# Perception, Use and Experience of Urban Open Spaces–Case Studies of Neighbourhood Public Parks in Nagpur

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**Abstract:** *The relationship between urban open spaces and the satisfaction level of the public ultimately determines the quality of life. But it is found that there is a gap between the intended design of such open urban spaces and experience, use and perception of such spaces by the public. This is because there is a lack of research in developing countries for the reason that there is a lack of good design public open spaces. Hence it is important to carry out the research among many problems of environmental quality of urban spaces so as to formulate more suitable policies based on people needs, satisfaction level and most importantly their perception of such urban spaces. The paper incorporates the study of urban open spaces in the form of neighbourhood public parks of Nagpur, a Grade II city of Central India. It is based on the key attributes of successful urban spaces identified by The Project for Public Space (1999) namely, comfort and image; access and linkage; uses and activity; and sociability. Three neighbourhood parks in Nagpur city were identified and analysed comparatively through various parameters of the above attributes so as to understand the people's perception of neighbourhood public parks based on their experience and use of such green open spaces. The methodology follows a qualitative approach through a study of morphological maps, non-participatory observation, walking interviews and photo documentation. The enquiry resolves that to make urban open spaces lively and successful, considerations of use, experience and perception of such spaces by the public are essential and should be incorporated in urban spatial planning particularly in the design of such public open spaces. The behavioural patterns by which people experience and use these spaces can act as a valuable source of information for spatial planning of urban spaces. Thus the satisfaction level of the public with such an urban environment proves to be an essential parameter for investigating the quality of urban life.*

**Keywords:** Public Perception, Urban open spaces, neighbourhood parks, attributes of successful urban spaces, quality of urban life

## 1. Introduction

Today, more than half of the world's population lives in cities. However, by 2050 this is forecast to increase to two thirds. So the urban planner should aim at creating cities that are receptive and responsive to their inhabitant's needs. The most significant element of today's cities is the public spaces. To make an urban space work for its intended use we should aim at making these spaces more comfortable, both psychologically and physiologically. There could be various ways of creating successful urban public spaces. One of the ways could be considering how users perceive, sense and experience the space. However, there is a gap in the literature in exploring how these factors may interact with each other and affect the human experience of public spaces. Seeking to fill this gap, the paper aims at analyzing three neighbourhood parks of the city through various parameters so as to understand how people perceive, experience and use these green spaces.

## 2. What is Perception?

"Perception may be defined as a process by which individuals organize and interpret their sensory impressions in order to give meaning to their environment." (Kashyap, 2018). According to Joseph Reitz, "Perception includes all those processes by which an individual receives information about his environment—seeing, hearing, feeling, tasting and smelling. The study of these perpetual processes shows that their functioning is affected by three classes of variables— the objects or events being perceived, the environment in which perception occurs and the individual doing the perceiving." So, every sense can be significant in transforming the experiential qualities of an urban space.

## 3. Environmental Perception

We affect the environment and are affected by it. For this interaction to happen, we must perceive - that is, be stimulated by sight, sound, smell or touch that offer clues about the world around us (Bell et a/., 1 990, p. 27). Gathering information about the environment, organising it and making sense of it is involved in perception. A distinction is generally made between two processes that gather and interpret environmental stimuli- There is a difference between two processes of sensation and perception. It is difficult to make the distinction between these two processes as it is hard to understand where sensation ends and perception begins.

Sensation refers to human sensory systems reacting to environmental stimuli. The four most valuable senses in interpreting and sensing the environment are vision, hearing, smell and touch (Carmona, 2003, Pg. 87).

Perception (sometimes, confusingly referred to as 'cognition') concerns more than just seeing or sensing the urban environment. It refers to the more complex processing or understanding of stimuli. lttelson 1978, (from Bell et a/., 1990, p. 29) identifies four dimensions of perception, which operate simultaneously:

**Cognitive:** Involves thinking about, organising and keeping information. In essence, it enables us to make sense of the environment.

**Affective:** Involves our feelings, which influence perception of the environment - equally, the perception of the environment influences our feelings.

**Interpretative:** Encompasses meaning or associations derived from the environment. In interpreting information, we rely on memory for points of comparison with newly experienced stimuli.

**Evaluative:** Incorporates values and preferences and the determination of 'good' or 'bad'. Apart from being simply a biological process, perception is to be socially and culturally 'learnt'. Most of the times sensation is felt similar by everyone however how the person understands, interpret, react and organize the information from it might differ from individual to individual. This differences in environmental perception depend on factors such as age, gender, ethnicity, lifestyle, length of residence in an area, and on the physical, social and cultural environment in which a person lives and was raised (Carmona, 2003, Pg. 88).

Despite everyone effectively living in their 'own world', similarities in socialisation, past experience and the present urban environment mean that certain aspects of imagery will be held in common by large groups of people (Knox and Pinch, 2000, p. 295).

## Public Open Spaces
Public open space is a free place for people to be accessed. Everybody is free to do many various activities at the place. The physical elements and activities of public open space offer many benefits to quality of life: health, social interaction and economic value (Achmad, 2014, Pg. 585).
The quality of public open space can be judged by how long people stay at such places and the range of activities carried out there. The quality of such space relates to its usability and people's need and perception. If it is not usable and perceived better by the public, it will not become useless and unsuccessful.

The quality of public open space can be viewed from two aspects: the function and the physical features. The function relates to the activities which people carry out at such public open spaces. The open space must be easily accessible by all groups of people and should reflect the local culture and tradition. The significant physical features expected at such spaces are the presence of clear pedestrian pathways and connectivity with the surroundings. If the open spaces are not connected properly, it will not be visited and used by the public. Some researches about the relationship between usability and the quality of public open space were conducted in a developed country, where the public open spaces are well designed. There is a lack of similar studies in a developing country, which has to face the degradation of the urban environment and the decreasing of public open spaces quantity and quality. (Achmad, 2014, Pg. 586).

The urban quality of life is the outcome of the interaction of man and the urban environment (Das, 2008). The satisfaction level with public open space can be an indicator of satisfaction with the urban environment and can influence people's quality of life.

As a place for many kinds of activities, public open space gives some advantages for quality of life, such as psychological and physical health, recreational benefits and the fulfilment of the need for a pleasant urban environment (Maller *et al,* 2009). Thus, a better perceived public open space can persuade a good quality of life.

## Perception of Urban Spaces
Urban spaces are the open or semi-open public spaces framed by buildings within an urban setup. Such spaces create a particular image of the city in the minds of the residents as well as the visitors which always remains in their mind. The image of an urban space is a result of not only its built form and enclosed space but also the activities that are held in that space. Hence understanding the relationship between people and their physical environment becomes an essential component of urban design. But present urban spaces lack visual and aesthetic quality resulting in loss of sense of place. In the perception of an urban space, the role and background of the perceiver become equally important as the visual physiology and characteristics of the built form (Mishra, 2005). Hence there is a need to know how people use and perceive the urban spaces and its visual and aesthetic quality. In other words, perception of an urban space needs to be analyzed from the point of view of users.

## Perception of Public Open Spaces In Urban Areas
The public open spaces of a city are all those areas open to people's freely chosen and spontaneous activities (Lynch, 1960). They are intended to be used by both city residents and visitors and are thus quite open to public use. Successful public open spaces are distinguished by the presence of people in an often self-reinforcing process. Public spaces are essentially discretionary environments: people have to use them and conceivably could choose to go elsewhere. If they are to become peopled and animated, they must offer what people want, in an attractive and safe environment. (Carmona, 2003, Pg. 99)

The human environment has two components: the physical environment of everyday life and the social environment of mutual relations. The experience, perception and use of open space by city residents can act as important clues for successfully implementing user-centric spatial planning. Planners often neglect these since the user's experiences and values are not directly visible. Consequently, space might not suit users' needs and requirements. Hence by studying how people perceive and use these open spaces can help find out the gap between the intention of the planners and users. This will help in better understanding of public needs and perception of such open spaces. The behavioural patterns by which people experience and use these spaces can act as a valuable source of information for spatial planning of urban spaces.

In cities, public green open spaces i.e. parks offer a potentially better quality of life to the residents. People are usually attracted to public green spaces when it succeeds in becoming an important part of their everyday life and meets their needs and expectations. Different aspects of public parks are reflected in the opportunities provided to users; that is, in responsive, democratic and meaningful public spaces. Responsively designed public parks satisfy different users' requirements, such as comfort, relaxation, easy access, active and passive engagement, discovery and socialization. Integrated public parks respond to different user group activities and are accessible to different age groups. They allow residents and visitors to lay temporary claims and control over the space and also provide opportunities to socialize and interact thereby establishing a strong connection between the environment and the users. So who we are and where we come from can be just as significant as an environment's objective physical attributes in determining how we perceive and experience public spaces.

## Public Perception of Neighborhood

People perceive their neighbourhood in very different ways. Some perceive it as merely the area in close proximity to their residence. Most participants perceive their neighbourhood as a medium-sized area around the residence. Residents feel connected with the area and are more personally responsible and critical of events in an area they perceive as their neighbourhood than they are towards other parts of a broader area of everyday use.

In residential neighbourhoods, a sense of belonging and safety is developed by an individual that is connected to society through the use of local services and through socialising. Hence, public parks in residential neighbourhoods play a particularly important role because they facilitate and encourage residents to socialise and connect. (Jurkovic, 2014, Pg. 108).

## Key Attributes of Successful Urban Spaces

The Project for Public Space (1999) identified four key attributes of successful urban spaces: comfort and image; access and linkage; uses and activity; and sociability (Table 1).

**Table 1:** Key attributes of Successful places (Source - The Project for Public Space-1999)

| Key attributes of successful places | | |
|---|---|---|
| KEY ATTRIBUTES | INTANGIBLES | MEASUREMENTS |
| COMFORT AND IMAGE | safety, charm, history, attractiveness, spirituality — sittability, walkability, greenness, cleanliness | crime statistics, sanitation rating, building conditions, environmental data |
| ACCESS AND LINKAGE | readability, walkability, reliability, continuity — proximity, connectedness, convenience, accessibility | traffic data, mode split, transit usage, pedestrian activity, parking usage patterns |
| USES AND ACTIVITY | realness, sustainability, specialness, uniqueness, affordability, fun — activity, usefulness, celebration, vitality, indigenousness, 'homegrown' quality | property values, rent levels, land-use patterns, retail sales, local business ownership |
| SOCIABILITY | co-operation, neighbourliness, stewardship, pride, welcoming — gossip, diversity, storytelling, friendliness, interactivity | street life, social networks, evening use, volunteerism, number of women, children and elderly |

The paper is based on these key attributes of successful urban spaces. The urban open spaces in the form of public parks of Nagpur city have been studied and analyzed comparatively through parameters of these key attributes like comfort and image, access and linkage, uses and activities and sociability. It incorporates analysis of the data collected based on perception, experience and use of these public parks by residents so as to formulate guidelines for suitable policies for the development of public open spaces based on local people needs.

An attempt has been made to understand the various factors which affect the public perception of urban open spaces through comparative analysis of selected public parks. Observation and public opinion have been taken into consideration for analysing the above said key attributes.

For this purpose, three neighbourhood parks i.e. Trimurti nagar park with size of 2.60 acres (Image 1), Survey nagar park with area of around 2.35 acres (Image 2) and Adhyapak layout park with area of 0.50 acres (Image 3) have been studied against each key attribute under certain parameters in a tabular form.
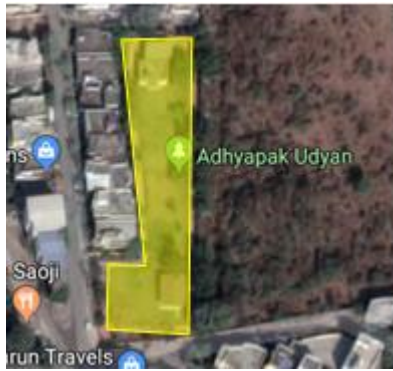


**Image 1:** Trimurti nagar park (2.60acres)



**Image 2:** Survey nagar park (2.35acres)

**Image 3:** Adhyapak layout park (0.50 acre)

Comfort and image attribute is analyzed against parameters like street furniture, basic amenities, noise level, cleanliness, greenness, safety, attractiveness and feeling. For access and linkages, parameters like connectedness, accessibility, parking and pathways are used. Parameters like sitability, walkability, activities, percentage of non-preferred areas and food and other facilities are used for analyzing attributes of uses and activities. For the attribute of sociability, parameters like interactivity, prime user group, spaces for socialization, celebrations are used. The methodology adopted incorporates a qualitative approach through a study of morphological maps, non-participatory observation, walking interviews and photo documentation.

## 4. Observations and Findings

**Table 2:** Comfort and Image

| Name of Park | ATTRIBUTES | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Comfort and Image | | | | | | | |
| | Street furniture | Basic amenities | Noise level | Cleanliness | Greenness | Attractiveness | Safety | Feeling |
| Trimurti Nagar | ✓ | ✓ | High | Moderate | Low | Low | High | Energetic |
| Survey Nagar | ✓ | × | Moderate | High | High | High | High | Lively |
| Adhyapak Layout | ✓ | × | Low | High | High | Moderate | High | Relaxing |

Under the attributes of comfort and image, it was found that all the three parks were having better street furniture but Survey nagar park and Adhapak layout park were lacking the basic amenities like toilets. The noise level at Trimurti nagar park was very high as most part of the park was covered by active playgrounds for various sports. Because of more sports activities and outdoor play equipment, cleanliness, greenness and attractiveness factors were moderate (Image 4) as compared to other two parks where cleanliness, greenness and attractiveness factors were high because of the leisure activities. Since all the parks were located in the neighbourhoods, away from main roads, safety factor was high at all the places. Survey Nagar Park was felt more lively by the public as it was having facilities for active sports with outdoor play equipment, open gymnasium and leisure activities as well (Image 5). The energetic and active feeling was found high amongst the public at Trimurti Nagar park as it was having more sports facilities and play equipment whereas relaxing feeling was more amongst the visitors in the Adhyapak layout park because of provision for more leisure activities (Image 6).



Image 5: Survey nagar park showing active sports and leisure activities



**Image 6:** Adhyapak layout park showing leisure activities



Image 4: Trimurti nagar park showing sports facilities

**Table 3:** Access and Linkages

| Name of Park | Attributes | | | |
|---|---|---|---|---|
| | Access and Linkages | | | |
| | Connectedness | Accessibility | Parking | Pathways |
| Trimurti Nagar | ✓ | ✓ | ✓ | ✓ |
| Survey Nagar | ✓ | ✓ | × | ✓ |
| Adhyapak Layout | ✓ | ✓ | × | ✓ |

Under the attributes of access and linkages, Trimurti nagar park and Survey Nagar parks were connected properly with surrounding neighbourhoods and easily accessible. All the parks were properly provided with pavements for walking and jogging. Parking facility was provided only at Trimurti Nagar park. But Adhyaapk layout park being smaller and because of its secluded location from the major part of the neighbourhood, it is perceived as a private park by other people and hence used only by the people living in close vicinity with it.

**Table 4:** Uses and Activity

| Name of Park | Attributes | | | | |
|---|---|---|---|---|---|
| | Uses and Activity | | | | |
| | Sitability | Walkability | Activities | Percentage of non-preferred areas | Food and other facilities |
| Trimurti Nagar | ✓ | ✓ | Mostly sports (Active engagement) | Nil | × |
| Survey Nagar | ✓ | ✓ | Both leisure and sports (active and passive engagement) | Low | × |
| Adhyapak Layout | ✓ | ✓ | Mostly leisure (passive engagement) | Low | × |

Under the attributes of uses and activity, since all the parks were provided with proper street furniture and pathways, sitability and walkability were proper at all the parks. But food joints were not provided at any of the parks. Since Trimurti nagar park was having mostly sports facilities, people were generally involved in active engagements whereas Adhyapak layout park being a small park with not much active sports facilities people were mostly involved in leisure activities. But Survey nagar park being large in size and having provision of both sports, play equipment and leisure activities, people were involved in both active and passive engagements.

**Table 5:** Sociability

| Name of Park | ATTRIBUTES | | | |
|---|---|---|---|---|
| | Sociability | | | |
| | Interactivity | Prime user group | Spaces for socialization and celebrations | Satisfaction level |
| Trimurti Nagar | High | Youngsters and Elderly | ✓ | Moderate |
| Survey Nagar | High | Children, Youngsters and Elderly | ✓ | High |
| Adhyapak Layout | Low | Elderly | ✓ | Low |

Under the attribute of sociability, the interactivity at Trimurti nagar park was found very high as the public was mostly involved in sports activities whereas at Adhyapak layout, people being mostly involved in passive engagements, interactivity was less. At Survey Nagar park, since people were involved in both active and passive engagements, interactivity was at a high level. Accordingly, the prime user group at Trimurti nagar park was youngsters whereas, at Adhyapak layout park, mostly elderly people were seen. But at Survey Nagar park, all the age groups including children, youngsters and elderly were seen as the facilities like open gymnasium, play equipment for kids, jogging tracks, landscaped areas, benches provided catered to all age groups of people (Image 7, 8 & 9).





**Image 7:** Survey Nagar park showing facilities and surrounding neighbourhood

**Image 8 & 9:** Lively atmosphere at Survey nagar park enjoyed by all age group people

# 5. Conclusion

The study has produced useful information regarding the planning of urban public spaces such as the significance of regular maintenance of green covered areas and the provision of outdoor play equipment and benches. Parks which were maintained regularly and provided with proper street furniture were found comfortable and better used and perceived by the public.

From the study, it is concluded that the parks having facilities for involvement in active as well as passive engagements are used and enjoyed by all the user groups and hence perceived more lively and satisfactory by the public.

Also, the parks which are accessible, better connected with the neighbourhoods and centrally located are used frequently. Hence the access and linkages attribute become significant as the close proximity of the park with their residences is much preferred by the people.

The use of public parks also depends upon options provided for carrying out various activities by different age groups. Opportunities provided for carrying out a range of activities also help in increasing the sociability amongst various user groups. Parks provided with provisions of an open gymnasium, play equipment for kids, jogging tracks, landscaped areas, benches and other facilities are found to be much popular and extensively used by the community.

Hence it is concluded that perception, use and experience of urban open spaces by the users should be incorporated in urban spatial planning particularly in the design of such public open spaces to make them lively. Thus the satisfaction level with such urban environments, public open space being one of it, is essential parameters for investigating the quality of urban life.

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