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Sanitation Services: Differential Access and Impact on Households: An Exploratory Study in Slums of Andhra Pradesh

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INTRODUCTION

SEVERAL STATEMENTS are made in policy and practice of sanitation needs and demands of the urban poor. However, in most cases the contours of needs and demands have been defined top-down. Lower priority is given by agencies responsible for delivering and/or managing water and sanitation services.¹ In India, according to the National Family Health Survey 3 (2005-06), the urban sanitation coverage is 83.2 per cent as against the all India coverage of 44.6 per cent. However, the condition is worse in urban slums where almost half of the cities population live.² Urban poor "communities", loosely identified as homogenous groups of people living in a particular areas of a city, have often been encouraged to demand what fits the range of sanitation deliverables determined top-down in project agendas.

Technically sanitation implies a greater likeness to hygiene, both personal and domestic than to a relative notion of cleanliness. Based on the exploratory study in slums of Hyderabad, using livelihood-gender-sanitation framework the authors bring out how the heterogenous group of urban poor are having the differential access to sanitation services.

The study also focused on how experiences of poverty impact differently upon individual households (hh) and community means to demand and access appropriate sanitation. We also focused on how poor and vulnerable sections are ignored by the various sanitation programmes and projects. The purpose of the present article is to provide better insight on people's sanitation needs in the context of the reality of their lives, livelihoods and relationships defined by gender.

This article is organized into five sections including this introduction. The second section explains the methodology adopted

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for the study. Communities' perception about poverty and vulnerability and their livelihoods are discussed in section three. Fourth section presents the various sanitation services available to people and their differential access to various households. It also looked at the impact of sanitation services on the livelihoods of people. Final section discusses the suggestions of people for the betterment of sanitation facilities and makes some concluding observations.

METHODOLOGY

Research locale

The study was conducted in two slums of Hyderabad, Vajpayeenagar (Notified Slum) of Qutbullapur municipality and Banjara colony (Non-Notified Slum) of LB Nagar Municipality. The area of Vajpayeenagar is 3.96 ha with a population of about 2,413 of which 483 (20%) belong to SC and 231 (9.6%) belong to ST communities. Significant number of telephone connections are observed in the locality. All the houses were provided with their own latrines about one and half years back. Presently the dwellers were given an amount of Rs.50,000 to Rs. 60,000 under VAMBAY (Valmiki Ambedkar Awas Yojana) Scheme to construct reinforced concrete cement structures for their housing. In the process of construction they are demolishing the existing houses (mostly huts with thatch roofs and plastic covers) and even demolishing the latrines constructed under Low cost sanitation scheme (ILCS program). Now they intend to rebuild toilets. The slum is notified and is considered for the implementation of all government schemes. The majority people of the slum are daily workers in the construction and civil works. The slum has a range of households from "vulnerable" to "better off". Children make up for large percentage of urban population.³

In Banjara colony of LB Nagar the housing and living conditions of the residents seem to be worse compared to other settlements. The majority of the slums residents are from the Lambada community (ST). The slum is about six years old located far away (about 7kms) from the city centre. The total population in the slum is about 2500 of which 1980 (80%) belong to ST and 365 (15%) belong to SC communities. About one third of the households possess the title deeds and the rest are promised the ownership documents in the near future by the municipality. ILCS program has been implemented in the slum in two phases covering 128 houses (19.6%) in the first phase and the rest in the second phase. Unfortunately nobody uses

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them. The people of the slum are engaged as labourers in civil works and as 'hamalis' (helpers at markets or head loaders) in vegetable and fruit markets.

The primary focus of this study is the household (HH), the individual –their poverty, their exclusion from social and political networks, the links between their poverty and their needs for sanitation.

Participatory Research Tools

The research study used the participatory exercises which prioritized a process in which categories of people hitherto excluded become more powerful. In carrying out the research, in addition to individual questionnaires, the approach adopted aimed to move away from 'survey slavery' towards less rigid and less formal styles of information collection and collation as encouraged by Chambers (1983). It provided enough space for the unreached voices of heterogeneous urban poor. In this research the authors have made an attempt to include vulnerable, poor and less poor women, houses headed by women, widows and other categories of people. Enough space was provided for the women, adolescent girls, vulnerable and poor to express their valid opinion freely in focused group discussions and other interactions. The sample households were disaggregated by gender and other factors of disparity. The primary focus of this study is the hh, the individual. In the hh interviews, all the members of the family, especially the women and adolescent girls were given priority to express themselves on various issues related to personal sanitation and hygiene and environmental sanitation. Household interviews were done using a guided checklist. Eight households each were selected from vulnerable, poor, not so poor and better off from both these localities. Two households each from four different categories such as vulnerable, poor, middle income and better off hhs.

A total of 32 households were interviewed for an in-depth analysis. Focused group discussions were done with different sets of people like women, adolescent girls, school going children, and men from various categories of households. Structured observation of the hhs was done to observe the sanitation habits and behaviour of the different hh members.

Community Perceptions of Poverty and Vulnerability

Thorough discussion was initiated with the residents of Vajpayeenagar and Banjara colony to categorise the households living

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in the colony and the possible indicators that could be used for each of the categories. The discussion on the heterogeneity of poverty and vulnerability is based on extended interactions with more than 50 households in the two slums. The Asset and Vulnerability framework has been used to structure the discussion. The social mapping exercise done earlier also established four categories: a) vulnerable, b) poor, c) not so poor and d) better off and these were confirmed in subsequent Focus Group Discussions (Table 1).

TABLE 1: COMMUNITIES INDICATORS FOR CATEGORIZATION OF PEOPLE

Category I Vulnerable	Category II Poor	Category III Not so Poor	Category IV Better Off
-Eat one meal a day with difficulty -Search for the meal -Chronically ill -Old age -Orphans -Totally depend on others -Widows with large families, insecure labour and unskilled -Widows with chronic illnesses and no support -Beggar women -Having no house -women who have to handle sanitation needs immediately after giving birth to child -One who has to work every day -HHs who borrowed money at high rates -VAMBAY beneficiaries -HHs which do not have support from nearest relatives.	-Widows with insecure labour -Large families supported by women headed families -having some shelter -Large families supported by single income -Physically handicapped but supported by family -Occupational categories such as house maids, rickshaw pullers, beneficiaries of old age pension, wig makers -People with big debts -VAMBAY beneficiary	-Seasonal -Employment -Household assets -Beneficiaries of Vambay Scheme without taking extra loan -Municipal workers, RCVs, teachers and aayas of local school -Pucca houses, private toilets functioning -HHs with more than one earning members -HHs which invested on personal toilet. -Households who have spent own money for house construction. -HHs with tiled floor. -HHs who can afford to buy drinking water and construct storage tanks.	-Leaders of colony Association -Business people -Educated people -Vambay Scheme Beneficiaries with big loans -House Hold assets and vehicles (two wheelers) -Good quality houses-private toilet functioning -HHs which invested on personal toilet. -Households which have spent own money for house construction -HHs which buy good quality and more number of sanitary items -HHs who can afford to buy drinking water and construct storage tanks. -HHs with tiled floors.

SOURCE: Focused Group Discussions

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Livelihoods

The livelihood patters of both the research locales are diverse in nature. They varied for each category of households. *Dalits* (SCs) are mostly engaged as petty vendors, rickshaw pullers or house maids. Households from *Erukala* (STs) community are earlier involved in making wigs, but are now better off running petty business such as shops. Basket weaver families are few and can't make enough for a decent livelihood. *Vadderas* (ST) who are traditionally from stone cutting community are now engaged in construction work, are doing manual labour that is defined as "*matti pani*" which is literally working with mud, or "*para pani*" or working with a spade. Only a few of the "*vadda*" or carpenter community people are engaged in that occupation and they now are also engaged as daily wage labourers. The few upper caste families are engaged as employees in private sector or running businesses.

Category of Households	Type of Livelihood
Vajpayeenagar	
Vulnerable	Street sellers of plastic show flowers, petty tea shops, traps pigeons, sprays pesticides on show plants, wage labourers of nursery, hunting pigeons and quails, selling honey, wage labourers in earth works.
Poor	Domestic servants, wage labourers, rickshaw pullers, workers in private factories
Middle income HH	Carpenter, rickshaw pullers, piece workers
Better off HH	Job in private companies, government job, business, Grocery shops.
Banjara colony	
Vulnerable	Wage labourers, domestic servants, auto drivers, hamalis.
Poor	Housemaid, wage labourers assisting masons, street sellers of peanuts etc, piece workers, auto drivers.
Middle income HH	Running of petty shops, wage workers, auto drivers.
Better off HH	Local leaders, working as brokers in the transaction of real estate business, running of grocery shops, secure government jobs and private jobs.

SOURCE: Field Study

The various categories of people living in Vajpayeenagar and Banjara colony are having diverse livelihoods. Most of the vulnerable and poor hhs have highly insecure livelihoods and the middle income and rich hhs have secured livelihoods. The following table provides us a picture of livelihood of different economic groups in both the study areas.

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Sanitation Services

Different sanitation services are present in the Vajpayeenagar and Banjara colonies. This study attempted to gain a comprehensive understanding of these services and differential access to these by various categories of people. For this in-depth analysis, one household from each economic category was chosen for analysis from the sampled households. Table 3 gives us an idea of various services available to different wealth groups.

From Table 3 it is evident that the vulnerable sections of the people living in the slums lack crucial services. This was more prominently seen in one of the study sites, Vajpayeenagar. Davis *et al.*⁴ revealed that almost half of households reported a moderate or high degree of dissatisfaction with their existing sanitation situation. The vulnerable sections lacked individual houses, latrines, lack access to tap connection and do not have a bath room. On the other hand in Banjara colony, vulnerable households had houses. As most of these households were STs, the emphasis given by the government to provide them housing has enabled them to own a house. However there was not greater difference in the services accessed by the various categories of people in Banjara colony. The sanitation services such as sprinkling of bleaching powder, fumigation for mosquitoes, and sweeping of internal lanes are irregularly provided in a similar way to all households irrespective of their economic category.

In addition to the services mentioned, Vajpayeenagar has the services of replacing the failed street light bulbs which do play a part in adopting better municipal practices. Residents of Vajpayeenagar also reported about the municipal service of catching stray dogs and killing. There is a machine, which is available for cleaning and emptying the pit latrines once they are filled (This is a private service. The machine is owned by a Self Help Group). All the households in Vajpayeenagar have proper pavement whereas in Banjara colony the houses have *kutchi* pavement. The roads in Banjara colony were improved just two months back.

Sanitation Services and Differential Access to HHs

The residents of Vajpayeenagar revealed that there are several sanitation services available to them. However, there is a bit bias shown in the way the municipal staff deliver these services. The poor and vulnerable felt that the services like cleaning of drains are done more frequently in the areas where rich reside. "*Vallu pedda pedda*

TABLE 3. AVAILABILITY OF SANITATION SERVICES INCLUDING WATER, ACROSS ALL CATEGORIES OF HHs IN VAJPAYEENAGAR AND BANJARA COLONY

HH category	Landhouse ownership	Latrine	Water	Bathing facility	Gargage collection from house	Sprinkling of bleaching powder	Fumigation for mosquitoes	Cleaning of storm drains	Sweeping of lanes	Repairing of hand pumps
Rich	Own assets, more than Rs. 7,000 was spent 10 yrs. when he built the project	Built 10 years back, spending more than Rs. 6000	Individual connection	Own	Yes	Yes, but complaints about the delay and completion	Yes, but frequency is less	Yes, but irregular service	Monthly rain roads are done, are cleaned, much	Yes
Medium	Recently constructed, own assets, spent Rs. 75,000.	R.C/Superior, costed Rs. 250.	Individual tap connection	Own	Yes	Yes, complaints about delay only when VIPs visit.	Yes, frequency is less	Yes, irregular service	Not service to central colonies	Yes
Poor	VAMBAY House under construction, Rs. 25,000 was given as subsidy and Rs. 30,000 as loan by govt.	R.C/Superior Rs. 1000 which includes cash and labour	No individual tap connection.	Own	Yes	Same as above	Same as above	Same as above	Same as above	Same as above
Vulnerable	No plot or house. Stay in shelter in lower part by making a temporary hut.	Uses Latrine belonging to mother-in-law.	No	No.	Yes	Same as above	Same as above	She says it is irregular service.	Occasional sweeping is done in internal roads.	Yes

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Table 3 Contd...

HH category	Latrine ownership	Latrine	Water	Refilling facility	Garbage collection from house	Sprinkling of biopesticide	Fumigation (frequency)	Cleaning of open drains	Drainage of open C.C. roads	Repairing of hand pumps
Banjara Colony										
Rich	One house sanctioned by Govt. Additional money Rs. 25,000 spent for bio-fertilization	ILCS latrine is present but is not used due to floor is not finished and small	Has a pump in which water is pumped and stored	Yes	Drainage is not done as common pit from which municipal by-picks off	Yes, but the frequency of spraying is irregular	Yes, the frequency of spraying is irregular	Recently established, but yet to be given connection.	It is done once in a week	Yes
Middle	One house sanctioned by Govt. Additional money was spent	They have ILCS latrine. Sanctioned by Govt. Additional money of Rs. 2000	Get water from water tanker and is stored in plastic drums	Yes	Garbage collection from house	Yes, but the frequency of spraying is irregular	Yes, the frequency of spraying is irregular	Underground drainage is cleared once in 15 days	Once in 10-20 days	Yes
Poor	One house sanctioned by Govt. Constructed with own money Rs. 5000	ILCS latrine	Get water from water tanker and is stored in plastic drums	Yes	Garbage collection from house	Yes, but the frequency of spraying is irregular	Yes, the frequency of spraying is irregular	Underground drainage is cleared once in 15 days	Once in 20 days	Yes
Vulnerable	One house sanctioned by Government	ILCS latrine is present but is not used	Temporarily set up	Drainage is not done as common pit	Yes, but the frequency of spraying is irregular	Yes, the frequency of spraying is irregular	Recently established, but yet to be given connection.	It is done once in a week	Yes	

Source: Based on Primary Survey.

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valla indlalaki velli cheshthunnaru", says, Kumbavula Yesamma (they clean regularly only in the lanes where rich and influential people reside). Supporting this complaint, Gaddam Laxmi Devamma says that "the municipality workers are showing interest in cleaning those lanes where they are given some petty amounts as tea expenses for cleaning the drains" (*Vallu kooda renduroopulu dhorikekada cheshthunnaru*). This payment is unofficial. Rajeswari of Vajpayeenagar says that the frequency of visits by the municipality staff is very less and irregular. She adds further saying, "if they do any cleaning work we should give them some money" (*vallu chesarante chalu paisalu ivvalli*).

Kamalamma, a middle income hh member reveals that, the municipality staff sweeps the inner lanes and cleans the drains of people where the most vulnerable of the colony stay. She has an interesting argument to present in this regard. It is not out of affection for these vulnerable groups that the municipal staff does more work in the lanes but it is out of fear that this may be noticed by important government officials visiting the colony and they may be made responsible for it and may eventually be punished. It was found that vulnerable hhs do not bother so much about environmental sanitation surrounding their houses. The households located at higher elevation and in the end of the bylanes receive less discharge output from their individual tap connection and also for lesser time as compared to other hhs. Fumigation is done by a pump for controlling mosquitoes, says, Karamthott Laxmi of Banjara colony (*poga bndi vacchi droom droom ani pothundhi*). She adds further saying that hitherto in the last summer the fumigation person used to come once in a week, but now it is coming only once in a month. It was complained by women the person fumigating does not stop at a place and do it and instead moves very quickly. In general, the residents of both research areas complained about the delays and irresponsibility of municipal workers in delivery of various services.

Rich people have constructed houses on their own and middle income households have spent additional money in the construction of houses sanctioned by the government. ILCS latrines are being used judiciously in Vajpayeenagar despite several drawbacks. They were most useful to families with limited members, as the filling of pits takes more time. Those families who could afford to lay more rings (spending additional money) also used it a bit comfortably when compared to other poor and vulnerable sections who could just lay the rings that were given by the government as per the programme. In Banjara colony the use of ILCS latrine is negligible. "Latrines are constructed but we have not started using them", says, Vaithay

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Seethamma (Paikanlu ayinayi kani, inka vadatledhu) This is mainly due to the nature of soil below these latrines. It allows the seepage of water quickly and the pit gets filled even without being used at all. Hence, all the families irrespective of economic category go for open defecation. Recently, a month back the underground drainage system was established and is yet to be connected to ILCS latrines. It was revealed during the focused group discussions that the owner of the proposed site for the central septic tank (meant for connecting the drainage pipes of the colony) was objecting for the building of the same with a claim that he has property rights over the land claiming that it was given to him by the government. Presently, the case is in the court. Once, the underground sewage system starts functioning major sanitation related problems of Banjara colony are likely to get solved.

Within households, all the services provided by the municipality are equally accessible to all the members of the family including men, women and children. All the services are provided taking hh as a unit rather than focusing on women or men. However, the delays in delivering these services by municipality are putting more burden on the women members of the hh. Except in children, there is also a common understanding within all the hh members about the various service providers and their roles and responsibilities. As the communities of both the study sites had to pass through difficult sanitation problems, they are very much aware who is supposed to do what and when. This is the precise reason why every hh interviewed and all the members who participated in the focused group discussions repeatedly complained about the delays and reliability of the services provided by the municipality.

Despite the provision of several sanitation related services, the communities in both the study areas complained about the inadequacy of these services. The major reason cited for this by the Vajpayeenagar residents during the focused group discussions is the lack of underground sewage system. It is the actual root cause of all the sanitation problems they are facing inspite of so much work done for providing better sanitation services. Lack of viable sanitation solutions in slums contributes to serious health and environmental risks for the entire population (WSP-SA, 2009). Similarly, in the other study area (Banjara colony) lack of piped water supply is the main cause for the non-adoption/partial adoption of sanitation tasks. Vaithay Sitamma of the Banjara colony says, "If water is available every thing will be clean", (*Neellunte shubram*). Another major problem is lack of any drainage system which forces them to go for open

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defecation. Stagnation of water is common feature as there is no provision for the drainage of waste water. To handle this situation, the women of Banjara colony have to carry the waste water for every two to three days from the pits dug adjacent to their bathrooms. Korra Madhavi with a disgust says, that, "it contains urine of the family members, water of clothes washed and bathed water and we carry all that" (*yass poyedhi dantlone, battaluthikina neellu, snanam neellu dantlone, avi mosthamu memu*). She remarks further adding, "This is a unpleasant sanitation task". This clearly depicts the impacts of improper sanitation services on women and the kind of drudgery they have to pass through every day.

In the study area Banjara colony, nearly 150 houses have underground sumps to store the tanker water so as to avoid the drudgery of pumping water from handpump every day and instead comfortably meet their sanitation needs. Mostly rich and middle income families who can afford—have gone for the construction of these pumps. Few poor HHs, wherein there is no physically strong person in the family to pump the water from handbore have also opted for underground sump. Each household has invested nearly Rs.2500 to Rs.3000 for the construction of these underground water storage structures. Others, specially the vulnerable and majority poor could not afford these sumps due to financial constraints and try to manage life by fetching the water from handpump. The price of full water tanker is Rs.150 and this water is equally shared by the two houses costing Rs75/each household. "We use this purchased water very carefully, we don't waste even a drop of water", says, Ramavath Mangya Naik of Banjara colony (*Jara badramga, paravoyakunta vadukuntamu, chukka neellu kinda ponyyamu*).

The access to various sanitation services is influenced by the permanency or transient nature of settlements.³ "Now we are residing at one place", says, Polaparathi Yesamma, of vulnerable household in Vajpayeenagar(*Oka daggara untunnam kada*). She belongs to a community who used to be nomadic hitherto, but, now at any cost she returns back to house after work. In this changed scenario she realizes the importance of sanitation services. She says, "Some one may come ask for drinking water, it is always good to be neat/hygienic" (*Yearaina vacchi neellu thagutharu, anduke shubramga unte manchidhi*). This change to good sanitation practices was voluntary and money really did not influence changes that have taken place in the sanitation habits, except that it can be used to buy things like detergents.

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Sanitation Services and Impact on Life

The women of both the research locales realised the importance of various sanitation services available from municipality. There is a compelling evidence that sanitation brings the single greatest return on investment of any development intervention: up to nine dollar for every one dollar spent.⁶ In Vajpayeenagar, most of these services have been provided a couple of years back whereas in Banjara colony most of the services were provided more recently. The present study tried to understand the impact of these improved sanitation services on the life of communities living in these areas, particularly on sanitation/hygiene practices and domestic work. The following paragraphs present the details of how each sanitation service influenced the life of people living there.

Concrete Cement Roads

The people of the study site Vajpayeenagar have good roads now. Earlier they used to smear the house front with dung water. Now the women wash their house fronts whenever they wash. As there is stagnation of water in ditches on road. Manjula says, "now, there is no chance of entering the houses with muddy legs" (*Buruda kallathoni inti kocchedi ledu*). Things improved only after roads were laid, otherwise, hitherto, with small drizzle, it used to be so muddy and unmanageable. Now the roads are good and there is facility for draining of excess water. Rajeshwari, a middle aged woman says, "it was difficult to reach the handpump walking on these muddy roads, some times or the other almost every one has fallen down in the process fetching water from hand pump" (*Boring kadiki velladamiki, veelu kakunde, akkadantha paddavalle unnaru, panichesukkonike*). Previously, there used to be knee deep mud. Some households who could afford used a couple of loads of gravel soil to improve the road condition so that they can reach the pump from their houses easily. To avoid falling down and problems arising from it, some rich HHs used to spend own money to make the roads a bit walkable in rainy season. However, others who could not afford money had to live with the existing conditions.

It was revealed during the focused group discussions, that the sanitation services provided by the municipality did a lot of good to children. Hitherto, children use to play outside and comeback home with lots of dust and dirt. Women in a single voice said that, "Now, we are confidently sending the children outside for playing, which was not the case before the roads and drains were formed" (*Pillalaku ippudu bayataki vadatalaguthumamu*).

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Contrary to Vajpayeenagar, in another study site there is a *kutchha* road but not concrete cement road. This too was done a month ago. Now there is no muddy road in the colony. "*Sanpi challadam alkagaidhi*" says Ramavth Parvathi of Banjara colony (the sprinkling of the water in the house front has become easy due to good inner *kutchha* roads). There are no pits and the colony is leveled now.

Open Drains

Construction of open drains reduced the quarrels between the neighbours. Earlier, when the solid waste from drains was not being cleaned, the waste water of one household located in slightly upper elevation used to stop in front of our next house. If the sewage removed from drains is not lifted immediately, it used to cause many problems and many a times also fell back into the drain again. Whenever there is delay in cleaning of drains, every body in the family gets affected as the waste water gushes back into the house. The untidy home or surroundings irritates the women who order the maids to keep it clean every day. Due to these unhygienic conditions many conflicts arose in the families. This used to be a big concern hitherto. Any work related to water would have resulted in stagnation of water. Now with developed drainage these problems have reduced.

Water Taps

This was one of the most important sanitation service provided to the research locale Vajpayeenagar. Earlier, women used to fetch water from hand pump and use it for washing purpose. Presently, the households get water luxuriously and use it liberally to wash the house, clothes and utensils. Kamalamma said, "*Nalla rikunte yekkada pani akkadane untundi*" (Now, if the water doesn't flow in tap, the whole work is at stand still). The timing of release of water from taps in Vajpayeenagar is between 3 p.m. and 5 p.m. during the day and 12 p.m. to 7 a.m. in the night. For the women who work in the day fetching water during the night time is convenient and for those who do not go to work the other time is convenient. When the tapped water supply was not available, families used rickshaws, autos and cycles to fetch potable water from a long distance. It is calculated that African and Asian women (rural and urban) walk an average of six km each day to fetch water and they fetch water for all domestic needs and for the entire household.⁷ One can live without sanitation; one cannot live without water; user needs and demands for water outweigh those for sanitation.⁸

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Earlier, when the tanker supplied drinking water to the Vajpayeenagar colony, "only physically strong people, active and those who were more vocal could manage to fetch water", says Kamala (*shatainollu pattukuntundi*). Physically weak members failed to succeed in fetching water from the municipality tanker as there is lot of crowd pulling and pushing in all directions. Hitherto, it was difficult to fetch water from hand pump walking through the muddy and slippery roads. Due to pumping, the hands of the women used to pain a lot. In some families men helped the women to fetch water. Fetching water from hand pump consumes a lot of time. Despite waking up quite early in the morning, it used to be around 9 a.m. by the time the women fetched water. Husbands of these women used to get late to office and scold them for this delay. After the tap connections were given, the men were relieved from the job of helping women to fetch water. "*Makkuda mosukochudu thappindhi*", says, Rajeshwari of Vajpayeenagar (the women were also relieved from the job of carrying water from the hand pump).

Hand Pumps

Hand pumps are the major source of water for the communities, especially for the poor and vulnerable, in Banjara colony. Whereas for study site Vajpayeenagar, it is a supporting service in addition to the tapped water supply. "In the event of tap water not sufficient for our use, we fetch water from hand pump" says Polineni Parvathi of medium income hh (*Dabbuna neellu saripoka pothe boringu kelli thesthamu*).

Women of Banjara colony have lot of difficulties in fetching water from hand pump. There will be a big queue in the day time, especially in the morning time. "*boring kottalante yasta, santa koorchunte oka binde dorukuthadhi*", says, Kasru (it is disgusting to pump the water from handpump, if we sit for one hour we get one pot of water). Hence the women will be awake till late night and fetch it around midnight. "*kastapadi nidra pogottukunaina, shubramgauntamu*", says, Ramvath Parvathi (at the cost of sleep, we fetch water to keep ourselves clean). Secondly, the pumping is very hard and the shoulders and hands of women pain a lot. "*Boring kodithe, rendu soodulu yepichukovale*", says Vaithaya Sitamma (if we pump too much water from handpump, I will fall sick and need to take two injection by visiting doctor). Nothing can be done without water. Due to the difficulty in accessing to water, the woman of Banjara colony faced lot of difficulties in performing sanitation tasks such as cleaning the house front, utensil washing, washing clothes and attending natures' call.

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In both the study areas, the women across all the economic categories complained about the quality of water drawn from hand pumps. In Vajpayee Nagar, after the tapped water supply, the quality of water in hand pumps has considerably improved. This was due to reduced load on these pumps. "*Anthaku mundu yerraga nune laga vasthunde*" says Kamalamma (Previously, the water from hand pumps used to be oily and reddish brown). Men of this study site during the focused group discussions revealed that the poor quality of water in hand pumps could be due to the effluents released from the industries located in the Qutbullapur municipal area. The women reported that the poor quality of water from hand pumps had a serious impact on the health of communities living there and there are incidents of cold and fever; the rice becomes yellow and soft; pulses do not cook well; food becomes stale very soon; when water from hand pump is mixed with milk, children hate to drink it and causes itching.

Fetching water from handpump is a big problem for women who had undergone operation. They face several difficulties while performing sanitation tasks. These include; (a) difficulty to walk and also to walk quickly; (b) painful to pump out water and also carrying it to the house; (c) Sprinkling of house front with dung water is difficult as we need to bend down and also carry dung to mix with the water in the bucket; and (d) difficult to wash clothes and clean utensils. Whenever there is a breakdown of handpump, a complaint is registered with the municipality. Women during the study complained, that, the municipality attends the hand pumps of the lanes where richer are residing, one or two days earlier as compared to poorer hhs.

Supply of water through tanker

Among all the sources of water, tap water is the most preferred water source.⁹ However, in study site Banjara colony, there is no tapped water supply. Hence, the municipality provides drinking water through tanker which is not adequate. The recent guidelines of the government, emphasize the shift away from the conventional normative approach of service levels measured in litres per capita per day (LPCD) and move towards water security at the household level, which includes equity aspects.¹⁰ In Vajpayee Nagar after the provision of piped water supply, the distribution of water through tankers was stopped.

Hence, the residents are supplied by drinking water through tanker once a week. Each household irrespective of family members

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is entitled to fetch five pots of water every week. Women strongly complained that such a small quantum of water is highly insufficient, especially in the summer season. "*Aa neellu oka bangaramu*", says, Vaithya Sitamma of Banjara colony (the water supplied by tanker has become precious like gold). She adds "*Yenda kalamlo okaroju, rendu bindela neellu thaguthamu, ayidhu bindelu varam rojulu yetla thagale?*" (in summer, on one day, the whole family drinks two pots of water, how can we adjust with five pots of water for one whole week). Sometimes, rich and medium income households buy small drinking water cans from nearby place L.B. Nagar for 20 rupees each. Others who cannot afford this amount go to a nearby village located a kilometer away and fetch water. Due to this long distance, the woman stop at atleast two places, unload the pots from their heads to take rest for some time and then carry the pots again to their home. Even in such a distant place there will be lot of crowd and many a times conflicts arise between women while fetching water. Only those women who are physically fit will go to such a long distance.

Electricity

Though electricity department provides this, the service has brought out some uses with reference to sanitation tasks. Since the electricity supply has started, the women were devoid of the headache of lighting the chimney every day. "*Katkesthe lightosthadi, kaidam rangane paisalu kattale*" (as soon the switch is pressed, the light comes and as soon as the bill paper comes we have to pay the power bill), says, Anusuya. The women reported that, though it is comfortable and convenient with electricity supply, we have to pay more money than that of investing for lighting chimneys.

Street Light Bulbs

Having a pole with a street light bulb in front of their house is an advantage for the poor and vulnerable. Sometimes, if the bulb fails, the people residing in that particular lane pool the money and replace it. "*Mana gallilo intiki renduvandhalu vesi meme konukonnam*" says Kamalamma (initially the hhs of our lane pooled Rs.200/each household and brought required number of electricity poles for the lane). Without light, the women have faced the following problems.

- How can we work in dark ? (*Cheekatlo yetla pani chesukuntam*)
- Once it becomes dark after sunset, we used to get frightened to move out of the house (*Cheekataithe bayata thirugalande bayam ayithunde*)

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- c. Used to do all domestic work during day time only (*Pagale panichesthunde*).
- d. Once night sets in, we never used to sit out (*Cheekataithe bayata kooda koorchokuntimi*).
- e. We get up early and cook food, if there is no light, we can't see even if some thing falls into the food while we are cooking (*Jaldhi lesi vanta chesukuntamu, cheekatunte andla yemi paddadhi kanapadadhi*).

According to women, the street light not only helps them to work in early hours but also enables to spend more time in early hours and during evening times to manage the house front, by cleaning/washing it so that it is much cleaner. Hitherto, "*bayatikellagane antha cheekati untunde*" (it used to be dark outside our houses), says, Rajeshwari. Now the women can sit outside, in the housefront for some time even after the sunsets. More importantly poor and vulnerable hhs who do not have electricity connection to their houses will get benefited from streetlights.

Garbage Collection

This is an important aspect for the women in the households. Earlier, they used to feel uneasy to go and throw at common dumping site. "By the time we start dumping the garbage, the pigs used to surround us", says, Rajeshwari (*Vampetappatiki pandhu lochhesthunde*). Hitherto, the women used to dump the garbage in the common dumping site and then only took the bath). Now, if the garbage collecting rickshaw of municipality does not come on time, houseflies and mosquitoes accumulate in the house. Similarly, when the garbage is not picked up regularly and quickly from the common dumping site, there will be more number of mosquitoes and we get stinking smell while we pass through it. In Banjara colony, the municipality picks up garbage from the common dumping site once in a month.

Sprinkling of Bleaching Powder

Every woman in Vajpayeenagar complained in single voice that this sanitation service is provided mostly when a key official/ politician/visitor is coming to the colony. They also informed that the municipality used to sprinkle this powder very regularly till a couple of years back. "*Peddalochinappude vestharu*", says, Kamalamma (bleaching powder is sprinkled prior to the visit of key persons to

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the colony). Sprinkling of bleaching powder in the open drains and on the common places helps to control mosquitoes and prevents the emanation of stinking smell. In Banjara colony too bleaching powder is sprinkled by municipality staff when VIPs visit the colony.

Fumigation for Mosquitoes

This service is provided in both study sites, but with long gaps. In Banjara colony, this service is provided once in 15 days. "If the spray for controlling mosquitoes is not done, their number increases, they bite us, we suffer from fever and vomittings, says Kamalamma (*Domala mandu kottakapothe domalu vasthai, karusthai, juaram vasthadi, vanthulaiithai*). "Since the fumigation spray for mosquitoes has started, the health of the residents is keeping well", says Hamza of vulnerable hh, Banjara colony (*Domala mandu vesinappati nunchi andariki manchiguntundhi*). More than fumigation, all the families including the vulnerable and poor in both study areas, heavily depend upon mosquito coils to protect themselves and also to have a sound sleep. Even small children are protected from the problem of mosquitoes bite. It was interesting to hear from the women that each household spends at least Rs. two per day to buy a mosquitoes' coil. Middle income and richer households use popular commercial brands.

Women in the study areas reported that men do not take the sanitation services seriously. They do not take it to heart. They just eat and go out. Women are more concerned about various sanitation services as it directly affects them and their work. According to the women in Vajpayeenagar, the only thing men are worried is about drainage cleaning as it breeds mosquitoes in front of house and gives bad smell.

Sanitation and Impact on Livelihoods

It was clearly evident from the study that the sanitation tasks were predominantly shouldered by the women. Naturally, the women who were the bread winners for the family had to struggle in balancing between sanitation practices and livelihood works. The women with grown-up daughters get some support. Women in these households get quite early in the morning and do all works except washing clothes. Worse was the case of Polaparthi Yesamma of vulnerable section of Vajpayeenagar who had to start doing sanitation tasks from fifth day of delivering a baby. Added to this she was also forced to go out to sell plastic flowers to eek a livelihood. Some of the women from poor and vulnerable hhs who work as housemaids have to delay

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the sanitation tasks in their own houses for attending to the needs of the houses where they work.

Another important sanitation related task is fetching of water. The time spent on fetching water from handpump delays the men in going out to earn their livelihoods. This was more so in the case in the study site Banjara colony where there is no piped water supply. In this colony some of the men pump the hand pump and the women carry the water. "*Neellu nimpukunte, coolie pothadhi*", says, Vaithya seetamma of vulnerable group (if we start fetching water, we get late and lose opportunity to work as wage worker). Proper living conditions like a house, roads, environmental sanitation has severe impact on the health of the families which in turn prevents them from earning their livelihoods due to poor health conditions. For the vulnerable and poor hhs who are still living in the huts, heavy rains are a curse to them. Whenever it rains heavily, the water enters their huts and they have to spend whole day in cleaning the things. On a heavy rainy day, they have to stay back without going to work. For these sections of people losing a day's wages matters a lot.

Housing Scheme and Loss of Livelihood due to delays

Resham Padma of Vajpayeenagar was sanctioned a house under VAMBAY scheme. One significant thing to be noted is that inspite of being poor she has decided to spend money/physical labour for the construction of latrine under ILCS and house under VAMBAY scheme. This decision was taken keeping view of the difficulties she faced without a proper house and latrine. Padma questions "*How long we should stay like this?*" As the government was providing some money she has decided to go for it. But unfortunately she has faced lot of difficulty due to the delay in construction which is again due to delay in release of installment amounts from government which again can possibly be attributed to the change in the government after assembly elections. Moreover, now, the cost of cement and steel has increased considerably, increasing the cost of house more than the original estimate. "Due to this prolonged delay, I have to forego some livelihood", says Padma. Many a times she has to wait for the masons to come and resume construction of her house. "I have to fetch water for masons when they are constructing the house" says Padma. Unfortunately, they do not turn up most of the times. By chance if I am not there when they come, masons postpone my work.

Contd..

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To avoid any such thing happening, she stays back at home anticipating their visit. Due to such intricacies involved during the house construction, she has decided not to work in more number of houses as housemaid. The situation of Kumbavula Yesamma (vulnerable HH) of the same study site is worse. To pay the initial deposit for getting the house sanctioned, Kumbavula Yesamma has taken a loan of Rs. 6,000 from moneylenders at high rates of interest (Rs. 5-10/100/month). The interest amount is accumulating from past two years. "*Konni rojulu pothe mitthulaku unna indlu ammuakovalsina parishithi*" says Kumbavula Yesamma (If the same situation continues for some more time, we have to sold out our houses being constructed under the VAMBAY scheme. Unfortunately, in spite of two years of time, the houses are still under construction.

SOURCE: Field Study

Were people consulted in designing, planning and implementation?

The study has clearly brought out how the various sanitation services can better the living conditions of people. This is the case when they were implemented as a top down approach. One can imagine what would be the situation, if the people, specially the women and disadvantaged are consulted and involved right from the beginning. Based on the research work done in two areas, interaction with people and evidence clearly brings out the fact that people were not given the choice of deciding what is best for them and how it should be achieved. They were given some service and asked whether they would want it or not. There was never a basket of options from which residents can choose according to their situation and suitability. First of all, the ILCS latrines were constructed in the soils which were unsuitable. Secondly, design was so poor and was not liked by the people. "*bucket podnu, manishi koorchonike radhu, ituka meeda ituka petti poyindru*" says Janya of banjara colony (the size of latrine is so small, neither the bucket fits in nor the man can go and sit comfortably, masons have laid one brick over the other and left the place). These latrines were also constructed in small lanes where septic tank cleaning machine cannot go. Once filled they will become useless for ever as it cannot be cleaned. In Vajpayeenagar, the government has laid very good concrete cement roads. But if the strong demand of the residents for the underground sewage system has to be met, all these roads have to be dug, wasting lakhs of rupees.

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The people have brought this issue at the time of laying roads to the concerned authorities, but only to be questioned "whether do you want these roads or not?". Now, there is no provision for the underground sewage system. What else can voiceless people do, except being content with whatever is offered. Otherwise, they have to struggle with muddy and uneven roads. Similar is the case with Banjara colony where the main demand of people, especially the women is tapped water supply, on the contrary they have been provided with *kutchra* roads and underground sewage system which is yet to function (of course it would be very useful once it starts). The residents of Banjara colony are being provided with drinking water through tanker once in a week only and that too five pots per household. Is it possible to quench our thirst for week with this water?— Is the serious question being asked by the women. This shows that all these works were done unilaterally and may be according to the convenience of municipality. Some of these works involve huge earthwork which can be managed in such a way that it benefits contractors. The services such as cleaning of drains, sprinkling of bleaching powder, fumigation for mosquitoes etc are not being delivered properly. Unfortunately, the poor women have less control over these things. Based on what was said by women and poor, it can be concluded that the poor residents and women were just the recipients of the services and programmes in whatever form and order it comes. There were no serious discussions with the residents, specially the poor and women. Of course some local leaders had knowledge of what was happening. If the poor residents and women were consulted for the implementation of various services, there would not have been a big list of suggestions from them, some of them being most urgent.

Suggestions for Improvement of Sanitation Services

The research work in both study sites clearly brings out the fact that the residents are better positioned now regarding sanitation and hygiene practices, specially the environmental sanitations. Many of them have moved from huts in low lying areas to *Kutchra/pucca* houses on levelled land. Vajpayeenagar is better in several aspects like concrete cement roads, latrines/bathrooms, pucca houses, piped water supply which places it in a far better position than the Banjara colony. Banjara colony has *kutchra* road and some *pucca* houses. However, in both study sites there are important lacunae in sanitation services (underground sewage system in Vajpayeenagar and piped water supply and drainage facility for excess waste water in Banjara colony) which are seriously affecting the sanitation and hygiene

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practices of the communities. This means, that, inspite of some work done, there are major difficulties for women regarding personal sanitation and hygiene practices and environmental sanitation. Decisions related to sanitation needs are made by experts far removed from the people living in poverty (Joshi, 2006). Based on their experience with the various services provided by the municipality and the prevailing situation in their areas, the women have come up with several specific suggestions, which can improve their living conditions, specially those related to sanitation. The suggestion given by the communities in Vajpayeenagar include development of underground sewerage system; development of playground in the colony for the children; use of smaller sprayers for fumigation in the smaller bylanes; avoid the delay in construction of houses under VAMBAY scheme; regular sprinkling of bleaching powder and fumigation for controlling mosquitoes; regular cleaning of drains; daily garbage collection and sweeping of inner lanes roads. Similarly the suggestion given for the Banjara colony is provision of individual tap connections; drainage for waste water; establishment of proper garbage dumping bins; development of *pucca* roads; weekly fumigation for mosquitoes; regular sprinkling of bleaching powder and frequent supply of drinking water through tankers.

CONCLUSION

The study clearly brings out that all the sanitation tasks are being done by women. Negligible number of hhs have support of men in doing some of those tasks. But they are doing some of these tasks out of compulsions. A definite link between poverty, livelihoods, gender and sanitation was found, especially in the case of vulnerable families. Women strongly underlined the importance of water in performing sanitation and hygiene practices.

The research work in both study sites clearly brings out the fact that the residents are better positioned now regarding sanitation and hygiene practices, specially the environmental sanitations. Vajpayeenagar is better in several aspects such as roads, latrines/bathrooms, *pucca* houses, piped water supply which places it in a far better position than the Banjara colony. Keeping the children in view, the women of both study sites were concerned about the incidence of diseases due to mosquitoes and flies which would further increase due to poor sanitary conditions.

The services were delivered using top down approach. Women were just the recipients of the services and programmes in whatever

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form and order it came. There were no serious discussions with the residents, specially the poor and women. There is differential access to some of these services by various wealth groups. Vulnerable and poor hhs of both study sites complained about the bias shown towards better off households in the provision of some of the sanitation services. There is also a general complaint by one and all regarding the delays and gaps in the delivery of sanitation services. In Vajpayeenagar there was no proper planning for underground sewage system. The various sanitation services provided did help the vulnerable, poor and women to some extent. However there is still lot to be done for the vulnerable, poor and most importantly for women so as to make their life comfortable with regards to performing of various personal sanitation tasks and maintenance of hygiene. Above all men have to be constantly educated (of course they do know it) about the tremendous role performed by women and make them understand the need to share this burden to a greater extent.

Much has to be done for the poor and vulnerable so that it enables them to practice the good personal hygiene and sanitation practices. There is also a need to focus on environmental sanitation in the newly formed colonies. Participatory approaches have to be used to understand the problems of people and know their preferences related to sanitation. Based on it, they have to be provided with appropriate sanitation services and more importantly have to be delivered timely. In this whole process the vulnerable, poor and women have to be empowered. All the sanitation programmes of the government must have an in-built mechanism for involving women from vulnerable and poorer sections and one should ensure that they occupy the centre stage of decision making process. This will help in meeting the real sanitation needs of the disadvantaged sections of the heterogenous urban poor population.

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