



LIVING ENVIRONMENT OF SQUATTER SETTLEMENTS, PURI A CASE STUDY

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Abstract: The environmental quality is relative in nature. It varies over time and space. The present study focused on living conditions in the slum from the physical and social aspects. It is a case study on the slums of Puri urban area. The study is based on both secondary and primary data. Primary data has collected directly from the field by the researcher. Simple Random Sampling, questionnaire survey, and different statistical techniques like frequency distribution, coefficient of correlation has been adopted as the methodology for the present study. Result, discussion and suggestions based on the result of statistical analysis.

Index Term: Squatter Settlement, Quality of Life, Dwelling Unit, Breeding Ground for criminals

INTRODUCTION

Urbanisation is a symbol of economic wellbeing and development. This characteristic of urban areas attracts people from different sub-urban and rural areas to the urban areas. The poor migrants to the urban regions prefer to reside in urban vacant lands in unplanned way. These unplanned settlements in urban regions developed by migrants are called as "Slum". Slum represents a deteriorate environment condition in urban region which make it so identical as a gray part of an urban region.

The environment conditions of the slum influence the day-to-day living of the dwellers. Deteriorate housing, road, unavailability, of social amenities like drinking water, sewerage connection, electricity, community toilets etc. creates a worsen living environment condition for the slum dwellers. Quality living depends on the living environment. In this way the quality of life of the slum dwellers is not good.

In India, as per 2011 census, 377,105,760 numbers of people live in urban areas, constituting 31.14 per cent of the total population and their decadal growth rate is 31.8 per cent. However, Odisha contributes only 3.4 per cent of its population to the national population. Out of the total population of Odisha, only 16.68 per cent of people are distributed over 107 urban areas of the state. 2011 Census reveals that out of 107 urban areas of the State, slums has been found only in 76 urban areas and 22.28 per cent of urban population (1560303) of the state is residing in these slums. In case of Puri, the slum population of the city constitutes 35.13 per cent. It is interesting to note that during 2001-11, the growth rate for the city was 27.07 per cent, whereas for the slum, it was 108.65 per cent.

STUDY AREA

Puri city is located on the shore of the Bay of Bengal at 19° 47' 55"N latitude and 85° 49' 55" E longitude of Puri district in the eastern coast of Odisha. The city is confined to an area of 16.32 sq. kms with a shore-line of 6.59 kms. As per 2011 census, the slum population comprises of 35.12 % the population of the city As per 2011 census, 62 number of slum pockets have been identified in the city.

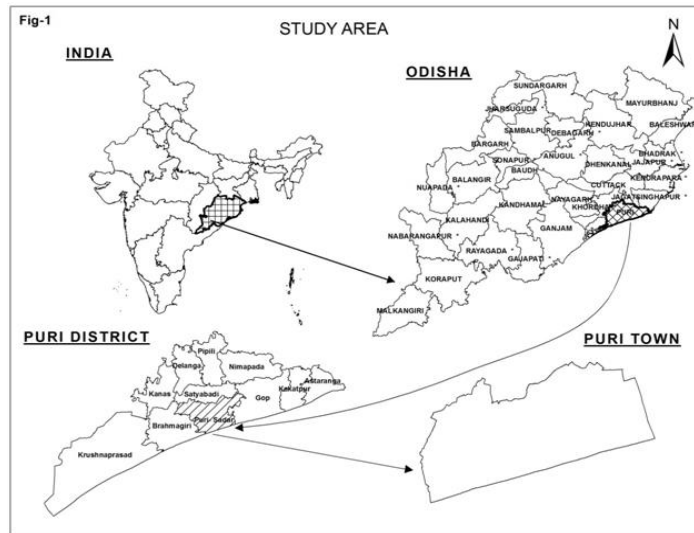


Fig. 1 – Location Map of Puri Urban Area, In Reference to District, State, Country

OBJECTIVE

The objective of the present study is to find out the living environment conditions in terms of physical and social aspects that influence the quality of life in the squatter settlement areas.

METHODOLOGY

The present study is focused on the assessment of physical, social environment, awareness and current living condition of the people living in slums of Puri city. For the purpose, data has been collected from different published and unpublished sources of government and nongovernment organisations. Since the micro level secondary data pertaining to the physical, social, current living condition is not available, the researcher has to depend on the primary data. The Simple Random Sampling technique has been used by the researcher to collect the primary data. 30 percent of sample slums were drawn from secondary data collected from Puri Municipality. In the process, a total number of 19 slums and 1488 households were drawn as sample for the present study. “Puri - Konark Regional Improvement Trust (P.K.R.I.T.) which was established in August 1982” (Puri Gazetteer, 2016, p. 233)¹ which started the first systematic slum study in Puri. The slums which were established before 1982 are put in the category of ‘Old Slums’ and the rest are put in the category of ‘New Slums’ as they were established after 1982. All the primary data were collected through the Schedule questionnaire, Interview and Observation schedule. The collected information were processed through SPSS and the maps are processed through GIS software. Analysis of data carried through percentage distribution followed by Pearson’s coefficient of correlation to establish relationship among different environmental parameters.

Environmental Quality of Urban Slum

In the present study “Living environment of slum” studied from two aspects i.e. Physical environment and Social Environment. Physical environment of the slum studied from Housing, infrastructure and neighbourhood environment, whereas social environment studied from domestic safety and outside safety of children and women.

1. Physical Environment

Physical environment studied from different aspects, Housing, Infrastructure and Neighbourhood Environment. **Housing** is studied from three parameters, i.e. *Type of Dwelling Units*, *Dwelling Space* and *Number of Rooms in Dwelling Units*, whereas, **Infrastructure** studies from *Road*, *Electricity* and *Sewerage*. However, **Neighbourhood Environment** studied from nine parameters i.e. *Drinking Water*, *Place for Cooking*, *Eating*, *Washing Utensils*, *Washing Clothes*, *Drying Clothes*, *Places for Defecation*, *Places for Bathing* and *Place for Garbage Disposal*.

1.1. Housing

Housing is one of the basic needs of every person. In this present study housing has been taken as one aspect, to study the physical environment of slum. *Type of Dwelling Units*, *Dwelling Space* and *Number of Rooms in Dwelling Units* are three parameters which has been discussed elaborately.

Types of Dwelling Unit

In the slum area housing are broadly categorised as pucca, semi-pucca and kutcha types. The wall, floor and roof of pucca house have been constructed by brick, stone and cement. However, the wall and floor of semi-pucca house may be constructed by mud, brick, stone, cement and roof may be constructed by thatch, asbestos, tin etc, whereas the wall and floor of kutcha houses may be constructed with mud, bamboo, plastic and roof from thatch, mud, plastic etc. The distribution of types of housing is place in table no. 1.1.

Table No - 1.1
Distribution of Type of Housing

Slum Name	House Type						Total	
	Pucca		Semi-Pucca		Kutcha		No.	%
	No.	%	No.	%	No.	%	No.	%
Old Slum	118	12.25	424	44.03	421	43.72	963	64.72
New Slum	89	16.95	238	45.33	198	37.71	525	35.28
Total	207	13.91	662	44.49	619	41.60	1488	100.00

Source : Primary Source

From table no 1.1 broadly it is notice that, out of total slum dwellers 64.72 percent households live in Old Slum and rest 35.28 percent are living in New slum. Out of total houses, the highest percentage of semi-pucca type of houses (44.49%) followed by kutcha type (41.60%) and pucca type (13.91%). Further, it is found that out of total old slum houses, the highest percentage of houses are semi-pucca type (44.03%) followed by kutcha type (41.72%) and pucca type (12.25%), however, in case of new slums, the highest percentage of houses are semi-pucca type (45.33%) followed by kutcha type (37.71%) and pucca type (16.95%). Hence, it can be said that most of the slum dwellers are living in either in semi-pucca or kutcha houses.

Dwelling Space

Distribution of Dwelling area has been given in table 1.2. From table no 1.2 it is found that, out of total houses, the highest percentage of dwellers are living in 51-100 square feet dwelling area (41.40%), followed by 101-150 square feet dwelling area (33.74%), 151-200 square feet dwelling area and pucca type (10.69%), > 200 square feet dwelling (8.20%) area and <50 square feet dwelling area (5.98%). Further, it is found that out of total old slum houses, the highest percentage of dwellers are living in 51-100 square feet dwelling area (68.83%), followed by 101-150 square feet dwelling area (65.34%).

Table No - 1.2
Distribution of Dwelling Area

Slum Area	Total Room Area										Total	
	< 50 SqF		51-100 SqF		101-150 SqF		151-200 SqF		>200 SqF		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Old Slum	55	61.80	424	68.83	328	65.34	92	57.86	64	52.46	963	64.72
New Slum	34	38.20	192	31.17	174	34.66	67	42.14	58	47.54	525	35.28
Total	89	5.98	616	41.40	502	33.74	159	10.69	122	8.20	1488	100.00

Source : Primary Source

Therefore it can be said that, most of the slum houses' average size vary from 51-151 square feet dwelling area.

Number of Rooms in Dwelling Units

Distribution of Number of Room is placed in table 1.3. From this table, it is observed that, out of total houses, the highest percentage of number of roomed Slum house is of 2 roomed dwelling Unit (46.24%), followed by 1 roomed dwelling unit (32.86%) and 3 roomed dwelling unit (14.25%). The same trend also observed both for old slum and new slum. Therefore it can be said that, most of the slum dwellers have either two roomed dwelling units or one roomed occupancy.

Table No - 1.3
Distribution of Number of Rooms

Slum Name	Number of Rooms												Total	
	1		2		3		4		5		6		No.	%
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Old Slum	327	33.96	459	47.66	118	12.25	52	5.40	6	0.62	1	0.10	963	64.72
New Slum	162	30.86	229	43.62	94	9.76	32	6.10	3	0.57	5	0.95	525	35.28
Total	489	32.86	688	46.24	212	14.25	84	5.65	9	0.60	6	0.40	1488	100.00

Source : Primary Source

1.2. Infrastructure

In the present study *Infrastructure* refers to the social built ups which make the living environment trouble-free. *Road, Electricity and Sewerage* are the 3 parameters to study the *Infrastructure* aspects.

Road

Road is a major infrastructure for transportation and communication. It is found that roads are very poor in every slum. Internal road facilities found in some old slums whereas it is completely absent in new slums. Within the slums there are some unplanned narrow paths are available and they are katcha in nature. Result of which, people faces different communication problems like the ambulance, fire brigade and Municipal Garbage cleaning Vehicles can't enter into the slum at the need of people. It is directly affect the living condition of people.

Sewerage

Like the roads, sewerage is a major infrastructure for sanitation. As this city's elevation is within 2mts from the sea level it shows a bad slope condition in Puri, result of which the sewerage water can't pass properly and it creates waterlogged areas. This problem is acute in rainy season. In the rainy season the sewerage dirty water flows on the road and enter into the houses of the people which creates very unhygienic situation. In some of the old slums, some sewerage facilities found in some places, whereas in new slums a poor sewerage facilities found or absence of sewerage in new slums.

Electrification

Electricity is one of the social amenities which play a major role in the infrastructure aspect. Most of the slums are not covered with electricity facilities. There are many slums of old categories which are fully covered with electricity whereas this facility is partially covered or absence in the slums categorized as new. Due to poor economic condition the slum dwellers can't take an electric connection to their houses. A few people take electric connection to their house and many people used the electric connection in unauthorized way. Most of the slums in Puri Municipality have electric stand posts. But some unsocial people break the lights of those electric posts in some bad intensions, result of which the slum becomes paradise for the antisocial activities in the evening and night time.

1.3. Neighborhood Environment

Neighbourhood environment refers to the immediate surroundings and inside of a dwelling unit. There are nine parameters have been selected to present the Neighbourhood environment for the present study. Those are: Drinking Water, Place for Cooking, Place for Eating, Place for Washing Utensils, Place for Washing Clothes, Place for drying Clothes, Place for Defecation, Place for Bathing and Place for Garbage Disposal. Here the neighbourhood environment condition studied from place aspect of each parameter. Due to some daily household practices, those places have a greater impact on its dwellers. Further, the place is basically divided in three categories, i.e. Unhygienic, Partially unhygienic and Hygienic.

Drinking Water

Clean drinking water is a basic need for the people living in squatter settlement. It has been seen that the people of squatter settlements usually fetch their drinking water both from the public and private sources. It is observed that the places of public drinking water like, public water check-post and public tube-well are not in hygienic places and the slum dwellers used to take the direct water from the public water check-post and public tube well. They do not use water filter and boiled water due to poor economic condition and high cost of fuel respectively. Result of which they are frequently suffered from health problems related to water-born diseases.

Table No. 1.4

Slum Name	Distribution of Quality of Drinking Water				
	Public		Private		To
	No.	In %	No.	In %	
Old Slum	289	30.0	674	70.0	963
New Slum	497	94.7	28	5.3	525

The distribution of quality of drinking water given is given in the table- 1.4. It is observed from the table that 52.8 per cent of households get their drinking from public sources, such as PHD water and public bore wells, while 47.2 per cent of households have private source of drinking water. Further, it is observed that the slums which are classified as New depend mostly on public sources (94.7%), while the slums which are classified as old mostly have private sources of drinking water (70.0%). Therefore, it can be said that most of the dwellers of New slum are suffered from different health issues due to unhygienic place for source of drinking water.

Place for Cooking

Distribution of Neighbourhood environment is placed in table no-1.5. Most of the people living in the slums cook their food in different places like in front of house, back side of the house, open air, in veranda or in a closed kitchen. Kitchen is the only place which consider as a hygienic place. Other places are comes under unhygienic or partially unhygienic. It is found from the table that the percentage of place for cooking is highest in unhygienic (59.81%), followed by partially unhygienic (20.77%) and Hygienic (19.42%). Hence, it can be said that place for cooking is unhygienic followed by partially hygienic.

Like cooking place, slum dwellers eat their food in different places like in front of house, back side of the house, open air, in veranda or in living room and in kitchen. Living room and in kitchen are the places which consider as a hygienic place. Other places are comes under unhygienic or partially unhygienic. It is found from the table that the percentage of place for eating is highest in partial unhygienic (70.77%), followed by unhygienic (17.94%) and Hygienic (11.29%). Therefore it can be said that places for eating is partially hygienic followed by unhygienic places.

Further, slum dwellers wash their dishes in different places like in front of house, back side of the house, near public tap or tube-well, near private tube-well, in pond or sea water, in bathroom, in veranda, in living room and in kitchen etc. Washing dish near private tube well, in bathroom are the places which consider as a hygienic place. Other places are comes under unhygienic or partially unhygienic. It is found from the table that the percentage of place for washing dish is highest in unhygienic (55.85%), followed by hygienic (35.95%) and partially unhygienic (08.20%). Here we can say that place for washing dishes is highest in unhygienic places followed by hygienic.

In case of washing clothes, slum dwellers wash their clothes in different places like in front of house, back side of the house, near public tap or tube-well, near private tube-well, in pond or sea water, in bathroom, in veranda and in living room etc. Washing clothes near private tube well, in bathroom are the places which consider as a hygienic place, whereas washing clothes in veranda is considered as partially hygienic. Other places for washing clothes are coming under unhygienic category. It is found from the table that the percentage of place for washing dish is highest in unhygienic (56.72%), followed by hygienic (37.97%) and partially unhygienic (05.31%). Thus, it can be said that place for washing clothes highest in unhygienic followed by hygienic.

Table No - 1.5

Neighbourhood Phenomena	Unhygienic Place		Place		Place		Total	
	No.	In %	No.	In %	No.	In %	No.	In %
Cooking Place	890	59.81	309	20.77	289	19.42	1488	100.00
Eating Place	267	17.94	1053	70.77	168	11.29	1488	100.00
Washing Dish Place	831	55.85	122	8.20	535	35.95	1488	100.00
Washing Clothes	844	56.72	79	5.31	565	37.97	1488	100.00
Drying Clothes	1221	82.06	138	9.27	129	8.67	1488	100.00
Toilet	1092	73.39	51	3.43	345	23.19	1488	100.00
Bathing	1026	68.95	67	4.50	395	26.54	1488	100.00

Source: Primary Data

For drying clothes, it is observed that most of the slum dwellers dry their clothes in unhygienic place (82.06%), followed by partially unhygienic (9.27%) and hygienic places (8.67%). Hence it can be said that place for drying clothe is highest in unhygienic place followed by partially unhygienic.

In slum area due to lack of area and bad economic conditions people don't have a lavatory in their home. Separate toilet is not available in most of slum households, results of which the slum dwellers used to go outside for open defecation. For defecation slum dwellers used to go different places like, open spaces besides the roads, in front of house, back side of the house, in pond, on the beach, the municipality drains, community toilet and bathroom, etc. Bathroom is the places which consider as a hygienic place for defecation, whereas, using community toilet for defecation purpose is considered as partially hygienic place. Open defecation is considered as unhygienic category of places. It is found from the table 1.5 that the percentage of place for toilet is highest in unhygienic (73.39 %), followed by hygienic (23.19%) and partially unhygienic (03.43%). It is observed that most of the slum dwellers use unhygienic place for toilet, followed by hygienic places and partially unhygienic. Therefore it can be said that place for toilet is highest in unhygienic followed by hygienic.

For bathing slum dwellers used to go different places like, bath in the open water sources like tube well, open well, ponds, municipality water taps, community toilet and bathroom etc. Bathroom is the places which consider as a hygienic place for bathing, whereas, using community toilet for bathing purpose is considered as partially hygienic place. Open water sources like tube well, open well, ponds, municipality water taps are considered as unhygienic places for bathing. It is found from the table 1.5 that the percentage of place for bathing is highest in unhygienic (68.95 %), followed by partial unhygienic (26.54%) and partially hygienic (04.50%). It is observed that most of the slum dwellers use unhygienic place for bathing, followed by hygienic places and partially unhygienic. Further, the slum wise distribution depict that the proportion of hygienic practice is found more in old categories of slum related to the newly formed slums. This open bath usually affects the environmental condition, health problem and their social life style.

Place for Garbage Disposal

Better environment condition depends on the process of garbage disposal. To make a clean city it is necessary to dispose the Garbage in smart way. Dumping yard is a place which is generally found in the periphery areas of a city to make a city Garbage free. All the unused things, household garbage and other industrial garbage have been dumped here by the City Sanitation Workers.

The dumping yards are like heaven for slum growth for the poor migrants. In this case, the dwellers affected both from environmental and health point of view. Further, the neighbourhood environment hygiene is depends on disposing practice of garbage of the slum dwellers. Disposing garbage in open field, near house, road side, backward of houses, pond side or on the beach can be called unhygienic place for garbage disposal, whereas using municipality dustbin and specifically marked area for dumping garbage can be taken to be hygienic place.

Table No - 1.6
Distribution of Garbage Disposal

Slum Categories	Open Area/ Field		Near House		Municipal Dust bin		Road Side		Backward of the House		Backside Drain		Pond Side		Total	
	No.	In %	No.	In %	No.	In %	No.	In %	No.	In %	No.	In %	No.	In %	No.	In %
Old Slum	337	65.95	183	58.65	306	67.85	105	66.04	5	41.67	26	63.41	1	50.00	963	64.72
New Slum	174	34.05	129	41.35	145	32.15	54	33.96	7	58.33	15	36.59	1	50.00	525	35.28
Total	511	34.34	312	20.97	451	30.31	159	10.69	12	0.81	41	2.76	2	0.13	1488	100.00

Source : Primary Data

Table no – 1.6 shows the distribution of garbage disposal. From this table it is observed that out of total slum dwellers, only 30.31 percent people dispose their garbage in hygienic place out of which 67.85 percent belongs to the old slum category. Thus, it can be said that the practice of Garbage disposal in the slum is not hygienic, which is a major problem for slum physical environment and it directly influence the health and quality of living of people.

2. Social Environment

Slum is like a heaven for the anti-social people and criminals. The hidden cause behind these people is the political leaders and criminals. Their major works are theft, creating fear within the people and leadership in the slum areas, collecting ransom from the nearby market areas, murder etc.

As per 2011 Census, 4.05 per cent of the State population are residing in Puri district, out of which 15.60 per cent are classified as urban and 75.70 per cent of the urban population are living in Puri City. However, the slum population of the city constitutes 35.13 per cent. Social environment is determined from the Social Safety and Neighbour Relation. Less socially unsafe and good neighbour relation leads to a better social environment.

2.1. Social Safety

Women and children are the weaker section of the society. So in the slum areas women are more vulnerable from the security point of view. In the slum areas women are not secure in their home also. Naturally it is found that there are no sufficient rooms in the house of a slum dweller. It is also give a cause that a couple may or mayn't get a separate room for them. So they can't maintain their privacy. It also affects the security of the women. So a number of mischief activities like rape, misbehave, cheating and other some crimes found in the slum areas frequently which are not found in the police records. In case of children, it is found that they are insecure both physically and socially. They are facing different kind of physical injury and social insecurity like child labour, early marriage, kidnapping and traffic etc.

For the present study Social un-safety is divided into four categories that is Child Safety, Women Domestic Safety, Women Outside safety, Women Evening Safety. Distribution of Social Un-safety has been placed in table number 1.7. It is found from the table that out of total households 50.7 percent households

have faced insecurity from children safety aspects followed by women evening safety(49.3%), women outside home safety(49.1%) and Women Domestic safety (48.0%).

Table No - 1.7

Distribution of Social Unsafety

Slum Categories Unsafety Aspects	Old slums		New Slums		Total	
	No.	In %	No.	In %	No.	In %
Child Safety	460	60.9	295	39.1	755	50.7
Women Domestic Safety	426	59.7	288	40.4	714	48.0
Women Outside Safety	438	59.9	293	40.1	731	49.1
Women Evening Safety	450	59.7	304	40.3	734	49.3

Source : Primary Data

Further, it is observed that, social safety from Children aspect (60.9%) are found more than the Women aspects (59.7%) in old slums. In New slums 40.4 percent of women safe at domestic environment, whereas 40.1 percent are safe in outside environment which shows a poor social safety condition. Therefore, it can be said that old slums are safer than the new slums.

2.2. Neighbour Relation

Neighbour relation is a major aspect for the study of social environment. In this present study, Neighbour Help and Neighbour Conflict are two measure parameters to study neighbour relation. Further, Neighbour Help consists of physical, financial and emotional helps.

Table No - 1.8

Distribution of Social Relation

Slum Categories Slum Relationship	Old Slum		New Slum		Total	
	No.	In %	No.	In %	No.	In %
Neighbour Help	963	64.7	525	35.3	1488	100.0
Neighbour Conflict	739	65.2	394	34.8	1133	76.1

Sources : Primary Data

Distribution of Social Relation has been placed in table number 1.8. It is found from the table that out of total households 76.1 percent households have Neighbour conflicts whereas 100 percent households have neighbour help. Further, it is observed that, out of total neighbour help 64.7 percent found in old slums and 35.3 percent in new slums. Same trend also found in case of neighbour conflict. Thus, it can be said that though some kind of neighbour conflict found among the slum dwellers, still they are helping each other at their need. This table depict a good social bonding among the slum dwellers.

Living Environment and The Quality of Life in the Squatter Settlement – An Assessment.

A correlation analysis was carried out to assess the living environment conditions in terms of physical and social aspects that influence the quality of life in the squatter settlement areas. For the present study, duration of stay has been taken as independent variable.

- A1 – Duration of Stay
- X1 – Numbers of Room
- X2 – Place for Cooking
- X3 – Place for Eating
- X4 – Place for Washing Dish
- X5 – Place for Washing Clothes
- X6 – Place for Dry Clothes
- X7 – Water Sources
- X8 – Place for Dumping Garbage
- X9 – Place for Defecation
- X10 – Place for Ladies Bath
- X11 – Place for Gents Bath
- X12 – Satisfied with the Place of Living
- X13 – Children Safe at Home
- X14 – Women Safe at Home
- X15 – Women Safe Movement
- X16 – Women Safe in the Evening
- X17 – Take Neighbour Help
- X18 – Conflict with their Neighbour

The co-efficient values of Pearson's correlation are given in the table number 1.9. It is evident from the table that Number of Rooms (X1) is significantly and positively correlated with the duration of stay (D1), ($r = 0.082$, $p=0.000$), which shows that as the duration of stay increases, the number of Rooms also increases. It is observed that in the old slums, the duration of stay is longer than newly formed slums, and has more number of rooms in their houses. Therefore, it can be concluded that in the older slums the houses contains more number of rooms and well built than the newly formed slums.

Further, place for cooking (X2), Place for Eating (X3), Place for Washing Dish (X4), Place for Washing Clothes (X5), Place for Dry Clothes(X6), Water Sources (X7), Place for Dumping Garbage (X8), Place for Defecation (X9), Place for Ladies Bath (X10), Place for Gents Bath (X11) are significantly ($p=0.000$) and positively correlated with duration of stay (A1) and their respective correlation co-efficient values are 0.155, 0.148, 0.139, 0.265, 0.162, 0.500, 0.194, 0.265, 0.182, 0.195. However, the co-efficient values are moderately low, still they establishes a valid relationship as their level of confidence is 99%. This implies that as the duration of stay increases, Hygienic practice among the dwellers to keep the place for cooking, Eating, Washing Dish, Washing Clothes, Dry Clothes, Dumping Garbage, Defecation, Ladies Bath, Gents Bath increases, however, the sources of drinking water becomes private.

Further, place for cooking, eating, washing clothes, defecation, bathing and practice of garbage disposal become hygienic. It is found that in the old slums, people have private sources of drinking water; washing clothes, cooking and eating their food, to defecate and take their bath in hygienic places and have a practice of disposing their garbage in a hygienic way. Hence, it can be said that the physical environment of older slums are more hygienic than the newly formed slums.

Satisfied with the Place of Living (X12) is significantly and inversely correlated with the duration of stay (D1), ($r = -0.118$, $p=0.000$), which shows that as the duration of stay increases, the slum dwellers are less Satisfied with the Place of Living. Therefore, it can be concluded that dwellers of old slums of Puri are not satisfied with their place of living. Further, Children Safe at Home (X13), Women Safe at Home (X14), Women Safe Movement(X15), Women Safe in the Evening (X16) are inversely related with duration of stay (A1). Their respective co-efficient values are -0.161, -0.209, -0.193 and -0.212. Though the co-efficient values are moderately low, it established a valid relationship, as their level of confidence is 99%. This

Table No. 1.9

Correlations

	A1	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18
A1	1	.082**	.155**	.148**	.139**	.265**	.162**	.500**	.194**	.265**	.182**	.195**	-.118**	-.161**	-.209**	-.193**	-.212**	-.149**	.186**
X1		1	.453**	.335**	.309**	.238**	.148**	-.029	.035	.297**	.266**	.270**	-.184**	-.126**	-.056*	-.079**	-.053**	-.009	.025
X2			1	.404**	.246**	.180**	.198**	.107**	.081**	.273**	.232**	.244**	-.166**	-.061*	-.040	-.037	-.040	-.077**	.106**
X3				1	.193**	.185**	.174**	.080**	.071**	.140**	.112**	.113**	-.080**	-.054*	-.047	-.070**	-.032	-.089**	.116**
X4					1	.634**	.222**	-.220**	.079**	.283**	.224**	.231**	-.035	-.105**	-.029	-.072**	-.012	-.055**	.159**
X5						1	.313**	-.003	.131**	.329**	.254**	.250**	-.085**	-.120**	-.108**	-.157**	-.087**	-.100**	.152**
X6							1	.087**	.098**	.233**	.207**	.209**	-.111**	-.092**	-.078**	-.080**	-.069**	-.065*	.150**
X7								1	.142**	.143**	.075**	.090**	-.087**	-.091**	-.141**	-.122**	-.146**	-.148**	.012
X8									1	.085**	.077**	.077**	-.058*	-.025	-.058*	-.111**	-.076**	-.123**	.050
X9										1	.773**	.777**	-.127**	-.202**	-.140**	-.111**	-.122**	-.091**	.135**
X10											1	.974**	-.105**	-.170**	-.107**	-.081**	-.098**	-.078**	.054*
X11												1	-.108**	-.182**	-.101**	-.066*	-.081**	-.086**	.054*
X12													1	.474**	.448**	.435**	.482**	.069**	-.016
X13														1	.751**	.706**	.700**	.030	-.086**
X14															1	.836**	.811**	.024	-.077**
X15																1	.844**	.038	-.115**
X16																	1	.018	-.100**
X17																		1	.030
X18																			1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

implies that the feelings of unsafe among children at home, feelings of unsafe among women at home, unsafe feeling of women movement and women outside the home in evening decreases with increase in duration of stay. Hence, it can be said that the children and women are safer in old Slums than the new slums.

Further, Take Neighbour Help (X17) is negatively and significantly related with Duration of Stay (A1) and its respective co-efficient value is -0.149($p=0.000$), however Conflict with their Neighbour (X18) is positively related to Duration of Stay and its respective co-efficient value is 0.186($p=0.000$). Though the co-

efficient values are moderately low, still they establish a valid relationship, as their level of confidence is 99%. This implies that Take Neighbour Help decreases with increasing Duration of Stay, however, Neighbour Conflict increases with decreasing Duration of Stay. Thus, it can be say that people in the old slums take less neighbour help than the new slums, whereas, most of the neighbour conflict found in new slums than the old slum. Therefore, it can be say that, the good social relationship found among the dwellers of the old slums as they have less conflicts.

It is observed that the older slums are more secured from the domiciliary and out of door security point of view and have better neighbour support which make them satisfied with their current living condition. Hence it can be concluded that the social environment of older slums is better than the newly formed slums.

Conclusion

The squatter settlement is one category of urban settlement which has been drawn a gray picture in an urban region due to its unauthentic growth. The present paper focused on the slums of Puri city. To find out the living environment conditions of the dwellers of the squatter settlement in terms of physical and social aspects, the researcher covers a vast area depending on the primary data. By adopting the statistical techniques like Frequency distribution the researcher compile the primary data and analysed the data through coefficient of correlation and establish the relation of different phenomenon. Through this critical analysis the researcher proof the influence of physical environment and social environment of slum on its dwellers, influence of dwellers day-to-day hygienic practice on their present environment and their health, social security that influence the quality of life in the squatter settlement areas. From the analysis the researcher derived following conclusions.

(i) A congested arrangement of semi pucca and kutcha houses in slum which influence quality of living of people. Around 2/3rd slum dwellers living in new slums those who are migrate to the town after 1984 after establishment of P.K.R.I.T.

(ii) In the older slums the houses contains more number of rooms and well built up area than the newly formed slums which proved that the physical environment found in the old slums are better than the new slums.

(iii) The Hygienic practice among the dwellers of old slums to keep the place clean for cooking, Eating, Washing Dish, Washing Clothes, Dry Clothes, Dumping Garbage, Defecation, Ladies Bath, Gents Bath are more than the New Slums, however, the sources of drinking water becomes private for Old Slums. Therefore it can be say that, the people of old slums prefer hygienic practice to make better their day today life which directly influence their better quality of living than the new slums. Therefore, it can be said that the physical environment of older slums are more hygienic than the newly formed slums.

(iv) Further, the feelings of unsafe among children at home, feelings of unsafe among women at home, unsafe feeling of women movement and women outside the home in evening decreases with increase in duration of stay. Therefore, it can be say that the children and women are safer in old Slums than the new slums.

(v) From social relationship aspects it is found that there is a good social relationship prevails among the dwellers of the old slums than the new slum.

Thus, it can be concluded that with a good physical and social environment that prevails in the old slum of Puri is a reason behind the living satisfaction among the dweller of those squatter settlements which directly influence the quality of living. Thus the dwellers have a good quality of living in the Old slums of Puri urban area.

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