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Senior-friendly Public Spaces for Overall Well-being in the Future Urban Environment: Factors Influencing Usability by Senior Citizens

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Abstract

Changing demographics is a global concern associated with the development of future cities. Over-migration and rapidly increasing senior population in the urban areas, worldwide, are the key drivers for city planning and development. Public parks are a significant aspect of the urban fabric that contribute to quality life of the city dwellers of all age-groups. They offer a low-cost solution for social engagement and physical activity for a longer duration and also contribute to the mental health of senior citizens. This necessitates the development of public parks with special consideration towards preferences of seniors, in order to create cities that are age-friendly and health-friendly. High quality public parks in the present tech-world would greatly contribute to prevention of social isolation, especially for seniors living in urban environment, which necessitates identification and incorporation of factors that influence usability of such spaces by them. This paper identifies the factors that affect usability of public parks by the senior citizens along with their preferences, needs and requirements, through an intense literature review. The identified factors are narrowed down through questionnaires and personal interactions with the field experts and the users, aged 60 years and above. The statistical analysis helps in understanding the association of these factors with the overall satisfaction of senior citizens and identifies the critical factors that need to be taken care of for an enhanced usability of such spaces by the seniors.

Keywords: *Age-friendly cities, Demographic variation, Future cities, Public parks, Public Spaces, Senior Citizens, Senior-friendly.*

1. Introduction

City design paradigm has been gaining a lot of attention in the past few years due to rapidly increasing population and tremendous technological development. However, rising senior population in urban areas is a global challenge and will be one of the vital aspects for planning and development of future cities. World Health Organization (2007) indicates within a decade's time, three-fifth of the world's population will be residing in urban areas, with nearly a quarter of it being 60 years and above in next 25 to 30 years. Government of India (2007) defines a senior citizen in India, as a person with Indian citizenship who has attained the age of 60 years or above. Buffel (2016) highlights the guidelines of WHO according to which an age-friendly city planning must include outdoor open spaces, social aspect`s in addition to housing, healthcare and related services, especially for senior citizens. Advancement of technology and digitalization has changed the lifestyle in cities resulting in increased dependency of senior citizens on open

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outdoor spaces, particularly on the parks; for social interaction, relaxation, recreation and various other activities (Mehta, 2013). Usability of parks, without difficulty, by all age groups is the success indicator of these spaces, on the contrary, such aspects often get overlooked which results in limited utilization of parks by the senior citizens. Ageing of population is giving rise to several challenges in terms of well-being of the people. With the increasing senior population and shifting demographics worldwide, future cities need to address to the requirements and preferences of the seniors. Public parks being one of the significant aspect of the city design on which most of the seniors rely for overall well-being; it becomes essential to create such spaces incorporating their needs with high quality standards. Winick and Jaffe (2015), Dunham-Jones & Williamson (2009) highlight the significance of planners in providing urban public spaces in accordance with the requirements of senior population. Some researchers suggest that there is a lack of fit between the preferences of senior citizens and design of the parks which leads to reduced presence of seniors in the parks (Loukaitou-Sideris et al., 2016). Effective utilization of public parks by the senior citizens requires identification of factors that influence their usability by the seniors, which makes the study inevitable.

1.1 Significance of study

Urbo-architectural style focuses mainly on built form with minimal consideration towards planning and development of open spaces due to which the built environment for active ageing has been gaining tremendous significance in the past decades. Public parks form a vital part of urban environment, especially in the present scenario of technological advancements and rising world's senior population. Parks form a major platform for activities that contribute to the physical, social as well as psychological well-being of users. With rapidly rising world's senior population in urban areas, all such aspects need to be collectively considered and appropriately incorporated in the design and development of parks to enhance their usability by the senior citizens.

1.2 Problem statement

Rapid urbanization and rising senior population in the urban areas worldwide has resulted in expansion of cities at a faster rate. In such a scenario, incorporation of social and psychological preferences of senior citizens often get neglected and consequently, the parks are developed mainly with emphasize only on the physical requirements which include incorporation of fitness equipment, pathways for walking, jogging etc. In such circumstances, the usability of public parks often gets affected which leads to identification of physical, social and psychological preferences of senior citizens along with the factors that affect usability of public parks by them, which makes this study inevitable. King and King (2010) states that senior citizens are relatively inactive and need to be encouraged and motivated to visit parks often.

2. Public parks for overall well-being

Public parks are accessible to all the ages-groups, races, gender, ethnicity, which includes plazas, squares, parks and streets. These spaces are among the key aspects of city planning, playing a crucial role in bridging the social and cultural values with urban trends. These spaces are the major contributors for overall well-being and active-ageing, thus, forming a significant part of senior citizen's routine. Harrison (1997) states that parks offer a platform for socialization that enables its users to interact with each other. Revitalization of such spaces with attractive landscapes, required facilities and amenities becomes necessary to ensure social inclusion and enhanced usability by all age-groups. A senior-friendly public space offers convenient access and way-finding for senior citizens and ensures smooth ingress and egress (Delhi Urban Art Commission, 2018). Gangadharan et.al, (2011) has estimated a rise of more than 300 percent in the count of senior population in India itself which necessitates the development of better quality of

life and spaces for senior citizens in the future cities along with rejuvenation of public spaces in the existing cities. Outdoor public spaces, especially public parks, contribute to the overall wellness and active ageing (Yen et al., 2014). Parks not only enhance physiological health but, also contribute to the psychological and emotional well-being of its visitors by building a connection between them and the nature which helps in recovering from various stresses of the urban lifestyle and complications (Maller, et al., 2006). Brittain et al. (2010) states that opportunities of interacting with people in the park are more fascinating for most of the seniors than the idea of just visiting and exercising. A well-connected park offers a socially active platform that can reduce the feeling of isolation, encourages social inclusion and participation; along with enhanced mobility and walkability (Zeitler et al., 2012). However, most of the parks fail to emphasize on social and psychological preferences of senior citizens and such aspects often get neglected (Kalinkara, 2001). Such significant aspects often get overlooked in the modern city design practices which fail to accommodate substantial activities and opportunities for active ageing. Hence, creating high-quality public spaces for senior citizens is a necessity to offer broader scope of opportunities to age actively and graciously.

2.1 Challenges and Impediments associated with senior citizens

City lifestyle and hectic routine often leads to mental and physical stresses (Mitchel et al. 2003) which increases the dependency of senior citizens on public parks that contribute to good health and well-being.. However, some studies (Scharf et al., 2003) indicate that there is a sense of reluctance among several senior citizens towards visiting public parks due to poor accessibility, improper lighting, undulating pathways, intruders in parks increasing risk of crime (Smith, 2009; Klinenberg, 2002). Some of the senior citizens are prone to getting affected by harsh climatic conditions which necessitates the planning of spaces incorporating suitable design components that encourage formation of micro-climate. An effective landscape design will also contribute to the formation of suitable micro-climate which will further encourage a greater footfall in the parks, especially in the mornings and evenings of extreme weather conditions. Seniors often get affected by the mental disorders due to age, day-to-day stress levels and social isolation. Having limited interaction opportunities, as compared to other age groups, social isolation leads them to mental challenges which often gets worse with the ageing (Clifford, 2018). Another critical aspect includes the conditions of dementia among some of the seniors for which nature acts as a healer in several cases. The idea of visiting large public parks, especially alone, could be fearsome for some of the senior citizens due to inappropriate way-finding, confusing pathways etc. Lack of adequate signage is also another factor that holds the users back from visiting the parks often. The fear of not been able to find the way back or being completely lost within the public park holds them back and forces them to stay mainly indoors (Garvin et al., 2012). Wenjuan and Shengxi (2018), highlight the significance of signage in the public parks and its contribution to way-finding and convenient usability. Appropriate signage could be supportive in such scenarios and can greatly contribute to way-finding.

2.2 Needs and preferences of senior citizens

Senior citizens are different from other age-groups in terms of psychology, thought process, lifestyle which is why their preferences and requirements also vary and need to be sincerely considered and incorporated. Kweon et al. (1998) and Alves et al. (2008) suggest that senior citizens are highly inclined towards green and open spaces that offer a safe and secured environment, physical activities, attractive landscape, appropriate lighting and sufficient seating for interactions with other park users. Another study concludes that outdoor spaces should be safe and must include physical activities for the senior population (Zhang, 2014). The preferences of the seniors also include a nuisance-free, green common space, for relaxation as well as physical activities, plantation, proper lighting, seating with atleast basic facilities and amenities (Alves et al., 2008). According to Steel (2015), a suitable landscape and spatial arrangement of urban parks play a vital

role in achieving the desired level of usability. Parks provide a social platform and an opportunity to its visitors to interact with each other which contributes to improved quality of life. Cohen et al. (2009) suggests that some of the seniors visit park to interact with other park users than the physical activities that encourages social inclusion and reduces mental stress. Social interaction also boosts moral support and encourages them for physical activities that are performed in groups (Carlson et al., 2012). Their preferences and comfort levels are different from other age groups which signify incorporation of age-friendly features, however, such aspects are often over-looked while planning and development of neighborhoods. Regular and moderate exercises contribute greatly to the physical fitness, activeness and mobility which further requires an easily approachable and conveniently accessible space. A neighborhood open space would offer a convenient and regular connection with the outdoor environment, keeping them active, motivating them to move out of the house and walk which is itself a physical exercise and enhances joint mobility. Presence of moderate exercise equipment in the open space would encourage the seniors for exercising, keeping them occupied, and enhancing mental health and encourage them to interact with other park visitors. Public Park that is safe and secured and can offer a soothing experience is highly preferred by senior citizens. Incorporation of proper lighting, security cameras, patrolling guards or detectors could contribute greatly an enhanced usability of such spaces by the seniors (Rupa, 2015). White et al. (2010) highlights their preference of having public transportation facility within convenient vicinity of the park.

3. Materials and Methods

The main objective of the study is to identify the factors that affect usability of public parks by the senior citizens in urban environment along with identification of physical and psycho-social preferences of senior citizens with reference to the development of public parks. In the first phase of the research, the paper identifies senior-friendly features for appropriate usability of public parks; physical, social and psychological preferences and constraints of senior citizens, through literature study. The data sources include online articles, journals and other internet sources. The second phase narrows down the identified factors to the more suitable ones through questionnaires and interactions with the field experts along with a survey of park users, followed by identification of the most critical factors that majorly determine the usability of such spaces by the senior citizens, through spearman’s rho test on SPSS software.

4. Discussion and results

The study highlights various benefits of public parks that contribute to active-ageing and healthy living of all age-groups along with their, social, physical and psychological benefits. Hence, it is significant to understand the aspects that dissuade or fascinate senior citizens. Factors that influence the usability of public parks by the senior citizens in different ways have been identified that need to be incorporated for an effective senior-friendly urban open spaces. Questionnaire and interactions with the senior citizens (users) identified various other aspects that need to be incorporated while designing the parks.

Field experts such as Architects, Landscape designers, Urban and town planners etc.; suggested some more significant aspects that need to be taken care for an enhanced and senior-friendly experience. Senior citizens also require barrier-free access which often gets neglected or not implemented appropriately. Additionally, the parks should be developed to make them inviting, especially for those with physical limitations by incorporating facilities like wider and convenient pathways, ramps, railing and grab-bars, charging stations for the self-driven wheelchairs, drinking water, washrooms etc. Such facilities would motivate otherwise-abled users to be self-dependent and visit parks even

on their own, frequently. Dark zones due to absence of appropriate lighting in the parks has been categorized as a threat to security and safety of the park users which often creates a sense of reluctance among senior citizens to visit parks in the late hours. Various other aspects highlighted during discussions with the experts showcased that incorporation of children's play area also attracts seniors to visit often. Based on the literature review and interactions, Table- I demonstrates the factors that affect utilization of public parks by senior citizens which have further been narrowed down to the significant heads such as distance, accessibility, facilities, activities, safety and security, noise level, cleanliness and micro-climate.

Table I: Factors affecting usability of Public Parks in Urban Environment

Distance	• Suitable distance • Convenient approach • Access to public transport within easy vicinity
Facilities and Amenities	• Exercise Equipment • Fitness activities (yoga, meditation etc.) • Training sessions • Jogging and cycling track • Ergonomically sound Furniture • Vehicular Parking • Drinking water • Clean Toilets (Male, female, Otherwise-abled etc.) • Refreshment kiosks (Tea, coffee, snacks, juice etc.) • Connection with nature • Vegetation • Refreshing views
Accessibility – convenient and safe mobility to different segments	• Proximity • Mobility • Walkability • Connectivity • Barrier-free movement • Ease of movement and approach • Zoning & Interconnections • Well-maintained and proper pathways
Landscape elements and furnishings	• Maintained water body(s) • Convenient Furniture • Plantation • Suitable material • Sufficient lighting • Outdoor environment offers a break from hectic and connects with nature. • Open & nuisance-free space. • Connection with nature • Medicinal plants • Fresh Air • Plantation
Uses and Activities	• Spaces for social activities • Space for Free exercises • Interaction opportunities • Seating for discussion • Spaces for interaction (performances, events etc.) • Group activities, games etc. • Gardening • Activities that involve mental skills and encourage brain-storming. • Pottery

	• Music
Safety and Security	• Way-finding • Surveillance system to prevent o risk of victimization o anti-social elements • Appropriate signage • Sufficient lighting to prevent dark zones • Proper pathways to prevent fear of falling off • Relief from mental stress
Landscape; Noise and cleanliness	•
Sun-shading (Covered/ semi-covered zones **Temperature**	Micro-climate Sun-shading Vulnerability to extreme weather conditions

The study further suggested that the usability of public parks also depends on the frequency and duration of visits by the senior citizens which are dependent on the fulfillment of identified factors. The survey, which includes questionnaire and personal interactions, is based on 5 point Likert scale. The questionnaire based on the factors identified through literature review and interaction with the field experts, was sent to 150 parks users. A total of 117 responses were received consisting of 63 males and 54 females; most of them being 60 to 69 years of aged and about only 8 percent were 80 years and above. Spearman's rho test on SPSS software provides evidence of association among the identified factors which is interpreted in Table no. II. It provides the level of association between the factors varying from very weak, weak, moderate and strong correlation based on which the inferences have been drawn.

Table II: Spearman's rho correlation test results

			Distance	Frequency	Duration	Facilities and Activities
Spearman's rho	Distance	Correlation Coefficient Sig. (2-tailed) N	1.000 . 117	-.467** .000 117	.067 .470 117	.226* .014 117
	Frequency	Correlation Coefficient Sig. (2-tailed) N	-.467** .000 117	1.000 . 117	.036 .702 117	-.098 .291 117
	Duration	Correlation Coefficient Sig. (2-tailed) N	.067 .470 117	.036 .702 117	1.000 . 117	.414** .000 117
	Facilities and Activities	Correlation Coefficient Sig. (2-tailed) N	.226* .014 117	-.098 .291 117	.414** .000 117	1.000 . 117
	Accessibility (Ramps, railings etc.	Correlation Coefficient Sig. (2-tailed) N	-.298** .001 117	.392** .000 117	.110 .238 117	-.083 .373 117
	Safety and security	Correlation	-.059 .528	.224* .015	.576** .000	.190* .040

	Coefficient Sig. (2-tailed) N	117	117	117	117
Comfort level in terms of Noise	Correlation Coefficient Sig. (2-tailed) N	-.109 .241 117	.378** .000 117	.434** .000 117	.108 .248 117
Comfort level in terms of Cleanliness	Correlation Coefficient Sig. (2-tailed) N	-.204* .027 117	.283** .002 117	.499** .000 117	.137 .140 117
Landscape	Correlation Coefficient Sig. (2-tailed) N	-.398** .000 117	.474** .000 117	.246** .008 117	-.018 .851 117
Sun-shading (trees, canopies etc)	Correlation Coefficient Sig. (2-tailed) N	-.305** .001 117	.273** .003 117	.335** .000 117	.131 .161 117
Comfort level in terms of Temperature (Micro-climate)	Correlation Coefficient Sig. (2-tailed) N	-.284** .002 117	.405** .000 117	.550** .000 117	.161 .083 117
Overall Satisfaction	Correlation Coefficient Sig. (2-tailed) N	-.079 .396 117	.205* .027 117	.389** .000 117	.189* .041 117

			Accessibility (Ramps, railings etc.	Safety and security	Comfort level in terms of Noise
Spearman's rho	Distance	Correlation Coefficient Sig. (2-tailed) N	-.298** .001 117	-.059 .528 117	-.109 .241 117
	Frequency	Correlation Coefficient Sig. (2-tailed) N	.392** .000 117	.224* .015 117	.378** .000 117
	Duration	Correlation Coefficient Sig. (2-tailed) N	.110 .238 117	.576** .000 117	.434** .000 117
	Facilities and Activites	Correlation Coefficient Sig. (2-tailed)	-.083 .373 117	.190* .040 117	.108 .248 117

		N			
	Accessibility (Ramps, railings etc.	Correlation Coefficient Sig. (2-tailed) N	1.000 . 117	.281** .002 117	.303** .001 117
	Safety and security	Correlation Coefficient Sig. (2-tailed) N	.281** .002 117	1.000 . 117	.377** .000 117
	Comfort level in terms of Noise	Correlation Coefficient Sig. (2-tailed) N	.303** .001 117	.377** .000 117	1.000 . 117
	Comfort level in terms of Cleanliness	Correlation Coefficient Sig. (2-tailed) N	.233* .012 117	.435** .000 117	.222* .016 117
	Landscape	Correlation Coefficient Sig. (2-tailed) N	.227* .014 117	.207* .025 117	.221* .017 117
	Sun-shading (trees, canopies etc)	Correlation Coefficient Sig. (2-tailed) N	.177 .056 117	.221* .017 117	.307** .001 117
	Comfort level in terms of Temperature (Micro-climate)	Correlation Coefficient Sig. (2-tailed) N	.215* .020 117	.462** .000 117	.470** .000 117
	Overall Satisfaction	Correlation Coefficient Sig. (2-tailed) N	.523** .000 117	.503** .000 117	.401** .000 117

			Comfort level in terms of Cleanliness	Landscape	Sun-shading (trees, canopies etc)
Spearman's rho	Distance	Correlation Coefficient Sig. (2-tailed) N	-.204* .027 117	-.398** .000 117	-.305** .001 117
	Frequency	Correlation Coefficient Sig. (2-tailed) N	.283** .002 117	.474** .000 117	.273** .003 117
	Duration	Correlation	.499**	.246**	.335**

	Coefficient Sig. (2-tailed)	.000	.008	.000
	N	117	117	117
Facilities and Activites	Correlation	.137	-.018	.131
	Coefficient Sig. (2-tailed)	.140	.851	.161
	N	117	117	117
Accessibility (Ramps, railings etc.	Correlation	.233*	.227*	.177
	Coefficient Sig. (2-tailed)	.012	.014	.056
	N	117	117	117
Safety and security	Correlation	.435**	.207*	.221*
	Coefficient Sig. (2-tailed)	.000	.025	.017
	N	117	117	117
Comfort level in terms of Noise	Correlation	.222*	.221*	.307**
	Coefficient Sig. (2-tailed)	.016	.017	.001
	N	117	117	117
Comfort level in terms of Cleanliness	Correlation	1.000	.419**	.420**
	Coefficient Sig. (2-tailed)	.	.000	.000
	N	117	117	117
Landscape	Correlation	.419**	1.000	.218*
	Coefficient Sig. (2-tailed)	.000	.	.018
	N	117	117	117
Sun-shading (trees, canopies etc)	Correlation	.420**	.218*	1.000
	Coefficient Sig. (2-tailed)	.000	.018	.
	N	117	117	117
Comfort level in terms of Temperature (Micro-climate)	Correlation	.401**	.332**	.538**
	Coefficient Sig. (2-tailed)	.000	.000	.000
	N	117	117	117
Overall Satisfaction	Correlation	.337**	.124	.176
	Coefficient Sig. (2-tailed)	.000	.184	.058
	N	117	117	117

			Comfort level in terms of Temperature (Micro-climate)	Overall Satisfaction
Spearman's rho	Distance	Correlation	-.284**	-.079
			.002	.396

	Coefficient Sig. (2-tailed) N	117	117
Frequency	Correlation Coefficient Sig. (2-tailed) N	.405** .000 117	.205* .027 117
Duration	Correlation Coefficient Sig. (2-tailed) N	.550** .000 117	.389** .000 117
Facilities and Activites	Correlation Coefficient Sig. (2-tailed) N	.161 .083 117	.189* .041 117
Accessibility (Ramps, railings etc.	Correlation Coefficient Sig. (2-tailed) N	.215* .020 117	.523** .000 117
Safety and security	Correlation Coefficient Sig. (2-tailed) N	.462** .000 117	.503** .000 117
Comfort level in terms of Noise	Correlation Coefficient Sig. (2-tailed) N	.470** .000 117	.401** .000 117
Comfort level in terms of Cleanliness	Correlation Coefficient Sig. (2-tailed) N	.401** .000 117	.337** .000 117
Landscape	Correlation Coefficient Sig. (2-tailed) N	.332** .000 117	.124 .184 117
Sun-shading (trees, canopies etc)	Correlation Coefficient Sig. (2-tailed) N	.538** .000 117	.176 .058 117
Comfort level in terms of Temperature (Micro-climate)	Correlation Coefficient Sig. (2-tailed) N	1.000 . 117	.307** .001 117
Overall Satisfaction	Correlation Coefficient Sig. (2-tailed)	.307** .001 117	1.000 . 117

	N		

Inferences based on the SPSS analysis:

- Distance satisfaction scores were correlated with frequency of visit scores, giving r-value of

(-0.467**) which indicates a moderate negative correlation between distance and frequency of visits which further suggests that the frequency of visits reduces with the increase in distance. With the p-value of less than 0.05, it may be concluded that there is a relationship between the distance and frequency of visits, in the population as well as the sample.

- Accessibility satisfaction scores were correlated with Frequency of visits, giving r-value of

(+0.392**) which indicates a moderate positive correlation between accessibility and frequency of visits which suggests that the frequency of visits increases with the increase in accessibility. With the p-value of less than 0.05, it may be concluded that there is a relationship between the accessibility and frequency of visits, in the population as well as the sample.

- Facilities and Activities satisfaction scores were correlated with Duration of visits, giving r-value of (+0.414**) which indicates a moderate positive correlation between Facilities and Amenities; and Duration of visits which suggests that the Duration of visits increases with the increase in facilities and amenities. With the p-value of less than 0.05, it may be concluded that there is a relationship between the facilities and amenities; and the duration of visits, in the population as well as the sample.

- Safety and Security satisfaction scores were correlated with Duration of visits, giving r-value of (+0.576**) which indicates a strong positive correlation between Safety and Security; and Duration of visits which suggests that the Duration of visits increases with the increase in the level of Safety and security. With the p-value of less than 0.05, it may be concluded that there is a relationship between the safety and security; and the duration of visits, in the population as well as the sample.

- Noise comfort scores were correlated with Duration of visits, giving r-value of (+0.434**) which indicates a moderate positive correlation between Noise comfort level and duration of visits which suggests that the Duration of visits increases with the increase in the comfort level of noise. With the p-value of less than 0.05, it may be concluded that there is a relationship between the comfortable noise level and duration of visits, in the population as well as the sample.

- Cleanliness scores were correlated with Duration of visits, giving r-value of (+0.499**) which indicates a moderate positive correlation between cleanliness level and duration of visits which suggests that the Duration of visits increases with the increase in the level of cleanliness. With the p-value of less than 0.05, it may be concluded that there is a relationship between the level of cleanliness and duration of visits, in the population as well as the sample.

- Landscape scores were correlated with the frequency of visits scores, giving r-value (+474**) which indicates a moderate positive correlation between Landscape and Frequency of visits. ¬This suggests that the frequency of visits increases with the suitable landscape design. With the p-value of less than 0.05, it may be concluded that there is a relationship between the landscape design of a space and frequency of visits, in the population as well as the sample.

- ‘Sun-shading’ scores were correlated with duration of visit scores, giving r-value of (+0.335**) which indicates a moderate positive correlation between level of sun-

shading and duration of visits, which suggests that the duration of visits increases with the better sun-shading. With the p-value of less than 0.05, it may be concluded that there is a relationship between the sun-shading level and duration of visits, in the population as well as the sample.

- It is observed that Safety and security; and Accessibility have a significant impact on the overall satisfaction of the users with the r-values of (+0.503**) and (+523**) respectively. With p-values being less than 0.05, it is likely that overall satisfaction of users is strongly associated with the safety and security; and accessibility, in the population as well as the sample.

5. Conclusion

Usability of urban public parks by the senior population is a major point of concern that has channelized our attention towards development of senior-friendly public parks for planning of future cities. The research indicates that the frequency and duration of visits to the parks by senior citizens get influenced by a wide range of factors, the critical ones being accessibility; and level of safety and security. A safe and secured, well-connected public space with convenient access would be more encouraging for seniors not just to visit regularly but also to spend quality time. It is also observed that most of the seniors prefer to visit the spaces that are within the convenient vicinity; however, it is found that their preferences get extended to a slightly distant public space also, if it is fairly secured and safe, and offers a wide range of activities for social inclusion with appropriate landscape. Suitable facilities and activities offer multiple opportunities which keep the seniors occupied, encourage social inclusion and contribute to mental as well as physical activeness. Attractive landscape design, suitable flora enhances natural surroundings which not only creates a convenient micro-climate but also contributes to natural healing, psychological well-being of seniors by connecting them with the nature, especially by incorporating some medicinal plants. In a way, all the identified factors are inter-linked and must be taken into consideration collectively. In the light of above evidences, it may be concluded that an integrated city planning having high-quality neighborhood parks incorporating the needs and preferences of senior citizens appropriately, will contribute to the development of senior-friendly public parks for the future.

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