Adolescent Reproductive Health: What are the Lessons Learned from the Intervention Projects

By Yasmin Siddiqua and M. Kabir*

Adolescents aged between 10 to 19 years, are a large and growing segment of the population. At 1.05 billion, this is the biggest-ever generation of young people and their number is increasing rapidly in many countries (UNFPA, 1998a). The population of adolescents will continue to grow because of the growth momentum of age structure and the high fertility rate in the past. Globally, the largest share of adolescents is and will continue to be in Asia, which has 60 per cent of the world population (UNFPA, 1998b).

In recent years, adolescent reproductive health has become one of the most widely talked about and sensitive health issues among programme planners around the world. "Adolescent sexual and reproductive health refers to the physical and emotional well-being of adolescents and includes their ability to be healthy and remain free from too-early or unwanted pregnancy, unsafe abortion, sexually transmitted diseases (STDs)including HIV/AIDS, and sexual violence or coercion" (Senderowitz, 1995; WHO, 1998). However, in assessing commitments made since the International Conference on Population and Development in Cairo in 1994, adolescent reproductive health rights remain inadequately addressed. The Programme of Action of the Conference called for organizations to initiate or strengthen programmes to better meet the reproductive health needs of adolescents (United Nations, 1994). Numerous programmes have been developed to address adolescent reproductive health needs accordingly. Yet, five years later, there exist legal,

* Yasmin Siddiqua, Ph.D. Student and M. Kabir, Professor, Department of Statistics, Jahangirnagar University, Savar, Dhaka

religious and social barriers which prevent adolescents from receiving the services offered to them and still there is room for policy makers to concentrate their attention on the urgency of the issue (UNFPA, 1998b).

Early marriage and especially childbearing can have a profound and long lasting impact on a woman's well-being, education and ability to contribute to her community (Liskin and others, 1985; McCauley and others, 1995). Teenage childbearing is most common in developing countries, where one quarter to one half of women have their first child by age 18. Although some 10-19 years olds are beginning to experience the changes that come with puberty, many are entering sexual relationships or marriage (Alan Guttmacher Institute, 1998). Each year, about 15 million young women aged 15 to 19 give birth (PATH, Program for Appropriate Technology in Health, 1998). Early childbearing adversely affects the mother and the child. Teenage mothers face a higher-than-average risk of mortality compared with mothers in their 20s and their children have a higher level of morbidity and mortality. Because girls generally continue growing physically during adolescence, pregnancy and childbirth before attaining full growth results in a competition for nutrients between the growing adolescent and the growing foetus (=>foetus) (United Nations, 2000). Childbirth at an early age also has a negative impact in the sociocultural and demographic context. Compared with a woman who delays childbearing until her 20s, the woman who has her fmt child before age 17 is likely to obtain less education and fewer job opportunities. Moreover, childbearing and child-rearing become a burden when the mother is emotionally or physically immature to do so (Singh, 1998). Yet, complex physical, familial and cultural factors that are often poorly understood determine who will many when and who will begin childbearing during adolescence. Available data demonstrate that while the needs and experiences of adolescents vary around the world, there are similarities within the cross-national and regional boundaries.

The principal risk factors for adolescent reproductive health can be categorized under two broad names:

Biolopical factors	Social factors
• Incomplete physical growth • Increased nutritional requirement • Sexual maturity without being prepared for parenthood	• Lack of adequate knowledge about sexuality and reproductive need • Limited access to health and family planning services • Time gap between menarche and marriage • Employment • Poverty • Early marriage • Adolescent fertility

The above two categories of factors simultaneously contribute to one or more of the following consequences:

- Interrupted education and career
- Premarital/unsafe sexual activity
- Low contraceptive use
- Early and unwanted pregnancy
- Unsafe and illegal abortion
- STD/RTI
- HIV/AIDS
- Anemia and malnutrition
- Pregnancy-induced hypertension
- Difficult delivery (obstructed and prolonged labour)
- Foetal growth retardation and low-birth-weight baby
- Premature birth
- High infant mortality
- Prenatalmortality
- Maternal mortality

Sources: Liskin, L., N. Kak, A.H. Rutledge, L.C. Snit and L. Stewart (1985). "Youth in the 1980s: social and health concerns", *Population Reports* 13(5), Series MyNumber 9; McCauley, A.P., C. Salter, K. Khguand J. Senderowitz (1995). "Meeting the needs of young adults", *Population Reports* 23(3), Series J, No. 41 (Baltimore, Johns Hopkins School of Public Health, Population Information Program also available online at: www.jhuccp.org/pr/j41edsum.htm) and Senderowitz, J. (1995). "Adolescent health. reassessing the passage to adulthood", World Bank ***Discussion Paper*** No. ***272.***

Note: RTI = reproductive tract infection.

As modernization occurs within the bounds of traditional systems, it is difficult to adopt any change; while young people face challenging lifestyles, the older generations' attitudes remain unchanged. If it is required to promote safer sex, for instance, information on safer sex and contraception should be given, and relevant health services provided. Yet, sex education for adolescents, even social interaction and often dialogue between the sexes, are not acceptable in many cultures. Cultural attitudes in many Asian countries, stemming from the adolescents and their parents, favour norms of premarital chastity. As such, there still exists a disturbing picture of teenage abortion seekers in South Asia and the Pacific region, comprising both married and unmarried girls (Jejeebhoy, 1996a). Adolescents are acutely sensitive about gender discrimination. Owing to a lack of access to education and a lack of exposure, young girls' economic dependency on men has, to a large extent, contributed to their being submissive and not making decisions about their own lives (Mensch and Lloyd, 1998).

Focusing on adolescent reproductive health is a challenge and opportunity for healthcare providers as well. Unlike adults, adolescents often lack basic reproductive health information, skills in negotiating sexual relationships and access to affordable confidential reproductive health and family planning services. Many do not feel comfortable discussing sexuality with parents or other key adults with whom they can talk about their reproductive health concerns (PATH, 1998). Likewise, parents, healthcare workers and educators are frequently unwilling or unable to provide complete, accurate,

age-appropriate reproductive health information to young people. This is often due to their own discomfort and the false belief that providing the information will encourage increased sexual activity (Baldo and others, 1993). On the contrary, studies deny the belief that sexual education contributes to earlier or increased sexual activity in youth. Rather, it causes a delay in the onset of sexual activity or a reduction in overall sexual activity (Baldo and others, 1993; Grunseit and Kipax, 1993).

This review attempts to investigate the type of interventions that are being offered by different agencies for improvement of the reproductive health of adolescents in Bangladesh and tries to assess the impact of these programmes in terms of some reproductive health indicators, comparing recent Bangladesh Demographic and Health Survey (BDHS) data, such as the 1996-97 BDHS and 1999-2000 BDHS.

Needs of the adolescents

Roughly, one in five people in the world is an adolescent. Like many other groups, adolescents all over the world have specific concerns and problems. Their circumstances and needs vary tremendously depending on individual characteristics such as age, sexual activity, schooling and employment status, as well as their position within the range of adolescent years. Since adolescence is a period of rapid physical, emotional, social and sexual maturing, adolescents need a full range of quality reproductive health care, as well as information and counselling (Alan Guttmacher Institute, 1998; McCauley and others, 1995).

Today's adolescents are the next generation's parents, workers and leaders. To fill these roles to the best of their ability, they need the guidance and support of their family and community, and the attention of a government committed to their development. As economic modernization, urbanization and mass communication change the expectations and behaviour of adolescents, adaptation to new ways is likely to be inconvenient and at times, painful. But adaptation is inevitable and inescapable (Alan Guttmacher Institute, 1998). Most countries recognize the necessity for and value of education for young women. Education contributes to the health of women's children and families and facilitates her use of information and services (Liskin and others, 1985; McCauley and others, 1995; Senderowitz, 1995; Jejeebhoy, 1996b; Alan Guttmacher Institute, 1998). Government and other social institutions, therefore, must find new ways to enable families to enrol girls in school and to encourage young women to stay in school and complete their basic education.

Young children and teenagers often learn about sexual matters from peers, siblings, parents and the media (Hong and Nam, 1989; Lema, 1990) but the information they obtain through these channels is usually limited and may

be erroneous (Ogutu-Ohwayo, 1991; McCauley and others, 1995). Formal instructions tailored to the age and background of the adolescents involved, is an important source of accurate information about sexuality, pregnancy, childbearing, contraception and STD prevention, Comprehensive sex education programmes not only cover biological facts but also provide adolescents with practical information and skills regarding sexual relationships and contraceptive use. Although programmes encounter religious or political opposition, most studies show that they do not encourage sexualactivity; rather, they are associated with the postponement of early sex and, among sexually active adolescents, with the use of contraceptives (Baldo and, 1993; Grunseit and Kippax, 1993; Haider and others, 1997).

In addition to STD and pregnancy risks, many young people who are sexually active have been forced into sexual relationships, either through violence or for economic reasons (UNFPA, 1997; Hossain and others, 1998; PATH, 1998; Alan Guttmacher Institute, 1998) and are in need of counselling, information and contraceptive services. Married adolescents who become pregnant may not encounter the same social risks as their unmarried counterparts, but they face the same complications from STDs and the health risks of early pregnancies. Along with increased exposure to STDs and unintended pregnancy, adolescents who engage in sexual activity outside of marriage may face social stigmas, family conflicts, problems with school and the potential need for unsafe abortion (McCauley and others, 1995).

Governments, along with NGOs and even the media, have a role to play in improving the adolescents' ability to protect themselves against unwanted pregnancies and STDsSpecial efforts are needed to educate and motivate men to cooperate with their sexual partners in the use of contraceptives to prevent unwanted pregnancies and diagnose and treat STDsAdolescent women require access to a range of contraceptive services (Liskin and others, 1985; UNFPA, 1997).

Privacy and confidentiality are important aspects of service provision for adolescents, who may be uncomfortable discussing sexual matters or may fear condemnation from their families or communities if they reveal their sexual activity (McCauley and others, 1995; PATH, 1998). Care provided specifically for adolescents must be sensitive to young women's limited access to transportation and their often-meagre financial resources. The degree to which the service environment welcomes adolescents will determine the extent to which adolescents avail themselves of reproductive health care.

The situation of adolescents in Bangladesh

Adolescents comprise 25 per cent of the total population in Bangladesh, the number being approximately 33 million in the year 2001. Among them,

Box 1. Selected socio-economic characteristics of female married adolescents in Bangladesh, 1999-2000

Mean age at marriage (years)	16.9
Rural inhabitants (per cent)	75.6
Islam follower (per cent)	92.3
Not educated (per cent)	27.4
Unemployed (per cent)	88.6
Mass-media exposure (television, radio, newspaper) (per cent)	4.4
Not allowed to go to health facility (per cent)	76.5

Source: Bangladesh Demographic and Health Survey, 1999-2000.

about 48 per cent were females and 52 per cent males. Box 1 shows some selected characteristics of female adolescents in Bangladesh. This large group of adolescents is a major social concern because they will exert a high population momentum effect on the future increment of population in Bangladesh. The annual growth rate of the adolescent population is 4.33 per cent, compared with 1.7 per cent for the total population. The absolute size is expected to rise to 35million by the year 2010 (Barkat, 2000).[1]

In Bangladesh, social norms and mores strictly support premarital chastity. Further, sexual encounter is supposed to occur only within marriage. The current section deals with the description of Bangladeshi adolescents reproductive health on the basis of information collected from two nationally representative surveys for married female adolescents. Since adolescents are vulnerable to many reproductive health hazards owing to their physical and mental immaturity, it would have been worthwhile to compare some of the important reproductive health indicators for both married and unmarried adolescents in this section, including their health-seeking behaviour. Since sexual relationships for any unmarried adolescents are socially regarded as promiscuity, any broad-scale study failed to collect such information apart from few small sample quantitative or qualitative studies. These study findings indicate that, though a substantial proportion of adolescents become sexually active before marriage (Haider and others, 1997), they do not admit it for a fear of social harassment and probable obstacles in future marriage (box 2). This section also covers the health-care utilization by the married adolescents in terms of antenatal care, tetanus toxoid coverage, delivery at a health facility and seeking treatment for pregnancy-related complications. Information on health-seeking behaviour for unmarried adolescents is also rare (box 3), as social restrictions hinder them from admitting their sexual activity outside marriage; they also do not feel comfortable seeking family planning or STD services from nearby clinics and pharmacies. They perceive that providers would be judgmental and unfriendly to them (Bhuiya and others, 2000).

Box 2. Premarital sexual behaviour among adolescents

One study in Bangladesh with adolescents from urban and rural areas revealed that nearly one fourth of the unmarried females and 29 per cent of the married females have had any sexual contact by age 19. By contrast, 61 per cent of unmarried and 69 per cent of married male adolescents reported some premarital sexual encounter by age 19, with a mean difference of 6-8 years for urban and 3-4 years for rural areas. For adolescent women, sexual partners before marriage were mostly their "future" husbands (Haider and others, 1997). Another small-scale baseline survey reported that 127 males and only 3 females out of 2,626 unmarried adolescents had premarital sexual exposure, with 15 years as the mean age at first sexual encounter. Of these males, 52 had sex with commercial sex workers and did not use a condom (population Council, 2001).

Box 3. Health-care utilization by unmarried adolescents

A clinic-based intervention found that a total of 4,580 adolescents, with 94 per cent girls visited the satellite and fixed clinic August 2000 and December 2001. Among those, 57 per cent were unmarried visiting the clinic for immunization, RTI/STI services and very few also came for problems related to menstruation and general health problems. (Population Council, 2002)

Notes: STI = sexually transmitted infection; RTI = reproductive tract infection

Table 1 shows some selected reproductive health indicators of adolescents derived from the 1996-1997 and 1999-2000 BDHS data (Mitra and others, 1997, 2001). We also investigated what changes occurred between the two surveys. The information indicates that there was little change in terms of fertility, proportion never married, use of contraception and met need for contraception. Box 4 provides information on the proportion never married among adolescents in 1999-2000. Similarly, there has not been much change in infant mortality. However, there was a dramatic decline in child mortality, which declined from about 44 per 1,000 births to about 29 per 1,000 births. Surprisingly, the proportion of adolescent mothers who were pregnant increased from 14.7 to 15.9 per cent between the two surveys. About 52 per cent of adolescents were never married at the time of the survey and the percentage who were married by age 15 was 28.5. Because of the censoring effect, the age at marriage for the 15-19 age group could not be estimated, i.e. all of them will not be married by age 19.

The level of HIV/AIDS knowledge has changed significantly since 1996. Knowledge of HIV/AIDS increased from 17 to over 30 per cent among ever-married adolescents between the two surveys. As part of the HIV/AIDS prevention programme, the mass media are playing a greater role to create awareness among the general public. Adolescents reported that television was the most important source of information about HIV/AIDS (20.1 per

Table 1. Reproductive health situation of female adolescents in Bangladesh, some selected indicators, Bangladesh Demographic and Health Survey, 1996-1997 and 1999-2000

Indicator		Situation	
		1996-1997	1999-2000
A.	**Fertility and requlation**		
1.	Current fertility (births per 1,000 women)	147	144
2.	Child ever born per woman	0.39	0.37
3.	Children living	0.35	0.33
4.	Who have began childbearing (percentage)	35.6	34.7
5.	Pregnant at the time of survey(percentage)	14.7	15.9
6.	Percentage never married (15-19 years)	49.8	51.9
7.	Contraceptive prevalance rate	31.0	30.5
8.	Unmet need for family planning (percentage)	19.0	21.0
B.	**Infant and child mortality**		
1.	Perinatal mortality	..	71.6
2.	Neonatal mortality rate	70.2	72.2
3.	Post neonatal mortality rate	35.9	31.4
4.	Infant mortality rate	106.1	103.6
5.	Child mortality rate	43.6	29.2
6.	Under five mortality rate	145	129.5
C.	**Maternal and child health**		
1.	Recipients of tetanus toxoid (per cent)	79	85.5
2.	Received antenatal check-ups	29.3	39.9
3.	Delivery at health facility (per cent)	3.4	6.7
D.	**Nutritional status**		
1.	Short stature mothers (per cent) (<145 cm)	19.0	18.4
2.	Acutely malnourished mothers (per cent) (BMI<18.5 per cent)	50	50.5
E.	**HIV/AIDS**		
1.	Ever heard of HIVIAIDS (per cent)	17.2	30.2
2.	Sources of knowledge - radio	7.6	11.7
3.	Sources of knowledge - televisions	11.7	20.1
4.	Sources of knowledge - friend/relatives	6.8	11.5
5.	Unknown to any valid way to prevent HIV/AIDS		19.3
6.	Perception of HIVIAIDS - a healthy person can have HIVIAIDS		66.4
7.	Perception of HIVIAIDS - healthy person cannot have HIVIAIDS		13.5
8.	Communicate with spouse about HIV/AIDS prevention		18.4
9.	Knowledge of STIs		8.5

Note: Two dots (..) indicate that the data arenot available.

cent). The other important sources were radio (10 per cent) and friend relative (11.5 per cent) (Mitra and others, 2001). The recent BDHS covered some other aspects regarding HIVIAIDS knowledge among adolescents. Relevant information from the table indicates that only about 19 per cent of them did not know any proper way to prevent HIV/AIDS. The distressing situation is that only 8.5per cent of the married female adolescents were found knowledgeable about sexually transmitted infections.

Box 4. Proportion of never-married adolescent girls in Bangladesh, 1999-2000

Current Age (in years)	Proportion never married
15	70.7
16	58.6
17	46.2
18	40.9
19	30.7

Source: Bangladesh Demographic and Health Survey, 1999-2000.

Information on matemal and child health indicates that the percentage of adolescents who had tetanus toxoid during pregnancy increased between the two surveys. For instance, according to the 1999-2000 BDHS, 85.5 per cent of teenage mothers reported receiving TT, as against 79 per cent in the 1996-1997 BDHS. There was also a 10-percentage point increase in the antenatal check-up recipients between the two survey periods, although no change was found in the delivery of births that took place in the health facility. The proportion of adolescent mothers receiving antenatal care rose from 29.3 per cent in 1996-1997 to about 40.0 per cent in 1999-2000. However, both the surveys reported only about 4 to 7 per cent births that were delivered at health facilities.

The nutritional status of the adolescents did not change at all between the two surveys. Adolescent mothers' nutritional risk was measured in terms of mean height (in cm), which can be used to predict the risk of difficulty in delivering children, given the association between height and size of pelvis. Also, the risk of giving birth to low-weight newborn is highest among women of small stature. The survey data on nutritional status indicate roughly one in five teenage mothers were shorter than the cut-off point of 150 cm About 50 per cent of teenage mothers are acutely malnourished (body mass index (BMI) 48.5).

Table 2 shows the percentage distribution of teenagers (15-19) who were mothers or pregnant with their first child according to the 1996-1997 and 1999-

Table 2. Adolescent pregnancy and motherhood in Bangladesh, Bangladesh Demographic and Health Survey 1996-1997, 1999-2000

Age	Percentage who are				Percentage who have begun childbearing	
	Mothers		Pregnant with first child			
	1996-1997	1999-2000	1996-1997	1999-2000	1996-1997	1999-2000
15	8.5	11.6	5.5	4.3	14.1	15.9
16	23.5	22.2	5.2	3.8	28.4	26.0
17	32.6	30.8	3.7	5.7	36.4	36.5
18	43.2	39.0	4.7	6.0	48.0	45.0
19	54.6	52.5	3.1	4.8	57.7	57.3
Total	**31.0**	**29.8**	**4.6**	**4.9**	**35.6**	**34.7**

Box 5. Percentage of female adolescents reporting their last child as mistimed according to current age, Bangladesh, 1999-2000

Current age	Percentage
17	1.1
18	0.8
19	1.9

Source: Bangladesh Demographic and Health Survey, 1999-2000.

Box 6. Proportion of adolescents who knew about menstrual regulation and used the procedured by place of residence, Bangladesh Demographic andHealth Survey, 1999-2000

Place of residence	Knowledge	Use
Urban	76.5	2.7
Rural	71.1	1.7
Total	72.4	2.0

2000 BDHS. The information reveals that 31 per cent adolescents were mothers in 1996-1997 and another 5 per cent were pregnant with their first child. The comparable figures for the 1999-2000 BDHS were about 30 and 5 per cent respectively. Thirty-five per cent of adolescents have begun child bearing in 1999-2000. In 'the same period, a small proportion of the adolescents also reported that their last child was mistimed (box 5). There has been a slight decline in this proportion since the 1996-1997 BDHS, which showed that 36 per cent of women aged 15-19 had begun child-bearing.

This section further investigates another reproductive health indicator, such as knowledge and use of menstrual regulation of the married adolescents on the basis of information collected from the BDHS 1999-2000 (box 6). The data suggest that slightly over 72 per cent of adolescents reported knowledge about menstrual regulation (both unprompted and prompted).

Health-care utilization by the adolescents

Pregnancy, particularly in adolescent age, is associated with many life-threatening risks. In the past, these aspects were not studied in any survey. The Bangladesh Maternal Health Services and Maternal Mortality Survey, 2001 shows detailed information on the knowledge of adolescents about these life-threatening issues associated with pregnancy and their health-care utilization. **Table 3** shows knowledge of pregnancy or delivery-related complications that might cause death and health-seeking behaviour for those life-threatening conditions of married adolescents (National Institute of Population Research and Training, 2001). Overall knowledge was high

Table 3. Percentage distribution of married females aged less than 20 according to their knowledge of maternal complications and their health-seeking behaviour, 2001

Indicator		Situation 2001
A.	**Knowledge of life-threatening conditions during pregnancy**	
1.	Knowledge of any life-threatening conditions during pregnancy/delivery	79.2
2.	Knowledge of severe headache/ high blood pressure	5.2
3.	Knowledge of edema/pre-eclampsia	5.4
4.	Knowledge of convulsion/eclampsia	17.1
5.	Knowledge of excessive vaginal bleeding	11.6
6.	Knowledge of tetanus	43.3
7.	Knowledge of baby in bad position	18.3
8.	Knowledge of prolonged labour	10.9
9.	Knowledge of obstructed labour	27.8
B.	**Type of assistance sought for complications**	
1.	Did not seek assistance	45.1
2.	Sought assistance, but not at health facility	30.5
3.	Went to a facility/doctor for assistance	24.4
C.	**Type of health facility visited for complications**	
1.	Government hospital/Thana Health Center/Maternal and Child Welfare Centre	44.4
2.	Satellite/Expanded Programme for Immunization clinic	5.2
3.	NGO and private health facility	16.2
4.	Private doctor	18.6
5.	Traditional doctor/other	15.5

Source: Bangladesh Maternal Health Services and Matemal Mortality Survey, 2001 (preliminary report).

but specific knowledge of life-threatening conditions was low. The information suggests that over 43 per cent knew about tetanus a life-threatening conditions during pregnancy or delivery. About 29 per cent of females reported knowledge about retained placenta and above a quarter (27.8 per cent) about obstructed labour. From 10 to 18 per cent of the females knew about prolonged labour, excessive vaginal bleeding, convulsion/eclampsia or bad position of the baby. Only about 5 per cent knew about severe headachehigh blood pressure or ededpre-eclampsia that might threaten the life of the mother during pregnancy or delivery.

The health-seeking behaviour of the adolescents who had complications shows somewhat alarming conditions, as nearly half of the adolescents did not seek any type of assistance for maternal complications and another one third opted for some non-facility assistance. Yet, a little less than one fourth of the adolescents went to a facility/doctor for their pregnancy or delivery-related complications. Further, among women who went to a facility for treatment, the most commonly mentioned place was government hospital facilities (44.4 per

cent), followed by private doctor (18.6 per cent) and NGOs and private health facility (16.2 per cent). A sizeable proportion of these adolescents also sought assistance from a traditional doctor or other for their complications.

Adolescent programmes and interventions currently in operation in Bangladesh

Since the Declaration of the International Conference on Population and Development in 1994, a good number of NGOs as well as government agencies in Bangladesh have introduced adolescent reproductive health programme in their project activities. The directory published by the Population Council, Dhaka indicates that more than 100 NGOs were working in the area of adolescent reproductive health and their welfare (Hossain and others, 1998). Recently, UNICEF compiled the types of interventions these NGOs are providing (UNICEF, 1999).

The general objectives of these NGO programmes include:

- Illiteracy eradication
- Empowering adolescents
- Promotion of individual development and support for the betterment of future life
- Exposure to reproductive health matters

The activities taken under the programmes are as follows:

- Group formation
- Skill development training
- Literacy/non-formal education
- Micro-credit/income-generation activities
- Adolescent family life education
- Sex education
- General health education
- Reproductive health services
- Leadership training
- Legal support, e.g. regarding violence and abuse
- Advocacy with families and community members to obtain support for programmes

Concerns about the current reproductive health programmes

Although many interventions have been provided over the last few years, very little is known about the impact of these interventions on the reproductive health of the adolescents. Before replication of the impact of these interventions, it is necessary to assess the correlates of these interventions. The

Government's programme

Government's intervention	Programme	Programme component	Target group	Remarks/ impacts
Education programme	Secondary Education Scholarship	1. Nationwide stipend 2. Book stipend	Girls in class VI to X in rural area	Increase in female enrolment in school
Health pro gramme under the Health and Population Sector Pro-gramme	Essential Services Package	1. Health services 2. Health education 3. Health and hygyenic environment	Students in class V to X	
	National Nutrition Project	1. Monitoring girl's height, weight 2. Educationsession on nutrion, personal hygiene and reproductive health care 3. Micronutrient supplements 4. Counselling	Unmarried in- and out of school girls	
Directorate of Health and Family Planning	Essential Services Packages	1. Education 2. Nutrition 3. Clinical treatment 4. Behavioural Change Communication (BCC) about reproductive health	BCC for girls aged 12+ and boys aged 13+	

interventions introduced by both the Government and local and international NGO, raise some valid and crucial questions, such as:

- What is the experience from the Government's secondary education scholarship programme and those of various NGOs? Is there any evidence that completion of secondary education increased age at marriage beyond 18 years and, if so, what is the age at marriage of girls who completed secondary education under the project?
- How many girls having completed secondary school are able to continue higher secondary education so that it really has an impact on age at marriage and on reproductive behaviour?
- Do the girls who completed secondary education after being enrolled in the Government's secondary education scholarship programme have any means to continue higher education? Do they have access to employment opportunities? If not, what will their parents do in the given cultural setting? One logical option is that they may be married off. It is also expected that education usually expands employment opportunities and educated women may delay marriage and child earing to earn income. Women's education is also associated with

NGO programmes

Name of NGO	Programme area	Programme component	Target group	Remarks/ impacts
Population Council	1. School 2. Community	1. Education programme 2. Friendly clinical service 3. Inform through telephone and print media	1. Boys and girls in class VIII and IX in school 2. Out-of-school, aged 13-19, working or non-working	1. Improved reproductive health knowledge 2. Increased clinic visitation by unmarried for counselling 3. Increased antenatal care recipients 4. Positive attitude towards reproductive health behaviour
International Center for Diarrhoeal Diseases Research, Bangladesh	School Community Workplace	1. Booklet 2. Adolescents friendly clinic services Adolescent Development Package 1. Health education 2. Health services 3. Credit and skill training programme Peer approach health services	Students of grade VIII, IX and X in school Adolescents aged 13-15 and 16-19 years from all categories Female garment workers aged 13-19 years	
Bangladesh Women's Health Coalition	1. School 2. Community	1. Adolescent family life education 2. Club based in the community	Girls in grade VIII and IX in schools in urban and rural areas and school dropout adolescent girls from the community	
Bangladesh Rural Advancement Committee	Adolescent reproductive health education	1. Formal school 2. Non-formal school 3. Club and skill training	Adolescents aged 11 to 14 years	
Under-privileged Children's Educational Programmes	Schooling opportunities	Education	Poor urban working/street girls 10+ and boys 11+	
Center for Mass Education in Science	School	Life-oriented non-formal education	Girls aged 11 to 19 years	

better child health. Women with some formal education are more likely to obtain care during pregnancy, immunize their children and take appropriate action when a child becomes ill.

- What is the experience from the existing health programme of Government and NGOs regarding the reproductive behaviour of the adolescents? Have any specific indicators of adolescent reproductive health been identified at the national level? Does the programme suggest any positive change in the reproductive health indicators of the adolescents? If so, what are those indicators?
- The adolescent family life education programmes raise important questions: which curricula are more effective in changing risk-taking behaviours, either by delaying or reducing sexual activity or by increasing the use of protection? What are their characteristics?
- What is the impact of additional programme components, such as parent programmes, peer programmes, afier-school discussion sessions and individual counselling? Are programmes more or less effective when teachers teach them or peers or outside experts? Are these appropriate and acceptable ways to teach adolescents so that they receive instruction more relevant to their personal experiences?
- What is the impact of the programme location (school-based or school-linked) and the location of its sponsor (school, clinic or other community agency)? How can school-based programmes be reinforced by community-wide efforts and vice versa?

On the basis of the review of Bangladesh adolescent programmes, it is not possible to identify successful programmes that can be replicated.

Lessons from programmes of other countries

Experiences from programmes of other countries on adolescents reproductive health suggest that a combination of approaches is often most effective in reaching adolescents, but very few have been rigorously evaluated for impact, making determination of best practices a challenge (PATH, 1998). It is therefore inevitable to assess the nature of these programmes and to ascertain the successful experiences that are feasible and can be replicated in other countries with a similar cultural context.

A wide variety of youth-oriented services and programmes have been found to operate in both developed and developing countries, differing according to the group of adolescents to which they belong. Adolescents in different settings are reachable in a varying manner. For those who are in school, school-based clinics are available in some developed and developing countries. Unlike developed countries, in developing countries school-based

services are often limited by restrictive policies, personnel shortages, lack of private areas for counselling and poor links to resources outside the school. Yet, some school- based clinical programmes in some developing countries show some extent of success. The Nepalese school-based AIDS/STD awareness programme by the B.P. Memorial Health Foundation (BPMHF) uses a peer education model (UNFPA, 2000) as its programme tool. In Jamaica, such a programme enabled adolescent girls to continue their schooling during pregnancy; to return to school after the birth of their child; and to avoid another pregnancy during adolescence. The programme also helps adolescents to continue their education and thus to delay first pregnancy, and offers them family planning information and services, skill-building on childcare and other life-planning services (Bamett and others, 1996). An evaluation of the Jamaican programme found that less than 2 per cent adolescents reached by the programme had a second pregnancy before graduating or starting work (UNFPA, 1997), which shows that providing a supportive environment where pregnant girls can continue their education can make a significant difference in their futures. This programme found the combination of education, information and services to be the key to pregnancy prevention.

In some Western and Latin American countries, youth-oriented clinic services are available to provide a wide range of clinical and social services such as pregnancy and STD prevention, counselling and testing (Pathfinder International, 1998). Such adolescent friendly health clinics are also available in other parts of the world. For example, one intervention programme in Thailand aims to be a friendly one-stop health clinic, which is accessible, convenient, confidential and culturally as well as socially sensitive to youth's sexual and reproductive health problems and needs. The youth-friendly clinic and educationalheoreational centre in Belize, called Planet Youth, reaches out to both students and young adults who are no longer in school and uses music and theatre to provide pertinent sexual and reproductive health information in the form of positive entertainment (RHO, Program Examples, 1997-2002).This programme suggests that reproductive and sexual health programmes designed for adolescents, particularly those who are not in school, benefit from meeting youths in their own environment. The programme also indicated that commitment from staff, donors, parent, and the young people themselves has been the key to programme success.

It is often revealed that owing to adolescents' cultural, social and geographic diversity, reproductive health programmes based in schools and health facilities cannot reach all segments of the adolescent population. Hard-to-reach adolescents such as those not attending school, working or living on the streets, who have been sexually abused or exploited, indigenous groups or newly-wed couples can better be reached under the community-based programmes. Community-based outreach programmes in different countries

such as El Salvador, Indonesia, Mexico, Thailand and Viet Nam are especially important for groups such as out-of school youth, "street" youth, and girls who have limited freedom to leave their community. These commmity-based projects have a variety of formats to reach youth where they congregate for work or play.

Trained peer leaders in a programme in Thailand facilitates young women living in the workplace to learn and practice skills such as negotiating, planning and sexual health, like using a condom (Cash and Anasuchatku, 1995). In Mexico, gang members are trained to reach out-of-school adolescents (PATH, 1998). In El Salvador, the peer education approach for gang adolescents suggests that programmes must provide information appropriate to the level of knowledge and skills of the community, as well as use the language of youth. The El Salvadoran approach also indicates that programmes should target young women emphasizing negotiation skills so that they can say "no" to unprotected sex and reinforce their self-esteem. Moreover, programmes must make condoms available to youth, so that availability is not an excuse for not using acondom during a sexual act. The experience from the Indonesian programme on street outreach workers indicates that involving gay youth in the overall programme builds trust among the gay community, fmding the selection, training and supervision of outreach workers to be the key to the programme's success.

Special approaches to reach the adolescents and to meet their needs are also being carried out in some other countries. For example, the Urban Life Network, Life Net program, in Thailand, a new approach to meet youth reproductive health needs, by bringing skills and strengthening relationships, reveals that reproductive health education materials should be adapted into formats that are engaging and entertaining to youth, using language and terminology that youth understand (RHO, Program Examples, 1997-2002). Programmes also involve people other than youths such as parents, religious leaders, health officials, and community members to raise community awareness and advocacy regarding the importance of adolescent educational reproductive health needs.

In Kenya, where the Government restricts discussion regarding reproductive health issues, the Kenya Scouts Association showed that it is possible to reach out-of-school youth with family life skills through scouting programmes, and working with homogeneous groups (either in school or out-of-school)works best. The programme also recommended that involving all stakeholders (parents, teachers, scout leaders and the management) in planning and implementing the project helped to address potential concerns and build support for the project. In Uganda, the media approach to address adolescent concerns about sexual and reproductive health demonstrates that it is possible

to openly address sexuality in the African context if the material is tasteful, well-written, scientifically accurate, and based on adolescents' questions (RHO, Program Examples, 1997-2002).

Until now, we have discussed some specific interventions that are in operation around the world. However, the lack of analytical studies to assess the impact of interventions has led to our inability to identify specific successful interventions that could be recommended for replication. One of the weaknesses of these experiences is that it does not tell the sample size and methodology of the data collection. It is important to have a mixed safer-message because adolescents areat different ages and at different points in their sexual development. It is unfair to over-promote condoms to adolescents who want to abstain fiom sex and, conversely, to over-promote the value of abstinence to adolescents who are already sexually active. There must be a message for every adolescent, where they are on the safer-sex continuum.

Limitation of study evaluation

Not surprisingly, the quality of the research methods employed and the strength of the resulting evidence for the impact of the programmes vary greatly from study to study. For example, to minimize selection biases, some studies used random assignment of adolescent to the intervention or comparison conditions, whereas others did not. Some studies involved large sample sizes to ensure adequate statistical power in detecting statistically significant results, while others used relatively small samples, reducing the chance of fiding programmatically significant differences. Some measured programme effects for only three months, while others measured long-term impacts of up to 24 months. And finally, some used more rigorous statistical analyses, while others failed to control statistically for design limitations. Because of those variations in quality, the strength of the evidence from each study should be considered with caution. Additionally, the strengths of any conclusion about the impact of programmes are confiied by the limitations of both individual studies and all studies as a group.

Implications and conclusions

Although as many as 100 NGOs are working in Bangladesh for the improvement of adolescent reproductive health, none of these interventions has been tested or evaluated to claim success of the programme. Consequently, none could be recommended for replication. Programmes recognizing that adolescents can engage in healthy, fulfilling sexual relationships, rather than focusing only on the negative outcomes, may go far in reaching young people with important information. Programmes to improve adolescent reproductive

health must understand the risks they face and consider the many influences on adolescents' lives. Such factors as whether adolescents have initiated sexual activity, are married, in school or working, are important. The impact of poverty, gender inequities, legal restrictions and various cultural expectations must also be addressed. Adolescent sexuality is a sensitive subject in all cultures. Programmes that offer reproductive health services to adolescents can expect to encounter some resistance from their community.

Among the programmatic challenges for adolescent interventions, the most important is to opt for the appropriate way to reach the huge number of adolescents in Bangladesh and to provide them with reproductive health services. The mechanism and strategy to provide friendly and acceptable services to the vast number of adolescents adding every year to the existing number need to be decided. Moreover, the barriers prevailing in the society make adolescents reluctant to visit the reproductive health service centres. This situation has facial programme planners with the challenge of adopting ways to overcome the barriers and thereby create a supportive environment at the community level in which the process of maximizing sexual reproductive health service utilization by the adolescents will be accelerated (Nath and Barkat, 2000).

Rapid population increase and urbanization place pressure on national health, education and social infrastructures, further reducing access to basic needs. On one hand, it necessitates the expeditious implementation of an effective programme, and on the other, the traditional and cultural norms prevailing in Bangladesh hindered the acceptability of new ideas and strategies. Strategies like sex education in schools and easy availability of contraceptives still pose a question of acceptability in the socio-cultural setting of Bangladesh. The health-seeking behaviour of adolescents in Bangladesh indicates that they are more likely to consult non-medical persons (kabiraj/religious and traditional healers/canvasser) for reproductive health illness, owing to their negative attitude towards service providers. Whether education will change adolescents' health-seeking behaviour as well as induce a positive attitude of adolescents towards service providers is another important programme aspect.

Successful programmes provide necessary counselling and clinical services and aim to help adolescents develop skills to make healthy life choices. These programmes respect the needs, concerns and insights of young people by including them in the design and implementation of activities. Working together with parents, community leaders and health professionals can create programmes that address young people's needs and help them to enjoy a healthy adolescence and become healthy and responsible adults (UNICEF, 1998). With the need for adolescent health services growing fast, it is important that new and expanded programmes build upon successful experience.

In order to address young people's reproductive and sexual health concerns, there need to be more researches and age-specific data to highlight the seriousness of youth's unmet needs for reproductive and sexual health information and services. Whenever possible, programmes should be monitored, evaluated and documented to ensure that their challenges are understood and their successes replicated.

In Bangladesh, the annual age-specific fertility rate for adolescents aged 15-19 according to the 1999-2000 BDHS, is 144 per 1,000 females, which accounts for about 22 per cent of the total annual age-specific fertility rates. This implies that at least one fourth annual fertility could be avoided by increasing the female age at first marriage to 20 years and beyond. Whether the current secondary education programme would help to increase the age at first marriage of adolescents beyond 20 years remains to be seen. The future rests heavily on the welfare of adolescent women, on how well they fulfil their roles as mothers, as contributors to the economy, as teachers of the next generations and as sources of strength for their communities and countries. As they work towards claiming their full and legitimate place in the world, young women face hardship and challenges. But the challenges for communities and countries to give young women the helping hand they need and deserve is even greater.

Endnote

1. Author's estimate based on current population size, annual growth rate of the overall population and "momentum effect" on population increase.

References

Alan Guttmacher Institute (AGI) (1998). *Into a New World: Young Women's Sexual and Reproductive Lives,* (New York, Alan Guttmacher Institute).

Baldo, M., P. Aggleton and G. Slutkin (1993). "Does Sex Education lead to Earlier or Increased Sexual Activity in Youth?", poster presentation at the Ninth International Conference on AIDS, Berlin, Germany, Global Programmeon AIDS/WHO (unpublished).

Barkat, A. (2000). Adolescent Reproductive Health: A Challenge, (Dhaka, Bangladesh Rural *Advancement Committee (BRAC)).*

Barnett, B., E. Eggleston, J. Jackson and K. Hardee (1996). *Case Study ofthe Women's Center of Jamaica Foundation Program for Adolescent Mothers, (North Carolina. Family Health International).*

Bhuiya, I., U. Rob, M.E. Khan and A. Al-Kabir (2000). "Reproductive health services for adolescents: recent experiences from a pilot project in Bangladesh", paper presented at the International Conference on Adolescent Reproductive Health: Evidence and Programme Implications for South Asia, 1-4 November, Mumbai, India.

Cash, K. and B. Anasuchatku (1995). "Experimental educational interventions for AIDS prevention among Northem Thai single female migratory adolescents", *Women and AIDS Program Research Report Series* (Washington DC, International Center for Research on Women).

Grunseit, A. and S. Kippax (1993). Effects of Sex Education on Young People's Sexual Behaviour (Geneva, Global Programme on AIDS, World Health Organization).

Haider, S.J., S.N. Saleh, N. Kamal and A.N. Gray (1997). ''Study of adolescents: dynamics of perception, attitudes, knowledge and use of reproductive health care", Project Report, Population Council and Read. Population Council.

Hong, M.S. and J.J. Nam (1989). "Implication for student's sex education in Korea" *Journal of Population and Health Studies* 9(1):148-181.

Hossain, S.M.I., I. Bhuiya, A.K.U. Rob and R Anam (1998). "Directory of organizations working with adolescent/youths" (Dhaka, Population Council).

Jejeebhoy, S.J. (1996a). "Adolescent sexual and reproductive behaviour: a review of the evidence from India", Working Paper No. 3 (Washington DC, International Center for Research on Women (ICRW).

_____1996b. "Women's education, autonomy and reproductive behaviour: assessing what we have learned" (Honolulu, Program on Population, East-West Center).

Lema, V.M. (1990). "Sexual behaviour, contraceptive practice and knowledge of reproductive biology among adolescent secondary school girls in Nairobi, Kenya", *East African Medical Journal* 67(2):86-94.

Liskin, L., N. Kak, A.H. Rutledge, L.C. Smit and L. Stewart (1985). "Youth in the 1980s: social and health concems", *Population Reports* 13(5), Series M, Number 9.

McCauley, A.P., C. Salter, K. Kiragu and J. Senderowitz (1995). "Meeting the needs of young adults", *Population Reports* 23(3), Series J, No. 41 (Baltimore, Johns Hopkins School of Public Health, Population Information Program also available online at: www.jhuccp.org/pr/j4 edsum.stm).

Mensch, B.S. and C.B. Lloyd (1998). "Gender differences in the schooling experiences of adolescents in low-income countries: the case of Kenya", *Studies in Family Planning* 29(2): 167-184.

Mitra, S.N.A. Al-Sabir, A.R Cross and K. Jamil (1997). *Bangladesh Demographic and Health Surveys 1996-1997* (Dhaka, National Institute of Population Research and Training (NIPORT)).

Mitra, S.N., A. Al-Sabir, T. Saha and S. Kumar (2001). *Bangladesh Demographic and Health Surveys 1999-2000, (Dhaka, National Institute of Population Research and Training (NIPORT)).*

National Institute of Population Research and Training (NIPORT) (2001). "Bangladesh maternal health services and maternal mortality survey, 2001", preliminary report.

Nath, D.K and A. Barkat (2000). "Policies, programs and services for young people's reproductive health in Bangladesh", paper presented at the High-Level Policy Makers Seminar on South-to-South Collaboration, Tokyo.

Ogutu-Ohwayo, J. (1991). "Family life education program of Uganda". Comments on Youth Programs in Uganda (Personal communication).

PATH (Program for Appropriate Technology in Health) (1998). "Adolescent reproductive health: making a difference", *Outlook* 16(3).

Pathfinder International (1998). "Insights from adolescent project experience: 1992-1997" (Galen, MA, Pathfinder).

Population Council (2001). "Improving adolescents' reproductive health: Bangladesh", Research Update No. 1, January 2001.

_____ (2002). "Improving adolescents' reproductive health: Bangladesh", *Research Update* No. 2, January 2002.

RHO (1997-2002). "Program Example", this program example was adapted from materials presented in *Description of Specific Programs That Were Assessed for Their HIV/AIDS Communication to Adolescents in Malawi, Zambia, Kenya, and Uganda.*

Senderowitz, J. (1995). "Adolescent health: reassessing the passage to adulthood", *World Bank Discussion Paper* No. 272.

Singh, S. (1998). "Adolescent childbearing in developing countries: a global review", *Studies in Family Planning* 29(2):117-136.

UNFPA (United Nations Population Fund) (1997). "UNFPA and adolescents" (New York, UNFPA).

_____ (1998a). "The state of the world population 1998 report" (New York, UNFPA).

_____ (1998b). "Report on the round table on adolescent sexual and reproductive health and rights: key feature actions" (New York, UNFPA).

_____ (2000). ''Communication and advocacy strategies: adolescent reproductive and sexual health, case study: Nepal", National Resource Center for Non-Formal Education, (NRC-NFE) (Nepal, UNFPA).

UNICEF (United Nations Children's Fund) (1999). "A selective review of interventions for adolescent girls in Bangladesh".

United Nations (1994). Programme of Action of the International Conference on Population and Development, held at Cairo, 5-13 September 1994.

_____ (2000). "Fourth report on the world nutrition situation: nutrition throughout the life cycle", Administrative Committee on Coordination sub-Committee on Nutrition.

WHO (World Health Organization) (1998). *The Second Decade: Improving Adolescent Health and Development* (Geneva, WHO).