Saha, S.; Basu, S.; Pandit, D.

A framework for exploration of variation in prioritization of neighborhood infrastructure influencing the overall Quality of Life (QoL) of older citizens, across varied socio-demographic groups

Research Paper

A framework for exploration of variation in prioritization of neighborhood infrastructure influencing the overall Quality of Life (QoL) of older citizens, across varied socio-demographic groups: a case study of Kolkata, India

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Abstract

Deteriorating physical and mental health, declining social relationships is expected to lead to a decline in the overall QoL of the older citizens or older adults. The physical limitations resulting from age related disorders are also likely to restrict the daily activities and interactions of the older adults to the immediate periphery of their residential areas. The role of the neighborhood in influencing the overall QoL of the older citizens thus becomes extremely important. In the Indian context, the relation between neighborhood and QoL of Indian older adults is still a comparatively less explored area of research. Considering the socio-cultural milieu of the Indian society comprising of diverse backgrounds, developing of a holistic list of efficient guidelines requires identification of the varied needs of varied socio-demographic groups of people. The present study, using structured interviews with 408 respondents from Kolkata, India, explores how the prioritization of neighborhood infrastructure, influencing perceived QoL, varies across varied socio-demographic groups. In this paper, the analysis has been conducted by comparison of results using ordinal regression and RIDIT analysis. The analysis consisted of three parts: Ordered Logistic Regression (OLR), RIDIT analysis and finally prioritization using both. These findings of the variation in prioritization of neighborhood infrastructure among different socio -demographic groups, can help in the formulation of guidelines for design of neighbourhood and gated community either for specific groups of older adults or for inclusive design integrating the needs and requirements of older adults from all backgrounds.

Keywords

Older adults, Neighborhood, Aging-in-place (3 to 6 keywords)

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1. Introduction

World Health Organization (WHO) defines Quality of Life (QoL) as an "individuals' perception of their position in life in the context of the culture and value system in which they live and in relation to their goals, expectation, standards, and concerns" (WHOQOL Group 1995). A plethora of studies on the older adults have observed the impact of weakening physical and mental health capacities, waning social relations, etc. on the decline in their overall QoL (Jeyalakshmi, Chakrabarti, & Gupta, 2011; Mane, 2016; Raju, 2011).

The physical limitations in the older adults along with their reduced capability to adjust and adapt to new and sudden changes, are likely to restrict their daily activities and limit their interactions to the immediate periphery of their familiar residential settings. The role of the neighborhood in influencing the overall QoL of the older citizens thus becomes extremely important.

The present study is a part of a broader research project which aims at identifying and prioritizing a list of urban neighbourhood level infrastructure and their respective attributes that the Indian older adults perceive to cater to their overall QoL.

Since the characteristics corresponding to age friendliness is expected to have different meanings for individuals from different socio-demographic contexts, (Scharlach, 2016), the present study, explores if and how socio-demographic characteristics of Indian older adults impacts upon the prioritization of neighbourhood infrastructure.

2. Background

The traditional family based care system for the older adults in India, traditionally, is gradually depleting due to the recent changes in family structure, brought about by rapid urbanization and the shifting of the youth to work based locations, away from home (Ugargol, Hutter, James, & Bailey, 2016). Substantial rise in the population of Indian older adults over the years along with the change in the traditional Indian family structure, rise in dual career families and changing value systems are gradually altering the social system (Kalavar & Jamuna, 2008) and thrusting the responsibility of caring for the older adults on the government, which may create a sense of insecurity among the Indian older adults, as a large section of them still prefer to depend on family based support. However, despite the spiraling need for research on ageing and the aged in India, there is a significant dearth of original studies investigating the perceived needs and perspectives of the Indian older adults and the heterogeneity in the perception among the myriad groups of Indian older adults.

The contribution of aging-in-place in helping the older adults to maintain their level of independence, social connections and living in a familiarized lifestyle, have been recognized in various studies (Jayantha, Qian, & Yi, 2018; Kendig, Gong, Cannon, & Browning, 2017; Tang & Pickard, 2008). The importance of aging in place and the role of residential satisfaction in contributing to the Quality of Life (QoL), have also been established by various studies (Temelová & Slezáková, 2014). In case of India, besides the preference of the Indian older adults to age-in-place, the considerable expenses involved in institutional care and the social taboo associated with the

institution of old age homes and similar age specific organizations (Brijnath, 2012), also contributes to their higher preference to age-in-place.

The relationship between well-being and neighbourhood has been explored by various studies. However, most of these studies have focused on the impact of environmental amenities such as open spaces and greenways on QoL (Feng, Tang, & Chuai, 2018). Research considering the varied dimensions of neighbourhood environments is required for the understanding of the role of the built environment on QoL (Feng et al., 2018). Besides, the requirements of the older adults are significantly different from that of the other age groups owing to their comparatively sedentary lifestyle due to declining physical conditions and engagement in non-job based activities, focusing more on recreational, social and leisurely activities (Feng et al., 2018). The significant influence of the home and its immediate surrounding with age, necessitates research on design of strategies to equip the housing and the surrounding environment of the older adults to cater to their QoL.

Considering the limitations in economic resources in a developing country like India, the proposed framework for prioritisation of identified neighborhood infrastructure, can be utilised by future policy makers for formulation of policies and programs catering only to the essential infrastructure, based on the socio-economic background of the target population.

3. Research Objective

The present study is a part of a broader research project which aims at identifying and prioritizing a list of urban neighbourhood level infrastructure and their respective attributes that the Indian older adults perceive to cater to their overall QoL. The research in this paper explores how the prioritization of neighborhood infrastructure, influencing perceived QoL, varies across varied socio-demographic groups, based on interviews with respondents from Kolkata, India.

4.   Study area and sample description

4.1.   Study area

The study area selected for this research is Kolkata the capital of the state of West Bengal in India. The study was conducted in different neighborhoods in the Kolkata Municipal Corporation and Bidhannagar Municipal Corporation, located in the state of West Bengal in India.

4.2.   Survey question format and process of data collection*

The survey format and data collection process has been published in Saha, Basu, and Pandit (2022) as this study is a part of a broader research project (discussed in Section 5). The researcher was accompanied by a team of five members, for conducting the survey. The purpose of the questionnaire and the questions, were first explained to each of the surveyors, in order to avoid any mis-interpretations of the survey questions. The survey process started with the surveyors first explaining the purpose of the survey and the type of questions. Any respondent who was not

comfortable with the entire survey process were not included. Only respondents who agreed to respond to the survey, after the introduction session, and were mentally and physically capable to complete the entire survey process, which spanned for approximately 1 hour for each respondent, were included in the survey. Respondents were also informed that they could choose to not respond to any question they were uncomfortable with. To maintain anonymity of the respondents, personal details like names, address, etc. of the respondents were not documented. Each questionnaire was translated to the local language, Bengali, which was the mother tongue of majority of the respondents. In some cases, questions had to be asked in Hindi. After the survey, the answers were read out/ shown to the respondents.

The questions consisted of satisfaction and importance rating of infrastructure in a scale of 1-5, where for the satisfaction scale, 1 meant least satisfied and 5 more satisfied and for importance scale, 1 referred to as least important and 5 as most important.

The survey questionnaire was divided into two parts: a) Socio-economic-demographic characteristics of the respondents and b) Importance and Satisfaction rating of Neighbourhood infrastructure.

4.3.   Survey respondent characteristics

The survey was conducted on 440 respondents, in which the respondents were gathered using convenience sampling. However, only 408 responses could be used for the analysis as few respondents had submitted incomplete responses and some respondents had left the survey in between. The socio-demographic characteristics of the respondents in the final user perception survey have been shown in Table 1. Since, this study is a part of a broader research project, the socio-demographic characteristics of respondents has been previously published in Saha et al. (2022).

Table 1: Socio-demographic characteristics of respondents of final survey

Socio-demographic characteristic	% of total respondents
Age	
60 -69 (Age 1)	54.9
70 -79 (Age 2)	34.1
80 and above (Age 3)	11
Gender	
Male	70.8
Female	28.9
Education	
Illiterate and Literate without formal education (Edu 1)	11.3
Upto Primary School (Edu 2)	14
Upto Secondary and Higher Secondary (School) (Edu 3)	25.7
Upto Graduate Level (Bachelors in Arts/ Science/ Commerce/ or Diploma (Edu 4)	36
B.Tech/ M.Tech/ Masters / M.Phil/ Ph.D. (Edu 5)	12.5

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Socio-demographic characteristic	% of total respondents
Household monthly income	
Less than Rs. 10,000 (EWS)	21.8
Rs. 10001 to Rs. 15000 (LIG)	15.4
Rs.15001 – Rs. 25000 (lMIG)	22.8
Rs. 25001-Rs. 40000 (uMIG)	16.2
above Rs. 40001 (HIG)	23.8
Marital status	
Married	85
Single (included divorced/ widowed/ unmarried)	13.7

5. Research Methodology

This paper is a part of a broader research project focusing on identifying and prioritization of urban neighborhood level infrastructure catering to the QoL of Indian older adults. In the original broader research, a list of QoL domains and their respective factors were first identified, followed by the identification of a list of neighbourhood infrastructure and attributes catering to these QoL factors. The complete list of QoL domains and factors identified in the broader project has been published in Saha et al. (2022). This present paper discusses only a part of the original research project and focuses only on the prioritization of neighborhood level infrastructure across varied socio-demographic groups.

In this paper, the analysis has been conducted by comparison of results using ordinal regression and RIDIT analysis. The analysis consisted of three parts: Ordered Logistic Regression (OLR), RIDIT analysis and finally prioritization using both. OLR was conducted using the Likert scale satisfaction rating of Overall satisfaction with neighbourhood in contributing to their QoL, as the dependent variable and the ordinal responses (satisfaction rating) of the different neighborhood infrastructure as independent variables.

6. Analysis Technique

This section discusses the process for exploring the variation in prioritization of the neighbourhood infrastructure among different socio-demographic population groups. To achieve this, we have conducted the analysis in two parts: priority analysis of neighborhood infrastructure and priority analysis of neighborhood attributes. The prioritization, is conducted by comparison the results from ordinal regression and RIDIT analysis.

Section 6.1 discusses the prioritization of the neighborhood infrastructure with respect to the different socio-demographic characteristics of the respondents.

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6.1. Prioritization of neighborhood infrastructure

The analysis consisted of three parts: Ordered Logistic Regression (OLR), RIDIT analysis and finally prioritization using both. The prioritization among different socio-demographic population groups were analysed using both RIDIT analysis and ordinal regression, adopted in the study by Pandit (2019). The study had developed a new criterion for categorization of priority where four categories of prioritization were proposed:

i)   High- attributes that have RIDIT score of less than 0.5 and have a significant relation to the overall satisfaction are categorized as variables with very high priority.

ii)   Moderately High- Attributes which have significant influence on the overall satisfaction but have RIDIT score of more than or equal to 0.5 (low stated importance). These attributes are assumed to have a strong impact on the users' overall level of satisfaction

iii)   Moderate- These attributes have RIDIT score of less than 0.5 (high stated importance) by the users but have non-significant effect on the users' overall level of satisfaction. Attributes in this category must be considered as of medium priority.

iv)   Low- Attributes categorized under this category have RIDIT score of more than or equal to 0.5 and have non-significant relation to the overall satisfaction. These attributes have no influence on the overall level of satisfaction.

Table 2 explains the prioritization criteria as suggested by Pandit (2019).

Table 2: Criteria for prioritisation

		Importance (RIDIT score)	
		<0.5	>= 0.5
Satisfaction from OLR	Significant	High priority	Moderately high priority
	Not significant	Moderate priority	Low priority

6.2. Prioritization of neighborhood infrastructure based on socio-demographic characteristics

The previous section discusses the prioritization of the entire sample. This section explores if the socio-demographic characteristics of the respondents have any influence on their prioritization. In order to analyse the same, the responses were first separated or stratified according to the all the categories of each of the demographic groups and then the prioritization analysis was conducted separately for each category and then compiled to form a single table for each socio-demographic characteristic.

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Prioritization based on gender groups

The difference of priority between the groups was observed for footpaths, teaching and learning facilities, and religious place. The difference reveals that the female respondents are more inclined towards religious practices, and the male respondents are more inclined to learning and teaching, which can be related to the patriarchal Indian society where many of the women (specially, those belonging to lesser privileged section of the society) of the older generation and prefer to remain indoors and engage themselves in household activities and religious practices.

Table 4: Prioritisation of neighborhood infrastructure based on gender groups

Neighborhood infrastructure	Male				Female			
	Significance from OLR	RIDIT Score	RIDIT Rank	Priority	Significance from OLR	RIDIT Score	RIDIT Rank	Priority
Community Centre	Significant	0.37	4	High	Significant	0.35	4	High
Footpaths	Significant	0.32	3	High	Not Significant	0.32	3	Moderate
Internal road/ Street	Significant				Not Significant			
Parks	Significant	0.32	2	High	Significant	0.31	2	High
Open Spaces	Significant				Significant			
Clubs	Significant	0.41	6	High	Significant	0.43	6	High
Medical facilities	Not Significant	0.28	1	Moderate	Not Significant	0.27	1	Moderate
Teaching and learning facilities	Significant	0.51	7	Moderately high	Not Significant	0.52	8	Low
Shopping complex or multi-utility market complex	Not Significant	0.57	9	Low	Not Significant	0.55	9	Low
Religious place	Not Significant	0.51	8	Low	Significant	0.51	7	Moderately high
Gardens	Not Significant	0.41	5	Moderate	Not Significant	0.41	5	Moderate
Space for formal practice of sports in playground	Not Significant	0.60	11	Low	Not Significant	0.62	11	Low
Senior care centre (Day care centre)	Not Significant	0.59	10	Low	Not Significant	0.58	10	Low
Coffee shops or formal tea/ snacks stalls	Not Significant	0.74	14	Low	Not Significant	0.72	14	Low
Gymnasium	Not Significant	0.63	12	Low	Not Significant	0.66	12	Low
Cinema/ Theatre Halls	Not Significant	0.72	13	Low	Not Significant	0.71	13	Low

Prioritization based on marital status

Results of prioritization based on marital status have been displayed in Table 5. The priority of clubs is high for respondents who are married. The priority of gardens is higher for single respondents. Teaching and learning facilities, Coffee shops or tea stalls and Gymnasium are observed to be of low priority for both the groups.

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Prioritization based on age groups

Table 6 shows the results of prioritsation based on age groups. Clubs have been observed to be given high priority by all the age groups, which establishes the need for social activities and interaction in the older adults, irrespective of the age group they belong to. The lesser priority of parks and open space among respondents of age group 3 can be due to their mobility issues. Clubs, being indoor facilities, are preferred for social interaction among all age groups.

Prioritization based on educational background

The priority of coffee shops, gymnasium and cinema halls have been observed to be of low priority among respondents belonging to all education groups. Table 7 and 8 shows the priority of clubs is estimated to be high for respondents having higher educational background. The priority of space for practicing sports is also found to be higher for higher education groups.

Prioritization based on economic background (household income)

Table 9 and 10 shows that the priority of club is found to be higher with higher income groups. Most of the respondents from lower income categories in our study area, reside in organically developed neighborhood, which have high density and also lived in joint families and therefore probably had adequate opportunity for interaction with their family and neighbors. The priority of community centre was observed to be high only for respondents who belonged to the HIG category (Inc 5). Except for religious place, the priority of all other infrastructure varies from low to moderate for respondents belonging to EWS category (Inc 1). This can also be owed to their unfamiliarity about the contribution of these infrastructure in their well-being. The priority of medical facilities is high for respondents belonging to LIG and MIG category, but moderate for respondents belonging to HIG category. It can be assumed that the respondents belonging to HIG category have the affordability to access treatment facilities located outside or far away from their neighborhoods, which is difficult for those belonging to the lower economic backgrounds.

Table 5: Prioritisation of neighborhood infrastructure based on marital status

Neighborhood Infrastructure	Married				Single			
	Significance from OLR	RIDIT Score	RIDIT Rank	Priority	Significance from OLR	RIDIT Score	RIDIT Rank	Priority
Community Centre	N.S.	0.37	4	Moderate	**Significant**	0.37	4	**High**
Footpaths	**Significant**	0.32	3	**High**	**Significant**	0.34	3	**High**
Internal road/ Street	**Significant**				N.S.			
Parks	N.S.	0.32	2	Moderate	**Significant**	0.32	2	**High**
Open Spaces	**Significant**				N.S.			
Clubs	**Significant**	0.41	6	**High**	N.S.	0.44	6	Moderate
Medical facilities	**Significant**	0.28	1	**High**	**Significant**	0.28	1	**High**

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Neighborhood Infrastructure	Married				Single			
	Significance from OLR	RIDIT Score	RIDIT Rank	Priority	Significance from OLR	RIDIT Score	RIDIT Rank	Priority
Teaching and learning facilities	N.S.	0.51	8	Low	N.S.	0.51	7	Low
Shopping complex or multi-utility market complex	**Significant**	0.56	9	Moderately high	**Significant**	0.55	10	Moderately high
Religious place	N.S.	0.51	7	Low	**Significant**	0.54	8	Moderately high
Gardens	N.S.	0.41	5	Moderate	**Significant**	0.37	5	**High**
Space for formal practice of sports in playground	N.S.	0.60	11	Low	**Significant**	0.63	11	Moderately high
Senior care centres (Day care centres)	N.S.	0.60	10	Low	**Significant**	0.54	9	Moderately high
Coffee shops or formal tea/ snacks stalls	N.S.	0.73	14	Low	N.S.	0.73	14	Low
Gymnasium	N.S.	0.64	12	Low	N.S.	0.64	12	Low
Cinema/ Theatre Halls	**Significant**	0.72	13	Moderately high	**Significant**	0.72	13	Moderately high

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Table 6: Prioritisation of neighborhood infrastructure based on age groups

Neighborhood infrastructure	Age 1				Age 2				Age 3			
	Significance from OLR	RIDIT score	RIDIT rank	Priority	Significance from OLR	RIDIT score	RIDIT rank	Priority	Significance from OLR	RIDIT score	RIDIT rank	Priority
Community centre	Not significant	0.34	4	Moderate	Not significant	0.40	4	Moderate	Not significant	0.388	4	Moderate
Footpaths	Not significant	0.33	3	Moderate	Not significant	0.31	2	Moderate	**Significant**	0.307	3	**High**
Internal road/ street	Not significant				Not significant				**Significant**			
Parks	**Significant**	0.31	2	**High**	Not significant	0.34	3	Moderate	Not significant	0.271	1	Moderate
Open spaces	**Significant**				**Significant**				Not significant			
Clubs	**Significant**	0.42	6	**High**	**Significant**	0.42	6	**High**	**Significant**	0.420	6	**High**
Medical facilities	Not significant	0.28	1	Moderate	**Significant**	0.27	1	**High**	**Significant**	0.290	2	**High**
Teaching and learning facilities	Not significant	0.51	8	Low	Not significant	0.50	7	Low	Not significant	0.525	7	Low
Shopping complex or multi-utility market complex	Not significant	0.57	9	Low	**Significant**	0.55	9	Moderately high	Not significant	0.551	9	Low
Religious place	Not significant	0.51	7	Low	**Significant**	0.50	8	Moderately high	**Significant**	0.570	10	Moderately high
Gardens	Not significant	0.41	5	Moderate	Not significant	0.41	5	Moderate	Not significant	0.407	5	Moderate
Space for formal practice of sports in playground	Not significant	0.60	10	Low	Not significant	0.61	11	Low	**Significant**	0.619	11	Moderately high
Senior care centre (day care centre)	Not significant	0.60	11	Low	Not significant	0.59	10	Low	**Significant**	0.546	8	Moderately high
Coffee shops or formal tea/ snacks stalls	Not significant	0.74	14	Low	Not significant	0.73	14	Low	Not significant	0.703	14	Low
Gymnasium	Not significant	0.63	12	Low	Not significant	0.64	12	Low	Not significant	0.694	13	Low
Cinema/ theatre halls	Not significant	0.74	13	Low	Not significant	0.71	13	Low	Not significant	0.672	12	Low

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Table 6: Prioritisation of neighborhood infrastructure based on educational background (1,2,3)

Neighborhood infrastructure	Edu 1				Edu 2				Edu 3			
	Significance from OLR	RIDIT		Priority	Significance from OLR	RIDIT		Priority	Significance from OLR	RIDIT		Priority
		Score	Rank			Score	Rank			Score	Rank	
Community Centre	Not Significant	0.38	4	Moderate	Not Significant	0.35	4	Moderate	**Significant**	0.352	4	**High**
Footpaths	Not Significant	0.30	2	Moderate	Not Significant	0.34	3	Moderate	**Significant**	0.312	2	**High**
Internal road/ Street	Not Significant				Not Significant				Not Significant			
Parks	Not Significant	0.34	3	Moderate	Not Significant	0.34	2	Moderate	**Significant**	0.332	3	**High**
Open Spaces	**Significant**				Not Significant				**Significant**			
Clubs	Not Significant	0.44	5	Moderate	Not Significant	0.39	5	Moderate	**Significant**	0.388	5	**High**
Medical facilities	Not Significant	0.29	1	Moderate	Not Significant	0.31	1	Moderate	Not Significant	0.281	1	Moderate
Teaching and learning facilities	Not Significant	0.45	7	Moderate	Not Significant	0.54	9	Low	Not Significant	0.536	8	Low
Shopping complex or multi-utility market complex	Not Significant	0.62	11	Low	Not Significant	0.64	12	Low	**Significant**	0.566	9	Moderately high
Religious place	Not Significant	0.46	8	Moderate	Not Significant	0.47	7	Moderate	Not Significant	0.480	7	Moderate
Gardens	Not Significant	0.44	6	Moderate	Not Significant	0.45	6	Moderate	Not Significant	0.388	6	Moderate
Space for formal practice of sports in playground	Not Significant	0.53	9	Low	Not Significant	0.56	10	Low	Not Significant	0.630	12	Low
Senior care centres (Day care centres)	Not Significant	0.53	10	Low	Not Significant	0.52	8	Low	Not Significant	0.594	10	Low
Coffee shops or formal tea/ snacks stalls	Not Significant	0.83	14	Low	Not Significant	0.74	14	Low	Not Significant	0.773	14	Low
Gymnasium	Not Significant	0.63	12	Low	Not Significant	0.61	11	Low	Not Significant	0.612	11	Low
Cinema/ Theatre Halls	Not Significant	0.74	13	Low	Not Significant	0.73	13	Low	Not Significant	0.743	13	Low

Table 8: : Prioritisation of neighborhood infrastructure based on educational background (4,5)

Neighborhood Infrastructure	Edu 4				Edu 5			
	RIDIT				RIDIT			
	Significance from OLR	Score	Rank	Priority	Significance from OLR	Score	Rank	Priority
Community Centre	**Significant**	0.367	4	**high**	Not Significant	0.389	4	moderate
Footpaths	Not Significant	0.306	3	moderate	Not Significant	0.382	3	moderate
Internal road/ Street	Not Significant				Not Significant			
Parks	Not Significant	0.281	2	moderate	Not Significant	0.333	2	moderate
Open Spaces	Not Significant				Not Significant			
Clubs	**Significant**	0.446	6	**high**	**Significant**	0.408	5	**high**
Medical facilities	**Significant**	0.251	1	**high**	Not Significant	0.296	1	moderate
Teaching and learning facilities	Not Significant	0.503	7	low	Not Significant	0.484	7	moderate
Shopping complex or multi-utility market complex	Not Significant	0.513	8	low	Not Significant	0.535	8	low
Religious place	**Significant**	0.547	9	moderately high	**Significant**	0.570	10	moderately high
Gardens	Not Significant	0.392	5	moderate	Not Significant	0.419	6	moderate
Space for formal practice of sports in playground	**Significant**	0.624	10	moderately high	**Significant**	0.624	12	moderately high
Senior care centres (Day care centres)	**Significant**	0.643	11	moderately high	Not Significant	0.568	9	low
Coffee shops or formal tea/ snacks stalls	Not Significant	0.683	12	low	Not Significant	0.696	14	low
Gymnasium	Not Significant	0.686	13	low	Not Significant	0.609	11	low
Cinema/ Theatre Halls	Not Significant	0.70837607	14	low	Not Significant	0.666	13	low

Illiterate and Literate without formal education : Edu 1, *Upto Primary School* : Edu 2, *Upto Secondary and Higher Secondary (School)* : Edu 3, *Upto Graduate Level (Bachelors in Arts/ Science/ Commerce/ or Diploma* : Edu 4, *B.Tech/ M.Tech/ Masters / M.Phil/ Ph.D.* : Edu 5

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Table 9: Prioritisation of neighborhood infrastructure based on income groups (1,2,3)

Neighborhood Infrastructure	Inc 1				Inc 2				Inc 3			
	Significance from OLR	RIDIT Score	RIDIT Rank	Priority	Significance from OLR	RIDIT Score	RIDIT Rank	Priority	Significance from OLR	RIDIT Score	RIDIT Rank	Priority
Community Centre	N.S.	0.378	4	moderate	N.S.	0.381	4	moderate	N.S.	0.349	4	moderate
Footpaths	N.S.	0.308	2	moderate	N.S.	0.309	2	moderate	N.S.	0.334	2	moderate
Internal road/ Street	N.S.				**Significant**				N.S.			
Parks	N.S.	0.329	3	moderate	**Significant**	0.311	3	**High**	N.S.	0.341	3	moderate
Open Spaces	N.S.				**Significant**				N.S.			
Clubs	N.S.	0.378	5	moderate	**Significant**	0.410	5	**High**	**Significant**	0.425	6	**High**
Medical facilities	N.S.	0.281	1	moderate	**Significant**	0.290	1	**High**	**Significant**	0.302	1	**High**
Teaching and learning facilities	N.S.	0.537	8	low	N.S.	0.479	8	moderate	N.S.	0.478	7	moderate
Shopping complex or multi-utility market complex	N.S.	0.629	12	low	**Significant**	0.576	9	moderately high	N.S.	0.567	9	low
Religious place	**Significant**	0.486	7	Moderately high	**Significant**	0.451	7	Moderately high	N.S.	0.513	8	low
Gardens	N.S.	0.397	6	moderate	N.S.	0.426	6	moderate	N.S.	0.420	5	moderate
Space for formal practice of sports in playground	N.S.	0.557	10	low	**Significant**	0.641	12	moderately high	**Significant**	0.583	11	moderately high
Senior care centres (Day care centres)	N.S.	0.547	9	low	N.S.	0.578	10	low	N.S.	0.580	10	low
Coffee shops or formal tea/ snacks stalls	N.S.	0.799	14	low	**Significant**	0.748	14	moderately high	N.S.	0.726	14	low
Gymnasium	N.S.	0.619	11	low	N.S.	0.620	11	low	N.S.	0.657	12	low
Cinema/ Theatre Halls	N.S.	0.747	13	low	**Significant**	0.748	13	moderately high	**Significant**	0.704	13	moderately high

Table 10: Prioritisation of neighborhood infrastructure based on income groups (4,5)

Neighborhood Infrastructure	Inc 4				Inc 5			
	Significance from OLR	RIDIT Score	RIDIT Rank	Priority	Significance from OLR	RIDIT Score	RIDIT Rank	Priority
Community Centre	N.S.	0.341	4	Moderate	Significant	0.377	4	**High**
Footpaths	N.S.	0.335	3	Moderate	N.S.	0.322	3	Moderate
Internal road/ Street	N.S.				**Significant**			
Parks	N.S.	0.296	2	Moderate	N.S.	0.295	2	Moderate
Open Spaces	N.S.				N.S.			
Clubs	**Significant**	0.437	6	**High**	**Significant**	0.439	6	**High**
Medical facilities	N.S.	0.257	1	Moderate	N.S.	0.262	1	Moderate
Teaching and learning facilities	N.S.	0.488	7	Moderate	N.S.	0.547	8	Low
Shopping complex or multi-utility market complex	**Significant**	0.543	9	Moderately high	**Significant**	0.494	7	Moderately high
Religious place	N.S.	0.525	8	Low	**Significant**	0.565	9	Moderately high
Gardens	N.S.	0.363	5	Moderate	N.S.	0.429	5	Moderate
Space for formal practice of sports in playground	N.S.	0.655	12	Low	N.S.	0.615	11	Low
Senior care centres (Day care centres)	N.S.	0.646	10	Low	N.S.	0.608	10	Low
Coffee shops or formal tea/ snacks stalls	**Significant**	0.746	14	Moderately high	N.S.	0.662	13	Low
Gymnasium	N.S.	0.648	11	Low	**Significant**	0.647	12	Moderately high
Cinema/ Theatre Halls	N.S.	0.706	13	Low	N.S.	0.702	14	Low

Less than Rs. 10,000 (EWS) : INC 1, *Rs. 10001 to Rs. 15000 (LIG)* : INC 2, *Rs.15001 − Rs. 25000 (lMIG)* : INC 3, *Rs. 25001-Rs. 40000 (uMIG)* : INC 4, *above Rs. 40001 (HIG)* : INC 5

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7. Conclusion

This chapter discusses the variation in priortisation of neighborhood infrastructure and their respective attributes among different socio -demographic groups, which can help in the formulation of guidelines for design of neighbourhood and gated community either for specific groups of older adults or for inclusive design integrating the needs and requirements of older adults from all backgrounds for enhancing the overall QoL of the older adults. The findings reveal that despite the subtle differences in perception, infrastructure catering to health and social relationships are of highest priority and importance. The findings also support the observations by a study by (Yung, Conejos, & Chan, 2016). Prioritization analysis establish the role of infrastructure related to the domains of Health, Social relationship and Leisure activities, which are also observed to be essential in supporting 'ageing-in-place'. Future research can explore the research framework on a larger sample.

8. Acknowledgement

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