

Working Paper No. 161

Reproductive Health Needs of Adolescents in Bangladesh: A Study Report

**Quamrun Nahar
Cristóbal Tuñón
Irit Houvras
Rukhsana Gazi
Masud Reza
Nafisa Lira Huq
Barkat-e-Khuda**

1999



CENTRE
FOR HEALTH AND
POPULATION RESEARCH



The Centre

The Centre is a unique global resource dedicated to the highest attainable level of scientific research concerning the problems of health, population and development from a multi-disciplinary perspective. The Centre is an exceptional position to conduct research within the socio-geographical environment of Bangladesh, where the problems of poverty, mortality from readily preventable or treatable causes, and rapid population growth are well-documented and similar to those in many other developing countries of the world. The Centre currently has over 200 researchers and medical staff from 10 countries participating in research activities. The Centre's staff also provide care at its hospital facilities in Dhaka and Matlab to more than 100,000 patients a year and community-based maternal/child health and family planning services for a population of 100,000 in the rural Matlab area of Bangladesh. In addition, the Centre works closely with the Government of Bangladesh in both urban and rural extension projects, which aim at improving the planning and implementation of reproductive and child health services.

The Centre is an independent, non-profit international organization, funded by donor governments, multilateral organizations and international private agencies, all of which share a concern for the health problems of developing countries. The Centre has a rich tradition of research on topics relating to diarrhoea, nutrition, maternal and child health, family planning and population problems. Recently, the Centre has become involved in the broader social, economic and environmental dimensions of health and development, particularly with respect to women's reproductive health, sexually transmitted diseases, and community involvement in rural and urban health care.

The Centre is governed by a distinguished multinational Board of Trustees. The research activities of the Centre are undertaken by four scientific divisions: Clinical Sciences Division, Public Health Sciences Division, Laboratory Science Division, and Health and Population Extension Division. Administrative functions are undertaken by Finance, Administration and Personnel offices within the Director's Division.

B

Reproductive Health Needs of Adolescents in Bangladesh: A Study Report

**Quamrun Nahar
Cristóbal Tuñón
Irit Houvras
Rukhsana Gazi
Masud Reza
Nafisa Lira Huq
Barkat-e-Khuda**



**CENTRE
FOR HEALTH AND
POPULATION RESEARCH**

**ICDDR,B: Centre for Health and Population Research
Mohakhali, Dhaka 1212, Bangladesh**

ICDDR,B Working Paper No. 130

Edited by: M. Shamsul Islam Khan

Layout Design and Desktop Publishing: Jatindra Nath Sarker
Manash Kumar Barua

ISBN: 984-551-207-0

Operations Research Project Working Paper No. 161
ICDDR,B Working Paper No. 130

© 1999. ICDDR,B: Centre for Health and Population Research

Published by

ICDDR,B: Centre for Health and Population Research

GPO Box 128, Dhaka 1000, Bangladesh

Telephone: (880-2) 8811751-60 (10 lines); Fax: 880-2-8811568

E-mail: msik@icddrb.org

URL: <http://www.icddrb.org> and <http://www.icddrb.org.sg>

Printed by: Prime Printers & Packages, Dhaka

d

Acknowledgements

The Operations Research Project (ORP) is a project of the ICDDR,B: Centre for Health and Population Research that works in collaboration with the Ministry of Health and Family Welfare, Government of the People's Republic of Bangladesh, supported by the United States Agency for International Development (USAID).

This publication was supported by the USAID under the Cooperative Agreement No. 388-A-00-97-00032-00 with the ICDDR,B: Centre for Health and Population Research. The Centre is supported by the following countries, donor agencies and others which share its concern for the health and population problems of developing countries:

- Aid agencies of governments of: Australia, Bangladesh, Belgium, Canada, European Union, Japan, the Netherlands, Norway, Sri Lanka, Sweden, Switzerland, the United Kingdom, and the United States of America;
- UN agencies: International Atomic Energy Agency, UNAIDS, UNICEF, and WHO;
- International organizations: CARE Bangladesh, International Center for Research on Women, International Development Research Centre, Swiss Red Cross, and World Bank;
- Foundations: Ford Foundation, George Mason Foundation, Novartis Foundation, Rockefeller Foundation, and Thrasher Research Foundation;
- Medical research organizations: Karolinska Institute, National Institutes of Health, New England Medical Center, National Vaccine Programme Office, Northfield Laboratories, Procter and Gamble, Rhone-Poulenc Rorer, and Walter Reed Army Institute for Research-USA;
- Universities: Johns Hopkins University, London School of Hygiene & Tropical Medicine, University of Alabama at Birmingham, University of Göteborg, University of California at Davis, University of Maryland, University of Newcastle, University of Pennsylvania, and University of Virginia;
- Others: Arab Gulf Fund, Futures Group, International Oil Companies (Cairn Energy PLC, Occidental, Shell, Unocal), John Snow International, Pathfinder, UCB Osmotics Ltd., and Wander AG.

The authors are grateful to Ms Laurel MacLaren, Communications Advisor and Dr. Katherine Bond, Research and Evaluation Advisor, FOCUS on Young Adults Program, for their valuable inputs in designing the study, developing the questionnaires and the guidelines, and analyzing the study findings. The authors are thankful to Dr. M.E. Khan, Regional Advisor, Asia and Near East Countries, Population Council, Dr. Fazlul Karim, Senior Research Epidemiologist, Research

and Evaluation Division, BRAC, and Dr. Japhet Killewo, Head, Reproductive Health Programme, PHSD, ICDDR,B for kindly reviewing the report and giving their valuable comments. The authors acknowledge the contributions to Dr. Zareen Khair, USAID and Dr. Shams El Arifeen of PHSD, ICDDR,B to the study. Special thanks go to Dr. Samina Manaf, Ms Hazera Nazrul, Mr. Siraj Uddin, Ms Meghla Islam, Mr. Dewan Naqibul Islam, Mr. Ezazul Islam, Mr. Faaiz Ahmed Bhuiyan, and Mr. A.K.M. Mohammadullah of the ORP, ICDDR,B for their outstanding contributions in collecting qualitative information for the study. Special thanks are also extended to the survey team for their dedication and sincerity in collecting information on a very sensitive but important topic. The authors are grateful to Mr. Khorshed Mozumder, Mr. Mohammad Ali Bhuiyan, Mr. Abdul Wazed, Dr. Dipak Kumar Mitra, and Dr. Mobarak Hossain Khan of the ORP for their support to conduct the study.

Last but not the least, our gratitude goes to the participants of our study for their patience and cooperation.

Acronyms

AFLE	Adolescent Family Life Education
AIDS	Acquired Immune Deficiency Syndrome
ASD	Assistance for Slum Dwellers
BCC	Behaviour Change Communication
BDHS	Bangladesh Demographic and Health Survey
BPHC	Bangladesh Population and Health Consortium
BWHC	Bangladesh Women's Health Coalition
CSWs	Commercial sex workers
CWFD	Concerned Women for Family Development
ESP	Essential Services Package
FDSR	Family Development Services and Research
FP	Family Planning
FPAB	Family Planning Association of Bangladesh
FWA	Family Welfare Assistance
GoB	Government of Bangladesh
HPSP	Health and Population Sector Programme
ICPD	International Conference on Population and Development
IUD	Intra-uterine device
NGOs	Non-government Organizations
NIPHP	National Integrated Population and Health Programme
NM	Nari Maitree
MCH-FP	Maternal Child Health and Family Planning
MOHFW	Ministry of Health and Family Welfare
OMI	Organization for Mothers and Infants
ORP	Operations Research Project
PDAP	Participatory Development Action Program
PLA	Participatory Learning and Action
PSTC	Population Services and Training Centre
RH	Reproductive Health
RSDP	Rural Service Delivery Partnerships
RTIs	Reproductive tract infections

Acronyms (Contd.)

SHPP	School Health Pilot Project
STDs	Sexually transmitted diseases
THC	Thana Health Complex
TT	Tetanus Toxoid
TTBA	Trained traditional birth attendant
UFHP	Urban Family Health Partnerships
USAID	United States Agency for International Development
UVP	Urban Volunteer Programme
VHSS	Voluntary Health Services Society

Contents

	Page
Executive Summary	vii
Background	1
Introduction	1
Adolescent Reproductive Health Status in Bangladesh	1
Interventions to Address the RH Needs of Adolescents.....	2
The Problem Statement.....	6
Objectives of the Study.....	6
Methodology	7
Study Design.....	7
Study Area	7
Sampling and Sample Size.....	7
Research Instruments	8
Operational Definitions	8
Data Collection.....	8
Problems Encountered During Data Collection	9
Ethical Considerations.....	11
Data Management and Analysis.....	11
Limitations of the Study.....	11
Results.....	12
Background Characteristics.....	12
Reproductive Health Knowledge, Attitudes, and Practice of Adolescents.....	15
Reported Morbidity Patterns and Healthcare Seeking of Adolescents	32
Development of a Relationship between a Boy and a Girl.....	37
Sexual Behaviour of Adolescents	38
Adolescent Network and How their Time is Spent	43
Exposure to Media	43
Adolescents' Concerns and RH Needs.....	44
Programme Implications of Study Findings.....	49
Meeting Adolescents' Needs: Improving Knowledge on RH Issues.....	49
Promoting a Supportive Environment.....	51
References.....	54

List of Tables

	Page
Table 1. Background characteristics of survey respondents	12
Table 2. Measures taken during menstruation by adolescent girls in study sites	17
Table 3. Appropriate age (mean age in years) for marriage for girls and boys as stated by study adolescents	20
Table 4. Adolescents' knowledge of measures needed to be taken during pregnancy	23
Table 5. Adolescents' (13-19 years) knowledge of the fertile period and conception	24
Table 6. Knowledge about family planning methods and perceptions about married adolescents' use of family planning methods	25
Table 7. Use of family planning methods among married adolescent girls.....	27
Table 8. Use of pregnancy care and delivery services by married adolescent girls.....	28
Table 9. Adolescents' knowledge regarding diseases of reproductive organs	29
Table 10. Adolescent-reported morbidity and health-seeking behaviour.....	33
Table 11. Perceived RH problems and healthcare seeking for adolescents	35
Table 12. Exposure to media	44
Table 13. Adolescents' perceptions on RH needs and suggestions for addressing these needs.....	47

List of Figures

Fig. 1. Reproductive health seeking behaviour of adolescents	36
Fig. 2. Development of adolescent relationships	38
Fig. 3. Influences and consequences of pre-marital sex	40

Executive Summary

Given the life-long significance of transition to adulthood, and in the light of the expected rapid growth rate of adolescents over the next few decades, importance has been given to developing strategies to address their reproductive health (RH) needs. Under the current Health and Population Sector Programme (HPSP) of the Government of Bangladesh (GoB), adolescents have been identified as an underserved priority target group. Similarly, under the National Integrated Population and Health Programme (NIPHP) of the United States Agency for International Development (USAID), both Rural Service Delivery Partnerships (RSDP) and Urban Family Health Partnerships (UFHP) have initiated health programmes for adolescents. The Operations Research Project (ORP) of ICDDR,B: Centre for Health and Population Research, the operations research partner of the NIPHP, is in the process of developing and testing strategies to address the RH needs of adolescents in Bangladesh.

In a recent review done by the ORP, it was found that very little is known about the health needs of adolescents in Bangladesh in general, and the RH needs in particular. Thus, before designing an appropriate intervention, a study was conducted to assess the reproductive health needs of adolescents. This community-based, cross-sectional and descriptive study in nature was conducted in three rural and two urban areas of Bangladesh, using the ORP's surveillance system. For the urban sample, half of the sample was drawn from urban slums and half was from urban non-slums. The study used both quantitative and qualitative data-collection techniques. In total, 3,961 adolescents aged 10-19 years were interviewed using a structured questionnaire. The participatory learning and action (PLA) techniques using group activities, such as social mapping, Venn diagrams, and free listings, were used in the study. In-depth interviews were also done with the adolescents. Adult key informants, such as parents, grandparents, community leaders, teachers, and healthcare providers, were also interviewed. In total, 47 group activities and 57 in-depth interviews with adolescents, and 40 key-informant interviews were conducted.

The findings of the study showed that about one-fifth of the adolescents in the study did not have any formal education. The school drop-out rate was high in both urban and rural areas and for both boys and girls, and it is highest in the case of urban slum adolescents. Sixteen percent of the rural and 20 percent of the urban slum girls were married. These girls were not only married but soon after marriage they became pregnant; more than half of them reported having had one or more children. Fifty-nine percent of the adolescent boys and about 30 percent of the girls in the urban slums worked for money. They mostly worked as either housemaids or garment workers.

Looking within the community context where adolescents live, the study findings showed that the adolescent boys spent most of their free time with friends,

whereas the girls stayed at home and spent free time with the family, especially with mothers and sisters. Although the boys reported to have more friends, both boys and girls met friends everyday. About 20 percent of both urban and rural boys were involved with clubs. Types of clubs they were involved in vary according to their residence. A lower proportion of girls (11% rural, 7% urban) was also involved with club activities.

In the survey, reported ideal age of marriage (median) for girls and boys are 18 years and 21 years respectively. The ideal age mentioned by both boys and girls, in fact, was same as the legal age of marriage in Bangladesh. Most adolescents mentioned that an early marriage is 'bad.' Despite adolescents' knowledge about the ideal age for marriage being a higher age and their wide recognition of the bad effects of early marriage, marriage at young ages for girls was reported. The reasons mentioned by both adolescents and adults for an early marriage include, 'difficulty in finding an eligible bride-groom,' 'preventing pre-marital affairs,' and 'maintaining social prestige.' There was also a clear community expectation that, once married, girls should prove their fertility by becoming pregnant.

Most girls in the study reported that they did not have any knowledge about menstruation before they experienced it. The girls learned about it from elder sisters, sisters-in-law, and female friends, whereas the boys knew about it from their male friends. Most girls who experienced menstruation reported that they used old clothes during menstruation and dried them in dark places. Very few of them reported that they used soap or savlon to wash these cloths. Menstrual taboos are also present, and include food restrictions, especially those that contain protein.

Most boys reported that they did not have any idea about wet dreams before they experienced them. As they did not know that these are normal phenomena, when they experienced them, they become confused as to whether they were sick and in the long run they would visit healthcare providers. They mostly reported going to traditional healers for this purpose.

Most adolescents do not have a clear idea about the process of reproduction. Of the adolescents who knew about menstruation, most of them did not know about the fertile period, and about half of them were not knowledgeable that a woman could get pregnant after having sex only once.

Most study adolescents (70%) had heard of family planning practices, mostly from TV and radio. Of the adolescents who knew about it, most (>90%) knew about the pill. The proportion of girls who knew about condoms was low (35%). The proportion of boys who knew about injectables was even lower. Although most adolescents hold a positive view about using family planning methods by the married adolescents, some adolescents, especially boys, believed that using pills would make adolescent girls infertile. Of the married girls, about half were family planning method users. The methods used were pills, condoms, injectables, and IUD. The prime source of supply for both urban and rural areas

was the pharmacy. Reasons for not using family planning methods included desire for children and post-partum amenorrhoea for the married adolescent girls and difficulty in obtaining supply for the unmarried but sexually active adolescent boys.

Knowledge about diseases of the reproductive organs was low among the rural adolescents. Of the adolescents who had heard of such diseases, gonorrhoea, syphilis, and AIDS were mentioned as such diseases. They could also identify that those diseases are transmitted by sexual contact. With the exception of rural adolescents, three-fourths of the adolescents heard of AIDS. They heard of it from TV and radio. However, the qualitative study findings suggest that adolescents do not have a clear idea about symptoms, transmission and prevention of AIDS.

Less than 20 percent of the survey sample perceived having ever suffered from diseases of the reproductive organs. About half of these adolescents visited the healthcare providers for treatments. Regarding health-seeking behaviour, in general, the adolescents did not feel comfortable seeking treatments for RH illnesses. Healthcare seeking for the girls and the boys seemed to be different. Generally, the girls did not seek any help for such problems. However, if they felt that the symptoms were becoming severe, they only then would consult their family members. If the family members, especially their mothers, perceived the problem as a serious one, only then would she be taken to a doctor or a hospital or traditional healer, such as *Kabiraj*, or *Fakir*. The boys followed a similar pattern for seeking RH care; however, they might independently also seek treatments directly from the healthcare providers before consulting any family member. The boys might directly seek treatments from canvassers, pharmacies, or village doctors. However, if traditional treatments failed, they would go to a doctor or hospital.

Both the survey and qualitative data provided evidence that, in general, the adolescents did not go to the healthcare facilities for several reasons. It was commonly perceived that the existing health centres often cater for the married people, so the unmarried adolescents felt that it was not a place where they belong. Whenever they went to seek healthcare, they felt that not enough information was provided, there were long waiting times, services were too far to reach, and there were limited afternoon hours. They did not find free time to visit the health facilities because of school timings. Many female respondents expressed reservations in seeking RH care from the male doctors.

Regarding sexual health, many boys believed that masturbation was bad for one's health. They mentioned that it causes weakness of the body, and would change the shape of penis. It was also commonly believed that this activity might have some long-term adverse effects. Both boys and girls reported knowing of commercial sex workers and brothels. They stated that young boys and young men go to brothels. A few male adolescents admitted that they themselves had visited brothels. Condoms were generally not used during these visits. Incidences of homosexuality, anal sex, and extra-marital sex among the adolescents were also reported in the study.

The adolescents and the adults all mentioned that pre-marital affairs are a common phenomenon among the adolescents. Many boys and some girls admitted that they themselves were or had been involved in pre-marital affairs. The girls were very concerned about the consequences of pre-marital affairs, including being labelled as 'bad girls,' pregnant, forced to marry, forced to drop-out of schools, etc. There was general disapproval of pre-marital sex. None of the female participants admitted to having pre-marital sex, however, a few male participants did. Both boys and girls narrated stories about friends, family members, and neighbours who have had or were having pre-marital sex.

The study findings confirmed that the adolescents had a limited knowledge about the RH issues and had limited access to accurate information or services. Thus, it is imperative to launch effective strategies to make accurate and relevant information available in formats that are accessible to adolescents. Information should be provided in different settings, such as schools, communities, and workplaces, because a sizeable proportion of the urban adolescents work for money.

More behaviour change communication (BCC) is needed to create a supportive environment for adolescents which would necessitate a more comprehensive approach that goes beyond the production of BCC materials to increase community awareness. The approach should integrate the issue of health needs of adolescent females within strategies that target and reach adolescents themselves and older people in the community with messages and legislative action to encourage and support families in enrolling and keeping girls at schools for instance, and that promote a more positive role of women in households with adolescent females and in the community as a whole.

The task of promoting a supportive environment for adolescents also concerns the organization of the existing RH services and the orientation of staff engaged in the planning, organization and delivery of services concerning adolescents. Consistent with the cultural norms, the health services in Bangladesh should be tailored to the provision of RH care to suit the needs of married and unmarried people. Finally, adolescent-friendly health services should be ensured by arranging special hours or special days for them, orienting and providing training to healthcare providers on how to counsel adolescents.

Background

Introduction

Today, at the end of this millennium, the world is facing the largest generation of adolescents ever in history. Currently, one in every five persons on the earth is an adolescent aged 10-19 years, and 85 percent of these adolescents live in developing countries [1]. In Bangladesh, about 23 percent of the total population are adolescents [2]. In terms of sheer numbers, these young people have tremendous demographic significance. Because of the population momentum, even if there were to be a rapid decline in age-specific fertility rates among young people, stabilization of the country's population would not occur for at least the next 10-20 years. Adolescents are not only numerous, but they have double significance as they are, at the same time, the present and the future. The behaviour of this generation of adolescents is going to affect everybody's future in the next generation. In addition, they are at a stage associated with an increased likelihood of sexual activity, and thus, at an increasing risk of contracting sexually transmitted diseases (STDs), including human immune deficiency virus/acquired immuno-deficiency syndrome (HIV/AIDS), if they practise unsafe sex.

Considering the significance of adolescents, the International Conference on Population and Development (ICPD), held in Cairo, in 1994, identified adolescents as a priority target group and urged all government and non-government organizations (NGOs) to address reproductive health (RH) needs of adolescents. However, till recently, very limited efforts have been made to address the adolescent RH issues.

Under the current Health and Population Sector Programme (HPSP) of the Government of Bangladesh (GoB), adolescents have been identified as an underserved priority target group. Adolescent health has been included as part of the Essential Services Package (ESP), and a separate programme titled "Maternal Nutrition and Adolescent Health" has been created to deal with the adolescent health issues. Similarly, under the current National Integrated Population and Health Programme (NIPHP) of the United States Agency for International Development (USAID), both Rural Service Delivery Partnerships (RSDP) and Urban Family Health Partnerships (UFHP) have initiated health programmes for adolescents. The Operations Research Project (ORP) of the ICDDR,B: Centre for Health and Population Research, the operations research partner of NIPHP, is in the process of designing interventions to develop and test strategies to address the RH needs of adolescents in Bangladesh.

Adolescent Reproductive Health Status in Bangladesh

Analysis of available data on variables, such as education, nutrition, fertility, marriage, use of health services, and knowledge and use of contraceptives, confirms that adolescents in Bangladesh are exposed to the same RH risks as adolescents in other developing countries. A falling trend in age of menarche, combined with

rising age at marriage, has resulted in an increased number of sexually mature, but unmarried adolescent girls with consequent potential for unplanned pregnancies [3 - 5]. The Bangladesh Demographic and Health Survey 1996-1997 (BDHS) indicated that about 36 percent of the teenage women have begun childbearing and that there are significant differences in rural and urban fertility [5]. Although two-thirds of adolescent males and females, in the 11-15-year age group, are enrolled in schools in urban and rural areas alike, the percentage of females enrolled in schools in the 16-20-year age group is about one in four [5]. Compared with other age groups, adolescents in Bangladesh also tend to have fewer contacts with the healthcare system, regardless of their need for specific services [6 - 9].

Interventions to Address the RH Needs of Adolescents

Recent review of literature and organizations working with adolescents and youth in Bangladesh have concluded that adolescents do not have access to correct information about reproduction, fertility and fertility regulation and their RH needs are largely ignored by current programme activities [3,10]. Nevertheless, over the past fifteen years, the government and non-government organizations have undertaken several interventions in an effort to address the RH needs of married and unmarried adolescents. The following section documents the salient features of some of them.

Activities of the Ministry of Health and Family Welfare

Until recently, the government departments had long established programmes that provide information and care for RH services, such as pregnancy, delivery and postpartum care, family planning, and reproductive tract infections (RTIs), through a vast infrastructure that includes contacts at clinics and visits to the homes of married women of reproductive age. Given the emphasis on married women, only married adolescents tended to have access to these services. Indeed, there is considerable evidence that contacts between the service providers and the teenage married women and newly-weds are substantially lower than for married women in other age groups. [11,12].

The current HPSP for the 1998 - 2003 period intends to give a higher profile to adolescent health activities. Among others, the following issues affecting adolescent RH are included in the list of priorities of the HPSP [12]:

- Communication activities to promote delayed first birth or prevent unwanted pregnancies and increased use of contraceptives by newly-married couples
- Prevention of unsafe abortion due to unwanted pregnancy
- Special antenatal and safe-delivery care to pregnant women aged less than 24 years
- Creation of awareness among adolescents about RTIs/STDs
- Involvement of private agencies and NGOs in promoting adolescent health

- Fostering inter-sectoral coordination among statutory agencies whose spheres of activities impinge on adolescent health, such as education, social welfare, etc.

At the school level, a School Health Pilot Project (SHPP) was designed in the mid-1990s to incorporate health education within the regular school curriculum, to improve facilities for water, sanitation, lighting and ventilation, and to enhance the provision of first-aid services and referral of critical cases at schools. The provision of health-education is based on two key strategies: developing a school health-education curriculum for students aged 10-15 years (class five to ten) and providing training to teachers and relevant health personnel. This project has begun to train teachers and produce behaviour change communication (BCC) materials for schools on topics, such as personal hygiene, safe water and sanitation, nutrition, population education, and common ailments. The programme also plans to incorporate subjects, such as STDs and HIV/AIDS. This pilot programme has had a limited coverage, but is scheduled to be continued and expanded under the HPSP.

Perhaps, a more concrete expression of the importance assigned to adolescent health in the national programme is the recent establishment of a programme under the Directorate of Family Planning to address the adolescent health-related issues. This programme has started the development and wide circulation of BCC materials to create awareness about the reproductive process, including safe sex, STDs/HIV-AIDS, contraceptions and disadvantages of early marriage and pregnancy [12,13].

Activities of non-government organizations

At present, NGOs working with adolescents can be classified under two main categories. Organizations, such as UFHP, Voluntary Health Services Society (VHSS), Bangladesh Population and Health Consortium (BPHC), ACTIONAID Bangladesh, Population Council, Save the Children-USA, and PLAN International, act as source of funding and technical assistance to organizations with adolescent programme activities. At the same time, more than 100 organizations are implementing adolescent programmes throughout the country [10,14]. In the following sections, an overview of the main activities of these NGO programmes is given.

Adolescent Family Life Education activities

The Adolescent Family Life Education (AFLE) is undoubtedly the main adolescent-targeted activity of most NGO programmes [3]. Important accomplishments of AFLE include: development of AFLE curriculum, staff training courses and production of a limited number of communication materials on the adolescent issues. The current AFLE programme is typically based on topics, such as social laws, rights and values, hygiene, general health, food and nutrition, sanitation, RH education, population education, and family planning.

The first AFLE programme was initiated in Bangladesh in 1989 as part of the Maternal Child Health and Family Planning (MCH-FP) programme of some NGOs [15]. However, organizations, such as BRAC and FDSR incorporated AFLE into their

regular community-level programmes for non-formal primary education and family-development programmes. Although most organizations have AFLE programmes at the community level, NGOs, such as BRAC, Concerned Women for Family Development (CWFD), Nari Maitree, and Bangladesh Women Health Coalition (BWHC), also hold sessions at schools [16-19].

In January 1999, the UFHP started the first phase of a pilot adolescent health programme with an educational component in schools conducted by UFHP staff which includes sessions on personal hygiene, food and nutrition, environment and sanitation, physiological changes, and promotion of delayed marriages. At the community level, the programme component is facilitated by UFHP facilitators and peers educators. The community sessions include the same elements of the school component, plus discussions on sexual relationships, legal rights, population growth and family planning, child birth and immunization [20].

Newly-wed programmes

Since the majority of births to adolescents in Bangladesh happen after marriage, the newly-wed adolescents are, thus, an important target group. Interventions that bring RH services and information to married adolescents also appear to be less controversial than interventions targeted to unmarried young people [21]. NGOs, supported by Pathfinder International, have incorporated activities with newly-wed couples into their existing family planning programmes to delay first birth and promote the use of other maternal and child health services. Evaluation of these activities has found that the contraceptive use among newly-wed couples increased from 19 percent in 1993 to 42 percent in 1997; 78 percent of births to newly-weds, reached by the programme, were delivered by the trained traditional birth attendants (TBAs) and/or health professionals compared with 41 percent of births to all 15-19-year olds [22,23].

Adolescent clinics

NGOs, such as Nari Maitree, CWFD, and Organization for Mothers and Infants (OMI) have established separate health clinics for adolescents [19,24,25]. These clinics are opened to non-members and to NGO adolescent members. Although qualified medical practitioners are available to provide primary healthcare services from these clinics, the managers of these programmes have expressed concern about their low use [19,25]. To improve the coverage of these clinics, satellite clinics for adolescents have been arranged by the Nari Maitree and the CWFD [19,24]. The UFHP adolescent health programme also includes a clinic component with special clinic hours for adolescents.

Vocational training and income-generation activities

A number of NGOs offer supplementary programmes for adolescents, such as income-generating activities (ash making, tailoring, and kitchen gardening), credit programmes, and skill-development training. As part of its adolescents programme, the CWFD encourages continued education through peer support groups that

involve both married and unmarried young women and provide opportunities for learning vocational skills, such as radio/TV repair, sewing and computer skills [24-26].

Social advocacy on adolescent health issues

Since a number of adolescent-related problems are rooted in socio-cultural norms of the society, it is imperative to involve parents and other members of the society in these programmes. NGO managers, who are running adolescent programmes, admit that their programmes encountered some opposition at the initial phase [3]. However, with the help of orientation and discussion meetings with parents and community leaders, community support for adolescents programmes were ensured. Some NGOs also provide legal support to adolescents [25,27].

The CWFD, in collaboration with the Population Council, has been promoting RH and rights of adolescents in Bangladesh [28]. This intervention seeks to stimulate the promotion of appropriate government policies and programmes for adolescents by improving awareness of key individuals and groups, especially elected representatives, on issues relating to adolescent RH and rights, and by creating a mechanism for addressing the adolescent issues at appropriate forums.

The VHSS organized a seminar in 1991 where different organizations interested in adolescent issues shared experiences on adolescent-education activities and discussed ways of addressing the need for more development work in this area, within Bangladesh [29]. The participants of the seminar remarked that there were already several "adolescent forums" in Bangladesh, and that the activities of these forums were implemented without any coordination.

Activities involving male adolescents

Most NGO interventions with adolescents have been primarily focused toward girls. To date, only a few NGOs are targeting males in their adolescent programmes. The Family Planning Association of Bangladesh (FPAB) has traditionally included both male and female adolescents in its long-established youth programme which began in the early eighties [30]. Through this programme, training is provided to youth organizers who, in turn, organize groups and AFLE-type sessions in their communities. BRAC has also given equal importance to boys and girls through its adolescent programmes. The FDSR, through its adolescent boys programme, provides family-life education and other recreational facilities, such as indoor games and reading books.

Working adolescents

In urban areas, many adolescents work at garment factories. Apparently, very few NGOs have yet to develop health programmes specifically targeted to these young workers. Adolescents aged 10-15 years, who had worked in the garment industry but were released from jobs due to child labour legislation are, however, being targeted by a few NGOs, such as BWHC and OMI in their AFLE programmes [25,31].

Strengths and weaknesses

Despite the relatively large number of organizations working with adolescents, their activities, for the most part, have been poorly documented and evaluated. In fact, only a few organizations are able to provide any documentation on the design, implementation and actual coverage, not to mention the success or effects of their interventions with adolescents [15,32]. Limited evidence suggest that girls trained in AFLE were more knowledgeable about the MCH-FP and gender issues compared with girls who had not received AFLE training. Moreover, they expressed strong views against dowry and polygamy [15,32].

A measure of the effectiveness of these programmes can be made by the level of community mobilization these programmes have generated. For some NGOs, such as BRAC, CWFD, and Pathfinder International, community mobilization is the key element for the success of their programme [33,34]. These NGOs operate on the principle that involvement and mobilization of the community change social and cultural norms that impact the RH of adolescents. Nevertheless, it could be argued that in integrated programmes, such as those conducted by the CWFD or BRAC, their "adolescent-targeted" activities are so tightly incorporated into their wider strategies of community mobilization, and depend to such a large extent on their own group affiliation, that it becomes difficult to evaluate the specific contribution of those activities as to their claims about the success of these programmes.

The Problem Statement

A review of past experiences of the non-government organizations involved in RH has uncovered a great variety of interventions, but limited documented examples of good practice exist. Allied to this mounting in-country expertise, there is a positive environment within the national and international health and population sector for the development of new interventions to address the RH needs of adolescents in Bangladesh, particularly for unmarried adolescents. These interventions will have to take into consideration specific circumstances surrounding adolescents and information needs of themselves and others in their families and communities.

However, review of the existing information suggests that, in Bangladesh, very little is known about the health needs of adolescents and RH needs in particular from their own perspectives, as well as from adult perspectives. Information on the circumstances surrounding adolescents is also limited. Thus, before designing interventions, it is imperative to assess the RH need of adolescents in Bangladesh.

Objectives of the Study

The overall objective of the study was to assess the RH needs of adolescents of Bangladesh. Specific objectives of the study were as follows:

- explore RH-related knowledge, attitudes and behaviour of adolescents

- understand adolescent decision-making regarding sexual and health-seeking behaviour
- identify communication channels for RH information and barriers to the use of services
- explore circumstances surrounding adolescents

Methodology

Study Design

The study was community-based, cross-sectional and descriptive in nature. As the literature suggests, little is known about the RH needs of adolescents in the context of Bangladesh, a descriptive design was, therefore, deemed appropriate.

Study Area

The study was conducted in sites where the ORP maintains a longitudinal surveillance system in rural and urban areas. The study population was selected using this surveillance system.¹ For the purpose of the present study, data were collected from Noapara union of Abhoyanagar thana and Bagherpara thana of Jessore district, and Jorarganj union of Mirsarai thana of Chittagong district. For the urban sites, data were collected from Lalbagh and Rayerbazar areas of Dhaka city.

Sampling and Sample Size

For the survey part of the study, age and sex-stratified sampling technique was used for selecting the study sample. For each rural site, a total of 1,000 adolescents aged 10-19 years were selected by the computer and half of them were male and half were female. From each age group, a total of 100 individuals were selected. For the urban site, the same sampling technique was used, but a total of 1,000 individuals were selected from slum and another 1,000 individuals from non-slum areas. For the survey, the sample size was calculated, using the following formula:

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

Here $Z\alpha = 1.96$ with $\alpha = 95\%$ and $d = 0.05$, 'p' was estimated to be at the 50 percent level (as the prevalence of adolescents' knowledge, attitudes and practice about RH is unknown). The formula gives a sample size of 384. Taken into account the design effect of 1.97, the approximate sample size is 800 (400 male

¹ For details of the sampling and field operation of the surveillance system, see ICDDR,B Scientific Report No. 81 (for urban surveillance) and the paper written by Mazumder et al., 1990 (for rural surveillance)

adolescents and 400 female adolescents). Taken into account 20 percent non-response rate, the sample size is 1,000 in each stratum.

For the qualitative part of the study, a purposive-sampling technique was used. Adolescents were selected using different socio-demographic variables, such as age (10-12/13-15/16-19 years), sex (boys/girls), marital status (unmarried/married), schooling status (school-going/drop-out), working status (working/not-working) and economic status (poor/rich). Adult key-informants were also selected purposively.

Research Instruments

Two different types of data-collection instruments were used in the study: a questionnaire (boys and girls versions) and guidelines to apply participatory learning and action (PLA) techniques. The questionnaire, containing structured pre-coded and a few open-ended questions, was used for the survey. The girls' and boys' questionnaires were almost similar with exception of menstrual practice questions for the girl's questionnaire and questions on wet dreams for the boy's questionnaire. Guidelines were used for collecting in-depth information to supplement and complement the information collected through the structured questionnaire. The instruments were first designed in English and then translated into Bangla.

Operational Definitions

Adolescents: Individuals aged 10-19 years were considered as adolescents for the study.

Reproductive Health (RH) : RH was referred to the health and well-being of women and men in terms of sexuality, pregnancy, birth, and related conditions. Thus, the operational definition of RH included:

- Pregnancy and child-birth
- Fertility
- STDs/RTIs, including HIV/AIDS
- Sexuality

Data Collection

Data on RH, especially sexuality, are difficult to collect from adolescents by using only a survey technique, the study, therefore, also adopted the PLA techniques that are more flexible to collect information on in-depth sensitive issues. To have an adult perspective relating to RH needs of adolescents, a number of adult key informants were included in the study. These include parents and grandparents of adolescents, community leaders, teachers and healthcare providers, such as doctors, paramedics, NGO providers, and drug-sellers.

Prior to data collection, several preparatory tasks were undertaken. These included pre-testing and finalization of the questionnaire, and recruitment and training of research assistants. The field research team included males and females aged 25 to 35 years.

Survey data were collected during December 1998 - April 1999. In total, 3,961 adolescents were covered in the survey. Survey information collected included a socio-demographic profile; knowledge, attitudes and behaviour on RH; use of health services; exposure to media; network and leisure activities; and drug, alcohol and tobacco use. For the survey, both male and female research assistants were used. One-to-one interview technique was used in the survey. The male research assistants interviewed adolescent boys, and the female research assistants interviewed adolescent girls. They interviewed them at convenient time and location. Girls were mostly interviewed at home, but boys were interviewed both at home and in other locations, such as open fields, play grounds, workplaces, etc.

Qualitative data, using the PLA techniques, were collected during March - April 1999. The PLA techniques used included group activities, such as social mapping, body mapping, Venn diagrams and free listing, and in-depth interviews with adolescents. Information about adolescents' relationships with each other, service providers, family members, and other community members, and communication channels about RH information and barriers to service use, and decision-making regarding sexual and health-seeking behaviours of adolescents were collected through the PLA techniques. In total, 47 group activities and 57 in-depth interviews with adolescents, and 40 key-informant interviews were conducted.

Six female and six male research assistants were involved with the qualitative part of the study. A team of 2-3 research assistants conducted the group sessions; one facilitator, one note-taker and one observer. For in-depth interviews and key-informant interviews, one-to-one approach was used. Group sessions were mainly held at home or backyards for girls, but at play grounds or open fields for boys.

Problems Encountered During Data Collection

A number of problems were encountered during the data-collection period. These concern both survey and qualitative part of the study. The problems were mostly related to convincing parents of the rationale for this type of study, finding respondents, gathering them in one place, especially during group sessions, and finding suitable places in the locality for discussion of the matters by maintaining privacy (especially in urban slums).

Initially, some parents were hesitant to give permission for their adolescents to be interviewed. In some cases, mothers, aunts, or sister-in-laws wanted to be present during the interview. In such cases, convincing reasoning about anonymity, confidentiality and the overall importance of addressing the RH needs of adolescents helped resolve the problems.

In some places, it was difficult to get a private place to isolate adolescents to meet them. It was more marked in urban slums that contain very closely situated one-room structures. In such circumstances, it was almost impossible to discuss matters privately. Parents and other community members were, sometimes, very curious and wanted to be present during the interview. Depending on the field situation, in general, research assistant/researchers applied their judgement and tried their best to maintain confidentiality.

Locating adolescents in the field was a difficult task. Adolescents who were studying and enrolled in school/college were not available during the school/college hours. The research assistants visiting them during the normal office hours, thus, could not find them at home. They, therefore, made flexible time tables that suited adolescents. Contacting working adolescents was even more difficult. Adolescents who work outside the home usually work long hours, and are not available during the day and weekdays. In such cases, extra efforts were made to cover them by making visits during weekends and in the evening.

While holding group activities with adolescents, it was difficult to gather five to six female adolescents at one place. This was most difficult, especially with females, in urban areas. Although houses are very closely situated, nevertheless, many households do not have close relationship with their neighbours, and adolescents did not feel comfortable coming to their next-door neighbour's house to attend a group session. In such situations, the team members contacted adolescents through some female health workers, who previously worked as volunteers and supervisors with the former Urban Volunteer Project (UVP) of the ICDDR,B. They helped in locating and gathering adolescents in suitable places, so that group activities could be conducted. In rural areas, the government health workers helped in locating and gathering groups within the community. Gathering adolescent boys in a group was relatively easy, both in urban and rural areas, and group sessions were held in homes, open places, play grounds, or even under a tree.

For group activities, every attempt was made to select adolescents sharing similar background characteristics, such as age, sex, marital status, schooling, and working status to form a group. However, it was not always possible to form homogenous groups. Although the group activities were conducted with boys and girls separately, and also with 10-12, 13-15 and 16-19-year age groups separately, sometimes both school-going and out-of-school adolescents were included in the same group. Similarly, working and not-working adolescents were included in the same group in some cases.

Finally, the use of an audio-cassette recorder to record in-depth interviews and key-informant interviews was a difficult task. Use of a recorder was especially needed for in-depth interviews and key-informant interviews as only one person conducted these interviews. After a few attempts to use a tape recorder, it was felt that the participants were suspicious about the use of the recorder, and some of

them directly refused to let their conversations be recorded. In such cases, a modified technique was used. First, the research assistants started the interview without using the tape recorder. At the same time, s/he also took notes. After a while (after 5-10 minutes), s/he approached the participant(s) to use the recorder explaining that conducting an interview as well as taking notes at the same time was difficult. In most cases, this strategy worked, and the research assistants were allowed to use the tape-recorder.

Ethical Considerations

Participation in the study was voluntary. A brief overview of the study objectives was read aloud in Bangla to all participants and their parents, in advance. It was explained that they were free to leave or refuse to take part in the study. The interviews were conducted at suitable times and in locations that were convenient to the participants. Although it was difficult to maintain privacy in all situations due to the space problem, every attempt was made to conduct the interview/group discussions privately. Special permission was obtained from the participant(s) to use a tape recorder during PLA sessions.

Data Management and Analysis

Different approaches were used for analyzing the data collected. Data sets for boys and girls were processed separately. Survey data were analyzed, using SPSS for Windows. For the test of significance, Chi-square test was used. Qualitative data, collected through the PLA techniques, were first transcribed and then translated into English. Data were then analyzed using content analysis.

Limitations of the Study

Perhaps the major limitation of the study is that it is not statistically representative of all adolescents in Bangladesh. The very nature of the study design conducted at the ORP intervention sites precluded this. Whenever possible, the authors have tried to compare the study findings with those of other smaller studies conducted in the country to validate the results.

This study applied innovative qualitative methodologies to investigate sexual behaviour in a socioeconomic context where sexual relationship and the discussion of issues relating to sexuality are discouraged and frowned upon. Collection of data to enlighten policy formulation was not sufficient, particularly in the areas of homosexuality, date rape and abortion.

Results

Background Characteristics

Survey respondents

Table 1 shows the background characteristics of the adolescents included in the survey. Regarding the age of adolescents, there was almost an equal representation of adolescents from different age groups, such as 10-12, 13-15 and 16-19 years.

Table 1. Background characteristics of survey respondents

Characteristics	Percentage					
	Boys			Girls		
	Rural (n=1200)	Urban (n=764)		Rural (n=1219)	Urban (n=778)	
		Slum (n=377)	Non-slum (n=387)		Slum (n=369)	Non-slum (n=409)
Age (in years)						
10-12	31	34	32	29	32	29
13-15	30	28	32	30	30	30
16-19	39	38	36	41	38	41
Education						
No education†	9	22	10	8	17	11
Primary	52	50	38	48	55	38
Secondary	34	25	41	40	25	41
Secondary+	5	3	11	4	3	10
School enrollment						
Yes	63	40	65	69	46	58
No	28	43**	27**	24	39***	31***
Never	9	17	8	7	15	11
Marital status						
Unmarried	99	98	100	83	78	85
Married	1	2	-	16	20	15
Others*	-	-	-	1	2	-
Number of children						
0	84	100	100	44	44	43
1	8	-	-	52	48	55
2 and above	8	-	-	4	8	2
Work for money	29	59	36	10	27	17

† No education means never attended school, plus attended but did not complete class I.

* Include widowed, divorced, dissented, and separated; ** $p = < 0.00000$; *** $p = < 0.05$.

Although most study adolescents had some form of education, irrespective of their rural or urban residency, about one-fifth of the slum adolescents did not have any education. In addition, about one-third of the adolescents dropped out of school. The school drop-out rate was highest among the adolescent boys (43%) living in urban slums. When looking at the school drop-out rate for boys and girls and comparing it to their residence, the urban boys (35%) had a higher ($p=0.003$) chance of dropping-out from schools than the rural boys (29%). This is also true of girls (rural 24%, urban 35%, and $p=0.000000$).

A considerable proportion of the study adolescents worked for money. In the case of adolescent boys from urban slums, 59 percent worked for money. Thirty-six percent of the adolescent boys living in non-slum areas were also working for money. These adolescents were mostly from lower middle-class families and did not live in slums. They worked in small factories as workers, in shops as manual workers, daily labourers, or street vendors.

Similarly, about 27 percent of the adolescent girls living in urban slums worked for money. They mostly worked as housemaids and garment workers. A few of them worked out of their own homes making paper packets, wrapping chocolates, and doing embroidery. Most of these adolescents worked long hours and spent most of their time at the workplace.

Wages earned varied between boys and girls and according to place of residence. In general, boys earned more than girls. The urban slum boys earned a higher amount of money than both non-slum boys and rural boys. Both rural and urban slum boys earned Taka 1,000 (median) per month, whereas the urban non-slum boys earned Taka 1,200 (median) a month. In the case of the urban non-slum and rural girls, they earned Taka 200 (median), whereas the urban slum girls earned more than double, i.e. Taka 500 (median) per month.

Although these adolescents worked, a number of them did not have control over the money they earned. They gave money to their parents or other relatives, and thus, they could not spend money according to their own needs. This was more marked in the case of adolescent girls. For example, 38 percent of the rural girls, 37 percent of the urban slum girls, and 62 percent of the urban non-slum girls did not give their earnings to others, rather they spent the earned money by themselves. Whereas, 60 percent of the rural boys, 59 percent of the urban slum boys, and 48 percent of the urban non-slum boys spent their own money.

With respect to marital status, only a few adolescent boys were found to be married during the study. On the other hand, a large proportion of both urban and rural adolescent girls were married, and it was the highest in the case of urban slum girls (20%). Among married girls, the mean age at marriage was 15.6 years for the rural girls, 14.8 years for the slum girls, and 15.7 for the non-slum girls. Thirty-six percent of them were married for over two years.

Although a very small proportion of adolescent boys in the study were married, among them, the mean age at marriage was 16.7 for the rural boys, 18.1 for the slum boys and 16.5 years for the non-slum boys. The mean age difference between spouses was nine years for both rural and urban slum girls and seven years for the urban non-slum girls. It is important to note that this large proportion of girls were not only married, but more than half of them were already mothers with one or more children.

Participants of group activities and in-depth interviews

Similar to the survey respondents, many adolescents, who took part in group activities and in-depth interviews, were enrolled in schools. Of the adolescents who were not enrolled in schools, a few had never attended school, and some discontinued their education after attending class VII to X.

A small number of adolescents were married (only one boy was married) and all of them had dropped out from schools after marriage. Adolescents who took part in the qualitative study came from families having six to nine members. The occupation of the household head included farmer, factory and industry workers, service holders, rickshaw-pullers and professionals, such as school teachers. A small number of adolescents were working for money, and they worked in small shops and factories (jute mills, garment, leather factories).

Adult key informants

As mentioned in the previous chapter, a variety of key informants took part in the study. Among the parents, most were mothers aged 30-40 years and having two to six children. Most of these mothers had been married for more than 12 years. The education status of these mothers varied from no education to primary-level education. All women were housewives, except one who was involved in sewing activities for which she was earning money. With regard to fathers, they had a better education compared to mothers (one class VIII, one Higher Secondary, and one completed a Masters degree). They were involved with either business or paid service, and reported to have a family of two to four children. Grandparents, who took part in the study, were aged 50 - 60 years. An aunt aged 35 years also took part in the study.

Among the service providers, both male and female providers from the government and NGO sectors were included in the study. They held different positions in the delivery of health services, such as field workers, mid-level service providers and supervisors, and top-level managers. Most of them had more than 15 years experience in their jobs. The traditional healers, who took part in the study, had even longer experience of providing health services. The drug-sellers, who were aged 25 - 35 years, did not have any formal training on dispensing drugs.

Both male and female school teachers were interviewed in the study. All of them were working at secondary schools. These teachers were aged between 30 to

45 years and were mainly science teachers. Community leaders who were interviewed for the study were aged 40 - 50 years and were elected members of the local government.

Reproductive Health Knowledge, Attitudes, and Practices of Adolescents

Physical changes during puberty

Although there were variations among the proportion of adolescents who could identify physical signs according to their age, sex, and place of residence, overall, more than half of the study adolescents could spontaneously mention one or more physical signs of puberty. These signs include: weight gain, become taller, breast development; menstruation, hair growth in different parts of the body, etc. for girls and weight gain, become taller, appearance of beard and mustache, appearance of hair on the chest and other parts of body, thickening of voice, wet dream, and development of genitalia for boys.

Girls have a higher knowledge about key physical changes during puberty than boys. This is true in both urban and rural areas. In urban areas, among the girls who could spontaneously mention about one or more physical changes during puberty, 33 percent could mention one or two key signs, and the rest (67%) could mention about three or more signs that occur in case of girls. Seventy percent of the girls could also mention about pubertal changes that happen to boys, and half of them could mention about three or more signs.

In contrast, among the boys who could spontaneously mention about one or more physical changes during puberty, 53 percent could mention one or two key signs, and rest (47%) could identify three or more signs that happen to boys during puberty. Interestingly, only 40 percent of the urban boys could speak about changes that happen to girls, and of them, 60 percent could identify only one or two signs. Adolescents living in rural areas, in general, were less knowledgeable about physical changes during puberty. This is more so in the case of boys than girls.

Knowledge, attitudes and practices about menstruation

Menarche

The study findings suggest that adolescent girls usually do not know about menstruation before they experience it. Of the surveyed adolescents who had not experienced menstruation, only 34 percent (rural 33%, urban slum 34%, and urban non-slum 35%) knew about it. This finding is supported by the qualitative data. Of the girls who knew about it, they learned it from their friends who already had experienced it, or from elder sisters or cousins. Some of them also knew about it by observing the behaviour of older people during their menstrual period. As most of these girls did not have knowledge about menstruation beforehand, they experienced menarche with severe mental trauma. Some of them screamed out

when noticing blood, and some thought that they had an injury or cut in their private parts.

One participant said,

"One day, I was bathing, menstruation started. At first, I thought that I had a cut or there may be a sore, but I could not find anything, blood was dribbling down my leg. I told my aunt."

After menarche, girls usually communicate with their elder sisters, *bhabhi* (brother's wife), aunt, grandmothers, or cousins. These family members inform them about the management of menstruation as well as norms and rituals to be followed. However, in most cases, information is incomplete, and no explanation is given regarding norms or rituals to be followed. Usually, the mother is the person who was least consulted about the problem.

Beliefs and practices during menstruation

A large number of beliefs and taboos relating to menstruation exist in society. These are mainly related to movements of the individual, restrictions of food and food habits, avoidance of certain day-to-day rituals, etc. Several of these beliefs are widely known; however, they are becoming less commonly practised.

The qualitative data suggest that movement restrictions have been imposed both at menarche and during menstruation. For example, while menstruating, a girl is restricted from going outside her home, especially in the evening. They are prohibited to go near a *khal/bil* (canal/ditch) as the *kharap batash* (evil air) may affect them. These restrictions are more marked among Hindus. Whenever a Hindu girl experiences menarche, she is kept locked in a room; food is served inside that room, and she is only allowed to go out for bathing and toilet. She is not allowed to go near a cow, kitchen, and tubewell. After three days, having a bath with '*ganga jal*' (holy water), she resumes her normal life. A girl shared her experiences during menarche,

"When I had my first menstruation, my mother asked me not to take any salt during menstruation. She said that salt will clot the menstrual blood. I was not allowed to take any curry during my first menstruation. I took only rice, milk, and banana."

Fish is the common food restriction during menstruation; mainly *hilsa* fish and prawns are forbidden. Certain other food items, such as bananas, vegetables, eggs, sour fruits, salt, and food cooked with turmeric, are also restricted. There is a notion that if fish is eaten during menstruation, menstrual blood would have an offensive odor (fishy smell). Sour fruit would cause excessive bleeding, food cooked with turmeric would form ugly yellowish stains in the cloths used to manage menstrual flow, and salt would clot menstrual blood.

In addition, some adolescents mentioned certain other restrictions. Some girls said that they were not allowed to sleep on the bed, instead they were instructed to sleep on the floor (mud) with a simple mat. They were restricted from climbing up a tree or going to a paddy field and sitting on *macha* (a place to sit for informal discussion). They were also not allowed to put oil in their hair during menstruation or to use *mehedii* (a type of leaf which causes reddening of the palm of the hand) as it would cause excessive bleeding. In one study site, one girl mentioned that, in their family, a special sitting arrangement had been made with grass for menstruating girls.

During the qualitative study, some girls said that they did not like these restrictions imposed upon them. Although they could not openly protest against these, they do not practise these. Some had tasted fish and sour fruits during menstruation and did not experience any untoward reaction. A Hindu girl said,

"I knew about menstruation. I knew our culture as well. But I did not like to be locked in a room. So, when I started menstruating, I managed myself without informing others. I was passing my normal life but at last I could not escape the eyes of others. I was caught red-handed and scolded heavily..."

Information was obtained through both the survey and the qualitative study on practices during menstruation. Among the survey respondents, 82 percent of rural girls and 89 percent of urban girls had experienced their first menstruation. The reported mean age of menarche was 14 and 13 years for rural and urban girls respectively. Most girls used old cloths (*nekra*) during menstruation (Table 2). Although this was more marked in the case of rural girls, about half of the urban girls (both slum and non-slum) also follow the same practice. Use of soap or savlon was more marked in the case of rural girls. However, more urban girls from both slum and non-slum areas reported the use of panties during menstruation.

Table 2. Measures taken during menstruation-by adolescent girls in different study sites

Measures taken	Percentage		
	Rural (n = 734)	Urban (n = 565)	
		Slum (n = 253)	Non-slum (n = 312)
Used old clothes	79	52	50
Used sanitary/cotton pads	5	4	15
Used soap/savlon/dettol	38	15	21
Wear panty	7	44	50
Did not go out from home	34	6	8
Used hot water	2	3	8

The qualitative study supported these findings, and gave more in-depth information on adolescent practices during menstruation. Girls who used old cloths during menstruation dried them in dark hidden places to avoid others to be seen. After washing the rags, they usually dried them inside the room behind an 'alna' (a rack that is used for hanging cloths) or in a bathroom or in other secret places where there was no sunlight. The adolescent girls stated that there was a common belief that if these rags were seen by others, especially by males, they (girls) would be affected by 'kaler batha' (abdominal pain) which would subsequently lead to infertility. These rags, which were often old and washed and dried by unhygienic means, were used several times by them.

Physical problems during menstruation

Half of the adolescent girls surveyed reported suffering from physical problems during menstruation which include lower abdominal pain (90%), pain in the waist (20%), and loss of appetite (11%). In about half of the cases, the adolescents disclosed their problems to their mothers, friends, elder sisters, or *bhabhi* (brother's wife). Those who did not discuss their problems with any one thought that they were normal phenomenon for them and/or felt too shy to discuss these with others.

The qualitative study supported these findings. Lower abdominal pain during menstruation was termed as 'kaldristi', 'asar', or 'badhak'. In most cases, the adolescents did not seek help from modern medicines for this purpose. They were strongly discouraged to seek any medical help. One girl said,

"During menstruation, I suffer from abdominal pain. It is so severe that I could not carry out my normal activities. In our culture it is called 'badhak betha', and unmarried girls should not seek any treatment for this purpose. My father gave me 'jalpara' (holy water), and my uncle made a medicine from guava's leaf for me..."

Some girls reported that their family members took them to traditional and religious healers, such as *pir*, *fakir*, or *huzurs*, for treatment or their mothers sent someone to buy medicines from a pharmacy.

Knowledge, attitudes and practices regarding wet dream

The survey data show that about 80 percent of the study adolescent boys had heard of night dreams (*sopnodosh*). Seventy-eight percent of the rural and 77 percent of the urban adolescent boys reported that they had experienced wet dreams. Most adolescents mentioned that they did not know about wet dreams before experiencing one. Of the adolescents who had already experienced wet dreams, about 42 percent of the rural and 29 percent of the urban boys knew about them, prior to the experience.

Perceptions of the adolescents about wet dreams were also explored during the qualitative study. Both rural and urban adolescent boys termed wet dream as 'sopnodosh'. One boy said,

"In the dream, if a boy imagines himself having sexual intercourse with a girl semen comes out then it is sopnodosh..."

Some participants described different circumstances when 'sopnodosh' can occur:

"Wet dream occurs due to bad thinking (thinking about girls, sex)...."

"It happens if someone is affected by evil spirits"

"If someone dreams about girls or sees any bad films, wet dreams occurs..."

The adolescents reported that they usually learned about wet dreams from their friends. When someone experiences it, he may discuss it with his friends. In most cases, they did not discuss it with elders, such as parents, teachers, or elder brothers. Adolescents often confuse having wet dreams with sickness that may require treatment. For example, one boy said,

"If any boy suffers from disease, his mal (semen) comes out automatically"

Another boy said,

"I do not know why it (wet dream) happens. To prevent it, one should have a tabiz (amulet) or put on a ring made of austodhatu (special metallic ring)"

The adolescents held a common belief that wet dreams make one's health weak. They believe that semen is produced from the blood and when semen is lost it means blood is also lost from the body. Some adolescents who experienced wet dreams reported feeling weak on the following morning.

Usually, adolescents do not seek treatment for wet dreams. However, when these occur more frequently, they reported going to homeopath and traditional healers to treat wet dreams. In a few instances, they also went to religious healers, such as *huzurs*, to get amulets (*tabiz*). Although they did not mention consulting medical doctors, interviews with a few doctors revealed that adolescents do visit them for this problem.

Views about early marriage and pregnancy

Views about early marriage

When the adolescents were asked about the appropriate age for marriage, both survey data and qualitative findings suggest that their responses were in line with the legal age for marriage (18 years for girls and 21 years for boys) in Bangladesh. In

most cases, adolescents responded that the appropriate age for marriage for girls and boys is 18 and 23 years respectively (Table 3).

Table 3. Appropriate age (median age in years) for marriage for girls and boys as stated by study adolescents

Characteristics	Boys			Girls		
	Rural	Urban		Rural	Urban	
		Slum	Non-slum		Slum	Non-slum
Appropriate age for marriage for girls	18.6	18.6	18.8	18.4	18.6	19.0
Appropriate age for marriage for boys	23.6	22.6	22.9	23.7	23.2	23.5

The study adolescents held a common perception that an early marriage was 'bad.' They mentioned several reasons why an early marriage was bad. These were mainly related to health. Many adolescents indicated that an early marriage would lead to an early pregnancy, and an early pregnancy would cause deterioration of the health of the mother. This would also cause a complicated delivery and ultimately the mother could die. Other reasons cited against an early marriage included 'lack of adjustment between couples,' 'enjoyment ceases very soon,' 'can not manage family,' 'not able to take care of husband or kids.' The following are several comments made by the study participants:

"If a girl gets married early her organs will not be in a developed stage. If a girl gets married at an age of 15-16 years, it will be harmful to her physics..."

"It is not good to get married at an early age. Difficulty arises during delivery, even a girl may die during her delivery..."

"If girls are married at younger age, then they do not understand the importance of their husbands. When the girls are grown up, they understand the family, and then they can guide their families."

Elders, such as parents and grandparents of adolescents, teachers, and other community people, also expressed similar views regarding the early marriage. One parent commented,

"If a tree is shar (matured), then the offspring will be strong. The mother will be weak if she gets pregnant at an early age. And a weak mother will give birth to a weak baby....."

However, despite adolescents' knowledge of the ideal age for marriage at a later age and wide recognition that an early marriage was bad for health of women,

marriage during adolescence was reported. There were many reasons for mismatch between knowledge and practice as mentioned by both adolescents and adults. These included 'difficulty in finding eligible bridegrooms at a later age,' 'preventing pre-marital affairs,' and 'maintaining social prestige of both girls and their families.'

It became clear, after talking to the community people that when girls grow up, their parents became very concerned about selecting a good bridegroom for their daughters. As a suitable bridegroom may not be available when the girl becomes older, if they got a proposal from an appropriate bridegroom or from his families, they do not consider the bride's age. For instance, a mother of a 14-year old girl said,

"My daughter studies at school. She reads Arabic as well. If I get a suitable bridegroom, I am ready to give her marriage..."

Similarly, a mother of a 17-year old girl living in an urban area said,

"I think that a girl should not get married before 20. But my 17-year old daughter's marriage has been fixed up. I do not want to marry off my daughter. But what can I do? As my 'would be son-in-law' is very good and well established, my other family members, especially my husband's brothers, almost forced me to give consent to this marriage. They said that a suitable bridegroom like him would not be available in future."

The parents who took part in the study were also worried about pre-marital affairs. They recognized the fact that, during adolescence, both boys and girls develop attraction for each other. According to them, society considers love affair as a 'bad thing,' and girls having a history of love affairs are not regarded as 'good' girls. Thus, in the future it would be difficult to marry off such girls with a good family. Moreover, during this time, if a girl sneaks away with a boy and gets married, her parents would have a bad reputation in their community. One married girl said,

"I know that marriage before 18 is an illegal act. However, in our area, most girls are married before 15/16 years. If a girl is not married by this age, others say bad about her and then her chances of getting married decline with time."

It is interesting to note that, although the adolescents recognized the adverse effects of an early marriage and wanted to marry at an older age, at the same time, most of them said that if their parents would arrange marriage for them, they would not object. The adolescents responded that their parents would make the decisions for them, and they did not have courage to disobey their parents' decision.

Negative instances were also reported. For example, one girl mentioned that she did not take any food for four days when her parents arranged her

marriage. She wanted to continue her education. She expressed her opinion to her parents, and at last she succeeded, and the marriage was called off.

Views about early pregnancy

Similar to early marriage, adolescents also hold a view that early pregnancy is bad for one's health. In the survey, most adolescents (more than 90%) mentioned that an early pregnancy (10 to 19) was 'bad.' The main reasons for considering early pregnancy to be 'bad' included, 'harmful for mothers health,' 'will give birth to sick/weak baby,' 'baby and mother could die', etc.

However, the qualitative study revealed that there was a clear community expectation that once married the girls should be pregnant. This was because there is a notion that these girls would have to prove their fertility, and to have a child would make their marital bond strong. Although the adolescents hold a view that an early pregnancy is bad, in reality, the study findings show that most married adolescent girls were pregnant or mother of at least one child. Other than the community expectation to have a baby soon after marriage, in some cases, the adolescents had lack of knowledge about fertility and family planning methods. For instance, one adolescent girl who got married at the age of 14 years said,

"When I got married I was unaware about any family planning method. If I knew about it I would not have had a baby for the first five years. Soon after marriage, I had my first baby. I started menstruating 40 days after the birth of my first baby. One of my neighbours advised me to take pill. When I first started taking pill I conceal it from my husband; later on, he came to know about it but he did not get annoyed. Now, I am taking 'Shukhi'..."

Adolescents' knowledge regarding measures needed to avoid health problems during pregnancy and delivery

Regarding adolescents' knowledge about different measures that needed to be taken to avoid complications during pregnancy and delivery, the survey findings indicate that both adolescent girls and boys were aware of visiting doctors, going to health centres, eating nutritious foods, being immunized and getting adequate rest during pregnancy (Table 4).

Table 4. Adolescents' knowledge of measures needed to be taken during pregnancy

Characteristics	Percentage					
	Boys			Girls		
	Rural (n = 1199)	Urban (n = 763)		Rural (n = 1218)	Urban (n = 777)	
		Slum (n = 376)	Non-slum (n = 387)		Slum (n = 369)	Non-slum (n = 408)
Go to see a doctor	69	48	49	55	61	70
Go to a health centre	41	59	33	17	34	38
Go to a traditional healer	4	-	-	-	-	-
Take more food	11	1	8	15	20	28
Take nutritious food	32	1	12	32	41	39
Take vaccine	17	1	5	32	29	28
Take rest	9	-	6	12	20	23
Not to do heavy work	9	-	7	12	9	16

With respect to knowledge about visiting a doctor or a health centre, there was no difference between boys or girls living in urban and rural areas. However, there were variations in knowledge regarding other measures, such as taking good and/or nutritious food, taking rest, etc. among the urban and rural adolescents, as well as knowledge among the boys and girls. In general, the girls had a better knowledge regarding all these issues compared to the adolescent boys. For example, about 30 percent of both rural and urban girls knew about vaccination during pregnancy, but very few adolescent boys knew about it.

Knowledge of reproduction and fertility

Adolescents, in general, have a limited knowledge of reproduction and fertility. From the bodymapping exercise in the qualitative study, it was revealed that the adolescents did not have a clear idea about the process of reproduction. A few adolescents commented that when a husband and a wife 'meet together'/'sleep together' (having sex), a baby comes into the mother's womb. However, most adolescents were not sure about the exact process of reproduction. One adolescent girl said,

"I do not know how pregnancy occurs. I only know that for being pregnant, husband and wife have to stay together, and to become pregnant marriage is a pre-requisite..."

Some of them had a vague idea about the position of the baby in mother's womb. They said,

"Females have a place inside the body where the baby lives; it is inside the abdomen and above the umbilicus. The food pipe has a connection with umbilicus and whatever a mother eats, it goes to her umbilicus first and then baby feeds through the nar (blood vessel)."

Regarding the birth passage, the adolescents expressed different views. Some adolescents, especially adolescent girls, could distinguish between routes of menstruation, urination, and defecation. Yet, when questioning about the birth canal, many of them said that baby is delivered through the urinary tract. Very few participants could identify that the route for menstruation and birth is the same.

When asked about the fertile period in the survey, most adolescents mentioned that they did not know about it (Table 5). Of the adolescents who did know about it, most held incorrect knowledge; they identified the menstrual period, the period short after menstruation or just prior to menstruation as the fertile period. This is true for male and female adolescents as well as adolescents living in rural and urban areas.

Table 5. Adolescents' (13-19 years) knowledge of the fertile period and conception*

Characteristics	Percentage					
	Boys			Girls		
	Rural (n=495)	Urban (n=259)		Rural (n=789)	Urban (n=523)	
		Slum (n=129)	Non-slum (n=130)		Slum (n=242)	Non-slum (n=281)
Knowledge of the fertile period						
Correct knowledge**	7	3	2	8	3	7
Incorrect knowledge	26	20	13	16	19	17
Don't know	67	77	85	76	78	76
Knowledge about getting pregnant after having sex only once						
Yes	20	38	33	32	36	43
No	23	32	24	20	8	6
Don't know	57	30	43	48	55	51

* This question was asked to adolescents who had heard about menstruation

** Correct knowledge includes: 'middle of menstrual cycle' and 'within 15 days of menstruation'.

In the survey, information was also collected on adolescents' knowledge of the chance of conception after having sex only once. As shown in Table 5, about half of the adolescents aged 13-19 years mentioned that they did not know. Of the adolescents who did know, with exception of urban girls (both slum and non-slum), about half of the respondents said that there was no chance of a woman getting pregnant after having sex only once.

Knowledge, attitudes and practices regarding family planning

Knowledge and attitudes

With exception of the rural adolescents, most (>70%) adolescents knew about family planning methods. Of the adolescents who knew about family planning methods, most knew about pill, and had limited knowledge about other methods.

For instance, about one-third of both rural and urban adolescent girls could mention condom as a family planning method. Similarly, very few adolescent boys knew about female long-term methods, such as injectables or IUD. Knowledge of injectables and IUD was lowest among the urban slum and non-slum boys (Table 6). Knowledge about vasectomy and tubectomy was low for both boys and girls.

Table 6. Knowledge about family planning methods and perceptions about married adolescents' use of family planning methods

Characteristics	Percentage					
	Boys			Girls		
	Rural (n=1200)	Urban (n=764)		Rural (n=1219)	Urban (n=778)	
		Slum (n=377)	Non-slum (n=387)		Slum (n=369)	Non-slum (n=409)
Knowledge about FP						
Heard about family planning use	43	71	75	67	75	76
Knowledge about						
Pill	98	95	79	99	97	99
Condom	65	61	55	34	33	36
Injectables	17	4	5	51	43	37
IUD	1	0	1	11	8	5
Vasectomy	3	0	2	7	5	8
Tubectomy	3	1	3	10	13	17
Perceptions about married adolescents' use of family planning methods						
Good	87	42	40	62	67	78
Bad	6	44	34	23	14	8
Don't know	7	14	26	15	19	14

There was no remarkable difference between urban and rural adolescents' knowledge regarding family planning methods. However, as expected, knowledge about family planning methods increased with the increasing age of the adolescents. It also appears that the adolescent girls were better informed about family planning methods than the adolescent boys.

Regarding the sources of information on family planning methods, both survey and qualitative study find that the adolescents knew about family planning methods from friends, elder sisters, field workers, and from radio and television.

Some adolescents knew about methods, such as pill, by observing others (aunt, sister-in-law) use them. The field workers were also mentioned as a major source of information on family planning methods, especially in the rural areas.

For instance, the adolescents said,

"I saw Mohima apa (a local FWA) distributing the pill to my bhabi (sister-in-law). She also gives injections and introduces capsule inside the arm. Bori, injection, everything is for girls. I do not know whether there is any method for boys..."

"Shasthya kormira (health workers) come to village and give injections. They also supply pills, such as 'Maya' and 'Femicon'. They also talk about Copper T but from where it is supplied I do not know. For the men, there is condom. 'Panther', 'Raja' are the names of condoms."

Of the adolescents who could talk about oral pills or condoms, most could mention them by their brand names. Many also indicated that they had heard of them through advertisements on the television and radio. For example,

"'Femicon', 'Nordett 28' are the names of pills. I heard these names on the TV..."

"I heard about pill from TV drama 'Sabujchata'. I saw advertisement on the TV showing 'Shuki', 'Nordett 28'"

"Girls take pills. 'Nordett 28', 'Maya' are the names of pills. I heard about them from radio."

With regard to perceptions about married adolescents' use of family planning methods, most adolescents, except the urban boys, held a positive view (Table 6). They considered it 'good'. However, a number of adolescents, both married and unmarried, perceived that if adolescents use contraceptives, they would be infertile in the future. This perception mostly related to pill use,

"Usually, a mother of at least one child can have it (pill). Otherwise, it would burn the nar (intestine), and girls would be infertile. Besides, if it is taken for a long time, infertility would also develop."

There are also misconceptions about other methods,

"I heard from my aunt that a condom is like a rubber balloon. Boys and girls can both use it. But if you use it, the woman would have sore in the passage of child birth"

"Condoms are not good to use. By using condoms, the life expectancy of husbands shortens. So, I'll not allow my husband to use condoms."

"I heard that if you use condom you will get a disease in your urinary tract"

Use of family planning methods

In the survey, the married adolescents were asked about use of family planning methods, how they decided to use them, and where they got them. About half of the married adolescent girls were using family planning methods (Table 7). The pill was the most commonly used method among the users. Other methods used include condom, injectables, IUD, and safe period.

Table 7. Use of family planning methods among married adolescent girls*
(not pregnant)

Characteristic	Rural (n = 172) %	Urban (n = 112) %	Urban slum (n = 62) %	Urban non-slum (n = 50) %
Family planning method use	39	49	51	46
Types of method used:				
Pill	50	53	59	44
Condom	18	25	22	30
Injectables	18	9	9	9
IUD	-	4	3	4
Safe period	10	4	3	4
Others	4	5	4	9

*The number of married adolescent boys is very small

Of the female adolescents who were using family planning methods, about 40 percent reported that they jointly decided with their husbands to use family planning methods. Another 40 percent said that they themselves made the decision to use family planning methods.

Regarding the sources of supply in the urban areas, 65 percent of the users got their supply from pharmacies. Other sources included hospitals (14%), health clinics (13%), and health workers (5%). For the rural areas, the field workers (FWAs) (46%) and pharmacies (36%) were primarily mentioned as the sources of family planning methods. Other sources include satellite clinics (10%) and hospitals (6%).

Of the adolescents who were married but not using any family planning methods, 30 percent of the rural girls and 8 percent of the urban girls were not using any method, because they 'wanted to have a child'. Other reasons for not using family planning methods included 'post-partum amenorrhoea,' 'newly-married', or 'not yet met their spouse,' etc.

During in-depth discussions with the unmarried adolescents, it was revealed that the unmarried but sexually active adolescent boys did not feel comfortable

going to the healthcare providers to buy family planning methods. They reported that, in most cases, they feared facing judgmental attitude from the healthcare providers. They were not welcome and not provided with family planning methods as they were unmarried.

This view was supported by a comment made by one key informant (shopkeeper-cum-drug-seller). He said,

"I do not want to sell condom to unmarried people. To me, if condoms are used by anyone other than husbands and wives, then it is illegal..."

Use of maternal health services

Pregnancy care

Regarding the use of maternal health services, the majority of the adolescent girls surveyed, who had been pregnant during the previous year, reported having received some form of care during their pregnancy (Table 8). The survey did not however, obtain adequate information regarding the type of services received. The qualitative study revealed that some girls had received only tetanus toxoid (TT) immunization during these visits.

Table 8. Use of pregnancy care and delivery services by married adolescent girls*

Characteristics	Rural (n=57) %	Urban (n= 43) %	Urban slum (n=22) %	Urban non-slum (n=21) %
Use of pregnancy care	82	86	82	90
Number of visits made				
<3	64	43	44	42
≥3	36	57	56	58
Place of delivery				
Home	91	75	79	70
Hospital	8	21	17	25
Others	1	4	4	-

* Sample included married adolescent girls who had a pregnancy outcome (still-birth or live-birth) during the last one-year reporting period.

Looking at the number of visits made by the pregnant adolescents, the survey data show that only 38 percent of rural and 50 percent of urban adolescent females made three or more visits, recommended as optimal by the GoB guidelines. These mothers visited the government health facilities in the rural areas and NGO clinics and specialized hospitals in the urban areas for pregnancy care.

Delivery care

Regarding the place of delivery, as expected, the majority of the study adolescents delivered babies at home (91% in rural areas and 75% in urban areas). However, of the proportion of the adolescents who delivered at a hospital, it was highest among the urban non-slum adolescent girls. Irrespective of the place of delivery, 32 percent of rural deliveries and 37 percent of urban deliveries were conducted by the trained personnel, such as doctors/nurses or trained TTBAAs.

Knowledge and perceptions regarding diseases of reproductive organs

Both survey and qualitative study findings suggest that, irrespective of urban or rural residence, the adolescents had a limited knowledge of the 'diseases of the reproductive organs' that include RTIs and STDs. As shown in Table 9, only 29 percent of the rural boys and 21 percent of the rural girls heard of such diseases. This knowledge was relatively higher among the urban adolescents.

Table 9. Adolescents' knowledge regarding diseases of reproductive organs

Characteristics	Percentage					
	Boys			Girls		
	Rural (n=1200)	Urban (n=764) Slum (n=377) Non-slum (n=387)		Rural (n=1219)	Urban (n=778) Slum (n=369) Non-slum (n=409)	
Knowledge about diseases of reproductive organs						
Heard about it	29	52	44	21	28	38
Types of diseases						
Syphilis	16	10	8	4	3	5
Gonorrhoea	20	23	16	22	6	9
AIDS	44	43	64	27	56	74
Routes of transmission						
Sexual contact	98	96	97	75	93	95
Others	2	4	3	25	7	5
Knowledge about AIDS						
Heard about it	43	73	88	37	73	79

When questioned about types of such diseases, less than 20 percent of the adolescents could identify gonorrhoea, syphilis, and AIDS as the 'diseases of the reproductive organs.' Most adolescents could say that these diseases are transmitted by sexual contact. When asked about sources of information about such diseases,

most adolescents mentioned friends, booklets, magazines, TV, and radio. However, when the adolescents were asked about symptoms of such diseases, most of them mentioned that they did not know. Of the adolescents who could tell about some symptoms of such diseases, very few mentioned three or more symptoms.² For example, only 10 percent of the rural, 12 percent of the non-slum, and none of the adolescent girls living in the urban slums could mention three or more symptoms of reproductive organ diseases. In the case of boys, 19 percent of the rural boys, 26 percent of the slum boys, and 15 percent of non-slum boys could mention three or more symptoms. When comparing knowledge between boys and girls, the proportion of adolescents who knew more symptoms was higher among boys than girls.

Similar findings were also reported from the qualitative study. Although many adolescents could not differentiate between different RTIs and STDs, such as gonorrhoea or syphilis, nevertheless, they grouped them as '*kharap oshukh*' (bad disease). They also mentioned how these diseases are transmitted. For instance, the study participants said,

"Those who go to 'bad' places (brothels), develop 'bad' diseases. These types of diseases destroy the birth canal of women. Males also get infected..."

"Those who visit 'magipara' (brothel), get 'bad' diseases.. "

"My sister-in-law's husband used to visit Fultala (name of a brothel), and he developed 'bad' diseases. I heard that he had bloody urine. I also heard that some men may develop sores and itching in their private organs..."

Similar to the survey findings, many adolescents could not mention the measures to be taken to prevent such diseases. Some stated that these types of disease could be prevented by not going to 'bad places.'

Knowledge and perceptions about AIDS

Given the importance of HIV/AIDS infections in adolescents, specially in developing countries, separate questions were asked to assess adolescent's knowledge and perceptions relating to AIDS. The survey data show that most adolescent boys and girls in the urban areas had heard of AIDS (Table 9), although there were differences between knowledge of slum and non-slum residents. The rural adolescents had, in general, a significant lower level of knowledge about AIDS compared to that of the urban adolescents.

When inquired about the route of transmission of AIDS, about half of the adolescents, irrespective of their residence, mentioned their ignorance about the

² Symptoms include: urinary discharge, vaginal discharge, pain in genitalia, sore in genitalia, swelling of genitalia, and burning urine.

topic. Of the adolescents who could mention the routes of transmission of such a disease mentioned sexual contact, going to 'bad places' (brothels), through blood transfusion, through sharing needle, through utensils and clothes used by someone with the disease, etc.

About 90 percent of both rural and urban adolescents mentioned TV and radio as the prime sources of information regarding AIDS. Boys (both rural and urban) also mentioned friends as a source for AIDS information (15%).

The qualitative study explored more in-depth views regarding the adolescents' knowledge and perceptions about AIDS. Although the quantitative data suggest that many adolescents knew the term 'AIDS', they did not know the details of the diseases and/or about transmission and prevention of the disease. One participant said,

"I heard about AIDS on TV, but I do not know what it is. We do not go to bad places, so how can we get AIDS?"

A few adolescents had some idea of how AIDS was transmitted. One boy said,

"By having sex with bad girls, AIDS occurs. But if husband and wife have sex, then AIDS will not occur. AIDS spread by visiting brothels, by having sex with AIDS patients. If one uses a syringe of an AIDS patient, the disease can occur. It can occur from an AIDS-infected mother to her child. This is not an infectious disease. It can not happen by just touching."

At the same time, there are many misconceptions. The same person commented,

"I do not know how to prevent AIDS. AIDS is a disease of blood, and it has originated from foreigners..."

Some participants also had incomplete ideas about AIDS. They commented,

"AIDS is also spread by saliva. It can happen through body contact..."

"It can happen if you are not clean..", "... by drinking water from the same glass used by an AIDS patient", or even "an AIDS patient should be kept separated in an isolated room."

Similarly, the key informants, who may serve as sources for AIDS information to adolescents, also had misconceptions about the causation of AIDS. For instance, one aunt who was mentioned as a source of information to local adolescents stated,

"AIDS is caused by having sex with animals, such as dogs and asses. It also happens by having sex with 'bad women' in 'bad places.' These women have sex with different people that is why they get this disease. One can get this disease from others if they have same 'blood group.' As in most cases, husband and wife have different 'blood groups,' except if they are cousins, so there is no chance of transmission of AIDS between them."

Reported Morbidity Patterns and Healthcare Seeking of Adolescents

General health problems

On an average, 34 percent of the urban adolescent girls and 48 percent of urban adolescent boys respectively reported that they had suffered from general health problems within the previous three months of the reporting period (Table 10). Among girls, reported morbidity was higher (47%) in the rural areas than in the urban areas (34%). On the other hand, a higher proportion of the urban boys (48%) reported such problems than the rural boys (41%). The most frequently reported health problems were fever, common cold, headache, abdominal pain, diarrhoeal diseases, and skin diseases.

Healthcare seeking for general health problems

A higher proportion (74%) of the urban boys sought healthcare than in the rural boys (69%). On the other hand, a higher proportion of the rural girls (67%) sought healthcare than the urban girls (61%) for general illnesses.

About half of the rural boys reported seeking treatment from a pharmacist. Twenty-eight percent of the rural boys also sought treatments from the private doctors, and 12 percent of them received treatment from the Thana Health Complex (THC). Similarly, for the urban boys the most commonly sought healthcare providers were the private doctors/clinics (pharmacists (31%)), whereas for the urban girls the most common healthcare providers were the private doctors (44%). Twenty-five percent of the urban girls also received treatments from pharmacists. Again, for the rural girls the most common health-care providers were pharmacists (32%). Twenty-six percent of the rural girls also sought treatments from the private doctors/clinics, and 15 percent of them received treatments from a THC. Eight percent of the rural boys and 11 percent of the rural girls sought treatments from a traditional healer.

Table 10. Adolescent-reported morbidity and health-seeking behaviour

Characteristics	Percentage			
	Boys		Girls	
	Rural (n = 1200)	Urban (n = 764)	Rural (n = 1219)	Urban (n = 778)
General health problem in last three months				
Yes	41	48	47	34
No	59	52	53	66
Healthcare use				
Yes	69	74	67	61
No	31	26	33	39
Type of health facilities used*				
THC	12	-	15	-
Other govt. hospitals	3	13	4	49
NGO clinic	-	3	-	5
Private doctor/clinic	28	49	26	48
Traditional healer	8	4	11	3
Pharmacy	55	32	33	26
Other	7	3	19	6

* Multiple responses were accepted

In response to the question of why they had selected a particular healthcare facility for their own health problems, the respondents commonly stated that the provider was good. The other important criterion for selecting a particular provider was that either the healthcare facility was situated nearby or the quality of services provided by that health facility was perceived as 'good.'

Most respondents (91-96%), who sought any treatments for their health problems, said that they were satisfied with the services received from the providers they visited. The most commonly cited reasons for the respondents' satisfaction were as follows; 'providers' good behaviour,' 'good quality treatment,' and 'a short-waiting time.'

The respondents, who were dissatisfied with the services, also mentioned reasons for dissatisfaction. The rural girls commonly mentioned that they were dissatisfied, because 'adequate information was not provided by the service providers.' The most commonly cited reason for dissatisfaction among the urban girls was a long-waiting time. Some rural boys thought that the providers were not competent enough to deal with their problems, and others said that the providers did not give them adequate information.

The qualitative data also provided evidence that, in general, the adolescents were dissatisfied with the existing healthcare facilities for several reasons. Whenever they went to seek healthcare they felt that not enough information was provided, there were long waiting times, services were too far to reach, and there were limited afternoon hours. They might not be able to find free time to visit the health facilities, because they were either going to schools or were employed.

In addition, many female respondents expressed reservations in seeking RH care from the male doctors. One girl commented,

"I can not tell a male doctor about my vaginal discharge problem, because they ask very detailed questions and I feel shy, we do not have a female doctor here, for that reason I do not go anywhere."

It was commonly perceived that the existing health centres often cater to mothers and children, and the adolescents felt that it was not a place for them to seek healthcare. Another girl expressed,

"If an unmarried girl comes along to the health centre, the local people will spread rumors about her."

Most rural boys (88%) preferred the THC as a facility where they would refer their friends for health problems. The urban boys preferred recommending their friends to general hospitals (53%) and private doctors (42%). Similarly, most rural girls (71%) would send their friends to the THC for health problems and the urban girls preferred private doctors (57%).

Perceived RH problems and RH care seeking

In general, less than 20 percent of the adolescents perceived that they had ever suffered from the diseases of reproductive organs (Table 11). A higher proportion (17%) of the urban slum girls believed that they suffered from such diseases than those of non-slum areas (7%). Similarly, a higher proportion of slum boys (6%) reported experiencing a RH-related illness compared to the non-slum urban areas (3%). However, 19 percent of rural boys and rural girls believed that they had suffered from the diseases of reproductive organs.

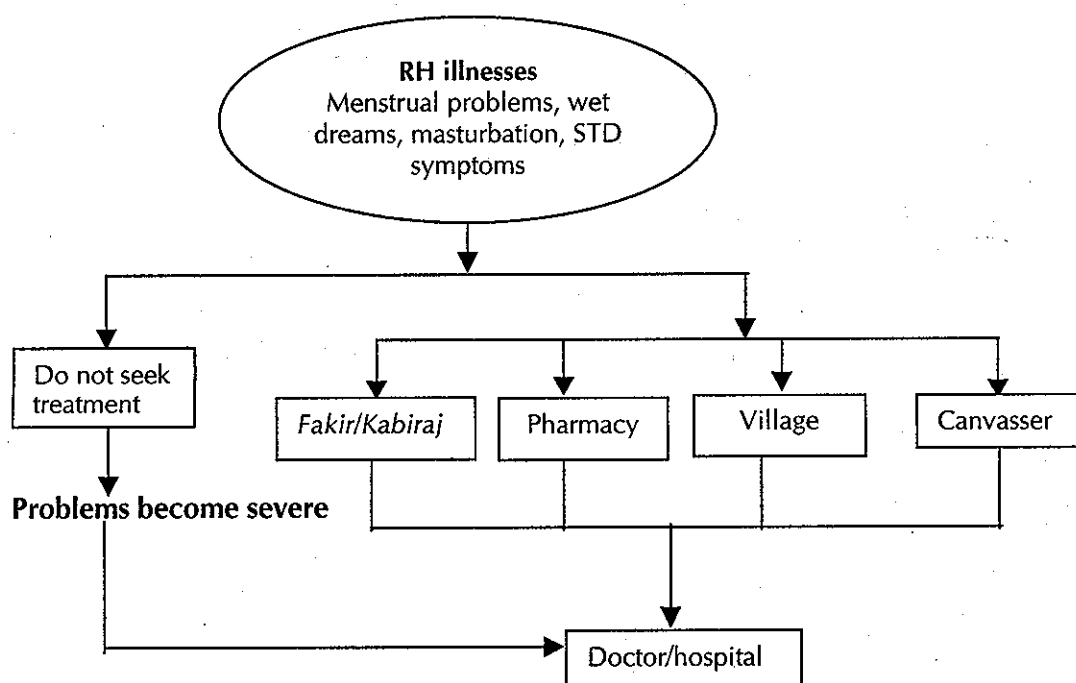
Table 11. Perceived RH problems and healthcare seeking for adolescents

Characteristics	Percentage					
	Boys			Girls		
	Rural (n=351)	Urban (n=368)		Rural (n=259)	Urban (n=258)	
		Slum	Non-slum		Slum	Non-slum
Perceptions about ever suffering from diseases of reproductive organs						
Yes	19	6	3	19	17	7
No	81	94	97	81	83	93
Use of health services for diseases relating to reproductive organs						
Yes	63	50	60	54	47	50
No	37	50	40	46	53	50

Sixty-three percent of the rural boys and 54 percent of the rural girls, who had experienced a problem, consulted the healthcare providers for their perceived RH problems. In the urban area, a higher proportion of boys from the non-slum areas (60%) consulted the healthcare providers compared to boys (50%) living in the slum areas.

Based on the qualitative information, a model demonstrating RH seeking behaviour of adolescent has been developed (Fig. 1). In general, the adolescents did not feel comfortable seeking treatments for RH illnesses. However, both male and females perceived that they had experienced some problems relating to reproductive organs. The girls identified menstrual problems, including '*Kaler Bhatha*' (lower abdominal pain) and *dhatubhanga* (vaginal discharge) as such problems. The boys believed that night emission, masturbation, and urethral discharge were illnesses for which they might seek treatment.

Fig. 1. Reproductive health seeking behaviour of adolescents



Healthcare seeking for girls and boys seemed to be quite different. Generally, the girls did not seek help from anybody for RH problem. However, if they felt that the symptoms were becoming severe, they then would consult their family members (sister-in-law, elder sister, or mother). If the family members, especially a mother, perceived the problem as a serious one, only then she would be taken to a doctor or a hospital. However, they might also be taken to traditional healers, such as *Kabiraj*³ or *Fakir* for treatment.

One girl mentioned,

"If someone takes a 'maduli' (amulet) from Gani Fakir, her 'dhatu' (leucorrhoea) will be cured soon. I told my mother regarding my 'dhatu' problem, she took me to Gani Fakir and I was cured."

"A kabiraj can diagnose a disease only by touching patient's hand."

³ *Kabiraj* is a provider who provides herbal medicines; *Fakir* practices spiritual exercises; and *Huzur* uses verses of Allah. It is commonly believed that traditional healers are very competent in treating some specific diseases, such as menstrual problems, vaginal discharge, and jaundice.

Some of these traditional health providers were interviewed to confirm whether the adolescents came to them for treatment of RH problems. They confirmed that they are used to seeing clients with such problems, and have successfully treated many cases. It was perceived that the adolescents consulted doctors or visited hospitals when treatments provided by the traditional healers failed or symptoms became more severe. Often, the adolescents consulted modern providers simultaneously while receiving the traditional treatment.

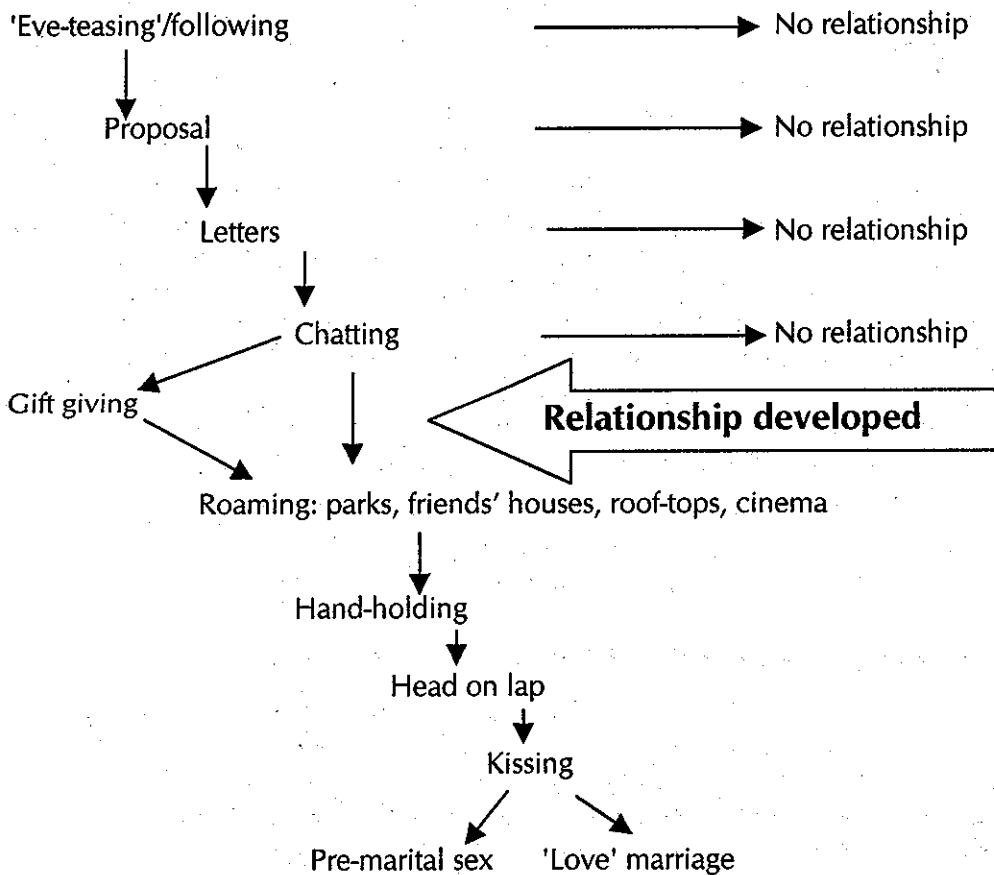
The boys followed a similar pattern for seeking RH care, however, independently they may also seek treatment directly from the healthcare providers before consulting any family member. The boys might directly seek treatment from canvassers, pharmacies, or village doctors. Some boys believed that the sex/RH-related diseases were better identified by the canvassers than the qualified doctors. However, if traditional treatments failed, they would then go to a doctor or a hospital. Some adolescents had no faith in traditional healers and canvassers. One rural boy who did not believe in treatment by canvassers commented,

"One of my friends has problems with the shape of his penis, he went to a canvasser and purchased medicine. He spent around Taka 500, but the treatment failed, so I do not believe in this type of treatment."

Development of a Relationship between a Boy and a Girl

Based on the qualitative data, a model was developed to show how a relationship develops between a boy and a girl (Fig. 2). The model is made based on adolescents' views of the process of development of a relationship between a boy and a girl. Generally, boys roam around and tease girls. Eventually, they may make a more formal proposal to a girl they like. This may be in the form of letter writing. The girl, if she likes the boy and if the opportunity permits, might respond to the letter writing, and this may then escalate to chatting and develop into a relationship. As the relationship progresses, if it does continue, there may be an expectation of gift exchange. And, at this point, they may also begin to develop a physical relationship. They may hold hands. In some cases, holding hands may be the maximum extent of physical contact, but it may proceed further. They may go to a park, field, or a roof-top (especially at night in urban areas) and lay down with their head on their partner's lap. They may also kiss. For many of them, they said that if it is "true love" the most that could happen is kissing.

Fig. 2. Development of adolescent relationship



Their parents may not agree to this love affair, and, as a result, they may sneak away and get married. If the parents do agree, a 'love marriage' could be arranged. Or, the relationship may end. If the situation permits, "the couple" could also have pre-marital sex. This pre-marital sex, if unprotected, may lead to an unwanted pregnancy and/or STDs, including HIV/AIDS.

Sexual Behaviour of Adolescents

Pre-marital affairs and sex

The boys, girls and adults all mentioned that pre-marital affairs are a common phenomenon among adolescents. Many boys and some girls admitted that they themselves were or had been involved in pre-marital affairs. The girls were very concerned about the consequences of pre-marital affairs, including being labelled as a 'bad girl', pregnancy, forced to marry, forced to drop-out of school, etc.

There was a general disapproval of pre-marital sex. Most respondents had some basic idea about sex from movies. Many strongly believed that in the case of "true love" there should not be any sexual relationship. They mentioned that if a relationship is 'true love', the most that could happen would be kissing or holding hands. None of the female participants admitted to having pre-marital sex, but some male participants did. Two male participants mentioned that they had sex with the same girl. Both boys and girls narrated stories about friends, family members, and neighbours who have had or were having pre-marital sex. One rural boy shared a story about pre-marital sex. He described one of the worst scenarios:

"In our village, there was a girl who made a physical relationship with her cousin. She got pregnant and after delivery her family members killed the child. The boy went away. Police arrested the girl. Later on, the girl committed suicide by drinking poison."

After analyzing the qualitative data, a causal flow analysis of the influences and consequences of pre-marital sex was developed (Fig. 3). Regarding the influences, both boys and girls were aware of both physical and mental changes that happen during puberty. They also indicated that there is an increase in the male sex drive as a boy grows up. The male and female respondents as well as the adults felt that the boys initiate pre-marital sex. Another influence is that, in Bangladesh, initiatives have been taken for delaying the age of marriage. By doing this, in effect, a longer period of adolescence is recognized. Thus, the time between childhood and adulthood has been created when the adolescents are increasingly interested in their development of sexuality and wanting to explore sexuality. And, with growing exposure to media, particularly movies and blue films, this curiosity is further developed which may also influence pre-marital sex. If they are in a relationship and they have the appropriate time and place, they might experiment with pre-marital sex. A number of participants also reported incidences of violence and rape. The only factor mentioned that could inhibit a pair from having pre-marital sex is 'true love.' Many adolescents mentioned that if they see their relationship as 'true love', they would not consider having pre-marital sex with their partners.

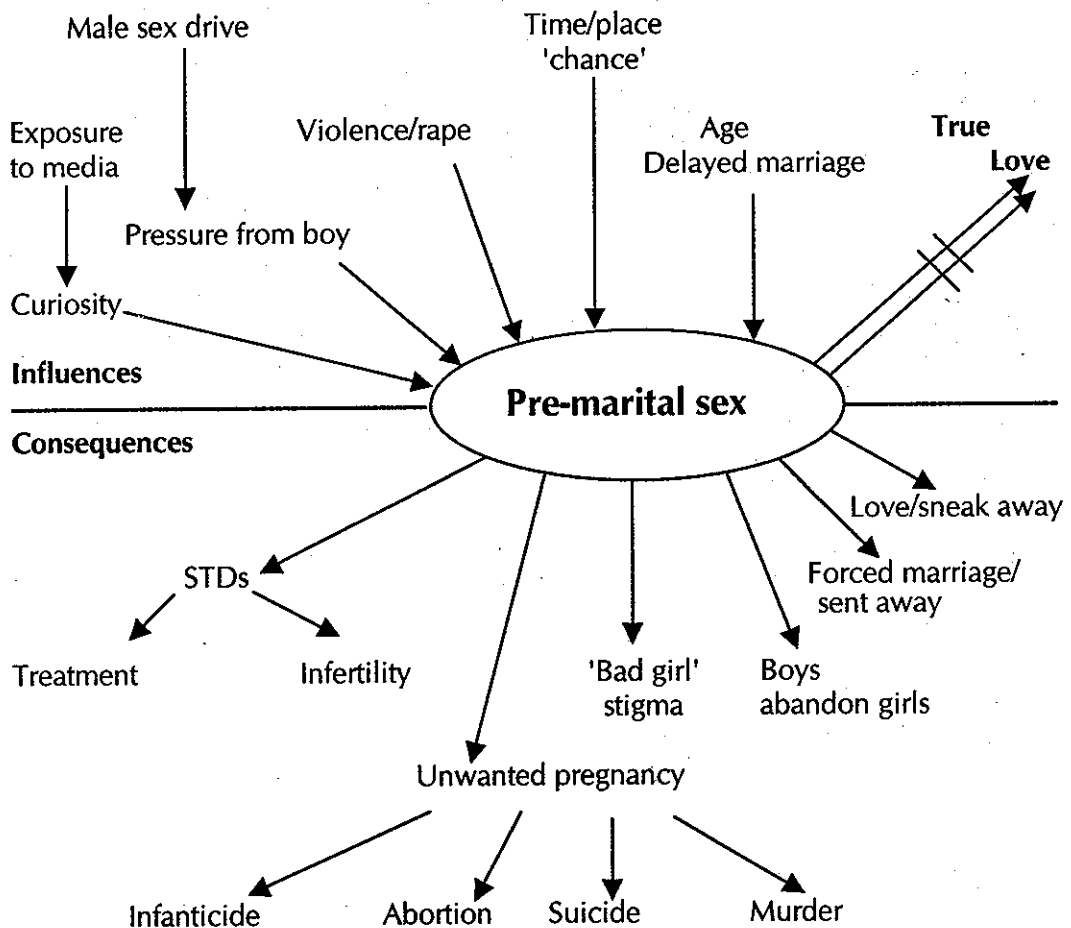
Most participants seemed to be aware of the consequences of pre-marital sex. These include: social stigma, pregnancy, 'bad diseases,' infanticide, suicide, and even murder of girls. Or, if they are in love, the parents may agree to their marriage, or they may sneak away.

In general, there is a great fear of social stigmas. The girls who are involved with or suspected of being involved in even a 'love affair' may be labelled as '*kharap*' or 'bad.' The girls were worried about maintaining their prestige within the community. The parents were also concerned for their social status. A story was told by one participant,

"An unmarried girl in this area became pregnant. Her family members told everyone that she had a tumour, but it became clear that she had been pregnant after she gave birth to a baby boy. Then, the boy was forced to marry the girl, but later on, he left the girl and married another girl."

As this girl described, many girls also spoke about the possibility of the boy leaving them once they have had sex with them. There was also a great fear of pregnancy. Not only would being pregnant lower the girl and her family's social prestige, but she might seek an abortion—which may lead to other health problems, or her baby may be killed (infanticide).

Fig. 3. Influences and consequences of pre-marital sex



Stories were told of forced marriage, rape, suicide, and even murder of girls. 'Kharap oshuk' (bad diseases) were also mentioned as a consequence of pre-marital sex. The disease could be treated or it might lead to infertility. Finally, as a consequence of pre-marital sex, couple could be forced to marry, or girls could sneak away with boys if parents do not give consent to their marriage.

Girls most often suffered the adverse consequences of an unwanted pregnancy resulting from pre-marital affair. Both boys and girls narrated stories, particularly stories that happened in rural areas where a girl had to face 'salish' (village trial). However, in one case, one of the girls blamed the girl:

"Sometimes a physical relationship may develop beyond one's desire. However, I also think that the girls should be blamed for this type of accident. If a girl could understand the attitude of a boy then why would she get involved with him?"

Extra-marital sex

Both boys and girls knew people in their community who were engaged in extra-marital affairs. They knew of women whose husbands had been working abroad and who were said to be having affairs with adolescent boys. These boys were either relatives or their next door neighbours. Although in one of the study areas, a large number of men were abroad due to work, similar comments were made in other study sites. The study participants described men who were having extra-marital affairs as those who were unhappy or dissatisfied in their married life.

Commercial sex

Both boys and girls knew about commercial sex workers (CSWs) and brothels. They termed this business as 'chamrar babsha' (body business) and brothels as 'magi para/kharap para.' Some of them knew about the exact location of some brothels. The commercial sex workers were commonly termed as 'Kharap meye' (bad girls).

Some adolescent boys from urban areas explained that 'bad places' were not always well demarcated or isolated from the society. Some had idea about floating sex workers. One urban male adolescent said,

"In the past, there was a brothel in our locality. The government broke it down but this has also had a bad effect. Now, the bad girls roam around in different parks. Sometimes they rent a house and continue their business. If we hear this, we ask the landlord to evict them."

Many adolescents knew people in their community who had visited commercial sex workers. Some urban slum adolescents knew the names of the girls who were involved with commercial sex business. Some rural adolescents identified one or two girls residing in the village who were marked by the villagers

as 'bad girls.' "Bad girls" or CSWs were also associated with "bad diseases" or STDs. Many participants had similar comments:

"If one goes to the bad places (brothels), they may get bad diseases, and they will fall ill ('chehara bhenge jai')."

Some adolescents knew that people might die of such bad diseases. According to them, mostly young boys and young men go to brothels. Some male adolescents admitted that they themselves had visited brothels. One boy claimed that he went to the brothel out of frustration after breaking up with a girl. Another male participant admitted that he visited brothels several times, but did not use a condom every time when he visited the brothel. He shared his experience and said,

"I had a sexual relationship with a girl. Later, the relation ended. Then I began visiting a brothel. I got a disease from the brothel. After seeking treatments from the doctor, I was cured. Again, I visited the brothel 3-4 times. I used a condom twice while visiting the brothels. In the medicine shop if I go to buy condom then the shopkeeper asks me if I am married or not. I feel shy for this and do not go to the medicine shop anymore."

Homosexuality

In each of the study areas, there was at least one adolescent boy participant who knew about an adult male who was having sex with adolescent boys, and adolescent boys who were having sex with boys of similar age. This activity was termed as 'jeena.' Sometimes the men who were doing so provided incentives to their young partners. Some of the men were said to have forced young boys to have anal sex.

Masturbation

Many boys believed that masturbation was bad for one's health; it causes weakness of the body and would change the shape of the penis. It is commonly believed that this activity might have some long-term adverse effects. However, they admitted that they did masturbate. They said that they used oil or soap as a lubricant. One male respondent thought that semen was made from blood. He explained why the body became weak after masturbation:

"From 20 drops of blood one drop of semen is made, so when semen comes out of the body that means the blood is going out of the body and the body becomes weak. A disease called 'dhatu khoya rog' may develop from this practice (masturbation) in which the semen comes out automatically."

Since a majority of the study males believed that masturbation was a kind of sickness, on some occasions they sought treatment for this.

Adolescent Network and How their Time is Spent

Both survey and qualitative data suggest that there are differences in the ways that adolescents spend their time, depending on their schooling and working status. In general, adolescent boys spend most of their free time with friends, while girls spend most of their time with family members, such as mothers and sisters.

Both boys and girls reported having a number of friends, but boys reported having a higher number of friends compared to girls. Although girls spend a shorter period of time with their friends, both boys and girls meet their friends everyday. The subjects relating to RH discussed with friends differed between boys and girls. Boys usually talk about girl friends, marriage, sex, pubertal changes, such as wet dream and acne problem, whereas girls talk about marriage and menstrual problems.

The survey data found that a number of adolescents are involved with club activities. About 20 percent of both rural and urban boys belong to clubs. In urban slums, they are involved with credit and sports clubs, while in urban non-slums, they are involved with sports, youth, and credit clubs and Boy Scout activities. Rural boys are involved with credit, youth, and sports clubs.

Compared to boys, a lower proportion of girls are involved with club activities (11% of rural girls and 7% of urban girls). The clubs they are involved in include credit clubs for urban slum girls; sports, debate, credit clubs and the Girls Guide association for urban non-slum girls; and credit and BRAC Samity for rural girls.

Differential analysis of adolescent's involvement with club activities relating to their age and education status suggests that probability of involving adolescents with such activities increases with their increasing age and increasing education status ($p = < .05$).

Exposure to Media

Both qualitative and quantitative findings confirmed that the adolescents have access to media as a prime source of information. Newspapers seem to be the least-exposed media. Reading newspaper appears to be a common daily practice only among the urban non-slum boys. Three-quarters of the girls in slums and rural areas said that they never read newspapers (Table 12).

In contrast, the proportion of adolescents who watch television daily is substantially higher in rural and urban areas alike. Adolescents seem to have special affinity with television. In the urban areas, over two-thirds of boys and girls interviewed said that they watch television everyday. Only rural girls seem to have a relatively lower access to television among the adolescent groups studied. The most commonly-mentioned television programmes enjoyed by the adolescents were drama serial and Bangla movies. Radio represents an important source of information for rural adolescents. Over half of the rural boys and girls listen to radio daily.

Table 12. Exposure to media

Characteristics	Percentage					
	Boys			Girls		
	Rural (n = 1093)	Urban (n = 666)		Rural (n = 1130)	Urban (n = 778)	
		Slum	Non-slum		Slum	Non-slum
Read newspaper						
Yes	43	41	66	24	24	49
Everyday	29	41	56	13	12	28
1 day/week	55	47	37	49	56	47
1 day/month	13	9	5	23	22	16
< 1 day/month	3	3	2	15	10	9
No	57	59	34	76	76	51
Watch television						
Yes	89	93	98	71	93	100
Everyday	42	65	75	37	70	88
1 day/week	53	34	23	55	25	12
1 day/month	4	0	1	5	4	0
< 1 day/month	1	1	1	3	1	0
No	11	7	2	29	7	0
Listen to radio						
Yes	77	57	48	58	56	53
Everyday	61	49	47	56	50	43
1 day/week	35	42	34	32	33	33
1 day/month	4	4	6	8	14	18
< 1 day/month	0	6	13	4	3	6
No	23	43	52	42	44	47

Adolescents' Concerns and RH Needs

Both survey and qualitative study explored adolescents' concerns and RH needs both from their own perspective and from adult perspectives.

Adolescents' concerns

In general, adolescents are concerned about education, jobs, health problems, and attention by elders. Adolescents who are in schools as well as out of schools both are concerned about continued education. Girls are specially worried, as they perceive that their parents might arrange marriage for them, and then their education will not continue. Some married adolescent girls also expressed great eagerness to continue their studies. They perceive that education would help them in developing self-esteem and would give them a higher status in their in-laws'

household. Adolescents are also worried about monetary support for continuing their studies.

Some adolescents who are out of school expressed that they are in dire need of a job. These adolescents are concerned about earning money and taking care of their families. In one extreme case, an adolescent girl aged 18 years, living in a rural area and working in a jute mill, commented,

"I do not think about marriage or love-affairs at the moment. I do not have time for that. My father is very old, and he cannot earn money. I have to take care of our family. I work in a jute mill on a daily basis. The mill is three miles away from my place, and I go there on foot. When I do not have work I can not manage food for my family. So, my only thinking is how to manage food for them, nothing else..."

A number of adolescents are concerned about health problems which include: menstrual problems and vaginal discharge for girls; wet dream, masturbation, and size and shape of penis for boys.

Some adolescents expressed worry about the lack of attention given to adolescents by both families and government. As elders and community people are not paying proper attention to them, according to them, they are getting involved in many self-destructive activities, such as drug and alcohol addiction. A comment made by an urban adolescent boy aged 19 years,

"Unemployment is a major factor for youths to be considered. We have left our study, now we have nothing to do. So, we are getting involved in many bad activities, such as taking drugs and alcohol, roaming around, involving with girls, or going to brothels. There will be no improvement of youth society until the government engages them in different productive activities."

Community concerns regarding adolescents

Qualitative data suggest that community members/parents are worried about adolescents. They are mainly concerned about marriage for their girls, pre-marital affairs, smoking, drug and alcohol addition, and continued education.

It was found almost universal among the community people that they are worried about the marriage of their girls. Parents are always searching for a suitable bride-groom if they have an adolescent girl. They also feel socially insecure about their girls due to an increasing incidence of violence against women, kidnapping, and rape.

The community people are also concerned about love affairs which are generally considered 'bad' by the society, and many adults perceive that these affairs will lead to pre-marital sex. Parents of adolescent girls are vitally concerned about interaction of their daughters with males and pre-marital affairs, because if a

girl is known to be involved in a pre-marital affair, she is regarded as a 'bad girl' in the society and it is not easy to arrange a marriage for her.

The community people also perceive pre-marital affairs as becoming more prevalent. A number of them consider it an effect of satellite TV:

"Now-a-days boys and girls of 12/13 years old have an inclination toward band music, but in the past they were fascinated by sports. The satellite TV is influencing them a lot. Naked films are shown through this TV, but at the same time, some good programmes are also shown. We always pick up the bad things. Boys and girls are picking up things that do not match with our culture. They develop inclination toward opposite sex and may lead to pre-marital sex..."

RH needs of adolescents

Both survey and qualitative study identified a variety of RH needs of adolescents from their own perspectives and from adult perspectives. The adolescents and adults also suggested different ways to address those needs. RH needs, as reported by the adolescents and the adults can be broadly divided into two categories: information needs and health service needs.

Information needs

The adolescents expressed that, in general, they are in need of information on seven different topics: physical changes during puberty (especially menstruation and wet dream), reproduction, marriage, pregnancy, family planning methods, STDs/RTIs, and AIDS. However, there are variations in information needs according to age and sex of adolescents (Table 13).

For example, adolescent girls who have not yet experienced menstruation (usually age 10-12 years) are in need of information on menstruation. It would help them prepare themselves to cope with menarche physically and mentally. Similarly, adolescent boys who are in the process of experiencing physical changes (usually age 13-15 years), such as wet dreams, are in need of information that wet dreams are normal developmental phenomena, and there is nothing to worry about. The study findings suggest that the adolescent boys aged 10-12 years are usually too young to have experienced transitional changes, and they would not yet identify RH needs which could relate to them.

Adolescents aged 13-19 years (girls) and 16-19 years (boys) need some additional information. They want to know about reproduction, marriage, pregnancy, FP methods, RTIs/STDs, and AIDS. They wanted to have this information before marriage. Many adolescents stated that if they were informed about marriage, pregnancy and FP methods beforehand, they would be able to plan their child-bearing ahead of time. The adolescents (both boys and girls) expressed the needs for detailed information about FP methods, such as how to use, side-effects, etc., and AIDS (transmission, ways of prevention).

Although the adolescents were comparatively straightforward in expressing their RH needs, variations in views expressed by the adults were observed. For example, some parents are in favour of giving FP information before marriage, and some strongly opposed it. The later group argued that giving FP messages before marriage would make adolescents promiscuous. The former group commented that providing RH information to adolescents should be carefully handled, so that the community does not react negatively.

Table 13. Adolescents' perceptions on RH needs and suggestions for addressing these needs

Target group	RH needs (perceived by adolescents)	How to address (perceived by adolescents)
Adolescent boys		
10-12 years	Nothing particular relating to health	Nothing particular
13-15 years	Information need: wet dreams	Provision of information: <ul style="list-style-type: none"> - by friends, field workers and doctors at a private place (club, community) - by teachers at school
16-19 years	Information need: wet dreams, reproduction, marriage, pregnancy, FP methods, RTIs/STDs including AIDS Health service need for psycho-sexual problem, STD symptoms, etc.	Provision of information: <ul style="list-style-type: none"> - by friends, field workers and doctors at a private place (club, community) - by teachers at school Provision of services: by male providers, non-judgmental and caring attitude of providers, maintenance of privacy and extended afternoon clinic hours
Adolescent girls		
10-12 years	Information need: menstruation	Provision of information: by mothers, teachers/schools and mass media
13-15 years and 16-19 years	Information need: menstruation, reproduction, marriage, pregnancy, FP methods, RTIs/STDs including AIDS Health service need for menstrual problems, vaginal discharge, etc.	Provision of information: <ul style="list-style-type: none"> - by sisters-in-law, elder sisters, cousins, peer (+-) and field workers at the community level - by teachers at school Provision of services: by female providers, caring attitude of providers, maintenance of privacy and extended afternoon clinic hours

Ways to provide information

The adolescents preferred community and school settings for getting RH information. The survey data suggest that adolescent boys prefer to get information from friends (peers), field workers, and doctors in a private place, such as a club, play ground, or an open field. Most of them preferred to have information provided in groups, because they feel that discussion would be easier.

Preference for obtaining RH information through schools varied greatly between adolescents. Most adolescent boys were not in favour of using school as a setting for providing RH information. They mentioned that both adolescents and teachers would not feel comfortable in discussing these issues.

The study findings suggest that the younger girls aged 10-12 years preferred to have RH information from their mothers, whereas the older girls aged 13-19 years preferred to have information at the household level by sisters-in-law, elder sisters, or field workers. They wanted to have information both in groups as well as in one-to-one basis.

Regarding the use of peers as a source of information, responses varied between the girls. Some girls felt that they were close to their friends and to get information from them would be comfortable and easy. But a number of adolescent girls strongly objected to the peer concept. They argued that if a girl of similar age comes to provide them with information, their parents would not accept them and will consider her a 'bad girl.' It was also felt that a girl of similar age would not have enough information and experience to teach her mates.

Similar to the views of the adolescent boys, the adolescent girls had also varied views on the provision of RH information through schools. The girls in favour of holding sessions at the school level said that it would be difficult to gather adolescents at one community place, rather a number of adolescents could be addressed at the school at one time.

When comparing these views with those of the adults, a number of key informants supported the idea of incorporating RH education at the school level. According to them a separate curriculum for RH should be introduced at the school level. Small booklets, containing explanatory information in simple language, could be given to adolescents attending school. They recommended holding separate RH sessions for boys and girls. Teachers should be from the same sex. One key informant commented that inclusion of RH in the curriculum would not be enough, it should be compulsory and should be included in exams. Peer concept, preferred by some adolescents, was completely rejected by adults. They commented that as adolescents have limited knowledge on the topic to be delivered, they would fail to convey the actual message. They also mentioned that adolescents would not listen to and show appropriate respect to their peers.

Service needs

In general, the younger adolescents, aged 10-12 years, did not mention any particular clinical service needs relating to them. Contrary to this, the older adolescents, aged 13-19 years, expressed the need of some clinical service. These included: treatment for vaginal discharge and menstrual problems for girls; and problems relating to wet dreams and discharge for boys. To meet those needs, they are in favour of arranging separate afternoon clinic hours for themselves. They also have a strong preference for both male and female doctors at the facility. They were of strong opinion that the providers should have a welcoming attitude and should give detailed relevant information during consultation.

Programme Implications of Study Findings

Adolescents constitute an important socio-demographic group for the health and population sector agencies of Bangladesh, both because of their sheer numbers and their significance for the present and the future of the country. Accordingly, the recently-formulated HPSS and the two current major programmes to improve health services in the country (HPSP and NIPHP) have identified the need to design appropriate strategies to address the RH needs of adolescents as one of the important 'under-served' groups in the country. This growing concern with improving services to adolescents has, in turn, begun to increase the number and variety of studies and interventions concerning adolescents.

The present study was conducted by the ORP in the process of developing more effective interventions to improve RH services for adolescents. Findings of a review of strategies and current programmes to meet the health needs of adolescents were earlier reported elsewhere [3]. The review suggested to collect information on the levels of knowledge among adolescents on RH issues. Other areas of inquiry identified in the review concerned the community norms affecting decision-making by adolescents and their sexual behaviour as well as their use and perception of the existing health services. The following sections consider the main study findings and their implications in relation to current and future adolescent programmes.

Meeting Adolescents' Needs: Improving Knowledge on RH Issues

In general, the study findings show that, in Bangladesh, adolescents have a limited knowledge about RH issues and have limited access to accurate information or services. The majority of the adolescents included in the study had no idea about changes associated with puberty (e.g. menstruation or wet dreams) until they experienced them. The study also found that, although being aware of media campaigns on contraceptive methods, the study participants had inadequate knowledge about reproduction, fertility, and family planning. Knowledge about causation, symptoms, transmission and prevention of RTIs/STDs and AIDS was also

inadequate. Attempts to increase AIDS awareness through the mass media seemed to have resulted in vague messages as they are not clear and are not perceived as relevant by the adolescents. As a result, misconceptions about the causation, route of transmission, and prevention of this critically important problem, were clearly present among the adolescents included in the study.

In sum, it is imperative to launch effective strategies to make accurate and relevant information available in formats that are accessible to the adolescent population. How can these knowledge gaps be best addressed? For instance, is school a feasible area of intervention to increase adolescent knowledge on the family-planning issues?

The impressive increase in school enrollment during the past 20 years in Bangladesh would seem to support the choice of a strategy of school-based interventions as a logical step to improve knowledge about reproduction, fertility, and contraception. Evaluations of the impact of educational programmes targeting adolescents in formal and informal school settings have shown that these interventions have been successful in improving knowledge about the RH issues in the context of relatively small geographical areas with intensive NGO inputs [32].

In terms of incorporating a more explicit school-education strategy into the national programme, two issues need to be considered. First is the question of the feasibility of dealing with the RH issues as part of the school curriculum. To date, only limited information on family planning has been added as part of the population education section in the science module for Higher Secondary School students. The information provided in the curriculum on these topics tends to be very general and does not adequately incorporate relevant RH issues regarding sexuality or the threat of HIV/AIDS for instance. There is also evidence that, in practice, at the classroom level, teachers may not be adequately skilled or motivated to deal with these issues, particularly because their audience is made up of unmarried adolescents.

Second, from the perspective of coverage, although two-thirds of the urban and rural adolescents, in the 11-15-year age group, are enrolled in schools, the percentage of females enrollment in schools in the 16-20-year age group is around one in four. Our findings and results from the BDHS 1996-1997 suggest that the proportion of adolescents dropping out from schools is still high. In slum areas, adolescent interviewed, most were either school dropouts or had never attended any school. A large number of these out-of-school adolescents, particularly boys, were employed. Female adolescents are also increasing as part of the workforce of the country, especially garment workers in the urban areas. These young women are experiencing a transition to adulthood, which is radically different from their mothers' experience, who had far less opportunities to work outside home and generate their own income [35].

Although some working adolescents were only employed on a part-time basis, the fact remains that they cannot be reached at schools, and are not likely to be available at their homes except late in the evening and on weekends. Thus, although schools still represent a good opportunity to contact younger adolescents, a key policy implication of these findings is that adolescents, particularly though not exclusively those from low socioeconomic segments, are less likely to be reached with messages and services regarding RH, through the use of a school-based programme strategy alone. In other words, in the context of Bangladesh, family-planning education directed to adolescents cannot rely exclusively on the school-based programmes and need to be complemented with interventions in the workplace and in the community.

In addition to interventions in schools and workplaces, the rapid expansion of the media begins to create a new channel for making information available to adolescents. Nationwide, household ownership of television, for instance, has increased from eight percent in 1995 to 14 percent in 1998. This increase is more marked in rural areas. Where ownership of radio increased from 18 to 31 percent, and the percentage of TV owning households increased from three to eight percent over the same period [36]. Adolescents seem to be influenced by this growth. Over half of the rural boys and girls in the ORP study said that they listened to radio every day, and even a larger number said that they watch television. Therefore, the role of media in providing RH information to adolescents needs further exploration.

Information on the use of leisure time and on trusted confidants on RH from male and female adolescents can also be used for the design of communication activities. The study findings revealed that about one-fifth of the boys interviewed, both in urban and rural areas, were regularly involved in some kind of club activity. Boys expressed that they felt more comfortable discussing RH matters with their friends rather than with the older people, such as parents and other relatives or school teachers. On the other hand, very few girls were involved in club activities. They felt at ease discussing RH matters with female relatives, such as their sisters and sisters-in-law, and with close friends. These findings seem to support the need for more strategies that strengthen the ability of peers to act as accurate sources of information.

Promoting a Supportive Environment

The study findings indicate that the adolescents in Bangladesh live in a community context with traditional beliefs and practices that still restrict the discussion and the flow of accurate information in the household, the community, the school, and the media. Access to accurate information on the key RH issues, such as sexuality, family planning, and STDs, is also severely restricted. Booklets and magazines are available in the market, but sometimes they contain inadequate and misleading information. In some instances, the adolescents reported that they discussed these issues with their peers who also had limited knowledge on these topics. Nevertheless, the growth of

global media networks and the availability of radio and particularly satellite and cable television are exposing adolescents to other sources of information.

Thus, adolescents in Bangladesh can be said to be "in between," i.e. bound by traditional values, but increasingly exposed to alternative cultural norms. The consequences of this exposure to media that openly advocate western patterns of consumption and lifestyles and display previously taboo subjects are bound to have an effect on the perceptions and aspirations of young people. Nevertheless, the specific effect of this exposure needs to be investigated further. These findings coincide with those of Caldwell et al., 1998 who highlight the changing context in which adolescents in developing countries are being born and brought up [37].

The task of promoting an environment that is supportive and favourable to addressing the RH needs of adolescents also concerns the organization of the existing RH services and the orientation of staff engaged in the planning, organization, and delivery of services. Consistent with the cultural norms, health services in Bangladesh have tailored the provision of RH care to suit the needs of married people. As with a similar study on this topic, the study found sufficient evidence of sexual activity among the unmarried adolescents, particularly the males [38]. However, the current government policies and cultural norms do not allow the healthcare providers, from government and non-government agencies, to supply commodities to the unmarried people, irrespective of their needs. The unmarried but sexually active adolescent boys who took part in our study confided that they did not feel comfortable seeking advice or commodities, such as condoms, from nearby clinics and pharmacies and perceived providers to be judgmental and unfriendly. It could be argued that this impaired access to counselling and available services limits the effectiveness of current efforts to prevent unwanted pregnancies and the spread of STDs. Nevertheless, the family-planning programmes need to take into account cultural norms and social barriers. Hence, sensitizing parents, community leaders, policy-makers, programme managers, and providers on RH needs of unmarried young people in general, and adolescents in particular, is a new challenge for those who are traditionally involved in family-planning programmes.

The issue of improving the provision of family-planning information and method supply should not be limited only to unmarried adolescents. Newly-wed couples, for instance, require special attention, and are not being adequately served by the existing systems. Our study confirmed that, although both adolescents and adults recognized that an early pregnancy was 'bad' for young mothers' health, there was a clear indication of a widely acknowledged community expectation that girls should be pregnant soon after marriage. In this case, the community expectations on marriage at an early age and pregnancy soon after are critical. According to adolescents involved in this study, it is a common cultural practice for parents to arrange the marriage of their young daughters as soon as possible, at times against their daughters' wishes and sometimes disrupting the girls' educational aspirations.

Community perspectives need to be addressed, because they considerably affect options open to adolescent girls. Service-delivery strategies need to be tailored to increase access to contraception for newly-wed couples. The newly-wed couples should be one of the priority groups targeted with selective visits by staff delivering health and family planning services, even though the national strategy has shifted from home visits to a greater reliance on services from community clinics.

More BCC strategies are needed to create a supportive environment where postponing early marriage and teen-age pregnancy are regarded as socially acceptable. This would necessitate a more comprehensive approach that goes beyond the production of BCC materials to increase community awareness about the dangers of early pregnancy for the health of mothers and children. This approach would have to integrate the issue of the health needs of adolescent females within strategies that target and reach the adolescents themselves and older people in the community with messages and legislative action to encourage and support families in enrolling and keeping girls at schools for instance and that promote a more positive role of women in households with adolescent females and in the community as a whole.

The task ahead is to enable the health providers to better assist the current users of services and to understand the needs of future and potential customers. At the global level, though, to a far lesser extent in Bangladesh, agencies working with adolescents have also experimented with clinic interventions by setting special clinic hours and organizing clinic services in the context of wider recreational and development activities with adolescents. This is an area that needs far more operations research interventions.

References

1. World Health Organization. Towards 2010: the challenge for adolescent health and development. Report of the meeting of the Technical Advisory Group for the WHO Adolescent Health and Development Programme, Geneva, March 25-26, 1998. Geneva: World Health Organization, 1998.
2. Hossain MS. Status of adolescent girls in Bangladesh, 1995. Dhaka: Bangladesh Bureau of Statistics, 1996.
3. Nahar Q, Amin S, Sultan R, Nazrul H, Islam M, Kane TT, Barkat-e-Khuda, Tunon C. Strategies to meet the health needs of adolescents: a review. Dhaka: Operations Research Project, International Centre for Diarrhoeal Disease Research, Bangladesh, 1999. (ICDDR,B special publication, 91).
4. Chowdhury S, Begum RA, Shahabuddin AKM, Seal A, Hassan Q. Age at menarche and nutritional status of adolescent girls in a rural area of Bangladesh. Paper presented at the 7th Annual Scientific Conference (ASCON VII) of the International Centre for Diarrhoeal Disease Research, Bangladesh, 14-15 February 1998.
5. Mitra SN, Al-Sabir A, Cross AR, Kanta J. Bangladesh demographic and health survey 1996-1997. Dhaka: National Institute of Population Research and Training, 1997.
6. Ahmed S. Behavioural aspects of reproductive health among poor adolescents female in Dhaka, Bangladesh. London: London School of Hygiene and Tropical Medicine, 1991. (MSc Thesis).
7. Islam MN, Islam MM, Yusuf HKM. Fertility and reproductive health status of married adolescents in rural Bangladesh. Dhaka: Population Development and Evaluation Unit, Ministry of Planning, Government of Bangladesh, 1995.
8. Kane TT, Islam M, Barkat-e-Khuda, Reza MM, Hossain MB. Determinants of contraceptive use among teenaged and newlywed couples. Paper presented at the Population Association of America 1998 Annual Meeting, Chicago, Illinois, 2-4 April 1998.
9. Mitra SN, Ali MN, Islam S, Cross AR, Saha T. Bangladesh demographic and health survey, 1993-1994: extended analysis. Dhaka: National Institute of Population Research and Training, 1996.
10. Hossain SMI, Bhuiya I, Rob AKU, Anam R. Directory of organizations working with adolescents/youths. Dhaka: Population Council, 1998.

11. Islam M, Kane TT, Barkat-e-Khuda, Hossain MB, Reza MM. Determinants of contraceptive use among the young and newlywed couples. *In*: Kane TT, Barkat-e-Khuda, Phillips JF, editors. Reproductive health in rural Bangladesh, policy and programmatic implications, volume 1. Dhaka: MCH-FP Extension Project. (Rural), International Centre for Diarrhoeal Disease Research, Bangladesh, 1997:105-34. (ICDDR,B monograph, 7).
12. Shariar A, Nahar Q. Proceeding of the First Stock-taking Workshop on Adolescent Health Activities in Bangladesh. Dhaka: Operations Research Project, International Centre for Diarrhoeal Disease Research, Bangladesh, 1999. (ICDDR,B special publication no. 88).
13. Personal correspondence [Dr. Rafiqus Sultan, Programme Manager, Maternal Nutrition and Adolescent Health, Directorate of Family Planning, Ministry of Health and Family Welfare. A draft report on adolescent health in Bangladesh, prepared by Dr. Rafiqus Sultan].
14. Personal correspondence [Dr. Nazrul Haque, Programme Officer, AFLE Desk-VHSS and from a list of AFLE forum members list].
15. Bangladesh Population and Health Consortium NGO Project. Evaluation and assessment of the Adolescent Family Life Education (AFLE) programme in BPHC-funded NGOs. Dhaka: 1997.
16. Ali A, Mahmud SN, Karim F, Chowdhury A. Knowledge and practice of NFPE-AG graduates regarding menstruation. Dhaka: Bangladesh Rural Advancement Committee, 1996.
17. Ali A, Mahmud SN, Karim F, Islam MN, Chowdhury A. Knowledge of NFPE-AG graduates on reproductive health and nutrition. Dhaka: Bangladesh Rural Advancement Committee, 1996.
18. Personal correspondence [Dr. Shamsheer Ali Khan, Sector Specialist, Reproductive Health Programme, BRAC].
19. Personal correspondence [Dr. Afroza Begum, Medical Officer, Adolescent Clinic, Nari Maitree].
20. Urban Family Health Partnership. Urban Family Health Partnership's proposed adolescent health program. Briefing for FOCUS Consultant. Dhaka; UFHP, 1998.
21. FOCUS on Young Adults. Reaching newlywed and married adolescents. In FOCUS. Washington D.C., 1999
22. Alauddin M. Newly married couples in Bangladesh: Pathfinder experience in adolescent reproductive health interventions. Dhaka: Pathfinder International, Bangladesh. 1999. (*In press*).

23. National Institute of Population Research and Training. Bangladesh demographic and health survey 1993-1994. Calverton, MD: Macro International, Inc., 1994.
24. Personal correspondence [Ms. Zohura Fatema, Concerned Women for Family Development].
25. Personal correspondence [Ms. Gulshan Ara, Director, Organization for Mothers and Infant].
26. Bond K, MacLaren L, 1998. Trip report on consultancy to the operations research project of the ICDDR,B in Dhaka, Bangladesh (Unpublished report submitted by the FOCUS on Young Adults Program to USAID Bangladesh).
27. Personal correspondence [Mr. Shafiqur Rahman, Save the Children (USA)].
28. Personal correspondence [Ms. Mubarra Matin, Concerned Women for Family Development].
29. Voluntary Health Services Society. Evaluation report of Adolescent Family Life Education Forum. Dhaka: Voluntary Health Services Society 1995.
30. Personal correspondence [Md. Shoeb Jalil, Assistant Director, Youth Project, Family Planning Association, Bangladesh].
31. Personal correspondence [Ms. Rebaka Sun-yat, Bangladesh Women's Health Coalition].
32. Gazi R, Khan SA, Chowdhury AMR. Ninth grade students knowledge, attitude and practice regarding reproductive health. Dhaka: Research and Evaluation Division, BRAC, 1998.
33. Personal correspondence [Dr. M. Alauddin, Chief of Party, Rural Service Delivery Partnership].
34. Personal correspondence [Mrs. Mufwaza Khan, Concerned Women for Family Development].
35. Amin S, Diamond I, Naveed RT, Newby M. Transition to adulthood of female garment-factory workers in Bangladesh. *Stud Fam Plann* 1998;29(2):185-200.
36. Caldwell JC, Caldwell P, Caldwell BK, Pieris I. The construction of adolescence in a changing world: implications for sexuality, reproduction, and marriage. *Stud Fam Plann* 1998;29(2):137-53.
37. Hasan K. National media survey 1998. Dhaka: ORG-MARG QUEST Ltd. Sponsored by Bangladesh Centre for Communication Programs, Johns Hopkins University, Social Marketing Company, and UNICEF, 1998.
38. Haider SJ, Saleh SN, Kamal N, Gray A. Study of adolescents: dynamics of perception, attitude, knowledge and use of reproductive health care. Dhaka: Population Council, 1997.

MCH-FP Extension Work at the Centre

An important lesson learned from the Matlab MCH-FP project is that a high CPR is attainable in a poor socioeconomic setting. In 1982, the MCH-FP Extension Project (Rural) with funding from USAID began to examine in rural areas how elements of the Matlab programme could be transferred to Bangladesh's national family planning programme. In its first year, the Extension Project set out to replicate workplans, and record-keeping and supervision systems, within the resource constraints of the government programme.

During 1986-89, the Centre helped the national programme to plan and implement recruitment and training, and ensure the integrity of the hiring process for an effective expansion of the work force of governmental Family Welfare Assistants. Other successful programme strategies scaled up or in the process of being scaled up to the national programme include doorstep delivery of injectable contraceptives, management action to improve quality of care, management information systems, and strategies to deal with problems encountered in collaborative work with local area family planning officials. In 1994, this project started family planning initiatives in Chittagong, the lowest performing division in the country.

The Centre and USAID, in consultation with the government through the Project's National Steering Committees, concluded an agreement for new rural and urban Extension Projects for the period 1993-97. Salient features include: improving management, quality of care and sustainability of the MCH-FP programmes, and providing technical assistance to GoB and NGO partners. In 1994, the Centre began an MCH-FP Extension Project (Urban) in Dhaka (based on its decade long experience in urban health) to provide a coordinated, cost-effective and replicable system of delivering MCH-FP services for Dhaka urban population. This important event marked an expansion of the Centre's capacity to test interventions in both urban and rural settings. The urban and rural extension projects have both generated a wealth of research data and published papers in international scientific journals.

In August 1997 the Centre established the Operations Research Project (ORP) by merging the two former MCH-FP Extension Projects. The ORP research agenda is focussed on increasing the availability and use of the high impact services included in the national Essential Services Package (ESP). In this context, ORP has begun to work with partners in government and NGOs on interventions seeking to increase coverage in low performing areas and among underserved groups, improve quality, strengthen support systems, enhance financial sustainability and involve the commercial sector.

ORP has also established appropriate linkages with service delivery partners to ensure that research findings are promptly used to assist policy formulation and improve programme performance.

The Division

The Health and Population Extension Division (HPED) has the primary mandate to conduct operations research, to disseminate research findings to programme managers and policy makers and to provide technical assistance to GoB and NGOs in the process of scaling-up research findings to strengthen the national health and family planning programmes.

The Division has a long history of solid accomplishments in applied research which focuses on the application of simple, effective, appropriate and accessible health and family planning technologies to improve the health and well-being of underserved and population-in-need. There are various projects in the Division which specialize in operations research in health, family planning, environmental health and epidemic control measures. These cut across several Divisions and disciplines in the Centre. The Operation Research Project (ORP) is the result of merging the former MCH-FP Extension Project (Rural) and MCH-FP Extension Project (Urban). These projects built up a considerable body of research and constituted the established operations research element for child and reproductive health in the Centre. Together with the Environmental Health and Epidemic Control Programmes, the ORP provides the Division with a strong group of diverse expertise and disciplines to significantly consolidate and expand its operations research activities. There are several distinctive characteristics of these endeavors in relation to health services and policy research. For one, the public health research activities of these Projects are focused on improving programme performance which has policy implications at the national level and lessons for the international audience also. Secondly, these Projects incorporate the full cycle of conducting applied programmatic and policy relevant research in actual GoB and NGO service delivery infrastructure, dissemination of research findings to the highest levels of policy makers as well as recipients of the services at the community level; application of research findings to improve programme performance through systematic provision of technical assistance; and scaling-up of applicable findings from pilot phase to the national programme at Thana, Ward, District and Zonal levels both in the urban and rural settings.



CENTRE
FOR HEALTH AND
POPULATION RESEARCH

Operations Research Project

Health and Population Extension Division

ICDDR,B: Centre for Health and Population Research

GPO Box 128, Dhaka 1000, Bangladesh

Telephone: (880-2) 8811751-60 (10 lines); Fax: (880-2) 8811568

E-mail: misk@icddr.org; URL: <http://www.icddr.org> and <http://www.icddr.org.sg>