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Resident's Perception towards Green Spaces Urban Areas of Mirpur AJK Pakistan, A Cross-Sectional Study

Humaira Mahmood [a], Farrah Pervaiz [b], Maida Kausar [a] Humaira Zafar [a], Hajra Noor [a], Farwa Shahid [a]*

Abstract

Urbanization with increasing proportion of the population living in cities limits access to nature and increases exposure to environmental hazards, such as air and noise pollution. Green spaces offer solutions by increasing the quality of urban settings, promoting sustainable lifestyles, and improving both the health and the well-being of urban residents. Aim of the study was to assess perceived advantages and disadvantages of urban green spaces (UGS). A cross sectional study, was conducted on the 200 residents of Mirpur district of Azad Jammu and Kashmir Pakistan. There were 54.5% of males and 44.5% of females in the study sample and 79% (n=79) of them were of age between 31-40 years. 164 (82%) individuals in the collected sample fall into high educational level. For positive attributes of urban green spaces most visitors reported strongly agree response. The highest strongly agree response (62%) is for importance of parks. Promotion of elders' and physical health also showed strongly agreed responses of 60% and 58% respectively. The agreed response was the highest for 'neighbors' meetup' (43.5%) and for the rest it was mental health (40%), people likeness (37%) and property value (38.5%). Commercial encroachment was the highest strongly agreed response (30.5%) and time wastage was the highest strongly disagreed response (21.5%). Visitors reported strongly agree response to scenic beauty (67.5%), air quality (49%) and reduce heat wave (40.5%). Agreed responses were topped by environmental conditions (37%) followed by almost equal responses for rainfall source (25.5%), biodiversity and noise pollution (23%). Fast and unplanned urbanization is threatening UGS. Our study highlighted visitors' perception about UGS which would help in their development and improved quality.

Key Words: UGS (urban green spaces), urban residences, Mirpur, Pakistan, Perception.

[a] Armed Forces Postgraduate Medical Institute, Combined Military Hospital, Rawalpindi, [b] Research & Development department, Rawalpindi Medical University, Rawalpindi

***Correspondence:** farrahpervaiz@gmail.com

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1. Introduction

As urban populations burgeon, the once-abundant green and open spaces are rapidly dwindling. The relentless march of urban development—marked by the rise of new residential complexes, the expansion of commercial zones, and business districts—alongside the influx of individuals from rural areas seeking better employment and educational prospects, has significantly encroached upon the verdant realms of parks, playgrounds, greenbelts, gardens, and farmlands. Such urban green spaces (UGSs) are not mere aesthetic embellishments but are vital to the populace's well-being, serving as a barometer for the quality of life and urban sustainability. The presence of UGSs within the concrete sprawl is a clear indicator of a city's livability and its commitment to environmental stewardship[5]. It is, therefore, crucial for the public to be cognizant of the myriad advantages and potential limitations of UGSs, a knowledge that is essential for informed community engagement and advocacy.

Rapid urbanization is also drastically impacting the global climate leading to various calamities including heat waves flooding and more[9,11,15]. Amidst the swift changes in climate, grasping how the public views urban green spaces (UGSs) is crucial. This is because these spaces are key tools for adapting to and lessening the impacts of climate change. Moreover, creating these spaces depends on and is enhanced by the backing of the community[1]. The inclination of residents towards green open spaces is influenced by their societal attributes and how they evaluate the quality of these areas also the interpretation they create within their community context[14,19]. Research indicates that engagement with open green spaces correlates with factors such as gender, age, financial status, level of education, ethnicity, and cultural affiliation[13]. Interest in urban green spaces differs across cities in countries with varying income levels, influenced by distinct socio-economic dynamics. In high-income urban areas, the focus is on how green spaces contribute to equity, health, and safety, enhancing the overall quality of life[18]. Conversely, in cities within lower-income nations, there is heightened concern over the erosion of natural resources and the deterioration of ecological systems due to urban sprawl[20]. Research predominantly conducted in middle- and low-income urban settings suggests that urbanization is the principal factor

driving the depletion of greenery, which is believed to precipitate a spectrum of environmental issues[16].

In the heart of Mirpur, Azad Jammu and Kashmir, Pakistan, the urban landscape is punctuated by pockets of verdant tranquility—green open spaces that offer respite from the city's hustle and bustle. This article presents a descriptive study that delves into the residents' preferences and perceptions of these vital green areas. Through this quantitative analysis, current paper uncovers the intrinsic value these spaces hold for the local community.

Our investigation seeks to understand the multifaceted relationship between the residents and the urban greenery. We explore how these spaces are integrated into daily life, their impact on the urban experience, and the extent to which they fulfill the community's recreational and environmental needs. This study endeavors to provide insights that could guide urban planners and policymakers in creating green spaces that not only sustain the environment but also enrich the lives of those who inhabit the urban milieu of Mirpur.

2. Materials & Methods

It was a cross sectional study conducted in three urban green spaces and neighborhoods of Mirpur, a district of Azad Jammu and Kashmir Pakistan for the period between August to November, 2022. Systematically simple random sampling was used for selection of households. Urban area residents living within vicinity of UGS, having age between 18 to 50 years and provided consent for their participation were included in the study and temporary residents of the area were excluded. A validated questionnaire translated into Urdu language, consisting of close-ended questions were used as a field survey tool to study resident's perceptions about the UGS. A pilot study was done prior to the commencement of the study to assess the feasibility of the study.

3. Results

A total of 200 participants, included both male and females (54.5% and 44.5% respectively). Visit frequency was the highest for age group 31-40 years (39.5%) followed by 41-50 years group (24%). Most participants had high educational level with164 (82%) having education of FA and above. 90% participants were married whereas. 73.5% had children and 26% were without them. 14 % participants had either own business or were privately employed while 32.5% had government jobs with 39% in miscellaneous category (Table 1). The visit frequency of the study participants to the UGS is reflected in figure 1. The study also found that the participants were mainly from middle class as 52.5% of visitors had monthly salary of Rs 50, 000 or above, 31% from group 30,000-50,000, 16% from 10,000 to 20,000 and only 0.5% from 10,000 and below. 99% of participants were urban and 62% lived in joint families while 38% lived in separate homes. 80.5% of respondents had own homes and 19.5% lived in rented accommodation. Regarding commutation 71.5% had their own transport while 28.5% used public transport.

Figure 1: Visit frequency of participants

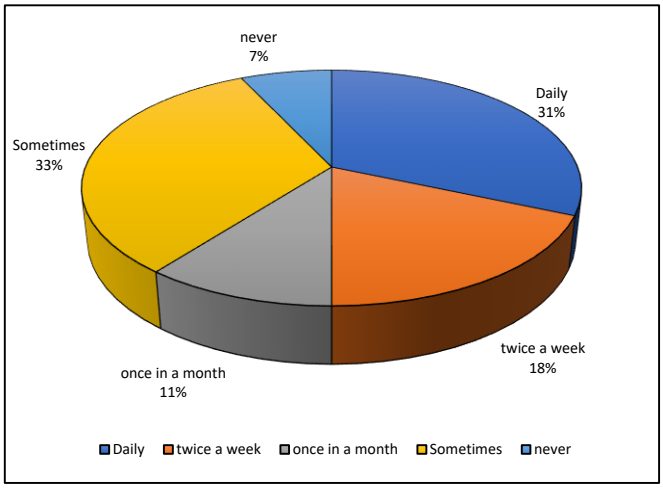

Figure 2, 3 and 4 shows the Likert-scale based responses of the study participants for the positive, negative and environmental attributes respectively. MANOVA test was used to assess the implications of the socioeconomic factors (like age, gender, source of income and the education levels) on the UGS attributes (positive, negative and environmental) and T-test is used for mean comparison of the variables.

Residents' perception

Positive attributes

For positive attributes of urban green spaces most visitors reported strongly agree response. The highest strongly agree response (62%) is for importance of parks. Promotion of elders' and physical health also showed strongly agreed responses of 60% and 58% respectively. The agreed response was the highest for 'neighbors' meetup' (43.5%) and for the rest it was mental health (40%), people likeness (37%) and property value (38.5%).

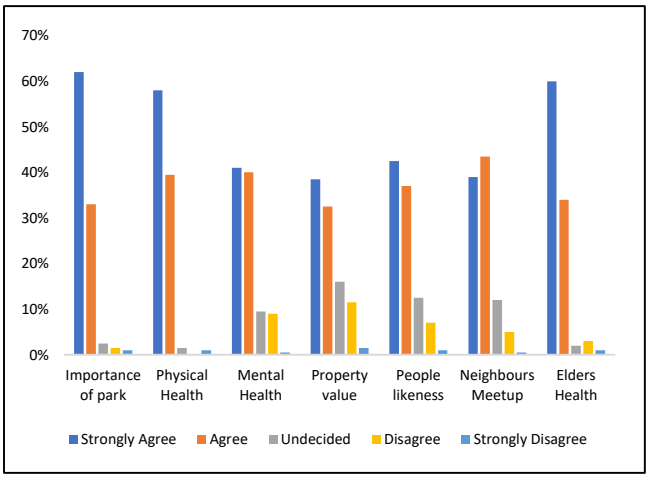

Figure 2: Residents' perception about urban green areas: positive attributes

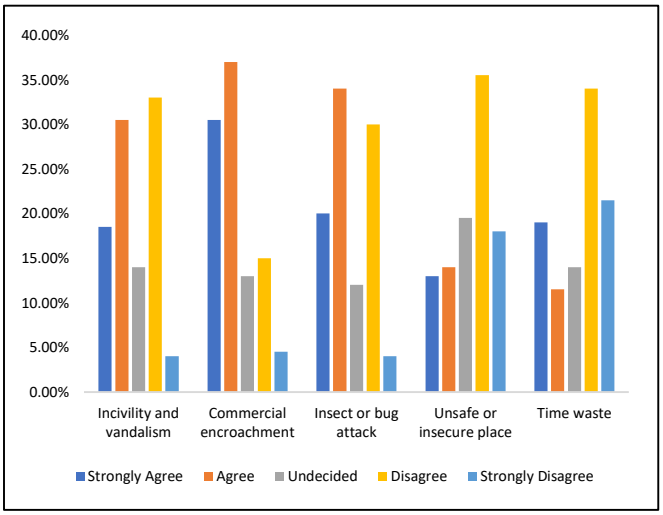

Figure 3: Residents' perception about urban green areas: negative attributes

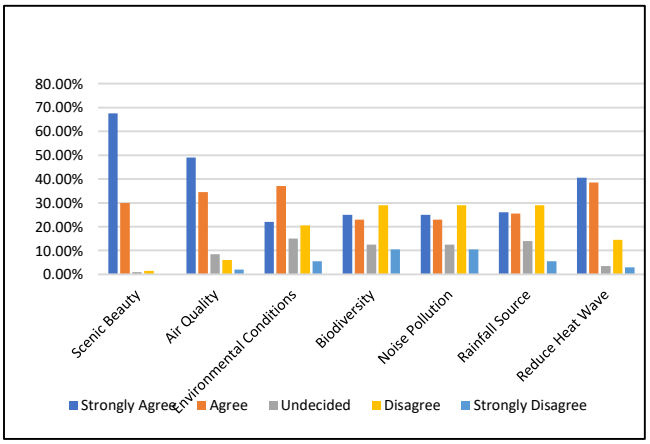

Figure 4: Residents' perception about urban green areas: environmental attributes

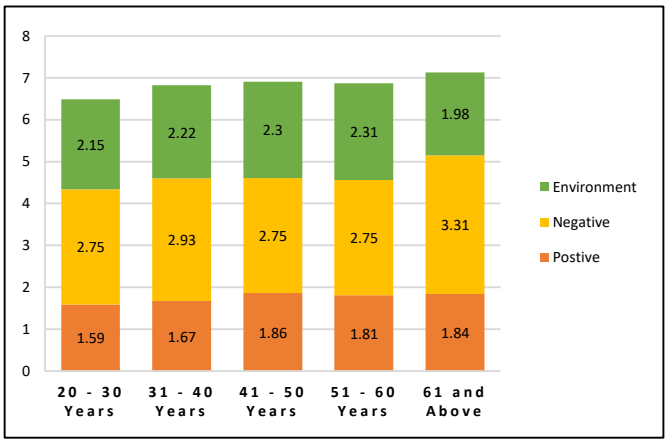

Figure 5: Age implications for UGS attributes based on MANOVA

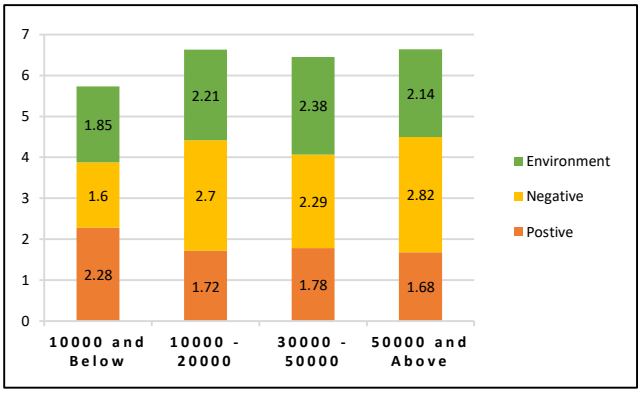

Figure 6: Income Implications for UGS Attributes Based on MANOVA

Negative attributes

Commercial encroachment was the highest strongly agreed response (30.5%) and time wastage was the highest strongly disagreed response (21.5%). Other agreed responses were insect or bug attack (34%) and vandalism (30.5%).

Environmental attributes

Visitors reported strongly agree response to scenic beauty (67.5%), air quality (49%) and reduce heat wave (40.5%).

Agreed responses were topped by environmental conditions (37%) followed by almost equal responses for rainfall source (25.5%), biodiversity and noise pollution (23%). For green spaces to enhance scenic beauty no negative response was recorded but 29% of residents disagreed with biodiversity, noise pollution and rainfall source.

Socioeconomic Differentials

Analysis showed that there is no statistically significant differences in participants' perception about urban green areas based on gender and occupation.

Table 1: Resident's Demographic Characteristics

Variable	Frequency	Percentage (%)
Gender		
Male	109	54.5
Female	89	44.5
Other	02	1.0
Age		
20 – 30 Years	41	20.5
31 - 40 Years	79	39.5
41 - 50 Years	48	24.0
51 - 60 Years	23	11.5
61 and above	9	4.5
Visit frequency		
Daily	63	31.5
Twice a week	37	18.5
Once in a month	21	10.5
Sometimes	65	32.5
Never	14	7.0
Education Level of Participants		
None	7	3.5
Primary	3	1.5
Middle	9	4.5
Matric	17	8.5
Intermediate	41	20.5
Bachelors	59	29.5
Masters and above	64	32.0
Marital status		
Married	180	90.0
Unmarried	19	9.5
Not responded	01	0.5
Children of participants		
Yes	147	73.5
No	52	26.0
Not responded	01	0.5
Profession of participants		
Private	28	14.0
Government servant	65	32.5
Own business	29	14.5
Others	78	39.0
Income of participants		
10000 and below	1	.5
10000-20000	32	16.0
30000-50000	62	31.0
50000 and above	105	52.5
Living location		
Urban	198	99.0
Rural	2	1.0
Family system of participants		
Joint family	124	62.0
Separate home	76	38.0
House of participants		
Own house	161	80.5
Rental	39	19.5
Transport used by participants		
Own	143	71.5
Public	57	28.5

The attributes showing significant relationship with monthly income are property value, people likeness to live in proximity to UGS and scenic beauty (figure 6). For property value (p=0.049) low-income group (Rs 10,000 and below) has a mean of 4 as compared to value of 1.91 for highest income group (Rs 50,000 and above). Similar trend is reflected in likeness to live near UGS (p=0.047) with means of 4 and 1.84 for low and high-income groups respectively. In scenic beauty the trend contrasts with the previous trends in the group as both groups have means less than 2.5 (p=0.039). Mental health is the only attribute showing significance with regards to age (p=0.014) with groups 4 and 1 showing highest and lowest mean values of 2.35 and 1.56 respectively, hence association between the age group and the attributes was reported (figure 5). Education and green space attributes were also found not statistically significant.

4. Discussion

The current study focused on the quantitative aspect of the perception towards Green open spaces in urban areas of Mirpur district of Azad Jammu and Kashmir, Pakistan. The study results reflected that for assessed positive attributes notable agreed responses included importance of parks, promotion of elder's health, physical health and neighbor's meetup. Whereas, commercial encroachment , insect or bug attack and vandalism stood most significant in negatively impacting the perception regarding the presence of UGS. Significant relation between monthly income was reported with the property value, people likeness to live in proximity to UGS and scenic beauty. However, mental health was found of significance with respect to age.

Comparison of demographic characteristics with a similar study showed similarities in terms of gender (male visitors more than the females in both) and high education status of the visitors. Notable differences were in marital status with married being higher in our study (90% vs 37.2%), age groups (most of our visitors were in age group 31-40 years while in reference study the number of young visitors 15-24 years was higher), socioeconomic class (higher income group constituted majority in our case (52.5%) while low-income group constituted 45.3% of visitors in the reference study)[16,19]. Another study conducted in Itlay favored that the socioeconomic variables like age gender, marital status influences the trends in utilization of these green spaces, which supports the finding of current study that has established significant corelation based on age and income of the individuals[14].previous literature also

supports the association of these socioeconomic factors with the utility of the urban spaces and has emphasized on considering these factors while planning and preservation or creation of such spaces in the residential vicinities, based on current findings of the study similar recommendation can be made for the targeted population and region[1,12].Studies have shown that planning and contextual settings influence human perception about natural capital in urban settings. In a study the negative impacts were more felt by the people living in semi-planned area than the people living in the planned areas[2]. With regards to the UGS perception about positive attributes the results match those of the reference study[16]. Visitors are well aware of the importance of UGS as this variable had the highest strongly agree response. Importance for health, place for socializing, property value and likeness to live near them were the other positive attributes which showed predominant agreement of the visitors with their positive value. In a study by Qureshi et al., the people were not aware of the health benefits of UGS which is in contrast to our data[13]. The difference could be because of better educated people comprising visitors in our case. Health benefits of UGS are also highlighted in other international studies but property value was not an important feature in their results[19]. Relationship between UGS and property value an interesting finding in our study was further explored was explored in the literature. UGS increases in property values because homeowners and renters are willing to pay more for the perceived benefits of being close to green space[3,4].

Consistent with international studies the participants are well informed on environmental impact of UGS with majority appreciating their scenic beauty value. Interestingly almost 40% of them disagreed with their value in biodiversity and noise pollution which is in contrast to the reference study conducted in Lahore, in which majority of the participants agree with these attributes. The difference could be due to lack of sufficient knowledge of the visitors on aspects of biodiversity. Secondly the UGS surveyed may not be totally noise free in our case leading to visitors disregarding its role in noise reduction. Amomgst the benefits of visiting green spaces current study showed that a significant number of individuals agreed that visiting these places helps improving the social interactions especially with the neighbors, which is supported by various studies conducted in different countries and cultural settings[6,7,17].Comparative analysis of perceptions for UGS attributes based upon different socioeconomic differentials has also shown both similarities and differences from the results of the reference study[16]. The current study data indicates a notable divergence in the perception of mental health benefits associated with Urban Green Spaces (UGS) when analyzed across different age demographics. Specifically, the cohort aged 51-60 years has demonstrated a statistically significant prioritization of mental health considerations in comparison to the 21-30 years demographic, which exhibited a contrasting stance. This pattern is corroborated by referenced studies[8,10,16], which collectively suggest an escalation in the valuation of UGS with advancing age. Furthermore, these studies elucidate that older individuals, alongside those possessing higher educational qualifications, are more inclined to acknowledge the psychological and health advantages conferred by UGS. Such findings underscore the necessity to tailor public health communications and UGS initiatives to resonate with and address the nuanced preferences of diverse age groups.

5. Conclusion

UGS are an essential component of any city. With urbanization and consequent commercialism UGS are shrinking. Our study focused on the perceptions of visitors to urban UGS with aim to guide future UGS planning. Most of our visitors were married, well-educated, from high income group and were mostly from 30-50 years of age. Most valued attributes were the importance of UGS, role in physical, psychological and elderly health, high property value and place for socializing. Commercial encroachment, vandalism, bug attack, insecurity was some of the key negative attributes. Its therefore, recommended that number of UGS should be increased and existing ones should be modified based upon the visitors' preferences and concerns.

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