Appendix D

Table D1:   Principal Component Analysis of Items for Place Use.

Items	Factor Loading			
	Factor 1	Factor 2	Factor 3	Factor 4
Jogging	.669			
Exercise	.877			
Sporting activities	.846			
Strolling		.748		
Relaxing		.739		
Family outing		.742		
Reading			.808	
Meditating			.661	
Socializing				.542
Attending meetings				.765
Cultural activities				.720

Source: Field Survey (2008).

Factor 1: Physical activities (20.59% of the explained variance)
The items with highest loading on this factor are activities related to active use of Park that are jogging, exercise, and sporting activities.

Factor 2: Informal activities (17.38% of the explained variance)
In this factor higher loading are the items related to response on informal use of the Open Space. The casual experience in the Park: strolling, relaxing, and family outing constituted the Informal activities.

Factor 3: Quiet activities (14.12% of the explained variance)
The highest loadings in this factor are contents for the response to different quiet activities undertaken in the Neighborhood Park. Reading and meditating in the Open Space formed the factor for measuring use of Park by residents for enjoyment of Quiet activities.

Factor 4: Social activities (13.77% of the explained variance)
The items with highest loading on this factor are activities with regard to social experience of the Park. Socializing like meeting friends, attending meetings and discourse, and participating in

cultural events organized in the Park are the activities concerned to evaluate the Social experience of the Neighborhood Open Space.

Factor 1: Spatial integration (20.86% of explained variance)
The most significant loadings on this factor are items relating to the response on satisfaction with the Location of the Neighborhood Park. The evaluation of spatial integration of the Park within the Neighborhood concerns with sociospatial attributes such as, safe accessibility, location of the Park, contributing greenery to the neighborhood, healthy recreation within the neighborhood and if it is a wastage of valuable land.

Factor 2: Natural features (15.99% of explained variance)
The higher loading in this factor relate to items regarding natural physical features of the Open Space. Inhabitants' perception of place quality is connected with natural elements of the Park which is evaluated by examining the degree of satisfaction with natural features, vegetation (trees, shrubs, bushes), manicured lawn, and flower gardens.

Factor 3: Built and atmospheric features (15.48% of explained variance)
The items on physical quality of the Open Space that load highest in this factor point out to the man-made elements and atmospheric attributes in and around the Park. This dimension is related to residents' level of satisfaction with the designed features like earth mounds, walkways and paved areas, recreational facilities and features (sitting space, fencing, garden bridges, and play equipments), and atmospheric characteristics such as cleanliness (litter, uncared landscaping elements) and air pollution near the Open Space.

Table D2: Principal Component Analysis of Items for Place Quality.

Items	Factor Loading			
	Factor 1	Factor 2	Factor 3	Factor 4
Accessibility	.618			
Contributing greenery	.831			
Location	.923			
Healthy recreation	.892			
Wastage of valuable land	.634			
Trees, shrubs		.791		
Manicured lawn		.885		
Flower gardens		.906		
Earth mounds			.427	
Walkways			.702	
Recreational facilities			.627	
Cleanliness and maintenance			.746	

Table D2:   (*Continued*)

Items	Factor Loading			
	Factor 1	Factor 2	Factor 3	Factor 4
Atmospheric qualities			.757	
Intensity of traffic				.821
Impact of surrounding built space				.554
Commercial activities				.845

Source: Field Survey (2008).

Factor 4: Influence of adjoining use (11.17% of explained variance)
The items on perception of spatial quality that have high loadings
on this factor are response to the influence of adjoining use on the
Park. The adjoining environmental criteria considered for evaluating
their impact on the Park are intensity of traffic, volume of surround-
ing buildings, and commercial activities near the Park.

Table D3:   Principal Component Analysis of Items for Place
Attachment.

Items	Factor Loading		
	Factor 1	Factor 2	Factor 3
Miss the Park if moved to another locality	.824		
Expressing happiness for the presence of Park	.835		
Like to speak about staying close to the Park	.771		
No commitment with the Park	.442		
Bring children to the Park	.614		
Satisfaction out of visiting the Park		.851	
Provide recreational facility		.377	
Frequent visit to the Park is acceptable		.857	
Feeling of home			.753
Familiarity with plants and places in the Park			.810
Memories about the Park			.805
Connection with different activities in the Park			.732
Connection with people coming to the Park			.536

Source: Field Survey (2008).

The KMO shows that the sample size is adequate (KMO) and a
significance of .000 in Bartlett's test of sphericity shows that the
data is amenable to factor analysis. The extraction value in the com-
munality found out three items having very less value, but if the
average communality is above 0.5 the variables can be included. As
the average communality is 0.58 and considering the conceptual sig-
nificance of the items, they are retained in the instrument for mea-
suring Place attachment.

Factor 1: Place identity (20.47% of explained variance)
The factor consists of items (Table 5.6) with maximum loading
which are related to emotional connections with the place and estab-
lish one's place identity. Effect and feelings are the central concept
of this dimension and the items that measured inhabitants' strength
of attachment with respect to place identity are miss the Park if
moved to another locality, expressing happiness for the presence of
Park, proud for staying in a green neighborhood, no commitment
with the Park, bring children to the Park.

Factor 2: Place dependence (15.72% of explained variance)
The items that have significant loading on this factor are regarding
aspects on functional fulfillment in the recreational place. The items
evaluate the agreement/disagreement of respondents, that their
recreational goals, activities, and experience are dependent on the
place. The Place dependence dimension is related to attachment with
the place for its utilitarian value and rated by the three items that
are satisfaction out of visiting the Park, provide recreational facility,
frequent visit to the Park is acceptable.

Factor 3: Social bonding (22.20% of explained variance)
The highest loadings on this factor regard items with content concern-
ing the spatiosocio relationship that is social bonding with the place.
The underlying concept of this dimension is examined by the five items
that are feeling of home, familiarity with plants and places in the Park,
memories about the Park, connection with different activities in the
Park, and connection with people coming to the Park. These items
sum up to explain the social aspect of the place attachment construct.
The questions rates the emotional bond formed by the respondents
with the place which are the product of an interaction process between
the individuals and their social environment.

Table D4: Principal Component Analysis of Items for Place
Management.

Items	Factor Loading	
	Factor 1	Factor 2
Attending residential welfare association meeting	.607	
Maintaining greenery	.847	
Maintaining other landscape features	.952	
Cleaning litter	.889	
Regulating use of Park	.945	
Attitude for managing vegetation		.940
Maintenance of walkway		.964
Maintenance of playing equipments and other minor features		.961
Managing Park workers		.961

Table D4:   (*Continued*)

Items	Factor Loading	
	Factor 1	Factor 2
Managing use of Park		.947
Facility management of Park		.942
Litter management		.943

Source: Field Survey (2008).

Factor 1: Environmental activities (31.72% of explained variance)
The factor extracted has highest loading of items (Table 5.8) regarding inhabitants' experience of managing their neighborhood Park. This dimension is measured by evaluating the activities in which residents may be involved to take care of the local Park that is the existing status of community involvement in Park management activities. The factor includes 5 items: attending residential welfare association meeting, maintaining greenery, maintaining other landscape features, cleaning litter and regulating use of Park (M5).

Factor 2: Participative attitude (53.39% of explained variance)
The highest loading on this factor are the items that evaluate the attitude of inhabitants for contributing time and effort in the management of the local Park (Table 5.8). The dimension of participative attitude measures the Place management variable by assessing the seven items, which includes attitude for managing vegetation, maintenance of walkway, maintenance of playing equipments and other minor features, managing Park workers, managing use of Park, facility management of Park, and litter management.

Table D5: Physical Inventory of the Parks.

Area	Content of the Space	Spatial Edge of the Space	
Lingaraj Nagar	Paved walkways, hedges, shady trees, few seating	Defined by road on three sides and boundary wall of old houses and temples and tanks in the vicinity	
Unit IX	Paved walkways, hedges, lawn, few seatings, and few trees	Defined by residential streets and multiple family residential buildings	
Sahid Nagar	Lawns, flower gardens, paved walkway, shady tress, formal play court, lights, seats, play equipments, grass mounds	Defined by roads on all sides and high boundary fences. Park activities not visible to the residential units as most of the houses do not face the Park and the Park has is a solid boundary wall	

IRC Village	Lawns, flower gardens, paved walkway, shady tress, seats	Surrounded by residential development only	
Saileshree Vihar	Lawns, paved walkway, shady tress, lights, seats, play equipments,	The dwelling units face the Park on all the sides in close vicinity and forms an enclosure to the Open Space	
Baramunda	Lawns, flower gardens, paved walkway, shady tress, lights, seats, play equipments, grass mounds	Abutted by residential streets and housing units	

Source: Field Survey (2008).

Table D6:   Socioeconomic Characteristics of Lingaraj Nagar.

Socioeconomic Characteristics		Frequency	Percentage
Age	18−35 yr	21	42.0
	36−45 yr	12	24.0
	46−55 yr	07	14.0
	56−75 yr	10	20.0
Gender	Male	27	54.0
	Female	23	46.0
Education	Primary	03	6.0
	Secondary	09	18.0
	Intermediate	05	10.0
	Graduation	33	66.0
Occupation	Student	04	8.0
	Searching for Employment	02	4.0
	Employed	25	50
	Retired	05	10.0
	House wife	14	28.0
Average monthly income	Up to Rs 3,000	0	0
	3,001−5,000	10	20.0
	5,001−10,000	18	36.0
	10,001−20,000	17	34.0
	More than 20,000	05	10.0
Duration of stay	Less than 6 months	0	0
	6 mo to 1 yr	0	0
	1−3 yr	1	2.0
	More than 3 yr	49	98.0
Ownership Status	Tenancy	13	26.0
	Owned	37	74.0

Source: Field Survey (2008).

Table D7:   Socioeconomic Characteristics of Unit IX.

Socioeconomic Characteristics		Frequency	Percentage
Age	18−35 yr	32	64.0
	36−45 yr	08	16.0
	46−55 yr	05	10.0
	56−75 yr	05	10.0
Gender	Male	27	54.0
	Female	23	46.0
Education	Primary	1	2.0
	Secondary	10	20.0
	Intermediate	10	20.0
	Graduation	29	58.0
Occupation	Student	17	34.0
	Searching for employment	02	4.0
	Employed	13	26.0
	Retired	01	2.0
	House wife	17	34.0
Average monthly income	Up to Rs 3,000	0	0
	3,001−5,000	04	8.0

Table D7:   (*Continued*)

Socioeconomic Characteristics		Frequency	Percentage
	5,001–10,000	33	66.0
	10,001–20,000	13	26.0
	More than 20,000	0	0
Duration of stay	Less than 6 months	0	0
	6 mo to 1 yr	02	4.0
	1–3 yr	08	16.0
	More than 3 yr	40	80.0
Ownership status	Tenancy	50	100.0
	Owned	0	0

Source: Field Survey (2008).

Table D8:   Socioeconomic Characteristics of Sahid Nagar.

Socioeconomic Characteristics		Frequency	Percentage
Age	18–35 yr	24	48.0
	36–45 yr	08	16.0
	46–55 yr	04	8.0
	56–75 yr	14	28.0
Gender	Male	29	58.0
	Female	21	42.0
Education	Primary	0	0
	Secondary	04	8.0
	Intermediate	06	12.0
	Graduation and above	40	80.0
Occupation	Student	12	24.0
	Searching for Employment	0	0
	Employed	11	22.0
	Retired	13	26.0
	House wife	14	28.0
Average monthly income	Up to Rs 3,000	05	10.0
	3,001–5,000	03	06.0
	5,001–10,000	07	14.0
	10,001–20,000	27	54.0
	More than 20,000	08	16.0
Duration of stay	Less than 6 months	02	4.0
	6 mo to 1 yr	03	6.0
	1–3 yr	05	1.0
	More than 3 yr	40	80.0
Ownership status	Tenancy	21	42.0
	Owned	29	58.0

Source: Field Survey (2008).

Table D9:   Socioeconomic Characteristics of IRC Village.

Socioeconomic Characteristics		Frequency	Percentage
Age	18−35 yr	27	54.0
	36−45 yr	09	18.0
	46−55 yr	05	10.0
	56−75 yr	09	18.0
Gender	Male	26	52.0
	Female	24	48.0
Education	Primary	0	0
	Secondary	10	20.0
	Intermediate	11	22.0
	Graduation	29	58.0
Occupation	Student	7	14.0
	Searching for Employment	1	2.0
	Employed	18	36.0
	Retired	5	10.0
	House wife	19	38.0
Average monthly income	Up to Rs 3,000	07	14.0
	3,001−5,000	06	12.0
	5,001−10,000	16	22.0
	10,001−20,000	15	30.0
	More than 20,000	06	22.0
Duration of stay	Less than 6 months	03	6.0
	6 mo to 1 yr	05	10.0
	1−3 yr	08	16.0
	More than 3 yr	34	68.0
Ownership status	Tenancy	23	46.0
	Owned	27	54.0

Source: Field Survey (2008).

Table D10:   Socioeconomic Characteristics of Saileshree Vihar.

Socioeconomic Characteristics		Frequency	Percentage
Age	18−35 yr	27	54.0
	36−45 yr	09	18.0
	46−55 yr	03	6.0
	56−75 yr	11	22.0
Gender	Male	24	48.0
	Female	26	52.0
Education	Primary	0	0
	Secondary	07	14.0
	Intermediate	08	16.0
	Graduation	35	70.0
Occupation	Student	09	18.0
	Searching for Employment	02	4.0
	Employed	12	24.0
	Retired	08	16.0
	House wife	19	38.0
Average monthly income	Up to Rs 3,000	03	6.0
	3,001−5,000	10	20.0

Table D10:   (*Continued*)

Socioeconomic Characteristics		Frequency	Percentage
	5,001–10,000	14	28.0
	10,001–20,000	17	34.0
	More than 20,000	06	12.0
Duration of stay	Less than 6 months	06	12.0
	6 months to 1 yr	05	10.0
	1–3 yr	06	12.0
	More than 3 yr	33	66.0
Ownership status	Tenancy	32	64.0
	Owned	18	36.0

Source: Field Survey (2008).

Table D11:   Socioeconomic Characteristics of Baramunda.

Socioeconomic Characteristics		Frequency	Percentage
Age	18–35 yr	32	64.0
	36–45 yr	13	26.0
	46–55 yr	05	10.0
	56–75 yr	0	0
Gender	Male	34	68.0
	Female	16	32.0
Education	Primary	0	0
	Secondary	2	4.0
	Intermediate	4	8.0
	Graduation	44	88.0
Occupation	Student	9	18.0
	Searching for Employment	0	0
	Employed	33	66.0
	Retired	01	2.0
	House wife	07	14.0
Average monthly income	Up to Rs 3,000	05	10.0
	3,001–5,000	09	18.0
	5,001–10,000	11	22.0
	10,001–20,000	13	26.0
	More than 20,000	12	24.0
Duration of stay	Less than 6 months	08	16.0
	6 months to 1 yr	02	4.0
	1–3 yr	10	20.0
	More than 3 yr	30	60.0
Ownership status	Tenancy	33	66.0
	Owned	17	34.0

Source: Field Survey (2008).

Table D12:   Overall Socioeconomic Characteristics.

Socioeconomic Characteristics		Frequency	Percentage
Age	18−35 yr	163	54.3
	36−45 yr	59	19.7
	46−55 yr	29	9.7
	56−75 yr	49	16.3
Gender	Male	167	55.7
	Female	133	44.3
Education	Primary	4	1.3
	Secondary	42	14.0
	Intermediate	44	14.7
	Graduation	210	70.0
Occupation	Student	58	19.3
	Searching for employment	7	2.3
	Employed	112	37.3
	Retired	33	11.0
	House wife	90	30.0
Average monthly income	Up to Rs 3,000	20	6.7
	3,001−5,000	42	14.0
	5,001−10,000	99	33.0
	10,001−20,000	12	34.0
	More than 20,000	37	12.3
Duration of stay	Less than 6 months	19	6.3
	6 months to 1 yr	17	5.7
	1−3 yr	38	12.7
	More than 3 yr	226	75.3
Ownership status	Tenancy	172	57.3
	Owned	128	42.7

Source: Field Survey (2008).

Table D13:   Association of Place Use and Socio-Economic Characteristics.

	Physical Activities		Informal Activities		Social Activities		Quiet Activities		Overall Place Use	
	F	P	F	p	F	P	F	p	F	
Age	1.50	.21	0.28	.84	1.26	.29	2.16	.093	0.69	.56
Gender	5.87	.02*	1.10	.30	3.41	.07	1.41	.236	1.18	.28
Education	0.98	.40	1.42	.24	1.22	.30	0.24	.871	1.69	.17
Occupation	1.85	.05*	2.34	.22	1.44	.06	2.33	.02*	3.15	.12
Income	1.24	.30	1.77	.14	0.88	.47	0.67	.61	1.11	.35
Duration of stay	0.93	.43	0.98	.40	0.71	.55	0.83	.48	0.95	.42
Ownership status	3.50	.07	4.38	.04*	0.01	.92	1.45	.23	4.31	.04*

Source: Field Survey (2008).
*Significant level < .05.

Table D14: Association of Place Quality and Socio-Economic Characteristics.

	Spatial Integration		Natural Features		Built and Atmospheric Qualities		Influence of Adjoining use		Overall Place Quality	
	F	P	F	p	F	P	F	p	F	
Age	1.48	.22	0.53	.66	0.67	.57	2.13	.09	1.43	0.23
Gender	0.05	.82	0.38	.54	0.32	.57	3.56	.06	0.89	0.35
Education	1.22	.30	0.82	.41	0.10	.96	1.58	.19	0.73	0.53
Occupation	0.97	.43	1.52	.20	1.48	.21	3.34	.01	1.45	0.22
Income	1.11	.35	1.29	.27	0.91	.46	1.15	.33	1.45	0.22
Period of stay	1.16	.32	0.64	.59	1.03	.38	2.35	.07	2.33	0.07
Ownership status	2.33	.07	0.47	.49	1.18	.28	11.24	.001**	7.08	.01**

Source: Field Survey (2008).
**Significant level < .01.

Table D15:   Association of Place Attachment and Socioeconomic
Characteristics.

	Place Identity		Place Dependence		Social Bonding		Overall Place Attachment	
	F	p	F	p	F	p	F	p
Age	0.07	.98	0.75	.52	0.52	.67	0.37	.78
Gender	0.02	.90	.74	.39	.025	.88	0.03	.86
Education	0.75	.52	0.40	.75	1.47	.22	0.52	.67
Occupation	2.80	.02*	0.90	.46	1.44	.22	1.09	.36
Income	0.63	.64	0.36	.84	2.36	.05*	1.65	.16
Period of stay	0.88	.45	1.01	.39	0.58	.63	0.99	.40
Ownership status	4.73	.03*	.06	.80	3.00	.08	4.24	.04*

Source: Field Survey (2008).
*Significant level < .05.

Table D16:   Association of Place Management and Socioeconomic
Characteristics.

	Environmental Activities		Participative Attitude		Overall Place Management	
	F	p	F	p	F	P
Age	1.23	.30	1.44	.23	1.02	.38
Gender	9.75	.002**	1.14	.29	0.03	.85
Education	1.00	.39	2.76	.04*	2.91	.03*
Occupation	1.24	.29	2.23	.06	1.20	.31
Income	3.03	.02*	0.55	.70	0.68	.60
Period of stay	2.40	.07	0.31	.82	0.77	.51
Type of occupancy	3.04	.08	1.90	.17	2.83	.09

Source: Case Study (2008).
*Significant level < .05, **Significant level < .01.