

Health Needs and Health-seeking Behaviours of Street Dwellers in Dhaka City



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Health Needs and Health-seeking Behaviours of Street Dwellers in Dhaka City

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Executive Summary

Background: Bangladesh has experienced one of the highest urban population growth rates (>6% per year) in the last three decades compared to the national population growth rate of about 1.5% per year. The numbers of urban poor and street dwellers are likely to increase at least in proportion to the overall population growth. Street dwellers are likely to be among the most deprived people in urban areas. Street dwellers are defined as the people who sleep on the street, railway terminals and platforms, bus stations, parks and open spaces, religious centres, construction sites, around graveyards, and other public places. Regardless of the reasons for people living on the street, street dwellers are considered to pose particular problems. They are often blamed for crimes and other antisocial activities that occur in cities, including prostitution, begging, and drug abuse. Some may turn to crime because they have no regular employment and are trapped in a vicious cycle of poverty, deprivation, and social ostracism with barely sufficient income to keep them above the starvation level. The city authorities are likely to view street dwellers in terms of social and environmental problems resulting from their activities, such as blocking footpaths and contributing to unhygienic conditions. This creates a public-health hazard as a large number of poor people living in unsanitary conditions without access to proper healthcare services. Findings of studies revealed that one-third of street dwellers were affected with some diseases. Many of these conditions are preventable and treatable with free services available at the government and NGO clinics. However, there are likely to be barriers for street dwellers to access services. Women in particular may find it difficult to attend a formal clinic for family-planning and reproductive health services if they have no fixed dwelling. In some countries, such as China and India, initiatives have been taken to address the primary healthcare needs of street dwellers. In Bangladesh, a few NGOs have been providing healthcare and related services to street dwellers. There is, however, no comprehensive programme to ensure the meeting of different health needs of different subgroups of the street dweller population. The city corporations and government health service providers also do not have a specific policy or strategy for providing health services for this population. On the other hand, street dwellers (apart from sex workers) are not organized to lobby the authorities to address their needs. Consequently, their health needs remain largely unmet through formal essential primary healthcare providers.

Specific aims: The main aim of this research was to ascertain the extent to which the needs of street dwellers for essential services have been met through existing facilities. The study also aimed at identifying the behaviours and barriers inhibiting improved access to formal essential services for street dwellers, particularly the most vulnerable, women, and children.

Methods and materials: This community-based, cross-sectional study was carried out over a 13-month period from June 2007 to June 2008. A survey and exit-interviews were conducted to collect information on health needs and health-seeking behaviours of street dwellers.

The study was conducted in 11 selected areas of Dhaka city. These included the five major entry points for rural people moving into the city, such as Kamalapur, Saidabad, Sadarghat, Gabtoli, and Mohakhali and particular locations with major concentrations of street dwellers, such as High Court premises, Kawran Bazar, Mirpur Mazar, Stadium area, Cantonment Railway Station, and Gulshan market. The study population included 448 female and 448 male ever-married street dwellers aged 15-49 years. There were two components for collection of data: (a) a cross-sectional community survey of adult street dwellers using questionnaires and (b) exit-interviews with users of essential service-delivery facilities.

Results: Ninety-five percent of the 448 female and all male respondents belonged to the age-group of 20-49 years. One-third of the female respondents were abandoned, separated, divorced, or widowed. Eighty percent of the female and 57% of the male street dwellers interviewed had never attended any school. The main occupations of the female street dwellers were domestic help, pick and sell, day labour, and sex work, although nearly half of them were unemployed. The male respondents were mainly day labourers and rickshaw/van-pullers.

The findings revealed that many street dwellers interviewed had no knowledge about places where vaccines are provided to children and women. About one-third of the female and half of the male street dwellers had no knowledge about the facilities where Expanded Programme on Immunization (EPI) services are provided to women and children. Although approximately two-thirds of the females and half of the males had knowledge of EPI service-provision facilities, 95% of the females and 87% of the males mentioned the mobile clinics of Marie Stopes, although EPI services are not provided there.

Data were collected on morbidity of street dwellers. They were asked if they were currently sick. Seventy-two percent of the female and 48% of the male street dwellers were sick at the time of data collection. Those who were not currently sick were asked if they had any sickness during the preceding 15 days, and the findings revealed that over one-fifth became sick. The female street dwellers were mostly affected by reproductive health problems, such as vaginal discharge, lower abdominal pain, genital itching/burning, and others (mass in the lower abdomen/irregular period/prolepses). The common general illnesses reported by the street dwellers included diseases of the respiratory system (cold/cough/fever/asthma), diseases of the digestive system (gastric, diarrhoea), severe pain (headache/chest), and scabies. Married female street dwellers were significantly more likely to be currently sick than females who had other marital status. No other factors analyzed significantly affected their current morbidity.

Survey data showed that about half of the female and one-third of the male street dwellers did not seek healthcare services during their sickness. Of those who sought seeking healthcare service, more than half of the females and two-thirds of the males bought medicines from drug sellers at the nearest pharmacy. Other respondents used the mobile clinics of the Marie Stopes Clinic Society. A very few street dwellers visited the Government of Bangladesh (GoB) facilities. The only government facility they visited was the Dhaka Medical College Hospital. A few street dwellers who visited healthcare facilities encountered problems, such as denial of treatment by providers due to their (street dwellers) financial insolvency, long-waiting time, and neglect of service providers during their last visit to healthcare facilities for services.

Of the female street dwellers interviewed, 14% (n=448) were currently pregnant, and two-thirds (n=63) of them were in the second and the third trimester. Twenty-eight percent of the pregnant women sought antenatal care (ANC). Eighty-two percent of mothers who sought treatment visited the mobile clinics of the Marie Stopes, which are held once a week in seven locations in Dhaka city. Only 13% of the pregnant women (n=63) received TT vaccines during their current pregnancy, and 67% of them received only one dose.

The street women who were not currently pregnant were asked if they had given birth during the last 12 months preceding the data collection. Twenty-one percent (n=385) reported that they

gave birth during the last 12 months. Twenty-one percent of deliveries were conducted in the street whereas 79% were conducted by untrained personnel, such as neighbours and relatives, and 6% were self-conducted.

The findings revealed that 67% of newborns (n=54) had neonatal morbidity. The common neonatal morbidities included cold/cough/fever, infection in cord, measles, and pus in the eyes.

Respondents (448 females and 448 females) with children aged 12-23 months were asked about the vaccination status of those children. Eighty-seven percent of the female and 66% of the male street dwellers reported that their children had received any dose of vaccines. These data are not comparable with other reported data as validation of data was not possible because the respondents did not have EPI cards.

The street dwellers were asked if their youngest child aged less than five years had any symptoms of acute respiratory infection (ARI) during the last two weeks preceding the data collection. They reported that their children had at least one of the symptoms of ARI during the last two weeks. Most street dwellers reported that their children had more than one symptom associated with ARI during the last two weeks. The common symptoms mentioned by them were fever, cough, breathing difficulty, rapid breathing, and chest in-drawing. Seventy percent of the female and 67% of the male street dwellers interviewed sought treatment for their children. Of those street dwellers who sought treatment, most visited drug sellers or a conveniently-located pharmacy. The other main source of service they received was from the mobile clinics of Marie Stopes.

To assess the prevalence of diarrhoea among street children aged less than five years, the respondents were asked if their youngest child had watery stool three or more times a day during the past two weeks. Thirty-seven percent of the female and 34% of the male street dwellers reported that their accompanied children had diarrhoea during the preceding two weeks. For the treatment of diarrhoea-affected children, they mainly gave packet oral saline and also other liquid foods, plain water and/or zinc tablets or zinc syrup.

The findings revealed that all the street dwellers interviewed used tap water for drinking. Seventy-seven percent of the female and 79% of the male street dwellers used tap water for their hand/face-washing. About half of the street dwellers used water from pond/river for bathing and cloth-washing.

Data on the street dwellers' practice of defaecation and practice after defaecation were also collected and analyzed. Eighty-eight percent of the female and 88% of the male street dwellers used road side/open spaces and drains for their defaecation. Some street dwellers used toilets of the local public utility by providing money to the staff members engaged in maintaining the security of the toilets.

To ascertain the status of physical violence among the street dwellers, data were collected and analyzed. The street dwellers were asked if they were ever assaulted by their spouses or others while walking or lying on the street. Eighty-three percent of the female and 29% of the male street dwellers interviewed reported that they were assaulted while staying on the street.

To ascertain the status of drug abuse among the street dwellers, data were collected and analyzed. They were asked if they used any drug during the last one year. A negligible percentage of the female street dwellers were using drugs, but most males used any kind of drugs during last one year.

To assess the status of sexual harassments among the female street dwellers, they were asked if they were approached for unwanted physical contact or propositions while walking/lying on the street. More than two-thirds of them reported that they were approached for unwanted physical contact or propositions while walking/lying on the street.

Conclusion and recommendations: The findings suggest that the street dwellers are extremely vulnerable in terms of their health needs and health-seeking behaviours. There is no health service-delivery mechanism targeting this marginalized group of people like other groups, such as slum dwellers, non-slum dwellers, and people living in hard-to-reach areas, except the mobile clinics service-delivery system of the Marie Stopes Clinic Society. On the other hand, the use of essential services among the street dwellers is very rare. Although the Health, Nutrition and Population Sector Programme of Bangladesh designed programmes to ensure equitable essential services to all, this marginalized group of people is not, however, targeted. The Ministry of Health and Family Welfare should, thus, focus future programmes to meet the needs of this extreme vulnerable group of people.

Background

In recent decades, most low-income countries have experienced a rapid growth in urban populations without adequate expansion of public services. In almost every major urban centre, thousands of people live in overcrowded slums, on streets, or in other public places that lack basic facilities, such as safe water, sanitation, and health services (1). Bangladesh has experienced one of the highest urban population growth rates (>6% per year) in the last three decades compared to the national population growth rate of about 1.5% per year (2). The number of the urban poor was estimated at 7 million in 1985 and 11.5 million in 1997 (3). The numbers of urban poor and street dwellers are likely to increase at least in proportion to the overall population growth. The urban population was estimated at 28,808,477 in 2001 (4); however, this could be double by 2010 if the current growth continues (5). Employment, shelter, and basic services accessible to the growing number of urban poor have become a major socioeconomic and policy issue in Bangladesh (3).

Generally, the health indicators for urban areas are better than those for rural areas of Bangladesh (6); however, there is great disparity among a heterogeneous urban population. Many parts of towns and cities in Bangladesh have extremely poor environmental and living conditions and lack basic amenities, public-healthcare facilities, and outreach services. The urban poor are particularly deprived in terms of basic health indicators. Surveillance data from Dhaka for the 1991-1993 period indicate that the contraceptive prevalence was only 44.7% in slum areas (7). A similar rate (45.4%) was found for slum areas in the Bangladesh Demographic and Health Survey (BDHS) 1993-1994 (8) compared to 54.9% in non-slum areas. The antenatal care (ANC) coverage was 31.5% in slum areas and 54.7% in non-slum areas. A household survey conducted in Dhaka and Chittagong in 1996 found even greater disparity in the use of ANC. In slum areas, only 18% of pregnant women had made at least one visit compared to 55% of women visited in non-slum areas (9,10).

The surveillance of households in Dhaka in 1991-1993 indicated that the use of oral rehydration therapy (ORT) was very low in slum areas with no health intervention (33.1%), and the two-week prevalence rate for diarrhoeal diseases among children aged less than five years was high (20.3%) (7). A similar rate (18.2%) was found for slum areas in the BDHS 1993-1994 compared to 10.5% for non-slum areas. Another survey in 1999 of slum and non-slum areas in Sher-e-Bangla Nagar, Dhaka, found disparity in access to services under the Expanded Programme on Immunization (EPI), with BCG coverage rates of 80% and 95% respectively. Only 57% of children aged 12-23 months in the slum area had full immunization (9). Another study in a slum area of Dhaka in 1995-1998 found an infant mortality rate of 135.2 per 1,000 livebirths among the lowest socioeconomic quartile (based on household income) compared to 71.5 per 1,000 livebirths for Bangladesh as a whole for the 1996-2000 period (6,11).

Street dwellers are likely to be among the most deprived people in urban areas, in terms of living conditions, access to basic facilities, and health indicators. A study of reproductive health needs among street dwellers in Calcutta, India, found a high prevalence of symptoms of reproductive tract infections (RTIs), menstrual problems, and back pain among women; low age at first birth; and low use rates for formal reproductive health services compared to women in slums (12).

The study population

A study in Bangladesh in 1997 defined street dwellers as people who sleep on the street, railway terminals and platforms, bus stations, parks and open spaces, religious centres, construction sites around graveyards, and other public places with no roof (3). A government census in 1997 used the term 'floating population', although this is not widely used outside Asia (13). The floating population defined as "the mobile and vagrant category of rootless people who have no permanent dwelling units whatever worse these are and they are found on the census night during 00:00-05:00 hours in the rail station, launch ghat, bus station, hat-bazar, mazar, stair case of public/government buildings and open space etc". The definition of street dwellers in this study is based on the above definition, including people who sleep in the census locations and on streets, in parks and open spaces, religious centres, construction sites, around graveyards, markets, and other public places.

The census count of the 'floating population' in 1997 was 14,999 in Dhaka city and a further 17,082 in other metropolitan areas, cities, and paurashavas and estimated the number of street dwellers in 105 locations of Dhaka city at 11,500. A more recent study conducted by the Marie Stopes Clinic Society (MSCS) estimated the number of street dwellers at 1,000–4,000 in seven major locations in Dhaka city. The survey found that many street dwellers were living on their own: 26% were unmarried females and 15% unmarried males. However, 36% were living as married couples, and the number of average family members was 3.6. The proportion of people in different age/sex-groups on the basis of rough estimates by street dwellers in seven locations was as follows: 14% children, 11% adolescents, 46% women, and 29% men (14).

The definition of street dwellers used in the present study reflects the fact that many people live without shelter in particular locations of major towns and cities. The study by Islam found that 47.5% of street dwellers in Dhaka city lived on footpaths, 22.6% in the city's transport stations, and about one-eighth (12.6%) in front of major market centres. People were found in the above locations in all seasons, although their numbers vary throughout the year. Concentrations of people increase following natural disasters, such as floods, cyclones, and famines. During religious festivals, many poor people from nearby districts come to the city, and some live temporarily as street dwellers. However, the main reason for migration into the city is economic. Those who move to the city are likely to comprise a transitory population, including many who have moved from rural areas to the city to seek employment. Islam found that nearly a quarter of street dwellers came to Dhaka city after losing their land and assets due to river bank erosion (3).

Health needs and services for street dwellers

Regardless of the reasons for people living on the street, street dwellers are considered to pose particular problems. They are often blamed for crimes and other antisocial activities that occur in cities, including prostitution, begging, and drug abuse. Some may turn to crimes because they have no regular employment and are trapped in a vicious cycle of poverty, deprivation, and social ostracism with barely sufficient income to keep them above starvation level (1). The city authorities are likely to view street dwellers in terms of social and environmental problems resulting from their activities, such as blocking footpaths, and contributing to unhygienic conditions. This creates a public-health hazard as a large number

of poor people living in unsanitary conditions without access to proper healthcare can result in the transmission of diseases.

Islam found that about one-third of street dwellers were affected with some diseases; communicable diseases associated with poor living conditions and personal hygiene were the most prevalent diseases (3). The main diseases identified were respiratory infections, broncho-pneumonia, common cold, tonsillitis, scabies, diarrhoeal diseases, tuberculosis, typhoid fever, helminthiasis, whooping cough, mumps, measles, malaria, infective hepatitis, gastritis, chickenpox, hypertension, rheumatic arthritis, and eye infection. Children were particularly vulnerable (3). The study conducted by the Marie Stopes in seven locations of Dhaka confirmed that the cold/cough/fever, skin diseases, diarrhoeal diseases, and gastric ulcers were the most common diseases among street dwellers. The respondents also identified symptoms of RTI and sexually transmitted diseases (STDs) as a particular problem among their study population (14).

Many of these conditions are preventable and treatable with free services available at government clinics or those run by non-governmental organizations (NGOs) in some locations of Dhaka city. However, street dwellers are likely to face barriers to access services. Women in particular may find it difficult to attend a formal clinic for family-planning and reproductive health services if they have no fixed dwelling. In some countries, initiatives have been taken to address the primary healthcare needs of street dwellers. For example, in China where more than 80 million rural labourers have moved to cities in recent years, the International Planned Parenthood Federation (IPPF) has implemented special programmes on sexual and reproductive health for the urban poor (15). In Delhi, India, the population of about 9 million includes a considerable 'floating' people. An NGO—Sulabh International Social Service Organization—has been developing a healthcare and sanitation model to address the basic health and sanitation needs of the poor and slum dwellers. They are combining toilet complexes with health centres for the poor. These provide free immunization services to children and pregnant women and free family-planning services. Healthcare is provided for the poor at a nominal price, which covers the cost of consultation and medicines (16).

In Bangladesh, a few NGOs provide healthcare and related services to street dwellers. For example, the MSCS has worked in collaboration with CARE-Bangladesh to provide treatment for STDs and has started an HIV/AIDS behaviour-change programme among street-based sex workers. The MSCS also has a mobile clinic service for street dwellers, with a medical doctor providing basic healthcare in seven locations in Dhaka city on different nights of a week. Aparajeyo Bangladesh, a national child rights organization, implements various programmes that target slum and street children, including provision of curative and preventive health services through indoor and outdoor clinics and a mobile medical team. Under its Street Children Programme, Aparajeyo Bangladesh provides a range of services to about 25,000 children through open air schools, drop-in-centres, clubs, and hostels. There is, however, no comprehensive programme, and there is little coordination of activities among agencies to ensure the meeting of different health needs of different subgroups of the street dweller population appropriately. The city corporations and government health service providers also do not have a specific policy or a strategy for providing health services for this population. On the other hand, street dwellers (apart from sex workers) are not organized to lobby the authorities to address their needs. Consequently, their health needs remain largely unmet through formal essential primary healthcare providers (3).

Specific aims

The main aim of this research was to ascertain the extent to which the need of street dwellers for services under the essential services package (ESP) are being met through existing facilities. The study also aimed at identifying the behaviours and barriers inhibiting improved access to formal services under the ESP for street dwellers, particularly the most vulnerable, women, and children.

The specific objectives were to: (a) identify the health needs of urban street dwellers; (b) ascertain their health-seeking behaviours; (c) ascertain their use of formal ESP services and the constraints they perceive in using healthcare services; and (d) assess the implications for improving access to ESP services, particularly for the most vulnerable, women, and children

Methods and Materials

This community-based, cross-sectional and descriptive study was conducted over a 13-month period from June 2007 to June 2008. A survey and exit-interviews were conducted to collect information on health needs and health-seeking behaviours of street dwellers.

Study areas

The study was conducted in 11 selected areas of Dhaka city. These included the five major entry points for rural people moving into the city, such as Kamalapur, Saidabad, Sadarghat, Gabtoli, and Mohakhali, and the particular locations with major concentrations of street dwellers, such as High Court premises, Kawran Bazar, Mirpur Mazar, Stadium area, Cantonment Railway Station, and Gulshan market (Fig. 1). All the areas in which the MSCS provides mobile health services were included in the study.

Study population

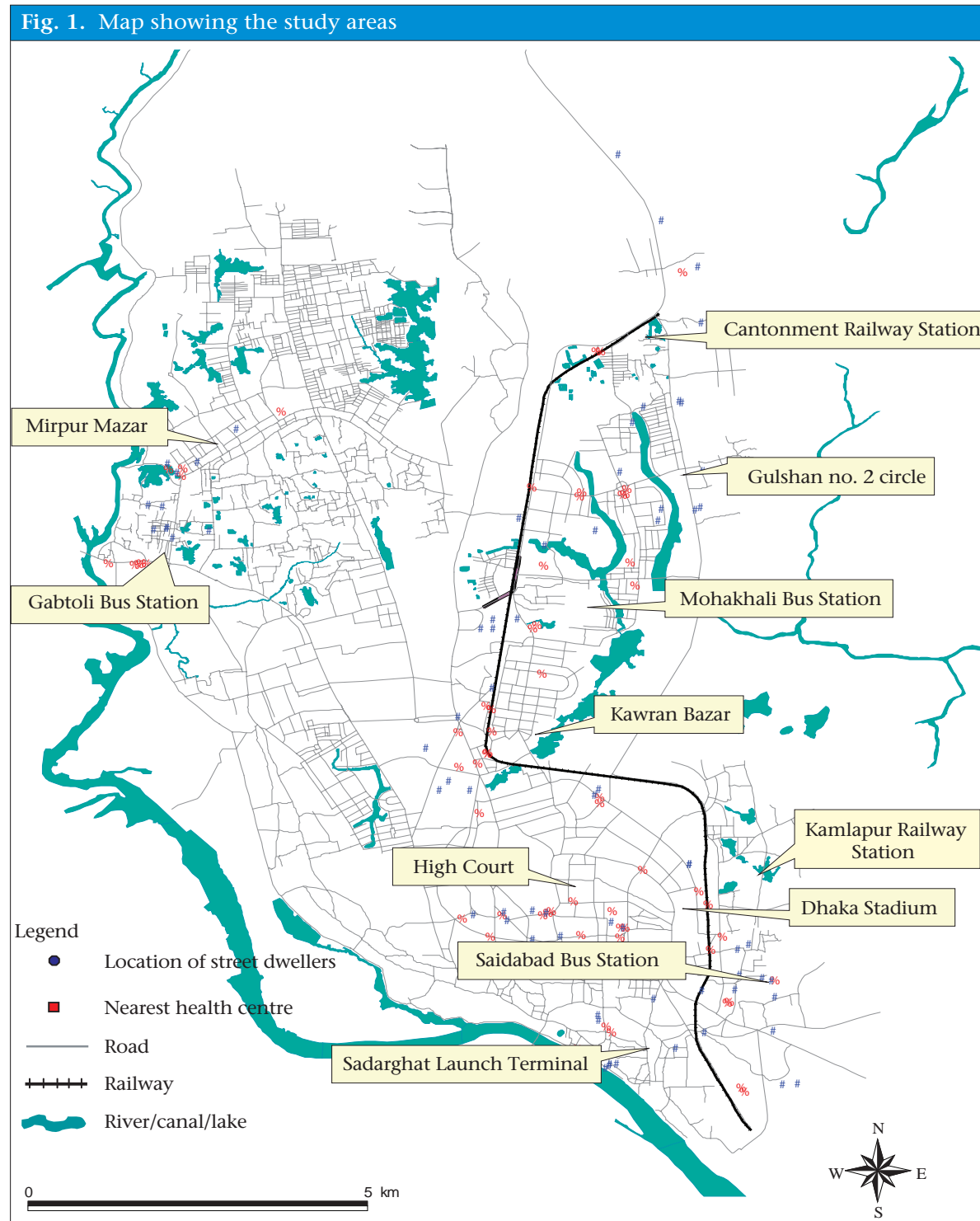
The study population consisted of four age/sex-groups of street dwellers. Box shows the study sub-populations and the sources of data for each.

Box. Study subpopulations and sources of data				
Study sub-population	Age-group (years)	Tools of data collection	Respondents	No. of respondents
Children	0-5	Structured questionnaire	Ever-married females/ mothers aged 15-49 years	448
			Ever-married males/fathers aged 15-49 years	448
Females	15-49	Structured questionnaire Exit-interviews	Ever-married females/ mothers aged 15-49 years	448
			Ever-married females/ mothers aged 15-49 years	224
Males	15-49	Structured questionnaire Exit-interviews	Males aged 15-49 years	448
			Males aged 15-49 years	224

Sampling

Two samples of adults (males and females) were drawn from street dwellers who slept in the last week within a two-kilometre radius of the five entry-point locations and from the six other locations in Dhaka city. To identify street dwellers for inclusion as study subjects, enrollment was carried out at night when the street dwellers took preparation to sleep. A modified cluster-sampling method was used for selecting 32 clusters—each cluster with 14 females and 14 males (448 ever-married females or mothers aged 15-49 years and 448 males aged 15-49 years). Depending on the number of street dwellers available for interview, sub-clusters each of seven respondents were sometimes required. Based on a rough estimate of the population in each location, the number of clusters of females and males were proportional to the number of street dwellers in each location. The

interviewer went to the centre of the location of street dwellers and spun a bottle to randomly select a direction. Following this randomly-chosen line, the interviewer then walked to the border of the location counting the number of adults of each sex. The interviewer used a table of random numbers to select a number (n) between 1 and the number of adults along the line. Counting back along the line, the first interview was with the n th adult. Subsequent interviews were conducted with the nearest adult until the cluster was completed.



Sample size

For the questionnaire survey, a separate sample was required for ever-married females or mothers aged 15-49 years and men aged 15-49 years. The sample size was calculated using the following formula:

$$n = Z\alpha^2 * (p*q/d^2)$$

$$Z\alpha = 1.96 \text{ (for 95\% confidence interval)}$$

$$d = 0.05 \text{ (the maximum error required on estimates of proportions)}$$

$$p \text{ is an estimated prevalence of a response (assumed to be 18\%)}$$

$$q = 1 - p$$

The sample size required, using simple, random sampling was 224. However, allowing for an unknown cluster-sampling design effect (estimated at 2), the sample required for each of the adult age/sex-groups was 448 (in total 896 structured interviews). As the prevalence of different components of health indicators, i.e. diarrhoea, acute respiratory infection (ARI), and ANC in slum areas varied from 15% to 18%, we took into account the maximum prevalence in calculating the sample size.

Data collection

There were two components for collection of data: (a) cross-sectional community survey of adult street dwellers using questionnaires and (b) exit-surveys with users of ESP facilities.

(a) Cross-sectional community survey of street dwellers

Experienced interviewers conducted the community survey of adult street dwellers using the structured questionnaires, supervised by the Research Investigators. Eight interviewers (four males and four females) worked together in a site. The aim was to complete one male and one female cluster of 14 interviews in a day.

Information was collected on:

Males and females: The number of street dwellers currently were sick and sick during the last two weeks; types of problems; proportion of street dwellers who sought healthcare; type of healthcare sought; use of different health facilities by members of family group in the last month; reasons for no care; barriers experienced and perceived to accessing health services; knowledge, attitudes, and behaviours in relation to health and use of health services; attitudes of care providers and satisfaction with services received; and preferred service location.

Environment: Sources of drinking-water and water for other purposes; places for defaecation; and hand-washing habits.

Nutritional: Regularity of food intake and food consumed each day.

Violence, drug abuse, and sexual harassments

Ever-married females or mothers aged 15-49 years: Proportion of pregnant mothers who received ANC during a recent pregnancy (current (6+ months) or birth in the last 12 months); sources of ANC; place of delivery (in the last 12 months); proportion of deliveries conducted by qualified persons; percentage of mothers receiving tetanus toxoid (TT) vaccinations during a pregnancy

in the last 12 months; percentage of mothers who used family-planning methods; and sources of family-planning services.

Children aged 0-5 year(s): Immunization status of 12-23 months old children; status of vitamin A supplementation to children aged less than five years (under-five children) in the last six months; prevalence of diarrhoeal disease among under-five children in the last two weeks, prevalence of ARI among under-five children in the last two weeks; care sought for episodes of diarrhoeal disease and ARI among under-five children in the last two weeks.

(b) Exit-interviews with street dwellers

Exit-interviews were conducted with users of essential services provided by the MSCS identified as street dwellers. Information was collected on the purpose of visiting health facilities, satisfaction with services provided, unmet needs, willingness to pay, willingness to go to fixed-site clinics, and experience of other health providers. In total, 448 adults (224 male and 224 female street dwellers) were interviewed from the seven Marie Stopes clinics.

Research instruments

Two structured questionnaires (survey and exit-interviews) were used for collecting data from street dwellers. The questionnaires contained mainly structured questions, many of which were precoded, and a few were open-ended questions.

Data analysis

Different approaches were used for analyzing data collected. Datasets for different age/sex-groups were processed separately. Data were entered into the visual BASICS/FoxPro software and analyzed using the SPSS software (version 11.5). Sufficient care/effort was given to ensure the quality of data through supervision and checking.

The precision of estimates from the quantitative surveys was based on 95% confidence interval (CI). Both bivariate and multivariate analyses were carried out, with statistical significance based on 95% CI and standard statistical tests. Multiple logistic regression analysis was conducted to identify factors that were associated with different dependent variables.

For multiple logistic regression analysis, the factors (independent variables) were grouped as follows:

Age: <30 years and 30+ years

Marital status: Married and others

Education: No education and some education

Occupation: Unemployed, day labourer, and others

Family members living together: >3 and up to three

Results

Sociodemographic Information



Table 1 shows that most (87%) female respondents were aged 20-39 years while the majority (74%) of the male respondents were aged 30-39 years. One-third of the female respondents were abandoned, separated, divorced, or widowed. Eighty percent of the female and 57% of the male street dwellers interviewed had never attended any school. The main occupations of the female street dwellers were domestic help, pick and sell, day labour, and sex work, although nearly half of the female respondents were unemployed. On the other hand, the main occupations of the male respondents were day labour and rickshaw/van-pulling.

Ninety-five percent of the female and 86% of the male street dwellers participating in exit-interviews were aged 20-39 years, and over 70% of them were married. Eighty-eight percent of the female and 70% of male street dwellers who participated in exit-interviews had never gone to any school. All the female and male street dwellers came from less than 1-km distance, and their required travel time was less than 10 minutes.

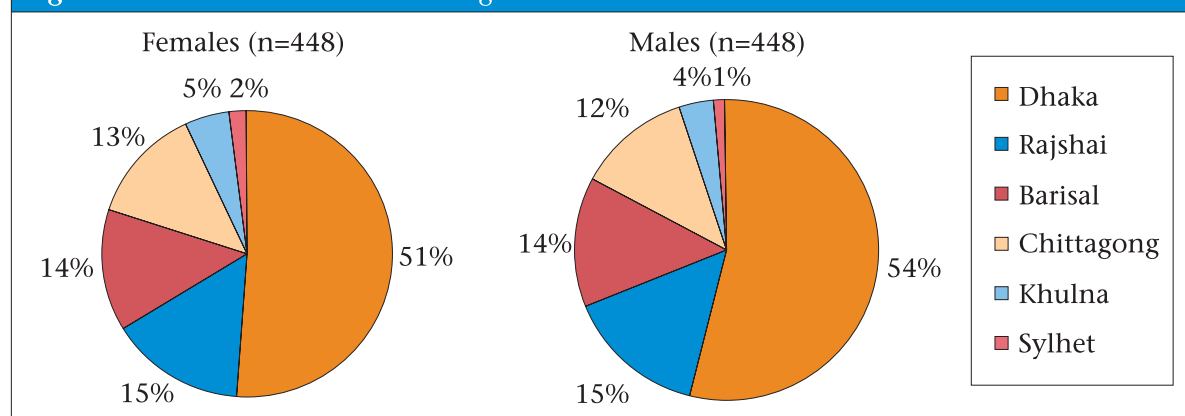
Table 2 shows that about half of the female respondents were involved with begging either full-time or part-time while 11% and 5% of the male street dwellers were involved with begging full-time and part-time respectively. Seven percent and 5% of the male street dwellers respectively were involved with part-time blood selling and stealing to earn money to meet their family expenditure.

Table 1. Sociodemographic characteristics		
Characteristics	Percentage	
	Females (n=448)	Males (n=448)
Age (years)		
<20	5	0
20-29	48	36
30-39	39	38
40 and above	8	26
Marital status		
Married	61	82
Abandoned	21	5
Separated (not divorced)	9	4
Divorced	4	7
Widowed	5	2
Education		
Never attended any school	80	57
Primary incomplete	15	33
Primary complete	3	4
Secondary incomplete	2	6
Number of family members living together		
Children (mean±SD)	1.33±1.23	2.01±1.12
Adults (mean±SD)	1.73±1.05	1.34±0.55
Total (mean±SD)	3.12±1.58	1.87±1.50
Occupation		
None/unemployed	48	12
Domestic help	15	0
Pick and sell	11	6
Day labour	10	55
Sex work	9	0
Rickshaw/van-pulling	0	21
Transport work/help	0	3
Small business	7	0
Butchery	0	3
SD=Standard deviation		

The findings revealed that approximately half of the female and male street dwellers interviewed came from different districts of Dhaka division (Fig. 2). However, individuals from all divisions of Bangladesh were represented in the street dweller population, although the fewest number of respondents among both females and males came from Sylhet and Khulna divisions. Figure 3 shows the number of street dwellers interviewed by their district of origin.

Table 2. Other activities done by street dwellers to meet their family expenditure

Activity	Percentage			
	Females (n=448)		Males (n=448)	
	Full-time	Part-time	Full-time	Part-time
Begging	35	14	11	5
Blood selling	0	0	0	7
Stealing	0	0	0	5

Fig. 2. Street dwellers' division of origin

The street dwellers were asked about the reasons for living on streets. Both female and male street dwellers mentioned lack of money/no income to rent a house as the primary reason for taking to the street. Other common reasons included: spouses abandoned in the street; people from their home villages were also living on the street; there are feelings of comfort while staying on the street with so many other people; it is easy to do sex work; it is possible to save money; and it is easy for males and females to mix freely, beg, and use of drug (Table 3).

Table 3. Reasons for living as street dwellers

Reason*	Percentage	
	Female (n= 448)	Male (n=448)
Lack of money	73	67
Abandonment by spouse	38	13
Others of same area of origin staying on the street	23	34
Feeling comfortable to stay on the street with many others	24	33
Easy to do sex work/easy for free mixing	15	9
Saving money	11	26
Easy to beg	9	6
Easy to take drugs	0	17
*Multiple responses		

Fig. 3. Street dwellers in Dhaka city by district of origin

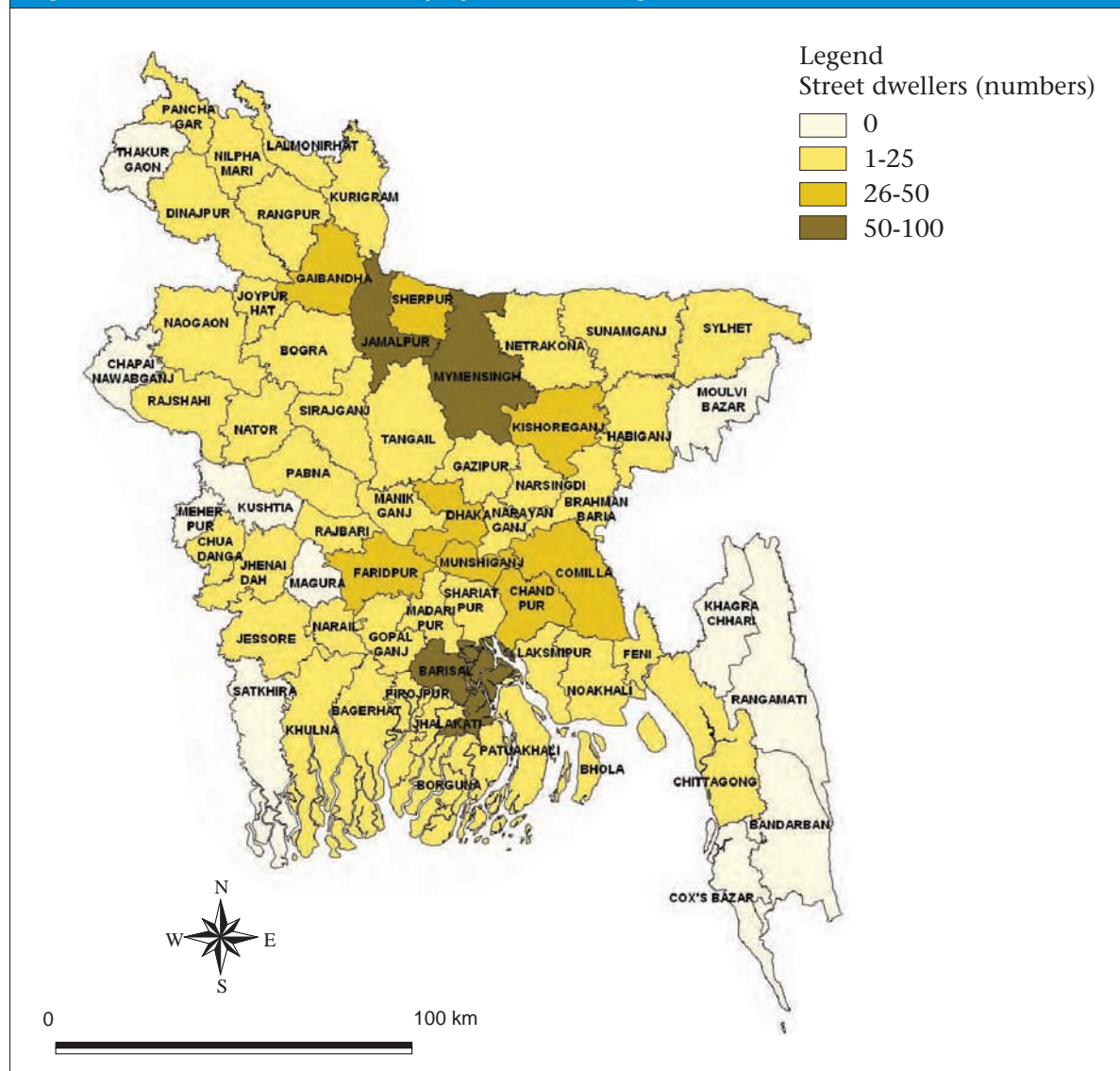
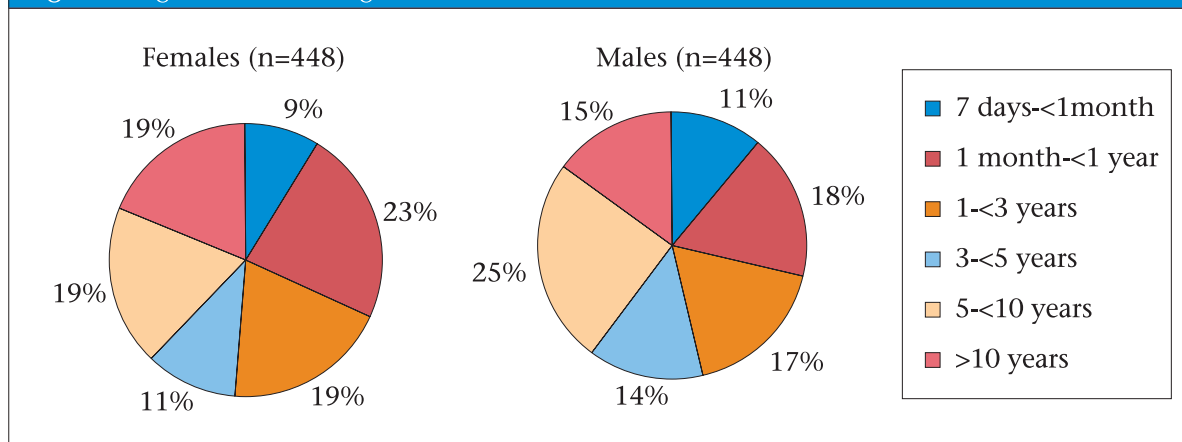


Fig 4. shows the length of time both males and females had been living as street dwellers. The findings revealed that most street dwellers both—males and females—had been staying in the streets for more than a year. Approximately half of both female and male street dwellers had lived on the street for more than three years. Fifteen percent of the females and 19% of the males had been street dwellers for over 10 years.

The street dwellers were asked about the reasons for living on streets. Both female and male street dwellers mentioned lack of money/no income to rent a house as the primary reason for taking to the street. Other common reasons included: spouses abandoned in the street; people from their home villages were also living on the street; there are feelings of comfort while staying on the street with so many other people; it is easy to do sex work; it is possible to save money; and it is easy for males and females to mix freely, beg, and use of drug (Table 3).

Fig. 4. Length of time living as street dwellers



To assess the food intake of street dwellers, data were collected on their food consumption during the last 24 hours prior to data collection. The findings revealed that the street dwellers mainly took carbohydrates (Table 4). Twenty-six percent of the female and 35% of the male street dwellers did not take vitamins and minerals (vegetables) at all during the last 24 hours. The table shows that the frequency of taking plant and animal proteins, such as pulses, eggs, fish, chicken, or beef/mutton was very low among them. The table also shows that 49% of the female and 42% of the male street dwellers did not take plant protein (pulses) at all during the last 24 hours. At the same time, over one-third of both female and male street dwellers did not take animal protein at all during the last 24 hours.

Table 4. Food consumption among street dwellers during the last 24 hours

Item and frequency of taking each item	Percentage	
	Females (n=448)	Males (n=448)
Carbohydrates (rice and bread)		
Taken once	64	35
Taken twice	36	65
Vitamins and minerals (vegetables)		
Not taken at all	26	35
Taken once	74	65
Plant protein (pulse)		
Not taken at all	49	42
Taken once	51	58
Animal protein (fish, meat, egg, milk)		
Not taken at all	34	33
Taken once	45	49
Taken twice	19	17
Taken thrice	2	2

Knowledge of Street Dwellers on Selected Health Issues



Knowledge about facilities where EPI services are provided

The findings of the study revealed that many street dwellers interviewed lacked knowledge about places where EPI vaccinations are provided. About one-third of the female and a half of the male street dwellers had no knowledge about the facilities where EPI services are provided for women and children (Table 5). Although approximately two-thirds of the females and a half of the males had knowledge of EPI service-provision facilities, most respondents mentioned the mobile clinics of the Marie Stopes, although EPI services are not provided there.

Knowledge about family planning

The findings of the study showed that, although most street dwellers interviewed had knowledge about ways of delaying pregnancy, a higher percentage of female street dwellers was still aware of how to delay pregnancy than male street dwellers (Table 6). Of those street dwellers who were aware of how to delay pregnancy, most were able to cite family-planning methods.

Results of regression analysis showed that female street dwellers aged <30 years had less knowledge about the facilities where EPI services are provided compared to females aged 30 years and above, although the difference was not statistically significant (Table 7). As expected, females who had no education and were unemployed had less knowledge about the facilities where EPI services

were being provided. Knowledge about the facilities where EPI services are provided was also higher among female street dwellers whose family size comprised more than three persons. The table also shows that knowledge about how to delay pregnancy was slightly higher among female street dwellers who were aged over 30 years and married compared to females aged above 30 years and marital status was 'Other'. The only statistically significant findings were that, of the impact of families living together with more than three persons having a greater knowledge of EPI services and for knowledge of how to delay pregnancy, the significant variables were occupation with the unemployed and day labours comparing poorly with those employed as 'Other', although living with a more than three persons had a greater likelihood.

Table 5. Knowledge about facilities where EPI services are provided

Area	% of respondents	
	Female (n= 448)	Male (n= 448)
Know where vaccines are provided to women and children		
Yes	65	49
No	35	51
Knowledge about facilities where vaccines are provided to women and children*		
Mobile clinics of Marie Stopes (NGO)	94	87
GoB hospital (medical colleges)	8	14
EPI centre of Dhaka City Corporation	2	1
*Multiple answers; EPI=Expanded Programme on Immunization; GoB=Government of Bangladesh; NGO=Non-governmental organization		

Results of regression analysis showed that the knowledge of facilities that provide EPI services was significantly lower among the male street dwellers who were unemployed or day labourers and was higher among males with more than three family members (Table 8). Knowledge on how to delay pregnancy was also significantly lower among male street dwellers who were unemployed and day labourers.

Table 6. Family-planning knowledge

Knowledge	% of respondents	
	Females (n= 448)	Males (n= 448)
Know how to delay pregnancy		
Yes	99	80
No	1	20
Reported ways of delaying pregnancy*		
Use of family-planning methods	100	99
Use of <i>kabiraji</i> medicine	2	2
Safe period (natural family planning/rhythm)	1	2
*Multiple responses		

Table 7. Factors associated with knowledge of female street dwellers about facilities which provide EPI services and how to delay pregnancy

Independent variable	Dependent variable					
	Know facilities that providing EPI services			Know how to delay pregnancy		
	Odds ratio	p value	95% CI	Odds ratio	p value	95% CI
Age (years)						
<30	0.78	0.247	0.5-1.19	1.11	0.638	0.73-1.69
30+ (RC)	1			1		
Marital status						
Married	1.10	0.674	0.71-1.68	1.10	0.702	0.66-1.84
Others (RC)	1			1		
Education						
No education	0.85	0.846	0.50-1.42	0.95	0.75	0.63-1.41
Some education (RC)	1			1		
Occupation						
Unemployed	0.97	0.905	0.59-1.58	0.19	0.000	0.12-0.50
Day labour	1.19	0.550	0.67-2.12	0.41	0.001	0.26-0.62
Other (RC)	1			1		
Number of family members living together						
Above 3	2.93	0.000	1.78-4.84	0.002	1.04	0.47-2.30
Up to 3 (RC)	1			1		

CI=Confidence interval; RC=Reference category

Table 8. Factors associated with knowledge of male street dwellers about facilities that are providing EPI services and how to delay pregnancy

Independent variable	Dependent variable					
	Know the facilities that provide EPI services			Know how to delay pregnancy		
	Odds ratio	p value	95% CI	Odds ratio	p value	95% CI
Age (years)						
<30	1.11	0.638	0.72-1.69	0.78	0.361	0.46-1.33
30+ (RC)	1			1		
Marital status						
Married	1.10	0.702	0.66-1.83	2.10	0.100	1.19-3.69
Others (RC)	1			1		
Education						
No education	0.95	0.795	0.64-1.41	0.64	0.081	0.38-1.06
Some education (RC)	1	1		1		
Occupation						
Unemployed	0.25	0.000	0.12-0.50	0.19	0.000	0.09-0.44
Day labour	0.40	0.000	0.26-0.63	0.41	0.007	0.22-0.78
Other (RC)	1			1		
Number of family members living together						
Above 3	2.65	0.002	1.41-4.98	1.04	0.932	0.47-2.30
Up to 3 (RC)	1			1		

CI=Confidence interval; RC=Reference category

Morbidity and Use of Healthcare Services



Morbidity among street dwellers

Data on morbidity of street dwellers were collected. They were asked if they were currently sick. Seventy-two percent of the female and 48% of the male street dwellers were sick at the time of data collection (Table 9). The street dwellers who reported that they were not currently sick were asked if they had any sickness during the preceding 15 days, and the findings revealed that over one-fifth became sick at that period.

Table 9. Morbidity of street dwellers		
Morbidity	Percentage	
	Females (n=448)	Males (n=448)
Currently sick		
Yes	72	48
No	28	52
Reported illness during the past two weeks (if not currently sick)		
Yes	22	23
No	78	77

The morbidity reported by the street dwellers were divided into two categories: reproductive health and general health morbidity. Table 10 shows that the female street dwellers were mostly affected by reproductive health problems, such as vaginal discharge, lower abdominal pain, genital itching/burning, and others (mass in the lower abdomen/irregular period/coming out of the uterus).

The street dwellers reported the following common general illnesses: diseases of the respiratory system (cold/cough/fever/asthma), diseases of the digestive system (gastric, diarrhoea), severe pain (headache/chest), and scabies.

Table 10. Types of morbidity among street dwellers		
Type of sickness*	Percentage	
	Female (n=350)	Male (n=268)
Reproductive health		
Vaginal/urethral discharge	39	11
Lower abdominal pain	13	1
Genital itching/burning	12	5
Others (mass in the lower abdomen/irregular period/prolepses)	5	NA
General health		
Diseases of the respiratory system (cold/cough/fever/asthma)	30	44
Diseases of the digestive system (gastric, diarrhoea)	31	25
Weakness	27	31
Severe pain (headache/chest)	25	38
Scabies	8	13
TB (blood with cough/ fever and cough with blood/fever at night)	5	2
Eye problem (burning in eye /problem in eye sight)	4	2
Others (tonsillitis/ kidney infection/worm/jaundice/throat problem/hearing problem)	7	7
*Multiple answers; NA=Not applicable		

Table 11 shows that the married females who were significantly more likely to be currently sick than females with any other marital status. No other factors significantly affected the current morbidity status of females.

Table 12 shows the odds ratios for factors associated with current morbidity among the male street dwellers. The results indicate a trend towards married men being protected against current sickness, although not statistically significant (odds ratio [OR]=0.64, $p=0.078$). Current sickness was slightly higher among male street dwellers who were aged <30 years, had no education, unemployed, and had more than three family members living together compared to street dwellers who were aged above 30 years, had some education, and unemployed; however, the difference was not statistically significant (Table 12).

To understand the status of use of healthcare services among street dwellers during their illnesses, data were collected and analyzed. Survey data showed that about half of the female and one-third of the male street dwellers did not seek healthcare services during their sickness (Table 13). Of those who sought treatment, more than half of the female and two-thirds of the male street dwellers bought medicines from drug sellers at the nearest pharmacy. Other respondents used the mobile clinics of the Marie Stopes. A very few visited the government facilities. The only government facility the street dwellers visited was Dhaka Medical College Hospital. A few street dwellers who visited the healthcare facilities encountered problems during their last visit for services. Problems reported included denial of treatment by providers due to street dwellers' financial insolvency, long-waiting time, and neglect of service providers.

Table 11. Factors associated with morbidity among female street dwellers

Independent variable	Dependent variable		
	Currently sick		
	Odds ratio	p value	95% CI
Age (years)			
<30	0.92	0.695	0.59-1.41
30+ (RC)	1		
Marital status			
Married	1.70	0.004	1.10-2.63
Others (RC)	1		
Education			
No education	1.02	0.946	0.60-1.72
Some education (RC)	1		
Occupation			
Unemployed	1.19	0.488	0.72-1.94
Day labour	1.44	0.221	0.80-2.58
Other (RC)	1		
Family members living together			
Above 3	1.16	0.520	0.72-1.87
Up to 3 (RC)	1		

CI=Confidence interval; RC=Reference category

Table 12. Factors associated with morbidity among male street dwellers

Independent variable	Dependent variable		
	Currently sick		
	Odds ratio	p value	95% CI
Age (years)			
<30	1.05	0.816	0.69-1.58
30+ (RC)	1		
Marital status			
Married	0.64	0.078	0.39-1.05
Others (RC)	1		
Education			
No education	1.03	0.867	0.70-1.52
Some education (RC)	1		
Occupation			
Unemployed	1.70	0.117	0.87-3.32
Day labour	0.75	0.182	0.49-1.14
Other (RC)	1		
Family members living together			
Above 3	1.32	0.331	0.75-2.34
Up to 3 (RC)	1		

CI=Confidence interval; RC=Reference category

Table 13. Use of healthcare services		
Status of use	Percentage	
	Females (n=350)	Males (n=268)
Sought healthcare services		
Yes	55	63
No	45	37
Type of clinic/facility visited for services*		
Pharmacy	53	66
NGO facilities (Marie Stopes mobile clinic)	37	13
Public facilities	11	11
Ayurvedic medicine sale centre	6	8
Others (canvassers)	5	3
Encountered any problem during the last visit to facilities for services		
Yes	5	18
No	95	83
Type of problem encountered*		
Denied treatment for financial reasons	60	29
Had to wait for a long time	40	43
Neglected them by service providers	20	43
*Multiple answers		

Those street dwellers who did not seek treatment for their illness were asked about reasons for not seeking treatment. Both males and females reported lack of money as the main motivation behind not seeking care while the majority of males also felt that treatment was not necessary. Other reasons mentioned included lack of knowledge about the location of healthcare facilities, nobody advised them to seek treatment, and neglect of service providers (Table 14).

Table 14. Reasons for not going for treatment by street dwellers		
Reason*	Females (n=156)	Males (n=104)
Lack of money	77	64
Did not feel that treatment was necessary	33	62
Healthcare facilities were unknown	8	5
Nobody told to go for services	4	8
Neglected by service providers	4	10
*Multiple responses		

Results of regression analysis showed that the use of healthcare services among female street dwellers who were married was significantly higher than unmarried, divorced, or widowed females, while the trend towards the higher use of healthcare services among women who had no education (missing—as the sentence is incomplete) (Table 15). No significant effects on healthcare-seeking behaviour were shown (not clear) due to age, occupation, or family size among females.

Table 16 shows that the use of healthcare services was significantly higher among those who were unemployed and day labourers. The availability of sufficient time among unemployed

street dwellers and the required funds for treatment among labourers may explain the higher use of healthcare services among these groups compared to others.

Table 15. Factors associated with use of healthcare services among female street dwellers during their sickness

Independent variable	Dependent variable		
	Use of healthcare services		
	Odds ratio	p value	95% CI
Age (years)			
<30	0.71	0.126	0.45-1.10
30+ (RC)	1		
Marital status			
Married	1.61	0.043	1.01-2.56
Others (RC)	1		
Education			
No education	1.63	0.073	0.95-2.79
Some education (RC)	1		
Occupation			
Unemployed	1.01	0.984	0.59-1.69
Day labour	1.09	0.778	0.60-1.98
Other (RC)	1		
Family members living together			
Above 3	0.93	0.775	0.58-1.49
Up to 3 (RC)	1		

CI=Confidence interval; RC=Reference category

Findings from exit-interviews showed that the problems the street dwellers had during their visits to healthcare facilities were similar to those reported by the respondents of the survey. Eighty-four percent of the females and 97% of the males did not inquire their unmet or additional needs. All the street dwellers interviewed paid money to receive services from the healthcare facilities, and the money spent ranged from Tk 5 to Tk 10 for each visit. The study attempted to assess willingness to pay among the street dwellers, and the findings revealed that all the street dwellers who participated in exit-interviews were willing to pay for healthcare services. When the respondents were asked if they would seek services from other healthcare facilities in the surrounding areas if those services were not available at that specific clinic, 94% of the female and 96% of the male respondents stated that they did not have any problem visiting other clinics for services.

Table 16. Factors associated with use of healthcare services among male street dwellers during their sickness

Independent variable	Dependent variable		
	Use of healthcare services		
	Odds ratio	p value	95% CI
Age (years)			
<30	1.01	0.973	0.57-1.77
30+ (RC)	1		
Marital status			
Married	0.88	0.882	0.46-1.68
Others (RC)	1		
Education			
No education	1.56	0.104	0.91-2.66
Some education (RC)	1		
Occupation			
Unemployed	3.09	0.003	1.47-6.47
Day labour	2.53	0.022	1.14-5.62
Other (RC)	1		
Family members living together			
Above 3	0.78	0.536	0.36-1.68
Up to 3 (RC)	1		

CI=Confidence interval; RC=Reference category

Reproductive and Maternal Health



Pregnancy and childbirth

Of the female street dwellers interviewed, 14% were currently pregnant (Table 17). Two-thirds were in the second and the third trimester. Thirty-six percent informed that their pregnancies were unwanted. The pregnant women who reported that their pregnancies were unwanted and who were not living with their husbands were asked about the father of the foetus. About two-thirds reported that the father of the foetus was not the woman's husband.

Use of antenatal care

Twenty-eight percent of the pregnant women sought ANC (Table 18). Eighty-two percent of the mothers who sought treatment visited the mobile clinics of Marie Stopes, which are held in seven locations in Dhaka city once a week. Only 13% of the pregnant women received TT vaccines during their current pregnancy, and 67% of them received only one dose.

The pregnant women who did not seek ANC mentioned the following reasons for not seeking ANC: ANC was not perceived as necessary; location of ANC; services were unknown to them; lack of money; not told to seek ANC; and husband's disapproval (Table 19). Fifty-three percent of the women did not feel that ANC was necessary.

Childbirth

The street women who were not currently pregnant were asked if they had given birth during the last 12 months preceding the data collection. Twenty-one percent reported that they gave birth

Table 17. Information relating to pregnancy

Status	Percentage (n= 448)
Currently pregnant	
Yes	14
No	86
Duration of pregnancy (n=63)	
First trimester	30
Second trimester	32
Third trimester	38
Wanted or unwanted pregnancy (n=63)	
Wanted	64
Unwanted	36
Father of the foetus (if the women were not living with their husbands) (n=23)	
Stranger who also lives on the street	48
Husband of woman who is not living with her	43
Boyfriend	9

Table 18. Use of antenatal care

Antenatal care	Percentage (n=63)
Received antenatal care	
Yes	28
No	72
Facilities visited for antenatal care of current pregnancy* (n=63)	
NGO health facilities	82
Public-health facilities	12
Private health facilities (private clinic/doctor's chamber)	6
Doctor's chamber	6
Received TT vaccines during current pregnancy (n=63)	
Yes	13
No	87
Number of TT dose received (n=8)	
1	63
2	37
*Multiple responses; NGO= Non-governmental organization; TT=Tetanus toxoid	

during the last 12 months (Table 20). The table also shows that 21% of deliveries were conducted on the street. Untrained personnel, such as neighbours and relatives, conducted most deliveries while 6% were self-conducted.

The study showed that 63% of the mothers experienced various types of problems during delivery (Table 21). The most common problems experienced during delivery were prolonged

Table 19. Reasons for not seeking antenatal care

Reason*	Percentage (n=45)
Did not feel that antenatal care was necessary/no need of antenatal care	53
Location of antenatal care services-delivery was unknown	19
Lack of money	15
Nobody told	10
Husband's disliking	8
*Multiple responses	

Table 20. Status of delivery and delivery care among street women who gave birth during the previous 12 months

Delivery and delivery care	Percentage (n=45)
Gave birth during the last 12 months	
Yes	21
No	67
Don't know	12
Place of delivery (n=81)	
At home (village home or rented home in slums at that time)	61
Street (Sadarghat Launch Terminal/railway station/under over bridge gate of BG Press/outside Dhaka, and Mirpur Stadium)	21
Public facilities	14
NGO facilities	4
Delivery attended by (n=81)	
Neighbours and relatives	69
Medically-trained personnel (nurse/midwife/ MBBS doctor)	21
Nobody (self)	6
Untrained birth attendant	4

labour, excessive bleeding, swelling (hands, face, legs), severe weakness, severe abdominal pain, premature rupture of the membrane, blurred vision, and obstructed labour.

Postpartum morbidity

Data on postpartum morbidity of the women were also collected and analyzed. The findings revealed that about two-thirds experienced problems after delivery (Table 22). Such problems included excessive bleeding, severe lower abdominal pain, swelling (hands, face, legs), fever with lower abdominal pain, and vaginal tear.

Table 21. Status of problems experienced by street women during delivery	
Problem	Percentage (n=81)
Experienced any problem during delivery	
Yes	63
No	37
Type of problem experienced*(n=51)	
Prolonged labour	40
Excessive bleeding	22
Swelling (hands, face, legs)	21
Severe weakness	17
Severe abdominal pain	17
Premature rupture of the membrane	16
Blurred vision	10
Obstructed labour	10
High fever	7
Convulsion	3
*Multiple responses	

Table 22. Problems experienced by mothers after delivery	
Problem	Percentage (n=81)
Experienced any problem after delivery (during 42 days)	
Yes	58
No	42
Type of problem experienced* (n=46)	
Excessive bleeding	44
Severe lower abdominal pain	38
Weakness	14
Swelling (hands, face, legs)	9
Fever with lower abdominal pain	6
Vaginal tear	4
*Multiple answers	

The findings revealed that 66% of the mothers sought postnatal care (Table 23). Of them, 40% visited conveniently-located pharmacies when asked about which facilities they had used for care. The other facilities they visited were: public facilities (medical colleges), NGO (Marie Stopes) clinics, private health facilities (private clinic/doctor's chamber), and homeopath doctors. Street women who did not seek postnatal care were asked why they chose not to do so. The primary reason mentioned by them for not seeking postnatal care was lack of money. Others did not feel the necessity of treatment for their current problems and/or nobody told them to go for services.

Table 23. Status of postnatal care

Postnatal care	Percentage (n=54)
Treatment sought for postpartum morbidity	
Yes	66
No	34
Facilities visited for postnatal care* (n=36)	
Pharmacy	40
Public facilities	26
Private-health facilities (private clinic/doctor's chamber)	22
NGO facilities (Marie Stopes clinics)	11
Homeopath	6
Ayurvedic medicine sales centre	9
Others (quack doctors, <i>Pir</i> , <i>Fakir</i>)	6
Reasons for not going for postnatal care* (n=18)	
Lack of money	78
Treatment not deemed necessary	28
Nobody told to go for services	17
*Multiple responses, NGO=Non-governmental organization	

Neonatal morbidity

The study findings revealed that 67% of newborns had neonatal morbidity (Table 24). The common neonatal morbidities included cold/cough/fever, infection in cord, measles, and pus in the eyes.

Table 24. Status of neonatal morbidity

Status	Percentage (n=54)
Neonatal morbidity	
Yes	67
No	33
Type of neonatal morbidity*(n=36)	
Cold/cough/fever	56
Infection in cord	12
Measles	10
Infection in eyes	10
Diarrhoea	10
Others (blister on head, swelling of head, bleeding during urination, jaundice)	8
*Multiple answers	

Use of family-panning methods among street dwellers

Fig. 5 shows the use of family-planning methods by the married street female and male dwellers. The findings revealed that only 33% of the married women and 31% of the married men were currently using any family-planning method.

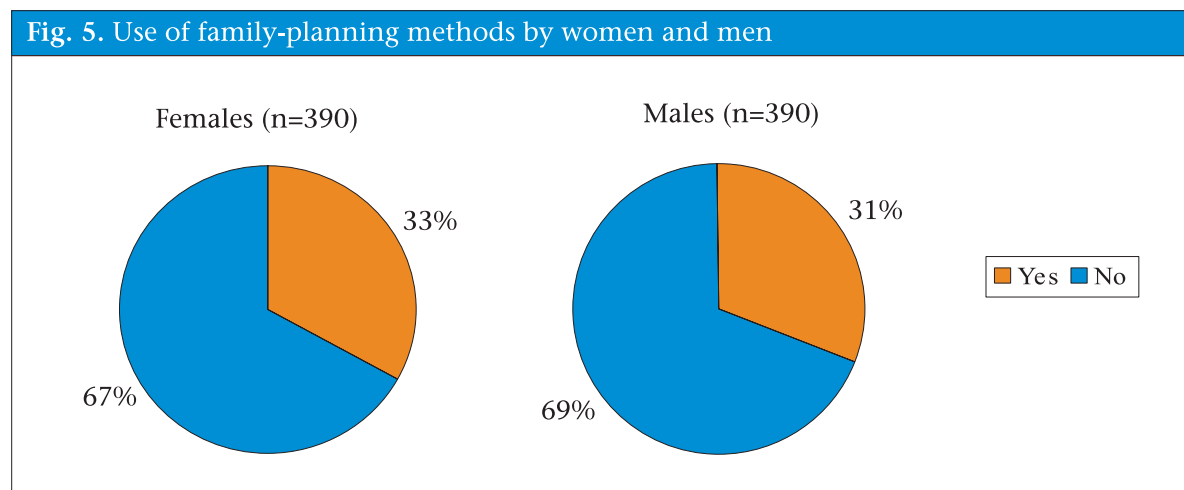
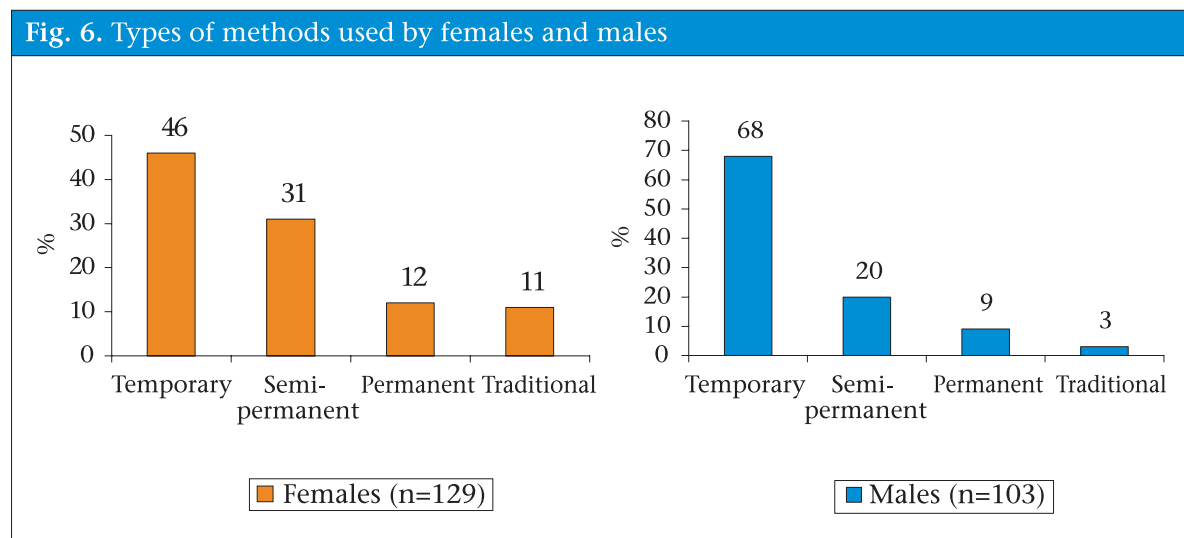


Fig. 6 shows the various types of methods used by the respondents or their spouses. The findings revealed that 46% of the women and 68% of the men used temporary methods, i.e. birth-control pills and condoms. Thirty-one percent of the women and 20% of the men reported that they or their spouses used semi-permanent methods, including injectables, IUD, and Norplant. The figure also shows that the use of permanent methods (vasectomy and tubectomy) among women and men were 12% and 9% respectively. Eleven percent of the females and 3% of the males used traditional methods, such as Azal and Ayurvedic treatment.



Those currently using any type of family-planning method reported that the main supply sources of family-planning products and services were local pharmacies, Marie Stopes mobile clinics, government hospitals, and field workers (Table 25).

The non-users were asked about their reasons for not using family-planning methods. Table 26 shows the reasons for not using any family-planning method by non-user women. The women cited amenorrhoea, husband living elsewhere, desire to have a child, and lack of knowledge about where the methods are available as the main reasons for not using any family-planning method.

Table 25. Sources of family-planning methods

Source of family-planning methods*	Percentage	
	Females (n=129)	Males (n= 103)
Pharmacy	41	50
NGO facilities (Marie Stopes clinics)	27	26
Public facilities	19	15
Field workers (GoB and NGO)	7	29
Others (Ayurvedic medicine sale centre)	8	1

*Multiple responses; GoB=Government of Bangladesh; NGO=Non-governmental organization

Table 26. Reasons for not using family-planning methods by women

Reason*	Percentage (n=261)
Amenorrhoea	30
Not living with spouse	26
Want child	23
No knowledge about where family-planning methods are available	8
Fear of side-effects	6
Money needed/lack of money	6
Others (husband is very old, nobody advised)	7

*Multiple responses

Child Health



Childhood immunization

Respondents with children aged 12-23 months were asked about the vaccination status of those children. Table 27 shows that 87% of the female and 66% of the male street dwellers reported that their children had received any dose of vaccines. The table also shows the coverage of antigen-wise child immunization. These data are not comparable with other reported data as validation of data was not possible because the respondents did not have EPI cards.

Table 27. Reported status of immunization of children aged 12-23 months

Status of child immunization	Percentage	
	Females (n=69)	Males (n=38)
Received vaccines (any dose)		
Yes	87	66
No	13	34
Antigen-wise reported child immunization coverage		
BCG	87	65
DPT1	84	65
DPT2	78	55
DPT3	72	55
Polio1	84	65
Polio2	78	55
Polio3	72	55
Hep1	84	65
Hep2	78	55
Hep3	72	55
Measles	66	55

Status of retention of EPI cards

Not a single woman or man could show an EPI card (Table 28). Fifty-five percent of the female and 72% of the male respondents reported that they never received an EPI card for their children.

Table 28. Status of retention of EPI cards		
Availability of EPI card	Percentage	
	Females (n=60)	Males (n=25)
Available and showed card	0	0
Possess card but could not show it	45	24
Did not receive card	55	72

Status of polio vaccination among children

Ninety-six percent of the female and 76% of the male respondents reported that their children were given the polio vaccine on National Immunization Days (NIDs) (Table 29). When asked about who advised them to immunize their children against polio, the respondents primarily mentioned NGO health workers. Other sources of advice included information widely dispersed through rickshaw-borne loud speakers ('miking'), GoB health workers, neighbours, relatives, and spouses.

Table 29. Status of polio vaccination of children during National Immunization Days		
Status	Percentage	
	Females (n=69)	Males (n=38)
Children received polio vaccine during National Immunization Days		
Yes	96	76
No	4	16
Do not know/cannot remember	0	8
Who advised about giving polio vaccine to the child*		
NGO (Marie Stopes) field workers	73	3
Miking	14	14
GoB health workers	8	45
Neighbours	8	24
Relatives	3	45
Self	2	17
Spouse	0	62
Other family members	0	21

*Multiple responses; GoB=Government of Bangladesh; NGO=Non-governmental organization

Vitamin A supplementation to children aged less than five years

The street dwellers were asked if their children aged less than five years had received vitamin A capsules during the last six months. Table 30 shows that over two-thirds of both females and males fed vitamin A capsules to their children during the last six months. Most respondents reported that the mobile clinics of Marie Stopes were the main sources of supply of vitamin A supplements for their children.

Table 30. Status of vitamin A supplementation to children aged less than five years		
Status of vitamin A supplementation	Percentage	
	Females (n=308)	Males (n=98)
Provided vitamin A to the last child during the last 6 months		
Yes	70	65
No	30	35
Sources of supply		
NGO (Marie Stops) clinic	97	91
Public facilities	3	9
NGO=Non-governmental organization		

The street dwellers who did not feed vitamin A to their children were asked as to why they chose not to do so. About two-thirds informed that they did not know the facilities where vitamin A was provided (Table 31). Others felt that their children were too small and/or they did not know about the necessity of vitamin A for children.

Table 31. Reasons for not feeding vitamin A to children		
Reason*	Percentage	
	Females (n=93)	Males (n=34)
No knowledge of where vitamin A was provided	58	56
Perceived that the child was too small	38	12
Did not know about necessity of vitamin A for children	5	42
*Multiple answers		

Acute respiratory infection

To assess the prevalence of ARI among street children aged less than five years, data were collected and analyzed. The street dwellers were asked if their youngest child aged less than five years had any symptom of ARI during the last two weeks preceding data collection. All the female and male street dwellers who had children aged less than five years reported that their children had at least one symptom of ARI during the last two weeks (Table 32). Most street dwellers reported that their children had more than one symptom associated with ARI during the last two weeks. The common symptoms mentioned by them were fever, cough, breathing difficulty, rapid breathing, and chest in-drawing. Seventy percent of the female and 67% of the male street dwellers sought treatments for their children. Of those street dwellers who sought treatments, most visited drug sellers or a conveniently-located pharmacy. The other main source of service they received was from the mobile clinics of Marie Stopes.

Of the street dwellers who did not seek treatments for their children with ARI were asked about the reasons for not seeking treatment. Most reported that they did not go for treatment of their children due to lack of money and/or they did not feel that treatment was necessary for the problems (Table 33).

Table 32. Status of ARI among children aged less than five years and treatments sought

Symptom and facility visited*	Percentage	
	Females (n=308)	Male (n=98)
Fever	59	59
Cough	55	60
Breathing difficulty	17	21
Rapid breathing	12	12
Chest indrawing	8	6
Sought treatments for the problems		
Yes	70	67
No	30	33
Type of facility visited for treatments*		
Pharmacy	57	71
NGO facilities (Marie Stopes clinics)	27	17
Public facilities	7	9
Private facilities (doctor's chamber)	7	2
Others (homeopath pharmacy, quack doctor)	8	2

*Multiple answers; ARI=Acute respiratory infection; NGO=Non-governmental organization

Table 33. Reasons for not seeking treatment of ARI-related symptoms of children aged less than five years

Reason*	Percentage	
	Females (n=216)	Males (n=66)
Lack of money	82	64
Treatment not deemed necessary	17	45
Others (medicine does not work, had no time)	9	0

*Multiple answers; ARI=Acute respiratory infection

Diarrhoea among children

To assess the prevalence of diarrhoea among street children aged less than five years, the respondents were asked if their youngest child aged less than five years had watery stool three or more times daily during the past two weeks. Thirty-seven percent of the female and 34% of the male street dwellers reported that their accompanied children had diarrhoea during the preceding two weeks (Table 34). The Table also shows that, for the treatment of diarrhoea-affected children, the street dwellers mainly gave packet oral saline, other liquid foods, plain water and/or zinc tablets or zinc syrup.

The street dwellers who said that their children had diarrhoea during the last two weeks were asked if any other treatment was given to their children. Table 35 shows that 39% of the female and 15% of the male respondents gave other treatments to their diarrhoea-affected children. Of children who received other treatments, most were given antibiotic capsules, syrup, or tablets. In terms of seeking care for their diarrhoea-afflicted children, the street dwellers informed that they mainly visited local pharmacies or drug vendors. Table 36 shows the details of these other treatments.

Table 34. Status of diarrhoea among children aged less than five years and its treatment		
Status of diarrhoea and its treatment	Percentage	
	Females (n=308)	Males (n=98)
Had watery stool for 3 or more times daily during the last two weeks		
Yes	37	34
No	63	66
Type of treatment given for diarrhoea*		
Packet oral saline	58	76
Other liquid foods	16	15
Plain water	8	70
Zinc tablet/syrup	8	6
Homemade saline	1	9
*Multiple answers		

Table 35. Status of other treatments given to diarrhoea-affected children		
Status of other treatments given and facilities visited	Percentage	
	Females (n=114)	Males (n=33)
Given any other treatment		
Yes	39	15
No	61	85
Type of other treatments given*		
Capsule/syrup/tablet	93	80
IV saline	2	20
Others (local/Ayurvedic medicine/homeopath)	7	0
Facilities visited for treatment of diarrhoea*		
Pharmacy	63	84
NGO facilities (Marie Stopes clinics)	19	8
Private facilities (doctor's chamber)	8	0
Public facilities	6	2
ICDDR,B hospital	5	8
Others (homeopath pharmacy/Ayurvedic medicine sale centres)	5	0
*Multiple responses; IV=Intravenous; NGO=Non-governmental organization		

Table 36 presents the results of regression analysis of information relating to child health. Children of women who were unemployed and living with more than three persons in the same family were significantly more likely to be vaccinated than children of other women. This may be because the unemployed women had much more free time to take their children for vaccination while, in big families, the job of taking children to the vaccination centre may be more easily divided. A significantly higher proportion of children of women whose number of family size was high were fed vitamin A than children in smaller family size. Married women were significantly less likely to seek services for their children presenting with symptoms of ARI than women with any other marital status.

When logistic regression was conducted on the factors associated with the health of children of the male street dwellers, none of the variables was statistically significant (Table 37).

Table 36. Factors associated with health of children accompanying female street dwellers

Independent variable	Dependent variable											
	Received vaccines			Received vitamin A			Sought services for ARI			Affected by diarrhoea		
	Odds ratio	P value	95% CI	Odds ratio	P value	95% CI	Odds ratio	P value	95% CI	Odds ratio	P value	95% CI
Age (years)												
<30	0.92	0.766	0.51-1.63	0.98	0.919	0.66-1.45	1.67	0.133	0.85-3.28	1.18	0.494	0.72-1.95
30+ (RC)	1			1			1			1		
Marital status												
Married	0.93	0.825	0.51-1.71	1.00	0.996	0.66-1.50	0.47	0.033	0.24-0.94	0.83	0.488	0.50-1.39
Others (RC)	1			1			1			1		
Education												
No education	0.84	0.639	0.42-1.69	0.74	0.217	0.45-1.19	1.42	0.361	0.66-3.01	0.60	0.077	0.34-1.05
Some education (RC)	1			1			1			1		
Occupation												
Unemployed	2.22	0.029	1.08-4.55	1.38	0.164	0.87-2.20	1.41	0.366	0.66-3.02	1.47	0.202	0.81-2.66
Day labour	0.82	0.692	0.32-2.10	1.23	0.447	0.72-2.09	0.90	0.824	0.36-2.24	0.74	0.439	0.35-1.56
Other (RC)	1			1			1			1		
Family members living together												
Above 3	2.19	0.008	1.22-3.93	2.52	0.000	1.64-3.85	0.95	0.895	0.48-1.89	1.19	0.487	0.72-1.99
Up to 3 (RC)	1			1			1			1		
ARI=Acute respiratory infection; CI=Confidence interval; RC=Reference category												

Independent variable	Dependent variable											
	Received vaccines			Received Vitamin A			Sought services for ARI			Affected by diarrhoea		
	Odds ratio	P value	95% CI	Odds ratio	P value	95% CI	Odds ratio	P value	95% CI	Odds ratio	P value	95% CI
Age (years)												
<30	7.16	0.142	0.51-99.48	2.06	0.153	0.76-5.55	0.94	0.932	0.27-3.28	0.79	0.668	0.28-2.24
30+ (RC)	1			1			1			1		
Marital status												
Married	0.08	0.206	0.2-3.91	0.16	0.122	0.02-1.63	1.63	0.717	0.11-23.09	0.10	0.059	0.01-1.09
Others (RC)	1			1			1			1		
Education												
No education	1.39	0.720	0.22-8.57	1.60	0.322	0.63-4.05	0.92	0.891	0.28-3.02	1.28	0.596	0.51-3.20
Some education (RC)	1			1			1			1		
Occupation												
Unemployed	0.23	0.403	0.01-6.92	0.69	0.656	0.14-3.50	1			1		
Day labour	0.74	0.757	0.11-4.89	1.12	0.897	0.20-6.12	2.08	0.205	0.67-6.48	0.72	0.678	0.16-3.27
Other (RC)	1			1			1			0.65	0.593	0.13-3.13
Family members living together												
Above 3	0.10	0.023	0.01-0.73	0.89	0.816	0.35-2.26	3.44	0.045	1.02-11.55	1.10	0.830	0.44-2.77
3 (RC)	1			1			1			1		
ARI=Acute respiratory infection; CI=Confidence interval; RC=Reference category												

Environmental Issues



Table 38. Street dwellers' sources of household water

Purpose and source of water	Percentage	
	Females (n=448)	Males (n=448)
Drinking-water		
Tap	99	99
Pond/river	1	1
Washing of hands/faces		
Tap	77	79
Pond/river	23	21
Bath		
Tap	55	43
Pond/river	45	57
Washing of plates/utensils/cooking		
Tap	67	32
Pond/river	18	14
Not applicable	15	54
Washing of clothes		
Tap	57	43
Pond/river	43	57

Use of water

To assess the household water-use practices of street dwellers, data were collected and analyzed. The findings revealed that all the street dwellers interviewed used tap water for drinking (Table 38). Seventy-seven percent of the female and 79% of the male street dwellers used tap water for washing their hands/faces. Pond/river was the source of water for bathing and washing of cloths for half of the street dwellers

Practice of defaecation

Data on the street dwellers' practice of defaecation and after defaecation were also collected and analyzed. Table 39 shows the place of defaecation mentioned by the street dwellers. The table shows that most street dwellers used road-side/open space and drains for defaecation purposes. Several street dwellers used toilets of the local public utility by providing money to the staff members involved in maintaining the security of the toilets.

Table 40 shows practices of the street dwellers after defaecation. The table shows that 72% of the female and 83% of the male street dwellers reportedly washed their hands after defaecation. Most street dwellers interviewed used plain water, rubbed hands on earth, and used ash when washing hands after defaecation.

Table 39. Places of defaecation by street dwellers		
Place of defaecation*	Percentage	
	Females (n=448)	Males (n=448)
Road-side/open space	88	88
Drain	27	66
Toilet/latrine of city corporation	25	34
Toilet/latrine of the nearest locality	10	8
*Multiple answers		

Table 40. Hand-washing practices of street dwellers after defaecation		
Hand-washing practices	Percentage	
	Females (n=448)	Males (n=448)
Washed hands after defaecation		
Yes	72	83
No	28	17
Material/substance used for hand-washing after defaecation*		
Water only	86	96
Rubbing hand on earth	46	15
Ash	37	5
Soap	6	0
*Multiple answerers		

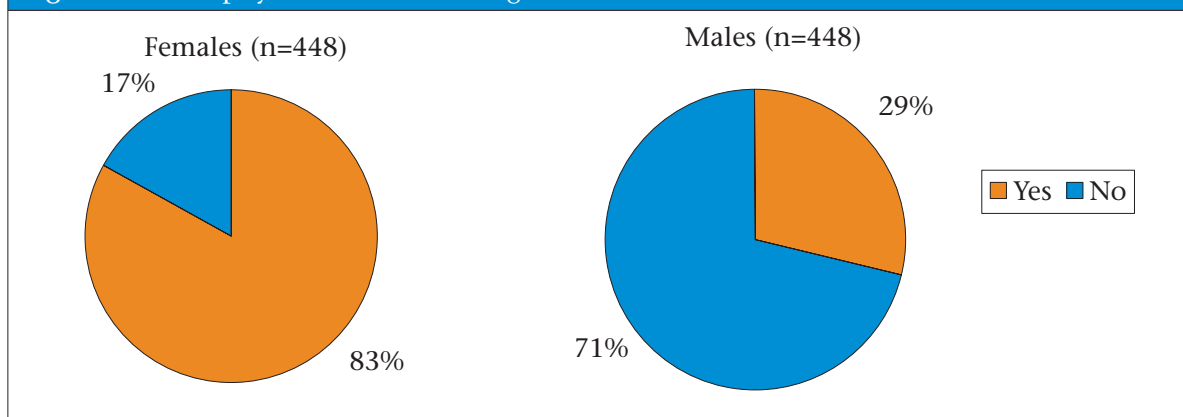
Violence, Drug Abuse, and Sexual Harassments



Physical violence

Data were collected and analyzed to ascertain the status of physical violence among street dwellers. The street dwellers were asked if they were ever assaulted by their spouses or others while walking or lying on the street. Eighty-three percent of the female and 29% of the male street dwellers interviewed reported that they were assaulted while staying on the street (Fig. 7).

Fig. 7. Status of physical assaults among street dwellers



The findings showed that physical assaults among the street dwellers were a regular phenomenon. Twenty-seven percent of the females and 22% of the males were assaulted by others within the last week (Fig. 8) Another 16% of the females and 27% of the males were assaulted in the last two weeks prior to the data collection while 43% of the females and 45% of the males had been assaulted once a month.

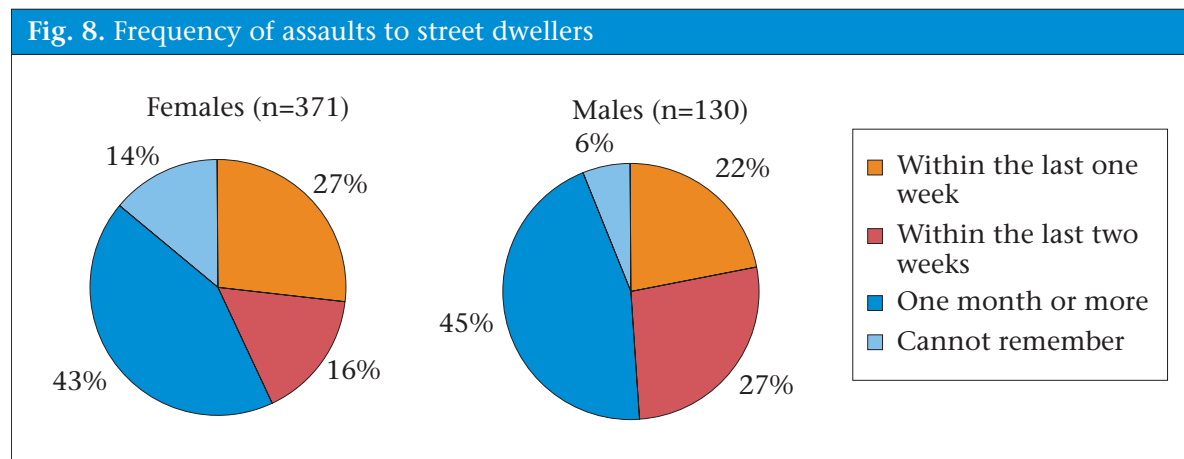


Table 41 shows the types of assaults and assailants of the female street dwellers. The table shows that both their husbands and others assaulted them, although the percentage was comparatively higher by husbands than by others. Other assailants of the female street dwellers included boyfriends, strangers, law-enforcement members, staff members of public utilities where they were living, and local miscreants. The female street dwellers were most often slapped or had something thrown at them (39%), or threatened and/or attacked by a weapon (34%). They were also kicked and dragged (15%) or hit with a fist or something else (12%).

Type of assault	Assailants (n=372) (%)		
	Husbands (n=245)	Others (n=127)	Total (n=372)
Slapped or had something thrown at them	30	9	39
Threatened or attacked by a weapon	17	17	34
Kicked and dragged	10	5	15
Hit with fist or with something else	9	3	12
Total	66	34	100

Table 42 shows the reasons the female street dwellers gave for being assaulted by their husbands. About half of them informed that their husbands assaulted them as they refused to carry out orders of their husbands in terms of giving money to husbands, going outside without permission, or nursing step-children. More than one-third were assaulted due to asking for money from their husbands for buying food and for treating children. Twenty-three percent were assaulted by their

husbands due to protesting about their husbands' illicit relations with other women. The other reasons mentioned by the female street dwellers for being assaulted by their husbands included husband's dislike of food cooked by wife, wife's preventing husband to take drugs, and husband's suspicion that his wife had 'bad work' (sexual relationship) with others.

Table 42. Reasons for physical assaults of female street dwellers by their husbands

Reason*	Percentage (n=245)
Refused to carry out husbands' order in terms of giving money to husband, going outside without permission, and nursing step-children	48
Asking husband for money	35
Protest about husband's illicit relations	23
Cooked unsatisfactory food	7
Preventing husband from taking drugs	6
Husband suspects that wife does 'bad work'	5
*Multiple answers	

Table 43 shows the reasons of assaulting the female street dwellers by others. The table shows that 44% of the street women were assaulted by the station master and police as they were staying in public places (railway station, launch terminal/bus terminal and, mazar gate). Twenty-six percent of the females reported being assaulted as they were quarrelling with other street dwellers over space for sleeping. Sixteen percent were assaulted because they did not agree with the proposal of police to have sex with them, and 12% were assaulted due to stealing.

Table 43. Reasons for physical assaults of female street dwellers by others

Reason*	Percentage (n=127)
Station master and police assaulted for staying in a public place	44
Due to quarrelling with other street dwellers over space for sleeping	26
Due to not agreeing to the proposal of police to have sex	16
Stealing	12
Others (use of drug, protesting miscreants)	3
*Multiple answers	

Table 44 shows the types of assaults to male street dwellers and identity of assailants. The table shows that the husbands reported no incidence of assault by their wives. Forty-three percent of the male street dwellers reported that they were hit with a fist or with something else while 26% were kicked and dragged. Twenty-two percent reported being slapped or having something thrown at them, and 91% reported being threatened or actually attacked by a weapon respectively. Others who assaulted male street dwellers included law-enforcement members, staff members of public utilities where the street dwellers were living, and local miscreants.

Table 44. Types of assaults and assailants of male respondents

Type of assault	Assailants (n=130)		
	Wives (n=0)	Others (n=130)	Total (n=130)
Hit with fist or with something else	0	43	43
Kicked and dragged	0	26	26
Slapped or had something thrown at them	0	22	22
Threatened or actually attacked by a weapon	0	9	9

Table 45 shows the reported causes for assaults of the male street dwellers by others. The table shows that 53% were assaulted by the station master and members of the police as they were staying in a public place (railway station, launch terminal/bus terminal, and gate of mazar). Other reasons for assaults included quarrelling with other street dwellers over space for sleeping, collecting food from mazars, not agreeing to the proposal of a local miscreant to bring girls from streets to have sex with them and being assaulted by members of the police due to drug use.

Table 45. Reasons for physical assaults of male respondents by others

Reason*	Percentage (n=130)
Station master and police assaulted for staying in a public place	53
Quarrelling with other street dwellers	15
Due to collecting food from Mazars	12
Stealing	8
Did not agree to proposal of miscreants to bring girls from streets for sex	7
Due to drug use	7
*Multiple answers	

Drug abuse

The street dwellers were asked if they used any drug during the last one year. Fig. 9 shows that a negligible percentage of females was using drugs. Sixty-nine percent of the males interviewed used any kind of drugs during the last one year.

The findings also showed that the female street dwellers used mainly tobacco (smoking and gul). Table 46 shows that the male street dwellers were using all the local, common drugs available, such as smoking, gaza/afim/charas, heroin, injection, Bangla wine/tary, gul, and sleeping pills. Ninety-four percent of male drug users used drugs every day. Drug users who used injection were asked about sharing of syringes and needles, and the findings revealed that more than two-thirds shared syringes and needles with others.

Fig. 9. Status of drug use among street dwellers

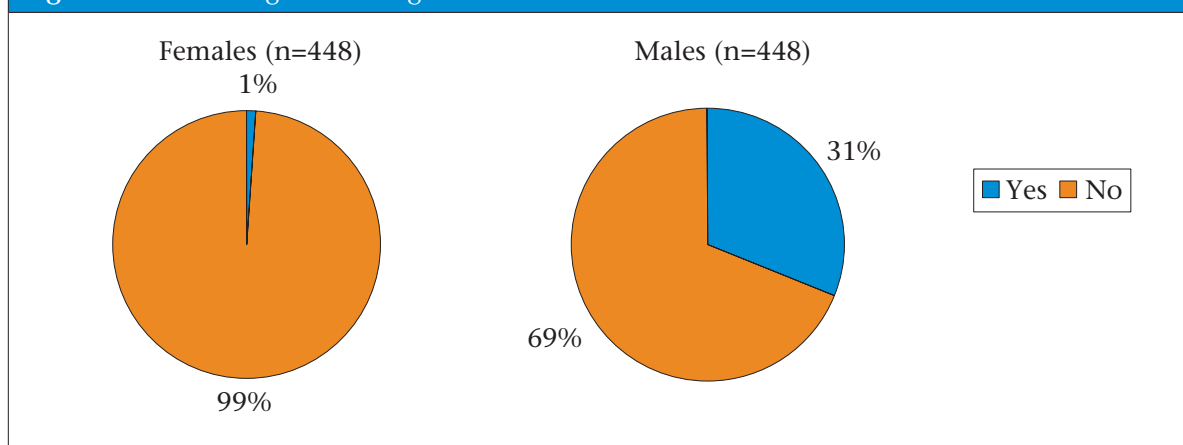


Table 46. Types of drug used by male street dwellers and frequency of drug use

Type of drug*	Percentage (n=309)
Gaza/afim/charas	73
Heroin	12
Injection	11
Bangla wine/tary	5
Gul	4
Sleeping pill	4
Frequency of using drugs	
Everyday	94
1-2 day(s) a week	5
Hardly	1
Share syringes and needles while taking injection	
Yes	67
No	33

*Multiple answers

Sexual harassments among female street dwellers

To assess the status of sexual harassments among female street dwellers, interviewees (n=448) were asked if they were approached for unwanted physical contact or propositions while walking/lying on the street. More than two-thirds (63%) of them were approached for unwanted physical contact or propositions while walking/lying on the street (Table 47).

Table 47. Status of reported sexual harassments among female street dwellers

Approached for unwanted physical contact or propositions of female street dwellers while walking/lying on the street	Percentage (n=448)
Yes	63
No	37

The victims were asked to name the type of sexual harassment and the identity of harasser of their last incident. In response, they informed that they were harassed by boyfriends and others. The others included male street dwellers who are staying around them, strangers, staff members of public utilities, local miscreants, and law enforcers (Table 48). Regarding the type of sexual harassment, the women reported that they were harassed through unwanted physical contact, sexual flirtations, touching, advancing, leering, rude gesture, and rape.

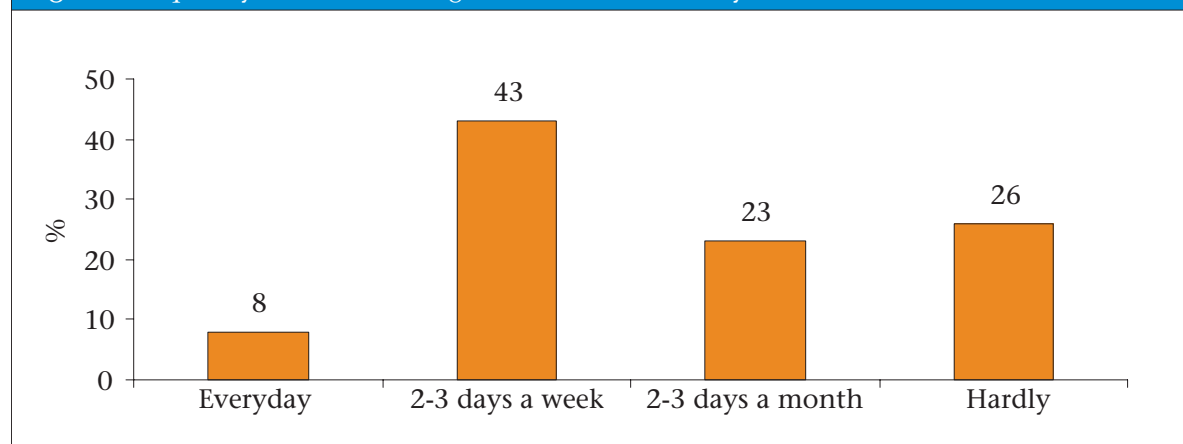
Table 48. Types of harassments faced by female street dwellers and harassers

Type of harassment*	Harassers (n=282) (%)	
	Boyfriends	Others
Unwanted physical contact	17	20
Sexual flirtations	17	3
Touching	13	18
Advancing	5	23
Leering	17	22
Rude gesture	36	36
Rape	4	3

*Multiple answers

In response to a question about how often the female street dwellers encountered harassments, three-fourths of victims informed that it happened frequently, such as every day, 2-3 days a week, and 2-3 days a month (Fig. 10).

Fig. 10. Frequency of encountering sexual harassments by street women



Conclusion and Recommendations



This study has shown that the street dwellers are extremely vulnerable in terms of their health needs and health-seeking behaviours. They experience poor nutrition, routinely use drugs, and experience violence. There is no health service-delivery mechanism targeting this marginalized group of people like other groups, such as slum dwellers, non-slum dwellers, and people living in hard-to-reach areas, except the mobile clinics service-delivery system of the MSCS. On the other hand, the use of ESP services among the street dwellers is very rare. However, based on the findings of the study, the following recommendations have been made for developing and providing healthcare services to urban street dwellers:

1. The findings of the study revealed that the street dwellers interviewed could not accurately identify the location of EPI services. One-third of the female and half of the male street dwellers had no knowledge about the facilities where EPI services are provided for women and children. Those who reported knowing about where EPI services are provided, most erroneously mentioned the mobile clinics of the Marie Stopes as EPI service providers. Therefore, a mechanism should be developed to enhance awareness among street dwellers about the facilities where healthcare services are available for them.

2. The findings also showed that reported morbidity among the street dwellers was extremely high. The street dwellers interviewed commonly reported both reproductive and general health morbidities. The female street dwellers were mostly affected by reproductive health problems, such as vaginal discharge, lower abdominal pain, genital itching/burning and mass in the lower abdomen, and uterine prolapse. The common general health morbidities reported by them were diseases of the respiratory system, diseases of the digestive system, and scabies. Therefore, programmes need to be developed for providing healthcare services to street dwellers with special focus on these problems.
3. The survey data showed that about half of the female and one-third of the male street dwellers did not seek healthcare services during episodes of their illnesses. Of those who sought treatment, more than half of the females and two-thirds of the males went to the nearest pharmacy; they bought medicines from drug sellers who are not properly trained to diagnose problems, prescribe medicines, and provide services. However, the findings indicated that the pharmacies and drug vendors were well-known to the street dwellers. Therefore, a mechanism should be developed so that drug sellers could be used for informing street dwellers about healthcare facilities where ESP services are available.
4. The main reasons for not going to healthcare centres for treatment reported by the street dwellers were lack of money and feeling that treatment was not necessary for the mentioned sickness. Therefore, the policy-makers and programme managers should develop a service-delivery mechanism considering the inability of street dwellers to pay for services and must raise street dwellers' awareness of the necessity of treatment for health problems.
5. The findings showed that only 13% of the pregnant mothers received TT vaccines during their current pregnancy, and 67% of them received only one dose. Therefore, the EPI programme of the Ministry of Health and Family Welfare, Dhaka City Corporation, and NGOs should focus more on vaccination of street pregnant mothers.
6. Twenty-one percent of deliveries were conducted on the street. Untrained personnel conducted most deliveries while 6% of deliveries were self-conducted. The findings showed that 63% of mothers experienced problems during delivery. Postpartum morbidity among the street women was also high, meaning that childbirth represents a very vulnerable time for street women. Despite this, a very few of them visited health facilities, except pharmacies, for treatment due to unawareness and lack of money. Therefore, a mechanism needs to be developed to inform them about the importance of seeking maternal healthcare and facilities where free or low-cost services are available for them should be established.
7. An alarming situation exists among the street children in terms of childhood vaccination coverage. The female and male street dwellers respectively reported that 87% and 66% of their children aged 12-23 months had received any dose of vaccines. The status of complete immunization among the street children is unknown as not a single woman or man could show an EPI card. The findings clearly indicate that the street children are neglected in terms of vaccination coverage. Therefore, the policy-makers and programme managers should exert more efforts to bring street children under EPI services.

8. The findings showed that the reported prevalence of ARI and diarrhoea among children aged less than five years was high. All the female and male street dwellers who had children in this age-group reported that their children had at least one ARI symptom during the last two weeks. At the same time, 37% of the female and 34% of the male street dwellers reported that their accompanied children had diarrhoea during the last two weeks. The findings revealed that those who sought treatment went to drug sellers of the nearby pharmacies and the mobile clinics of the Marie Stopes mainly for the treatment of their children. Therefore, a mechanism should be developed to strengthen mobile clinics service-delivery for providing services to street dwellers.
9. The findings indicate that defaecation practices of the street dwellers are responsible for environmental pollution and hazards to their own health. Most street dwellers interviewed used road-side/open space and drains for their defaecation. Several of them used toilets of a local public utility by paying money to the staff members responsible for maintaining the security of toilets. The city planners should give attention to this problem and take necessary actions to protect cities from this type of pollution for the well-being of city dwellers. The street dwellers should be allowed to use the available public toilets without any money. Low-cost toilets may be built in concentrated areas of street dwellers to protect cities from such type of pollution.
10. The street dwellers also reported that they used plain water and rubbed hands on the earth and/or used ash while washing their hands after defaecation. An education programme for them is essential to make them aware of the environmental issues, including health education and proper hand-washing practices.
11. The findings showed that physical assaults among the street dwellers, particularly among women, were a regular phenomenon. Eighty-three percent of the females were assaulted by their husbands and others while they were staying on the street. Necessary steps by the concerned authorities should be taken to prevent this type of inhuman practice. The mass media may play a vital role in this regard.
12. The study found an alarming picture in terms of drug abuse among the street males. Ninety-three percent of them used any kind of drugs during the last one year. The findings also showed that a good percentage of drug users injected and shared their syringes with others. Therefore, concerned policy-makers and programme managers should give special attention to this group of people to prevent further drug-use. Education programmes emphasizing the dangers of drug-use may be introduced. The existing programmes in this area managed by different organizations need to be strengthened.
13. Sexual harassments among the female street dwellers interviewed were common. The types of sexual harassments included unwanted physical contact, sexual flirtations, touching, advancing, leering, rude gesture, and rape. The law-enforcing organizations should come forward to protect street women from such unwanted activities.
14. Findings of regression analysis indicated that there was no significant difference between

health problems and healthcare-seeking among the street dwellers with different background characteristics. This means that similar risks prevail among all groups of street dwellers. Therefore, a comprehensive programme needs to be developed for all groups of street dwellers; there is no need to focus on any special group.

15. Except local pharmacies, the street dwellers sought healthcare services from the mobile clinics of Marie the Stopes which are involved in providing both preventative and curative services in particular areas of streets. The findings suggest that providing healthcare services to street dwellers through mobile clinics could be an effective mechanism. Therefore, the programme of providing healthcare services through mobile clinics to street dwellers needs to be expanded and strengthened. But the sustainability of the existing high-cost mechanism run by the Marie Stopes needs to be reviewed. If the existing mechanism involves high cost, a local, low-cost, and sustainable mechanism may be developed and tested for providing services to street dwellers.
16. Although previous discussions on behaviours of street dwellers and anecdotal evidence consider street dwellers to be highly mobile, designing long-term programmes for them would not be an effective practice. However, the findings of the present study revealed that half of the street dwellers were staying in the same place for three years and more. The findings also showed that a good percentage of this group of people was staying in the same place for 10 years and more. Therefore, the policy-makers and programme managers may develop static clinics for providing services to semi-permanent street dwellers.
17. Although the Health, Nutrition and Population Sector Programme of Bangladesh designed programmes to ensure equitable ESP services to all, this marginalized group of people is not targeted by ESP services. The Ministry of Health and Family Welfare should develop programmes to meet the needs of this extreme vulnerable group of people.

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