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Women's Safety in Urban Public Spaces - A Case of Kamalpokhari Area

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Abstract
As, safety perception of urban public space is a neglected dimension in case of gender responsive areas which is significant for inclusive city design, this paper expounds the necessity of the study on public safety-based urban design in perspective of public spaces. It brings forward the concept of safety-based urban design corresponding to the perception of women in public spaces. Based on an extensive review of literature and empirical work, this paper identifies nine parameters to measure the safety perception of the public places. Ten public spaces are selected based on the typology of urban public spaces in the vicinity of Kamalpokhari area. Safety perception of these areas are then measured based on the grading of safety parameters and safety elements are identified for each type of public space. In conclusion, it was established that safety elements should be kept in mind to achieve safer environment. The research necessitates urban planners and designers to introduce features for women safety, privacy, and comfort in the design of public places.

Keywords
Urban public spaces, safety perception, women-friendly spaces, urban design

1. Introduction

It is now widely acknowledged that cities are home to more than half of the world's population, and that urbanization is causing cities to expand at an exponential rate. Although everyone perceives the effects of urbanization, the experiences of women and girls in cities, as well as their usage of the city and its public spaces, are heavily influenced by their gender [1]. Even though public space is considered open and as a common ground in all our cities and towns [2], but for many women and girls around the world, just passing through public places- a market, a crowded street or riding the bus – is cause for great anxiety [3]. This is because women access spaces in cities quite differently from men. As a result, millions of women, and girls experience violence in urban public spaces as a kind of pandemic; natural, invisible, and justified. So, violence and the threat of violence against women and girls (VAWG) has become a pervasive problem that affects communities and cities everywhere [1].

While many advances have been made in the elimination of VAWG, much of the focus was on intimate partner violence (IPV) inside the home, rather than women's safety in urban spaces [4]. According to a 2014 survey of more than 600 planners [5], these urban spaces do not address women's needs. Poorly planned infrastructure in urban spaces creates opportunities for violence against women and has a direct impact on whether a woman or girl feels safe in their surroundings. Yet, safety is not just about installing good lighting and removing dilapidated buildings. Uneven paths, lack of clear sightlines in parks and alleyways, and badly maintained public areas such as parking lots and public restrooms are frequently mentioned by women and girls as indicators that the environment may not be safe for them. [6]. This leads to reduced mobility of women, reduced independence and autonomy, restriction from the use of certain services and from equal access to education and employment [7]. It also does not allow for women to benefit from public spaces and green spaces as freely, owing to concerns of sexual violence and harassment. Here, the considering fact is that women are at risk of violent crime just because of their gender and even after all of this, the society first questions what the victim did that lead to such a violence instead of looking at it the other way around [8]. Is it justifiable that women should ensure their own safety by changing their behaviors such as

modifying their dress or when to go out; or gender sensitive strategic plans and performance programs should be prepared in the cities to ensure women's safety in urban public spaces?

Even in case of Nepal, Action Aid conducted a women's safety audit in Kathmandu as part of its Safe City programme. The study's findings reveal that lack of access to quality services, such as public transportation, streets and lighting, power, public restrooms, markets, education and career possibilities, as well as safety and security, are major concerns for various groups of women [9]. According to the study, fifty-three per cent of the women feel unsecured while travelling on public transport and walking around the bus stand; 63 per cent of respondent's fear travelling on public transport; and 73 per cent feel being a female affects their personal security [9]. As, women and girls have a right to enjoy the streets, parks, public vehicles, public toilets, marketplaces and neighborhoods of their city, this research focuses on the safety perception of urban public spaces and gender inclusive planning in reference to its accessibility and safety.

2. Research Objective

The objective of this research is to study *women's safety in urban public spaces*. A case of Kamalpokhari area was selected for the study.

3. Study Area

The study area is focused on the surrounding area of Kamalpokhari, a high-density area with the greatest concentration of heavily trafficked, publicly accessible spaces in the city. The land use pattern in this area has rapidly changed from residential to mixed use land use pattern. This induced a shift in the typology as well as the accessibility of urban public spaces for all individuals. To achieve site-specific results, a buffer of 400m was created and major public spaces were identified in this allocated area. Based on the typologies of urban spaces of literature, urban public spaces were categorized in four spaces and ten public spaces were then selected.

- **Recreation:** Public parks (Kamalpokhari, Narayanchaur)
- **Cultural:** Temples (Kumari Temple, Ganesh Mandir, Naxal Bhagwati, Naag Pokhari)
- **Entertainment:** City Centre, Kumari Cinema
- **Mobility:** Streets with Public Transportation and Streets with no Public Transportation

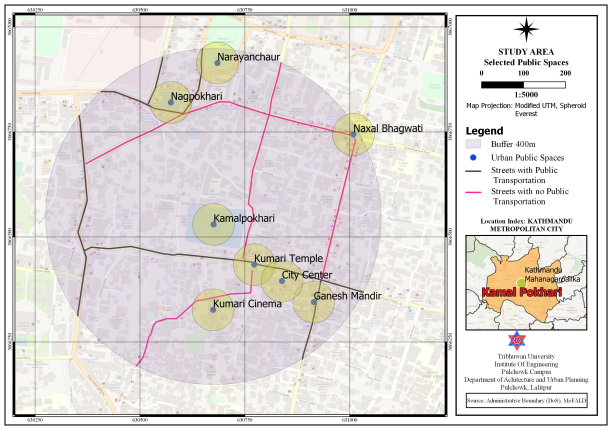

Figure 1: Study Area

4. Methodology

Pragmatic paradigm with mixed methods is used for guiding this research. It is based on both quantitative and qualitative approach as the objective of the research that is looked upon is based on real-world problems. It makes an ontological claim that the women's perception of urban public spaces differs from that of men. The perception of women regarding urban public spaces is interpreted and explained in relation with nine parameters which is identified from literature. It studies the parameters determining the social behavior of women in those urban public spaces which is determined through various literature.

A well-structured questionnaire divided into two sections is used to collect quantitative data which is measured to create radar charts to understand the safety of the public space. The first section includes basic information about the respondent and the selected public such as age, time of interview use of the public space, how long and how often they had been coming to that place, and whether they feel safe or not in that public space. The second section includes information about the nine safety parameters (Table 1) which was identified from the literature. These parameters were then analyzed based on the grading provided to them and safety perception of the selected ten public places was studied.

In this research, the sample frame for the structured questionnaire consisted of female from four different age groups – less than 20 years, 20-40 years, 41-60

Parameters	Grading of those parameters			
Light (Night)	None	Little	Enough	Bright
Signage	No Signage	Poor Signage	Adequate Signage	Proper Signage
Openness	Not Open	Partly Open	Mostly Open	Completely Open
Visibility	Not Visible	Less Visible	Fairly Visible	Highly Visible
Maintenance	Not Maintained	Poorly Maintained	Well Maintained	Highly Maintained
Security	None	Minimal	Moderate	High
People	Deserted	Few People	Some Crowd	Crowded
Gender Usage	Not Diverse	Mixed	Fairly Diverse	Diverse
Feeling	Frightening	Uncomfortable	Acceptable	Comfortable

Table 1: Safety Parameters

years and above 60 years. Also, the study was carried out in different time frame such as in morning targeting the people who go for a morning walk; the women buying household items or the students going for the school and passing by the space.

4.1 Sample Determination of Study Area

The research study follows simple random sampling technique in which the sample size of 350 respondents (females) of Kamalpokhari area were questioned. The sample size was calculated by the following categories:

- Population of 400m buffer area of Kamalpokhari (Projected 2021) = 5869;
- Number of female population = 2794; (47.6

Then Equation $n = N/(1+Ne^2)$ was used where n is the number of samples, N is total population of the area (in this case Kamalpokhari study region), and e is tolerance (level). Assuming the confidence interval of 95% for better accuracy and a margin error of 0.05:

$e = 100\% - 95\% = 5\% = 0.05$

$n = 2794/(1+2794(0.05)^2)$

$= 328.9004898 \simeq 330$

A sample of 35 women were collected in each of the identified ten public spaces in different time of day (morning, afternoon and night).

5. Description and Analysis

5.1 Perception of the Respondents

Data from 350 respondents (females) were collected from the street survey and it was found that among the respondents, women of age group <20 were concerned for their safety at public spaces compared to women of age group >60. But in general, all women of different age groups were found to be concerned for their safety at different public spaces (Figure 2)

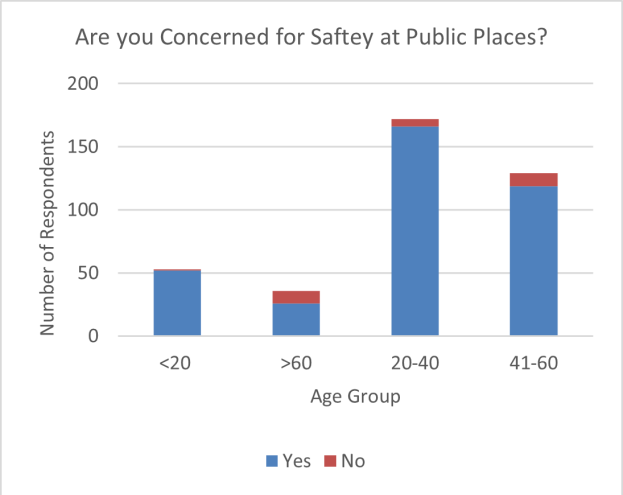

Figure 2: Concerned for Safety at Public Spaces

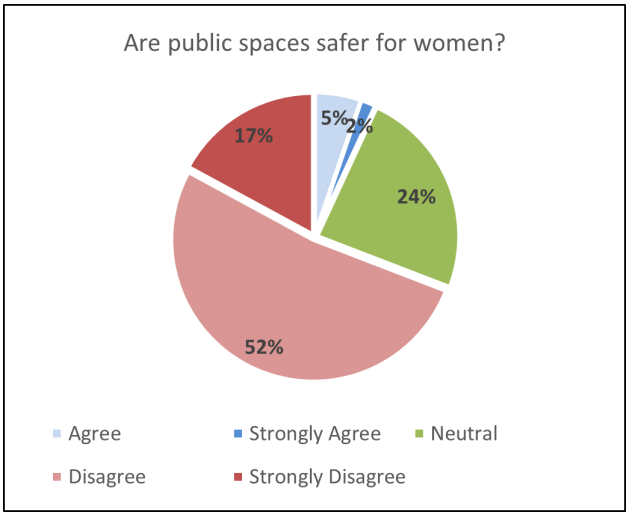

Figure 3: Are public spaces safer for women?

Also, majority of the women (52%) responded that they do not agree public spaces are safer for women whereas one fourth of respondents consider public spaces as neutral areas (neither safe nor unsafe) for women (Figure 3). Similarly, only 8% of the respondents were not concerned for their safety at public spaces whereas two third of the respondents were sometimes concerned for their safety (Figure 4).

5.2 Safety Perception Analysis based on Public Places

Safety perception was analyzed based on identified nine parameters in each of ten selected places. Nine parameters were graded in four levels and an average

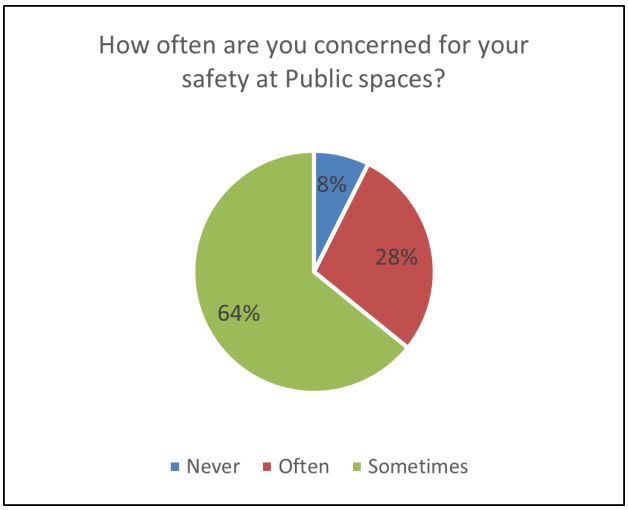

Figure 4: How often are you concerned for your safety at public spaces?

of those parameters was calculated for each place. This revealed why the specific public space was safe or unsafe and because of which parameter. Also, it described which type of public place was not preferred by women and for which reasons as well. As a result, it helped us to provide recommendations based on urban design factors.

5.2.1 Kamalpokhari - Recreational

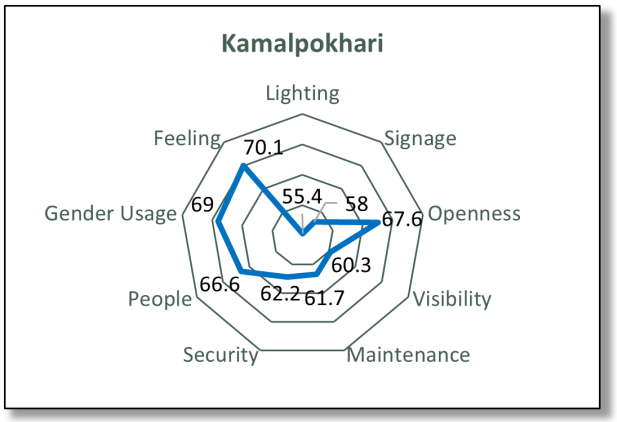

Figure 5: Safety Perception of Kamalpokhari

Kamalpokhari was found to be nearly acceptable in terms of safety perception for the respondents. The reason why this area was found to be comfortable was because of its mixed gender usage and openness. But since there was very little availability of light in the area at night, respondents did not feel comfortable during dark in this area (Figure 5).

5.2.2 Narayanchaur - Recreational

According to the respondents, Narayanchaur was comparatively safer than Kamalpokhari because of its openness and presence of security guards/ police officers. Even though the area is acceptable based on the safety perception of the respondents, the signage was not found to be proper in the area (Figure 6).

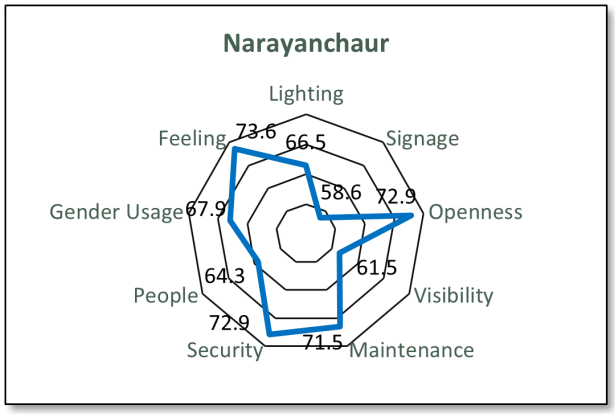

Figure 6: Safety Perception of Narayanchaur

5.2.3 Kumari Temple- Cultural

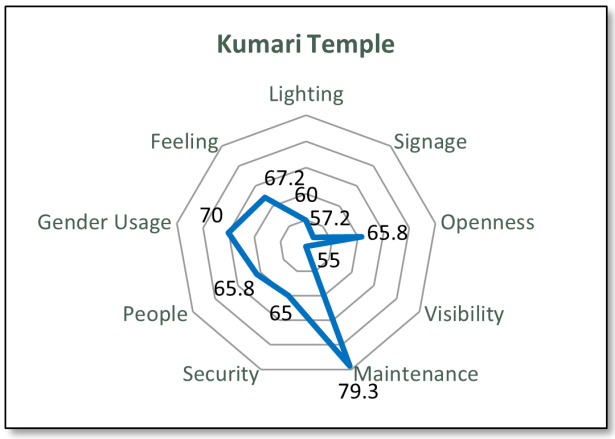

Figure 7: Safety Perception of Kumari Temple

The safety perception of Kumari Temple area was found to be uncomfortable compared to the recreational parks of the surrounding area (Kamalpokhari and Narayanchaur). As it lies in the center of crossroads and surrounded by a huge tree, the visibility of this area is poor. In addition, the area does not have proper signage as well as availability of light at night. Even though the area is properly maintained but due to poor visibility, poor signage and very little availability of light, respondents do not comfortable in this area (Figure 7).

5.2.4 Ganesh Mandir- Cultural

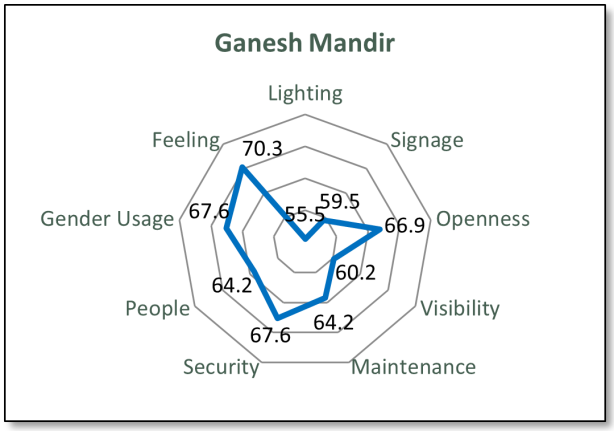

Figure 8: Safety Perception of Ganesh Mandir

Since Ganesh Mandir is located next to a high traffic road, because of diverse gender usage and presence of security guards in the area, the safety perception was found to higher compared to that of Kumari Temple. But even in this area, there was very little availability of light and adequate signage was not present as well (Figure 8).

5.2.5 Naxal Bhagwati- Cultural

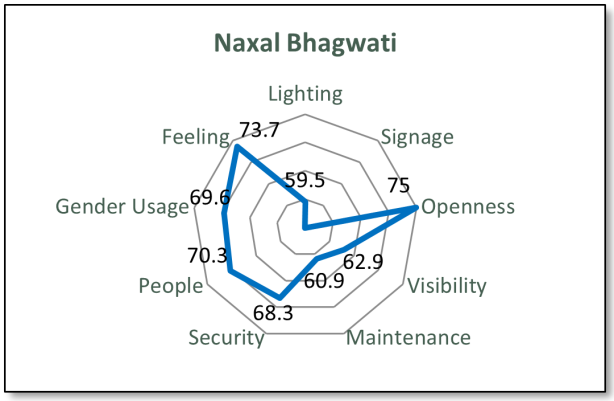

Figure 9: Safety Perception of Naxal Bhagwati

Naxal Bhagwati is situated at the intersection of two major roads and has a lively surrounding. Due to the presence of number of people (some crowd) and its openness, the safety perception of this area was found to be acceptable according to the respondents. But despite this, there was little availability of light at night, so respondents did not feel comfortable enough to travel in dark. (Figure 9).

5.2.6 Naagpokhari- Cultural

With minimal presence of security guards in the area, poor signage, poor visibility (high boundary walls of Narayanhiti Palace Museum) and little availability of light at night, the safety perception of Naagpokhari area was found to be uncomfortable compared to other cultural places (Ganesh Mandir and Naxal Bhagwati) (Figure 10).

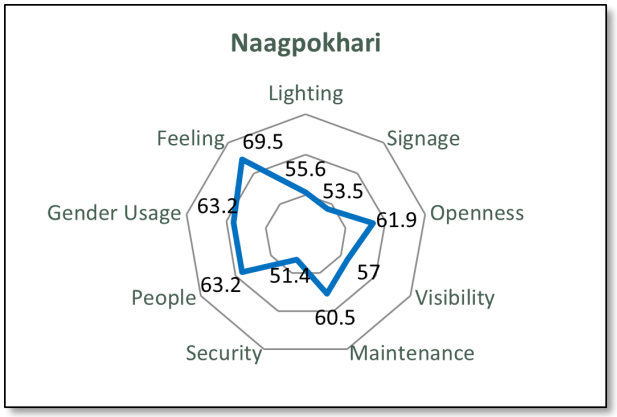

Figure 10: Safety Perception of Naagpokhari

5.2.7 City Centre- Entertainment

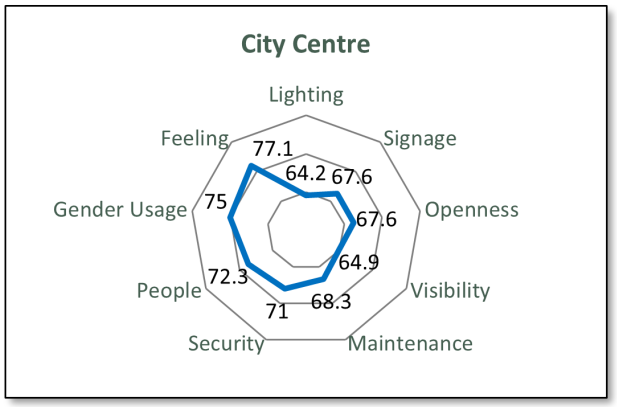

Figure 11: Safety Perception of City Centre

According to the respondents, City Centre was the only area which had enough lighting compared to all the public places. Even in terms of gender usage, presence of people and security guards, this area was safer compared to all other places. So, the safety perception of City Center was found to comfortable according to the respondents (Figure 11).

5.2.8 Kumari Cinema- Entertainment

As Kumari Cinema is situated along the road which has no public transportation, so the provision of lighting, signage, maintenance, and presence of security guards was found to be minimal; due to which the safety perception of this area was uncomfortable. Respondents did not prefer this area

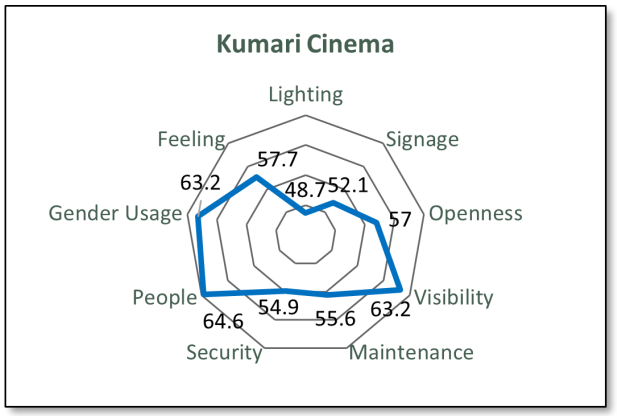

Figure 12: Safety Perception of Kumari Cinema

because this area was provided with low rating for all the selected nine parameters (Figure 12).

5.2.9 Mobility – Streets with Public Transportation

In general, the safety perception of streets was found to be uncomfortable. According to the respondents, provision of lighting, signage, security professionals, maintenance, the openness, and visibility of the street area were found to be lacking; due to which respondents did not feel safe in the streets even during day (Figure 13).

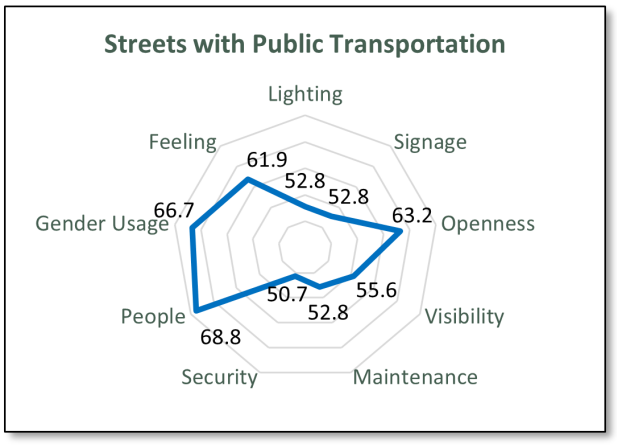

Figure 13: Safety Perception of Streets with Public Transportation

5.2.10 Mobility – Streets with No Public Transportation

Streets with no public transportation was found to be the most unsafe area among the ten selected public spaces. With no proper provision of street lights, signage, poorly maintained streets, and minimal presence of security professionals; the safety perception of this area was found to be uncomfortable i.e. many respondents avoided this area even during daytime (Figure 14).

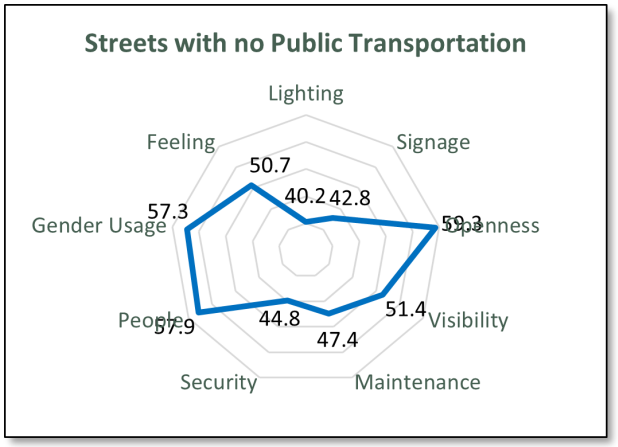

Figure 14: Safety Perception of Streets with No Public Transportation

6. Conclusion

Cities as we know them are not homogenous entities [10] and how one experiences the city is not homogeneous in nature as well. Even as change is happening, many women experience the city differently than men. They are particularly affected by urban design choices, the organization of public services and the mix of urban functions [3]. The current study also reveals that many girls and women are facing issues in public places because of poorly planned urban infrastructure. Lighting was found to be an essential feature in urban public place safety in the dark time of the day. Similarly, it was also found that personal crime is more likely to occur in bleak, deserted areas; and that fear of public space often stems from the fact that there are very few people around. Proper signage and well-maintained public spaces also helped people feel safe in their surroundings. Many also believed that placing security guards or staff members, especially at night, will aid in improving security and reduce passenger fear of crime due to formal surveillance and instant availability of help. Likewise, perceptions of safety in an urban environment were also found to be influenced by environmental characteristics; mainly by what is visible i.e., in lighted and open spaces, people are less likely to feel fearful of crime and more likely to use public areas after dark. These findings confirm the relevance of lighting, prospect, and possibilities of escape for the design of living in urban

public places for women. Therefore, characteristics providing prospect, escape, and sufficient lighting should be considered at the early stage of the design of so-called hot spots of fear, such as parking garages, parking places, subways, public parks, and public transportation stops. The future outlook of the research can include safety perception of other genders in public places and specially-abled people as well.

Acknowledgments

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