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COMMUNITY HEALTH CONCERNS: QUALITATIVE RESEARCH IN RURAL BANGLADESH

Nasima Selim and Sabina Faiz Rashid

People living in rural and semi-urban areas of Bangladesh experience disease and health risks in their day-to-day life as much as their urban counterparts do, if not more. Access to health care and health information are limited. Educational achievement and income status is low. General state of knowledge and awareness regarding health conditions is rudimentary. However, people live by what they know best, their cultural beliefs and practices, as well as the means and opportunities available to them. Health is therefore more often an outcome of the socio-cultural determinants that influence and shape their perceptions, beliefs and practices.

The main strengths of anthropology is its attention to complexity, questioning the familiar, helping with language, local constructs and translation, reconfiguring boundaries to create new frameworks and being reflective (Porter, 2006). Anthropology has an essential role to play in public health research, practice and policymaking. Anthropology tends to study ‘illness’ which encompasses the cultural meaning and social relationships experienced (Inhorn, 1995). Qualitative research methods provide the tools to ask particular kinds of questions—a qualitatively different kind of slant in the research questions, and inclusion of a broader socio-cultural perspective on the issues being investigated. They question the frameworks and perspectives through which other public health researchers and practitioners see things and may provide a different view and understanding of a public health situation (Behague et al, 2008; Porter, 2006).

The application of a qualitative research perspective to different illness experiences reveals important insights into people’s perceptions and practices of health as well as responses to available public health interventions. Utilization of different health providers and pluralistic medical systems are shaped profoundly by culture. When implementing public health measures to stop transmission of a disease or to provide community services for an unmet need, or addressing community resistance to any health intervention, we need to understand the meanings and contexts in which people experience health. This will bridge the gap as to why certain health interventions fail in communities, and thrive in other places. This also takes away the possibility of victim blaming, as it attempts to shed light on the meaning and reasonableness of behaviors, as well as the political-economic factors that may contribute to certain behaviors (Inhorn, 1995).

Large-scale surveys and statistical analyses of health status and concerns provide us valuable information but they fail to offer important insights about the day-to-day realities of their lives, perceptions and practices. Qualitative research is a broad umbrella term for research methodologies that describe and explain persons’ experiences, behaviors, interactions and social contexts without the use of statistical procedures or quantification (Strauss & Corbin, 1990; NHMRC, 1995). Qualitative research has a critical role to play in highlighting the complexities, diversities and interconnectedness of factors (social, cultural, political-economic) in shaping health perceptions and practices. Increasingly, program planners and policy makers are making use of context-specific information and humane narratives to complement health indicators and survey data. For a program or policy to be successful, we need to actively engage with the rural community, take into consideration the people’s perspectives, to decide when it is necessary to intervene, where and how. Faced with such dilemmas, qualitative research methods help us understand the community health concerns, to design successful public health interventions and make them acceptable to the community. Where numbers fail to provide answers, words and images work wonders. For example, clinical and epidemiological studies have shown that very rapid breathing is a sign of pneumonia and other

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serious respiratory infections, indicating that a child be treated immediately with antibiotics. The qualitative researcher, to this particular point, will investigate and describe how important people think it is, ways of learning the terms used to describe acute respiratory infection (ARI) and what kinds of treatment, if any, are sought for it.²

James P Grant School of Public Health at BRAC University runs a twelve-month international Master of Public Health (MPH) program. In former years, the first six months all the students lived in the residential campus of the University about thirty kilometers from Dhaka, in a rural and semi-urban setting in Savar Upazila, so that students could learn directly from the community. The MPH program offers two courses related to qualitative research, one focusing on the anthropological approaches to public health and the other exclusively on the qualitative research methods. During these courses, students visit the surrounding villages and semi-urban areas to explore community health concerns, beliefs and practices.

Two years ago, as part of their qualitative research methods course, thirty-two MPH students conducted short exploratory qualitative research in Bagnibari, a small village of about two thousand inhabitants, as well as some of the neighboring villages and semi-urban locales. Eleven of them were visiting students from the Department of Global Health, School of Public Health and Health Services, the George Washington University, USA. Twenty-one were regular MPH students of the James P Grant School of Public Health at BRAC University. Nine students came from countries in Asia and Africa (Afghanistan, India, Liberia, Myanmar, Nepal, Pakistan and Uganda) and the rest were from Bangladesh. For fieldwork, the regular and visiting students formed pairs and trios with at least one Bangladeshi student as the interpreter. Together they visited rural and semi-urban households, observed the day-to-day life in such settings, conducted interviews, group discussions, observations, and used participatory rapid appraisal (PRA) tools to explore community perceptions, beliefs and practices about diverse health concerns.

This was a unique exercise - as students from diverse backgrounds undertook qualitative research in communities to understand the meanings of health and the underlying factors (how, why, who) that shape experiences, treatment behaviors and practices. Their fieldwork was not only an opportunity for training in qualitative methods, but provided exploratory data on the community’s behaviors on these diverse health concerns.

In twelve pairs/trios, the MPH students explored common health concerns, e.g., feeding practices of under-five children, use of contraceptives by married women, and the use of tobacco and other substances. Some students investigated the utilization pattern of a local government health centre. One pair explored the traditional health system. Another pair described the pharmaceutical use for common cold and cough of children. Another team explored the perceptions and practices of food consumption of adult women. Some students focused on neglected health concerns such as disability, exploring people’s perspectives of paralysis, child-adolescent mental illness perceptions, and occupational health of factory workers. The papers, although exploratory, shed insights on the range of experiences among its heterogeneous populations (e.g. socially excluded participants such as poorer women and people with disability). They also demonstrate the importance of conducting research that provides in-depth knowledge of local conditions, practices and realities (Behague et al, 2008). The utilization of qualitative methods can articulate what a public health problem means in the lives of people facing it.

This edition of the BRAC University journal aims to provide beginners in qualitative health research with some exploratory insights into the health of a segment of the rural and peri-urban poor in Bangladesh. The narratives of the communities are based on limited research in the field. In spite of the constraints and limitations of time and resources, they provide a view from the ground by collecting the people’s perspective of their health, the diseases they suffer from and the health systems that they do or do not use. It is surprising how intensive qualitative exploration of one week can bring forward such a rich variety of

data. Both the editors provided supervisory and editorial support during the fieldwork and writing of the initial reports that the students had submitted. We commented on each report and offered advice to turn them into manuscripts for submission to the BRAC University Journal. All papers went through an external review process and the editorial board approved them before publication.

The James P Grant School of Public Health had previously published a departmental monograph in 2008 with a slightly updated version that came out two years earlier (Van der Geest, Selim & Zaman 2010). The monograph titled Daily Health Concerns: Anthropological Explorations in a Bangladeshi Village included fifteen essays, collected and edited from selected qualitative research papers during the first four years of MPH students at BRAC University. In the fifth year, instead of bringing out a monograph, we encouraged the students to work further on their fieldwork reports, restructure and resubmit them as journal manuscripts. It gives us great pleasure that all the submitted papers were reviewed and nine were accepted for publication in this special edition.

We thank the BRAC University Journal committee for approving this special volume. We also acknowledge the contributions of editorial assistants at the James P Grant School of Public Health in putting together this volume. We thank Maliha Bassam, Research and Communications Officer, Tahrim Chaudhury, Research Staff, Mashida Rashid, former Senior Research Associate at the School of Public Health, Upama Chakrabarty, Research Assistant, and Tapan Biswas, Senior Program Officer, IT.

We are proud to present the collection of these nine papers to the broader audience of BRAC University as well as students, faculty members, researchers and interested professionals in the field, working in other health and development institutions and organizations. Despite constraints and limitations of these student papers, we hope that each reader will find valuable insights into the life and health conditions of people living in rural and peri-urban Bangladesh.

References


Sabina Faiz Rashid and Nasima Selim taught in the MPH courses on Anthropological Approaches to Public Health and Qualitative Research Methods in 2009.
FEEDING PRACTICES OF UNDER-5 CHILDREN IN A SEMI-URBAN VILLAGE IN BANGLADESH

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ABSTRACT

**Objective:** To explore the reported feeding practices of under-five (U-5) children in a rapidly urbanizing village in Bangladesh.

**Methodology:** This was a study with qualitative exploratory design based on grounded theory. Researchers identified caregivers of U-5 children and shopkeepers in proximity to the village through purposive sampling. The researchers conducted five in-depth interviews, two focus group discussions, participatory rapid appraisal exercises and three informal interviews were done. For the purpose of triangulation, informal observations took place in households, nearby shops and with children on the streets.

**Results:** The study identified five main themes: family influences, caregiver’s educational level, overall changes in time, the perception of “good” or “bad” food for health and preferences.

**Conclusion:** Exploring these themes regarding the feeding practices of U-5 children will be helpful in understanding the health and nutritional changes of nearby semi-urban areas going through rapid development.

**Keywords:** under-5 children, feeding practices, urbanization, Bangladesh

I. INTRODUCTION

On the way forward to Millennium Development Goal 1, Bangladesh has been trying to achieve the target of reducing prevalence of underweight under-five children (U-5) to 33% by 2015. However, the country achieved only 47.8% by 2005 [1]. Poor nutritional status remains one of the most important health and wellbeing problems in Bangladesh. Levels of malnutrition in the country is high - 43% of the U-5 children are stunted, 16.7% wasted and 41% are underweight [2].

Nutritional status is a result of various intricate interactions between the socio-economic status, overall health status, food consumption and availability patterns, education status, socio-cultural context and the individual level. However, most researchers agree that inadequate or inappropriate feeding patterns often lead to malnutrition on the individual level [2].

Breast-feeding, complementary feeding, adequate nutrition during infancy and early childhood are critical to the development of children’s full human
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potential [3]. UNICEF (2009) reports poor complementary feeding practices in most developing countries. As a result, majority of the children suffer from irreversible outcomes [4]. Contrary to popular assumptions, poor feeding practices do not only result from lack of food, resources or money but can also happen due to the wide availability and acceptability of unhealthy food. According to a survey conducted by Helen Keller International, children do not get food as often as needed and not from the right age. Whatever food items they get, are poor not only in quantity but also in quality [5].

Many developing countries, including Bangladesh, are going through rapid urbanization that is parallel to the emergence of the “nutrition transition” [6]. Nutrition transition refers to the increased consumption of unhealthy food (more refined sugar and processed foods) emerging in developing countries. Many developing countries are experiencing a ‘rapid nutrition transition’ due to the urbanization and globalization of food production and marketing with the expansion of mass media [7]. Personal observations reveal that different brands of candy, chips, and ice cream are readily available for consumption even in rural villages of Bangladesh. Developing countries, like Bangladesh, can face a negative impact by this nutrition transition due to the already existing burden of nutritional deficiencies [7]. Previous research on infant feeding practices did not always provide adequate emphasis on the feeding practices of U-5 children in the semi-urban areas of Bangladesh.

Therefore, the purpose of this study is to explore the reported feeding practices of U-5 children in a semi-urban village in Bangladesh that is currently changing due to rapid urbanization leading to the influx of various different businesses and factories. This qualitative study explores the breast-feeding practices, complementary/family feeding practices and other factors influencing the self-reported feeding practices as well as the reported changes in the feeding practices overtime.

II. METHODS

(1) Context Setting
The study was conducted in Bagnibari village in the Birulia Union of Savar Upazila under Dhaka district in Bangladesh. Savar is a town located about 24 km northwest of the capital, Dhaka. The town is undergoing rapid urbanization. Within a five-year period, an increased influx of factories such as garment and furniture factories has attracted many investors, migrants and workers from different places to avail of these business and job opportunities – making the area “semi-urban”. Akran bazaar/market is one of the nearest hubs in Bagnibari village (population of 4,000-5,000) where many small teashops, convenience shops, roadside vendors, fruit and vegetable stalls serve as food sources for the local population [8].

(2) Study Design
This is an exploratory qualitative study based on the grounded theory approach (Fig. 1). This study design would provide insight into the context and scenario of feeding practices of U-5 children in Bagnibari village. The grounded theory approach would construct inductive theories from the data collected in the process of conducting the research. Sample target population was the primary caregivers of U-5 children. Purposive sampling method was used to find five mothers with U-5 children for In-Depth Interviews (IDIs) and thirteen mothers were identified with U-5 children to be included in two Focus Group Discussions (FGDs). Three shops nearby were selected conveniently for holding observation and informal discussion. Researchers took informed verbal consent proceeding with the interviews.

(3) Data Collection
Five IDIs, two FGDs, two Participatory Rapid Appraisal tools (PRAs) (free listing and pile sorting), three informal interviews and two informal observations were used for collecting data. The numbers of IDIs, FGDs, PRAs, informal interviews and observations were not pre-set but rather decided upon as the process of data collection and basic analysis continued side by side. The researchers conducted preliminary research via a mini-tour to familiarize with the area and to get a mental map of where the majority of houses were. The researchers spotted some houses with young children playing in the courtyards as well as communicated and identified focal person to begin building a rapport with the village residents, children and the shopkeepers in Akran bazaar. Before actually going out to the field for data collection, the researchers developed guidelines and checklists to explore the following areas: (a) breast-feeding practices, (b) complementary feeding and family feeding practices, (c) factors influencing feeding practices,
(d) how reported feeding practices changed over time.

Background demographic the information of the village was obtained from the Birulia Union office. The research team consisted of one native speaker as the interviewer and two note-takers/co-interviewers (who also served as observers). The native speaker also served as an interpreter and translated throughout the interviews.

The IDI and FGD guidelines included socio-demographic data to explore the various feeding practices on breast-feeding. These practices included pre-lacteal feeding (food given to newborn before breast-feeding or before breast milk “comes out”, e.g. honey, sugar water, etc.), complementary feeding, family food feeding, eating habits of children, feeding practices during illness of children and feeding trend changes in time and the underlying perceptions. In conjunction with the two FGDs, the research team conducted two PRAs. Participants of the FGDs were asked to freely list the various types of food given to their children from birth until the present age (all were U-5). After the free-listing of the different kinds of food, pile-sorting was conducted: the participants were asked to sort the items into what they perceived as healthy or unhealthy foods for their children. Researchers conducted informal observations throughout the IDIs in households, during FGDs, in the shops and during conversations with the children on the streets to check whether they actually practiced what they had said they did. For the purpose of further triangulation, informal interviews were conducted with three shopkeepers (two local villagers and one from the nearby Akran bazaar) and children.

(4) Data Analysis

Data analysis took place throughout the data collection cycle to assure the quality of information collected. The researchers transcribed and cleaned the collected data into MS-Word documents at the end of each day for content analysis. To ensure validity, all researchers independently read and reread the transcripts, as well as cross-checked as a team to produce consistent findings. The research team defined general codes and sub-codes leading to the development of major themes and sub-themes. After individual coding was done the research team collaborated and decided on categories and inserted these categories into Excel spreadsheets for an easier visual analysis. The Excel sheets were printed, arranged and rearranged on the floor to create a flow chart and to identify the emerging themes. The general codes provided the support/body for the major themes. Finally, after the content analysis, five major themes were recognized. The following section on findings will present the major themes.

III. FINDINGS AND DISCUSSION

1. Findings

After analyzing data, five themes influencing the feeding practices of U-5 children emerged from the data. These themes included influence of family, education, change over time, perception of good or bad food for health and preferences.

(1.1) Influence of family

Five IDIs were conducted, from which four mothers reported the use of “cheeni-pani” – sugar water-right after birth. Only one mother reported that she breastfed her baby right after birth. The four participants who gave sugar water reported the initiation of breastfeeding ranging from 2 hours to 1-3 days after birth. The 4 participants were asked why they chose sugar-water as pre-lacteal feeding. All four of them stated that the sugar-water was given to their children because “the sugar water cleans the baby’s dirty stomach through the stool.” Or, “this is to clean the stomach and to continue breast-feeding thereafter”. One mother believed that provision of sugar (sweet) water would help ensure a sweet voice later in life. Another participant said, “The baby was crying and so we gave sugar water. Because [breast] milk normally comes out after 3 days”. All four of them said that it was often some other family members who fed the newborn babies with sugar water. For example, one mother said, “Sugar water was given right after birth by his (the child’s) aunts while I was inside the operation theatre”.

All the participants from the IDIs and the FGDs responded that complementary feeding was initiated between 3 and 8 months of age for reasons as to why that were not very clear. The types of complementary food given by participants were similar – “suji” (mashed grain), “khichuri” (mashed rice with lentils), biscuits, chocolates, chips and fruits (bananas, apples, grapes). Family food such as rice, fish, meat, dal (lentils), and vegetables were initiated ranging from 6 months to one year, or, one and a half years of age. Two of the five IDIs participants, as well as the overall
consensus from the 2 focus group discussions mentioned “moza” as a primary reason for their choice.

“Moza” (literal meaning is ‘tasty’) is a term defining “junk food” in this area. “Moza” ranges from sweet, sour to fried food. The common list of “moza” was compiled through the free listing and pile listing from the responses of the participants in all IDIs, FGDs and PRAs. “Moza”, particularly in the form of biscuits, are one of the first complementary foods given to a child from the age of 4 months. Many of these children were given “moza” at home by their own family members. One participant said, “My son owns a small shop selling biscuits, rice and different kinds of “moza”. So everyday he brings her[the child] moza”. One participant whose husband ran a shop said, “Before we had the shop, she would eat rice, fish, meat, egg but now she eats less of these and more cake and chewing gum.” Another participant said of her child, “Her grandmother gave her biscuits” while one mentioned the pressure of social status and becoming a victim of inferiority complex: “I will not share the “moza” with you as you didn’t share your “moza” with me earlier.” “It is considered shameful if they (parents) don’t buy “moza” for their own children when they are crying”.

Family members also influence feeding practices during the child’s illness. All participants from the IDIs and the FGDs reported the restriction of certain food during diarrhea, common cough and cold. From both FGDs, the consensus seemed to be the restriction of “moza”, meat, fish, eggs and milk. When asked why they maintained these restrictions, responses were, “Because family elders say not to” or “Because the doctor tells us to stop giving moza during diarrhea”. Variation is seen in the restriction of food during the illness from the five IDIs. Two mothers reported that they did not restrict anything. One of them responded, “I offer her whatever she requests during her illness.” While the other reported that, she took her child to the doctor and followed what he prescribed. Another mother restricted meat, fish and milk upon the advice of her mother-in-law.

(1.2) Education
The education level of caregivers within five IDIs and two FGDs ranged from second grade to completion of secondary school. The participants with secondary level education had variation in their child feeding practices as compared to the participants with the primary education. One of the participants with tenth grade education had a nine-month-old child – her breast-feeding practice was different from the other participants. The participant reported, “I never gave chips and other food (outside food)”. This participant’s practice in regards to “sugar-water” also varied and she reported breastfeeding right after the baby was born.

In FGDs, educational level ranged from primary to secondary as well. Some differences were also found between the child feeding practices regarding “moza” between mothers with secondary level education compared to mothers with primary level education. One of the mothers with educational level of tenth grade had a nine-month-old son to whom she did not feed any “moza” and said that she does not plan to either. The other mother with the educational level of tenth grade also did not feed her 3-year-old child “moza” with the exception of mango juice (provided only when traveling for a distance). The rest of the participants did feed their children “moza” – one participant reported about her 3 years and 11 months old daughter, “She eats biscuits, chips, RC (soft drinks), Pepsi, Tiger (energy drinks), pickles, mishti (sweets), and curd.” Other participants also listed several types of “moza” fed to their children: RC, juice, biscuits, chocolates, pickles, cakes, 7-Up and chewing gum (a few common types listed by the three participants). The participants in the two FGDs with variation in educational levels also fed “moza” to their children and listed biscuit, cake, chana-chur (fried lentils) and pickles as the common types.

Perceptions about healthy foods were very similar. However, perceptions about unhealthy foods differed considerably between participants with secondary level education and participants with primary level education. A participant having secondary level education with a nine-month-old child said that she had not thought about what was unhealthy for the child but she said, “I will not provide him with “moza”.” The only other participant with secondary education said, “All outside foods [food prepared outside home] are unhealthy.” The three participants with primary education had different perceptions about the certain types of foods they considered to be unhealthy. For instance, one participant specifically said RC (Royal Crown) Cola, juice and pickles were unhealthy because they contained saccharine.
development”, another participant said chewing gum and chocolates were unhealthy because “we don’t know whether they are prepared under hygienic conditions or not”. Another mother mentioned dried chili pepper as unhealthy because “it causes gastric (upset stomach)”.  

(1.3) Change overtime  
The participants in the five IDIs and two FGDs were asked about their childhood experiences with “moza” and whether their children’s feeding and eating practices were comparable to their own. All but one participant from the IDIs reported eating “moza” during childhood but all made a point about how the current “moza” was very different from the “moza” of their time. One participant said that the “moza” of their time tasted a lot better than the current “moza”. Another said, “Nowadays, there are different varieties of ‘moza’ and different types. And these are also expensive”. Another participant also mentioned the high cost of the current “moza”, “We spent only ¼ of a taka to 1 taka in our school life. But now, these foods are expensive and have changed in package.”

According to the collected data, the expenditure on “moza” currently has increased significantly. The sample population, especially in five IDIs, the socio-economic levels were similar across four of them – they all owned their houses (some smaller than others), all owned farming land and cared for cattle. The one exception here was a participant who was educated, lived in a brick house, and who did not give “moza” to her children. Her spouse was working outside the country. Based on the observations, the four participants appeared to be making a decent living- the daily expenditure on the outside food such as “moza” ranged from ten to one hundred Taka (1 USD= 80 BDT).

When asked about the differences in accessibility to “moza” during their childhood one participant said, “there were not enough shops or even if there were, they were at a distance and now, shops are more available.” Another participant said that there are many more shops now than there were before, making it easier for their children to want to go to the shops and ask for “moza” - “Or when they go outside and see the “moza” in nearby shops – they insist on buying it”. The participant went on, speaking about the area and its recent “development”, adding, “Before, there were only 3 shops to be found in the area. Now, every house in the neighborhood is a shop.”

A participant from the IDIs mentioned that she lived in this area for more than ten years and claimed, “This area was not as well developed as it is now. There were no shops nearby and if we needed to buy something, we had to go to Akran bazaar, which was too far away at that time.” Similar comments were made by the participants in two FGDs: there are many more shops in proximity to their homes nowadays and there are many different types of “moza” available. One participant went on to say that parents are much more attentive to their children and try to provide and fulfill their wishes. This comment was followed by another participant who said that their area (Bagnibari Village) has been changing rapidly, “Even in the past five years, there has been a lot of changes; there are more factories in the area now.”

(1.4) Perception of good or bad food for health  
Participants were asked to compare breast milk and pre-lacteal feeds from their point of view regarding infant feeding. Four participants from IDIs replied that breast milk and pre-lacteal feeding were not absolutely comparable. Follow up questions on the perception of pre-lacteal feeding brought out responses such as, “They are not equal but I don’t know about it. We are illiterate people,” or “Breast milk is better.” One particular woman reported that she did not practice pre-lacteal feeding. The same question was also discussed in FGDs and six mothers replied, “Breast milk is better” and only one mother said, “They [breast milk and pre-lacteal feeding] are the same”. Underlying perceptions were also explored in FGD: “Sugar water was given because the breast milk is not adequate in the first 3 days after birth and it was easy to swallow and cleans out the stomach.” The same answer was explored in the IDIs. One mother said, “Condition of mother is not convenient to provide breast milk so we give sugar water.”

The IDI participants mentioned the following items as ‘healthy food’ for children: rice, vegetables, milk, eggs, fruits, fish and meat. During the FGDs the mothers said fruits, milk and vegetables were healthy. As many as eight mothers in the FGDs mentioned, “Jackfruits are vitamin rich in our area,” with one mother adding a comment, “especially [rich in] Vitamin A”. Khichuri (lentil, rice & oil) was also considered healthy for the children by all participants in both IDIs and FGDs. One of them commented, “As I prepare it at my
Participants from IDIs revealed that “moza” is not a healthy food for children. They mentioned different types of “moza” including RC cola and juice, chewing gum, chocolates and pickles. Also in FGDs, they said, “Moza is not good; children eat it for appetite not for nutrition”. This “moza” was also regarded as outside food in all IDIs and outside and “opened” food in FGDs. They reported the reasons why they believed it to be unhealthy food. “We consider it as open food and unhygienic which sometimes cause indigestion and frequent loose motion”. Participants from IDI reported, “They are not good for health because we don’t know whether they are prepared under hygienic conditions or not”. “I never give her ‘moza’ because she got diarrhea when she ate it and I am very much afraid of diarrhea.” Two mothers from IDIs said they never give “moza” to children for the sake of health.

There were some arguments among FGD participants regarding perceptions of good or bad food. For example, one mother in an FGD said, “Fish is not good for children and it causes worms” but other mothers disagreed and said that fish was good for children. Similarly, all mothers believed that packet juices are not good and cause cold in children because they contain no vitamins whereas one participant argued, “It is good and I like it, I give it to my children”. Moreover, two mothers in FGDs believed that formula milk was not good because it contained “chemicals-melamine” whereas the rest of the mothers considered it safe for their babies.

All participants agreed that chocolates caused dental problem in children. “Shingara” (local fried food) and dried chili were perceived as causal agents of stomach ache and gastritis among children. Chewing gum was also considered unhealthy because it contained rubber and saccharine, the artificial sweetener. They also considered “Moza” as a causal agent of worms. Regarding their perception on “moza”, one mother from FGD expressed, “For children it is ‘moza’ and we think it is not good but for adults we call it snacks and we enjoy it”.

Family feeding practices are also linked to perceptions of good and bad food. “She (the baby) likes spicy curry but I don’t want to give it to her because it causes problem in defecation and it is spicy.” Even family foods are considered bad if they go stale. One mother said, “My son and daughter never eat leftover food. They don’t like it and I have to prepare new dishes every day.”

Based on their perceptions of good (=healthy) or bad (=unhealthy) food for children, the diet restrictions and perceptions in case of illness in children were also explored. All participants gave diarrhea as an example and reported the feeding practices. “In case of diarrhea, saline and ‘khichuri’ (lentils, rice & oil) are encouraged while sour food, milk and meat are restricted as they cause more diarrhea.” Findings from FGD showed that the mothers restricted “moza” especially “chana-chur” (fried lentils) and “jhalmuri” (spicy puffed rice) and other “open” foods and “street foods” in case of diarrhea in children as they considered these foods to be dirty. IDI participants reported that they restricted fish, meat and milk in case of diarrhea (according to the advice of a local traditional healer) and the rest of them said they imposed no food restriction in case of diarrhea and continued to provide normal feeding provide as they wished, including “moza”. “Moza” eating was restricted among 20% of IDI participants during the illness of their children.

(1.5) Preferences – children’s choice vs. parents’ desire
During IDIs and FGDs, mothers mentioned the names of the food their children took. Usually rice, khichuri, chapatti, fish, meat, potato, egg, curry, dal, leafy vegetables, mustard oil, carrots, pumpkin, vegetable, curd, puffed rice with sugar, fruits, formula milk, breast milk (young children) and also outside food, “moza”. One participant, a mother of a seven-month-old child, had exclusively breastfed her child up to seven months. Other participants gave formula milk along with breastfeeding. Most of the participants started giving complementary feeding before six months of age. Regarding the frequency of the common food it varied but the pattern was: rice every day, meat 1-2 times/week to 2 times/month, fish (2 times/week), vegetable 2-3 times/month, dal 1 time/week. One of the participants from IDIs described her daughter’s daily food habit as, “For breakfast and dinner, she eats very little amount of rice sometimes with potato curry. Sometimes she eats fish 1-2 times per week. She sometimes eats meat (beef/chicken) 1-2 times per week as well. Sometimes she wants to eat puffed rice with sugar;
she also likes to eat boiled eggs 1-2 times per week. She skips lunch but throughout the day, she constantly eats “moza”. I always try to forcefully feed her – she is very tough when it comes to eating”.

A common/specific type of food habit was observed among the children who ate “moza” regularly. Most of the mothers reported that they had to feed their child forcefully. One in-depth interviewee said, “Her father has to feed her. She eats ‘moza’, you see, she is chewing gum now. All she eats is ‘moza’. As she rises from her sleep in the morning, the first thing she wants is cake and doesn’t eat family food…. Her father has to forcefully feed her. She doesn’t eat family food by herself at all. Every day she goes to the shop and eats anything she wants.” The participants from the FGDs also mentioned that their children were eating much less family food and sometime refused to take family food after taking “moza”. Sometimes they also skipped meals. Their habits shaped by the intake of “moza” as “moza” had become a habit of its own. One participant from FGDs said that her child had to have some “moza” every day and night or it would start crying. One participant from IDI said, “Every night, her older brother brings “moza” for her and leaves it at her bedside to eat when she wakes up at around 3 A.M. Sometimes, she gets up and eats it and sometimes she has to hold it in her hand and sleep with it. Throughout the day, she constantly eats ‘moza’.” From observation, it appeared that children were taking “moza” at any given time of the day.

In most cases, “moza” ranked at the top of the list of children’s favorite foods. FGD participants said, “The children didn’t like to eat home food like rice, even when given forcefully, rather they preferred to eat ‘moza’ happily and willingly.”

2. Discussion

The findings of the study explore many themes of the conceptual framework (Fig1). Feeding practices of infants and young children are evidently influenced by different interrelated factors such as individual family norms and practices, health knowledge of caregivers, community’s cultural beliefs on nutrition and various environmental factors. The conceptual framework in this study is inspired by UNICEF’s extended conceptual model of child development [9]. Family influences are observed through the feeding practices of U-5 children. For example, pre-lacteal feeds given to the newborn and stopping of breast-feeding are often decided by other family members. This is true for other parts of the world as well. For instance, a study conducted in Malawi showed that child feeding practices were influenced by family, in particular, by in-laws [10]. Family influence in decision-making during the illness of a child is apparent by the restriction of certain foods, such as fish, meat, milk and eggs. Family influences are also shaped by cultural perceptions and traditional feeding practices, such as the perception that pre-lacteal feeding of sugar water was important to clean out the baby’s stomach. The same result was obtained (sugar-water was given to clean the stomach and rid of stool) by other authors who explored cultural beliefs and pre-lacteal feeding [11]. Such traditional beliefs may negatively affect the health and nutritional status of the child [12].

The researchers observed that mothers with higher education were more likely to eliminate pre-lacteal feeding and initiate complementary feeding after 6 months of exclusive breastfeeding. The complementary foods given by such mothers were not “outside food”. Mothers with lower education were more likely to include pre-lacteal feeding of sugar-water and provided “biscuits” at a young age, beginning at 4 months. Other studies have also pointed out maternal education as one of the major determinants of nutritional status of children. [13]

Early initiation and practicing/feeding of “outside” food shape the later eating habit and pattern of the young children. From the study sample, most children ate “moza” all day long affecting their intake of family foods (nutritious) and skipped meals leading to unsuccessful forceful feeding of the child. The failure of forceful feeding of children is a common phenomenon that was also observed elsewhere with consequences on the nutritional status of the child [14].

Perception of caregivers about good (=healthy) or bad (=unhealthy) food for health shaped their feeding practices. Due to the culture of “moza” in the area, children are sometimes given “moza” as complementary food from a young age, making it their habit eventually. Hence, forceful “healthy” feeding of family food fails, as the habit of eating “unhealthy” food has already been formed. Regardless of family income, parents had to spend some money to buy “moza” for children as “moza” eating had become habitual among them. However, effect of “moza” on child health and nutritional
status was not explored in this study as it was beyond the scope.

Many participants reported a rapid change of the area and perceived it as a cause of the increased consumption of “moza” among their children. Changes in recent years, such as increased influx of factories, have transformed the village to a semi-urban area. Such rapid changes in semi-urban areas, perhaps led to the changing, feeding and eating practices among children [15]. According to one of the shop keepers the inventories had to be modified due to the demand by children for popular brand name (foods and snacks) viewed on TV, newspapers or elsewhere. Another research paper also pointed out the influence of media on junk food eating habit among children. [16]

An increase in the number of shops, an increase in the varieties and types of “moza”, the increased price and the increased consumption are changes that have occurred over time and are still happening. The generation differences are reflected in the consumption and availability pattern. The different types, varieties, changed packaging and media influences attract children to eat more junk foods (“moza”) with high cost. This can be attributed to the negative health and nutritional outcome not only on individual level but on a socio-economic as well as national level.

**IV. FIGURE**

Fig1. (Conceptual Framework Model)

After preliminary literature search, the above micro-level factors were identified to be most influential on Infant and Young Children’s Feeding Practices and the overall health status of the child. Individual family, Cultural Beliefs/perception and the Environment are the three major factors are perceived, on a micro-level, to affect the feeding practices. On a macro-level, perceive urbanization and media are influential in the Infant and Young Children’s Feeding Practices.
V. CONCLUSION

After exploring the five emerging themes from this study, the effects of rapid development of that area on the diet of the population living in the semi-urban Baghnabari Village seemed to be evident. Cultural and traditional beliefs and practices hold high value amongst the family structure as well as the perception of “good” and “bad” food in the study sample. However, the influence of media and advertisements seemed to have a strong influence. They shaped the eating habits and desires of the young children in this area. Education level was also an important factor. Mothers with higher education decided against “moza” and seemed to provide a healthier feeding practice. By exploring these themes regarding the feeding practice of U-5 children further, it might be possible to understand the health and nutritional changes of the nearby semi-urban areas. Although this study cannot provide sufficient evidence to generalize the findings to all semi-urban areas of Bangladesh, this initial exploration hopes to initiate the basic understanding of the semi-urban feeding practices of U-5 children to a certain extent.

Limitations

The major limitations faced by the researchers were time and the language barrier. The time available to conduct this study was too short to conduct an adequate number of interviews and observations. The time of data collection was also a factor as the mothers had household chores to complete and needed to attend to their children throughout the day. During the FGDs many mothers were distracted by their children or had to do household chores. This also factored into the time of availability of the mothers as well as the research team, as the team had an intensive schedule to work with.

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REFERENCES


PERCEPTIONS OF MENTAL ILLNESS AMONG ADOLESCENTS IN BAGNIBARI VILLAGE

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ABSTRACT

Introduction: Mental illnesses have a large impact on a society, affecting economic productivity and bearing potential for destabilization of a society. About 16% of the population in Bangladesh suffers from mental illness. Previous studies in Bangladesh have focused primarily on mental illness in young children and adults in urban and rural populations, but not on adolescents.

Methodology: The research team conducted a short exploratory qualitative study utilizing grounded theory approach in Bagnibari village, Bangladesh. The study consisted of in-depth and semi-formal interviews, focus group discussions, and observations with adolescents, parents, traditional healers, and caretakers of adolescents.

Findings: The research team identified local terms and symptoms for the conditions of adolescents who had a mental illness. These terms were used to find an English equivalent for each condition. Community members had mixed responses to the use of traditional medicine and home remedies. Use of hospital and professional doctors was similar for complicated cases, especially after the failure of traditional medicine in relieving the condition. The behaviors of adolescents with mental illness included emotional changes and isolation.

Conclusion: The research teams categorized the common mental illnesses among adolescents into convulsions, supernatural, and worry illnesses. The perceived causes of mental illnesses varied from mother’s fault to evil spirits. Social interactions of adolescents with a perceived mental illness varied throughout the community.

Key words: mental illness, adolescents, Bangladesh, supernatural condition, convulsions, worry

I. INTRODUCTION

The mental health of people is a major public concern worldwide. Mental health is an essential component and foundation of overall health status. According to WHO: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" [1]. Mental health is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community [1]. It is a positive state of psychological and emotional
well-being and the conditions that promote it, as well as the absence of mental illness [2]. Mental health problems affect society in general but there is a higher risk among the poor, unemployed, persons with low education, victims of violence, migrants and refugees, indigenous populations, children and adolescents, abused women and the neglected elderly [3]. Mental health problems create a burden, both economic and social, for the individuals and the society as a whole. Global estimates in 2002 showed that over 150 million people suffered from depression, 50 million from epilepsy, 25 million from schizophrenia and 15 million from drug use [1].

A global estimate indicated that there are about 14 million mentally ill people, 0.5% of Bangladesh’s population [4]. However, a recent study exploring the prevalence of mental disorders among adults from varying socio-economic classes and living in different settings (rural vs. urban) in Bangladesh was estimated to be 16% [5]. Global epidemiologic data reports that up to 20% of children and adolescents suffered from mental illness and up to 50% of all adult mental disorders are rooted in adolescence [6].

Child and adolescent mental health services are inadequate throughout developing countries due to the lack of consistent epidemiological data and lack of agreement on a framework of impairment [6]. Mental disorders among children and adolescents have a long-term impact on society in terms of both lost economic productivity and the potential for destabilization in communities. In addition, mental disorders are often associated with interpersonal violence and substance abuse among children and adolescents [6].

More than 50% of people in a Bangladeshi study believed that mental illnesses were caused by supernatural forces [5]. In Bangladesh, mental health activities are mainly concentrated in the field of hospital-based psychiatry. However, this excludes a large part of the population who do not usually report such cases to health centers [4]. Due to the supernatural beliefs surrounding mental illnesses in Bangladesh, patients and their families most often seek traditional treatments first [7].

Previous mental health research focused on adults in urban areas, children (5-10 year olds) in rural, urban and slum areas in Bangladesh, adults and their perceptions of mental illness in a rural village [8, 9, 10]. Emotional disorders such as anxiety, depression, and obsessive-compulsive disorder as well as behavior disorders were observed among children in urban areas [9]. The prevalence of behavior impairment among a sample of young children from rural Bangladesh was 14.6%, indicating the importance of exploring mental health among adolescents [8].

There is a general deficiency in the literature on mental health among adolescents in Bangladesh, specifically in a rural setting. The exploration of mental health problems and coping strategies among the adolescent population in rural Bangladesh is warranted in that the presence of developmental conditions which appear in childhood or adolescence continue into adulthood and have implications for the society as a whole [11].

The purpose of the study was to explore the perceptions and coping strategies for mental illness among adolescents in Bagnibari village. Three main objectives of the study in Bagnibari village were to: 1) identify the local terms, strategies and causes for perceived mental illnesses among adolescents; 2) understand the coping strategies for mental illnesses among adolescents, and, 3) explore the social interactions of adolescents with a perceived mental illness.

II. METHODOLOGY

Context setting
Bagnibari village is a semi-rural village located about 25km from Dhaka City. Rapid urbanization is prevalent and its surroundings consist of factories, bazaars (marketplaces), teashops, and rice fields. Preliminary fieldwork revealed that residents are mainly farmers, factory workers, and small businessmen. The houses are semi-structured, made of mud, brick or both. There is a combination of both single and joined families within the households. A 2001 census estimate by the Bangladesh Bureau of Statistics stated that in Savar district, the total population was 587,041 and in the Bagnibari village approximately 1,838; preliminary field visits with village members indicated an increased population of 7,000 with 500 households in the village [12].

Study design and conceptual framework
This short exploratory study utilized the grounded theory approach in qualitative methods to explore
perceptions of mental illness among adolescents. A conceptual framework (see Figure 1 below) was developed to focus the study questions. Interrelated factors that contributed to perceptions of mental illnesses among adolescents such as culture, environment, socio-economic status and childhood development helped the research team in developing guidelines and checklists for the fieldwork. Culture plays a role in people’s perceptions and health seeking behavior for mental illnesses. Environment refers to the family structure in the context of behaviors, feelings and familial practices, adolescents, their peers, and living place (rural or urban setting). Socio-economic status reflects the ability and access to education and resources that influence health seeking behavior and perceptions of mental illness as well. Childhood development refers to the health status of a mother’s pregnancy and the nutritional intake of the child.

Figure 1: Conceptual Framework

![Figure 1: Conceptual Framework](image)

**Sampling**
The research team used convenience sampling to identify and speak with participants regarding perceived mental illnesses. They chose households, traditional healers’ shrines and homes, and a school as areas of interest. Participants included adolescents (less than 20 years based on age at secondary school completion), adults (both men and women), children and traditional healers. Overall, twelve adolescents participated in the interview. Key informants were the two traditional healers in Bagnibari village who were interviewed through semi-formal interviews. Two teachers from a local primary school were interviewed. They provided information about symptoms of adolescent pupils with mental illnesses, and behavior of other pupils towards the mentally ill in the school. The principal of the school arranged a focus group discussion (FGD) with adolescent girls (from Class 6-8), which was conducted at the school office. A key informant, a village member who led us to two traditional healers, further helped organize a FGD consisting of adult men and women.

**Data collection**
During the initial visits to the village it did not seem very difficult to find individuals with a mental illness as community members and an individual with a perceived mental illness were within the route of the researchers on the first day. However, subsequent visits and discussions with caretakers of adolescents with a mental illness proved to be difficult and from the perspective of the researchers, elicited very emotional responses. When these difficulties were encountered, participants were given enough time to respond and was then requested to continue the discussion. As the researchers furthered the scope of the participants, a community member was identified as a key informant and provided assistance in gaining access to traditional healers and was valuable in gaining community trust and participation in the meetings.

Speaking about mental illnesses, a topic still stigmatized in the rural setting, was not easy. Meetings with the community had to begin with an initial discussion on physical health problems and only then it was possible to lead to questions about mental illnesses. Four in-depth interviews (IDI) were conducted with an adolescent, grandparent, caregivers and traditional healer. Two semi-formal interviews were conducted with the traditional healers, teachers, and a joined semi-formal interview with two adolescent girls. Two FGDs were organized to collect community views about the specific research questions. The Participatory Rural Appraisal (PRA) method of body mapping was utilized during the adolescent focus group to facilitate discussion about symptoms, causes and behavior of adolescents with a mental illness. Participants whose family members or relatives suffered from a perceived mental illness provided illness narratives. In addition, general observation was conducted throughout the study. Multiple methods of data collection (FGD, IDI, semi-formal interview, PRA, and observation) were utilized to ensure triangulation and the validity of responses related to local terms, symptoms, causes and coping strategies of perceived mental illnesses.
among adolescents. Tools used in methods included a guideline and checklist. The guideline served as a guide for leading questions during FGDs and interviews. The checklist contained a list of key points to address during data collection methods [Table 1].

Data analysis
Data was transcribed each day after the field visit. At the end of all the field visits, the researchers utilized multiple qualitative analysts in coding data and final codes were merged based on categories such as local terms, causes, symptoms, coping strategies and social interactions for perceived mental illnesses. Responses and categories were organized in a table format, which provided a clear image of the findings and common macro themes. Data analysis was continuous throughout the study period and themes were identified which provided the basis for interpretation. A list of local terms and the English equivalent for each is provided in Appendix A.

Table 1. Overview of data collection methods

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Field Site</th>
<th>Participant</th>
<th>Method</th>
<th>Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What are the perceived mental illnesses among adolescents?</td>
<td>Village households</td>
<td>Men, women and adolescents</td>
<td>FGD PRA – free list</td>
<td>Guideline</td>
</tr>
<tr>
<td>2. What are the perceived causes of mental illness among adolescents?</td>
<td>Village households</td>
<td>Men, women and adolescents</td>
<td>FGD PRA – free list</td>
<td>Guideline</td>
</tr>
<tr>
<td>3. How do adolescents with mental illnesses interact with others?</td>
<td>School, Kindergarten</td>
<td>Teachers Students</td>
<td>IDI FGD PRA – body map</td>
<td>Guideline</td>
</tr>
<tr>
<td>4. What are the local treatments for mental illnesses among adolescents?</td>
<td>Village of traditional healer</td>
<td>Traditional healer, local people, Imam</td>
<td>Semi-formal interview</td>
<td>Guideline</td>
</tr>
<tr>
<td>5. What are adolescents’ perceived symptoms of mental illnesses and effects?</td>
<td>Village household</td>
<td>Adolescent with mental illness Adolescents</td>
<td>Semi-formal interview</td>
<td>Checklist</td>
</tr>
</tbody>
</table>

Ethical issues
Verbal informed consent was given in Bangla and was obtained from participants after an explanation of the study purpose and questions associated with it. The purpose of the study was to learn about mental illness from the community’s perspective. Participants were informed that they had the right to leave or not answer any questions if they felt uncomfortable. If it was noticed by the researchers that the participants felt uncomfortable at any point, they were given time to answer, without pressure and then to lead the discussion (this happened once with a traditional healer fearful of authorities). Confidentiality was explained and maintained for the participants. Participants were informed that all responses would remain private and that each individual would only be identified in the final papers through the use of pseudonyms.

III. FINDINGS AND DISCUSSION

She was an old woman, the traditional healer. She was willing to speak with us. Many other people gathered around her, and our guide to the village emphasized that she is an important and most respected person in the village. As we sat with her, she spoke about the people who come to seek cures from her for various physical and mental ailments. The villagers started giggling at an approaching young man (13 years old) dressed in torn clothing, pants and shirt. They called him “Adhapagol.” As the village members spoke with us, the young man pulled a boy and beat him in the back. The healer said, “He was mute in childhood... kichuni, mrigi disease [healer demonstrates by putting her arms in front of her in a freezing stance]. When he was three years old, he had
ichuni; he has no intelligence in his head, always feels angry, walks here and there, and has no sense. The boy is my grandson, he came to me and I tried to treat him with bash (bamboo) but it did not work. I did not get much more power to treat him.

Above is a brief narrative from a respected traditional healer who had described and demonstrated seizure-like behavior that was exhibited by her grandson when he was a child. From that meeting, it was apparent that community members, traditional healers and young children had different perceptions of how a person with an illness, other than physical, behaves and how that individual should be treated.

Throughout the field visits, several narratives were described by people who either were mentally ill themselves or knew someone who was. From the field visits, there were five people identified with a form of madness (age range 5-20, 4 males and 1 female). Two individuals were identified as having a type of convulsive disorder. Focus groups facilitated with PRA tools allowed for the identification of local terms for perceived mental illnesses among adolescents, as well as the general perceptions of causes and associated symptoms. In-depth interviews provided a range of terms as well, but were more focused on personal experiences and the social interactions of, and with perceived mentally ill adolescents.

**Local terms, symptoms, and causes of perceived mental illness**

Local terms for general madness include pagol (madman), paglapagladhoker/adhapagol (half-mad), manoshikrog (mental illness), and protibondhi (intellectual disability). For general madness symptoms such as abnormal talking, weakness, aimless wandering and silence were described by the participants. Someone with adhapagol was described to have been bleeding from the mouth and fever as a child. Causes of madness were identified as bhuterasor (evil effect), bhutedhora (devil), Arali (Hindu bhute chitaniya jai), examination tension, jaundice, taking less breast milk as a child, underweight, lack of proper food, no fish or meat products, poverty, food poisoning, premature birth, and inadequate food intake by the mother during pregnancy. A girl from eighth grade said:

> My cousin is ‘Paglapagladhoker’. He doesn’t respect any people, he bites people. He is always quarreling with the other boys. If the madam tells these boys to read something, he beats madam and goes home. Their family is suffering a lot. I think his problem is due to ‘malnutrition’. His mother, during pregnancy, did not take adequate food. The house is not good also. Something goes over the house every night. At night, the boy gets out at midnight every night. He stays with me...Every night, he has bad dreams. “Bhut or petni, Arali”. Arali means ‘Hindu bhutchitaniya jai’... When a person dies and their body is burned, there is a devil that goes with the person’s heart over the house every night. The boy does not tell me about dreams, but sometimes he laughs at night. His family treats him good but the boy is naughty. He does not respect anybody. He beats me with shoes. There is no treatment. The parents do nothing. He went to fakir but the treatment failed. The boy treats me very badly and my sisters too. His father and mother try to cope with the problem, but it is due to poverty and they suffer. I feel that if the boy gets proper treatment from fakir he will be good.

Terms for convulsive disorders were: khichun/mrigi/mirkiberam (epilepsy), and jenjiberam (convulsions). Symptoms described for mirkiberam, kichuni, and mrigi included: no intelligence, anger, aimless walking, shaking limbs and becoming senseless. Perceived causes of convulsive disorders were identified as not having enough food, less breast milk, muteness in childhood and an evil presence in the pregnant mother’s belly. This is illustrated by the story of a girl in tenth grade:

> There is a boy close to my age, he attracts mirkiberam. During mirkiberam, he started shaking his limbs and eventually became senseless. Then he was taken to a kobiraj. The kobiraj blew over him and gave him shoes to bite, special shoes. Later he became normal, slowly.

Two female primary school teachers described chintarog. They said that as girls approached fifth grade, they would become more conservative and isolated themselves. These girls typically stopped mixing with other girls, and developed one or two close friends whom they shared everything. The perceived causes of chintarog were due to menstrual problems and emotional changes.
Jenjiberam (stroke) was identified as a form of mental illness. The symptoms described in the focus group were paralysis and numbness. The causes of jenjiberam were perceived in the following way: when someone would sit down, he/she would become stiff and blood circulation would stop.

Bhutedhora (captured by evil spirit) was described as a form of possession for both adult women and adolescent girls. Symptoms of bhutedhora include vomiting, itchy body, silence, aimless walking, fear and crying. The adult woman described bhutedhora as the result of spirit possession and bad air, while the adolescent female described it as the result of quarreling in the household and tension.

Coping strategies
Seeking help from the fakir was common as was using a tabiz (amulet) on the affected individual. Other participants identified the kobiraj, who would “bhutmatirvetorpuitamairafela” (kill the devil by putting it under the soil) for coping with madness. Going to the kobiraj involved the use of kelakuuca (leaf fruit), boiragota (seed of fruit), and Arjungacherchal (Arjun tree bark). A group of adolescent girls described that a boy with paglapagladhoker had gone to the fakir and the treatment had failed. Yet the consensus was that fakirs could cure. Seeking treatment from a doctor was mentioned by three out of six participants. Malek, the grandfather of a 14-year-old boy described their coping mechanism:

We went to kobiraj, he is Imam (religious leader) of mosque. We went to several healers for treatment and also had gone to the fakir. We went to four to five local healers, but the boy did not feel better. We went to local healers for one month for the treatment. After 1 month, we went to the doctor at the Science Laboratory in Dhaka, the Lab-aid Hospital. The doctor gave us medicine and the boy improved. The medication is still going on. He is not completely cured, but he had started going to school. The doctor said he has Manoshikrog.

Another family took their 11-year-old daughter - a protibondhi who would wander aimlessly and had hat pa baka (curved limbs/deformed organs) - to the doctor at the hospital, but the doctors would not admit her to the hospital just because she could recall her family name. The event had happened much earlier and a family member described this past event as follows:

My aunt is protibondhi (psychiatric patient). We took her to the hospital and they did not receive her because she could tell the names of the family so they said she should not be in the hospital. We tried a lot to go to the hospital, but hospitals did not receive us anymore. From birth her hands and legs were slightly not normal. The arms are hat pa baka.

Strategies for dealing with convulsive disorders consisted of seeking out the kobiraj, traditional healer for a bash (bamboo treatment), and then seeking help from a doctor or hospital when the traditional treatment had failed. In a semi-formal discussion, a local healer, a 80-year-old woman, described how she would ask her colorful bamboo stick the patient’s illness and how to help them. For her grandson with khichuni, she said, “I tried to treat him with bamboo, but it did not work. I did not have enough power to treat the boy.”

The healer also described when people would come to her to get treatment for a mental patient, “they tell me that they will give everything, cow, hen, chicken, gold and they say, ‘please just do something for the child’. Usually within one year they are healed. There is a mela (fair) where I go. People bring gifts and gold to me for the recovery of their child.” Another strategy for mirkiberam was described as going to the kobiraj where they would blow over the person, and give them special shoes to bite and then the patient would become cured slowly.

Coping strategies for chintarog, as girls approached adolescent age, include girls having fewer friends but forming close relationships with one or two girl friends whom they would confide in. For jenjiberam, placing a small stick on the upper ear would make someone better. If someone had bhutedhora then going to the kobiraj where a montro(spiritual words) is said and panipora (holy/spiritual water) used is the coping strategy.

Coping strategies varied among the participants, but the general health seeking behavior involved the fakir, kobiraj, and a doctor/hospital visit. Culture and traditional practices play a role in choice of coping strategies, the use of kelakuuca (leaf fruit), boiragota (seed of fruit), orjungacherchal (orjun tree bark) to treat people with jaundice and mental illness is based on strong
cultural attachments to the tree as it is said to give life.

Social interactions
The research team was speaking with Malek, a 60-year-old man, about his grandson Ranna. At that time, Ranna comes with his mother towards the grandfather. He is a wearing a tabiz [an amulet usually worn on the arm]. Asking the boy what he enjoyed in school, he replied:

I like to study everything and then he was asked what he wanted to be in the future and he said “nothing.” [What do you want to be in future?] Nothing. [Do have any friends?] No friends. I don’t like friends. Bhalolagena (I don’t feel good). [What do you like to do all day?] Study all day. [Do you play?] No, I don’t like to play. [How do you spend most of your time?] Sitting. [What you like to eat?] Nothing. [Do you like going to school?] Yes. [Do you have problem with friends?] No. [Do you feel comfortable with your friends?] I don’t feel well; don’t like to mix with friends. Feel “weak” [points to leg and every part of body]. [Why do you think you feel weak in your legs and body?] I don’t want to sit here.

Adolescents, such as Ranna who are said to have a form of madness such as manoshikrog were described as not feeling well. They preferred to be alone and were also known for disrespecting and beating other people. They were also teased and beaten by their peers. One participant replied that the family suffers from not being able to treat their child. Also, the behaviors of adults and peers towards adolescents with mental illness differed. An adolescent girl in a focus group described how the village members treated her aunt:

My aunt is protibondhi… she is eleven years old. She is staying at home, and she sometimes gets lost as she wanders here and there. The community people know her and they bring her back to the house if she gets lost.

Two girls from fifth grade described a boy in their class who had manoshikrog. They told the researcher how the boys in their school would tease him:

We try to behave nicely with him but other junior boys like to mistreat him, they beat him and he cries. He sits alone, he cries...

Adolescents with kichuni, mrigi, mirkiberam and general convulsive disorders were teased by both peers and the community members. Overall, adolescents with a perceived mental illness did not have friendships with others. They were often teased and beaten. Interactions with others included quarreling and disrespecting those around.

The study revealed contrasting details on the behavior of others towards adolescents with mental illness. While the school authority may be expected to behave positively towards such young people because the school is presumed to be a safety place for children, it does not control the entire environment surrounding the patient within which these adolescents may be subjected to violence. People with mental illness are often misunderstood as weak, lazy, or dangerous and as such, they are more likely to become victims of violence. Other studies have also found that they are sometimes beaten or left hungry [13].

Seeking help
On health seeking behavior for mental illness of adolescents, it is important to note that careseeking was highly dependent on traditional beliefs and practices. Our study shows an inseparable relationship between culture and people’s beliefs as a key factor in determining solutions for a problem. Even the limited data from this study reveal that residents of Bagnibari village embraced use of traditional healing as remedy to mental illness. Like many other developing countries, it may therefore be relevant to involve spiritual and traditional healers in therapy for mental illness since the healers provide explanations for the perceived causes of illnesses in most communities where they exist [13].

Concerning the use of biomedicine, when village members were initially asked about treatment of illnesses other than physical in their community, they replied that such types of illnesses were uncommon in their village because of preventive measures taken from the health center. A man in the village described:

“…Nowadays, because the families are health conscious, and the health center is nearby, we maintain hygiene and there is no quarrel in the household. The parents no longer quarrel in front of children. 60% of the kids are born by Cesarean sections in the medical hospital, 30% are normal births and only 10%
childbirth happen at home. If the mother is mentally okay, then the child will be okay."

From the abovementioned quote, it is evident that medicalization and urbanization are often perceived as determining factors of mental illness in adolescents. Having more births in a hospital, and a clean and quarrel-free home, compared to births in the home are perceived as protective factors. However, despite this participant’s belief that 90% of kids are born in a hospital, recent national surveys reveal that actually 85% of births in Bangladesh still occurs at home [14]. It appears that a clean environment, free of quarreling and healthy behaviors, can lead to a normal birth and this environment is thought to be in a hospital setting, but the man also indicated if the mother is well, then the child will be too, putting the onus on the mother.

Supernatural beliefs
People embrace beliefs in supernatural power in this village. Our study, like many others, points out the perceived contribution of supernatural beliefs on mental illness. This should push researchers to explore how people make such connections between the people who suffer mental illness and the different ways they perceive their body-mind-soul and their deity. As if the spirit chooses to show itself in that manner [15]. Perceiving this reality can therefore help us to understand and penetrate into the mysterious world of those who suffer from mental illness. It can also help us to understand that what they go through is a deficiency that promotes healing by showing what is missing [15]. As a fact, in some communities, mental illness is perceived as a supernatural possession which may be either celebrated as a supernatural gift or the person may be shunned. In our study more often people with mental illness were shunned and ill-treated because of the perceived cause that they were possessed by evil spirits.

Hereditary factors with motherly blame
Hereditary factors were also identified as a causal theme in mental illnesses. However, these were connected only to the mother of the adolescent. Several comments in the village linked mother to the child. Little is known about the fact that the father’s role may have an effect on a child’s mental being, and physical responsibilities such as breastfeeding and early child care may also be probable bases for their argument. There seems to be an existing bias against the mothers where actions taken by the mother in raising the child were identified as contributing factor for mental illnesses. For example, if the mother could not produce breast milk or the child was underfed, especially during weaning. It was evident that child related deformities such as mental illness are linked more to the mothers because of their identified role as primary care givers. Adverse effects at birth are also taken to be the mother’s fault regardless of whether she had a hospital birth or was helped by the traditional birth attendant. Therefore, mothers bear all the blame and bear the burden of taking appropriate preventive measures against mental illness.

The relationship between eating behaviors and nutrition intake in childhood was also identified by the community as a factor in mental illness. This increased the blame on mother, but was also related to the effects of poverty in such a way that a poor family might feed the growing child just one type of food for a long period of time and thereby caused mental illness.

IV. CONCLUSION

Mental illness among adolescents is a difficult condition to study. Adolescents may feel a variety of pressures: to do well in school, to be popular with peers, and to gain parental approval. In addition, many adolescents have other special problems. For example, they may worry about a parent being violent or even about marriage (girls). Unfortunately, with such concerns some adolescents may develop serious emotional problems that turn into mental illnesses in the course of time if they do not receive help in time. The issue of mental illness is becoming predominant in the rural areas of Bangladesh. The mode of treatment causes great concerns as most of the solutions seem not to be definite, meaning that the condition may resurface again later in life or from time to time. More attention and time should be invested in providing a solution to the poor adolescent patients who suffer the burden of the disease, because chances are high that they may live with the condition forever. However, any form of alternative treatment provided should also be explored. This needs to be culturally sensitive, since most of disease labeling and perceptions on causes seem to be culturally determined to a large extent.
At the time of writing this paper, Bangladesh does not have a national policy that addresses mental health. However, the country does have a mental health act based on the British Lunacy Act of 1845 [16]. The National Institute of Mental Health in Bangladesh serves to oversee public education and awareness campaigns for mental health, yet the findings of this study indicate a lack of organizational presence for mental health throughout the more rural areas such as the villages outside of Savar [17]. Despite there being a mental health hospital in Pabna, Bangladesh, it is not possible for a hospital in just one location to serve the mental health needs of the entire Bangladeshi population. In addition, human resources specific for mental health in Bangladesh are severely lacking with less than one per 100,000 population, and outpatient clinics are not sufficient [17]. Future research on mental health in Bangladesh should focus on the lifestyles of individuals with mental illness and how they cope with everyday situations.

It is recommended that Bangladesh should develop targeted mental health policy that includes public awareness and education among the adolescent as well as the general population, including rural areas. In addition to developing culturally sensitive interventions, adequate training of medical professionals should also be implemented.

Acknowledgements
We would like to thank the people of Bagnibari village who gave their time to speak with us. We would also like to thank the professors and lastly James P Grant School of Public Health, BRAC University, for granting us such a learning opportunity.

REFERENCES
Ekaterina Yakovlevna Noykhovich, et al


APPENDIX

A. Terminology

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
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<tbody>
<tr>
<td>Pagol</td>
<td>Mad man/women. It is the most commonly used term for the deranged and the mentally ill.</td>
</tr>
<tr>
<td>Adha pagol/Pagla pagla dhoker</td>
<td>Mentally disturbed but not as severe as a pagol</td>
</tr>
<tr>
<td>Manoshik rogue</td>
<td>Mental patient</td>
</tr>
<tr>
<td>Protibondhi</td>
<td>Psychiatric patient</td>
</tr>
<tr>
<td>Kichuni/Mrigi disease/Mirkiberam</td>
<td>Epilepsy</td>
</tr>
<tr>
<td>Jenjiberam</td>
<td>Convulsions</td>
</tr>
<tr>
<td>Mathaghora</td>
<td>Disease inside the head associated with mental illness</td>
</tr>
<tr>
<td>Chintarog/chintamyrog</td>
<td>Worry illness/depression</td>
</tr>
<tr>
<td>Nazarlagi</td>
<td>Evil eye</td>
</tr>
<tr>
<td>Totkapaiche</td>
<td>Mental disease from touching waste products of the healer</td>
</tr>
<tr>
<td>Totkapaiche</td>
<td>Waste substance thrown from local healer</td>
</tr>
<tr>
<td>Alga batash, Khoraidhora</td>
<td>Bad air</td>
</tr>
<tr>
<td>Bhutedhora/Jine-dora/Bhuteasor</td>
<td>Devil attack</td>
</tr>
<tr>
<td>Jor</td>
<td>Fever</td>
</tr>
<tr>
<td>Shordi</td>
<td>Colds</td>
</tr>
<tr>
<td>Pocha, bashi</td>
<td>Rotten food</td>
</tr>
<tr>
<td>Hat pa baka</td>
<td>Deformity of bones</td>
</tr>
<tr>
<td>Peter vetormoilaKhaishilo</td>
<td>Swallowing of amniotic fluid</td>
</tr>
<tr>
<td>Hugna-chora</td>
<td>Malnourished</td>
</tr>
<tr>
<td>Dhud-chora</td>
<td>Spirit stealing breast milk; lack of breast milk</td>
</tr>
<tr>
<td>Masik</td>
<td>Menstrual changes</td>
</tr>
<tr>
<td>Mora mora</td>
<td>Acute respiratory infection</td>
</tr>
<tr>
<td>Bhute/petri, Arali</td>
<td>Devil</td>
</tr>
<tr>
<td>Hindu bhut, chitaniya jai</td>
<td>The belief that when a person dies and their body is burned, there is a devil that goes with the person’s heart over the house every night.</td>
</tr>
<tr>
<td>Kobiraj</td>
<td>Local/traditional healer</td>
</tr>
<tr>
<td>Tabiz</td>
<td>Amulet</td>
</tr>
<tr>
<td>Bash</td>
<td>Enchanted bamboo</td>
</tr>
<tr>
<td>Panipora</td>
<td>Enchanted water</td>
</tr>
<tr>
<td>Montro</td>
<td>Reciting prescribed mystic word</td>
</tr>
<tr>
<td>Soitan matir vetor puita fela</td>
<td>Killing devil by putting devil under soil</td>
</tr>
<tr>
<td>Imam/Fokir</td>
<td>Religious leaders</td>
</tr>
<tr>
<td>Majar</td>
<td>Religious place</td>
</tr>
<tr>
<td>Tulshipatarrosh</td>
<td>Extract from a herb (tulshi)</td>
</tr>
<tr>
<td>Kelakuca</td>
<td>One type of leaf &amp; fruit</td>
</tr>
<tr>
<td>Boiragota</td>
<td>Seed of fruit</td>
</tr>
<tr>
<td>Orjungacherchal</td>
<td>Bark of the orjun tree</td>
</tr>
</tbody>
</table>
ABSTRACT

Introduction: Occupational health risks are emerging topics of interest and concern in Bangladesh. It is important to understand worker perceptions of risks, illnesses and their coping strategies in order to develop interventions relevant to their environment and concerns.

Methods: We interviewed 28 factory workers in Savar, Bangladesh identifying their perceptions of illness, risk and coping strategies for illnesses occurred in the factory.

Results: All workers identified repeated exposure to dust and industrial chemicals as the main risks within the factory. Additionally, workers reported unsafe conditions from cutting machinery with mechanical injury being the common outcome. Among all workers in the factory, common illnesses attributed to the work environment included respiratory disorders, anorexia and skin infections. It emerged from data collection that socioeconomic conditions and lack of rights added to the burden of illness. Some workers also resorted to self-inflicted injuries in order to receive compensation.

Conclusion: Societal factors and perceived hierarchy within the factory has led to an added burden among factory workers. The already dangerous work environment adds to the job insecurity and psychological stress imposed on a worker. Factories should include compulsory safety training and mandatory safety equipment use in order to curb the growing risks of occupational health.

Key words: Occupational health, Occupational Risk, Job security, Industrialization, Bangladesh

1. INTRODUCTION

Bangladesh is a low-income country with a rapidly growing manufacturing and industrial sector. As a consequence, more and more individuals are drawn to the emerging, industrialized areas in Dhaka and other urban areas in search of employment [1]. In Africa and South Asia, studies suggest that gaseous and auditory pollution contribute substantially to worker morbidity [2, 3, 4]. Ahasan, Ahmad, & Khan [5] found that workers in a cotton textile factory were at a significantly higher risk for acute respiratory illnesses such as asthma than the general population. Ratnasingingam and Scholz [6] revealed that workers are frequently exposed to harmful chemicals such as organic solvents from the coating processes for wood furniture finishing. During surface coating, workers are exposed to these organic resins along
with formaldehyde causing burning sensations in the eyes, nose and throat, with nausea, coughing, chest tightness, wheezing, skin rashes, and other allergic reactions occurring as well [6,7]. Additionally, the spray adhesive used in furniture production routinely contains a bromine derivative that has been shown to affect the peripheral nervous and reproductive systems [8].

According to the Bangladesh Garment and Tailoring Workers League (GTWL) General Secretary report, the legislations related to Occupational Safety & Health (OSH) particularly the Factories Act 1965 and Factories Rules of 1979 are old and inadequate in terms of perspective, provision, specificity and coverage to cope with newer production technology and materials involved in the production process [9, 10]. National statistics concerning OSH are inadequate and information is gathered mainly from secondary sources with no proper primary data collection system in place.

Baddrudoza [9] found that almost 80% of industries in Bangladesh store chemicals improperly, lacking ventilation systems and allowing hazardous fumes to accumulate. Furthermore, only 10% of workers use ear, eye and hand protection, with 30% of factories providing safety training for workers [9].

Due to the lack of ratification and enforcement of International Labour Organization (ILO) conventions and lack of national occupational safety and health policies, the government of Bangladesh has done very little compared to other South Asian countries with regards to occupational safety. The industrial working population stands at 20.8% of the total population and is growing rapidly [10]. These new industrial factories can pose substantial health risks for those working there. There is very limited literature on the potential health risks and illnesses encountered in factories, how employees cope with such illnesses and their perception of health risks in a factory setting of Bangladesh. This study hopes to add some initial findings by identifying the common illnesses and health risks and their perceived causes and coping strategies among workers in a factory of Savar, Bangladesh. This study will help to understand a) the common illnesses among factory workers; b) the perceived causes of illness; c) what strategies are employed to cope with the occupational health risks; d) the health seeking behavior of the workers in the event of an illness; and e) the physical working environment of the factory.

II. METHODOLOGY

A. Context Setting
The area of study is Birulia Union in Savar Upazila, which is located 24km from the city of Dhaka in Bangladesh. Savar Upazila is characterized as a rapidly industrializing area and with its close proximity to Dhaka City there has been a recent influx in the construction of factories producing products ranging from garments to batteries. The census conducted by the Bangladesh Bureau of Statistics [11] found that there are 587,061 persons living in the Savar Upazila with 23,760 persons living in the Birulia Union. With rapid industrialization, the physical and economic landscape is transitioning from an agrarian setting to an industrial area. Recent construction of manufacturing facilities is causing an influx of migrants from all over Bangladesh in search of work.

B. Study Design
This was an exploratory qualitative research study based on the grounded theory approach. Through the process of literature review, we were able to construct a preliminary conceptual framework on the various occupational elements a factory worker in South Asia might encounter and possible health implications they might incur as a result. We then used this conceptual framework as a guide for questioning during in depth interviews and focused group discussions. The information gathered throughout the research was used to construct a new conceptual framework.

C. Sampling
The study area of focus in factories limited our sample population to employees who currently work, or have recently left their position at a local factory in the Birulia Union with no discrimination between age and gender. To maintain consistency within the data collection, we identified workers at one particular factory and focused exclusively on them. It was determined through data collection that no females were employed in the factory of interest, resulting in data collected from 28 male informants. Through the iterative process of sampling and data collection, we also included a local pharmacist in our sample population as a key informant. Our sample population was identified
purposively and by convenience from local teashops, households and surrounding areas adjacent to the factory of interest. We made every attempt to ensure an equal representation of temporary and contractual (permanent) workers. Additionally, we tried to include employees from all divisions within the factory: sawmill, fitting, treatment, finishing and glass. A majority of the employees were not married but had family responsibilities. Their age ranged from 15 to 35 year. Throughout the sampling process, informants showed no hesitation or reservation in speaking with us regarding their experience in the factory.

D. Data Collection
Data collection took place between the 7th and 15th of March, 2010. We conducted four in-depth interviews with two key informants, the medical officer of the factory and a local pharmacist identified by participants in a social mapping exercise. Our first in-depth interview turned into an informal group discussion halfway through the interview. Our presence and location adjacent to the factory had attracted an abundance of factory workers. During our interview with the medical officer, the head security guard at the factory sat down to observe the conversation. Before long, he joined the conversation informally providing social and economic context. The in-depth and informal interviews were semi-structured based on a predetermined interview guide.

We conducted two focused discussion groups of eight and nine persons with the latter doubling as a participatory rural appraisal exercise in which the informants began to draw a body map. Although nine participants were present for the second focused discussion group, one informant was present in both discussions. Due to the nature of sampling, and the short study duration, we decided to include him in both discussion groups in order to provide additional facilitation due to his familiarity with the discussion format. The focused group discussion followed a predetermined guideline of talking points in order to facilitate discussion between the perceived causal factors of illness and perceptions of safety equipment use.

An informal group discussion was used as a setting for a social mapping exercise. This social map identified surrounding areas where factory workers resided and local health facilities utilized by workers, with preference depicted on the map. Another instance of informal group discussion took place with three informants providing a body map describing common injuries and their etiology among sawmill workers. A second instance of body mapping occurred alongside a focused discussion group of nine individuals (as mentioned above) with a more diverse sample of employees from the factory including individuals from the sawmill, e.g., the treatment and finishing divisions. Like the first body mapping exercise, this allowed the informants to pictorially represent illnesses experienced in the factory showing how conditions related to work manifested into disease. Both body mapping exercises allowed the researchers to understand causal factors associated with occupational illness in a pictorial format and how these factors manifested into clinical symptoms.

The mapping exercises were facilitated by all three researchers. A native Bangladeshi, who was also a research assistant in the study, was our main facilitator in all the field interactions. Bengali to English translation was ongoing throughout all the conversations with the other two research assistants transcribing independently to ensure that all observations and translated material was accurate and complete. Conversations were transcribed verbatim during all in depth and informal interviews, including all informal and focused group discussions. Observatory notes were taken during all three participatory rural appraisals by all researchers.

Throughout data collection, analysis was ongoing. It emerged through analysis that recurring themes and topics were repeating with little deviation. The total volume of raw data collected totaled approximately 35 pages of handwritten field notes per researcher. These were later condensed to 15 pages of computerized data.

A formal request to tour the factory facility was submitted to the headquarters, but this request was later denied due to what the facility officials called, “lack of credentials.”

E. Data Analysis
All field notes, including observations and complete transcriptions of interviews and discussions were computerized and categorized the same day of collection to maintain familiarity of the field visit. Data analysis was ongoing with all three researchers reviewing the transcripts independently. Coding the transcripts by hand was
preferred to maintain familiarity with the information, although Microsoft Excel was used to color code lines of transcript with its respective coding category.

After individual coding was completed, the team compared their codes and categories for consistency. The emerging codes were, illnesses, perceived causes, coping strategies, health seeking behavior, demographics and factory environment. Recurring themes and concepts that emerged initially were: poverty, job security, and migration along with occupational risks of chemical exposure. A group reanalysis of the data allowed for relevant links to be made for interpretation. The new themes were then used to construct a new explanatory framework.

F. Ethical Assurance Procedures

Verbal informed consent was discussed and obtained before the initiation of any formal or informal informant discussions.

III. FINDINGS

The findings are presented below following the broad themes that emerged: migration, job security, and the work environment. Information was collected from workers in all divisions within the factory with varying levels of authority. Additional information was gathered from the Medical Officer and a local Pharmacist that informants had identified during data collection. By gathering information from factory workers and local key informants and comparing their narratives with environmental observations, we were able to obtain a rich and comprehensive overview of occupational health risks and the perception of illness within the factory. Both the views of our key informants were used to either contrast or deepen the understanding of the workers’ perceptions of illness.

A. Migration and Family

The theme of migration became readily apparent as data was collected. Throughout the individual and group discussions, we did not encounter anyone who was originally from the Dhaka division, where Savar Upazila is located, despite the brevity of the data collection period. Workers revealed that they came from all over Bangladesh in search of a better paying job.

Out of the 28 factory employees interviewed, we had directly observed two separate households. The first household we visited was a five-minute walk from the factory front gates, situated just off the main road in Birulia. There was a concrete and mud border within which approximately forty households were located; each household consisted of one room roughly twelve by twelve feet, with one open window and a fan supported by a bamboo lattice overhead that held an aluminum sheet to function as a roof. Afzal, a thin man with soft features greeted us as we took our shoes off and offered us a seat on his bed, which was the only sitting arrangement in the room. Despite conducting our interview with his wife, two children, brother and grandmother huddled nearby and a small contingent of curious onlookers peering through the doorway, the informant was relaxed.

Afzal had been employed at the factory for two years in the finishing division. His brother was also employed at the same factory. Both brothers were actually aware of the dangers of factory work. Afzal described that he handled bishh [poison] on a daily basis, and tried to trivialize the effects it had on his body. Afzal’s story, like many of the other factory workers we encountered, showed that the workers considered exposure to such chemical poisons as a fact of life and a means to provide for his family. His story was unique only in the face that he migrated with his whole family from Mymensingh.

For others, migration to Savar in search of work usually entailed leaving loved ones behind in order to provide them with adequate financial support to ensure a dignified and secure lifestyle. The familial mindset of the daily workers became personified when Raffik, a young man in a clean short sleeve shirt and jeans, originally from the west of Bangladesh described how his attention during work affected job performance. He described:

“We have to always think about our family back home who are waiting for our money. The man working next to me can send money but I cannot. So it’s very often that my hand goes into the machine and gets cuts here and there.”

B. Job Security

The constant flux of the employment market in Savar makes it difficult to maintain a steady job longer than a few years. During a focused group discussion, it became evident that a clear delineation existed between permanent union workers and the daily-wage workers. The
perception of wages and job security may determine the different mindsets of different types of workers.

Some of the factory workers we encountered had the luxury of joining the workers union established by the factory. Only permanent contractual workers were allowed to join the union. When the factory initially opened in 2006, the outlook for transition from temporary to permanent work was more favorable. In an informal group discussion, we heard that the workers had to be employed for six months only before he/she was conferred permanent status. However, when the new management took over a few years later, the policy for becoming a permanent worker was changed to six or seven years of consistent temporary work. This new guideline was considered to be a big obstacle. Sanin, a man no older than 20 years, employed in the sawmill division for less than a year expressed apprehension when he said, “We won’t be here [meaning they might not be alive] in ten to twenty years if we keep working here.”

During another focused discussion group, Sufjan, a permanent worker in the chemical treatment division expressed that a sense of health and well-being appeared to be lacking amongst the other workers in the group who were daily-wage workers. When the group was asked how much they spent per month on health care, the overwhelming consensus was around Tk. 1,000 to 1,200 per month. Although this figure was representative of this focus group, informants reported monthly expenditures on health care ranging from Tk. 100 to Tk. 2,000. Sufjan, made it clear he did not “pay as much as these guys.” ‘These guys’ were the union workers, distinguishable from the daily-wage workers who had less job security.

One narrative illustrated a worker who had his hand amputated at the wrist by a machine and received a Tk. 200,000 (approximately 1,400 USD) settlement for his injuries sustained in the factory. This unfortunate event resulted in the worker forgoing any formal medical treatment with which the settlement was intended but instead was sent back to his family. But this case seems to be the exception and not the norm. In most cases, factory policies and hierarchy complicate the process of receiving compensation for injuries.

For those workers who did not suffer from injuries, remittance back to their homes was the preferred method of providing for their family. One worker had to send Tk. 100 back to his family out of his Tk. 115 earnings for the day. In order to provide for his own living costs, he resorted to 5 hours of overtime to earn an additional Tk. 50.

Daily workers received lower wages when compared to other factories in the area, but for the security of a regular paycheck, the situation was favorable. For those who had the luxury of permanent work, it instilled a sense of well-being, security and a sense of superiority over their peers.

C. The Factory Worker and His Environment

Faiz, an unmarried factory foreman for the past year and a half from Pabna, sat with us in an open field across the road from the factory gates. With the wind quietly moving the dry leaves across the grass, he described his position. He supervises approximately 60 workers. By chance, Faiz happened to be our first in depth interviewee and provided us with a broad overview of the factory functions. He described three distinct departments: sawmill, [wood] seasoning and chemical treatment. In order to have a better understanding of the hierarchy in the factory and the different perceptions of risk, we compared his view with those of his subordinates.

That same early Sunday afternoon we spoke with Faiz, the sun was hanging particularly high, bathing the landscape and raising the temperature to 35 C. In a heated environment like this with a pungent smell emanated from the lowered windows of the factory – this was not a place to hang out. Despite the factory being closed on Sundays and the ventilation fans being switched off, our eyes would still water and we would notice our breathing begin to labor, just a bit. With the chemical smell that comes through those windows, “everyone is affected” describes Apu, a local teashop owner situated right across the road from the main gate of the factory. “The ones [pipes] facing the road are emitting gas into the road. Those who are passing by are also affected.”

Perceptions of illness and consequences

When workers were pressed to describe possible causes or coping strategies for factory related illnesses, both focused discussion groups and the informal group discussion expressed nutrition as a key underlying theme for both. Although there was no difference between job descriptions for both daily and permanent workers within the same
division, daily workers repeatedly stressed lack of money for nutritious foods. During the same discussion group with Sufjan, Aladdin described his feeble stature and dwindling body mass to a lack of money for “fruits or milk” and further qualified his appearance due to the delineation between permanent and daily workers. Ali, a daily worker dressed in a faded lungi and T-shirt further added that, “temporary workers make Tk. 120 per day, with permanent workers making Tk. 130 per day.” This seemingly insignificant difference in wages was perceived to have a drastic effect on an individual’s health.

The working conditions in the sawmill are evidently detrimental to the workers health. The danger to injury is ever present. Workers are routinely vigilant with the omnipresent threat of injury and serious disfigurement due to large, openly exposed blades used for cutting down large logs to size. One worker described an accident:

One day we were working together. He carelessly put his hands into the blade and his wrist was cut off. He was at once taken to a hospital and he had been treated there for three months. Factory provided all the expenses. But after being cured, factory did not take him [back].

Narratives such as these were so recurrent and prevalent that the workers talked about it as a matter-of-fact.

If the workers are successful in their quest to remain injury free for the day, they are rewarded with a fate worse than bleeding. They called it jam. Jam as described by Sufjan, is caused by the inhalation of dust from the cutting of the wood. Sufjan and the other members of one of our group discussions belonged to the sawmill division of the factory, and drew a body map of illnesses incurred at the factory where they clearly showed which part of the body is affected by jam.

According to their description, the saw dust passes through the nose and mouth and when it goes into the lungs, it caused “black sputum.” Eventually, jam would spread throughout the body via the blood and cause itching throughout the limbs. After spreading from the limbs, jam would terminate in the head where it would manifest as vertigo.

The Medical Team at the factory however does not perceive these symptoms to be caused by the dust from the wood. The team often overlooks them as health complaints. According to Faiz, workers from all departments, including the sawmill would “go to the Medical Team for fake problems, so they can get a break from working.” Symptoms without an evident cause, typically go unnoticed by the Medical Team. However, workers understand that the dust in the environment is causing their symptoms. During an informal group discussion, Krishno described:

One of my co-workers developed spots [dag] in his lungs and was operated for that. After the operation he lost his strength and cannot do heavy work. If the workers ingest the “bishh” through food or water it goes through your stomach and causes a problem in the urine and changes the color either to yellow or red.

Babu added, “The virus travels through the blood and affects the whole body.”

Repeated exposure to “bishh” was so harmful it caused reduced appetite [ruchi noshto], nausea [bomi bomi vab] and reduced weight [shasto noshto] among workers. It affected the body so profoundly, that Hanif described, “Those who work in the lacquer section are skinny due to the chemical, despite protection,” and that another reiterated that fact with, “You will not recognize me if you see my picture taken six months back. I was almost double my size.”

A worker in the veneering division, Aladdin, proclaimed, “You will not be able to stand in the veneer room even for a single minute but we are working there for hours and hours.” Descriptions like this were recurrent throughout all the interviews except with the Medical Officer, Minhaz and Faiz, the foreman. Although Faiz mentioned that, “workers handle boric [acid] powder with bare hands,” and that the “chemicals are not harmful to the touch”, his account contrasts starkly with Ali whose visibly marked skin is littered with lesions. Ali narrates, “[I mix] the white powder [boric acid] with water and to do so, I need to get into the tank. I’ve had these symptoms since two years back. The Medical Team does not relate them to exposure from work.” Skin discoloration [dag], rash [khujli-chulkani] and infection [gha] are not the only illnesses experienced by workers who handle chemicals in the factory. In addition to skin related issues, eye
burning [chokh jala], headache [matha batha], runny nose and pain [shordi and nak jala], and cough [kashi] are considered as the first stages of illness. When the bishh [poison] advances through the body to the next stage, colored sputum [rongin kashi] and lung spot [dag] progress to [jam] in the chest and causes chest pain [buk batha].

Health seeking behavior

Protective equipment such as masks and cotton gloves are provided free of charge to the workers for use. Since their use is not mandatory, their prevalence throughout factory workers is variable. Those who do decide to wear them are aware of their inherent limitations. Firstly, those who decide to wear a mask, understand that the gap between the mask and face caused by the bridge of the nose allows for particulates such as dust to enter the body. For even those who do decide to wear the mask, their use throughout the day is inconsistent due to the discomfort of wearing them in a hot environment. The cotton gloves also have a pattern of inconsistent use. Their poor fitting results in workers routinely removing them, as Rahman exclaimed during a focused group discussion, “I can’t wear gloves because I won’t be able to properly finish the job.”

Taufique, a sawmill employee for about ten months described his experiences as, “When I first joined in the cutting-boarding section my hands used to cut almost all the days and I bled. I went to personnel [Medical Team] and they gave me tape [band-aid], one Clofenac tablet for pain and one antacid tablet all the times. Now my skin over palm [chamra] got thicker and I do not bleed so easily. Factory is the best place for treating cut injuries. I never go to outside doctors.” As a sawmill worker, cuts and bleeding were a common occurrences, with frequent trips to factory Medical Team. For workers who suffered from cuts and bleeding, or as they were described, “visible” injuries, the Medical Team was their first and usually only method of treatment for injuries.

According to the Medical Officer, Minhaz, “hand and foot cut injuries including amputations” were common. Minhaz described giving primary treatment in stopping the bleeding, and if needed in cases of emergency, the worker was referred to a specialty hospital in Dhaka via their own private ambulance. Visible injuries such as these were viewed as direct consequences of working with factory machinery, and were thus provided with medical care, cost free.

With a varied and unique display of illnesses presented by workers, with a multitude of etiological mechanisms, there was a surprising consensus among the workers for coping strategies. Since the Medical Team disregarded many of the symptoms experienced by these workers as make believe, or a result of outside factors, workers had to resort to coping strategies outside the factory.

A social map drawn during a focused discussion group helped us outline the process of selection of health facilities in the area. The map identified a pharmacy conveniently located adjacent to a local bazaar, approximately at a walking distance of 10 minutes from the factory gates. The group identified a number of other pharmacies, but selected this particular one for its proximity to the factory and worker homes.

During an interview with the head pharmacist in the aforementioned pharmacy, Dr. Farrukh confirmed that he does indeed get a large number of factory workers coming in for treatment. “Fever, cough, cold and general pain” were the chief complaints presented by “about 20 to 30 workers per day” Dr. Farrukh added. He commonly prescribed Paracetamol for fever, anti-histamine for colds and either Cirpofloxin or Livofloxin for coughs. Additionally, during our interview with Min, workers routinely showed up at the Medical Office asking specifically for Paracetamol for fever or cough. However, during our interview with Afzal, he described, “I go outside and get medication from the pharmacies that are more expensive. My wife and I prefer them.” When asked to why he does not trust the medicine in the factory, he added, “I don’t trust the medications in the factory that they try and give us. They’re cheap.” But if the medications from the pharmacy do not cure his symptoms after a few days, he goes to a private health care clinic in Savar. Afzal made an important distinction between symptoms caused by the factory and those caused by the evil air [batash laga]. Since his symptoms were chemical in origin from the factory, he sought aide from pharmaceuticals. Dr. Farrukh made the same distinction when we asked him if he saw patients from the factory with jaundice, which is considered an illness treated by traditional healers; “For jaundice, they don’t come to me. They go to the local healer for that… they use herbal medicines”
Although physical safety barriers such as gloves and masks are available, their use is sparse. Mahmud, who was employed in the factory for three months before he had to leave due to an unrelated event explained, “Not sure if there is a policy for gloves, but some wear gloves and others do not. Those that do wear gloves, tell the other workers to wear gloves, but they don’t pay much attention to them.” We heard numerous accounts of workers foregoing protective measures for chemical spraying or mixing because they did not come into physical contact with the substances. During an informal group discussion, Nakib said, “Those who mix the chemicals wear gloves, but those who spray wear masks and not gloves because they think that they don’t get into contact with the chemicals.”

The narratives quoted are not exclusive to the factory in question. Mahmud added about his friend who worked in another factory with him:

*My friend who was 20 years old was working in another factory for seven or eight years and developed skin problems. He was engaged in varnishing activities in the factory. He eventually died. I don’t have evidence, but if you investigate you will find something. I’m certain they use the same chemicals in this factory and that is why he died. He was suffering for one and a half years with the sores on his hands and feet before he died.*

As we spoke with Afzal, in his quaint one room home, we noticed out in the corner of the room, tucked underneath a table were two containers. When we asked where they came from, he responded, “from work.” Upon closer inspection, we noticed that the containers were of organic solvents. The warning label on the large metal drum read, “Liver, kidney and blood toxin. Central nervous system depressant, eye, skin and respiratory irritant.” The label was written in many different languages, but Bengali was not one of them. For Afzal, or any of the other factory workers interviewed, a label would not matter. With education levels among the work force being low, they likely would not be able to recognize the dangers associated with the contents of the container.

**IV. DISCUSSION AND CONCLUSION**

The working environment of the factory is such that there is no escaping the air saturated in dust or chemicals. By using multiple qualitative methodological tools, we were able to obtain both rich narratives on illness perception and etiology among workers in all divisions within the factory and their health seeking behavior and coping strategies and also verified the narratives by interviewing the pharmacist and medical officer.

Many workers were aware that work within the factory was particularly harmful, with visible effects on their bodies. However, the use of protective equipment was not clear. We could not distinguish when the protective equipments were used, whether they were used before or after an illness episode, but the physical act of wearing protective equipment conferred a sense of security as indicative of their perception of illness and its cause.

Sawmill workers were “afforded” the added benefit of being able to readily utilize the free of cost medical facilities within the factory if their injuries were “visible,” which was reported to be a common occurrence. Despite all workers having free and open access to the Medical Team in the factory, the common illnesses experienced by the non-sawmill workers were not treated in the same light as those who did work in the sawmill section. But for those unfortunate enough to be subjected to the persistent exposure to chemical sprays and dust, their health seeking strategies were focused away from the factory. With the onset of illness, workers either self-treated with nutritional supplementation (tea and/or bananas), or went directly to the pharmacy or public or private health facility.

If consistent and proper occupational safety equipment were used, for example, particle masks and safety goggles for dust and debris and proper ventilation when chemicals are prepared and leather gloves for use during cutting work, the majority of worker experienced morbidity could be greatly reduced.

The other emerging theme that came from this study was one on industrialization and migration and its contribution to perceived wealth and social status. We found that the recent mushrooming of factories in the area has contributed to the greater economic good. However, individuals who must resort to dangerous work and provide remittance for families in their places of birth are under substantial stress, both physically and emotionally. Apart from the physical and environmental
vulnerabilities, these workers also have poor nutrition habits and the overriding concern of providing for a family many hundreds of miles away made them emotionally fragile.

From the information and context gathered from these qualitative research tools, we were able to identify a situation that was further complicated by the social ranking within the factory as defined by union status.

Individuals who live in a persistent state of job insecurity, such as the temporary workers in this factory have an additional risk factor in the occupational setting. Temporary workers are over six times more likely to sustain an occupational injury than those who are permanent workers [12]. Whether the possible increase in injuries sustained are accidental or deliberate remains to be investigated. However the added burden provided by this particular socioeconomic stressor remains foundational to the conceptual framework for illness endured within the factory. The definition of a breadwinner is concisely summed up by a quote, “We have to do this [work]... what else to do?”

Recommendations
It is recommended that a policy change should be implemented in order to address both the lack of regulation and mandate for proper safety equipment and thorough examination of factory workers as they present at the Medical Office.

Further studies should focus on the measurable effects of the policies recommended above and the contextual improvement of the factory environment as per a qualitative study. It is further recommended that workers should be regularly orientated on occupational health risks and monitored to ensure compliance. It might be of interest to also explore the benefit and challenges of host communities in the face of industrialization, urbanization and migration.

REFERENCES
PERCEPTIONS AND PRACTICES OF FOOD CONSUMPTION OF ADULT WOMEN IN BAGNIBARI VILLAGE, BANGLADESH

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ABSTRACT

Introduction: An understanding of working and non-working women’s perceptions and practices of food consumption is crucial for success of nutrition intervention programs by incorporating their emic perspective.

Methods: An exploratory qualitative study was carried out among 7 adult working women (aged 15 years to 35 years) and 11 adult non-working women (aged 17 years to 60 years) using in-depth interviews, focus group and informal discussions, participatory rural appraisal tools and observations in households, roadside tea-shops and restaurants.

Results: Rice and potato are commonly consumed by people. Rice symbolizes food as it reduces hunger and provides energy. Three meals with rice are usually consumed by the family. Home-cooked food is perceived as healthy. Although market food are perceived as unhealthy, it is often consumed, particularly by working women. Cognitive and socio-economic factors influence its consumption. Stale food is considered unhealthy and is perceived to be a cause of diarrhea but is nevertheless eaten by poor households. Elderly women perceive food as adulterated and they consume less.

Conclusion: Consumption of food is not determined by the perception of its nutrient value alone, but is influenced by cultural, social and economic factors. Understanding of perceptions of adult women is crucial for the success of nutrition intervention programs.

Keywords: Working Women, Non-Working Women, Perceptions, Practices, Food consumption.

I. INTRODUCTION

The high prevalence of under-nutrition in Bangladesh is due to poverty, environmental factors (social and economic) and poor health. Maternal malnutrition is widely prevalent in rural areas in Bangladesh. Increased vulnerability of women is due to the fact that they experience a much greater social, economic and nutritional deprivation than men (Rahman and Nasrin, 2009). Low intake of dietary energy and micronutrients by rural people is due to lack of access to resources to grow and purchase food. Body Mass Index (wt in kg/ht in m²) can be used to define women’s nutritional status. In Bangladesh, 45% of the rural women of reproductive age group have critical food insecurity with a Body Mass Index (BMI) less than 18.5 kg/m² (Rahman and Nasrin, 2009).

Eating food is the most common human activity. Though it appears simple and is accepted as a part of everyday life, human behaviour related to food and eating is complex and is influenced by several factors and their interactions (Koster, 2009). In rural Bangladesh, factors that affect food consumption and dietary intake are multi-factorial
and include women’s low social status, their lack of decision making power affecting the household food allocation, food expenditure, and diet resulting in inequitable dietary practices that adversely influence women’s health and nutritional status (Shannon, Mahmud, Asifa& Ali, 2008). A study by Alam, Roy, Ahmed, and Ahmed (2010), show that the dietary energy intake of adolescent girls aged thirteen to eighteen years is low leading to a widespread prevalence of stunting and thinness. In rural Bangladesh, most pregnant women have beliefs related to food taboos, aversions and preferences (Shannon, Mahmud, Asifa& Ali, 2008) while consumption of energy rich foods by lactating mothers is similar to non-pregnant, non-lactating women (Sarkar& Taylor, 2005).

Urbanization has increased economic opportunities resulting in a larger proportion of women working outside the house. This has led to an increase in the demand for market food in many countries. In Bangladesh, urbanization with resulting income increases in households has led to changes in food consumption (Regmi&Dyck, 2001). There has not been much research about the perceptions and practices of food consumption of adult working and non-working women in rural Bangladesh and exploration of the differences in food consumption pattern between the two groups.

The purpose of this exploratory study is to examine the perceptions, and practices related to food consumption of adult women in the working and non-working sector in Bagnibari village, Bangladesh. The specific objectives include an understanding of different kinds of food consumed, the reasons which influence choice of food most commonly consumed, an understanding of the symbolic meaning of food, perception of food as healthy and unhealthy, exploration of factors that influence perceptions and practices of food consumption of women in the working and non-working sectors. This exploratory study will focus on the emic perspective that may help in the design of effective nutrition education messages and intervention programmes.

II. METHODOLOGY

A. Context Setting:
The study was carried out in the semi-urban contextual setting of Bagnibari village, located about 3 km from Dhaka. The population of Bagnibari is around 7000 with 530 households (Bangladesh Bureau of Statistics, Population Census, 2001). It is surrounded by several factories, a local market and has farming/agricultural land. The local market has vendors of vegetables, fish & meat, restaurants, tea-shops, fast food shops, and shops that sell packaged food products. A few small bakeries that sell bakery products, tea and snacks are located by the side of the main road in Bagnibari. Preliminary field visits revealed that the village inhabitants were primarily rickshaw pullers, daily wage/agricultural labourers, local business men, and “Rajmistri” construction labourers. The houses in the village are made of brick, mud, and bamboo thatch. The village is made up of three hamlets or neighbourhoods/localities named Modhyapara, Purbapara and Paschimpara.

B. Study Design and Conceptual Framework
This was an exploratory qualitative study with focus on the Grounded Theory design. Through literature review, an initial conceptual framework was prepared which served as a guide in the design of the questionnaires and checklists for the focus group discussions and observations. Based on the information gathered during the conduction of the study a new conceptual framework was developed to identify the variables that influence the food consumption patterns of adult women, both working and non-working. Biological, economic, social, cultural and physical determinants, knowledge, beliefs and age are the main factors that influence perceptions and practices of food consumption of adult women.

Figure: Final Conceptual Framework

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C. Sample population:
Purposive sampling was used and the sample population for this research comprised of adult women who had been broadly divided into two groups: working (age ranging from 15 years to 35 years) and non-working (age ranging from 17 years to 60 years). Working group may be defined as women engaged in work in the informal and formal sector. Among the women interviewed and those who participated in informal discussion all except one worked in the garment factory. The “non-working” (not engaged in paid wage labour) group may be defined as those who are engaged in household work. In the sample population adolescents, the middle aged and elderly women were included. Elderly women (even retired) were not included in the working group. Participants in the study included women belonging to the lower socio-economic background, and two among them were from ultra poor households.

Data Collection:
The methods for data collection included six in-depth interviews with women at the household level; three of which were conducted among women in the working group and three among women in the non-working group. The interviews were semi-structured and free-flowing and unstructured observation of the participant and their surroundings was done during the interview. Two Participatory Rural Appraisal tools, free listing and ranking, were used alongside focus group, informal discussions and key informant interviews. Observation and informal discussions were conducted with the owner and a few customers in the local tea shop located by the roadside in Bagnibari village and the owner and the lady helper in the restaurant in Akran Bazaar. The process of preparation and cooking of food was observed in the household of working and non-working woman. A focus group discussion (FGD) was conducted with 8 participants, all of who were engaged in household work (age ranging from young, middle-aged and elderly). The common variable in the focus group discussion was that all were women; however, a limitation of the study was that focus group discussion with women in the same age group could not be carried out owing to the time constraints within which the research was conducted. An informal discussion with four working women in the garment factory was conducted at the household level on their holiday. Guidelines for in-depth interviews, focus group discussions and observation had been developed and used. During the process of data collection, field notes were collected.

In order to reduce bias, verification of the collected data was done through triangulation of methods (tools) primarily using focus group/informal discussions, in-depth interviews and observations. Triangulation of sources of data was done by conducting informal observations in the restaurant in Akran Bazaar and roadside tea shop in Bagnibari. Data were collected until a point of partial saturation was reached. Limited time did not permit further data collection.

D. Data Analysis:
Field notes were taken by the researchers in the village. They were transcribed and after examining the transcripts carefully, illustrative codes were formulated. The transcripts were analyzed by broad coding of data into general categories. An initial code list was prepared. The transcripts were re-examined and the preliminary code list was partly modified. The entire process of coding was done manually. Sub-codes were identified and written in the margins of the transcripts. Codes were categorized for existing patterns and relationships and the themes were identified. New themes that emerged were included and sorting was done by compiling and arranging themes, and the illustrative quotes into an outline of a narrative.

Ethical assurance for protection of human rights:
Informed verbal consent was obtained prior to interviews, focus group & informal discussions, observations, and taking photographs. Strict confidentiality was ensured. Focus group participants were informed a day in advance.

III. FINDINGS

The findings presented below are based on six in-depth interviews, a focus group discussion (FGD), an informal discussion and observational findings during cooking and preparing food in households of working and non-working women aged 15 years to 60 years belonging to the lower socio-economic group. Most women (5) interviewed did not have any formal education.

Common findings that emerged were that working women (aged 15 years to 35 years) had no control over the salary they earned, as it was handed over to their respective husbands/fathers. The little money that they kept aside was spent as per individual likings on clothes and food. One of the participants also helped her mother financially.
The decision makers in most cases were found to be the husbands, sons (in case of two elderly women) and father (in case of a young adolescent woman). Exception was seen in case of an ultra poor household where the primary decision maker was the mother-in-law. Most housewives, who participated in the study, would eat after serving food to everyone. Working women ate food before their husbands in case they had to leave early for work in the morning. However all of these women said that they usually ate less than their husbands. We used the PRA tool and asked the participants to visually depict the amount of food given to each member of the household, including themselves.

Basic meal patterns consisted of three meals interspersed with intake of snacks as “in-betweens”. This was more common among the working women and also among several housewives participating in the focus group discussion, except for two elderly women.

A. Types and reasons of food commonly consumed

The food universally observed being prepared, cooked and served during our visits was rice. Rice (bhaat) remained the food commonly consumed by all and was a part of each meal in all households in the study. Young working girls in an informal discussion said that:

“We eat bhaat, we get energy and nutrition and if we do not eat then we feel weak and cannot work.”

A married working woman aged 24 years said, “Without rice one cannot survive …”

### Table 1: Types of food consumed by women participants in research study in Bagnibari village, Bangladesh

<table>
<thead>
<tr>
<th>Local Names</th>
<th>English</th>
<th>Local Names</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food: (Home cooked)</td>
<td></td>
<td>Food: (Market Prepared)</td>
<td></td>
</tr>
<tr>
<td>Bhaat</td>
<td>Rice</td>
<td>Puri (suji&amp; dal)</td>
<td></td>
</tr>
<tr>
<td>Aloo</td>
<td>Potato</td>
<td>Pivaji</td>
<td></td>
</tr>
<tr>
<td>Begun</td>
<td>Egg Plant</td>
<td>Paraitha</td>
<td></td>
</tr>
<tr>
<td>Tomato</td>
<td>Tomato</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seem</td>
<td>Green Beans</td>
<td>Furuli</td>
<td></td>
</tr>
<tr>
<td>SaakhSabji</td>
<td>Green Vegetables</td>
<td>But Bhaja</td>
<td></td>
</tr>
<tr>
<td>HechiSaakh</td>
<td>Variety of green leafy vegetable</td>
<td>Shingara</td>
<td></td>
</tr>
<tr>
<td>Lau Saakh</td>
<td></td>
<td>Dal Bhaji</td>
<td></td>
</tr>
<tr>
<td>PuiSaakh</td>
<td></td>
<td>Tele Bhaja</td>
<td></td>
</tr>
<tr>
<td>KochuSaakh</td>
<td></td>
<td>Aachar</td>
<td>Pickle</td>
</tr>
<tr>
<td>MishtiKumro</td>
<td>Pumpkin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kohi</td>
<td>Variety of green vegetables</td>
<td>Amirti</td>
<td></td>
</tr>
<tr>
<td>Dhundol</td>
<td></td>
<td>Jelepi</td>
<td></td>
</tr>
<tr>
<td>Jhinga</td>
<td></td>
<td>Rosagolla</td>
<td></td>
</tr>
<tr>
<td>Potol</td>
<td>Snake gourd</td>
<td>Pihe</td>
<td></td>
</tr>
<tr>
<td>Korola</td>
<td>Bitter Gourd</td>
<td></td>
<td></td>
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<tr>
<td>Pepe</td>
<td>Papaya</td>
<td>Pauruti</td>
<td>Bread</td>
</tr>
<tr>
<td>Chhotomaach/ Giromaach</td>
<td>Small fish</td>
<td>Muri</td>
<td>Puffed Rice</td>
</tr>
<tr>
<td>Dim</td>
<td>Egg</td>
<td>Cake</td>
<td>Cake</td>
</tr>
<tr>
<td>Mangsho (Murgi)</td>
<td>Chicken</td>
<td>Ice-cream</td>
<td>Ice-cream</td>
</tr>
<tr>
<td>Dudh</td>
<td>Milk</td>
<td>Chanachur</td>
<td>Variety of fried snack</td>
</tr>
<tr>
<td>Phol</td>
<td>Fruits</td>
<td>Chips</td>
<td></td>
</tr>
<tr>
<td>Kamla</td>
<td>Orange</td>
<td>Biscuit</td>
<td>Biscuit</td>
</tr>
<tr>
<td>Appel</td>
<td>Apple</td>
<td>Cha</td>
<td>Tea</td>
</tr>
<tr>
<td>Angur</td>
<td>Grapes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peyara</td>
<td>Guava</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kathal</td>
<td>Jackfruit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aam</td>
<td>Mango</td>
<td></td>
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</tr>
</tbody>
</table>
Another common food cited by all included potato “aloo”, which was observed to be a part of most meals in the households. A non-working married woman aged 17 years with a child, whose husband was ill and not working said:

“Potato “aloo” is not only cheap and affordable, and one can make a variety of preparations with it such as fried potato “aloobhaji”, mashed boiled potato/ “aloobharta”, and potato curry “aloo r jhol.”

Few mothers in the focus group discussion mentioned that green leafy vegetables like “lau-shaak”, “puishaak” and “hechishaak” are consumed more by those working in agricultural fields, while vegetables like eggplant “begun”, snake gourd “potol” and bitter gourd “korola” are consumed chiefly by those who purchased vegetables from the market. Four women interviewed said that they use “latapata”/green leafy vegetables which they get from surrounding fields. A woman from an ultra poor household said that she gets small fish from the stagnant water in paddy fields.

B. Perceptions of food as healthy and unhealthy

Food perceived as healthy and unhealthy were listed by participants of the focus group and informal discussions and are in the table below.

<table>
<thead>
<tr>
<th>Local Names</th>
<th>English</th>
<th>Local Names</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy Food</td>
<td>Unhealthy Food</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dudh</td>
<td>Milk</td>
<td>Chanachur</td>
<td>A variety of fried snacks</td>
</tr>
<tr>
<td>Dim</td>
<td>Egg</td>
<td>Puri</td>
<td></td>
</tr>
<tr>
<td>Lalsaakh</td>
<td>Green Leafy vegetable</td>
<td>Paratha</td>
<td></td>
</tr>
<tr>
<td>Palaksaakh</td>
<td></td>
<td>Shingara</td>
<td></td>
</tr>
<tr>
<td>KochuSaakh</td>
<td></td>
<td>Tele BhajaKhabar</td>
<td></td>
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Food commonly perceived as healthy included either fruits and/or green leafy vegetables by all women participants in interviews. Housewives participating in the focus group discussion were aware of the nutritive value of food. They said that certain food could be used as medicine for specific illness. The participants’ responses include:

“Green leafy vegetables contain calcium. Small fish, pumpkin & “kochusaakh”/a variety of green leafy vegetables improve eye-sight. Eggs help in stabilizing blood pressure in those with hypotension, milk forms blood, papaya is helpful in gastric problems and tamarind helps to lower blood pressure in patients with hypertension”.

Their perceptions were based on opinions of others and on what doctors commonly advised. Home cooked food was perceived as healthy by all as the women said that they prepared it themselves in a clean and hygienic manner. The participants feel that “bhaat”/rice prepared at home alone can appease the feeling of hunger (“pet bhorey”).

Unhealthy food- Health problems. All participants in interviews, focus group and informal discussions considered spoilt food “pocha” and stale food “bashi” as unhealthy. A young housewife
from an ultra poor household felt that spoiled fish/“pochamaach” and stale green leafy vegetables/“bashisaakh” cause diarrhea and should not be eaten. Young working women, and elderly woman interviewed and participants of discussions (informal and focus group) linked consumption of stale food with occurrence of diarrhea and gastric problems like acidity, gas, dyspepsia. A middle aged housewife interviewed said that a type of fish such as “Mrigel” caused epilepsy/"mrigibyaram."

An elderly woman interviewed felt that consumption of excessive oily and spicy home-cooked food may cause diarrhea and jaundice.

Food prepared in market was perceived as unhealthy by all participants of the discussions and interviews. Participants of the focus group discussion felt that market food is prepared in unhygienic conditions as those who prepare the food do not clean their hands adequately; food is prepared on an open table and often food is kept in open counters exposed to flies. Similar concerns were expressed by an elderly woman and a young working woman interviewed. Participants of the focus group discussion felt that the market food was prepared by frying in burnt oil which led to health problems like pain in abdomen, gastric problems and diarrhea. A young working woman said she suffered from gas/flatulence, dyspepsia and gastric problems after eating fried food from market which was the reason for disliking such food.

In the informal discussion with a group of working women, they linked market food, particularly fried food such as “badam” and “chanachur” with diarrhoea and oily food with illness such as diarrhea and gastric problems.

C. Symbolic Perceptions of Food

What does Food signify? All participants felt that food was directly related with hunger. Food satisfy hunger and are synonymous with life as all felt that one could not survive without eating. A seventeen year old housewife and mother of a child belonging to an ultra poor household said:

“Food means satisfaction of hunger; we eat so that we don’t feel hungry”.

Few of the housewives interviewed and those participating in the focus group discussion felt that food was necessary for good health and development. A thirty five year old pregnant mother of three children said that:

“Food is necessary for growth of body and for development of the brain. Food is always good for health. First I think about getting food for the family and then I think of education of my children/ (Khabarercintaagey, pore lekhapsorarchinta)”.

Young adolescents participating in an informal discussion felt that food was “rice” which was invaluable as it provided them with energy and nutrition so that they could work. Extolling the virtues of rice, participants said that there is never any lack of appetite/“aruchi” for rice and one can eat rice throughout life. One of the young women said,

“…Food means rice/“bhaat” to us and rice is our food. If we do not eat rice we cannot live, or work. When we eat we feel good…”

A participant, a working woman said that food meant joy in eating together and was associated with pleasure. Among the working women in the study, there were social dimensions such as enjoyment related with eating food together with others in the factory and at home. Food purchased from the market was eaten at workplace or home and rarely at restaurants except when they went out with families. A working woman who was the mother of two children, aged 35 years said,

“Food is related to hunger and when we eat food together we feel good…”

However another participant, an ultra poor housewife, felt that there is happiness if there is money as one could eat good things, when that did not happen, one could not feel good.

Food on special occasions

Different kinds of food are prepared on special occasions like festivals, marriage celebrations, during other occasions such as second Bangla month/ “Jyostomash”. The different kinds of food prepared include beef/ “gorumangsho”, mutton/“khashi”, chicken/ “murgi”, duck/“hash”, fish/“maach”, egg/“dim”, rice preparations/“pulao” or “biryani”, “jorda” and “borhane”.

Preparation and consumption of food on these special occasions, strengthens social ties and
relationships and in some cases preparation of such food represented a matter of prestige. One of the participants mentioned that they took loans while another used their savings to prepare food on these occasions.

Food as gift to man and offering to God
The practice of giving gifts when one is invited for any feasts/celebrations or visits houses of relatives has become a custom and one was expected to bring gifts in cash or kind as mentioned by the housewives participating in the focus group discussions (FGD). It was found that several social factors such as prestige, respect, social class, and courtesy dictated their behavioral action of giving food as a gift. They felt that if they go without any gifts their relatives will feel that they do not have any shame="lajja" & “sharam". A twenty four year old working woman and second wife said,

“They will think we are poor and so have not brought anything…”

While a 35-year-old working mother of two said:

“We take food when we visit house of our relatives as it is a matter of respect/“samman” and prestige for us…”

While few participants said that they give offerings of bread/“roti”, “sweets” during festivals like Shab-e-Barat, a fifty-five year old woman said that she offered food for God/Allah and sometimes served sweets in madrasah as she feels that she will be rewarded for it after death.

Food as hot and cold
Housewives participating in the focus group discussion perceived food as hot and cold. They said that

“Jackfruit/Kathal and mango/aam are “hot” and yoghurt/doi, watermelon/tormuj, tender green coconut water/daaberjol, cucumber/sasha, papaya/pepey are “cold”.

Housewives participating in the focus group discussion felt that during winter season they could eat well and they felt good, and during summer months they would eat less as when they ate a lot, they did not feel well.

Food Taboos
Most women we spoke to felt that pig and all dead animal products except fish are “haram”/prohibited to them on religious grounds. A seventeen year old mother and housewife said,

“We do not eat pig, snake, fox and tortoise like the Hindus do”.

D. Factors that influence perceptions and practices of food consumption
It was found that knowledge about food perceived as “healthy” and “unhealthy” and dietary practices were not always related, as social dimensions and economic factors influence food choices and hence consumption.

Food Preferences
However despite knowledge about the adverse effects of market food on health, participants from the younger age group and those in the working sector said that they enjoyed eating prepared food from markets. A twenty four year old married working woman said that:

“I prefer home cooked food as meals but I like snacks purchased in-between. I enjoy eating snacks from the market but it does not appease our hunger. We eat chanachur/a variety of fried food sold in the market and other food because we enjoy the taste .....(smiles)”

Cognitive factors such as the sensory perception of taste influenced choice and preference for market food among several participants including those in the working and non-working groups. They said that they ate because they liked the taste/“saadpaye” of the fried snacks that they purchased from the market.

Among the young working girls who participated in the informal discussion, peer and social factors played a role in influencing practices of food consumption. Young working women mentioned that the co-workers bring food from the market, share their food with others at the workplace. The experience of eating together is what they described as an enjoyable experience and a source of pleasure. Young adolescent working girls’ responses eliciting their pleasure included,

“We like eating food; we enjoy it (“moja”), feel good (“bhalolagey”, “monkore”). We feel happy when we all sit together and eat…”

Two working women of slightly higher age said that they ate outside as it is convenient for them.
When they could not bring meals from their home or when they were unable to cook, the food available in the market was the only available option.

Income
Fruits and milk were cited as preferred food by several women (4) interviewed and the participants of the focus group discussion but they could not eat the same as the income and purchasing power of the households was limited. A seventeen year old housewife and mother of a child, whose husband is ill and not working for the past one year, said that:

“Earlier when my husband was well he used to bring fast food/“moghlai” for us from the market 2-3 times a month. But now we do not eat anything from outside as we cannot afford it. We eat fish (once or twice a month), egg (three times a month), and we do not eat much green leafy vegetable. We cannot afford to eat meat….I like to eat Cocola noodles (She smiles as she tells what she likes). We used to make the Cocola noodles two to three times a month during our good times. Now we cannot afford to buy the Cocola noodles now…”

Market food was perceived as expensive by most participants. The two ultra poor households in the study did not eat prepared market food due to the cost. The two participants from ultra poor households mentioned that they did not prepare any food for social occasions as they could not afford it. When invited for any special occasions, they did not go as they were expected to give something and they could not afford to give any gift of food. A young 17-year-old housewife from an ultra poor household said,

“We cannot give anything and so we do not go when we are invited”

Women from the two ultra poor households could not make offerings to God. Cost is recognized as an important attribute that influences practices of food consumption.

Food perceived as unhealthy was eaten as the families could not afford to waste food. Several participants(4) interviewed said that eating stale food caused illness like diarrhea, but their families ate stale food. A working woman aged 24 years said,

“Stale food is not good. But we eat the leftover food from the night before. We do not throw the food as we cannot afford to waste food owing to lack of money/“abhaab”. Where will we get the money to buy food if we waste?”

Seasonal Factors. Two women interviewed, one from the working group and the other from the non working group and the housewives in the focus group discussion said that seasonal factors affect household income and thereby food consumption during certain months. During these months, they faced shortage of food and sometimes ate only two meals. A working woman aged 24 years, said,

“During the month of March-April/“chaitro” my husband, a rickshaw-puller does not get much money in his trade and during this period we consume less food. We cook only once and eat 2 or 3 meals and our diet consists of salt and rice or boiled potato”

While a pregnant housewife aged thirty five years, mother of three children said that:

“During the rainy season, my husband is unable to get any work and we have to take loans on interest from moneylenders. During that period we eat two rice meals with boiled potato/“aloobharta” and green chilies/ “marichbharta” and in the morning we have bread/“roti” with potato”

Age: Perceptions of elderly. Elderly women (2), who were participants in the focus group discussion and an elderly woman interviewed said that they feel that the food they eat now is adulterated/“bhejal” owing to contamination of all vegetables with pesticides. They feel that rain water washes the pesticides from the fields into rivers and this in turn contaminates the fish. An elderly woman aged 55 years, living with her son said,

“Fish sold in the shops these days are not fresh as they are preserved in ice and then sold in the market. Fish do not have any smell and don’t attract flies. Even the meat sold in shops is not fresh as it is preserved in the fridge and sold the next day.”

Two elderly women in the focus group discussion said,
“Food was healthy and nutritious before and there was no disease. The food we eat now is contaminated with pesticides/‘saar’. Eating food contaminated with pesticides is harmful and is leading to heart disease and cancer.”

**Age: Practices of Food consumption in elderly**

All the three elderly women who participated in the research study ate less food and had only two meals daily as they felt better. An elderly woman aged sixty years, a participant of the focus group discussion said,

“I eat less because I feel light/‘halkalagey’. If I eat less, I feel better. With old age there has been decrease in powers of digestion/‘hazamshakhtikomeyjaye’, hence I consume less dal and vegetables as I suffer from diarrhea/‘patlapaikhana’ if I eat more.”

**Illness: Food restrictions and change in dietary pattern**

Most women said that during an episode of fever they would eat only dry food items such as biscuits, “muri”/puffed rice and decrease consumption of food. During an episode of diarrhea, they would give Oral Rehydration Solution (ORS) and boiled soft rice with potato. One young working mother said,

“Mixture of turmeric and salt is beneficial during diarrhea. Light foods like biscuit and bread are beneficial while heavy food like fish and meat result in heaviness of the abdomen and diarrhea/‘patlapaikhana’ continues. During any illness, egg and milk provide nutrition, green coconut water keeps the body cool and fruits increase energy”.

A 35-year-old working woman, mother of two, said that her family does not eat rice meals when they suffer from fever as advised by their pharmacist. During focus group discussion with housewives, participants said that during illness like measles and chicken pox, food like beef, fish, and vegetables should not be consumed as they felt that the diet during that period should consist only of potato and rice.

**IV. DISCUSSION**

Our attempt was to find out different kinds of food consumed, common food consumed, factors affecting choice, symbolic role of food in life of people, perceptions of food as healthy and unhealthy and factors affecting perceptions and practices of food consumption.

Findings of the study show that the women of Bagnibari village eat different kinds of food both home-cooked and prepared food from the market. Home-cooked food constitutes their meals while they enjoy eating fried snacks from market as “in-between” food due to cognitive factors like taste. Working women have to eat food from market more frequently due to lack of time and convenience. Owing to influence of peer factors, young working women enjoy eating together and sharing food in the work place. The common food consumed in our study was found to be rice and potato, which constituted the meals. Meaning of food was symbolically associated with feeling of hunger and its fulfillment. While rice was perceived to be synonymous with food, the choice of potato was governed by the cost factor as the study was conducted among women from the lower socio-economic group. Perceptions of food considered as healthy and unhealthy were based on opinions of healthcare providers and others in the community. While unhealthy food was linked with certain health problems, healthy food was associated with health benefits. The study shows that consumption of food perceived as healthy or unhealthy is not determined solely by the nutrition value of food but is influenced by environmental (social and economic) and cultural factors. Old age influences perceptions and practices of food consumption with a person eating less. A study by Drewnowski & Shultz (2001) also shows a decrease in food consumption with old age.

The sample in the study consisted of women in the working and non-working groups; the women in the working group were found to have no financial control over their salary. This is consistent with the position of women in Bangladesh, where exists a patriarchal society; with low status and limited decision-making powers of women leading to discriminatory dietary practices among them (Helen Keller International, 2006). The qualitative study has been done in the rural setting which is becoming increasingly urbanized, owing to the presence of a large number of garment factories, resulting in increased opportunities for the women in the work sector. There has been a subtle shift in food consumption particularly amongst the more mobile working women with increased demand for non-traditional ‘fast food’ resulting from increased...
opportunity cost of women’s time (Regmi and Dyck, 2001). The diet consumed in the contextual setting is rice-based as in many Asian countries and the people in the study belonged to the low income group.

Studies have shown that cost of food is the most significant factor in determining food choice (Pollard, Kirk, & Cade, 2002). The type and amount of food available depends on the household purchasing power as nearly 50-60 per cent of the people do not have any farming land in Bangladesh and most food consumed is bought from the local market (Rizvi, 1988).

Social aspects such as atmosphere, mood and eating with others are important aspects of the pleasure gained from eating together and influences choice of food as has been shown in several studies (Pollard, Kirk, & Cade, 2002).

Societal conventions govern different acts of people such as giving food as gifts, making offerings to God or preparing food for special occasions. Food symbolizes a number of things for people and is deeply rooted in the culture and societal conventions and relationships (Helman, 2001). Rizvi (1988) demonstrated that socio-economic and cultural factors influence dietary practices of rural Bangladeshis in the brief ethnographic analysis.

Current health policies in all countries are focusing on improvement of nutritional health, particularly of women as they are more vulnerable biologically and socially. This is being done through implementation of nutritional programs that lead to healthy diet practices. However knowledge of what people perceive as healthy and unhealthy is important in designing the programs. Recognition of the complex factors that determine food choices is necessary to bring about any sustainable behavior change in practices of food consumption (Keane and Willetts 1994).

Promotion of health and nutrition should take into account differences that exist among diverse communities (Mackereth and Milner, 2007). Understanding the cultural perceptions and practices of food consumption of adult working and non-working women will help in effective design and is essential for successful implementation of any nutrition intervention programme targeting gender specific age groups.

A. Limitation:
Limitations in the study include a very small sample size as a result of which we could not reach specific conclusions. The time period was too short due to which the process of data collection was not exhaustive till a point of full saturation was reached. A Focus group discussion was conducted with women of all age groups; a homogeneous variable such as age could not be used owing to the limited time. Another limitation of the study was that there was not enough socio-economic diversity among participants. A standard definition for defining the socio-economic status was not used. During the course of the research study, etic perspective of the researchers’, both of whom were doctors sometimes came in the way of viewing the emic approach of participants.

V. CONCLUSION
The study explores the perceptions and practices of food consumption of working and non-working groups of women. Symbolic meaning of food is rooted in the cultural beliefs of the community. Rice/bhaat symbolized food for all and is integral to the perception and practices related to food consumption in the study. Findings among the small study group indicates that though food may be perceived as healthy, consumption of food is influenced by social and economic factors. Cognitive factor like taste of food also influenced consumption patterns. Among the working group, social interactions and peer factors particularly among the younger age group influence perceptions and practices of food consumption. Income of a household limits person’s choice and influences practices of food consumption. Age influences both perceptions and practices of food consumption.

In the broader social and political economy of Bangladesh, where there is increased urbanization, presence of a patriarchial society, widespread poverty and gender discrimination, the prevailing cultural practices and beliefs influence consumption of food in the community.

Recommendations
The sample size of this research exercise is very small. Our recommendation would be to take the research forward through a more specific approach to gain an in-depth understanding of the perceptions and practices of the food consumption of adult women in the working and non-working
sectors. This would take into account changing food preferences of working women, knowledge of which would help in the design and implementation of effective nutrition education messages.

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REFERENCES


PHARMACEUTICAL USE FOR COMMON COUGH AND COLD IN UNDER-FIVE CHILDREN

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ABSTRACT

Introduction: There is a burgeoning epidemic of antibiotic resistance in low-income countries, and pharmaceutical use is on the rise even in rural areas. It is important to understand how caregivers and drug sellers use pharmaceutical medicines in treating the common cold and cough in under-five children.

Methods: The researchers interviewed caregivers and drug sellers, observed drug sellers’ practices, and conducted social mapping with caregivers in Bagnibari, a village transitioning to a peri-urban area in Savar, Bangladesh.

Results: Researchers found that caregivers use pharmaceutical medicines extensively in treating the common cold and cough and that drug sellers recommend the use of pharmaceutical medicines. However extensive antibiotic use was not found. Drug sellers gave instructions on the use of the pharmaceutical medicines that caregivers followed, and caregivers considered drug sellers their main source of information. Drug sellers said they had completed a governmental training course.

Conclusion: Because some caregivers perceived drug sellers as uneducated and there is no follow-up training, visible knowledge dissemination should be started with drug sellers. Medicalization and urbanization are impacting the treatment of the common cough and cold of under-five children.

Key Words: under-five children, drug use, pharmacy, Bangladesh, common cough and cold

I. INTRODUCTION

Acute respiratory infections are one of the two most common causes of under-five mortality among children [1]. Pneumonia alone accounts for 20 to 40% of childhood deaths worldwide [2]. In Bangladesh, respiratory infections at all ages kill 129.5 per 100,000 people, a tenth of all deaths [3], and there is an estimated tripling of that number due to comorbidity [4]. However, the least severe form of a respiratory infection, the common cough and cold, receives little attention.

As western biomedicine becomes more embedded throughout the world, pharmaceutical medicine use is increasingly prevalent. They are sold in an unregulated fashion outside of OECD countries, which can lead to drug stalls (pharmacies) permeating a village [5,6]. The drug sellers are generally receive little education about the pharmaceutical medicines they are selling. They are also encouraged by medical representatives from different pharmaceutical companies who are eager to add another person to their client list [5]. Drug sellers push these drugs on their customers, who rarely know better and treat the drug sellers as “mini-doctors.” It is in this environment that children suffering from the common cold and cough seek to be treated. How is their cold and cough treated by caregivers and drug sellers? The researchers tried to find out the answer to these questions with this study.
While usage of pharmaceutical medicines is prolific, several points demarcate the importance of antibiotics in this study. There is a burgeoning epidemic of antibiotic resistance [7], which directly impacts treatment of the common cough and cold. In most low-income countries, antibiotics are usually the most prescribed and used pharmaceutical medicines taken for many ailments [6, 7, 8, 9, 10]. They are also frequently misused because of the high cost of completing a full dose [11] and lack of knowledge on the part of the drug seller and the caregivers of children [6, 8, 12].

In Bangladesh, a study was done in 1994 on attitudes towards acute respiratory infection treatment by mothers in Matlab [13], but the researchers did not find a published study about the use of pharmaceutical medicine in the treatment of common cough and cold among the under-five children.

The objectives of this paper were to find the knowledge, perceptions and practices of caregivers and drug sellers in relation to using pharmaceutical medicines in treating the common cough and cold, the sources of information for the caregivers and drug sellers, and factors associated with use and non-use of pharmaceutical medicine in Bagnibari village.

The operational definition of a pharmaceutical medicine is a biomedical drug produced by a pharmaceutical company and purchased at a local pharmacy.

II. METHODOLOGY

This research was undertaken as an exploratory qualitative study based on grounded theory. Grounded theory is a reverse type of traditional research theory where data is collected first instead of developing a hypothesis; collected data is analyzed to create theories. It is particularly useful in situations where there is little literature or when a new topic is being studied.

2.1 Setting
Bagnibari, a village in Savar, is undergoing urbanization as highways and multiple roads are being constructed, and communication with Dhaka becomes easier. There are many factories (garment and furniture) surrounding it, as well as land cultivating paddy and other forms of farming land. In the nearby Akran Bazaar, pharmaceutical use is widespread, and they are easy to access with seven pharmacies in the small village. Six of them are situated at the corner of Akran Bazaar and one 1.5 km north from the corner of Akran Bazaar.

2.2. Sample population
Two target groups were identified- caregivers of children under five years of age and drug sellers from local pharmacies.

2.3. Data collection, Ethics, and the Process
During the short data collection phase, the research team identified and spoke with four drug sellers and 15 individual caregivers. The Bengali-speaking researcher would approach households to ascertain willingness and availability, and if the residents had under-five child children they were requested to participate. Drug sellers were approached similarly, with the additional request for conducting observation in their pharmacies. All observations were over the period of 2 to 3 hours. Verbal informed consent was taken. Purpose, risks, and benefits were explained, and participants were told they could stop the interview or ask the researchers to leave at any point if they were not comfortable with their presence or questions.

Caregivers were interviewed via a prepared guide, who also participated in a social mapping exercise (map of pharmacies). A focus group discussion was held with several caregivers. During each activity, the non-Bengali speaker would take detailed observational notes to corroborate findings from the translated interviews.

Drug sellers were both observed and interviewed. Three of the drug stores at the corner of Akran Bazaar and the distant one were visited on different days and different times. The presence of the non-Bangladeshi researcher provided unwarranted distraction because she was female and American, and crowds clustered at every pharmacy which affected the usual nature of the drug sellers’ business. Due to this and other responsibilities, only the Bengali speaker was present during two observations. However, both researchers were present in every interview.

2.4. Data Analysis
Verbatim transcripts were prepared directly after return from the field. In this way, both written and verbal data were transcribed before they were forgotten or lost. Transcripts were coded manually and organized with the help of Atlas. Individually
before comparing and finalizing the coded transcripts. Through an iterative process of coding, certain themes began to emerge from the data.

III. FINDINGS

There are seven pharmacies in Bagnibari, and all the caregiver participants lived within a fifteen-minute walk of a pharmacy. Most of them lived within five minutes. The participants had varying socioeconomic statuses, as evident by their houses and clothes. One participant had a mud house with reed roof; her clothes and those of her children were worn, though clean. Others had tin roofs and concrete walls. Only one participant had a compound of several houses, a large courtyard, goats, cows and chickens with troughs for feeding and watering, and electricity.

The drug stalls were all well-kept. All but one drug stall had a curtain separating the backroom from the front sales counter, either for storage or because they once had a visiting doctor. Pharmaceutical medicines of any kind were available without prescription. This is a common practice in Bangladesh. All drug sellers reported that business was going well.

Overall, findings showed that pharmaceutical medicines were used extensively to treat the common cold and cough in under-five children. They were demanded by caregivers and recommended by drug sellers. Both drug sellers and some caregivers had some knowledge about the signs of severity associated with coughing.

A typical experience of one caregiver coming to the drug seller is as follows:

| Saima came with her child, Mahmud, and said, “Doctor bhai, please treat my child. His father will pay you later.” Aftab, the drug seller, asked, “What happened?” Saima replied that he had fever. Aftab put his hand over the child’s forehead and asked why it was wet. Saima replied that she had poured some water to reduce the fever. “How old is he?” the drug seller asked. “Four years,” Saima answered. Aftab asked if other drugs had been given to Mahmud, and Saima said No. The drug seller took out two bottles of syrup, Amoxicillin (antibiotic) and Napa (painkiller). He wrote on a piece of paper how many tea spoons should be taken per day. The total cost of drugs was 75 taka (USD1). |

Aftab, a typical drug seller, was concerned about the appropriateness of Saima’s treatment of baby Mahmud and checked to see if Mahmud had a fever before prescribing. Unusually, in this instance, he sold Amoxicillin, an antibiotic in the penicillin family, along with Napa, a painkiller. But he asked if she had used anything else, either to make sure there would be no drug reaction or to make sure that the child had not already been taking antibiotics. Although he did not ask if she was literate, he still marked the packages of drugs with slashes to indicate the number of doses per day. Saima, after trying her best to reduce her child’s fever, came to the drug seller to seek his advice. Trusting the drug seller’s advice, she took the drugs home. In this small community, families knew each other, and the drug seller was willing to wait for the father to pay later.

3.1. Factors Associated with Use and Non-Use of Pharmaceutical Medicines

There are several factors that are associated with pharmaceutical medicine use and non-use, including delay, desire and cost. Most caregivers would attempt to cure childhood illnesses first with herbal medicines, like tulsipata and bakoosh pat (leaves of medicinal plants), before going to the pharmacy. So there was a delay factor involved in using pharmaceutical medicines. A mother would try the herbs for two to three days, and if it does not work, they would go get syrup from the pharmacy.

Cost was not an issue because drug sellers allowed their customers to pay for part of the purchase and finish payment at a later date. Multiple women at the focus group agreed that this was quite common. However, some caregivers said that they or others might choose medicines based on how much money they had. An educated, middle-class mother said that others would ask for the better drug even if they cannot afford all the medications.

Since all participants lived in walking distance from a pharmacy, distance did not seem to be a factor. However, one participant stated that pharmaceutical medicines were cheaper in Savar than they are in Akran Bazaar. Although it was only a difference of 5 taka but of course one needs to take into consideration the cost of transportation from Bagnibari to Savar. Akran bazaar was just round the corner and Savar bazar was far.
3.2. Sources of Information about Pharmaceutical Medicines for Caregivers and Drug Sellers
Both caregivers and drug sellers had various sources of information which constructed their beliefs and practices.

For the drug sellers, the main source of information was their experience in selling drugs in a pharmacy for a variable period of time. The most commonly cited training course was the “licentiate medical faculty” (LMF) course, a course initiated by the Bangladesh government that trains people for six months to two years about pharmaceutical medicines and their common use, as well as the most common diseases and their treatment. Some of the drug sellers in this study also worked for MBBS doctors before becoming a drug seller or they had observed doctors in hospitals. It was a family business in only one case and that drug seller said he also took part in an LMF course.

Sources of knowledge for caregivers included the drug sellers, their neighbors, learned practices in the family and only infrequently the private clinics they had previously gone to.

3.3. Perceptions of Caregivers in Relation to Using Pharmaceutical Medicines
14 out of 15 caregivers perceived that a syrup (mild painkiller and antipyretic Paracetamol) was the best treatment for common cold and cough among children. Few preferred a powder suspension. Most knew about herbal remedies, and all but one sought to use herbal remedies first.

Finishing the drug regimen was very important to nearly all the women because money had been spent, and the illness would not be completely cured unless all the syrup was taken.

Two caregivers perceived the local drug sellers to be uneducated, which affected their use of pharmaceutical medicine. One believed that the drug prescribed by the drug seller might kill her child. The other woman wanted her child cured immediately. She thought that the local drug seller did not have the education to cure her child so fast. Most caregivers had the perception that pharmaceutical medicines were important to cure their children. One stated that she would “go to the pharmacy first,” and another said that the herbal medicine “used to work before the medicine was available,” but because the medicine is available, she would go and buy that anyway.

Disposal of the medicine was also discussed. All participants stated that they discarded the bottle after the child was better. It was perceived to be dangerous to use expired medicines by several women. An educated, middle-class caregiver said that using expired medicine “creates a reaction, and you can die from it.” She knew someone who had been “severely” sick from using expired medicine. All caregivers said they discarded bottles appropriately. Several discarded bottles were noticed in the backyards of caregivers.

3.4. Perceptions of Drug Sellers in Relation to Using Pharmaceutical Medicines
Drug sellers had varying perceptions on the use of pharmaceutical medicines to treat the common cold and cough. Some did not offer antibiotics and only offered syrups like Napa. Some thought that low-dose antibiotics were appropriate and would give a higher dose if it was not effective; one recommended it immediately. One drug seller preferred SQUARE brand medications over others but did not give a reason. SQUARE was considered a prestigious and trustworthy pharmaceutical company of Bangladesh.

A drug seller had the perception that doctors overprescribed antibiotics in an attempt to cure a patient in their first visit, thus making them more willing to come back. One of the mothers also agreed with this opinion. The same drug seller was worried about antibiotic resistance in his village.

3.5. Practices of Caregivers Relating to Using Pharmaceutical Medicines in Treating the Common Cough and Cold
Some caregivers try home remedies for two or three days before going to the pharmacy. Other caregivers go to a pharmacy in Akran Bazaar within a day. One differentiated based on age because the cough and cold is frequent among infants (under one year). All caregivers said they followed the directions of the drug seller in relation to use, meaning they gave the medicine to the child the prescribed number of times a day and the prescribed number of days or until the bottle was empty.

Caregivers said they would buy the medicine that the drug seller recommended regardless of cost, but most also said the final decision was their own.
They also chose specific medicines that had worked previously before buying other recommended medicines. All caregivers recommended the use of Napa syrup for the treatment of under-five children with cough and cold.

Napa syrup is a paracetamol syrup that contains 120 mg of paracetamol per dose of 5 ml syrup. Other medicines purchased or described by caregivers included Amoxicillin, Histacin (Antihistamine), Cef3, DiCef, Sefrad (different local antibiotics) and unnamed antibiotics.

**List of Pharmaceutical Medicines Used in Treatment**

Caregivers usually did not use antibiotics to treat the common cough and cold. They would only use them when the cold was severe in most cases because of the worry that the antibiotic would harm the children.

<table>
<thead>
<tr>
<th>List of the most commonly used drugs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Napa syrup</td>
</tr>
<tr>
<td>Histacin syrup</td>
</tr>
<tr>
<td>Tyrosin syrup</td>
</tr>
<tr>
<td>Amoxicylin syrup</td>
</tr>
<tr>
<td>Cefradin syrup</td>
</tr>
</tbody>
</table>

Caregivers associated several factors with coughing severity: wheezing, vomit, chest in drawing, sunken eyes, and loss of appetite.

### 3.6. Practices of Drug Sellers in Relation to the Use of Pharmaceutical Medicines in the Treatment of Common Cold and Cough among under-five children

Drug sellers would measure the temperature of children present when the caregiver came for medicine if they had a thermometer, which was noticed in two of the pharmacies. All asked the mothers for the symptoms. The usual process of prescribing included verbal instruction by the drug seller about the use of medicine. The drug seller would mark the packet for the caregiver. They would instruct them to discard the syrup at the end of treatment or after using it for five to seven days. One said to stop treatment of Napa syrup when the fever was gone, but others said to use it for the entirety of the prescribed treatment.

Their most frequent recommended drug was Napa syrup. Other drugs were antihistamines (Tysin), prescribed in a similar way, and antibiotics. One drug seller in particular recommended antibiotics to most customers coming to his pharmacy. Some drug sellers also recommended a home remedy to reduce fever: pouring cold water over the child’s head.

Drug sellers occasionally referred customers to doctors when the child had a severe cough, high fever, or if the medication had not made the child better. They also accepted partial payment if a customer could not afford the full cost of the medicine at the time when their child was sick and they needed to buy the medicine immediately.

### IV. DISCUSSION

The findings organized themselves into several themes. Broadly, caregivers and drug sellers existed together in an amicable relationship where caregivers would mostly depend on drug sellers to treat their children, and drug sellers would take that relationship quite seriously. Most importantly, pharmaceutical medicines were used commonly in the treatment of under-five common cold and cough by caregivers and recommended by drug sellers, and children were given low-impact medicines because caregivers and drug sellers were very concerned about medicinal effects on their children.

#### 4.1. Factors Affecting the Use and Non-Use of Pharmaceutical Medicines

The factors affecting the use of pharmaceutical medicines were cost, desire, location, and delay. Cost was rarely an issue because of the relationship between the drug sellers and the locals. Also, location was not a large factor because all participants were relatively close to a pharmacy. Delay was the largest factor that related to the use of other kinds of medicine. 14 out of 15 caregivers would use herbal remedies before using pharmaceutical medicines. Because of the poverty in the village, it was likely that they sought to use locally-grown herbs available in gardens and nearby shrubs before spending their hard-earned money on pharmaceutical medicines. Because caregivers could list the signs of a severe cough and cold when asked and could speak of occasions when they went to the clinic or drug seller immediately upon recognizing those symptoms, delaying the treatment of a severe cough or cold did not seem to be usual in severe cases.
All participants stated that they used pharmaceutical medicines. Whether this points to the medicalization of Bagnibari or a desire to become Westernized is beyond the scope of this research. But the participants stated that they would no longer go to local healers when pharmaceutical medicines were available because they now had the knowledge that the latter were more effective. However such responses could also be influenced by the presence of a western researcher.

4.2. Sources of Knowledge
According to our findings, drug sellers were knowledgeable about pharmaceutical medicines. However, they did not translate all of their knowledge to their customers, the caregivers, who were found to receive most of their knowledge from the drug sellers.

Most caregivers were unaware of the actual use of the pharmaceutical medicines they were giving to their children. While this problem is not unique to Bagnibari or Bangladesh, it does highlight an unmet need for health information in the community. There is an information gap that needs to be bridged between the drug sellers and the caregivers about the pharmaceutical medicines themselves. This also addresses the issue of the legal status of the drug sellers as prescribers of pharmaceutical medicines such as antibiotics.

4.3. Perceptions of Caregivers and Drug Sellers
Caregivers and drug sellers both perceived the best pharmaceutical medicine to be Napa syrup, a paracetamol syrup. This is fever and pain reducing syrup and appropriate for the treatment of the common cough and cold.

A concern brought out in the study was the length of use and how long one should use the medicines to achieve the best efficacy. Some participants only used it for a couple of days and went to a private clinic if the symptoms did not decrease. However, since it was not a strictly regimented medicine, stopping the use of paracetamol was not though to affect the child’s recovery.

Caregivers also used the knowledge from drug sellers and perceived that discarding the syrup bottles after the illness was very important. This led to them not saving the medication or possibly avoiding bad or expired medicine the next time a child was sick.

4.4. Practices of Caregivers and Drug Sellers in the Use of Pharmaceutical Medicines
All caregivers except one actually preferred not to use antibiotics unless necessary because they believed it was dangerous for children to have too many antibiotics. In our effort to triangulate, it was found that the drug sellers (except one) tried to either not prescribe antibiotics or prescribed a low-dose antibiotic, if necessary. The antibiotic calamity spoken of the literature is not present in Bagnibari based on these findings [7].

Caregivers said they were given verbal instructions on how to use the pharmaceutical medicines, and dosage was marked on the packet. Drug sellers were observed giving these instructions with every pharmaceutical sold for a child. While some caregivers asked for specific medicine instead of asking the drug seller for a recommendation, they were still given instructions on how to use it to cure their child. This was in opposition to earlier literature that says there is a lack of knowledge [5, 6, 8, 12]. The instructions given were appropriate for the medicine.

As discussed in the previous section, Napa syrup was considered to be the best pharmaceutical medicine and was the most used and recommended.

4.5. Limitations
Only one person spoke Bangla, which made interviews and note-taking a challenge. The time of the study period was short, so full data saturation could not be reached. It was also very difficult to know when drug sellers were performing for the researchers rather than conducting business as usual. One drug seller admonished a customer for using the wrong word because the observer was
taking notes. Researchers were also unsure as to whether the research topic and subsequent interview questions would lead caregivers to speak more about pharmaceutical medicines; however, this limitation was not much of a handicap through the triangulation of drug seller observation and yard debris findings. The interview guide was structured to not immediately specifically ask about pharmaceutical medicines but rather their general treatment strategy for the common cold and cough. There was no funding available to recompense drug sellers or caregivers for their time, which led to less than amiable drug sellers for subsequent researchers. Because the study was limited to the common cold and cough, asking about pneumonia or severe coughing could have given different results.

V. CONCLUSION

This study gives a picture different than the literature available on the subject. Evidence shows that caregivers do not generally use antibiotics for the common cold and cough, nor are the drug sellers uneducated; while a certificate can be faked, and bribes can be readily used, each drug seller actually detailed parts of their education, which seems to be true.

Themes also came under two larger factors: urbanization and medicalization; as discussed earlier, it is unknown exactly what effect either has, but caregivers prefer medicines and have greater access to them than they previously had. As a caregiver mentioned, if the medicine works best, there is no need to treat it in another traditional or cultural way.

5.1. Recommendations

More research should be done on this topic to see if findings are generalizable beyond the village of Bagnibari. Also, since one drug seller believed in the importance of a particular brand of medicine, more information should be found on the practices of medical representatives and the quality of different brands, despite the limitations delineated in the Bangladesh Health Watch [5]. A new intervention should be established to improve the knowledge of the drug sellers in a visible format to make the community aware of their education.

Acknowledgements

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UTILIZATION OF A LOCAL GOVERNMENT HEALTH CENTER:
COMMUNITY AND PROVIDER PERCEPTIONS FROM A
BANGLADESHI VILLAGE

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ABSTRACT

Objective: To explore the contributing factors for the utilization or underutilization of a local government health center from the community member and health provider perspectives in a rural village of Bangladesh.

Methods: In-depth interviews, focus group discussions, participatory rural appraisals, informal discussions, and observations were conducted among lower socio-economic community members and health providers.

Findings: The main contributing factors for the utilization of the local government health center from community members and providers were free service, accessibility, and availability of service. The main contributing factors for the underutilization of the center were lack of health personnel and medicines, as well as staff behavior towards patients.

Conclusion: Numerous factors affect the underutilization of the health service in rural Bangladesh. These critical factors must be explored further and considered in the design and implementation of health programs to meet the needs of communities in order to improve utilization and the health status of the population.

Keywords: Utilization; Provider; Local health center; Accessibility; Free service; Absenteeism;

1. INTRODUCTION

Background
The Bangladesh National Health Policy adopted in 2000, ensures quality institutional health care, universal access to health care, and improves the availability of health care personnel. The policy prioritizes targeting rural communities in order to provide affordable cost effective services; however, this has not been observed in rural Bangladesh (WHO, 2007 & BHW, 2009).

Despite the government’s effort of decentralization in the health sector in the late 1990s, little has been done in providing local need and community participation (Chowdhury, 2005). Government health services are free to the public; however, this may not influence the public in the utilization of services (WHO, 2007). Specific contributing factors found in Bangladesh that influenced the quality of care of government health facilities included: adequacy of staff and their attitudes...
toward clients, supplies, drugs, waiting time, client satisfaction, management, technical efficiency, sufficient funds, physical infrastructure, and operational rules. This study found that rural facilities were in critical need (BHW, 2007).

Regarding utilization (Habib & Vaughan, 1986) or underutilization (Krishnaswamy, et al., 2009 & Agyepong, 1999) of the health services, various factors were found in different literature. Underutilization has been a major public health problem in low-income countries, such as Bangladesh. Major issues such as inaccessibility, lack of human resources and essential drugs may contribute to underutilization. Facilities may not always be accessible due to the fact that there is only one health center per 100,000 people (WHO, 2007). However, most rural facilities have exemplified a lack of sufficient staff in managing facilities due to the fact that most providers would not accept a placement in a rural area or even if they do, they would usually be absent (Chaudhury & Hammer, 2003). In addition, rural centers do not store all 20 essential drugs (BHW, 2009). Previous studies have examined the quality of care of facilities and have shown that quality of care may not be linked to patient’s satisfactions and perceptions regarding the issue. In order to create program interventions that tailor to the needs of people utilizing rural health facilities in Bangladesh, examination of both community and provider perceptions are necessary (Aldana et al., 2001).

**Objectives**

Our main research question was what factors influence the utilization of a local government health center in rural Bangladesh to recognize the underlying factors at the grass-root level. Our specific objectives were to explore the services available at the health center, understand the common users, and explore underlying factors as well as to gain community and provider insight for improving the health center. The study aimed to demonstrate the perceptions of the community and providers regarding the utilization or non-utilization, with an aim to find ways to improve the current services at the community level.

**II. METHODOLOGY**

**Context Setting**

Our research was conducted in a rural village in Bangladesh, which is approximately 45 km from the capital city. The local health service includes traditional healers, pharmacies, and the local sub-center government facility. Our study focused on the local government health center.

**Study Design and Conceptual Framework**

![Conceptual Framework](image)

Our study was a qualitative exploratory design to fit for our purpose of understanding the complexity, meaning, and social context of barriers including behavior, experience, and attitudes surrounding the utilization of the local government health center. Grounded theory was used in order to observe themes and trends that appeared as data collection and analysis were done. The conceptual framework gives an overview of the broad perspectives (figure shown above). There are many factors from provider side that influence the utilization of a health service such as human resources, services offered, and supplies. Factors related to the users could be: accessibility, socio-economic status, cost of the service, and the expectations of the services provided. Existing policies and local factors like traditional healers, private providers and NGOs could also have significant role in the perception and utilization. All these factors were the basis for assessing the perception of community and providers as given in the framework.

**Sampling**

A convenience and purposive sampling was in use for data collection to overcome time constrictions, as well as to fulfill the pre-selected criteria of the participants consecutively.

The sample population consisted of community members of the rural village including men and
women, a traditional healer, an NGO worker, and local government health workers: medical officer, a messenger, and pharmacist. The participants’ occupations in the men’s focus group varied within teacher, businessman, factory worker, Imam (religious leader), and seasonal or part-time agricultural worker. Whereas, women in the focus group were all housewives, and of lower socio-economic status, mostly without primary school experience. On the provider side, we captured the view of the community members working at the health facility (government staff) and an NGO worker working at the health center.

Data Collection
We collected data through in-depth interviews (6 in total), Focus Group Discussions (2 FGDs, 1 for men and 1 for women), informal discussions, Participatory Rural Appraisals (PRAs), document review, and observation with complementing tools. Thesocial mapping demonstrated a good understanding of the layout of the village.

We created different guidelines and checklists for the interviews and focus group discussions, and PRA exercises and observations. These questions came directly from our specific research questions, literature review, and conceptual framework. We conducted an informal interview to pilot the questionnaire and a social mapping exercise in order to pilot our checklist. Owing to a dynamic community co-operation, we followed a flexible schedule.

Data Analysis
We used varied data that were cross-checked from different sources, andwith different methods and tools. This helped to ensure the quality and reliability of the information. We found it very important to understand both the perceptions of providers and community members through comparing and contrasting the experiences of the two groups.

During data collection, one researcher interviewed while the other two took notes, paying special attention to the body language, intonation, and facial expressions of the participants. All the transcripts were typed by all three researchers present, in order to fill the gaps due to language barriers (Annex 1) and then were coded from a list based on factors that might influence people from utilizing or not utilizing the health facility. With the compiled coded data, a new chart was createdin Microsoft Excel describing the main themes within the community and provider perspectives. Through the chart we were able to extract the main findings of our research.

Ethics
Each guideline and checklist consisted of an informal verbal consent. Before collecting any data, we obtained consent from the participants and family members. We emphasized confidentiality, and clarified that answering the questions was completely voluntary and one could leave at anytime if they so wished. We also asked for permission to take photographs.

III. FINDINGS
We proceed to articulate findings through the perceptions of providers and community members: the services of the health facility, primary users, factors influencing utilization and factors influencing underutilization, as well as opinions about future improvement of the situation.

The ‘Medical’
The local government health center, known by the community as ‘medical’ was established in 1975 and was donated by a social worker. The government started managing it in 1980. It is a large two-storeyed building located on the main road and about half a mile from the local bazaar, creating easy access. When passing the structure, even we were confused of the purpose of it as there was no sign indicating that it was a health center. People would not know that it was the local health center for the community unless someone informed them. The posters in the wall with health messages were worn-out and the windows were broken. A local elderly man mentioned that the door was locked most of the time. No water supply or latrines for the facility was found. The doctor also complained that there was not enough water for TB smears, and they managed to get water from a nearby house.

The lobby of the health center consisted of numerous benches, a bed, and a couple of posters with written materials including information regarding contraception and TB. Many doors branching off the lobby were locked; however, there was a waiting room, a medical officer’s room, a TB laboratory, and a room for storage and dispensing medicine.
Services
The services provided by the center, reflect a typical primary healthcare delivery system of rural Bangladesh. This is the patient’s first point of contact with a government health service. The two wings of the health care services are: Health and Family Planning. Under the Health wing there is medical outpatient service staffed by one medical officer, one medical assistant, and one pharmacist. There is also a messenger who carries medicine from the Upazila Health Complex to the sub-center. Under the Family Planning wing is one medical assistant, one pharmacist, and one family welfare visitor.

Major services offered are outpatient services, free medication, family planning including ‘tika’ (immunization) and ‘gorvobotiporikkha’ (antenatal check-up), and also there is a TB smearing laboratory provided by both the public and private sector (NGO).

An interview with a villager revealed that there was no diagnostic facility, emergency service like delivery for a pregnant woman, service for acute illnesses, or services to deal with injuries. He said, “What is the point of a center for only cough and cold”?

Primary users
Both providers and community members explained that primary users of the health center were mostly women, children, and mainly the poor people. Documents reviewed at the center (outpatient registration book and disease profile), showed the following data:

<table>
<thead>
<tr>
<th>Age group</th>
<th>Numbers utilizing the service</th>
<th>Percentage (%) utilizing the service</th>
<th>Men</th>
<th>Numbers utilizing the service</th>
<th>Percentage (%) utilizing the service</th>
<th>Total Numbers of people utilizing the service</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-11 months</td>
<td>12</td>
<td>60</td>
<td>8</td>
<td>40</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>1-4 years</td>
<td>43</td>
<td>57</td>
<td>32</td>
<td>43</td>
<td>43</td>
<td>75</td>
</tr>
<tr>
<td>5-14 years</td>
<td>54</td>
<td>56</td>
<td>43</td>
<td>44</td>
<td>44</td>
<td>97</td>
</tr>
<tr>
<td>15-49 years</td>
<td>145</td>
<td>69</td>
<td>64</td>
<td>31</td>
<td>31</td>
<td>209</td>
</tr>
<tr>
<td>50 and above</td>
<td>83</td>
<td>62</td>
<td>50</td>
<td>38</td>
<td>38</td>
<td>133</td>
</tr>
<tr>
<td>Total</td>
<td>337</td>
<td>63</td>
<td>197</td>
<td>37</td>
<td>37</td>
<td>534</td>
</tr>
</tbody>
</table>

Source: Disease profile, January 2010

Factors influencing utilization

Free service, a priority for the poor
A woman at the FGD explained, “I can get my medicine free of cost when I’m ill.”

Most people we spoke with who were of lower socioeconomic status explained that they utilized the center due to the free service. Yet, the non-poor told us that they did not use the facility due to the low quality of the services. During our men’s focus group discussion, the Imam (the religious leader) and teacher explained that usually poor people only go there to use the free services. Upon our observation we found people still used the free services, even if the amount of medicine was insufficient.

A poor housewife who was a regular user of the health center commented, “Treatment is treatment and government is government”, indicating the questioned quality of the service.

From our FGD, we found people of higher socioeconomic status also took advantage of the free services in order to get the prescriptions from the qualified doctor even though medicines were not available. Although they would not admit using the free service.

Transportation and location
The participants claimed that people not only living across the street but from the entire union would come to the facility for the service. We also found that the facility was well connected with local
transportation services such as rickshaws and buses that passed frequently in front of it. The NGO worker said that distance was a factor for the underutilization of the center. One provider explained that local people tended to use it the. However, the location of the facility did not hinder people from remote areas to utilize the services provided.

For the sake of health
Most people who were using the health facility went for common ailments such as cough and cold, fever, diarrhea, dysentery, stomachache, scabies, and weakness. Women used the facility mainly for family planning services like, ‘bori’ (pill) and ‘shui’ (injection), while men went to acquire information about vasectomy and other contraceptive methods. During the FGD most participants mentioned that one of the main reasons for utilization of the facility was the existing services it provided.

Factors influencing underutilization

Bhut (ghost) doctors
Absenteeism and unavailability of the health personnel were possibly the main reasons for underutilization. A young businessman who used to run a pharmacy had an explanation. According to him, people would make an effort to go to the facility only to find no one there. After such experience they would hardly come back for service the next time and would prefer to use a pharmacy or a private clinic instead.

A day laborer described that the medical officer was never there and therefore he never went to the facility. In reality, we found the current medical officer available at least four days a week, although for a short period of time. However, due to a long tradition of the doctor’s absence in previous times, people perceived that no medical doctor would be available in the health center. As a result, the patients would still choose alternatives to the health center. The scenario was even worse for family welfare staff who were reported to be absent by both the clients and some providers.

Staff behavior
Community members mentioned that they deliberately did not go to the service due to the unfriendly behavior of the staff. Repeatedly, people complained that the staff were quite rude and especially towards the poor. During the women’s focus group discussion, one woman commented, “charalchaitokharap” (indicating severe rudeness found within lower caste people). Most staff was described as rude and scornful. One woman said, “valadakter dam dekhai” (good doctor shows pride). Also interesting was that the medical assistant and the Pharmacist were known as ‘doctors’. So it was often confusing which doctors they were talking about.

During the men’s FGD, two members explained that they always got good treatment from the staff, but it could be due to their higher status in the community. The traditional healer expressed the same opinion. However, most participants explained that the staff behavior was very unfriendly, especially towards the lower income patients. Few members explained that they were willing to pay more money at a private clinic just to get good behavior and respect from the providers.

Supply of medicine
Availability and supply of drugs emerged as a concern from most community members and providers. Participants explained that no matter what illness they had, the same treatment was always given; for example, Paracetamol. This was prescribed for stomach-ache, headache, and any kind of pain. When people repeatedly got the same treatment for different health problems, they preferred to go to the pharmacy to get advice from the drug sellers.

Women during the FGD mentioned that they rarely got more than 6 tablets when visiting the health facility. During our observation, we found that patients were receiving even as few as two tablets. The cough syrup usually was divided into three parts into a container that the patient had to bring themselves. The staff dispensed similar drugs for common illnesses because there were no other drugs available in the center. In the past, there were times when there was no drug supply for more than three months.

Most community members expressed that the leakage of medicine was present within the system. One business man described that the medicine of the facility was being sold by the staff to local pharmacies. They indicated that for the center to function properly corruption must be overcome. A woman from the focus group also mentioned that she thought she saw the same medicine from the facility being sold in a nearby pharmacy. The medical officer said the yearly budget for medicine
was 75,000 taka (approximately 100 USD). However, the health center received medicine worth only 60,000 taka from the Upazila Health Complex (UHC). He was very upset and said, “Where did the rest of the medicine worth 15,000 taka go?” The pharmacist explained that the medicine was supposed to come from the UHC every four months, but that was rarely the case. When the facility ran out of medicine, they had to ask for more from the complex and it took time.

**Improvement suggestions by community and providers**

From our study, some suggestions emerged from the participants regarding the future improvements of the health center which could result in better utilization. Suggestions regarding the facility from community members and providers varied. Health provider perspectives were that there was a need for better supply of drugs, basic water and electricity, political commitment, community motivation, supervision, and effective and apparent management.

Community members suggested improvements such as: an emergency service for obstetric care and injuries, increased quantity and variety of medicine, a system for long stay patients, a proper water supply, a facility designed for staff in order for them to stay in the locality, involvement of community members and politicians in running the center, presence of health specialists, more information for the public regarding services, overcoming corruption, improving the staff behavior, and a thorough investigation of the clinic.

**IV. DISCUSSION**

Our study represents two major themes: factors influencing the utilization and factors influencing underutilization of the local government health center.

We found from our research that there were core factors influencing the utilization of the local government health center such as demographics of the sample population, available free service, facility access, curative and preventive services provided by the center. Core factors such as absenteeism of health personnel, staff behavior, and problems with the availability of medicines influenced the underutilization among community members.

Our study asserts that free service seems to be a major incentive for people to utilize the facility and had a direct link to the socioeconomic status of an individual. Habib and Vaughan (1986) suggest that indeed economic factors of an individual are imperative when explaining utilization patterns, e.g., when free services were available, many more clients would take part.

Regarding accessibility, usually the greater the distance of the service from the individual’s house the greater is the underutilization of the service, is evident in existing literature (Habib and Vaughan, 1986). In contrast, our study findings reveal that there was no barrier to the utilization of the health service depending on the location of a person’s homestead and the health facility. Not only providers, but also community members mentioned that people traveled from remote areas for free services. However, most of our participants lived in close proximity to the health facility which might have biased our findings regarding accessibility and its influence on utilization. Studies have found that in lower income countries health services were utilized by people living in close proximity and that there was a significant drop of utilization from people living further away (Krishnaswamy et al., 2009). The reduction of utilization can be due to excessive costs from transportation (Habib and Vaughan, 1986). People in our study explained that there was good transportation and that the health facility, though in a rural area, was easily accessible from remote areas. This was one area where we found different results than what literature suggest.

In our findings, health center opening hours were only during mid-day for about four hours. Men utilized the health center in lesser numbers in comparison to women. It may signify the opportunity cost of coming to the center even if free treatment was available. Income loss can discourage low-income generators from utilizing health services (Habib and Vaughan, 1986). Our study underpins what Islam and Ullah (2009) states: that utilization and participation in rural health complexes in Bangladesh was dramatically higher among women than men. Some other studies have also shown that in many countries women usually seek out treatment more than men (Krishnaswamy et al., 2009). However, in some patriarchal societies like in Pakistan and Ghana, men tend to utilize health services more than women (Krishnaswamy et al., 2009).
It is evident that socioeconomic condition and gender of the individual are linked to the utilization of the health center. Possibly, the main users of the free health care service were the poor women, mainly housewives and usually not involved in salaried jobs in comparison to men, with less or no financial freedom on their part. It is probably only them who would choose the free health care service as an only option (World Bank, 2001).

Regarding absenteeism, we found out that the health center was sometimes without a medical personnel for a maximum of 15 days. The community members expressed their frustration asking why one should bother going to the facility if no one was there. Although, during our observation, a medical doctor was indeed present. In Uganda, Rajasthan and India the absence of health workers had no definite pattern and therefore made services unpredictable for patients (Banerjee et al., 2004). Community members at times were unsure if a doctor would be available during their need to use the service. So they would seek treatment elsewhere.

An important study was published in 2003 by Chaudhury and Hammer, exploring the absenteeism of health workers in health facilities in Bangladesh. The poor living in the rural areas of Bangladesh suffered from the highest percentage of vacant posts in health facilities compared to other places in the country.

Many health professionals refuse a placement in a rural setting due to various reasons. Even the lack of a functioning toilet may deter a doctor from taking a position in a remote area (Chaudhury & Hammer, 2003). During our observation we found no water supply in the health center. The health workers used the latrine and water from the neighboring household. Although it seemed a reasonable infrastructure with a two-storied brick-built building, virtually, three rooms were in use for providing services. Chaudhury & Hammer (2003) explained that even electricity improvements in facilities might help encourage medical personnel to be present.

Staff may not want to travel far to reach a rural facility to work and they have little financial incentive as well. Underfinancing is a huge determinant and may contribute to the frustrated attitude among staff (Agyepong, 1999).

As mentioned earlier in our findings, unavailability of services and lack of drug supply were two major barriers for utilization. From the community, it emerged that they had not received a drug as it was not available in the center and also complained of similar medicines being sold on the local Pharmacy. On the other hand, the medical officer and the pharmacist pointed to the poor distribution management of the Upazila Health Complex. It is crucial to establish a link between the community and the health providers’ statements to verify the reasons behind the two different perceptions.

In the existing literature, we found that both quality and drug availability are similar in meaning and have repeatedly been shown to discourage utilization of government facilities (World Bank, 2005). Several studies report unavailability of drugs in public sector and their resale in the private market (Lewis M, 2006).

Good governance plays an important role in ensuring effective health care delivery system. If the health system is not well governed, health workers are absent, patients do not get adequate services, there is improper drugs management, performance of health service will be poor and people’s health will suffer (Lewis, 2006). In terms of reducing maternal, neonatal and child mortality and other health indicators, to achieve the Millennium Development Goals (MDG) by 2015, it is crucial to shift the government attention to the institutional factors that affect the health sector performance (Lewis, 2006).

V. LIMITATIONS

A major limitation of this study was that the sample size was relatively small. However, the richness and quality of data we gathered directly from the community and from different categories of participants have added much significance to our study. The time constraints, though a limitation at the beginning, actually drove us to collect the data and make the transcript as soon as possible and to start analysis simultaneously helping in re-organizing our further tasks and learning from previous days’ experience. In few occasions, information bias may have occurred as the health providers and the community members were not fully candid in their opinion. Furthermore, we could not verify the political commitment and involvement of the local leaders, although it was
mentioned repeatedly by the community and the health providers.

VI. CONCLUSION

Our research identified important factors contributing to the utilization and underutilization of a rural health facility in Bangladesh. The majority of users are lay people, basically from the poverty stricken rural area. Free service, accessibility and limited curative and preventive services offered were main contributors to the utilization of the health facility; however, there seemed to be a huge gap between the expectation of the community and the services provided.

Poor communication between staff and patient is a major reason for dissatisfaction and reflects on the underutilization along with absence of health personnel and lack of essential medicines. All these are strong evidence of a poor governance system and underpin the findings of the recent report of BHW 2009.

These critical factors must be explored and synchronised together for further design and implementation of health programs to meet the needs of communities, not just for utilization per se, but to address the equality and efficiency issues in all geographic locations in Bangladesh where the health centers are situated. Overall improvement and quality care need to be ensured in order to meet the challenges of what is actually happening in the local government health centers.

VII. RECOMMENDATIONS

Based on our short exploratory qualitative study, we are hoping that the findings will motivate further research in the area of utilization of government health centers. We would like to recommend key messages in order to reduce underutilization. Keeping in mind that our recommendations may not work in every context or setting, initial and extensive research can be done with each of the following:

1. Ensure proper supply of essential drugs to the health center and to the patient.
2. Address shortage of human resources in rural health centers.
3. Ensure proper water supply and sanitation at rural health centers.
4. Provide training for staff on communications, counseling, and motivation.
5. Ensure regular supervision and monitoring of staff at all levels.
6. Increase community involvement and participation for community ownership.
7. Political involvement and commitment towards ensuring quality of services as expected by community.

ACKNOWLEDGEMENTS

We would like to pay our gratitude to all the participants who provided valuable information for this study. We would also like to extend thanks to the faculty members of James P Grant School of Public Health for giving us the opportunity to accomplish this assignment and also for guiding us in all respects to complete the study.

REFERENCES

Utilization of Local Government Health Center


Annex 1: Bangla words and phrases used at the field:

*OoushodhNai To ChikitshaNai* (No drugs, no service); *Imam* (Religious leader);
*Shorkari to Shorkari* (Government is government);
*Chikitsha to Chikitsha* (Treatment is treatment);
*KofKashirHashpatal* (Health Center for cough & cold);
*Ashun, Sheba Nin* (Come and receive the care); *Bhut* (Ghost);
*Medical, Hashpatal* (Health Center);
*RogeSharey* (Diseases get cured);
*Tika* (Immunization);
*GorvoboiPoriikkha* (Antenatal check-up);
*BinaMulleOoshodhPai* (I can get my medicine free of cost when I’m ill);
*Bori*(Pill);
*Shui* (Injection - Injection Depo);
*CharalerChaiteoKhaprapBabohar* (Indicating severe rudeness found within lower caste people);
*ValaDaiker Dam Dekhai* (Good doctor shows pride);
*AmraMurukkhuManushAmraGorib, Amar Dam Ki* (I am illiterate; I am poor, what is my value to them?);
*Fakir/Jharfuk-Wala*(Traditional healer)
TOBACCO AND SUBSTANCE USE: PERCEPTIONS AND PRACTICES AMONG MEN IN BAGNIBARI, BANGLADESH

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ABSTRACT
Tobacco and substance abuse are associated with several serious diseases and despite understanding their negative health consequences, men in Bangladesh still smoke at a rate higher than elsewhere in South Asia. There is little information concerning substance use in men in rural or urbanizing areas of Bangladesh. This study was a qualitative, exploratory study of the practices and emic perspective of men’s tobacco and substance use in order to more fully understand why men choose to use and their associations with use. The research team sampled men in Bagnibari village, Bangladesh, and questioned them on theirs as well as the community’s perceptions and use of tobacco and substances conducting a series of qualitative methods. Men within the study associated smoking at first as a social behavior but as their habits grew, they smoked on their own. Substance use on the other hand started in social situations and remained social. Participating men showed components of individual will and assertion of independence which were made more convenient through the perceived acceptance of men smoking among the community.

Keywords: Men in Bangladesh, Tobacco, Substance Use, Practices, Perceptions

I. INTRODUCTION
Tobacco use has a significant impact on global health. Out of 6.8 billion of world’s population, almost 1.1 billion are smokers. The majority of these people live in low and middle income countries like Bangladesh, India, Indonesia and China [1]. Globally, 48% of the adult population use alcohol and 4.5% of them use illicit substances [2]. Tobacco and substance use are a major public health problem because their use is linked with high levels of mortality concerning chronic diseases, as well as morbidity concerning mental health and unintentional injuries or violence. The mortality rate attributed to tobacco use is higher than malaria, tuberculosis and maternal and child diseases combined [3]. Use of alcohol and other drugs are strongly linked to unintentional injuries, physical fights, academic and occupational problems and illegal behavior [4]. If a person uses alcohol for an extended period of time, he or she is more likely to experience liver disease, cancer, cardiovascular disease, and neurological damage as well as psychiatric problems such as depression, anxiety, and antisocial personality disorders [5].

In Bangladesh 44.7% of men are tobacco smokers and 26.4% use smokeless tobacco. Despite 96.8% of men believing tobacco causes serious illness [6], Bangladesh has the highest prevalence of men who smoke in the South Asian region [7]. Concerning drug use, it is estimated that between 500,000 and 1,000,000 Bangladeshi residents are addicted to some sort of drug [8]. This is made more problematic by the fact that Bangladesh is geographically surrounded by a large area of opiate producers, sometimes referred to as the “Golden Crescent” [8], which provides relatively easy access to opiates and other drugs. Bangladesh is a predominantly Muslim country and alcohol or most substance use is socially and legally prohibited. Yet there is data on urban alcohol abuse [9] as well as
in rural areas where fermented sugar-cane, rice and molasses are distilled for homemade alcoholic products [10].

Some studies have already been conducted to understand the prevalence of smoking and substance use. There are quantitative studies that use statistical analysis to try to relate smoking with substance use like in a study of addicted patients admitted to a Dhaka hospital, which found 100% of cases smoked tobacco. Another study found that men in Bangladesh who smoked cigarettes were 10 times more likely to use ganja/charas (cannabis) than non-smokers [11, 8]. Although tobacco and substance use are well documented worldwide, there is little Bangladesh-specific qualitative information on tobacco and substance perceptions and practices, which are needed to craft appropriate, effective interventions in the future.

This study addressed a portion of this information gap with a display of men’s histories behind their smoking and substance use to explore the perceptions and practices concerning tobacco and other substances among men in a Bangladeshi village. The study looked at their current smoking practices and substance use, their perceptions of smoking and substance use, their physical, mental, social and economic consequences of use and their perceived relationships between tobacco and substance use. Exploring men’s emic perspective (personal understanding) was an important way to gain insight into their perceptions and context of use. The study was specific to a small village in a peri-urban area called Bagnibari near Savar. This was an exploratory research study, without a priori assumptions, as per the guidelines of grounded theory. To collect our data we used in-depth interviews (IDI’s), focus group discussion (FGD), participatory rural appraisal (PRA), observations and informal discussions. We included men with a range of demographic features in order to capture a wider picture of the community.

II. METHODOLOGY

A. Context Setting

Bagnibari is a small village of 4000-5000 persons located in Savar, Bangladesh. Excepting a few, most of the people of Bagnibari are middle class or poor. The village is near a marketplace called Akran in the union of Savar. Savar is a suburb of urban Dhaka characterized by recent urbanization and development of factories and land.

B. Study Design and Conceptual Framework

The study lasted for a short period with one and half weeks with data collection and analysis from March 8 to March 14, 2010 and further analysis and writing from the March 15 to March 20, 2010. It was an exploratory qualitative study to establish perceptions and practices of men’s tobacco and substance use, which looked at the emic experience of tobacco and substance use in men, rather than its prevalence.

The research team created an initial conceptual model of factors concerning men’s history of use, knowledge or beliefs of use, their social environment, and the economic accessibility of substances to guide our initial findings. The conceptual framework was to sort potential themes and influences. A modified conceptual framework was later created based on the findings.

C. Sampling

The research team sampled men varying in age to capture a variety of views in the community. Males younger than 14 were excluded because their experiences and narratives would not be as extensive as men who had been smoking for longer periods. But when sampling, the team managed to obtain consent for interviews with men between the age of 20 to 70 with most of the men being in their 30s and had an informal discussion with only one 14-year-old. Men were not chosen based on use-status so as to gain the perspective of users and non-users alike. Women were not interviewed although they are an important set of informants as they were considered to be non-smokers and would not have a first hand, emic understanding of men’s perceptions and practices concerning substance use. The samples were collected through purposive, snowball and opportunistic sampling for research as needed to collect relevant data. These types of sampling allowed for the team to interview available participants in the community (via purposive and opportunistic methods) as well as the difficult-to-identify groups of substance users (through snowball). One informant led the team to the key informant, who suggested the team meet with individuals he knew to be substance users (purposively) and he helped organize our focus group discussion. In order to improve triangulation, the team also interviewed other individuals separate from the key informant so as to gain other perspectives. These men were chosen opportunistically by the research team as they
traveled by bicycle on the road and in tea stalls throughout Bagnibari village.

D. Data Collection

On the first day of data collection, the team went to a tea stall in the village and found an older man named Salim. He has been working with the community police for the last 30 years. After a half hour conversation, Salim introduced us to his nephew, Rajib. Eventually Rajib became our key informant and helped us arrange our focus group discussion (FGD).

The team spent time observing people along the roads, sat at tea stalls and interviewed individuals in Bagnibari—while attempting to create rapport and manage the impressions we may have projected to the community. The researchers wanted to collect data until reaching saturation (no new data), but there is a possibility this was not achieved in the small amount of time in which the study was conducted. Snacks were provided during the FGD for participants and occasionally tea was provided if we were in a tea stall to facilitate conversation.

In all encounters, individuals were first informed about the research purpose before verbal consent was taken. There were not always, however, positive responses. There were moments when people refused to give interviews. These complications may have affected our sampling during the short period of data collection. Despite all these impediments, the research team conducted five in-depth interviews (IDI), one focus group discussion (FGD), one participatory rural appraisal (PRA), several observations and two informal discussions. These several methods were used to triangulate the data and ensure a more in-depth understanding of the data.

The team formulated guidelines for FGD and checklist for IDIs, observations and PRA to ensure the tools were enacted properly. One interview was set up through a snowball approach—when a community policy officer was interviewed purposefully (as he was smoking in a tea shop). He led the team to a new informant, as mentioned above, who helped arrange the FGD. In FGDs, the team used open-ended question to elicit emic perspectives. The PRA conducted was free listing, in which the team asked individuals and groups to identify words and phrases they associated with tobacco or substance use and finally ranked the responses to understand what they associated most with substance use. The group said that they were illiterate so the research team wrote down the words or phrases they said, repeated them, and asked them which of these were more important and ranked them verbally.

Interviews were selected by purposive and opportunistic sampling. Interviews were conducted in semi-private areas (corners of shops or in fields) to ensure that the participants spoke freely on such sensitive topic. The FGD consisted of male smokers we found through our key informant. FGD was used to identify common perceptions and practices in tobacco and substance use for individuals and the community. It was focused on general perceptions and practices. Individuals were not encouraged to describe personal experience. This was done to reduce the risk of identifying them as users of illegal or unacceptable practices within the group setting. Observations took place in public places chosen purposively to observe men’s practice of tobacco use (actual use/purchasing of products). The team also observed substance use practices (in the middle of a field and within a tea stall).

E. Data Analysis

While in the field, interviews were facilitated in Bengali by one team member and translated to English. Notes were confidential with pseudonyms throughout all processes and transcribed within 24 hours to ensure accuracy. For analysis, the team coded according to a code list created together based on specific objectives and research questions. The notes and manuscripts were then coded manually through Microsoft Excel with color-coding. This was done separately to ensure rigor of analysis and the separate findings were eventually merged to establish themes, choose core quotations, and create memos to provide the presented findings with adequate context.

F. Ethics

The team was aware that each member came to the process with different backgrounds, which might have influenced research or analysis—but recognized that they might not be completely devoid of their own emic perspectives. All names were changed into pseudonyms. However the real names were kept for reference by the research team in a confidential file in an effort to protect the participants from any seen or unforeseen risk associated with answering questions.
III. FINDINGS

A. Smoking Histories
Participants varied in age when they started smoking, from 8 to 45, and it was common that they began smoking when surrounded by smokers (peers or coworkers) who persuaded them to start. One older gentleman, Salim, a member of the community police force, said that he had started smoking 25 years earlier. He said, “I started when I was working with these policemen…they all smoke, and their pressure encouraged me to smoke.” Men’s smoking trends changed over time. Most admitted to smoking more but some mentioned less as they grew older. In a focus group discussion (FGD) of men mostly in their 30s and 40s, all six men reported an increase in smoking over time and attributed this to the power of addiction.

B. Current Tobacco Smoking Practices
There were a variety of responses concerning the practices and perceptions of tobacco and substance use (which can be seen in Table I). Of those who smoked, only one reported smoking fewer than 10 times a day (he smoked four cigarettes during his interview and he reported two-to-three per day) and one as many as 60. Concerning their current practices, the fact that men smoked “when they wanted to,” or “anytime” were repeatedly mentioned but they also referred to some social situations in which they smoked, such as while drinking tea or playing cards. During our observations in tea stalls, a common place where men can buy cigarettes and other tobacco products, men rarely bought a cup of tea without buying apam (betel leaf) or smoking a cigarette while they sat and chatted quietly, watched television or the street. At all times during observations of tea stalls there was at least one person purchasing or using tobacco.

Observations also found men smoking on the street, in the fields, at home, while talking with us and while lounging on their rickshaws. They were able to buy cigarettes at any tea stall, market, and small vendor in single sticks or by the pack or borrow from each other (often sharing a match to light each other’s cigarette). The interviewees said that at no time was it inappropriate to smoke—but during Ramadan and while being in the office were the two times individuals knew it was prohibited. A non-smoker claimed that it was inappropriate to smoke in front of mosques and family members.

A. Perceptions of Smoking

Why Use: In the FGD, while ranking the major reasons why they smoked, addiction was pointed out as their driving factor. Only one man mentioned that he thought he could quit in a week if he wanted to but another retorted that the same individual would not quit even during Ramadan, the holy month for Muslims. Although everyone agreed that addiction was not a good thing, few wanted to quit. Besides addiction, common reasons why participants wanted to smoke were to deal with stress, to relax or reflect, and also because they had the freedom to do so. A 24-year-old mechanic informed the team, “Smoking helps me relax. It makes the time pass fine. I can sit, smoke, and think and remember about some beautiful memories to pass the time” as he and a friend enjoyed a cigarette in the corner of a field during sunset. A non-smoker made a similar assertion that smokers liked cigarettes in spite of their addiction.

Physical Health: All participants said that smoking had negative health effects yet few smokers were able to name any specific problems. When asked which health effects they associated with smoking, men in the FGD mentioned health issues not necessarily associated with smoking, but eventually enumerated coughing, tuberculosis and gastric problems as made worse by tobacco. Few smokers admitted that they themselves suffered from any health problem. One interviewee, 20-year-old Lohit, a factory worker, implied a dose-effect of smoking, saying that he knew his friend Bitan experienced coughs, but that he himself did not smoke too much to experience such problems. In an interview, a 36-year-old smoker said he would not smoke around his small daughter, as she needed the oxygen (he added that adults need oxygen too but he was not as concerned with their wellbeing as much as he was concerned about his daughters). Non-smokers mentioned cancer, lung diseases, tuberculosis, ulcers, and some of them said that those who smoked needed “operations”.

Participants focused on some positive aspects of smoking that it was essential for relieving constipation and that cigarettes were a type of “medicine” (although no one was able to elaborate on this point, but implied the context of mental health for relieving tension or “to relax” mentioned above, rather than physical health). In a particular case, a 70-year-old man explained that he started smoking at the advice of a traditional healer to solve a distended stomach problem in which it was “like a pregnant lady’s” and the condition went...
away after a month of smoking. He did not know why, but he knew that he had stomach troubles during Ramadan when he tries to abstain from smoking.

Relationships: Smokers did not mention that smoking directly affected their relationships, either familial or social. The closest they came was to say that a member or so of their family did not approve of them smoking. One man knew of another man who gave up smoking because his daughter had made an ultimatum—yet none of the men we interviewed actively felt this familial pressure. Besides, smokers also perceived positive effects on relationships in a form of communion over a cigarette with other smokers, building stronger bonds while passing time together and smoking collectively. Among the non-smokers, a 21-year-old driver did not approve of his friends smoking and if they were smoking, he said, “It keeps me standing farther away from them, and I would join them only when they are done.”

D. History of Other Substance Use
When asked to list other substances participants mentioned mod (alcohol), ganja (marijuana), tari (fermented sap/molasses), heroin (opiate) and phensidyl (cough syrup). Although these questions were asked concerning the community, some men described their individual experiences. One upper-middle class land developer aged 36, said that he used to drink, and that he had done most of his drinking while he was being educated and later working in real estate development in Malaysia. But he was no longer drinking now that he was married and his wife did not approve of it. Three admitted during interviews that they had smoked ganja (aged 20, 24, 31). They said that they had started because of the encouragement of their peers. One individual started smoking ganja as he started spending time with influential political leaders and he felt a pressure to smoke ganja and drink mod with them. Another young man insisted that he started using different substances with friends he had been smoking with and eventually started with ganja, then moved on to mod, and heroin. He said he was able to smoke ganja because he was not living with his family and he had a lot of time to himself. This individual, Bitan, said that he had tried “these other things” (meaning heroin) and no longer used them but still smoked ganja and drank alcohol.

E. Current Substance Use Practices
Mod, ganja, and tari were the most common forms of substances our informants used. We were able to witness these three individuals using ganja, each time in a social setting—either with each another or in a teastall with about 10 other patrons around. Ashor is a gathering of young people where the participants said it was appropriate for each to take mod or tari together. Another social gathering mentioned was during a game of “three card” (popular gambling).

When asked to speculate about his community’s substance use, 21-year-old Noor thought 60-70% of the men in his community used substances excessively, especially mod, tari and ganja (he defined mod excess as two to three litres per day). He made note that mod and tari were produced discreetly and locally, but sold within the village. Through a few informal conversations about how to procure ganja, tari or mod, users were candid about their access to such substances. Users and non-users alike noted that these substances were produced locally by villagers away from the eye of authorities, but that gatekeepers with some forms of authority were involved in the process and were bribed to ensure protection.

F. Perceptions of Substance Use
Why Use: As with tobacco, everyone admitted that there was an element of addiction, but one informant claimed that he ended use before addiction became an issue (in the case of heroin). Other informants who used ganja, mod or tari were not concerned with addiction. They claimed that they liked the feeling and that it was a habit, but not an addiction. An user of tari said that it was social and something common in Bagnibari—and when asked about why he used tari, one man stated “I know that it is bad for me, but I like it, so I continue to take it. I am not concerned with what other people say of my lifestyle, I do not bother with that. Most of the people here are addicted to similar things—so I have no concern if it is good or bad.” For one individual who occasionally drank beer, drinking was a form of relaxation that he often paired with smoking cigarettes. In the case of 31-year-old Rajib, drinking was social, something men did together after dark, and he knew that his friends encouraged each other to consume mod or tari.
Table I: Results

<table>
<thead>
<tr>
<th>Practices of Tobacco</th>
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</thead>
<tbody>
<tr>
<td>Initial use</td>
<td>At suggestion of someone else</td>
<td>Curiosity</td>
<td>Greater social circle were smokers</td>
<td></td>
</tr>
<tr>
<td>Pattern of use</td>
<td>More over time</td>
<td>With friends</td>
<td>While playing cards</td>
<td>At tea stalls/with tea</td>
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</tbody>
</table>

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<tr>
<th>Perceptions of Tobacco</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Why smoke</td>
<td>To relax for tension</td>
<td>Because I want to</td>
<td>To spend time thinking</td>
<td>Addiction</td>
</tr>
<tr>
<td>Physical health</td>
<td>Negative in general</td>
<td>Lung problems</td>
<td>Cancer</td>
<td>As medicine</td>
</tr>
<tr>
<td>Effect on relationships</td>
<td>Family does not approve/secrecy</td>
<td>“Spoiling” of children</td>
<td>Spending time with other smokers</td>
<td></td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Practices of Substance</th>
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<tbody>
<tr>
<td>Initial use</td>
<td>At suggestion of someone else</td>
<td>Greater social circle were users</td>
<td>Curiosity</td>
<td>With people who were smoking</td>
</tr>
<tr>
<td>Pattern of use</td>
<td>More over time</td>
<td>With friends</td>
<td>While playing cards in group (ashor)</td>
<td>At night (mod)/day (ganja)/anytime (tari, ghul)</td>
</tr>
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<th>Perceptions of Substance</th>
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<tr>
<td>Why use</td>
<td>To relax for tension</td>
<td>Because I want to</td>
<td>With smoking</td>
<td>Accessible from key members</td>
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<tr>
<td>Physical health</td>
<td>Negative in general</td>
<td>Troubles</td>
<td>As medicine</td>
<td></td>
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<tr>
<td>Effect on relationships</td>
<td>Family does not approve/secrecy/“Spoiling” of children</td>
<td>Building relationships with key community members</td>
<td>Spending time with other users</td>
<td>Violence against family</td>
</tr>
</tbody>
</table>

Noor, a non-user, had opinions about why men in his community used substances. He asserted that demographic information determined what type of substance men chose: for example men between the age of 15 and 30 were most likely to use ganja. “The Rangbaz [gangsters], use mod and phensidyl. Normal people mostly just take ganja” and when asked about why they used, he responded, “Those who do this are not strong enough to work. They are weak…most are illiterate and don't know what is good and what is bad. Therefore they engage themselves in using these substances.” Users and non-users alike cited peer pressure as a reason for using substances.

Physical Health: Two mechanics agreed that smoking ganja at work made them physically more productive, which is why they smoked it at work, although one admitted that there were probably times when they were not as productive as they could have been because they were not paying attention. But as far as negative effects were concerned, the other mechanic mentioned that he stopped using heroin since it was bad for him but could not give any reason as to why it was bad. Another claimed that his uncle encouraged his drinking habit because he wanted to inherit his land and drinking would make him die more quickly.

Individuals who did not use substances but were willing to share their perceptions about it cited that they were healthy because they did not use substances. In an informal discussion, a 80 year old man walked up to us, took off the shawl he was wearing to cover his shoulders, flexed his arms and said that he was “good and strong” because he did not use these substances. Loss of control was described as a physical health effect, “…and they don’t have any idea [when they are using]—they just go here and there. They walk on the streets and...
they don’t realize they are not wearing clothes. They are out of their own control.”

Relationships: When discussing the effects of substance use on personal and familial relationships, users mentioned that their families knew of their use and did not approve but they continued. However, one man said that he stopped drinking when he was married as his wife disapproved and it was her will (but he also associated drinking with his time spent in Malaysia—when he was not married). Asking this man how drinking affected relationships, he answered broadly, “Sometimes when people take these substances, they beat their wives, or misbehave with other family members.” Noor said families were affected by substances use because a substance user “beats his wife…misbehaves with family members…when they take mod and ganja they beat their wives. They shout at them and at other family members.” He also believed that users “will take loans from father for business then smoke and drink alcohol to ruin everything [economically].” In case of Rajib, who thought his habit was encouraged by his uncle wanting him to die an early death. This uncle called him “spoiled,” explaining that he had been consuming ganja and mod, etc without having any concern for his family. We also heard the term spoiled from a mother who lamented her son’s tobacco use.

Concerning extra-familial social ties, users thought communal consumption brought them closer and is a way to pass time together, like the two friends who shared two joints in a field while we interviewed them. Some non-users were indifferent to men in their community using substances, but Noor was adamant that substance suppliers should be aware how they were ruining the community’s youth, expressing anger at them.

Smoking and Substance Use: All of the men in our study who smoked cigarettes did so before trying other substances. For those that used both tobacco and other substances, use was initiated in social situations like the aforementioned gatherings, ashor and playing cards. Some individuals stated that smoking and substance use were commonly done together, especially in social situations:

“I smoke more when I sit and drink. Take beers. We always smoke more…now that I do not drink I do not smoke as much.”Participants who started using in social settings also starting smoking cigarettes in the same way— as something their friends were doing and they joined upon their encouragement. Participants did not always make assertive comments for smoking and substance use. They said that they had consumed these products “when they wanted to”. On one hand they seemed to assert “independence”. On the other hand, our observations also imply that they were more cautious in determining times when it was appropriate to use them.

Conceptual Model: These findings led to the creation of a conceptual model delineating factors of perceptions and context of smoking and substance use. As derived from the data, tobacco and substance use are each affected by social environment, history of use, accessibility, and knowledge or beliefs of use. In the social environment social gatherings help to facilitate use, familial views of substance use have an impact, peer groups are a context in which people use, and the social or local environment where people use are important. Concerning individuals’ history of use, initiating use, the idea of habit, and trends of life-long use are factors that lead to use. Individuals’ access to substances is impacted by socio-economic status (SES), liquidity of assets to procure substances, the elasticity of use, and profession and employment are important. Knowledge and beliefs concerning use were also essential in the usage chain: concerning ideas of physical, mental health, perceptions of addiction, and differing levels of understanding made an impact in use of tobacco or substances as did any other perception concerning the substances or their use. All of these are interconnected tangentially between tobacco and substance use—especially social environment, history of use, knowledge and beliefs of use—but there did not seem to be too much relation between accessibility. There are more macro themes that make a difference in both tobacco and substance use; these are environment, independence, and urbanization which are discussed in the discussion session.

IV. DISCUSSION

A. Smoking and Substance Use

In general, tobacco is considered a “gateway drug” for further substance use [12, 13], and this study’s findings were consistent with that hypothesis. The study revealed an overlap between those who use substances other than tobacco and those who already smoked; this is consistent with other
findings in Bangladesh [8] and worldwide [14]. When asked why they began smoking or began using substances they replied similarly for each question. The answers for when they smoked or when they used substances were also similar. Peer pressure was a major motive for initial use in this and in other studies concerning tobacco and substance use in Bangladesh [11, 8].

B. Assertion of Independence

Although they responded that their initial use may have been due to peer pressure and in social settings, and that their current practices are amongst other men, participants were clear that they smoked or used at their own will. Men may be aware of their family members’ disapproval, but responded that they smoke or use “when I want to” and “because I want to.” This may be a factor of asserting their independence and autonomy; choosing to drink alcohol, or spend a minute smoking a cigarette is a personal choice over which they have control. They consider it time spent on themselves, for themselves.

Concerning their families’ condemnation of use, men are usually heads of households and were not willing to quit for their wives (except in one case) and those who were unmarried were no longer dependent on parental ties for support, and therefore were no longer subject to their parents’ ideas of acceptability. Some men who had stated that they smoked and used whenever they want to also identified times when they were quitting, reducing their habit, or had identified what was inappropriate to use—but they had internalized these issues as important to themselves (for example, because they did not like being out of control or out of concern for their daughters), not due to pressure from others. Even when the participants considered smoking and substance use as a bad habit they were still proud to report that they had power over when and how they would consume tobacco and other substances.

Literature concerning masculinity explored the idea that men do not want to be seen as “weak” and that they therefore smoke [15, 16]. In this study, men who were more open about their substance use were also attempting to demonstrate their power in the community and freedom from legal or communal norms. When talking at a tea stall with an informant and some of his friends about substance use and when he wants to smoke ganja, he stopped talking, produced a cigarette filled with marijuana, and smoked it in front of the people in the stall. He then spoke of the power he held in the community, being able to smoke in front of these people without concern for the consequences.

C. Environment of acceptance

A theme that emerged from the data was the idea that in addition to acting on their personal will to smoke or use, men enjoyed both social and physical environments of acceptance in smoking. Relaxing and passing the time with smoking and substance use were such common answers for use that one might ask how else men would pass their time if these substances were not available to them or how men would gather and spend time with each other without the social context of smoking or use of other substances.

Although all informants were Muslim, no participant who consumed substances or cigarettes expressed concern for the religious prohibition or the illegality of substance use except for a brief mention of Ramadan (during which they had a difficult time adhering to the religious fast and often faltered). Men were more concerned with the questions, such as the places where it was appropriate to smoke or use substances according to their environmental context (i.e. in some social settings, at night or during the day, at one’s own home, among whose company and what that company thought about use stigmatized substances like tari or ganja more). They carefully assessed the research team to see if they held any judgments about the topics being researched. For instance as soon as the team stated a neutral and positive stance on smoking cigarettes, all the members of the FGD pulled out packs and passed cigarettes and matches between them simultaneously before starting to smoke together. When asked about how the community felt about their substance use, men usually answered that it was common and that other men accepted the use within the community and only their immediate families had negative opinions.

Men alluded that the national laws against substance use were inconsequential, as some local authorities also drank or used drugs and were subject to bribes by local producers. Once an interviewee waited 45 minutes during an IDI before he deemed it safe to smoke ganja from an empty cigarette he had been holding since the research team had approached him. In another case, a non-user reported that he felt there was no
community concern for smoking or substance use; it was just accepted especially since he believed the local authorities promoted substance use for profit. A member of a specific legal authority informally bragged to the research team that the law enforcers exerted their authority to serve their vested interest in keeping alcohol and substance use within the community.

D. Urbanization and its Consequences
As Bangladesh is urbanizing beyond the confines of the capital city, Dhaka, accessibility to more substances is also increasing [9, 10]. There is more migration into peri-urban Savar, with several garment factories surrounding the area, and land being partitioned for development. Individuals in Baghbari look at these changes as affecting their community. Many men in the study mentioned that they perceived that their land was worth more and that they had more access to money (even boys had more access to pocket money) to spend as they wanted. Many of the users did not have education beyond sixth grade, and were working either as farmers or day laborers. They felt that the financial stability attributed to the economic climate of Savar could also contribute to the use. Whereas a non-user educated until 12th grade and employed as a private driver believed that his money was better spent on his family and that substance use or smoking was a waste of limited resources. Also, if more people were moving into the area, the reported corruption concerning illicit substance production and allowance in the area would be exacerbated with an increased demand for these products and more consumers.

Globally, urbanization is an issue related to substance use as poverty remains constant or increases with the influx of migrants to the urbanizing area. Unemployment, low education and lack of social support are all risk factors for substance use [17]. One young man, Bitan, migrated to Baghbari for work, was away from his family, for economic reasons, and began using *ganja*, *tari* and heroin with his friends where he worked, and did not mind spending TK 300-400 per week on substance use because he felt that there was money to be made in Savar and that substances were readily available. Although he had ended his heroin use, Bitan still smoked frequently and consumed other substances, which he did not consider to be a problem and he was happy how Savar was becoming a more urban place where they could enjoy an easier, more metropolitan lifestyle.

V. LIMITATIONS
This study faced some limitations despite the researchers’ efforts to control for them. The study was done in a short period of time, and therefore saturation may not have been reached. The lack of time also might have hindered the quality of data collected in general. Moreover, the interviews were conducted in Bengali and translated and analyzed in English; with these translations some context or data might have been lost. Furthermore, one of the researchers was a woman which might have affected the interviews as they pertained to men’s practices. This may have influenced the observations or individual responses. The fact that the topic was sensitive and involved illegal substances could lead to a stigma attached to the informants if they were seen in the presence of the researchers. So this might have had an effect on the validity of the data collected. Additionally, the pattern of questioning usually started with tobacco use and then transitioned into substance use by which time, despite trying to find neutral, private spaces, other people usually stood around and observed. This probably had an effect on the responses as well. The researchers are aware that some aspects of their own etic or personal perspectives concerning the subject may have also influenced their research or analysis.

VI. CONCLUSIONS
Currently, worldwide campaigns to discourage tobacco and substance use are targeted at the cost of substances, making them illegal or constructing a legal component for their consumption, information dissemination concerning negative effects or mitigating the role of peer pressure—but users who participated in this study did not respond that legality, cost, or current social campaigns had impacted their habitual use. Although these may be effective strategies concerning new users, targeting current users would require an understanding of how individuals incorporate smoking and substance use in their daily lives, what they say about their use, and how urbanization is rapidly changing previously isolated, low-income areas with an influx of capital and migration and thereby creating the possibility of ready access to substances. More studies must be done concerning these macro factors influencing tobacco and...
substance use to target current users in peri-urban Bangladesh.

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ABSTRACT

Introduction: Traditional medicine plays a vital part in the health care systems of many developing countries. Healers’ knowledge and background, commonly treated illnesses, methods, and the factors leading to communities’ utilization of traditional services are important areas of research to understand how the informal health sector contributes to the health outcomes in these countries.

Methods: A short exploratory, qualitative study in two villages of Savar, Bangladesh focused on traditional healers and community members. We completed six in-depth interviews, one focus group discussion, four informal discussions and three PRA techniques to investigate the issue. Data were translated, transcribed, coded and analyzed to develop themes that emerged from the specific research questions.

Results: The study found that there were common illness experiences among our participants, including fever, headache, body pain, jaundice, diarrhea and illness caused by evil spirits, as well as commonalities among healers in terms of training, social status and treatment practices.

Conclusion: We found that perceived causes of disease and severity led to the use of traditional healers. There was a need for increased training among the healers to improve their ability to contribute to the broader health care system.

Key words: traditional healing, Bangladesh, rural health, perceptions

I. INTRODUCTION

A. Background

In many settings health and culture are inextricably linked. This is found to be especially true in developing countries, including Bangladesh, where culture has a profound impact on health and health practices [1]. Our study seeks to explore some of the issues present within the rural villages of Bagnibari and Samair in regards to the background, treatment, and utilization of traditional healers. Our qualitative data attempted to answer our central research question, “what are the traditional healing practices in Bagnibari and Samair villages?” This question encompassed the traditional medicinal treatments, the perception of these treatments within the community, and the factors that led to their use.

We anticipate finding that there are multiple and
varied treatments, as well as a range of motivations for seeking traditional healing methods. Our aim in this study is to investigate the traditional healing norms, as defined by our research participants, in order to shed light on certain aspects of the health seeking behavior within these villages, and the perceptions of traditional medicine as it existed within a broader social context.

This area of research is important for continued health improvement efforts and intervention development in Bangladesh. Knowledge about perceptions of disease cause and severity, and how that information influences an individual’s health seeking behavior given other economic and practical issues, will shed light on the realities of healthcare options and services sought in a rural Bangladeshi setting. This information, when gathered through an in-depth approach and using “thick descriptions”, which take into account the setting and background and is particularly compatible with qualitative data collection, will be a valuable insight into the function of traditional medicine in this context. The necessity to understand the bigger picture, outside of simple data on use and methods of traditional healing, is essential to accomplish any future impact on the health-seeking behavior of these communities.

The existing literature on the subject of traditional and alternative medicine in developing country settings is a bit scattered and often focuses on specific diseases or alternative medicinal treatments rather than the reasons and motivation for individuals to seek traditional remedies. It is clear, however, that indigenous medicine play a key role in communities across the globe [2]. The empowerment and strengthening of the traditional health system has been cited as a necessity in the effort to achieve a number of the Millennium Development Goals [3]. This informal, or traditional, health sector is diverse and complex [4]. Given this diversity and extensive network of traditional healers, the operational definition of traditional healer was, for the purpose of this study, any informally trained health service provider who provides contextualized treatment to our study population. This includes kobiraj, hakim and pir/fakir (spiritual healers).

Many of the health care trends across the developed world show an increased use in these traditional or alternative medicinal practices for health related issues such as slowing the aging process or chronic disease treatment. [5]. This fact, however, does not do justice to the vital role that traditional medicine plays in the developing world, where many rely on traditional healers for basic health care [6]. Traditional healers, as embedded members within the culture that they serve, provide a contextualized treatment, which has been shown to be a highly valued aspect of their services. An individual’s reasons for visiting a traditional healer vary, from simply trusting the healer’s advice and service as a fellow member of a culturally significant community, to having limited or poor access to the official health care system [7]. In many cases traditional healers are easily accessible and also play a large role in the cultural identity of a community or region.

Despite working outside the official biomedical system, traditional healers have the potential to contribute positively to the official primary health care systems, a fact illustrated in the literature. The informal sector is cited as a significant potential resource with the ability to strengthen the healthcare system as a whole and even minimize health disparities if utilized effectively [8]. To this end, the argument has been made that an “atmosphere of understanding, trust and respect should be created between modern health workers, traditional healers and the communities that they serve” [9].

Unfortunately, this is often not practiced. Similar to other developing countries, Bangladesh has a strong indigenous health system, though it is also one that operates nearly exclusively outside the standardized medical system and maintains negligible communication with professionally trained doctors and health professionals. Perhaps due to this, and in spite of traditional healers’ prevalence and importance within individual communities, more information is needed to understand traditional healers’ techniques, practices and the variety of circumstances that lead to an individual choosing to utilize their services [10].

Additionally, little policy related research has been conducted to understand the roles of non-professional health practitioners [11]. The health system in Bangladesh, which tends to put more emphasis on hospitals rather than primary care, attempts to create a network that would provide even small villages with access to some sort of healthcare provider. However the limited financial
and human resources create a number of gaps in service and availability, thus creating even further need and demand for informal healers [12]. The traditional healers’ cultural understanding also allows traditional healers to provide treatment very much rooted in context to patients’ beliefs and perceptions [13].

In addition to accessibility, the perceived cause of disease and its relation to treatment practice has been shown to have a heavy influence on health seeking behavior across cultures, especially in Bangladesh [14]. Regardless of religious practice, a large percentage of the population in Bangladesh believes in unseen powers and spirits. These spirits, called bhut or jinn in local terminology, are believed to be capable of entering the body in various ways and causing a number of health problems [15]. One of these, the evil eye, shows symptoms categorized by loss of appetite, headache, fever, and general weakness or body pain, and is believed among many to be a common cause of disease [16]. Due to the deeply rooted cultural beliefs associated with perceived disease causation, there exists a disparity between biomedical practices and some traditionally appropriate methods to promote health, which can in some cases cause tension and even negative health outcomes through mixing incompatible treatment methods sought out by different sources [17].

Additional and important aspects of health seeking behavior, which influences decision-making across the world, are societal power structures and gender relations [18]. Either as widespread norms that exist as a part of the environment, or at the individual level, these have a great deal of influence in determining who the main decision makers are within a family and how healthcare decisions are made. Patriarchal systems, which often limit a woman’s access to a number of resources and health services for both herself and her children, plays a large role in the decision making process and helps to determine the primary source of treatment sought out by a family [19]. Given the choice and opportunity, patients would most likely approach different providers and services for different symptoms [20]. Additionally, while some literature suggests that the severity of illness is not related to health seeking behavior or choice of provider, the majority of existing literature and our own research experiences provide evidence to the contrary [21]. Types of treatment provided by traditional healers in a variety of settings have been shown to have some similarities. However, there is also a significant variation across cultures. Herbal care has been noted as a common treatment for both men and women [22]. The use of amulets as a protective method against evil spirits is also something that appears in Bangladesh, even stratified across socio-economic levels. Despite the widespread use and seemingly cultural acceptance of traditional methods, both our findings and the literature explain that often patients of traditional healers are hesitant to admit that they seek the services of alternative medicine [23]. This reflects the ambiguous status of traditional medicine within the broader health care system in a number of countries, and is a relevant issue highlighted through this study.

In a large-scale response to traditional medicine, its regulation, and its place within a variety of countries and villages, the World Health Organization developed a strategy for traditional, complementary and alternative medicine. This strategy was developed in an effort to help improve the safety, efficacy and availability of these types of services. This strategy, combined with additional research on the role and practices surrounding informal practitioners, has the potential to have large-scale, positive implications for health outcomes around the world and in rural Bangladesh [24]. However, the relative lack of understanding about the motivations behind the average rural Bangladeshi’s decision to seek out alternative medicine, and the perceptions of the role of traditional healers within a community make this study an important contribution to the broader set of knowledge on the topic and may prove a necessary component in the future development and approach to developing health-related interventions or program design in rural Bangladesh.

B. Objective
This study aims to answer a variety of questions of a qualitative nature, which include:

1. Who are the traditional healers that serve this population?
2. What are the background, knowledge and training of the traditional healers?
3. What illnesses are most commonly brought to traditional healers?
4. What treatments are given to patients by the traditional healers?
5. How does perceived disease cause relate to health seeking behavior?
6. What are limitations of biomedical services that lead to the use of traditional medicine?
7. What is the societal status of traditional healers within the communities that they serve?

II. METHODOLOGY
A. Setting
The setting for our study was Bagnibari and Samair villages, which have seen a slight increase in urbanization trends recently due to the establishment of several factories in the surrounding area. Our sample population consists of the traditional healers working within Bagnibari, as well as the community members who access their services. We have chosen these populations because they are the direct actors in the provision and utilization of traditional healing services.

B. Conceptual Framework
The conceptual framework for our study involved four factors that might directly impact the traditional health system and traditional healers. These factors are contextual treatment, sociopolitical context, cost effective treatment and the influence of other systems on the community.

The contextual treatment theme includes the community’s interpretation and their own beliefs of disease, the culture surrounding certain ailments and conditions, and the treatment methods passed down both through individual families, as well as knowledge passed down through traditional healers. Additionally, the relatively easy accessibility of traditional healing methods, ability of traditional medicine to give hope and solutions when biomedicine fails to do so, and the similarly deeply rooted emic perspectives of both the patient and the service provider, all contribute to this contextualized focus of traditional medicine. These are all vital aspects in relation to the traditional health system in that they are some of the direct reasons and rationale for utilizing alternative medicine, and for ensuring the informal sector’s sustainability both over generations and through changing conditions.

An additional aspect that impacts the traditional health system in our particular study site is the sociopolitical context. Traditional healers’ methods of acquiring abilities to heal are related strongly to social and cultural norms. Inheriting abilities from ancestors, the ability to “see” treatments in dreams, and the overall social acceptability of a healer’s practice and knowledge all play into the broader social and economic contexts that allow them to interact and be involved with the community on a variety of levels. A healer’s social status, which was shown in some cases to accompany the profession itself, is yet another element that contributes to the sociopolitical context that influences the traditional health system as a whole. This is important because it speaks to the context, outside of health, in which the traditional health system operates. The environmental, economic, political and cultural aspects of life in Bagnibari and Samair villages all play their roles in creating a situation in which traditional healers are able to function, as well as one where they are necessary and desired by the rest of the community.

As briefly mentioned above, there are economic factors that impact the traditional health system from the community perspective, and prominently include differences in cost and affordability when traditional medicine and western biomedical costs are compared. Typically lower or more manageable expenses are a major factor when evaluating an individual’s health seeking behavior. Given the opportunity and unlimited resources, a person may make very different decisions regarding health and health care providers than what this study has observed. We must however, take these elements into consideration when assessing trends as it is likely a contributing factor to the popularity or utilization of traditional healers.

Finally, other health systems’ reliability and quality are additional elements that affect the community’s use of traditional medicine. Inefficient, expensive or unreliable formal healthcare, financial and human resource shortages in professional or government clinics, and poor relationships between outside doctors and patients all contribute to traditional and informal health care’s utilization.

Our health seeking pathway map also illustrates the way in which the most commonly described illnesses are treated. Based mainly on their severity, and through additional extraneous elements such as available resources, perceived cause, and power relations in the decision making process, any one case of disease could be treated by either western biomedical therapy or through the informal sector and traditional healers.
C. Data Collection and Analysis

Data Collection
Our study was a short exploratory, qualitative study rooted in inductive grounded theory. We identified individuals through purposive and convenience sampling. Ethical considerations were taken into account, and the entire research team ensured that verbal informed consent was taken before involving any research participant.

Prior to collecting data, we developed a guideline and checklist for our data collection tools, which include focus group discussions, in-depth interviews, PRA (Participatory Rapid Assessments/Rural Appraisal), and informal discussions. Data collection took place from 9-14 March, 2010 in Bagnibari village and its surroundings. The material consists of six in-depth interviews, one focus group discussion, four informal discussions and the collection of three PRA tools (one social mapping, one body mapping and one free listing exercise).

A systematic approach was taken in all of the interviews, wherein we introduced ourselves and acquired verbal informed consent. The facilitator and other researchers built rapport by greeting and conversing with all present. Assuming that consent was given, we began questioning about the demographic information and background of the participant(s). We moved on to information about illness and health seeking behavior, focusing on the role and perceptions of traditional healing.

Community members willing to be interviewed or participate were easily found. The healers, however, were slightly more difficult to locate. While community members were shown to use traditional healers frequently, there were not an excessive amount of healers in the vicinity. Interviews with community members and the collection of a social mapping PRA tool by the research team assisted in locating healers for inclusion in the study, and despite their busy schedules, we were able to engage with the most prominent healers in the designated study area to gather the necessary data for this study.

In-depth interviews were taken from traditional healers with one each from a kobiraj, fakir, and pir, who vary slightly in training and practice, as well as two completed with mothers, as the primary care-givers. We also did one focus group discussion with 6 participants who were mothers of different age groups and who sat in a circle to further facilitate communication. Similar to the interviews, informed consent and introductions were done, as well as an explanation of our purpose. Open-ended questions were used to gather information about common illnesses and the pathways for treatment. Probing and ensuring that all present were able to participate equally was done if necessary. This discussion took two hours. Everyone participated with each other and with us, sharing about their common illness experiences, their health seeking behavior, and the biomedical presence in the village. In spite of their different life experiences we found similar types of responses.

Four informal discussions, or unstructured interviews, were also taken, with a 20 year old boy, a traditional healer’s wife, a mother and father, and a kobiraj. Three PRA tools used included a social mapping, a body mapping, and a free listing tool, all of which have been used to help identify the location of the traditional healers, common illnesses and symptoms, perceptions of disease cause and methods of treatment. We were also diligent about observing the context in which these activities took place, including social interactions, as well as any direct observations that were contradictory to what was being expressed to the research team verbally. We also observed the homes of the healers to identify key actors in traditional medicine within Bagnibari, and to observe any themes or interesting points for our research (such as trends in treatment, common beliefs and the interactive relationship between patients and traditional healers). The use of all the above assisted the research team with triangulating our data, or centering in on conclusions based on multiple sources, which allowed the team to gain as clear a picture as possible on the traditional healing services in Bagnibari.

Data Analysis
Immediately after data collection, we made transcripts of the interactions. Data was analyzed using manual coding methods. We coded individually with themes and sub-themes and compared for commonalities and links between our varied areas of study interest. As theories emerged through data collection, they were tested, refined and retested against new information until the explanations were repetitive and the point of saturation was reached. Then we formed a hypothesis about the relationships between the
III. FINDINGS

A. Traditional Healers

Types of Healers

Despite the fact that we entered our study with an operational definition of traditional healers, those generated by the community were of particular importance to us. The kobiraj was defined by a healer who based his treatments mainly on diet change, the use of herbal supplements, holy water and amulets. The pir was defined as someone who recited religious verses and used holy water to treat patients. Finally, the fakir was defined as someone who used mantra, recitation of Koran verses and who used herbal juices for healing. These treatments and methods varied slightly depending on the specific disease or ailment that was presented to them; however these themes were consistent across our interviews and provide an accurate description of how the community views the healers’ services and abilities.

Knowledge and Practice of Traditional Healers

One of our main areas of interest regarding this research topic centered on the background and knowledge of the traditional healers. We were fortunate that the healers we interviewed gave detailed descriptions of their abilities to cure a variety of diseases. One healer expressed that he could cure cases of cancer in his patients within 12 hours through the use of Kaustori, which is a very expensive liquid derived from a deer’s gland. He explained that it is sold for 2,200 taka for 12 grams and is prepared through combining Kaustori with 5 liters of water and boiling down the combination to a half-liter of condensed medicine that is then distributed to the cancer patient.

We also discovered that healers had a variety of levels of formal education and also different methods of acquiring their knowledge about healing. Two told us that they had inherited their power to heal and their abilities through their ancestry, where their mothers, fathers or grandparents were healers and the knowledge was passed down through the family to them. Another healer informed us that he had been an apprentice to a spiritual healer (Pir) prior to “graduating” with the skills to treat patients on his own. The final healer that we interviewed informed us that her abilities came from God and were given to her through her dreams. She explained to us that these God-given dreams told her which herbs to choose and how to mix them to make the proper medicine for her patients. In the area of formal education two of the healers had no formal education, one had completed up to secondary school and the last had completed up to the sixth grade. Their varied education levels and training allowed for slight differentiation between their abilities and the community identified and defined the three different groups of healers, as described above.

B. Health Seeking Behavior

Diseases Treated by Traditional Healers

Our data collection also revealed much information about common diseases experienced by the research participants and what treatments are used or sought after for those illnesses. Commonly expressed illnesses were fever, headache, body pain, jaundice, diarrhea and signs or symptoms of evil spirits. The most often mentioned were pain in the abdomen and jaundice (4 of the 7 participants included these in their statements) and 3 of the 7 responded that fever was prevalent in their family. Additionally, all of the participants spoke about the effects of the evil spirits and evil air. They expressed, however, that these “evil” problems (choralirog or chorachurni) are not as common now as they used to be. Despite this, the theme of evil spirits was highly prevalent, and every mother and caregiver with whom we spoke mentioned the presence of evil spirits and air (Batashlaga) as a serious consideration for their usual methods of prevention and avenues for treatment, should their children become ill. One woman told us that “there are two types of diarrhea. One is watery and the other is an attack by the evil spirits. The evil air gets into the baby’s chest and the abdomen swells and it causes diarrhea”. We were told repeatedly that while the evil spirits are very common, they usually only have the ability to affect children up to one year of age. Many participants told us that for treatment from evil spirits, traditional healers were the primary and usually only source of treatment. They gave, to expel the evil spirits from a person, holy water, amulets, recitation of mantra and when the case is considered to be more severe the healer organized a boithuk, wherein the family and healer gather to sing and coax the evil spirit to leave the patient. For evil spirits/air and jaundice, the traditional healer was almost always sought out as the first step of treatment. The symptoms used to identify a person being affected by evil spirits or
air were lack of appetite, inability to get up and get
dressed, talking incoherently, inability to recognize
people, children crying constantly, abdominal pain
and vomiting. One healer said, “when evil spirits
attack the people have no appetite, they don’t want
to get dressed, they talk incoherently, there is pain
and vomiting and they can’t recognize people.
That’s when they come to me”.

The healers also had much to say about the
consequences of evil spirits. Another explained to
us that, “there are eyes in the chest, when a person
has the evil spirits their legs and arms become
rigid. I ask the spirit what it wants. If it wants food,
then I give food to the patient and then the spirits
go away from the patient’s body. The spirits go
inside and take the food. There is much pain before
that, and that’s why the patient comes to me.”

The belief and perceived severity of the effect of
evil spirits or evil air, and the consequent
dependence on traditional healers is an interesting
discovery when considering potential outside
intervention or education campaigns. While a
pathogen or viral agent may be responsible for
certain kinds of illness, dedication to the evil spirit
explanation may prove to be a barrier to attempts to
promote professional medical advice for specific
symptoms in this community.

Disease Treatment
Treatments for all the diseases mentioned varied
slightly among the participants. For fever,
headache, and diarrhea the pharmacy was the first
choice for treatment. Additionally, if the condition
was serious, or worsened significantly, it was
found that the patient would often be taken to the
hospital

One mother in our focus group clarified for us that
if a disease is not serious, she and her family see
the traditional healer first. If the disease is serious,
however, then they go to the hospital. If she sees
the traditional healer first for an illness and he
advises that she seek additional treatment at the
hospital, then she will usually do so, despite it not
being an established referral system. Among the
participants, cases of reported diarrhea were very
high. Those in the interviews spoke about their
varied treatment methods, and within the focus
group discussion of mothers, we were told that they
treat their children’s diarrhea with oral rehydration
saline (ORS) from the pharmacy, and if it is not
available that they make it at home. They
distinguished, however, between “normal” diarrhea
and the kind that is caused by the evil spirits, which
enters the child’s body and causes swelling of the
abdomen and abdominal pain. These cases, they
said, were taken to the traditional healer instead of
being treated with the ORS solution because only
the kobiraj could treat cases that involve evil
spirits. One deviant case presented in the focus
group discussion of mothers, where one participant
informed us that because her child was very young,
under one year of age, she would not take him to
the traditional healer. She felt that due to his young
age, any illness that befell him would need to be
taken either to a formal doctor or to the hospital.
Alternatively, the overwhelming majority of
participants felt that youth was a factor that made
the influence of a traditional healer more important,
as children and babies are more susceptible to the
effects and influence of evil spirits and would
therefore require the specialized attention of
traditional treatments.

The focus group in many other areas of questioning
was fairly consistent. The ages of the participants,
who totaled 6, were from 20-50 years. They were
all women of similar socio-economic status. They
were all housewives and had multiple children.
They jointly expressed common cold, hypertension
and diarrhea as frequently occurring illnesses
within their families and community. The
pharmacy was the most common source of
treatment and information for these and other
diseases, however as stated previously, if the
mother felt the disease was severe the child was
taken to Dhaka Medical College or Savar Hospital.
For diseases not felt to be serious, or for illnesses
and symptoms caused by evil spirits or air, they
expressed that they took these cases to the
traditional healer for his or her advice and therapy.
Holy water and herbals were the most common
treatments used by the healers for their ailments.

Costs of the services provided by the healers that
were reported to us were varied, from claiming that
services were offered free of charge to 500 taka for
one treatment. One mother also informed us that if
the healer only had to use holy water, that the
services were free, however if they had to use
additional medicines or techniques then the cost
went up. Treatment methods varied among the
healers and for the evaluation of these methods we
were keenly interested in the perspectives of the
healers themselves. One kobiraj stated, “Mainly I
use herbs, ginger, and holy water”. This healer also
explained to us that he was also able to cure cancer within 12 hours of seeing a patient with a potent mixture of Kaustori (a byproduct of a deer’s umbilicus). He claimed success in treating all cases of cancer that were presented to him except for one, where the patient had attempted surgery and therapy from a western biomedical doctor first, which then hampered the healer’s ability to effectively cure the cancer. These methods and varieties of experiences all helped to shed light on the realities of the traditional healing system and led us to draw several conclusions. Finally, as seen in the final example of the cancer-curing healer, the disparity and disagreements between western biomedical practice and the services of traditional healers can create confusion within the community and may heavily influence decision-making and/or future health seeking behavior.

IV. DISCUSSION

Our information has significance on a number of levels. What is valuable both for the purposes of our study, and as a contribution to the field of public health, is the illustration of some of the motivations behind seeking out certain kinds of treatment for specific diseases. The delineations within both perceived severity and cause had significant implications for the kind of care sought out by families and individuals. The cases deemed “serious” by the majority of our participants were taken to biomedical clinics or to hospitals. While not necessarily the same definitions as what biomedicine would classify as a serious case, the implications of turning to that form of care when the situation seemed most dire outlines the way in which the community views traditional healers. While both the literature and our experience in this study show that traditional healers are generally respected and valued members of their community, their lack of formal education and training, and in some cases resources, lowers the level of trust held in them for illness experiences that are viewed as the most serious. The number of factors that led to the use or rejection of traditional medicine was quite extensive, and included some issues surrounding the perceived level of knowledge of the healers as well as the unavailability of doctors, cultural norms and practices, cost issues, and proximity to healers. These issues however, were not consistent when the perceived cause of disease is evil spirits. Although known to be serious, these cases, which also involve symptoms of jaundice and severe diarrhea in children, are taken almost exclusively to traditional healers due to widespread belief that their services are the only thing that will cure these problems. Other diseases, such as jaundice, were also taken almost exclusively to traditional healers, out of either cultural tradition or personal experience with traditional methods being effective in the treatment of jaundice. Additionally, even for cases where a biomedical or formally trained doctor was seen first for a serious case of any number of illnesses, often times there were follow up visits to traditional or spiritual healers. In our experience, this was related to the outcome of the formal health sector visit. If given undesirable news or results, an alternative source and second opinion was often sought out for the simple yet powerful option of feeling that there was something that could be done and that treatment and healing was possible. This kind of hope, irrespective of having or not having a factual basis, had a powerful effect on many of the patients we spoke to. Those who visit the spiritual healers, who work more often with recitation of the Koran, had the additional comfort of religion on their side.

Another interesting trend that emerged in our research was that initially participants stated that they either did not go to the traditional healer, or did not trust them. However, upon further questioning and probing they often admitted to seeking treatment from traditional or spiritual healers for a number of ailments, sometimes even foregoing treatment and medicines prescribed by trained doctors in favor of alternative or herbal medicines. In one case study, a wealthy and prominent man in one of the villages expressed to us that he had no use for traditional medicine. He told us that he went to a biomedical doctor when he was sick and decided on the same method of treatment for his family. In an effort to get a body map from him and his wife, we discovered that he had a few health problems, one being high cholesterol. The facilitators probed this fact to discover his treatment methods and we discovered that he had gone to a doctor, but had also visited a traditional healer for this condition. He had a prescription from the doctor, but had since discontinued its use in favor of alternative medicine in the form of a powder. The healer told him that after 41 days of incorporating the powder into his diet that he would be cured of the high cholesterol. At the time of the interview he had stopped the treatment prescribed by the doctor and had been taking the powder for 11 days and expressed to us that he “already felt lighter”. This
case study illustrates that for some, especially of higher socio-economic status, there is a slight disconnect from maintaining a certain image in the community and towards outsiders that was not necessarily reflected in their actions. His reluctance may have been due to the fact that there were a team of outsiders involved in the interviews, or a result of any number or combination of other factors. Many recent health interventions have emphasized the need for more modern methods of health care, for everything from contraceptives to treatment of chronic disease. Our research team has taken these facts and decided that more training of traditional healers would serve to increase their legitimacy in the community as well as improve their ability to refer patients appropriately to biomedical doctors when necessary.

Finally, against a backdrop of increasing modernization and urbanization, the profession of traditional healing as a whole is experiencing changes. While the biomedical healthcare system in Bangladesh is far from comprehensive or easily accessible, the increasing influence of medicalization and medical knowledge among the population will change the necessity and practices of traditional medicine in Bangladesh. Incorporating traditional healers in development projects could have the ability to strengthen the healthcare system, even where official medical clinics or hospitals are unable to provide necessary services.

V. LIMITATIONS

Our study had several limitations, including a minimal scope and inability to spend extensive time within our study population, which might have led to more extensive understanding of the situation and background. Another limitation was that for our focus group discussion there was a traditional healer sitting just outside the circle of participants. This was unknown to the research team at the time, until he came forward and assisted with a drawing of the evil eye within the chest of a person, which, while insightful, was a strong influence over the group and the opinions given to the researchers. His presence may have influenced the participants to answer without complete freedom and confidentiality, and thus created a bias within the data collected from that group.

We were also influenced by our own backgrounds, including the presence of medical doctors on the research team and our separation from the community in which we were working. This outsider bias, along with our time shortages and the lack of any formal record keeping of traditional healers in the area were all limitations to our study.

VI. RECOMMENDATIONS

Moving forward, the research team would recommend that further follow up and more extensive research is done among the residents of Bagmibari and other rural villages in Bangladesh to better understand the motivations and background of the findings of this study. We would suggest that the information gathered in regards to the connection between disease cause and severity and the treatment choices be utilized in any future health intervention. We would also like to see more training for the traditional healers, which would help bridge the gap between biomedicine and alternative practices. This would also increase comprehensive health care, as well as positive health outcomes if the healers, as a first point of contact for treatment, were more knowledgeable about appropriate referrals to doctors.

Acknowledgements

We would like to thank the residents of Bagmibari and Samair villages for their kindness, hospitality and wealth of knowledge that they shared with us. We would also like to thank the members of the James P Grant School of Public Health and the George Washington University professors who were a constant source of help and guidance through our project. Our fellow classmates, as well, were a wonderful source of knowledge and support throughout this process. Thank you, to all!

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APPENDIX

A. Figure 1

Conceptual Framework of Traditional Health System

Sociopolitical Context
- Inheritance
- Socially acceptable
- Interact With community
- Prestige position in community
- Politically influence personality

Contextual Treatment
- Boliofs Interpretation
- Culture based
- Used Herbs
- Easy Access
- Deal with Emic
- Create Hope till last

Traditional Health System
(Traditional Healers)
- kobiraj
- Spiritual Healers (Pir/Fakir)
- Hakeem

Other Health System
- Inefficient Health sector
- Expensive Health system
- Unavailability of medicine
- Shortage of staff
- Not exist in the community
- No influx in the community
- Poor doctor-patient interaction
- Unnecessary referral to Clinics

Cost Effective Treatment
- Low cost
- Affordable
- Manageable

B. Figure 2

Health Seeking Pathway

Biomedicine

If not treated

Go to Traditional Healer

Encourage Patient/Gives hope

Severe

Illnesses
- Cold
- Abdominal Pain
- Convulsions

Preceived Cause/Illness

Mild to Moderate

Traditional Healers

Belief/Customs
- Not Costly
- Caused by Evil Eye
- Poverty
- Family decision (power/gender relations)
- Lack of or distance to formal health center

Individual/Family
USE OF CONTRACEPTIVE METHODS AMONG MARRIED WOMEN OF BAGNIBARI VILLAGE: PERCEPTIONS, PREFERENCES AND BEHAVIORS

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ABSTRACT

Introduction: Understanding the cultural and socioeconomic factors influencing the choice of contraceptives among women are essential to having a successful family planning program.

Objectives: To identify the cultural and socioeconomic factors influencing the individual use of contraception among married women of reproductive age in Bagnibari village.

Methods: A qualitative grounded theory approach collected data from In-Depth Interviews (IDI), a Focus Group Discussion (FGD), Participatory Rural Appraisals (PRA), and informal discussions and observations in peri-urban Bagnibari village from married women of reproductive age and key informants.

Results: The most popular contraceptive method is the pill followed by the injection. Decision-making regarding contraceptive use is directly and indirectly affected by the relationship of three dimensions – individual, cultural, and socioeconomic. All are heavily influenced by Muslim religious beliefs and male and female power dynamics. Women are responsible for use of contraceptives and often do not have proper knowledge regarding the methods and side effects. Knowledge is further limited by the cultural context placing women primarily in the home without access to non-governmental family planning options. Women perceive government family planning as inadequate. There was a lack of trust in government services. Women prefer temporary methods rather than permanent methods owing to their religious beliefs.

Conclusion: Cultural and socioeconomic factors have a significant impact on contraceptive use. The relationship among the three dimensions influencing contraceptive use has to be addressed when delivering family planning services.

Key words: contraceptive use, cultural, socioeconomic, preference, perception

I. INTRODUCTION

Family planning programs have been present in Bangladesh for more than three decades. These programs have had a significant impact in addressing the undesirably high Total Fertility Rate (TFR) of the country since it gained independence in 1971. Historically, a consistent increase in the Contraceptive Prevalence Rate (CPR) has helped to decrease the TFR from 6.9% in 1970 to 2.3 in 2008 (UNICEF, 2010). However, the CPR began to plateau in the 1990s for about ten years, resumed growth for a while and continued to decline from 58% in 2004 to 56% in 2007 (Bangladesh DHS,
Addressing the current cultural and socioeconomic barriers influencing contraceptive use will assist Bangladesh in its continued efforts to decrease the TFR. Control of population growth in the world’s most densely populated country needs to persist through family planning programs to continue the decline in fertility and increase economic development (CIA Factbook, 2009).

Bangladesh is home to one of the largest populations of Muslims in the world, having a predominantly agricultural based economy. Half of the population is currently living under the international poverty line with the women comprising a miniscule eight percent of the workforce and little decision making power (Boonstra, 2001). Thus, the relatively universal cultural and socioeconomic factors influencing the use of contraceptives need to be addressed in the Family Planning (FP) program at a national level. The following factors have noteworthy roles in contraceptive method choice: cultural preference, different levels of effectiveness, convenience, accessibility, and suitability for a couple (Mannan, 2002).

Kamal (2000) found that the most significant factor influencing the current use of modern contraceptive methods among women in Bangladesh is “husband’s approval” of family planning (Kamal, 2000). Perception of contraceptives is therefore critical in identifying how to address the differing needs among women to increase the CPR. In a traditional society like Bangladesh when a woman is expected “to be guided by their husband’s opinion in every sphere of life”, women may not receive essential reproductive health care (Kamal, 2000). The situation is further aggravated when it comes to women with little or no education and using contraceptives. As Obermeyer (1999) stated, “discrepancies have repeatedly been found between women’s perceptions and expressions of their needs and biomedical assessments of their health” (1999). Thus, it is important to gain an understanding of their perspectives if the Bangladeshi government is to deliver a family planning program that will be utilized efficiently.

To gain as much insight available on the perceptions regarding contraceptive use it is necessary to use qualitative studies to find these answers. This paper reports the findings obtained from a qualitative study during March 2010, in Baghiniari village, a peri-urban area of the Dhaka division. The purpose of the study was to identify the cultural and socioeconomic factors influencing the individual use of contraception among married women of reproductive age in Baghiniari village.

History

In the mid-1970s, the Bangladesh government initially introduced FP programs empowering women to make decisions regarding their reproductive health. The CPR during this time was less than 10% (Saha, 2007). The government established more satellite clinics, advocacy at the community level by key informants (e.g., religious leaders) to raise awareness, giving incentives for using permanent methods. Initial FP services offered invasive options, such as the Intra Uterine Device (IUD), tubectomy, and vasectomy. In 1978, the government began to distribute the contraceptive pills free of charge through the Family Planning Workers (FPW) who were visiting the women door-to-door in their houses (Kamal, 2000). The introduction of the pill as a contraceptive method was not initially accepted. In fact it took a long time to increase the rate of usage only from 5% in 1985 to 21% in 1996-97 (Mannan, 2002). This increased rate also signals a transition from more permanent contraceptive methods to modern temporary methods (e.g., pill, injectables, condoms). The transition to a modern contraceptive market is likely the result of the significant changes in the cultural and socio-economic situations from Bangladesh’s independence in 1971. This resulted in the introduction of new preferences, perceptions, and behaviors influencing the use of contraceptives. For example, the perception of family size, the changing socio-economic status of the population and the improvement in education of women in post-independence Bangladesh.

Quantitative studies since FP programs were first introduced in the mid-1970s and at present have revealed the trends in the CPR, but survey limitations fail to address the cultural and socio-economic factors that influence the choice of methods. The few available qualitative studies focusing on the influences on contraception method choice are outdated and emphasize only one factor, such as power relations, but not the combination of factors influencing the choice of contraceptive methods.
In that regard, a contemporary qualitative study based on grounded theory will contribute to a greater understanding of the cultural and socio-economic factors influencing method choice among married women of reproductive age currently in Bangladesh.

II. METHODOLOGY

The study was conducted in the peri-urban area of Bagnibari, about 30 km outside the center of Dhaka city. Village population is 7,000 people within 530 households having 700 eligible couples of reproductive age (Union Office Worker, personal communication, March 9, 2010). The village livelihood is mainly agriculture, but many garment and furniture factories near the village provide additional job opportunities. In addition, most houses have generous land plots, brick-built houses, access to clean water, electricity, and livestock (e.g., cattle, goats, chickens). Bagnibari village is within Birulia union sharing a Family Welfare Centre (FWC) provided through government family planning services that employ FPWs responsible for the home-delivery of pills, injectables, and condoms.

B. Study Design, Sampling & Methods

From existing literature and our personal experiences, the study was designed by conceptualizing contraceptive use within three domains – individual, cultural, and socio-economic. The individual level may include the woman’s age, occupation, education, present children (e.g., number, age, and sex), contraceptive side effects, knowledge and preference. The cultural dimension reflects the dominating practice of the Muslim religion, the power dynamics between men and women in Bangladesh, son preference, and a general lack of empowerment. The third dimension focuses on the socio-economic factors including income, occupation, contraceptive cost, government service, and accessibility of sources.

Data were collected through six in-depth interviews with married women of reproductive age and one FPW, two Participatory Rural Appraisals (body mapping and free-listing), one Focus Group Discussion (FGD), informal observations and discussions with key informants using semi-structured guidelines. In addition, an extensive literature review provided insight on past and current usage of contraceptives as well as the cultural and socio-economic context.

Based on research questions, we designed certain criteria for our sample selection using a small sample size to address our research efficiently and collect data of great depth and breadth. Village households were chosen conveniently throughout different areas of the village with the purpose of locating married women of reproductive age. Thus, initially our sampling was purposive, but later we also chose our sample conveniently because of our field time restriction. Most data were collected from the local pharmacy, the union health complex, a medicine shop, and village households from males and females. However, we initially started collecting our data from the married women of reproductive age until the women informed us their primary source of contraceptives were from the pharmacy and local medicine shop.

C. Data Analysis & Ethical Considerations

Transcripts were completed cohesively among the three research analysts the day the data was collected. All qualitative data collected were analyzed using the same broad coding process of general themes and specific sub-categories. The analysts independently coded the transcripts and discussed the codes collectively to assign final codes in agreement, adding rigor to findings. Accuracy of data was ensured through triangulation of data collection methods involving different key informants. Final codes were all cross-referenced to ensure validity. Manual coding was used to familiarize the analysts with the data and the emerging themes. Each code was identified on a separate note card and as a team the analysts maneuvered the codes in a multitude of combinations in an open floor space until themes began to emerge. Analysis of the data ceased after it was reflected on and reanalyzed numerous times until significant relationships among various factors emerged and emphasized the most significant findings.

Ethical considerations were taken into account via informed verbal consent explaining the study purpose. Participants were assured of confidentiality. The willingness of participation or refusal in the study and the ability to withdraw at any time was explained. In addition, each participant was given a pseudonym.
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and stop for a month it will be okay. If I start menstruating I stop taking it for that month.”

The women ranged in age from 21-45 years. Woman under the age of twenty-nine preferred using the pill compared to women above the age of 30 preferring injection. The women we talked to did not work outside the village. Fifteen women were housewives and only one worked within the community with a local NGO. Of the sixteen women, eight had more than two children and two women had four children. One woman with two children was satisfied, but stated that her husband desired more children.

C. Cultural Influences
From observation it was found that all the women came from Muslim families. Their religious beliefs influence their choice of contraceptive methods. The following statements further explain the Muslim influence as different women in the FGDs stated,

“We have to do everything according to our religion.”
“We follow religiously, but sometimes we have to use [methods] because we live in a society and have to keep our families small.”
“Some people don’t use anything because God will punish them for not obeying the rules.”

Religious rules regarding family planning were primarily associated with the choice of avoiding sterilization, fearing that it would cause punishment from God after death.

The existing power dynamics between men and women in Bangladeshi society places women at a distinct disadvantage in the decision making process of contraceptive use. Ten of the women stated how they needed permission from their husbands to use contraceptives. The husband often chooses what method the couple will use but the woman is predominantly responsible with the burden of ensuring contraceptive use. Both men interviewed informally stated they did not want more children, but were not willing to use any methods so their wives must take the responsibility. One of the men stated that his wife had terrible side effects with contraceptives and wished his wife would get sterilized. His wife was against sterilization for religious beliefs and the man refused to get sterilized himself; therefore, the couple was now using condoms. Another woman stated her helplessness of having to use contraceptives that caused terrible side effects. Her husband refused to use any other method so she had to continue to use the pill because she could not go against her husband’s decision. Data showed that men usually do not like to use condoms and refuse them often. In addition, women are the ones being educated by the FPWs on how to properly use condoms attributing to the continuation of the unequal power dynamics between men and women regarding contraceptive use. It was also quite evident that women experienced many challenges trying to balance their religious views and health while trying to practice family planning.

D. Socioeconomic Influences
The FPW stated that the majority of the couples of reproductive age are in the middle-income bracket. This statement was confirmed from our data findings. Only one woman had an average monthly income of less than BDT 6000 (a little less than 100 USD). The other women reported an income of between BDT 8000-12000 per month (between 100-150 USD). The pill is seen as the most cost-effective method to use because it can be used for a whole month, as a participant stated,

“We don’t have enough money to buy enough condoms for a month. We can use pills for a long time.”

Therefore, people consider the condoms an expensive contraceptive method because a package of condoms costs 10-25 taka and there are only three condoms per package. The pill lasts a whole month and protects against pregnancy during multiple intercourse. This is considered better compared to a condom which can only be used once. In reference to the other methods used in the village, the pill costs 35-60 taka per month and the injection costs 35-80 taka per injection.

All of the women were aware of the government family planning services that are available to them at the different levels (e.g., door-to-door, union health complex). Services provided by the government were perceived to be negative by the women at all levels of service. One woman complained that the health complex was too crowded and the waiting time was very long. All but one woman complained that because the contraceptive methods distributed from the government were free, the side effects were worse than contraceptives purchased elsewhere. The
women often did not accept the free contraceptives provided from the government and chose to purchase them elsewhere from local pharmacies and shops. In addition, the family planning worker stated the following common perceptions from women:

“They buy from the pharmacy. They think if it is free, it is not good (government contraception methods). They complain about more dizziness from the pill and stopped taking it from me. One lady stopped taking from me and I continued to visit her home. One day she told me she was having difficulty paying for the pill from the pharmacy and wants the free pill again.”

We found that, 12 of the 16 women using contraceptive methods purchase from the pharmacy and local shops. These shops are their primary sources for getting contraceptives. Only one woman actually used the contraception provided from the FPW and one other woman distributed the pills she had got from the FPW to others. The government provides an incentive for the IUD by providing 100 taka plus the cost of transportation. An incentive is also given for sterilization with a payment of 1,000 taka plus a sari (traditional long piece of clothing used by women) for a woman and a loongi (traditional long skirt for men) for a man. People are not motivated as the FPW informed us that only 1-2 women are sterilized each year. According to the FWV (Family Welfare Visitor), out of the union of eight villages, which Bagnibari is part of, only 2-3 women per month receive the IUD. In Bagnibari the FPW mentioned the use of the pill, injection, and condom as the predominant methods used.

IV. DISCUSSION & CONCLUSION

This study analyzed the influences of cultural and socio-economic factors in the use of contraceptives among rural women of reproductive age in Bagnibari village. Three domains were identified to explain the perceptions, preference, and barriers to contraceptive use – individual, cultural, and socio-economic. In addition, the three dimensions have direct and indirect relationships with the use of contraception. At the individual level, a woman’s age, education, present children (e.g., number, age, sex), contraceptive knowledge and preference are directly related to the components of the cultural dimension (e.g., religion, power dynamics, lack of women’s empowerment) and socio-economic dimension (e.g., income, occupation, contraceptive costs). This suggests the importance of women’s involvement in the social-sector to further develop their status within society by increasing their opportunities for education and employment (Kabir et al. 2005).

The cultural aspect of women lacking independence by staying inside their home working as housewives isolates them from sources outside of Bagnibari village. It is important to note that some women do work outside of their homes, but we did not come across any during our study. As reported by Hanifi, “the low contraceptive prevalence has largely been attributed to the religious conservativeness of population” and the limited mobility that women have outside their home (2001). The women in Bagnibari village must depend on government services provided by the door-to-door FPWs regarding their knowledge and use of contraceptives. None of the women mentioned any activities provide by NGOs in their village or surrounding village focusing on family planning. Previous research found a similar finding that a woman’s dependence on her husband has a significant role in the utilization of family planning services (The Schuler, 1999). Thus the idea regarding that the three domains are heavily intertwined and have a considerable influence on each another is further reinforced. This is an important finding because it supports the idea that family planning programs need to be addressed from a multi-level approach.

Women have limited socio-economic security due to the financial dependency on their husbands. This creates a correlation between the cost of contraceptives and the methods chosen. Further suggested by Kabir, “socioeconomic conditions exert both independent and joint efforts on family size. For instance, educational attainment of the woman is generally considered to be a useful index of socioeconomic status as well as the level of overall social sophistication and therefore it is inversely related to the desire for additional children and positively related to the use of contraception” (2005). Employment of women can assist to increase their independence and enable them to have a more active role in decision-making in all aspects of their lives, especially reproductive health. When women work outside of their home, they have increased access to additional information on contraceptive use to adopt an

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appropriate method. Research suggests there is a positive correlation between employment and use of contraceptives (Kabir, 2005).

Although women have the availability to receive family planning services through FPWs provided by the government, it is not always an accessible source. Another study addressed that the, “low contraceptive prevalence has largely been attributed to…insufficient contact by field workers with clients” (Hanifi, 2001). Besides, women’s views towards government family planning services are not positive. Women feel that because contraceptives are provided free of cost they are not good and cause more side effects. A gap of communication between FPWs and women is also a factor that influences the use of contraception. Many women could benefit from increased contact with FPWs. Increased visits would help the women in the village to build a relationship with FPWs and likely create an open forum for discussion regarding side effects instead of the usual distribution of contraceptives. In addition, women often do not know how to respond to side effects. Some women accept the side effects believing they are a natural process, while other women may try another contraceptive method or decide to forgo using contraceptive methods. A study by Schuler (1999) found women making similar contraceptive decisions when they experienced adverse side effects as stated here, “high rates of contraceptive discontinuation due to side effects are another sign that women are not receiving adequate information and counseling through the system of domiciliary services”. It also created a lack of motivation to adopt permanent methods, pointing to their religious beliefs. As stated by Fahimi (2004), “sterilization as a family planning method is considered as interfering with God’s will and attempting to change what God has created.”

The peri-urban area of Bagnibari village is not significantly different from other areas in Bangladesh. “Bangladesh maintains a traditional social organization and is one of the least developed, predominantly rural, and poverty-stricken countries in the world. In addition, most of its people have a minimal level of education and women generally have a lower socioeconomic status than men” (Nosaka et al. 2008). Thus the relevance of our findings and the insight they offer can be applied to other areas of Bangladesh as well. Our methodology can also be applicable to future research addressing contraceptive use in other peri-urban villages.

V. LIMITATIONS

The sample size was too small even to gain a full emic perspective and the research period was very short. The study focused on the emic perspectives of married women, but informal discussions also included a few men to incorporate the male perspective of contraceptive use in Bagnibari village. But this may not be enough to gain insight into the men’s views. Besides, all women were from the same religious group (Islam) and perceptions of contraceptive use may be different among members of other religions. Finally, access to accurate demographic data on the study population from a reliable and documented source was not possible.

VI. RECOMMENDATIONS

Advocating at a policy level to improve the service of family planning through empowering women and male involvement is necessary. This includes providing family planning counseling and education to both men and women individually and as a couple to create equal involvement in contraceptive use. The inclusion of a male family planning worker at field level will assist in improving CPR. This will have a positive impact on total fertility rate (TFR) over time and assist in women’s empowerment so women can have a larger decision-making role in their reproductive health.

In addition, strong monitoring and evaluation services are essential to improve the performance of the government family planning program. The lack of counseling and motivation may be one of the causes of misconceptions, discontinuations and switching of methods. The current communication gap between FPW and women may be a noteworthy factor influencing contraceptive use which also created a lack of motivation to adopt contraceptive methods that are suitable for both partners.

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