Analysis and Action for Sustainable Development of Hyderabad

Hyderabad as a Megacity of Tomorrow: Sustainable Urban Food and Health Security and Environmental Resource Management

Project funded by Federal Ministry of Education and Research (BMBF), Germany:
"Research for the Sustainable Development of the Megacities of Tomorrow"

FOOD AND NUTRITIONAL SECURITY IN THE SLUMS OF HYDERABAD

THE COMMUNITY STUDIES TEAM

Research Report 2

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Research Reports are outcomes of the Pilot Projects implemented jointly in Hyderabad by the Pilot Project Groups of the Megacity Project of Hyderabad. These reports for analysis and action focus on *knowledge generation and application* as well as on *institutions and governance structures* concerning the core issues of poverty, food, nutrition, health, transport, environment and resource degradation. This has been possible through joint research efforts, involving institutions of urban governance, integration of organisations of civil society in communication, participation, co-operation and network linking. Views and opinions expressed in the reports do not necessarily represent those of the Project Consortium.

Food and Nutritional Security in the Slums of Hyderabad

*The Community Studies Team**

Research Report 2

April 2007

The Community Studies Team
The Community Studies Team was comprised of staff members from Yugantar (a Hyderabad-based NGO), the Confederation of Voluntary Associations (COVA), the Satyam Foundation (community-based organizations in Hyderabad), and the International Food Policy Research Institute (IFPRI). Individual members of the study team are listed below. Members of the team participated in the planning, coordination, fieldwork, and/ or writing of this report. The qualitative segments of the report were written by Padma Reddy and Vishnu Vardhan and translated and edited by Jaideep Unudurti. The quantitative segments were authored by Dr. Veena Shatrugna. Structural and editing support was provided by Natalia Smith and James Garrett.

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Abstract

The case-studies presented in this report are a preliminary survey of the food and nutrition security situation in low-income communities in the emerging Megacity of Hyderabad. Understanding current conditions of food and nutrition security and their determinants, and how these are changing in the face of evolving employment opportunities and population composition is essential for a sustainable and inclusive growth of the city. This research attempted to provide contextual information on some of these issues by conducting qualitative and quantitative research in three urban slums of Hyderabad—Rahmath Nagar, Papi Reddy, and Addagutta. The report explores the conditions and environment in each slum by providing information on livelihoods, infrastructure, services, food security, and nutrition. Constraints to reducing hunger and malnutrition were found across all three communities including seasonality of employment, limed availability of foods resulting in a limited dietary diversity, and child feeding and caring practices that are not optimal. In other cases, the challenges found were specific to the contextual circumstances of each community particularly dietary practices influenced by religion and culture, and social networks determined by permanence of community residents. The report concludes by calling for further in-depth research and action to better understand the challenges and opportunities to food security and nutrition present in the low-income communities of Hyderabad.

Acknowledgments

We gratefully acknowledge the research participants from Rahmath Nagar, Papi Reddy, and Addagutta who graciously welcomed us into their communities and shared with us their experiences, insights, and knowledge of their lives. We hope this work and future research studies can contribute to improving their situation and those of others in similar conditions elsewhere. We express our appreciation to Ali Asghar, Director of the Confederation of Voluntary Associations (COVA), and the Satyam Foundation for their assistance in gaining entrance to the selected communities. Particular thanks are due to Dr. K.R. Chowdry for his constant support. We also thank Dr. Ramesh Chennamaneni for his overall guidance.

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1 Introduction

The city of Hyderabad is experiencing rapid increases in population, primarily fueled by large influxes of people moving to the city. While employment opportunities are growing within the city from increases in investment and the booming Information Technology industry, these are not sufficient to absorb all additional labour. Important too is that, with the changing economic environment in the city, certain livelihoods and opportunities among locals may also be threatened. The rapid changes in population composition and increases in demand for housing, infrastructure, and services pose an additional challenge to Hyderabadis and the current government. These increases in vulnerability, affecting both newly arrived migrants and long-time residents, can have adverse consequences on the food and nutritional security situation of the city.

Understanding current conditions of food and nutrition security and their determinants, and how these are changing in the face of evolving employment opportunities and population composition is essential for a sustainable and inclusive growth of the city. The research presented in this report has attempted to provide contextual information on some of these issues by conducting qualitative and quantitative research in three urban slums of Hyderabad.

The report first presents a historical account of the city of Hyderabad. This is then followed by a description of the objectives and methodology undertaken to complete the community studies presented here. The report is then divided into two sections, one section for each community studied. Information on livelihoods, infrastructure, services, food security, and nutrition is presented. The last section provides concluding remarks and draws comparisons and similarities across communities, highlighting particular areas for future research and action.

2 History and Background of Hyderabad

Hyderabad state at the turn of the last century stretched over the present Indian states of Andhra Pradesh, Karnataka, and Maharashtra, covering an area of over 82,000 square miles. The state had a population of 16 million, 85% of whom were Hindus. Its ruler was Nizam Usman Ali Khan, who had always enjoyed a special relationship with the British Raj. When

the British ruled out dominion status, the Nizam set his mind upon independence, under the influence of Muslim radical Qasim Razvi. Without Hyderabad, a large gap would exist in the centre of the united nation envisioned by Indian nationalists and the Indian public.

In June of 1948, Lord Mountbatten designed a proposal called the Heads of Agreement, which called for 1) the disbandment of the Razakars[1] and restriction of the Hyderabad Army, 2) the Nizam to hold a plebiscite and elections for a constituent assembly, and 3) eventual accession. However the Nizam nurtured the unrealistic expectation of retaining independence for his land-locked Nizamate. While negotiations continued, the Razakars began carrying out "ethnic cleansing", targeting Hindus as well as liberal Muslims who opposed them. The government of India decided to intervene and ordered the Indian Army to forcibly integrate Hyderabad into India.

On September 13th, the Indian Army launched "Operation Polo" and, by the 18th, crushed the Razakars as well as the regular Hyderabad Army. The main aim of Mountbatten and Nehru in attempting to achieve integration through diplomacy had been to avoid an outbreak of Hindu-Muslim violence. "The police action", as the invasion was called, resulted in annexure of the Nizam state (Hyderabad) with the rest of India. After annexation, the general who led the invasion disbanded the Razakars as well as the Muslim aristocracy[2]. This caused a massive migration of Muslims out of Hyderabad, particularly amongst the upper-class Muslims. The Old City or *anterun* continued to have a Muslim majority and eventually became a bastion of the Muslim communal forces, such as the Majlis.

A significant consequence of the communal electoral battle in the constituencies inside the walls of the Old City has been the efforts made by Majilis leaders to attract migrants from neighbouring rural areas, as well as districts like Bidar, Mahaboobnagar, Nizamabad, and Tandur, in order to strengthen their support base. There were many efforts made to bring back the Muslims who migrated to other parts of the country after the police action. Following the violence between the Hindus and Muslims, the population of Muslims in the Old City declined from 69 to 55%, while the Hindu population increased from 21 to 40%. The bulk of the Muslim population living in Hyderabad continues to reside in the Old City.

After the linguistic reorganization of India and the formation of Andhra Pradesh in 1955, Hyderabad became the capital city of the nascent state. In the last 50 years, it has come a long

1 The Razakars were a nationalist militia organized by Qasim Razvi to support the rule of Nizam Usman Ali Khan and resist the subjugation of the Hyderabad state by India. Despite being poorly armed the Razakars opposed the massive invasion of Hyderabad by the Indian Army, popularly known as "the Police Action" and code named Operation Polo.

2 The aristocracy, or Jagirdari, is a feudal system used to impose and collect taxes through revenue officers, Jagirdars.

way from the walled medieval capital of a feudal state that it once was. With approximately 6.1 million people, it is India's 6th largest metropolis and the 41st largest metropolitan area in the world. Greater Hyderabad today consists of 9 municipalities outside of the area covered by the Municipal Corporation of Hyderabad (MCH), such as the Serilingampally municipality.

The massive growth in the Information Technology industry in the last decade has spurred development in the city. New malls and luxury apartments are springing up at a rapid pace. Real estate prices have shot up at an unprecedented rate. The city has sprawled radially, with formerly obscure outskirts being chosen as the sites for enormous self-contained IT parks, virtually self-contained cities in themselves. The political and economical “centre of gravity”, therefore, has shifted from the Old City to the fashionable suburbs, where the elite live.

Hyderabadi Cuisine

It may not be out of place to briefly mention that Hyderabad is renowned worldwide for its cuisine. Hyderabad, being a confluence of various cultures, has always been a “melting pot” of diverse culinary habits. There is a strong *Mughlai* influence, as well as innovations wrought locally. The other strong influence has been the traditional Andhra cooking, from the coast, which is spicy and very hot. The most famous dish of Hyderabad, the biryani, is an amalgamation of these culinary traditions, being rich with spices and lacking any vegetables, having only rice, chicken and the “masala”, the paste of spices which gives it a special flavour.

Hyderabad is also famous for its “Irani hotels” or “Cafes”, which are run by Iranian immigrants. These cafes are unique in that they cater to all walks of society; it is not uncommon to see autorickshaw drivers share tables with bankers or lawyers. Famous for their “Irani tea” and “Osmania” and “Fine biscuits”, the cafes remain popular to this day.

3 Study Objectives and Methods

The pilot project community studies aimed to develop informative case studies on food and nutrition security within the low-income areas of Hyderabad. This preliminary survey and gathering of information was intended to help understand issues relevant to food and nutrition

in the context of Hyderabad as well as identify challenges and areas for future study and action.

The objectives of the quantitative and qualitative community studies included:

- Identifying patterns and determinants of availability and access to food, including food distribution and purchasing patterns.
- Examining access and availability to health services, food-and nutrition-related social programs, water and sanitation infrastructure, and education.
- Assessing household food consumption patterns and intra-household food allocation.
- Identifying livelihood strategies, including employment, income generating activities, and food-related coping strategies.
- Examining prenatal care and diet and infant feeding and caring practices.
- Assessing malnutrition prevalence in children between 6 and 24 months of age.

The qualitative study was conducted by a team from a local research and advocacy NGO—Yugantar. The quantitative survey was conducted by Dr. Shatrugna, working under the aegis of Yugantar. Capacity-building and training support was provided by the International Food Policy Research Institute (IFPRI), and two community-based organizations—COVA, which works in the Old City, and the Satyam Foundation, which works in slums within urban and peri-urban Hyderabad—provided assistance in gaining entrance to the communities and in participant selection.

Community selection

It was agreed that, although some of the key factors that impact the food and nutrition situation in Hyderabad will vary across communities, it was difficult to cover all of these factors with the limited time and resources. It was therefore decided that the communities selected should be representative of two important factors: (i) the ethnic and language diversity found across Hyderabad and (ii) the varying length of time communities have been in existence. This meant choosing one community in the Old City, which is primarily Muslim and representative of a well-established community, and another community with a primarily Hindu composition and located in an emerging area of the city.

After some deliberation, Rahmath Nagar and Papi Reddy colonies (see Figure 1 below) were selected on the basis that they adequately corresponded to the above criteria. Rahmath

Nagar colony, within the area of Talabkatta, is predominantly Muslim and located in the Old City. It possesses a large migrant population, which is now "stable", i.e. the wave of migration stopped several decades ago, and there is now only natural population growth. The Papi Reddy colony, within the area of Chandanagar, located outside MCH but within the boundaries of the Hyderabad Urban Development Authority (HUDA), was selected because it is predominantly Hindu and has witnessed a huge influx of migrants in recent years, primarily from the rural areas of Krishna, Guntur, Cuddapah, and Kurnool districts. People searching for jobs have settled in this area because of its suitable location—it is within the expanding and developing area of Chandanagar and in close proximity to the booming technological business park of Cyberabad.

Originally, both the quantitative and qualitative studies were designed to complement each other in the same two communities. However, due to unforeseen circumstances, it was not possible to carry out the quantitative work in Papi Reddy and, therefore, Addagutta[3], a slum in Secunderabad[4], was selected. Although this community is not comparable to Papi Reddy in terms of population mobility, it is so in terms of socio-cultural composition.

[3] Although Addagutta was the second quantitative community selected, it was decided not to assign it as a separate case study, because it would lack the richness of the qualitative data. Instead, information collected from this community is presented within the Rahmath Nagar case study to compare and contrast the quantitative data collected across both communities.

[4] Secunderabad originated as a separate city, but it is now considered an administrative within the Hyderabad District.

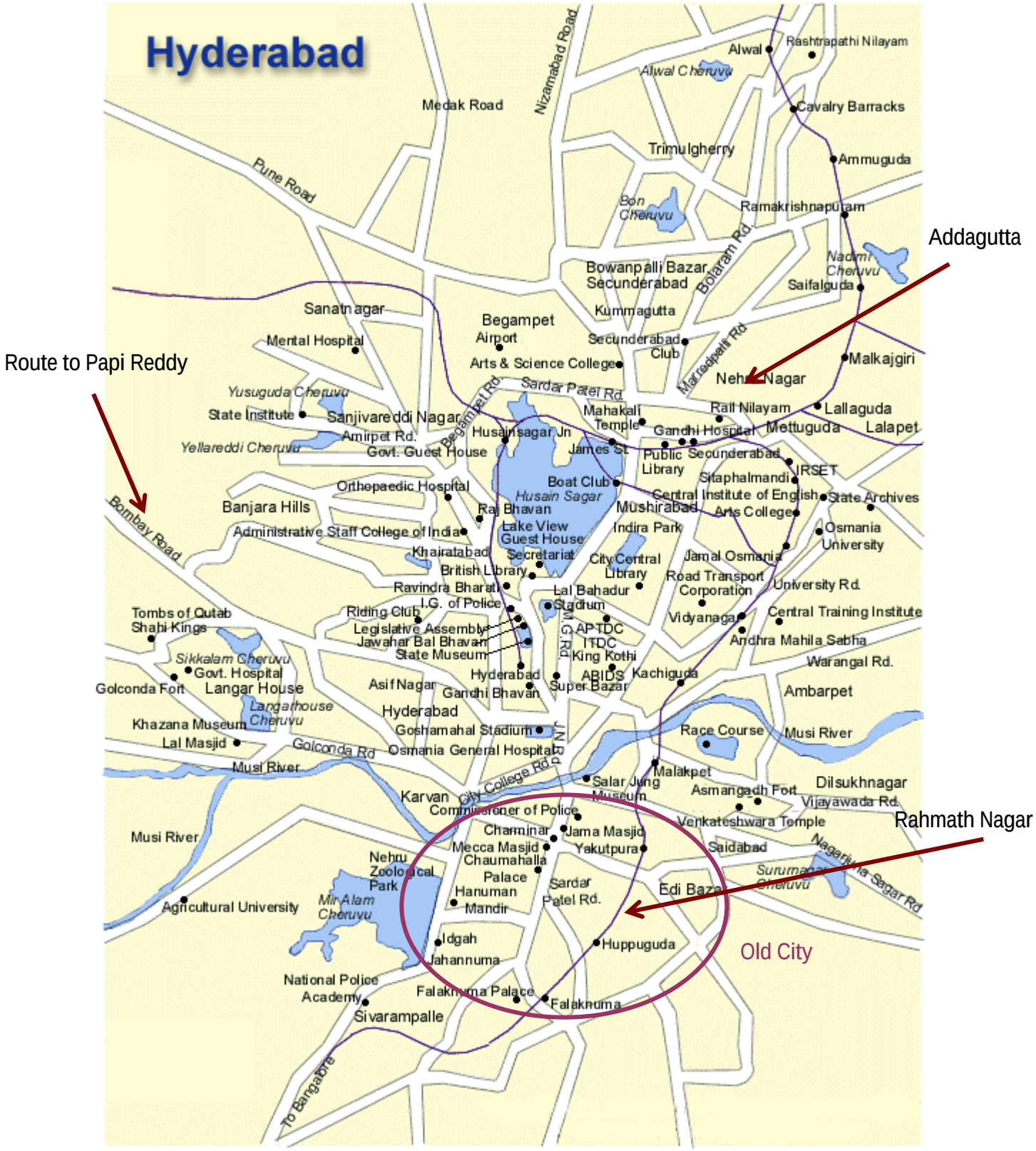


Figure 1: Map of Hyderabad

Qualitative methodology

The qualitative team, including staff members from Yugantar, COVA, and Satyam, were trained by IFPRI in qualitative field work methodologies and briefed on key food and nutrition concepts. This was an important capacity-building exercise as, although team member's had prior experience working in low-income communities and conducting focus groups, knowledge was lacking in topics specific to nutrition and in taking the lead role in setting-up and following through with the research process.

The one-day training covered the following items:

- Review of the UNICEF nutrition conceptual framework, highlighting key points relevant to food security, pre-natal care, child feeding and caring practices, and water and sanitation.
- Discussion of focus group interview guidelines (see Appendix 1) for all participants to familiarize themselves with the questions and probes.
- Assessment of interview questions and topics to ensure cultural appropriateness, clarity, and adequacy of time needed to conduct the focus groups.
- Dialogue on suitable topics to include in gender-specific focus groups.
- Review of pilot-testing methodology, timeframe, and roles of team members.

The pilot testing of interview guidelines was conducted over a three-day period. All interview guidelines for both the women's and men's focus group were tested in Talabkatta, while the community group questions were tested in Patancheru (a community more than an hour away from Hyderabad). It was originally thought that this peri-urban community would be an appropriate representation of communities in Hyderabad, but after conducting the field testing it was decided that it was too far out geographically. It was then replaced by Papi Reddy.

The field work methodology included:

- Focus group discussions were divided into three groups: women, men, and a larger mixed community group;
- A total of 8 focus groups were conducted in each locality;
- Key informant interviews within the communities were carried out;
- There was a random selection of households covered in each locality;

Quantitative methodology

Dr. Shatrugna took the lead role in planning and conducting the quantitative field studies. Given the resource constraints, it was decided on a sample size in each community of 100 children, 6 to 24 months old, and their mothers. Data collected included anthropometry for a mother-child pair, infant feeding practices and child illness, household diet diversity, and water and hygiene (see Appendix 2 for questionnaire). The households were identified from each of the slums starting from one end of the community and continued in a serpentine order. The first house was selected randomly. Only households with mother and children of 6 to 24 months of age were selected for the study. A total of 207 pairs of mothers and children were recruited for the study: 105 from Addagutta and 102 from Rahmath Nagar. Final data for analysis was available for only 183 pairs however because the rest of the women were pregnant.

4 Case Study: Rahmath Nagar

Historical Setting

Hyderabad once had many water bodies and lakes which became dissipated because of urbanization and industrialization of the city. Talabkatta was once a water body and, in the beginning, there were small huts built around it. Later, in the 1960s, a housing colony was built with the approval of the government. The housing colony soon covered the whole area. The reason was that the growing population and resultant pressure on the land market meant that some political leaders filled the tank and were able to sell the newly "formed" land at a good profit. The water body disappeared beneath the relentless tread of urbanisation.

Rahmath Nagar, a small colony within Talabkatta, is located at a distance of 3 kilometres from Charminar[5]. To the south of this area is Somnathnagar, to the east Bhavaninagar, to the west Sultan Shahi and to the north Yakutpura. It is conveniently located at a distance of 15km

[5] A landmark of Hyderabad, located in the Old City centre built by Mohammed Quli Qutub Shah in 1591, shortly after he had shifted his capital from Golkonda to what now is known as Hyderabad.

from NH 7 (National Highway Seven). Talabkatta comes within the municipal limits of Hyderabad. Muslims who had fled to other parts of the country returned to Hyderabad and settled in Talabkatta. Muslims from within Andhra Pradesh in regions like Telangana, Rayalseema and coastal Andhra, who came in search for a livelihood, also settled in Talabkatta. The migration has now decreased to a trickle. As the main wave of migration was in the 1960s and 1970s, the connection between the migrants and their origin places has become quite tenuous, if not altogether dissipated.

The migrants were primarily drawn from the former Nizamate of Hyderabad. In the aftermath of the police action of 1948, there was a wave of retaliatory violence on Muslims. The most vulnerable were the Muslims living in far-flung Hindu-majority provinces on the periphery of the Nizamate. They naturally chose to flee to the Old City, with its large Muslim population and the safety of its walls. The most important motivation for migration to Talabkatta was easy availability of land, infrastructure facilities, and jobs. Another attraction for Muslim families was that the neighbourhood already had a lot of Muslims.

Basthi Description

The study was conducted in Rahmath Nagar, representative of other colonies in Talabkatta. Rahmath Nagar consists of three big street lines and almost all the houses have roofs of cement or iron/asbestos sheets. There are only five tiled houses. Three fourths of the population own houses, while the rest live in rented houses. The house rentals range from Rs 700 to Rs 1,200[6]. Rahmath Nagar is located close to the Yakutpura Railway station. If they choose, residents have easy access to the local as well as metro rail.

Each house in this colony has electricity, paying approximately Rs 70 per month. The tenants in each house contribute to the electricity bill. There is at least one cell phone or a landline for every fourth house, and most houses have cable TV. The post office is located at Yakutpura, which is at a distance of 2 kilometres. There is a police station at a distance of half a kilometre. The streets in the colony are *pucca*[7] roads. There are many autorickshaws (three-wheelers) that charge only Rs. 4 to go to Charminar, and then from there many buses depart to every corner of the city.

There is a kirana shop in every street in the locality. A kirana shop is a general grocery store, stocking most of the daily requirements of the people. Most residents buy their

[6] According to the exchange rate of April 13, 2007, 1 US dollar equals 42.3 Indian Rupees and 1 Euro equals 57.2 Indian Rupees.

[7] Pucca, a term usually used to describe type of house, refers to permanent material like brick or cement.

provisions from shops close to their residence. They buy clothes and other essential items during festivals from Charminar and Mozamjahi market. Goods at Lad bazaar are much cheaper.

Two thousand eight hundred families reside in Rahmath Nagar, of these there are one thousand two hundred Muslim families. The total population of Rahmath Nagar is twelve thousand people, most of whom are poor, though there are a few middle class families as well. Focus group participants stated that there are four rich families living in the colony, based on the fact that these families have large houses and own businesses. They attributed 'being poor' to daily wage labourers, while the middleclass were described as those who have sustainable incomes on a monthly or weekly basis. In the area around Gopala Krishna Temple there are only four non-Muslim families.

People from different political parties, such as the Congress, Telugu Desam Party (TDP), and Majlis-e-Ittehadul Muslimeen (MIM)[8], etc reside in this area. Many of them are supporters of the MIM party. Present Members of Parliament and Members of the Legislative Assembly belong to the MIM party and the colony has many leaders from it. The Muslims founded the party in 1927; thus the MIM leaders who live in the colony represent many families. While there used to be a considerable Communist presence at one time, the communal polarization has meant that the MIM is now the predominant party, at least in Muslim-majority regions. In recent times, the Communists have begun forays into their former bastion, taking on the entrenched MIM.

Telugu and Urdu are the principal languages spoken in Hyderabad. Muslims living there have a separate identity in terms of the language they use. They speak in Urdu; hence it is the language most commonly heard in Rahmath Nagar. They also use a colloquial language, which is a mix of Urdu and Telugu, though Muslims are not the only ones who speak it. Although Telugu is the regional language, Urdu is also widely spoken and understood by the Muslims and the non-Muslims in the city.

The Muslims residing in Rahmath Nagar belong to the Shia community. They offer prayers during the month of Moharrum in remembrance of Imam Hussain, the grandson of Mohammad the prophet. During the month of Ramzan, thousands of Muslims gather at one of the oldest and the largest mosques in India, called the Makkah Masjid, to offer prayers. Makkah Masjid is located 100 yards southwest of Charminar and is believed to be comprised

[8] Majlis-e-Ittehadul Muslimeen, or the All-India Council of the Union of Muslims, is a political party in India that was formed to represent the Muslim population of Andhra Pradesh.

of bricks brought from the holy city of Mecca. It is located at a distance of 3 km from Talabkatta. The male members and children go to the Mecca Masjid to offer prayers on the last day of the Ramzan month. The women read the holy Koran (in Arabic) in their houses.

Education and Schools

The quantitative study found an illiteracy rate among sampled women of 27.5 percent, and only 13.7 percent of women had attended high school[9]. In the focus group discussions, it was evident that illiteracy is perceived as begins more widespread than these figures suggest. Participants said that over half the men in their community are illiterate, with most men dropping out of school between fifth and seventh standard. Female illiteracy appears to be even higher—participants believe that only an estimated quarter of the women know how to read and write. However, these trends seem to be changing. People who are illiterate are aware of the importance of education and the impact it can have on improving living standards and job opportunities and are, therefore, doing what they can to ensure their children attend school. They send their children to schools despite having financial problems and other difficulties.

There is one private primary school and one government high school and four *Madrasas*[10] in this colony. COVA runs five adult literacy centres in Rahmath Nagar, which are attended by 20 to 22 students each. The literacy centre opens at nine in the morning and closes at three PM. The government schools provide a mid-day meal to all children; although greatly valued by parents, they feel the nutritional content of the food could be improved.

Environmental Hygiene

The people living in Rahamathnagar are united and considerate and help each other in times of difficulty. One proof of their unity is that they all went together to the municipality to complain about lack of drinking water in their area. Every house in the colony now has a water connection, and this is a result of their united struggle. Before the water connections were set up, they used to drink water from the bore well. The bore water is salty and contains toxic material like fluoride. The research team was told by the local residents that the Municipality has conducted tests and has found excessive levels of fluoride.

[9] In Addagutta, the percent was even lower—only 7.6 of sampled women had reached high school or above.

[10] Madrasas are Islamic schools that give religious lessons.

The colony got household tap connections 20 years ago. Before that, municipal tankers used to supply water to the residents once every two days or twice a week. They paid Rs 2 per pot of water. Now they pay a fixed amount of Rs 70 per month. Two years ago, the tap water was supplied once every four or five days but now it is supplied once every two days for two hours. Presently, the residents have sufficient tap water available to them.

The quantitative study found that 94 percent of households have access to piped water for drinking and cooking. When it comes to bathing, 56 percent of households use piped water, while the remaining 44 percent use well water. Depending on the quality of water from the well, this may increase exposure to water-borne diseases, especially among children. In addition, another concern relates to how water is stored. Most women use earthen pots, which studies have shown may increase the probabilities of contamination, and, if this water is later used for drinking, it can increase exposure to disease (see Table 1 below for comparisons between Rahmath Nagar and Addagutta).

Table 1: Household water and hygiene infrastructure and practices

	Addagutta (%)	Rahmath Nagar (%)
	N = 105	N = 102
Drinking and Cooking Water Source		
Piped to residence	92.4	95.1
Public tap	7.6	4.9
Bathing Water Source		
Piped to residence	92.4	55.9
Public tap and others	6.7	44.1
Storage of Drinking Water		
Earthen jar	3.8	84.3
Metal pot	93.3	13.7
Storage of Cooking Water		
Earthen jar	1.0	70.6
Metal pot	99.0	29.4
Storage of Bathing Water		
Opaque container	68.6	76.5
Others	31.4	23.5
Covering of Water Container		
For drinking and cooking	100.0	100.0
For bathing	54.3	58.8
Sanitation		
Adults: pit/ latrine (sealed)	100.0	100.0
Children: open space	100.0	100.0

Rahmath Nagar area has black soil, which causes problems for the residents in the rainy season. Water stagnation during the rains is a common occurrence, because Rahmath Nagar is a low lying area, where rainwater often floods the houses of the residents. In addition, they do

not have proper drainage facilities. During the rainy season the drain water mixes with rain water and floods their houses, causing a lot of hardship. The residents have to work hard to expel the water from their houses and It takes them two days to clean theem. Even though every house has sanitary a latrine facility, the quantitative study found that all children use open spaces for defecation.

The municipal corporation officials collect property tax and only lift the garbage once every 15 days. During the time between pick ups, the garbage decomposes, making the neighbourhood unhygienic and becoming a breeding ground for flies and mosquitoes. If they would collect the garbage more regularly, the residents would face fewer health problems. Vehicular pollution and garbage dumped in this area adds to the woes of the residents. The houses are crammed and the rooms are small and dingy, with little fresh air and sunlight.

Health Services and Disease

An auxiliary Nurse-Midwife attends to the needs of pregnant and nursing mothers with pre- and postnatal care. The Auxiliary Nurse-Midwife scheme is a free service provided by the government. The Nurse-Midwife visits regularly, giving advice and medication. She counsels mothers about polio drops and other immunization for their babies. When the residents suffer from any disease or ailment they go to the Government General Hospital located at Afsalgunj. The general hospital is at a distance of 5 km, but the quality of the facilities is poor. While theoretically there is no cost, in practice, *mamools* (bribes) have to be paid to various staff if treatment is to be received. The people who are richer go to the private doctors in the colony.

The primary health centre (PHC) for Rahmath Nagar is located at a distance of one km. The government established the PHC system, where medical care is rudimentary at best. Apart from the primary health care centre, there are three private hospitals and 12 to 13 private practitioners in this colony.

The community complained about the lack of an Anganwadi Centre. The Anganwadi (AW), literally a courtyard play centre, is a childcare centre located within a slum area itself. It is the focal point for the delivery of services at community levels to children below six years of age, pregnant women, nursing mothers and adolescent girls. Besides this, the AW is a meeting ground, where women's groups can come together with other frontline workers to promote awareness and joint action for child development and women's empowerment. Key informants noted that, if there was an Anganwadi Centre the young children could have toys, a place to play, and better access to health and nutritional services.

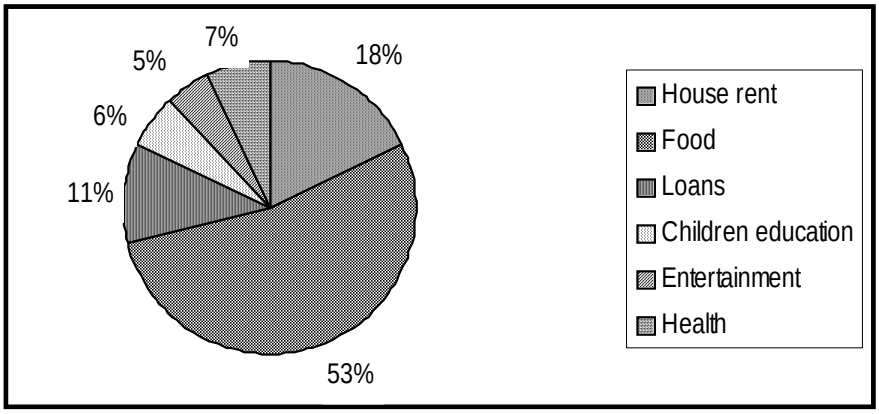
During the rainy season the residents of the colony suffer from coughs, colds, fever and body pains. Recently there has been an incidence of new kinds of fevers, like the chikungunya and the dengue. When infected with these fevers, they suffer for 15 to 20 days. They cannot work and face lots of hardship and problems.

Livelihoods

Based on our investigations, we find that in Rahmath Nagar approximately $1/5^{th}$ of the people work as labourers and are daily wage earners. Many residents of Rahmath Nagar find employment at Lad bazaar, because it is a major business area. Lad bazaar, located on the street leading from Charminar, is one of the oldest shopping centres in the city. It is famous for bangles made of glass and semi-precious stones etc. Residents also find employment as attendants in government offices or do petty jobs, while others own auto-rickshaws or have set up mechanic shops. Street vending is another important source of employment; for example, a number of residents sell footwear, fruits, bangles, ornaments, etc on pushcarts on the roads. Women, as a rule, do not step out of the home to work, but a small minority are involved in paid work from home, either manufacturing *agarbathis* (incense sticks) or stitching mirrors onto *sarees*. Children often work at petrol stations, hotels, and mechanic shops.

The adults earn about Rs 80 to 100 per day, which excludes their travel expenditures. A typical family will have 5 to 6 members, including aged ones. At least two members of each family work. People who work in shops and government offices receive a monthly salary. Such people can borrow money during the month and repay it when they get their salaries. The middle-class women save some money every month in their self-help groups. COVA formed five self-help groups in this area, linked with Roshan Vikas MACTS Ltd. The salaried employees earn Rs. 2000 to 2500 per month. The maximum family expenditure is 4000 rupees. A huge portion of the salary goes towards payment of rent and food and a smaller percentage is spent on medicines and health care (see text box below). Some of the elders in the family get a monthly pension of Rs 200 from the government, which is used for the family expenditures.

Making ends meet. Bhaktar Vali is employed as a supplier in a hotel, and his brother works in a cloth shop. Their family consists of mother, a wife, two children and a younger brother. The family earns Rs 4500 per month. They spend Rs 175 on gas, Rs 500 on rice (at the rate of Rs 35 per kg rice purchased at the ration shop), Rs 300 on vegetables, Rs 1000 on monthly provisions and kirana items, Rs 150 on milk (half litre per day), Rs 250 on children's education, and Rs 800 on house rent. They spend Rs 500 for health care and cable TV. To pay off loans they pay Rs 500. They spend about Rs 200 on (halal) meat. They cannot afford to buy fruits. They buy plantains (bananas) once every 3 or 4 months.



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Food Availability and Purchasing Patterns

Food is generally purchased either from the local government-run ration shop (sometimes referred to as a fair-price store) that supplies commodities provided by the Public Distribution System (PDS)[11], the community kirana store, or from street vendors. Sometimes trips are taken to the closest food market to purchase items not available within the community.

Rahmath Nagar has a ration shop at Somanathnagar, near Somanath temple, at a distance of two kilometres. Rice and kerosene are available to while ration-card holders. Rice is sold at Rs 5.15 per kilo and kerosene at Rs 9.50 per litre. Sugar is sold to the pink cardholders at just one rupee less than the market price. Thus, most pink cardholders buy sugar from the open market, rather than the fair-price shop. The ration shop is open only for 2 or 3 days a month and, therefore, people are forced to buy in bulk. The rations are issued on a quota system, with 5 kg of rice per head and 2 kg of sugar per family. In practice, the shop owners

[11] This program aims to provide food grains and other essential items to vulnerable sections of the society at reasonable (subsidised) prices. The market prices are too high for the poor and the middle class. The government issues ration cards/ household cards to lessen the burden on economically weaker sections. Those identified as poor are issued a white card, enabling them to receive higher subsidies than the non-poor, who are given pink cards.

divert a considerable part of the rations into the black market, where they are readily available throughout the month, albeit at a higher price.

Vegetables, rice, dal, oil, eggs, and meat, when available, are procured from the local kirana stores. From the focus group discussions, it was apparent that the majority of families buy provisions once a week, those engaged in daily wage labour have no option but to buy the little they can every day, some buy provisions on a monthly basis through credit from familiar shop owners (in this case they pay more than the market price), and a small minority buy provisions whenever they have money in hand (sometimes monthly or every fortnight). Storing rice and other provisions is difficult, because of the limited space in the households. This means that most families are limited in terms of how much food they can buy in bulk. In addition, the families dependent on daily wages do not have the resources to buy large quantities of food at one time.

Table 2: Sources of food

Type of food	What and how much	Where	How many times
Rice	Generally only low-cost and poor quality rice is available from ration shops. However, the amount allocated to each family is insufficient, as each family is only given four kilograms per head. On average a family consumes thirty kilograms of rice per month.	The ration shop is one kilometre away. The kirana shop is a few blocks away. There are 2 mini kirana shops on each street.	Ration shop once in a month. Kirana shop 3-4 times in a month.
Wheat flour	Used to make *roti*, which they consume at least twice a month.	Purchased from the local kirana shop.	Approximately twice a month
Fruits	Bananas and seasonal fruits[12].	From Charminar (3 kilometres away)	Twice each season.
Green leafy vegetables	Primarily *thotakura* (collard greens) and *palakura* (spinach), these are the only green leafy vegetables that are low-priced.	Vegetable vendors sell from home to home.	Once a week.
Potatoes	From the vegetables vendors	Vegetable vendors sell from home to home.	Once a week.
Other vegetables such as cauliflower, coriander, and mint	The most low-priced vegetables available in the market	Vegetable vendors sell from home to home.	Any one of them twice a week.
Dal (lentils)	1kg per month.	The local kirana shop.	Once in two weeks.
Curd	Do not consume curd	--	--

[12] **Summer** – watermelon, mango, sapota, **Rainy season** – guava, sweet orange, grape and **Winter** – custard apple

Dairy	Every day ½ a litre of milk to make tea.	The local kirana shop.	Every day
Animal products	Eggs, chicken, mutton, and beef.	Local meat shop, located at a distance of half a kilometre	Twice a month
Cooking oil	3 litres per month.	The local kirana shop.	Twice a month
Ghee	Do not consume ghee.	--	--
Sugar	Sugar is bought for making tea.	The local kirana shop.	Every day
Salt	For cooking food.	The local kirana shop.	Every day
Dried fish	Consume rarely.	From nearest fish market, about 2km away.	--
Spices	Used in cooking all curries.	The local kirana shop.	Every day
Tea	Every morning, non branded.	The local kirana shop.	Every morning

Food availability and purchasing patterns fluctuate seasonally. During the rainy season the price of vegetables is high and, therefore, many families cannot afford to buy them all year round. Some families take advantage of lower prices during the dry season and make pickles at home. The pickles are long lasting and can be stored to be eaten any time during the year. Shahana, a 58-year old woman described this situation, "*Vegetables are cheaper during winter season; in general the rates of commodities rise and do not fall. The families adjust their expenditure according to the prevailing market rates of commodities. There is no rise in their wages or salaries*." She also pointed out that, during her childhood, she could buy a meal for 2 Rs. Many things could be bought for that amount then, but now it is no longer the case.

Consumption Practices

Food is handled and cooked exclusively by the women of the household. Tea is the first thing that is prepared in the morning, for the whole family, and a meal is put together for those family members who work outside the home. Some of the children who go to school carry lunch boxes with them, and the others eat after they return from school. Children who go to government schools get a mid-day meal at school during lunchtime, which includes rice and sambar every day and once a week one egg. The daily wage labourers take a lunch box to

work or they purchase their meal (usually samosa, puri, roti, etc.) from street food vendors. Household food distribution varies, depending on the age and sex of family member. Elders are given priority and are served food first, then children and males are served, and women eat last (even when pregnant).

Table 3: Dietary variety found in Rahmath Nagar

Dairy	Milk
Animal products	Eggs, Chicken, beef, lamb, dry fish
Vegetables	Green-leafy vegetables, cauliflower, coriander, mint, cucumber, tomatoes, lady fingers, brinjal
Fruits	Watermelon, sweet orange, apple, mango, banana, papaya
Cereals	Rice, wheat, bread, fine biscuits
Pulses	Pigeon pea dal
Fats and sweets	Salty snacks, soft drinks

A typical home meal consists of rice with vegetable and dal. Small children are fed *khichidi*[13] purchased from street vendors in the vicinity. Adults eat *khichidi* and *paratha*[14] twice or three times a month. Fruits are consumed infrequently. Many people thought that consuming meat once a week is a nutritious diet, however not always can they afford to follow such a diet. When they attend celebrations, they eat Hyderabadi kebabs and different kinds of bread, including *roomali roti* (handkerchief bread), *naan* (flat bread made from wheat), and stuffed *parathas*. During the month of Ramzan, they fast for a month, only eating before sunrise and after sunset. Another common practice is for the head of household to purchase the traditional Hyderabadi rice dish, *biryani*, and a special Indian bread, *roti*, from hotels 2 or 3 times a year for the entire family. Table 4 below shows interesting differences in consumption patterns between Addagutta and Rahmath Nagar. Households in Rahmath Nagar consume significantly more meat and vegetables, while households in Addagutta consume significantly more pulses and dairy.

Table 4: Foods consumed previous day of survey by any household member

	Addagutta (%)	Rahmath Nagar (%)
	N = 105	N = 102
Cereals	100.0	100.0
Pulses	81.0*	34.3
Roots and tubers	8.6	13.7

[13] A vegetable stew favoured by the poorer classes. Sick people and convalescents also drink khichidi.

[14] Parathas are a kind of bread very popular in India. It is in the form of a flat disk and sometimes it is stuffed with vegetables.

Green-leafy vegetables	17.1	53.9*
Other vegetables	36.2	39.2*
Fruits rich in vitamin A	2.9	2.9
Other fruits	34.3	30.4
Meat	28.6	74.5*
Eggs	24.8	21.6
Fish	1.9	2.0
Milk and milk products	55.2*	42.2
Oils	96.2	97.1
Spices	100.0	100.0
Sugar	98.1	99.0
Tea/ Coffee	99.0	99.0
Liquor	54.3	6.9
Pan	38.1	48.0

Note: * denotes significant difference between communities

There is a belief in the concept of purity, which means that certain foods are impure to eat, such as pork or alcohol. Similarly, certain practices are followed in the storage, preparation, and cooking of food to makes they are not contaminated. Before cooking, they clean rice to remove stones and insects. Rice and vegetables are washed with water, before being cooked. Where rice is stored, they apply area-denial insect repellents, such as *Laxman Rekha,* to protect the rice bags from ants and insects.

About half of the families use gas stoves. The gas cylinder is changed every second month. The families that have only one cylinder use kerosene stoves when the gas runs out. Some of the wealthier families have refrigerators, so they can store food for 2 to 3 days.

Coping Strategies

When a family is in financial difficulty because of non-payment of wages or inability to find work, it is unable to buy enough food. When the daily wage earners fall sick or any of the family members fall sick, hospital bills are high and it becomes difficult to pay them. They have to choose between paying for medicines and food. Even when they have minor ailments, they find it difficult to pay medical bills. During difficult periods, they forego drinking tea.

The few families that have savings find them useful in times of need. They sometimes borrow rice and other provisions from friends and relatives during crisis. When they have no family or friends to borrow from, they use moneylenders at high rates of interest. When they get no loan, the elders in the family have just one cup of tea and they eat broken rice because it is cheaper. Sometimes the elders reduce intake of food and skip meals. When they do not have enough money, they live on cheap food.

Prenatal Care

The team observed that most women are married at the age of 19 or 20 and become pregnant at a young age. During pregnancy, most young women visit doctors, and some go to midwives to seek advice on prenatal care. Although household family problems and stress keep them busy, and their workload is not reduced, they to try to follow the care prescribed by the doctor or midwife. These include:

- Do not eat undercooked meat and eggs. Eat cooked meals only.
- Keep away from smokers.
- Do not drink very cool items, like cool drinks.
- Avoid hot environments, like saunas or hot baths. High temperatures are risky for the baby.
- Keep your mind peaceful and calm.

Many pregnant women visit the doctor regularly, take iron tablets, and follow the advice that they are given. The elders in the family observed that the pregnant women go to the private doctors who are well known. They take their children with them and carry through with the tests prescribed by the doctor. Most women deliver their babies at the hospitals. Some babies who are underweight are given food as advised by the doctor.

Generally, women do not eat any special food during pregnancy. Lack of resources does not permit them to concern themselves with their diet, and so they tend to eat what is available. A number of the women in the focus groups commented that some girls do not feel like eating anything during pregnancy. They feel nauseous when they smell the rice boil. Some women develop cravings for citrus foods, raw mango, guava, jamun, tomato, red chillies, buttermilk, or pickles. A few commented on cravings for sweets and developed aversion to certain foods, like rice, pulses, and fried foods. One woman said that her aunt asked her to eat well during pregnancy and double food intake. She that understands she needs to eat for herself and for the baby, although the quantities and types of food do not change much. One woman noted, "*Most of us just follow the normal diet. Some fruits like papaya, eggs and drumsticks create heat in the body, so we don't consume them.*" A number of women agreed with this comment, stating that, when pregnant, they are not allowed to eat certain fruits like papaya and custard apple.

Child Caring and Feeding Practices

Most mothers are advised by doctors to breastfeed their baby immediately after birth; however, generally mothers will wait three days so as to not give colostrum. As one woman pointed out, "*We thought that colostrum was stale milk, unhealthy for the child*." Mothers are told by their neighbours or relatives that it takes some time before milk formation, and colostrum that is green or yellow in colour and thick is indigestible by the baby. Instead, the baby is given honey to lick immediately after birth. It is believed that the honey cleans up the stomach. For the first two days the babies are fed buffalo milk. Mother's milk is given to the baby after the third day. This corresponds to what was indicated in the quantitative study, which found that 90 percent of babies received liquids other than breast milk immediately after birth (see Table 5 below for comparisons of infant feeding practices between Addagutta and Rahmath Nagar).

Table 5: Percentage of women reporting particular child feeding practices for children 6 to 24 months of age

	Addagutta (%)	Rahmath Nagar (%)
	N = 105	N = 102
Breastfeeding	99.0	99.0
Currently breastfeeding	86.7*	74.5
Give liquids (other than breastmilk) immediately after birth	51.4	90.2*
Continue breastfeeding child >6 months	90.0	90.0
Give liquids (other than breastmilk) to child <6 months	89.0	87.0
Start solids when child <6 months	85.8*	57.9
Start solids when child >6 months	14.3	42.1*

Note: * denotes significant difference between communities

Most women do breastfeed, although there was a woman in the focus group who commented that she was not able to feed her baby her own milk, "*I tried but could not produce milk. I cried when I saw my baby hungry. I pleaded a recent mother whose bed was next to mine. She fed my baby her milk. She was very kind. After 3-4 days I produced a little milk so I could feed my baby. But the milk is insufficient for the baby, so the Doctor prescribed a milk powder. We have to mix milk powder with a little hot water*". All focus group participants agreed that breastfeeding is the best method of infant feeding. It is the most common method recommended by grandparents. Media advertising and the advice of health care personnel have a significant influence on the decisions of many mothers. Some women breastfeed their babies up to six months, while others continue for another number of months. The most

common reason to stop feeding an infant early are travel, pregnancy, or paid labour, if it takes place outside the home.

Complementary feeding usually starts at around 6 months of age. There is also the tendency to introduce other types of milk at this age, because of the perception that mother's milk is not sufficient. Cow's milk is given first and then buffalo's milk is introduced. The local buffalo herdsmen go from door to door in the morning selling their milk. Although powered milk is easily available, only a few women stated that they give it to their babies, as it is expensive.

The frequency of giving complementary foods to a baby is 2 to 3 times a day. Complementary foods with milk are first given when the infant is 6 months old. Fresh milk and baby formulas, when affordable for the families, are increasingly used for babies in the range of 7 to 9 months, after which the quantity of fresh milk is increased and baby formula reduced. As the infants grow older, semi-solid food is introduced in the form of cereals in powdered or semi-powdered form and mixed with milk or tap water. Some mothers prefer giving baby food instead of baby formula by diluting it to a semi-liquid form that can be fed from a bottle. After the baby is 9 months old, s/he is fed *upma*[15] and *khichidi* in small quantities, and at this age it is also common to give the baby the same foods as the adults. The dish or the *sabji* is made less spicy and is served hot. Children like ghee mixed with their food; however, not all families can afford it. When the child turns one s/he is given plantains to eat. Most children like sugar and sweets, so they are given *upma* with a small amount of sugar.

Until recently, babies were fed only mother's milk. Presently, there is a huge variety of baby food available in the markets, such as wheat-based formulas, wheat-based formulas mixed with fruits, baby food composed of three cereals, and baby food composed of five cereals. The wealthier families have a tendency to give the baby different kinds of baby foods under the suggestion of friends or neighbours. However baby foods are still the exclusive preserve of the relatively wealthier families.

It is believed that when a child cries, s/he is hungry. When the baby does not cry, they feed the baby in an interval of 2 to 3 hours. Both male and female babies are fed the same food. There is no discrimination based on gender in terms of what they are fed. The parents believe that God has given them the children. They said that Allah has decided whether a male or a female child will be born, and hence there is no differentiation. Forty days after the

[15] A wholesome Indian dish made of semolina, usually mixed with vegetables and served for breakfast.

child is born, the house is cleaned with water and the walls are white washed. This tradition is prevalent among many households even today. This is followed religiously when the baby is the first-born child.

Intra-Household Dynamics

It is the women who buy the provisions for the family from the kirana shop, while the men of the family give the women money for the purchases. Sometimes the men buy the provisions from the kirana shop after work. The men take the decisions about the whole family. Women do the household duties, like serving food to the family members, cooking and cleaning. When a child falls sick, it is the mother who takes them to the hospital. If the child is extremely ill, then the father accompanies them. Only when the children or adults fall severely sick, do male members skip work. The children are taken to doctors at least two times a year.

Vulnerability to Food and Nutritional Insecurity

Focus groups participants expressed that, in Rahmath Nagar, there are families who have scarcity of food. This includes people who are physically challenged, widows, and the elderly. In some cases, family members who are able to find work provide some sort of financial support, but, generally, their scarcity of income only permits them to buy food and provisions on a daily basis. Many times they are unable to borrow money, as community members do not trust they will be able to pay back the loans. Their problems are compounded by the fact that they cannot leave their houses, because of family problems and circumstances. Rahim, who participated in the focus groups said, "*We do not get help or employment wherever we go*". The physically challenged and elderly get a monthly pension of Rs 200, but this is not sufficient to cover their basic needs.

There is the perception that close to half the children in the community are malnourished. The quantitative study found that 12.9 percent of children 6-24 months were stunted and 20 percent were wasted. Although, a deplorable situation, the children are nutritionally better off compared to the urban slum of Addagutta. Here the quantitative study found that 41.7 percent of children 6-24 months were stunted and 13.9 percent were wasted (the latter not statistically different from the prevalence found in Rahmath Nagar).

5 Case Study: Papi Reddy

Basthi Description

Papi Reddy colony is located at a distance of 15 km from the main city, outside MCH limits. Because of its proximity to Cyberabad, the new "information technology suburb," its surrounding areas have undergone massive construction and change. Both Papi Reddy colony and Cyberabad are part of the Serlingampally municipality, which is part of Greater Hyderabad. Serilingampally municipality, once a stony wasteland with a scrub jungle, presently has international recognition. One can still see some hills and large stone formations in the municipality. Thirteen Gram Panchayats[16] form Serilingampally municipality.

This municipality consists largely of government lands. The Hi-Tec City, the Indian Institute of Information Technology (IIIT), and the University of Hyderabad are located in this area. The previous government, led by the Telugu Desam Party (TDP), established these institutions. The TDP government invested heavily in developing this area, which led to unprecedented growth in the last five years. The other institutions located around Serilingampally municipality are the Indian Business School, GMC Balayogi Stadium, the National Academy of Construction, and Shilparamam (Craft Village), to name a few.

Chandanagar is a colony in Serilingampally Municipality, and Papi Reddy colony is located inside Chandanagar. When the TDP was in power in Andhra Pradesh, they developed this colony and established an e-Seva[17] centre at a cost of 42 lakhs. Chandanagar is mainly populated by squatters who have illegally occupied government land. In the normal course of events, squatters who have occupied land for considerable time get "regularized", i.e. the government gives them the land on which they have built their houses. In some localities, the TDP has provided latrines, street lights, water supply, etc., but this has not reached all inhabitants.

Many families living in the colony have migrated to the city from villages in the Kurnool, Cuddapah, Krishna, and Guntur districts. The primary reason for the migration was drought in the villages. They had no access to or insufficient water for, irrigation and, hence, they could

[16] These are local government bodies at the village level. A Gram Panchayat can be set up in villages with a population of more than five hundred. There is a common Gram Panchayat for two or more villages if the population of these villages is less than five hundred.

[17] e-Seva is Andhra government's e-governance project, envisioned to create a new paradigm in citizen services by providing online services including, payment of utility bills; issuing of certificates, permits, and licenses; reservation of buses, etc.

not cultivate their crops. Focus group discussants commented that they are more comfortable in the city than they ever were in their villages. They further added that, unlike in the village, in the city they have at least one meal per day. The people who have migrated to the city do not wish to return to their villages. Being in a city gives their children access to education. They are also able to get some food to eat and are relatively more comfortable in the city than in villages.

Environmental Hygiene

There is a severe shortage of drinking water in Papi Reddy. Only five families in the focus group stated that they receive Manjira water (the drinking water scheme of the municipality), while all other families do not, because it is expensive. Each family has to invest Rs 4000 to 5000 to get a Manjira water connection, which is an exorbitant price for the residents of this colony. The municipality provides these connections on a pay-and-use basis for household taps. The supply of Manjira water is on alternate days and is inadequate, because they get only a pot of water for each household. Thus, residents must go across the railway track to get pots of water from houses in the other colony. They have to pay a sum of Rs 10 and wait for fifteen minutes to get a pot of water. There are only a few connections, which are located on an average at 10 minutes distance from their houses. Consequently, it takes 40 minutes to fetch a pot of water. A water tanker is available to the residents of Papi Reddy once in two days, but only a few streets in the colony have access to it.

In addition to the Manjira water, they use bore well water for bathing, cooking, and for washing the clothes. Sometimes even the water coming from the bore well is insufficient, causing a lot of hardship. The water from the bore well contains fluorine, thus it cannot be used for drinking. The residents of the colony have no choice but to use it for washing, cleaning, etc. Nevertheless, whenever the Manjira water supply is not available, they drink water from the bore well. The contamination of the water and fluorine make the people prone to ill health and diseases.

The colony does not have drainage facilities, which causes a lot of inconvenience. There are proposals for provision of drainage and streetlights, but it has not yet moved from the stage of being a proposal to the stage of implementation. The residents of the colony have approached the municipality to provide drainage facilities several times but there has been no response. Due to lack of drainage facilities, garbage is dumped into the open drainage canal. This becomes a breeding ground for mosquitoes, because of the stagnant murky water in it. The government has constructed latrines for serving all the houses, under the Integrated Low

Cost Sanitation Scheme (ILCS)[18], but since there are no drainage facilities the latrines are directly connected to the sewerage canal. The residents of the colony themselves clean the canal when it overflows with dirty water. Whenever there are heavy rains, the canal fills with garbage, and the residents of the colony go to the municipality to complain.

Another problem faced by the residents of the colony is that, during heavy rains, the rainwater and sewage enter into their houses. The municipality staff clean the canal once in five days, for which the residents of the colony have to pay Rs 300 as *mamool*. Each household pays Rs 20 to share this expense although the residents are legally not required to pay this money to the municipality. Nevertheless, the residents of the colony do not question staff members because they fear that they will not come to their locality when the need arises.

Lack of dustbins is another problem faced by the residents of this colony. There were dustbins a year ago, but, they were not cleared regularly by the municipality. When the dustbins collected a lot of garbage and gave off a foul smell, the residents of the colony complained to the municipality. The municipality removed permanently not only the garbage but also the dustbins. Now the residents dump their garbage on empty land behind the colony, located at a walking distance of five minutes.

The municipality is accountable for the upkeep of sanitation and water facilities in the colony. However, as these examples show, it has failed to discharge its responsibilities. At the same time, one must note that the colony residents have failed to pay *mamools* to the municipal workers, who are underpaid in any case, and therefore not have received the services. The extra payments are not a considerable burden when divided on a per-head basis, especially when taken into account the services rendered for such payments.

Community-based Schemes

Unity of residents within a community or town is an important step in ensuring an improvement in standards of living. Team members observed that Papi Reddy lacks unity and self-support among its people. This assessment is based on interactions with a wide cross-section of locals. It is not their fault that they are not united. They have to go collectively to the government offices several times to complain about problems they face. However, this does not always result in an action or response from the government. Moreover, these people are largely daily wage earners. Thus, going to government offices

[18] Integrated Low-ost Sanitation Scheme (ILCS) is a centrally sponsored program to eliminate the dehumanizing practice of manual scavenging. This scheme was initiated in 1981 by the Ministry of Home Affairs and later implemented through the Ministry of Social Justice and Empowerment.

several times results in loss of pay,without the guarantee that their complaint will be noted and problem solved. Hence, the poor families are not able to come forward to demand that the government to solve problems they face.

On a more positive note, an NGO called SWAWS[19] is helping to develop networking and empowerment, particularly among women, and to provide asset-building mechanisms through a microfinancing scheme. Initially, there was reluctance among residents of the colony to join SWAWA programs. They believed that the group would cheat, them because they were required to save money from their earnings and give it to the group. The residents of Papi Reddy did not want to lose their money and did not easily come forward to join the group. However, the SWAWS group did not give up and went to each house asking household members to join the group. The residents of the colony finally started believing them, joined the SWAWS group, and started saving money.

The SWAWS group then went to each household, explaining how to save money, how to get back the money that they save, how to take loans on their savings, and how to repay loans. A group consists of five members and has a group leader and a second leader. When a member of a group fails to repay a loan, the group leader is held accountable. The group members are required to do the work allotted to them in order to continue participating in the group. The group has weekly meetings, which have a mandatory attendance. If a group member is absent or late to a meeting, s/he has to pay a fine of Rs 5.

The group members take a pledge before starting the meeting. The member pledge states that, with God as their witness, the loan taken for the family will be repaid when due and the work allotted by the group will be done. The group members say that their economic conditions have improved after joining the group. One group member pointed out, "*Before joining the group it was difficult for us to get a loan, but after joining the group it is easier and the rate of interest is lower. Our economic condition has improved*." The loans are used for unavoidable household expenses, home improvements, and children's education.

Government Education and Nutrition Schemes

There is a government school in the colony; however, few families send their children there. Some families send their children to the private schools, although they are expensive. They say that they send their children to private schools because they do not want their children to

[19] SWAWS or Sharada Women's Association for Weaker Section is a Not-for-Profit Organization registered in Andhra Pradesh. They have initiated a microfinancing program.

suffer like themselves. The children who go to the government schools get mid-day meals. The mid-day meals consist of rice, dal, and *rasam*[20]. The children also get one egg once a week, like in Rahmath Nagar. The children who go to government schools are usually from the weaker sections of society.

Just like in Rahmath Nagar, Papi Reddy colony does not have an Anganwadi Centre, because it does not fulfil the required population size of one thousand people. Lack of such a centre has meant that the economically weaker segments of the population do not receive any support or guidance to overcome food and nutritional insecurity. If Papi Reddy had an Anganwadi Centre, at least the children and pregnant and nursing mothers would be able to get supplements and health care services, such as immunization.

Many residents of Papi Reddy receive subsidized food through PDS. Other income support provided by the government includes pensions to old people and widows. Unfortunately many families in the colony do not have any information on available government schemes and do not know the process they need to go through to access them.

Livelihoods

There are many wage labourers in the colony and a majority of them are daily wage earners. All the men work and, in labourer families, both women and men go to the construction sites and work together. There are also some weekly and monthly wage earners. The pay for a male labourer is Rs 100 to 150 per day, while that of a female labourer is Rs 80 per day. Some of them work as maistry[21] and get weekly wages. Some people do contractual work and receive a payment when the work is complete. The contractual labourers are employed for only 20 to 25 days per month. There are other wage-earning people in the colony apart from the labourers. The other wage earners include tailors, kirana shop owners, and flour grinders, who are able to earn Rs 100 per day. Some of the households in this colony send their children to work. These children work in hotels as servers and cleaners, and some work in mechanic shops. They earn Rs 500 to 700 per month. Many of the children who work are from labourer families. Such a family usually has 5 to 6 members. As the labourer families are migrants from the countryside, they rarely have aged family members. A few other families who reside in this colony earn Rs 3,000 to 6,000 per month.

[20] A South Indian soup prepared with tomato and spices. Sometimes lentils and a variety of vegetables are added.

[21] Maistry is a term mostly used for a male mason.

In allocation expenditure, the allocation on food is priority. The amount spent on food is close to 60% of the total earnings of all the working members. In the labourer families, the male members spend as much as 70% of their earnings on liquor. Such families do not spend an adequate amount on food. The residents in the colony spend varying amounts on entertainment. Those who can afford to pay Rs 100 per month for a cable television connection. They do not go to the cinema theatres to watch movies.

The colony has people belonging to a number of different castes, including SC, ST, BC and OC[22]. Many residents have lived in the colony for more than 15 years. The people who have lived in the colony for a long period of time are able to earn more money. They have secured loans and built *pucca* houses. But some of the labour families residing in this colony live in extremely poor housing, such as thatched or mud houses. The labourer families spend most of their earnings to pay for food and are unable to save any money. Thatched mud houses in the slums are the only property they possess. The land is actually owned by the government and has been occupied by the people. In the eyes of the government, they are squatters. They require help from the government to improve their living conditions.

Food Availability and Purchasing Patterns

There are many kirana shops in the colony—probably every second street has one. The kirana shop provides a livelihood for its owners. Kirana shops stock groceries, household needs, fruits, and vegetables. The daily and weekly wage earners buy their provisions from the kirana shops. They cannot afford to buy large stocks on a monthly basis from the big shops. Some of the kirana shops have been set up with financial help from SWAWS, and the repayment is flexible. The interest rate, however, is higher if the repayment schedule is at the buyer's convenience. Women run many of the kirana shops.

There are no vegetable markets in Papi Reddy. Generally, women need to travel to the nearest Rythu bazaar, which is approximately 5 kilometres away, to buy their vegetables there. The TDP government established the Rythu bazaars, or farmers markets, in 1999 for the benefit of both consumers and producers of perishable goods, to eliminate middlemen. The farmers profit from selling the produce directly to the consumers. Furthermore, the consumers benefit from buying at these bazaars, because the vegetables are cheaper than in

[22] Scheduled Caste, Scheduled Tribes, Backward Castes and Other Castes, all considered lower castes, while the Brahmins are upper caste.

the open market. For example, a kilo of any vegetable sold for 16 rupees in the open market is sold for only Rs 10 at the Rythu bazaar.

Many families in the Papi Reddy have white ration cards. They get 16 kg rice at the rate of 5.25 and 10 litres kerosene at the rate of 9.50 per litre for a family of four members. Many families depend on the ration cards. They say that they are able to eat two times a day because of the ration card. In addition to procuring food from ration shops, kirana stores, and the Rythu bazaars, many families purchase food items from street vendors, owing to the convenience and low cost.

Few families can afford to buy vegetables every day. They buy vegetables once a week or once in a fortnight. Most families do not have refrigerators at home. Families that have refrigerators buy vegetables once every 15 days and store them. These families go to the wholesale stores at Chandanagar to buy required provisions once a month. Of the families that do not have refrigerators some buy vegetables from shops in the vicinity, store them for 2 or 3 days, and buy provisions 3 or 4 days a week.

Work is available during the summer months, because most construction projects build in summer. If one does not find work in one colony, it can be found in the others during the summer season. Food access is higher because of availability of more work. During the rainy season, however they find employment at most for 15 days; this reduces their income and heightens their food insecurity status. The rainy season is a difficult period. They eat less than the normal quantity of food. Not only the labourers but also kirana shop owner and tailors have less food during the rainy season. The food prices fluctuate seasonally in summer, monsoon and winter. Practically speaking, summer is the "only" season, with winters being very mild. As far as coping strategies are concerned, the respondents further said that, to live they have to eat, whether the prices rise or fall. In winter, they just make do with less.

Consumption Practices

The same food is prepared for the elders, children and women. No one gets special food. They prepare *tiffin*[23] four or five times in a month, because they do not have money to prepare it more often. Tiffin among Papi Reddy households usually consists of the previous night's leftovers, as few have the resources and time to prepare it in the morning. No one has the economic means to buy from hotels. For lunch the men eat from vendors, while the women

[23] Tiffin usually refers to a light lunch prepared for working Indian men by their wives after they have left for work.

just have tea. In general, no family can afford to prepare snacks at home, and instead use leftovers for that purpose. Leftover rice, for example, is turned into a snack by frying it.

While approximately half the families get to eat *roti* every night, the others have to make do with rice for all three meals. A majority of the families cannot afford to eat meat regularly, but rather once every 15 or 20 days. Half a kilo of chicken costs them Rs 35. For this same amount of money they can buy vegetables to last them 4 or 5 days. Ten Brahmin households live in this community. They do not eat meat, only vegetables. Some of the families buy seasonal fruits. They spend Rs 20 to 30 per month on chips and chocolates for their children. They cannot afford to buy and eat nutritious food.

Most family members wash their hands before they cook. Then they wash the rice with water five or six times. The rice is edible only after washing several times, because it contains small insects and husk. The rice purchased from the kirana shop is cleaner than that purchased at the …….shop and is washed only two or three times. The vegetables also need to be washed before cooking, as they are purchased from outside. Most families in the colony use gas for cooking. Some use kerosene stoves and firewood. During the rainy season, it is difficult to cook using firewood, as it gets wet and does not burn well. Some families use kerosene stoves to cook in the rainy season. Several families got their gas connection under the Deepam Scheme[24].

Coping strategies

Many families have shortage of food. Who hold alcoholism as the main reason for this shortage. The male members spend all the money they earn on alcohol and give either a small amount or nothing to the family. The women who are daily wage earners run the family with the money they earn. They cannot be members of any group, because their earnings barely cover the cost of food. They have no savings. They have two options: they either could buy provisions from the kirana shop on credit or eat just one meal a day. The provisions on credit from the kirana shop are expensive. They charge two Rs more than the actual price. But the women have no option but to buy provisions on credit as the neighbours do not give them any food.

Whenever there is a shortage of food, the mother first feeds the children, then the husband, and the woman eats whatever remains. The children cannot bear hunger, thus a mother will

[24] Under the Deepam scheme, the government pays the LPG connection fee for women who belong to self-help groups and whose households are classified as being below the poverty line (BPL), indicated by the possession of white ration cards.

serve them food first. Traditionally, the wives serve the husband and eat whatever remains. This situation occurs frequently in very poor households. When food is sufficiently available, then all members of the family eat.

Prenatal Care

Pregnant women face various problems during pregnancy. They ought to take a lot of rest, but they are unable to do so because there is a lot of household work to do. They tend to get irritated easily and angry during pregnancy. When they consult a doctor, the advice they get is to go for walks, eat nutritious food and fruits. They cannot afford to do any of this. Their minds should be calm and the stress levels minimized during pregnancy. The elders also say that the pregnant women should take rest and eat nutritious food.

Child Care and Feeding Practices

The elders and the doctors say the newborn children should be given mother's milk. The children given mother's milk are healthier than the children fed on baby food are. In practice, at birth babies are given honey. For the first two days, the mother does not breastfeed the baby because of a belief that this would be unhealthy for it. Breastfeeding is initiated on day three. Elders say that nursing mothers should not eat certain types of food and fruits, as these can reduce milk production. When the baby cries, the mother feeds the baby. At six months, the baby gets his/her first complementary food. The baby begins by eating rice made into a paste and mixed with dhal. Mother's realize that from this point on breastmilk alone is not sufficient. If the mother produces sufficient milk, the child feeds on it for one year. Some mothers breastfeed their babies for two years. There is the perception, however, that mother's who are malnourished can feed their child with mother's milk only for ten months.

Household Decision-making

Both the husband and wife in most families take decisions. The men take decisions about matters like children's education and buying goods for the house or clothes during festivals. The men started asking them for their opinion and started taking joint decisions after the women joined microfinancing groups, because the women get money from the groups in times of necessity.

There has been considerable improvement in the lives of women after the formation of the groups. Women who do not even know how to sign their names now are going to the banks to

withdraw and deposit their cash in the bank. These are signs of development. The male members of the family cannot avail themselves of loans, as the SWAWS has only women groups. Thus, only women have access to loans from SWAWS, which have lower interest rates than the informal market. In some of the families, the men remain the decision makers, as they are the ones to pay the initial fee to join the groups.

Vulnerable Families

Some of the families depend solely on labour work for their livelihood. These families have only ration cards. They do not have access to other government schemes. They buy rice from the ration shops. When the rice from the ration shop is insufficient, they buy broken rice from the market. The children and women in these families are often sick and prone to diseases, including diarrhoea, especially during the monsoon, malaria, waterborne diseases, as well as newer diseases such as chikungunya.

Many labour families are in miserable situations because of the alcoholism of the male members. They neglect their parents, do not find work, and suffer financially. Women whose husbands have died suffer because of their inability to educate their children. They force their children to work, thus promoting child labour. If the child manages to find work and earn money, the family can then buy food and eat. When the team members asked focus group participants why they send their children to work instead of to school, they replied that their poverty forces them. They further added that, if the government would financially support them, they would send their children to school, as they do not want their children to suffer like them by doing labour work.

6 Summary

The community studies are an important contribution to better understanding the challenges to reducing hunger and malnutrition in Hyderabad. Some of these challenges were found across all three communities, while in other cases they were specific to the contextual circumstances of one community. Following are the most salient commonalities and differences found across the communities studied.

Community Commonalities

- Easy availability of dry foods from kirana shops, fair-price stores, and street vendors.
- Seasonality of food security – lack of livelihood options, especially in Papi Reddy colony, during monsoons.
- During pregnancy, women's dietary habits do not change in terms of quantity and quality of food consumed.
- There is a general understanding that colostrum is unhealthy for infants and should, therefore, be discarded.
- Newborns are given liquids and honey until colostrum is no longer produced and, then, breastmilk is given; cow and goat milk are given to children in addition to breastmilk.

Community Differences

- Rahmath Nagar has food street vendors that sell leafy-green vegetables, primarily spinach and amaranth, but fruit is only available at markets three kilometres away.
- In Papi Reddy, residents need to travel five to six kilometres to purchase vegetables, and to purchase fruits they need to travel five kilometres to the Rythu bazaar.
- Women in Papi Reddy are all self-help group members and, therefore, have relatively more spending power than women in Rahmath Nagar.
- Consumption of variety of meats is higher in Rahmath Nagar, while consumption of dairy products is higher in Papi Reddy.
- A similar pattern emerged when comparing Rahmath Nagar with Addagutta: inhabitants of Addagutta consume less meat and vegetables but more pulses and dairy products.

- Coping strategies:
    - In Rahmath Nagar, they eat broken rice, cut down on tea, reduce intake of food, particularly among elders, and take money and rice loans from friends and family.
    - In Papi Reddy, they reduce consumption during monsoons and take money loans from neighbours, but not rice.
- The residents of Papi Reddy are all new migrants, and it is apparent that the ties of kinship and social support within the community are not as strong as in Rahmath Nagar this may explain why, in Papi Reddy, loans are not such a common coping strategy.
- The nutritional status of children from Rahmath Nagar was much better than the nutritional status of children from Addagutta. A possible explanation for this difference could be the higher consumption of meats and vegetables in Rahmath Nagar; however, further analysis and a larger sample is needed to confirm these findings.

Child feeding and caring practices, constraints on dietary diversity (although each community has limited access to different types of food), and seasonality of food insecurity are characteristics found throughout all three communities. On the other hand, each community has unique dietary practices influenced by a particular religion and culture, and social networks are less effective among the more transient populations. All these factors will not only have different impacts on food security and nutrition, as seen by the significantly different type and extent of malnutrition found in Rahmath Nagar and Addagutta, but also affect the effectiveness of policies and programs. Therefore, understanding how widespread or localized constraints and opportunities are toward achieving food and nutritional security will help to better design appropriate responses and interventions. The pilot project has provided an important initial step in highlighting some of the key constraints and, as such, calls for further in-depth research to conceptualize how widespread these issues are and whether their impact on food and nutritional security will differ according to specific context and community characteristics.

Appendix 1. Interview guidline

Focus Group Questions: Women (with young children)
Nutritional Security/ Child Care and Feeding Practices

1. Pre-Natal Care

When you were pregnant, did you consult with anyone about caring for your baby and yourself during pregnancy? How many times? About what issues?

Where was the baby born? And who was present?

Is your experience on these issues similar or different from most women in this community? If different, what happens to most women?

Do pregnant women tend to eat more or less when they are pregnant? Do they eat any special foods? What are the reasons or influences behind these beliefs or practices?

Probe on:
Explore whether they consult with trained medical practitioners (a doctor, a nurse), or rely on others (community health volunteers, midwives, mothers and mothers-in-law, traditional doctor). Did they get counseling for breastfeeding (promotion of exclusive bf), micronutrient supplementation, or weight monitoring?

If mention hot/ cold, ask why they do this, what types of food are hot and which ones are cold.

If they did not consult with anyone, ask why not (money, in-law pressure, treated badly at the clinic, etc.).

2. Feeding after birth

Immediately after a child is born, how is the child fed (in the first 24 hours)?

Probe on:
How soon are babies breastfed after birth?
Are they given colostrum?
Are they given any liquids or other foods except breastmilk soon after birth?
Does this change depending on the season?

What are the reasons or beliefs for these practices (particularly if practices diverge from the recommendations)?

Explore constraints to improved practices, sources of information, and who influences these decisions.

Explore whether any differences relate to characteristics such as caste, class, religion, education, living with in-laws, or by sex of child. Note: ask them if others in the community discriminate against boys or girls.

3. Breastfeeding

Why do mothers choose to breastfeed?
Who or what influences this decision?
Why would a mother decide not to breastfeed?

When do mothers stop breastfeeding completely (age)?
Why do they stop, and who or what influences the decision?

Probe on:
Explore whether working schedule or family or society influences these choices (both the decision to breastfeed and stopping). Explore also whether characteristics of child development influences stopping.

4. Introduction of Liquids

When do mothers usually begin to give their children liquids other than breastmilk?
What do they give them?
Does this change over time (at what ages, what liquids)?

If they give water, do they boil it?

Probe on:
What are the first liquids given (water?)? Do they give only, say, water for a time, and then introduce other liquids? Is this different depending on the season?

5. Introduction of Other Foods

When do mothers usually begin to give their child semi-solid or solid foods?
What do they give them?
What are the characteristics of the food (Is there a traditional food? Is it cooked? Does it have to have a particular color, taste or texture?)?

How do mothers introduce other foods as the child gets older?
How do you know when a child is ready for these foods?
What do they give them?
Where do they buy the food? How much does it cost?

6. Mental Health

Do mothers in the community tend to be happy with their lives? Why or why not?
Do you think this has any effect on their ability to take care of their families? If so, in what ways?

Probe on:
How do they feel during pregnancy? How do they feel after they give birth?

7. Balancing workload and childcare

Can you describe what you do during a typical day (what household tasks do you do first, etc.?)? Do you work outside your home? What types of work do you or other community members do? How long are you usually away from home?

How do you manage your work, child care responsibilities, house work, etc? If you work outside the home, do you take your child with you? Who do you leave your child with?

Probe:
Find out if they structure their work time outside the home depending on child age and/or household economic situation? If so, how?

How is it different from other women in the community?

8. General questions

Age at first marriage?
Age at first child?
What do their husbands do?
What is the monthly household income?
Family size?

Focus Group Questions: Food Security

a) **Women (those who have knowledge on food purchasing)**
b) **Men (married)**

How do you usually get your food?

1. Means of Access

Do you buy most of your food?
Do you grow any of your own food, or raise any animals to eat?
Do you get any food from government or NGO programs, or from others, that you don't pay for?

Do you or any of your family members eat any food or meals not prepared at home (for example, in restaurants or street foods)?
What types of food?

Note: It is important to ask about *all* other family members (e.g., husband may work outside the home and eat at stalls for lunch, children may get a Mid-Day Meal).

2. Importance of Sources

How often do you get foods from each of these sources? (e.g., every day)

How much does each source contribute to the food of your family?
(e.g., a lot, most, hardly anything, not much)

Note: Discuss how much of their food they buy, produce on their own, or get from others.
If they grow or raise their own, what do they grow or raise?
If they get food from others, from whom and what kind of food?

3. Source of Food

From where do you get these foods (mostly)?
How far do you go to get them?
How many times a week?
. rice [what kind of rice?]
. wheat flour
. fruits
. green leafy vegetables (spinach)
. potatoes
. other vegetables (cauliflower, peas, onions, tomatoes, carrots)
. dal
. curd
. milk
. meat (chicken, mutton, lamb)
. cooking oil
. ghee
. sugar

. eggs
. pasta
. other processed / canned foods
. salt
. dried fish
. fresh fish
. spices
. sweets
. tea

Coping Strategies

Does your family ever have trouble getting enough food?
How often does your family encounter problems (during a year, say)?

What are the most difficult periods?
[season or months]

Why are these the most difficult periods?

Check for: additional seasonality in employment (why?), in illness, in hunger and malnutrition

When your family has trouble, what does your family do to make sure you can continue to eat?

Be alert to: Discussion of various coping strategies: eating wheat or another grain when they would prefer rice; eating less food or fewer meals, or skipping a day of eating altogether; getting food or money or credit from neighbors or shopkeepers.

Also discuss which are their first and last options.
Also discuss whether strategies affect family members differently (men, women, boys, girls).

Programs and organizations

What organizations or programs (government, NGOs, CBOs) exist in the community that provide food, help to improve nutrition, or promote income-generating activities?

Are these programs helpful? [specify] Why or why not?

Does your family participate in any of these programs? [specify] Why or why not?

Gender Relations

In the family, who is mostly responsible for making decisions about food purchases? About feeding the children? About getting health care if a woman is pregnant or a child is sick?

Community Group Questions:
For men and women (in two separate groups)

Perceptions of Food and Nutritional Security

1. Are there many people in the community that usually cannot get enough to eat? How many?
Who are these people? And why can't they get enough to eat?
[Participatory problem tree]

2. Are there babies and very young children in the community who are undernourished? How many? What causes them to be undernourished?
[Participatory problem tree]

Livelihoods

3. What are the main characteristics of the people who live in this community?
    - ethnicity
    - religion
    - income levels
    - what men do for work
    - do women work?
        - if so, what do they do?

Residency and Migration

4. When was this community established?
On average, how long have most families lived here?

In general, how much coming-and-going is there of residents?
(of people moving into the community, of people leaving the community)

Where do those moving in come from?
And where do those moving out go?

Changes

5. What would you say are the most important changes that have affected the community in the past 10 years? What do you think are the most important changes happening now?

Seasonality

6. During the year, are there changes in:
    - employment / income
    - food prices
    - food availability
    - illnesses
    - hunger
    - malnutrition

[Seasonal calendar]

Food Security

7. Do households in the community face any problems in getting enough food to eat?
If so, what problems? [general food security]

8. Are these problems the same throughout the year?
If not, what happens?

Probe:
Are changes related to price fluctuations? To drops in income? To the seasons? Explore the causes for the problems they mention, and explore why problems change during the year.

Food Availability

9. Is food generally available in markets in this area throughout the year?
If not, what is going on? Why does this happen?

10. [From seasonal calendar:] If food prices change, why do they change?
Do changes cause any hardship for the households in the community?

Probe:
How much do they change? When do they change? Why do they change?

11. Where do people go to buy food?
Why do they go to these places?

Food and Nutrition Programs

12. What organizations or programs (health clinics, PDS, ICDS, other government, NGOs, CBOs) exist in the community that:

- provide food
- help to reduce or prevent malnutrition in children
- promote income-generating activities?

Are these programs helpful? [specify] Why or why not?
Does your family participate in any of these programs? [specify] Why or why not?

Water

13. a. How do people in the community get water for drinking? For cooking? For bathing?

Prompt:
Where do they get the water? [Check if sources vary by type of use and, if there is more one than source.
Who is responsible for supplying the water?
Who collects the water?
On average, how far do they have to go?
On average, how long do they have to wait?
How much, if anything, do they have to pay?

b. Is this true for everyone in the community? Or is it different for some groups in the community [go farther, wait longer, pay more]? Which groups? Why is it different?

14. How would you describe the quality of the water in the community for drinking? For cooking (if a different source)?

15. Do households in the community ever have problems in getting enough water for drinking or cooking?

If so, how often do these problems occur?
If so, what is the reason for the problem?
What do people do when there is not enough water?

How can the problem be solved?
What can the community do to solve the problem? Would people be willing to pay more to solve the problem?

Sanitation

16. How do households dispose of garbage?

Who is responsible for taking the garbage away from the community?

Are the public spaces and areas around homes free of garbage, or are there problems?
What problems? Why are there problems?
How can the problems be solved?

17. a. Describe what households do for toilets.

Probe:
Are toilets public or private? Closed or open systems?
Do households share latrines or toilets? How many? What is the condition of the toilets?
How are latrines or toilets kept cleaned and maintained (e.g., through community maintenance; small payments)?

b. Is this true for everyone in the community? Or is it different for some groups in the community [go farther, pay more, less safe]? Which groups? Why is it different? Does it vary by age? Does it vary by house owner or house tenant?

18. Describe the system for dealing with sewage water and rain water.
Who is responsible for the system?

Do the canals work well to drain water away from homes as needed, or are there problems? What problems? Why are there problems?

How can the problems be solved?

Walkabout: [can be used to construct a community map]
Community and household hygiene / water / sanitation
How water is stored and transferred from storage container for use.
Markets (how markets look, what they sell, where they are located)
Siting, including crowding and proximity to industries or other environmental hazards.

Appendix 2. Quantitative Questionnaire

Food and Nutrition Household Survey
Hyderabad Megacity Pilot Project
September 2006

Community Name _____ Code _____

Household ID Number _____

Interviewer Name _____

Interviewer Date _____ _____
(day / month / year)

Complete ONE questionnaire per household.

Check to see if the household has a child between 6 and 24 months and his /her mother.

If so, the household forms part of the sample.

If the mother and child are present, complete the survey.

If they are not (for example, the mother is working), then set a time to return when both are present.

If there is more than one child in the specified age-group, choose *one* child in the following order of priority:

. child of the Head of Household
. child whose name begins with a letter closest to the start of the alphabet

1. ANTHROPOMETRY

ONE CHILD BETWEEN 6 AND 24 MONTHS	Child's name		
	1. Sex of the child		Female ---------- 1 Male ---------- 0
	2. Child's date of birth		**Day** **Month** **Year** If does not know day, month or year write 99 in appropriate box.
	3. Weight (kg)		If not measured----------99
	4. Height (cm)		If not measured----------99 **NOTE: if under 2, measure lying down**
	5. How was this child's height measured?		Lying down ---------- 1 Standing up ---------- 2

THIS CHILD'S MOTHER	Mother's Name		
	1. Age		Write in years. If does not know --------99
	2. Does she know how to read and write?		Yes---------- 1 No ---------- 0
	3. What was the highest grade of school completed?		Write grade number. If above high school ----44 Not applicable ----------55
	4. Weight (kg)		If not measured----------99
	5. Height (cm)		If not measured----------99
	6. Is she pregnant?		Yes---------- 1 No ---------- 0
	7. If not measured, why?		Absent ---------- 1 Sick ---------- 2 Refused ---------- 3 Other (specify) ---------- 4 ---------- _____

2. FEEDING PRACTICES and CHILD ILLNESS

Ask the following questions to the mother of the child measured above.

1. Was this child ever breastfed?		Yes ----------1 No ----------0 If **NO**, go to #5
2. Did this child receive any liquids other than breastmilk right after birth?		Yes ----------1 No ----------0

3. Are you still breastfeeding this child?		Yes ---------- 1 No ---------- 0	If **YES**, go to #5
4. How many months old was this child when you stopped breastfeeding?		Write in number of months.	
5. How many months old was this child when you began giving him/ her liquids (other than breastmilk) to drink?		Write in number of months. Not applicable ---------- 55	
6. How many months old was this child when you started giving him/ her foods (LOCAL EXAMPLES)?		Write in number of months. Not applicable ---------- 55	
7. During the past month, has this child had diarrhea?		Yes ---------- 1 No ---------- 0	If **NO**, go to Section 3
8. What treatment did you give your child to cure the diarrhea?		Home remedy ---------- 1 ORS ---------- 2 Medication ---------- 3 Other ---------- 4 Nothing ---------- 5	

3. HOUSEHOLD DIETARY DIVERSITY

Ask the following set of questions to ONE household member (this person must be knowledgeable on this issue).

Household member's name		
Sex		Female ---------- 1 Male ---------- 0

Read the list of foods from each category.
Place a **ONE** in the adjacent column if anyone in the household ate at least one food from the food group.
Place a **ZERO** in the adjacent column if no one in the household ate any foods from that food group.

1. Now I would like to ask you about the types of foods that you or anyone else in your household ate yesterday during the day and at night:	
A. Any bread, rice, biscuits, or any other foods made from millet, maize, rice, wheat, jowar, maida, or rava?	
B. Any pulses, such as tur dal, black dal, or beans or nuts?	
C. Any potatoes, manioc, cassava or any other foods made from roots or tubers?	
D. Any dark, green, leafy vegetables such as bean leaves, spinach, chili leaves, taro leaves [LOCAL EXAMPLES]?	
E. Any other vegetables such as cauliflower, okra, eggplant?	
F. Any fruits, such as mango, papaya [OTHER LOCAL VITAMIN-A RICH FRUITS]?	
G. Any other fruits such as guavas, apples, bananas?	
H. Any meat, such as chicken, goat, pork?	
I. Any eggs?	
J. Any fresh or dried fish?	
K. Any cheese, milk, yogurt or other milk products?	
L. Any edible oils, butter or ghee?	
M. Any sugar, honey, sweets or toffies?	
N. Any spices, garlic, chilies, tamarind, salt?	
O. Any tea or coffee?	
P. Any liquor?	
Q. Any pan and/ or beetal nuts?	

4. WATER and HYGIENE

Ask the following set of questions to ONE household member (this person must be knowledgeable on this issue).

Household member's name		

Sex				Female ---------- 1 Male ---------- 0
	Drinking	Cooking	Bathing	
1. Where does your household get its water for…?				Piped ---------- 1 Public tap ---------- 2 Tanker truck ---------- 3 Cart with small tank ---- 4 Pump ---------- 5 Rainwater ---------- 6 Surface water ---------- 7 Bottled water ---------- 8 Other (specify) ---------- 9 - _____
2. How much water does your household use per day for…?				Write number of liters.
3. How does your household store water for…?				Clear plastic/ glass container --------1 Not-clear plastic/ glass container -------2 Earthen jar ----------3 Metal pot ----------4 Metal tank ----------5 Other (specify) ----------6 _____
4. Do you cover the container you use for storing water?				Yes---------- 1 No ---------- 0
5. How long does it take to fetch water for…?	☐ MIN ☐ HOURS		☐ MIN ☐ HOURS	If less than 1 hour, write number of minutes and check minutes box. If more than 1 hour, write number of hours and check hours box.
6. In the past 15 days, how many times did you not have water for…?				Write number of times. If they always have water, write 0.
7. Where do the adults in your household go to the toilet?				Open space/ field -------- 1 Pit/ latrine (sealed) ------ 2 Pit/ latrine (not sealed) - 3 Other (specify) ---------- 4 - _____
8. Where to the children in your household go to the toilet?				Open space/ field -------- 1 Pit/ latrine (sealed) ------ 2 Pit/ latrine (not sealed) - 3 Other (specify) ---------- 4 _____