining public spaces of Peshawar through Urbanity”. This information will be kept anonymous and used only for study purposes. Your cooperation in this regard will be acknowledged and appreciated.

Name of Surveyor: _____ Contact no. /email: _____

Survey Date: _____ Survey Time: _____

Location: _____

Functional Classification:

- Park
- Neighborhood Park
- Commercial Area
- Plaza

1. Gender

- Male
- Female

2. Age:

- 20-30
- 31-40
- 41-50
- 51-60
- 61+

3. Do you live nearby?

- Yes
- No

4. How distance do you travel to get here?

- Less than 5 km

- 5 – 10 km
- 10- 15 km
- More than 15 km

5. How did you get here today?

- On Foot
- By Bike
- Transit
- Taxi
- Car Share
- Car

6. Why did you choose those modes?

- Faster
- Recreation
- Cheaper
- Avoid Parking

7. How long did it take you to arrive?

- Less than 5 mins
- 5-10 mins
- 10-30 mins
- More than 30 mins

8. How often do you visit?

- Daily
- Weekly
- Monthly
- Several times per month
- Very rarely
- First Time

9. Who are you visiting with?

- Single person
- With family
- With friends
- With elderly
- With children
- With pets

10. What is the reason for your visit?

- Live nearby
- Work nearby
- Passing through
- Errand

- Shopping
- Dining
- Entertainment
- Exercise
- Sports
- Attending Events
- Sitting and Relaxing
- Socializing

11. What do you think of this place?

	Unsatisfied – 1 2 3 4 5 – Satisfied				
Cleanliness	1	2	3	4	5
Maintenance	1	2	3	4	5
Security	1	2	3	4	5
Protected from weather	1	2	3	4	5
Safe from vehicles	1	2	3	4	5
Parking	1	2	3	4	5
Lighting	1	2	3	4	5
Available Facilities	1	2	3	4	5
Greenery	1	2	3	4	5
Pedestrian path	1	2	3	4	5
Street Furniture	1	2	3	4	5
Shading	1	2	3	4	5
Furniture	1	2	3	4	5
Public Toilets	1	2	3	4	5

12. Overall how will you rate the physical condition of this place?

- Excellent

- Good
- Fair
- Poor

13. Overall how welcome do you feel in this place?

- Extremely welcome
- Quite welcome
- Moderately welcome
- Slightly welcome
- Not at all welcome

14. Do you think more plantation is required in this place?

- Yes
- No

Any Suggestions:

ANNEXURE –C



National Institute of Transportation

The Checklist is designed for observing the present conditions of four public spaces in Peshawar. It will be helpful in completing MS research thesis on “Reimagining Public Spaces of Peshawar through Urbanity”. This information will be kept anonymous and used only for study purposes.

Location Name: _____ Public Space Type (Park, Neighbourhood Park, Commercial Area, Plaza): _____

Town: _____ Date: _____

Street Name: _____ Total Area (Dimension): _____

Pedestrian Space / Walkability	Is Pedestrian path available?	<input type="radio"/> Yes <input type="radio"/> No
	What is the width of the Path?	

	How is the continuity of the path?	<input type="radio"/> No barriers <input type="radio"/> 1 barrier <input type="radio"/> More than 2 barriers
	Is the path easily accessible?	<input type="radio"/> Yes <input type="radio"/> No
	Is the pedestrian path adequately lit?	<input type="radio"/> Yes <input type="radio"/> No
	What is the material of pedestrian path?	1. Concrete 2. Brick 3. Asphalt 4. Other: _____
	How is the condition of pedestrian path?	<input type="radio"/> Good: no surface problems; no obstacles <input type="radio"/> Fair: minor surface problems; minor obstacles <input type="radio"/> Poor: major surface problems; significant obstacles
	Do pedestrian facilities address the needs of all pedestrians?	<input type="radio"/> Yes <input type="radio"/> No
Land Use	Type of buildings in study area? 1. Commercial 2. Residential 3. Institutional 4. Corporate 5. Recreational	1. Yes: _____ No: _____ 2. Yes: _____ No: _____ 3. Yes: _____ No: _____ 4. Yes: _____ No: _____ 5. Yes: _____ No: _____ 6. Other: _____
	Is the development mixed used?	<input type="radio"/> Yes <input type="radio"/> No
	What is the density of the Study area?	<input type="radio"/> High <input type="radio"/> Medium <input type="radio"/> Low
	Is the public space easily accessible?	<input type="radio"/> Yes <input type="radio"/> No

	Is the study area easy to enter?	<input type="radio"/> Yes <input type="radio"/> No
	Is the study area easily connected to surrounding streets?	<input type="radio"/> Yes <input type="radio"/> No
	What is the surrounding context of the study area?	<input type="radio"/> urban <input type="radio"/> suburban <input type="radio"/> rural and open space <input type="radio"/> Industrial
Legibility / Clarity	What is the number of entrances?	
	What is the number of exits?	
	Does the entrances and exits have gates?	<input type="radio"/> Yes <input type="radio"/> No
	What is the number of constricted entrances?	
	Are the entrances adequately lit?	<input type="radio"/> Yes <input type="radio"/> No
	Is there any barrier blocking the visibility of the entrances?	<input type="radio"/> Yes <input type="radio"/> No
	What is the orientation of the entrance?	1. Not on street level or block from side walk 2. Street-Level but oriented away from side walk
	Is there sign announcing the public space?	<input type="radio"/> Yes <input type="radio"/> No
	Are there signs posted to direct to the public space?	<input type="radio"/> Yes <input type="radio"/> No

	What is the opening time of public space?	
	What is the closing time of public space?	
	Total hours of operation	
Quality of Public Spaces	Are the following facilities available? 1. Parking Lot 2. Public toilet 3. Sport Area 4. Playing Area 5. Praying Area 6. Sitting Area 7. Eating Area 8. Street Vendor	1. Yes: _____ No: _____ 2. Yes: _____ No: _____ 3. Yes: _____ No: _____ 4. Yes: _____ No: _____ 5. Yes: _____ No: _____ 6. Yes: _____ No: _____ 7. Yes: _____ No: _____ 8. Yes: _____ No: _____ 9. Other: _____
	Is the lighting of the public space adequate?	<input type="radio"/> Yes <input type="radio"/> No
	What is the type of lighting?	
	Number of Lights	
	Is there any type of seating available?	<input type="radio"/> Yes <input type="radio"/> No
	What are the types of seating?	<input type="radio"/> Stationary or Permanent Seating <input type="radio"/> Movable Seating
	Are there any waste bins available?	<input type="radio"/> Yes <input type="radio"/> No
	How is the condition of the waste bins?	<input type="radio"/> Good <input type="radio"/> moderate <input type="radio"/> poor
	How is the condition of the toilets?	<input type="radio"/> Good <input type="radio"/> moderate <input type="radio"/> poor
	How is the hygienic condition of toilets?	<input type="radio"/> Good <input type="radio"/> moderate

		<input type="radio"/> poor
	How is the overall cleanliness of the public space?	<input type="radio"/> Good <input type="radio"/> moderate <input type="radio"/> poor
	Is there any art or visual enhancement (Minor Installation, Interactive installation, Statues, monument, and fountains)?	<input type="radio"/> Yes <input type="radio"/> No
	Is there any permanent or temporary shaded area?	<input type="radio"/> Yes <input type="radio"/> No
	What is the type of shade?	
Visibility, Contact and Security	Is there any security cameras?	<input type="radio"/> Yes <input type="radio"/> No
	What is the number of cameras?	
	Are the available cameras operational?	<input type="radio"/> Yes <input type="radio"/> No
	Are there any security personnel?	<input type="radio"/> Yes <input type="radio"/> No
	Number of Personnel	
	Number of secondary security personnel	
	Are there any visual barriers?	<input type="radio"/> Yes <input type="radio"/> No
	Are there any billboards creating visual barriers?	
	Is there any encroachment?	<input type="radio"/> Yes <input type="radio"/> No
	Are there any electric wires contributing to visual pollution?	<input type="radio"/> Yes <input type="radio"/> No
	Are the rules displayed regarding the use of public space?	<input type="radio"/> Yes <input type="radio"/> No
	Is there any Restricted areas?	<input type="radio"/> Yes <input type="radio"/> No

	If yes, are the rules regarding restricted area displayed?	<input type="radio"/> Yes <input type="radio"/> No
Green Space	Are there any trees and plants?	<input type="radio"/> Yes <input type="radio"/> No
	How many types of trees?	
	What is the percentage of green area in the study area?	
Vitality and social Aspect	What type activities are taking place in the study area? 1. Recreation 2. Commercial 3. Sport 4. Political Activity 5. Social Interaction	1. Yes: _____ No: _____ 2. Yes: _____ No: _____ 3. Yes: _____ No: _____ 4. Yes: _____ No: _____ 5. Yes: _____ No: _____ 6. Other: _____