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Exploring Adolescent Reproductive Health Knowledge, Perceptions, and Behavior, Among Students of Non-Government Secondary Schools Supported by BRAC Mentoring Program in Rural Bangladesh

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Abstract

Adolescence is the transition period from childhood to adulthood. Since Bangladesh is such a conservative society, reproductive health education for adolescents has not been widely introduced. Very small adolescent health components are included in the secondary and higher secondary school curricula. The BRAC Mentoring Program provides mentorship training to secondary school pupils to develop them as peer leaders. However, this program does not provide adolescent reproductive health education. Therefore, a study, supported by BRAC Education Program in rural Bangladesh, was conducted to explore the current status of reproductive health knowledge, perceptions and practice among the students of secondary schools. This study was conducted in November 2012 among the students of three secondary schools supported by BRAC Education Program in two sub-districts of Mymensingh district, Bangladesh. The qualitative study explored students' reproductive health knowledge, perceptions, and behavior. Twenty four In-Depth Interviews and four Focus Group Discussions were conducted with students and four Key Informant Interviews were also conducted with teachers. The findings indicated that there is a lack of knowledge on reproductive health among the adolescent girls and boys of rural secondary schools. The students did not know about physical changes in puberty before the onset of such changes and mostly learnt about them from their own bodily experience. Mothers were the main source of information on menstruation for girls, and in case of boys, friends were the main source of information on wet dreams. All girls had comparatively good menstrual hygiene knowledge and practices. On the other hand, boys had very poor knowledge about wet dreams. Both girls and boys had poor knowledge about sexually transmitted diseases. However, they had better knowledge and perceptions about AIDS, in comparison with other issues of adolescent reproductive health. Though teachers and students felt uncomfortable with the teaching of reproductive health issues in class, but, interestingly, books were found to be the most reliable source of information for the students. Most of the students and teachers felt that the available information was inadequate for the adolescents. The study findings also showed that adolescent boys and girls had limited knowledge about reproductive health. Therefore, it is recommended that BRAC Education Program needs to provide adolescent reproductive health education in the

school through peer education approach and provide special training to the teachers on teaching reproductive health education in class as well.

Keywords

Sexual health, BRAC Mentoring programme, Menstruation, Wet dream, ARH education, rural Bangladesh

Introduction

Adolescence is the transition period from childhood to adulthood and is widely recognized as a time of great opportunity. It is also considered as a period with vulnerabilities, in terms of both biological (physical and psychological) and environmental (national and international politics along with influence of family, community, neighbors, peers and schools) aspects.[1]. At present, the adolescent cohort among the global population is the largest ever, adolescents aged 10-19 years comprise about 18% of the global population.[2] Moreover reproductive health problems are the major cause of death among women aged 15 to 19 years.[3] Although considerable progress has been made in understanding the factors that affect healthy transition into adulthood, many adolescents still lack the support they need for their physical, psychological, as well as social development, including access to information and services.

Adolescence is the period when major physical changes take place and secondary sexual characteristics appear. Therefore, accurate and adequate reproductive health knowledge at this age is crucial for developing proper practices and behavior regarding reproductive health for the future. In reality, adolescents are poorly informed about their own bodies and health. Moreover, the information available to them is most often incomplete, inadequate, and confusing.[4] Proper Adolescent Reproductive Health (ARH) education can provide adolescents with culturally relevant, age-appropriate and scientifically accurate information. This can give adolescents the opportunity to explore their knowledge, attitudes, and values on reproductive health (RH) as well as in practicing those skills while taking decisions related to their personal lives.[5]

In Bangladesh, the total number of adolescents (10-19 years of age) is 34 million, which represents 23% of the country's population[6]. About 12% of the adolescents belong to the age group of 10-14 years and 11% are in the age group of 15-19 years.[7] among the adolescent girls, 11% belonging to the age group of 10-14 years and 46% from the age group of 15-19 years are reported as married.[8]

Different types of school-based reproductive health interventions have been introduced and tested in many developed as well as developing countries. However, due to the conservative society of Bangladesh, reproductive health interventions for adolescents have not been widely introduced. Very small adolescent health components are included in the curricula of secondary and higher secondary schools and in Ibtedai[a] and Dakhil courses. The textbooks cover the reproductive system, mental changes during puberty,

[a] '*Ibtedai*' is equivalent to primary level and '*Dakhil*' is equivalent to secondary level of education under Bangladesh Madrasah Education Board.

personal hygiene, relationship with parents and peers, adolescent nutrition and HIV/AIDS.[9] But the section on physical changes during puberty only highlights the menstrual cycle and there is no information about the physical changes of adolescent boys.[9]

Although, the public secondary school curriculum has been reviewed, and updated but, these issues have still not been included in the curriculum. Moreover, the information included in the curriculum does not cover all aspects of adolescent health and teachers often skip the chapters on adolescent health, or ask students to read them at home[8]. The teachers as well as the guardians also do not feel comfortable in talking about/ discussing these issues with adolescents.[10] However, considering the importance of adolescent reproductive health education, the Program Implementation Plan of the current Health, Nutrition and Population Sector Development Program emphasizes more on effective dissemination of the existing SRH information in the secondary school curriculum at school.[6]

The School-based BRAC Mentoring Program was started in 2007. It provides mentorship training to the secondary school adolescents to develop them as peer leaders called 'Mentor'. This program basically follows the 'Peer Leadership Model'[b] where mentors actually work as peer educators for their peer groups.

An evaluation of BRAC Mentoring Program showed that mentoring training has contributed to the development of leadership skills and creativity among school adolescents and has thereby, improved their school performance[11]. However, at present, this program has no intervention on adolescent reproductive health education for the students of the program supported schools. Therefore, the proposed study aims to explore the current status of reproductive health knowledge, perceptions and practices among adolescents who participated in the Mentoring Program, and whether the mentoring skills have had any effect on their reproductive health practices. The findings of this study will help the program identify the missed opportunities for providing reproductive health related knowledge to these adolescent groups during mentorship training.

Methodology

Study design

It was an exploratory study where the qualitative method was used to explore ARH knowledge, perceptions and behavior of the students of the selected secondary schools.

Setting

The study was carried out in Mymensingh Sadar and in the Phulpur sub-district of the Mymensingh district, Bangladesh in November 2012. The study site was selected purposively, considering the time and budget constraints, the availability of accommodation for the researchers, as well as the objectives of the study. Mymensingh

[b] In **Peer leadership model**, a person is selected and trained with special education and skills, so that he/she can facilitate a desired change by disseminating information within the assigned group (UNSCO/UNFPA, 2003)

is one of the oldest districts, with 12 sub-districts, located about 120 km north of Dhaka, the capital of Bangladesh. Mymensingh Sadar is the Headquarter of this district and Phulpur is the biggest sub-district.

Sampling

According to the Population census of 2011, 19.6% of the total population in Mymensingh belongs to the adolescent group, aged between 10 and 19 years. In 2012, the BRAC Mentoring Program was providing support to a total of 44 non-government secondary schools in Mymensingh; of those 8 schools were in Mymensingh Sadar and 5 schools were in Pulpur sub-districts. Of these mentoring supported schools, two schools were selected purposively, considering better communication and access to the schools for organizing group discussions and interviews. Another non-government secondary school was selected from Pulpur sub-district, where there was no intervention from BRAC Mentoring Program, and this was referred as a non-mentoring school in this study.

This study was conducted among the students studying in the 9th grade and the teachers of the selected schools. The students were selected because they receive ARH education, though little, through the secondary school curriculum in Bangladesh. The students were selected conveniently, considering their availability in the schools on the date of data collection and their willingness to participate in the study. The sample distribution for this study is explained in table 1.

Table 1
Distribution of Samples

Method of data Collection	School supported by BRAC Mentoring Program	School not supported by the BRAC Mentoring Program
24 IDIs	6 Mentor boys (3 from each school) 6 Mentor girls (3 from each school)	6 boys 6 girls
4 FGDs (6 students in each group)	1 with boys from one school 1 with girls from the same school	1 with boys 1 with girls
4 KIIs	2 Headmasters 1 Biology teacher	1 Biology teacher

Data collection

The relevant documents on adolescent reproductive health were reviewed to identify the existing strategy and the guidelines on the curriculum. 'Bangladesh Adolescent Reproductive Health Strategy 2006'; 'Health, Population and Nutrition Sector Development Program (2011-2016): Program Implementation Plan, Volume -I'; 'National Population Policy 2011', and national textbook on 'Social Science', 'General Science' from 6th to 9th grade and 'Biology' book of 9th grade were selected for document review.

In-depth Interview (IDI), Focus group discussion (FGD), and Key Informant Interview (KII) were the main methods of data collection. Individual knowledge, perceptions, and behavior of the students regarding ARH were explored through IDI. In the two mentoring schools, IDIs were carried out among mentor students following some criteria – those who received mentoring training in the 6th/7th grade and were continuing their mentoring role in the 9th grade. Focus group discussions were carried out with boys and girls separately to identify common sources of information, and to explore the general knowledge and perceptions of the adolescents regarding ARH. For FGDs, fellow students who belonged to the peer group of the selected mentor students of that school were selected from the mentoring school and the students who did not participate in the IDIs were selected from the non-mentoring school. The perceptions of the teachers on teaching ARH at school were explored through Key Informant Interviews.

All the IDIs, FGDs and KIIs were conducted and facilitated in the local language – Bangla. Each IDI and FGD lasted for about one hour; and the KII for about 30 minutes. Three separate guidelines were developed for the IDI, FGD, and KII, on the basis of the guideline developed by Cleland & colleagues 'Asking young people about sexual and reproductive behaviors: Illustrative Core Instruments'[12]. The guidelines focused on these issues: physical changes during puberty, menstruation / wet dreams, family planning, sexually transmitted infection (STI) and HIV/AIDS, source of information, and teaching SRH in school.

Data analysis

The researcher developed a list of codes prior to the data collection, based on literature, the conceptual framework, and the research question. All the recorded interviews and FGDs were transcribed and translated into English, following data collection. Content analysis was done for data analysis.

At first, all the transcripts were reviewed carefully and repeatedly to get familiar with the range, content, and diversity of the raw data. Secondly, transcripts were coded by using ATLAS.ti software. Third, broader themes were identified on the basis of the research questions that emerged progressively from the data. Then, data was clustered, grouped, and organized under four major themes – knowledge and perception, ARH behavior, source of information, teaching SRH in school. Finally, different matrixes were developed to display data under themes and sub-themes. Then, comparative analysis of the findings was done between students from the mentoring and non-mentoring schools, as well as between boys and girls, by using the themes and sub-themes. Data were then verified and validated by triangulating data emerging from different methods.

Ethical considerations

Ethical approval was received from the Ethical Review Committee of James P. Grant School of Public Health, BRAC University. Following the WHO guidelines for

conducting research on reproductive health involving adolescents[c], consent was taken from both Headmaster of the study schools as well as from adolescents participated in the study. As all the interviews and group discussions were conducted in the school compound, verbal consent was taken from each of the Headmaster of the selected schools to carry out the study with adolescent students. Informed written consent was also obtained from each student before proceeding with the interviews and informed verbal consent was obtained from each student before the FGD. A unique number was used for each participant instead of using any identification marks, such as name, address, etc. to ensure the confidentiality of information at all levels.

Results

Characteristics of the respondents

All student participants from the mentoring and non-mentoring schools were Muslims and unmarried. The number of boys and girls were equal for both groups. The age range of the students was 13 to 17 years and the median age was 14 years.

There was a World Vision supported adolescent reproductive health program named 'Alokito Manush' (Enlightened People) in one mentoring supported school. One mentor girl and three mentor boys from that school participated in World Vision's health forum. There was no such kind of intervention in another mentoring supported school. In the non-mentoring school, BRAC had established a library named 'BRAC Pathagar' having some books on adolescent health. None of the students of the non-mentoring school were involved in any adolescent development activities.

Four teachers were interviewed as key informants. Of them, three were male and one was female. All of them were Muslims and married. Their age range was 32 to 58 years and the duration of teaching experience was 8 to 29 years.

Knowledge and perception about puberty and pubertal changes

Most of the boys from the mentoring schools considered the age range from 12 to 16 years as adolescents and their counterparts from the non-mentoring school mentioned the range as 10 to 24 years. On the other hand, most of the girls from the mentoring and non-mentoring schools mentioned the adolescent age range between 12 to 18 years. Most of the boys and girls, from both the groups understood puberty as the time when different physical and mental changes happen to boys and girls.

The most common physical changes during puberty identified by a majority of the girls and boys from mentoring and non-mentoring schools are presented in Table 2. Almost all the girls and boys were not informed about pubertal physical changes before the onset of such changes. They reported that they learnt about pubertal physical changes from their own bodily experience. All the girls from both the group mentioned that they first realized physical changes in their bodies after the experience of menarche. Several boys from both the groups mentioned that they first noticed the gradual increase of their penis

[c] WHO. Sexual and Reproductive Health: Ethical issues. Reproductive health involving adolescents. [Internet]. Available from: http://www.who.int/reproductivehealth/topics/ethics/adolescents_guide_serg/en/

size, and several other boys from both the groups recognized their bodily changes after experiencing their first wet dream.

Table 2
Most commonly identified physical changes

Identified by girls	Identified by boys
Menstruation	Development of reproductive organ
Height and weight increase	Appearance of beard and moustache on the face
Breast enlargement	Muscle development
Hair growth around vagina	Hair growth around penis and hair growth on the chest
Increase in length of skull hair	

All the girls, and a majority of the boys, did not have correct knowledge about the reasons for pubertal physical changes. The common understanding among a majority of the boys and girls from the non-mentoring school was 'physical changes happen due to increase of age'. Several girls from mentoring schools also had similar perception. Only two boys from the non-mentoring school correctly mentioned hormonal changes as a cause for physical changes during puberty.

The girls reported feeling more uncomfortable with the symptoms of puberty than their male counterparts. The girls mostly reported about feeling fear, shy and irritated; whereas the boys mentioned about attraction to girls and sexual desires as psychological effects of physical changes.

Girls and boys were asked how physical changes influenced their daily activities in order to understand the potential factors that may influence their reproductive health behavior. Girls from the mentoring and non-mentoring schools mentioned more changes that came in their life due to physical changes than their boy counterparts (Figure 1).

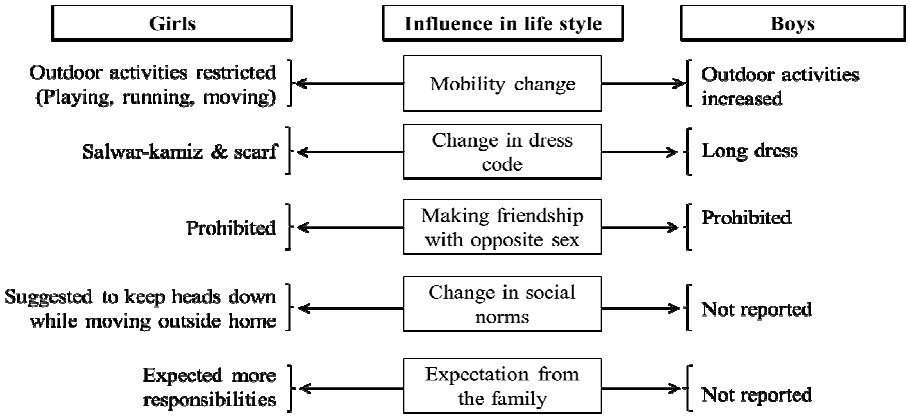

Figure 1. Influence of physical changes in life style

Knowledge and perceptions about sexually transmitted diseases:

Girls and boys from both the mentoring and non-mentoring schools had poor knowledge about sexually transmitted diseases (STD). The adolescent girls who attended the World Vision's health class had a better understanding about sexually transmitted diseases than the other adolescent girls of the same mentoring school. The adolescent girls of the other mentoring school and the non-mentoring school had the similar perceptions about STD. A majority of them only had heard the term 'jounorog' (sexual disease). On the other hand, a majority of the boys from the non-mentoring school had some idea about STD as compared to their counterparts from the mentoring schools. A majority of the boys from the mentoring schools did not know about STD. All of the respondents recognized STD by AIDS. The girls from both the groups who knew about STD mentioned that sexual diseases are caused by illegal non-marital sexual relationships. On the other hand, the boys from both the groups who knew about STD stated that STDs spread through both non-marital and extra-marital illegal sexual relationships. With regard to symptoms of STDs, only three boys from the non-mentoring school mentioned some symptoms - ill health; can't be attentive in work; do not feel well all the time; cheek sunken; scabies, ulcer and discharge from sex organ; urination problem, and pain in the penis. Only one girl from a mentoring school mentioned

> The joints of the body are mainly affected by these diseases and black spots develop in the affected areas. [girl, non-mentoring school, 15 years]

The boys and girls who participated in the study had better knowledge and perceptions about AIDS in comparison to other issues related to adolescent reproductive health. A possible reason for this could be that AIDS is included in the secondary school curriculum. A majority of the girls from the mentoring and non-mentoring schools defined AIDS as a 'Dangerous', and 'Sexually transmitted' disease. On the other hand, a majority of the boys defined AIDS as a 'Viral' disease caused by 'Human Immune Virus'. All respondents, from both the groups, knew that there was no treatment that had been invented yet to cure AIDS. Girls and boys from the non-mentoring school knew more about the symptoms than their counterparts from the mentoring schools. Amongst the students from the two mentoring schools, boys and girls from the mentoring school were having the World Vision's intervention knew more symptoms than their counterparts from the other mentoring school. Fever and weight loss were the most commonly mentioned symptoms mentioned by the students from both the groups.

Students from both the mentoring and non-mentoring schools had similar knowledge about the mode of HIV transmission and non-transmission. Girls from both the groups had comparatively better knowledge than their boy counterparts. The common mode of HIV transmission correctly mentioned by a majority of the boys and girls from the mentoring and non-mentoring schools were: sexual relations (marital, non-marital and extra-marital) with AIDS patients, blood transfusion from AIDS patients, using the same syringe used by AIDS patients and mother to child transmission.

A majority of the girls from both the groups correctly mentioned some modes through which HIV is not transmitted: using belongings (dress or clothes) of an AIDS patient, sharing food from the same plate with an AIDS patient, sharing the same bed with an

AIDS patient (without having sex), through saliva and cough of an AIDS patient, and by taking a bath with an AIDS patient.

Students from both mentoring and non-mentoring schools correctly mentioned some preventive measures to protect oneself from HIV transmission: abstaining from illegal sexual relations before and after marriage, using new syringes each time and for each person while injecting drugs, avoiding drug addiction and following religious rules and regulations.

Knowledge, perceptions, and behaviour regarding menstruation among girls

Girls of both mentoring and non-mentoring schools had poor knowledge and perceptions about the menstrual cycle. A majority of them defined menstruation as the monthly release of 'nosto' or 'kharap rokto' (contaminated blood) from the body. They experienced menarche between 11-12 years of age. The mother was the first contact person for most of the girls for getting information and for sharing experiences about menstruation. A majority of the girls of both the groups informed that they were scared when they first saw the blood of menarche, because they were not informed about menstruation before the onset of menarche:

> Many become scared when it happens for the first time. Many think that what is happening. Is this a cut? Some cry that suddenly what's happening? They cannot share with anybody what happens in such a place. [girl, mentoring school, 15 years]

Only three out of the 12 girls from mentoring schools and three from the non-mentoring school used sanitary napkins with panties during the menstrual period. Their elder sister, neighbour, sister-in-law or female relatives taught them the use of a napkin. The rest of the girls of both the groups used rags with panties during the menstrual period. All of them informed that their mothers taught them the use of rags. All the girls of both the mentoring and non-mentoring schools knew how to clean and dry the rags that were used to manage menstruation. Those who used rags informed that they washed those daily with water and soap. Some of them used warm water and Savlon (liquid antiseptic) to wash the rags. All of them knew that rags should be dried-up properly under sun light and a majority of them practiced that. All the rag users informed that they had to change each rag 5 to 7 times on an average, per day, based on the flow of bleeding. Girls, who used napkins, had to change the napkin 3 to 5 times on an average, in a day. The rag user girls mentioned the cost of the napkin as the reason behind not using napkins:

> We have heard that this thing cannot be used more than once. We have heard on the TV. This will cause many diseases. But in the rural areas, there are many poor people. How will they change this a second time? It's hard for them to buy this. [girl, non-mentoring school, 15 years]

All of the girls mentioned that during the menstrual period they were advised to take a shower daily to keep the body clean, to wear clean clothes and to always keep the vulva clean. Many girls from the mentoring schools informed that they followed some rules even when their menstrual period was over. The rules are: take a shower, wash clothes, and remove hairs from around the vulva and from the under arms, cut nails, and wash head hair with shampoo.

All of the girls of both the mentoring and the non-mentoring schools, informed that they had some problems prior to and during the menstrual period. Lower abdominal pain, pain in the leg and waist, weakness, and headache were the most commonly mentioned problems by a majority of the girls from both the groups. Figure 2 presents the treatment seeking behaviour mentioned by almost all girls from both the groups for managing menstrual problem. One girl from the non-mentoring school mentioned that her mother bought her a 'bori (pill) which is taken for stomach ache' from the local pharmacy for abdominal pain.

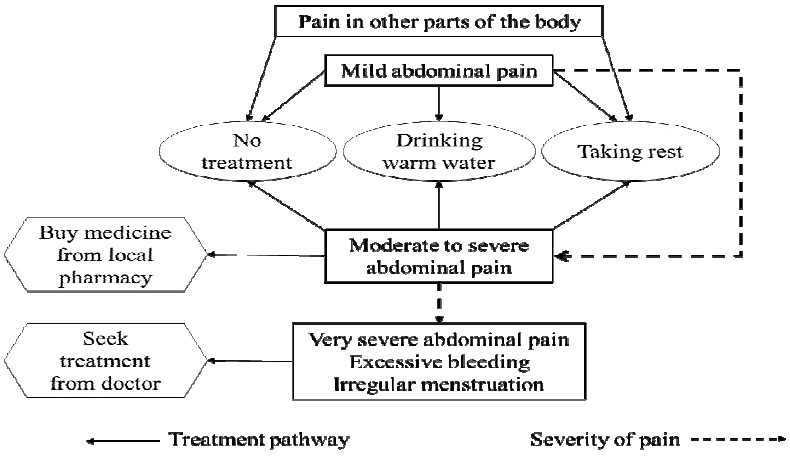

Figure 2. Health care seeking behaviour for menstrual problems

Some information about menstruation related cultural beliefs and practices were revealed from the conversation with both the groups of girls. All girls from both the groups informed that some food items, such as fish, meat, milk, egg, and sour foods are restricted during menstruation, because it is believed that eating these restricted foods creates many health problems. It is believed that eating fish, muri (puffed rice), dal and Chalvaja (fried husked paddy) produces bad smell in the blood of menstrual bleeding; eating sour foods, milk, meat and eggs leads to excessive bleeding during menstruation and makes the vulva white:

> Milk, meat, egg, and fish are restricted. People forbid us to eat these foods, because these will develop a disease. There is a disease like white substance, which is called 'Dholi' (probably leprosy). [girl, non-mentoring school, 14 years]

However, four girls from the non-mentoring and four girls from the mentoring schools informed that in spite of being forbidden, they eat all types of foods:

> Mother forbade me to eat eggs and fish during menstruation, because eating eggs and fish will increase blood loss. But I have read in a book that if we eat these foods we will get nutrition. People say that during menstruation, bad blood separates from the body. So, the body becomes weak. That's why we have to eat more eggs, fish, meat and milk. These will replace the blood that the body loses due to menstruation." [girl, mentoring school, 15 years]

Most of the girls from the non-mentoring school reported that they are restricted from going to certain places like banks of river and ponds, and cow sheds, because there, it is believed that they will be subjected to the evil eyes and therefore, they will have more

bleeding.They are also forbidden from walking over rats and scorpions holes, because this may cause excessive bleedings. Other restricted places mentioned were graveyards and paddy warehouses, which are considered as pure places. A common belief is that during menstruation the body of girls becomes impure, therefore, they should not go to these pure places.

Two girls from the non-mentoring school mentioned that it was believed in their community that menarche aids develop a bad smell. Therefore, the first aids used during menarche are buried under the soil:

> The rags which were used for the first menstruation should be buried in the soil……. It is said that the rags which are used first are subject to odour. Those can't be re-used. [girl, non-mentoring school, 15 years]

A girl from the non-mentoring school mentioned that in their village female family members celebrate a girl's menarche:

> During the first menstrual period the girl is fed different types of foods, such as 7 types of fish, eggs, leafy vegetables and sunned rice. It's a kind of a family ceremonial function, because it's the first experience of a girl's life. The mother and other female family members celebrate this. [girl, non-mentoring school, 15 years]

Knowledge, perceptions and behavior regarding wet dream among boys

Boys from both the mentoring and non-mentoring schools had poor knowledge about wet dreams. More boys from the non-mentoring school, than boys from mentoring school had some idea about wet dreams. Two concepts about wet dreams came out from the conversation with the boys from the non-mentoring and mentoring schools – 1) dreaming about sexual activities and 2) seminal emission while sleeping.

A majority of the boys from the non-mentoring schools thought that some problems may occur due to repeated experience of wet dreams, these included: physical weakness, ulcer in the reproductive organ, sexually transmitted disease, headache, hot flushes and reduces sexual ability. Several boys from the non-mentoring school also mentioned that boys could seek treatment from a homeopath or a 'kabiraj' (traditional informal provider) for wet dream related problems. A majority of the boys from the mentoring and non-mentoring schools had experienced a wet dream at least once. They first shared their first experience of a wet dream with their friends. All of the boys from both the groups mentioned that they took shower and washed their dress in the morning, if they experienced wet dream at night. One boy from the mentoring schools thought that after experiencing a wet dream one should eat nutritious foods.

Source of information on adolescent reproductive health

One of the objectives of this study was to identify the different sources of reproductive health information available to the adolescents. All boys and girls learned about physical changes mostly from their own experience. Girls from both the groups mentioned that road side posters and leaflets and stickers distributed in the vehicles were the major source of information about STDs, while friends and magazines were the major source mentioned by majority of the boys of both groups. The textbook was the main source for all boys and girls to learn about AIDS. Girls were informed about menstruation by their family members (mostly mother, sister, sister-in-law, grandmother); whereas boys learned about wet dreams mostly from their friends. Books were the most important source of information to all of the boys and girls from both the mentoring and non-mentoring schools, for learning about reproductive health:

> It would be better if there was a book on these topics. Books are more reliable, because books are written based on research and evidence. [girl, mentor, 15 years]

Teaching ARH education in the school

Almost all the student respondents, and three out of the four teachers, thought that information on reproductive health in the text book of secondary school was inadequate. Besides, the students also reported that teachers, most often, skipped some topics of reproductive health, like sexual diseases or human reproductive organ, although these topics, to some extent, were covered in the text book.

All the teachers mentioned that society is one of the main barriers in providing ARH education at the school level. They said that in the conservative society of rural Bangladesh, community people, especially the parents and guardians of the students, usually do not accept ARH education being provided in the school. One teacher shared his experience:

> It happens sometimes that if we provide a bit more information in class, then the village people criticize and complain to the Head master. They say why this is discussed in the class. Therefore, we have to teach carefully. [Biology teacher; non-mentoring school; male, 58 years]

The two Headmasters suggested two techniques for overcoming this social barrier. One way could be informing parents about the topics and the importance of ARH education, in the Parents Teachers Association (PTA) meeting, before introducing this in the school curriculum. Another possible way suggested by another headmaster was including guardian representatives of the school management committee in the training process; so that they can understand that what is taught in the school is good for their children. They thought that if guardians are informed about ARH education then they will not create any barrier.

Discussion

The present study findings indicate that there is lack of knowledge about reproductive health among the adolescents from both mentoring and non-mentoring schools; especially, they have very poor knowledge on puberty and pubertal physical changes, and STDs. Girls were poorly informed about the physiology of menstruation. Similarly, boys had very poor knowledge about wet dreams. Several previous studies have also found similar results regarding adolescents' knowledge about puberty.[13, 14] The study respondents were aware of the visible physical changes during puberty, which is consistent with the findings of other studies conducted in Bangladesh.[14-16]

A common belief regarding menstrual bleeding, as revealed from this study, was 'nosto or kharap rokto' (contaminated blood). A similar belief was found among the Pakistani adolescent girls in a study conducted in Karachi.[17] Moreover, similar to this study, some studies conducted in Bangladesh[18], India[19-,20] and Pakistan[17] also report that, due to lack of awareness prior to menarche, adolescent girls experienced menarche as a fearful, unusual, and scary event. Like some other studies conducted in Pakistani[17] and Indian contexts,[21] the present study also revealed that the mother was the first contact person to get information and with whom menstruation experience was shared. Conversely, another study, conducted in Bangladesh, reports that the mother is as the last contact person for sharing the first menstrual experience.[18]

Several studies have reported that the use of reusable old torn clothes or rags for managing menstruation is a common practice among rural adolescents, [18, 20-22] which is similar to this study's findings. However, a noticeable difference was observed between the adolescent girls in the present study and other similar studies in Bangladesh regarding menstrual hygiene. Most of the girls dried the rags in a dark or shaded place

inside the home[18, 22], whereas this study revealed that a majority of the adolescent girls dried used rags in direct sunlight after washing them with soap and water. This finding is a positive sign of improved menstrual hygiene practice among adolescent girls in rural Bangladesh.

There are different beliefs and taboos related to restricted movement and feeding patterns during menstruation in different cultures which guide the menstrual practices of adolescent girls. This was also the case in the present study. Another study conducted in rural Bangladesh also reported such beliefs and practices, but mostly among Hindu adolescent girls[18]. On the other hand, all of the current study participants were from Muslim families. Similar types of beliefs also exist in the Indian culture where adolescent girls are restricted from passing crossroads during menstruation due to the belief that an evil eye will be cast over them.[21] Bathing during menstruation is traditionally forbidden in rural cultures in Egypt[23] and Pakistan.[17] However, our study girls reported that their mothers suggested them to take a bath daily during menstruation to maintain cleanliness. Restriction of certain foods, especially fish, and sour foods is a very common cultural practice during menstruation in many countries including Bangladesh[18, 22], India[19,20] and Pakistan.[17] The present study also revealed the similar practices which is consistent with the findings of previous studies.

Adolescent boys have very poor knowledge about the physiology of wet dreams. They are most often not informed about such pubertal events prior to their experience.[18, 24] This study finding also provides evidence supporting previous studies in this regard. This study also revealed that adolescent boys get information about wet dreams mostly from friends, who usually share their own experiences or perceptions which are most often incorrect or incomplete. A common perception of the adolescent boy respondents of our study about wet dreams was that boys become weak due to seminal emission during a wet dream. Several boys also reported that as a result of frequent experience of wet dreams boys may lose their sexual strength. This finding is consistent with the finding of another study conducted among Bangladeshi adolescent boys.[18]

Adolescent girls and boys have very poor knowledge about STD in Bangladesh.[18, 25] A study conducted among adolescent boys and girls in 1999 showed that only 20% had heard about STD.[18] A decade later another study conducted in 2008 among rural adolescent girls reported a similar level of knowledge about STD, and a majority of them had incorrect knowledge about the mode of transmission.[25] The 2005 Adolescent Survey in Bangladesh (ASB) conducted by the BRAC Research and Evaluation Division also found that a large portion of married adolescents did not know about the symptoms or mode of transmission of STD.[14] Similarly, this study also found that a majority of the adolescent boys and girls had only heard about the term 'jounorog' (sexual disease), but did not know anything about it. Most of them only recognized AIDS as an STD. This finding is also consistent with the findings of other studies where researchers found that Pakistani[17] and Indian[26] adolescent girls had very poor knowledge regarding STD other than HIV/AIDS.

Though a majority of the participants of this study had very poor knowledge about STD, but all had good knowledge about HIV/AIDS. These findings of the present study contrast with the findings of other previous studies conducted among rural Bangladeshi adolescents. Though most of the study participants had heard about AIDS, half of them did not know the route of transmission.[18] Another study conducted among rural adolescent girls showed that 60% of them had never heard about AIDS, and of those who had heard about AIDS, 48% did not know the route of transmission.[25] The 2005 Adolescent Survey in Bangladesh (ASB) also showed that a substantial portion of adolescents had no knowledge about the mode of transmission of AIDS.[14]

The current education system in Bangladesh is also not addressing the information need of the adolescents.[14] In the present study, teachers thought that there is not adequate

information on reproductive health in the secondary school curriculum. Besides, the student respondents in this study reported that teachers also, most often, skipped some topics on reproductive health. A very recent study conducted in rural Bangladesh also reported that teachers most often told students to read such topics on their own at home.[10]

The present study revealed that books are the most important source from which the students get reproductive health information. Moreover, they prefer to learn about this in classes, because parents do not feel comfortable in discussing these issues at home. In one study the key informants (including the parents and grandparents of adolescents, community leaders, teachers, and healthcare providers) also expressed that they were in favor of providing RH education at the school level.[18]

Study limitations

The major limitation of this study was the period of data collection. The qualitative data were collected for this study in November 2012 which was the time of annual examinations in the schools. Therefore, the researcher faced problems in recruiting students and teachers for interview and was not able to provide enough time to the respondents for rapport building, which may have influenced the response of the participants. Another potential limitation of this study was that the students were interviewed in the school campus, due to shortage of time. This may also influenced the responses of the students.

Conclusion and recommendations

The study revealed that, overall, adolescent boys and girls had limited reproductive health knowledge. Although the girls from the mentoring school showed comparatively better knowledge than girls from the non-mentoring school, the result also showed a difference in knowledge level between the girls from the two mentoring schools. Access to ARH information from other sources besides the school curriculum could be a possible reason for the differences in the girls' knowledge of the two mentoring schools. The students from one mentoring school that had the World Vision's adolescent health intervention had got the opportunity of accessing more information on ARH and therefore, especially girls, had comparatively better knowledge about reproductive health.

On the other hand, the majority of the boys from the non-mentoring school had better knowledge about STD and HIV/AIDS than their counterparts from the two mentoring schools. No difference was found in the level of knowledge between most of the boys from the two mentoring schools. Boys from both the mentoring and non-mentoring groups had poor knowledge about wet dreams and the underlying causes of pubertal physical changes. It can be concluded from the findings of this study that there is a lack, and also a need for reproductive health information among the students of selected non-government secondary schools.

This study has provided evidence, especially for BRAC Education Program as it is supporting secondary schools in the rural areas with an aim to improve the quality of education. Several interventions are recommended for the BRAC education program on the basis of the suggestions and findings revealed from this study for providing adolescents with accurate and accessible reproductive health information to promote a healthy reproductive life.

It is recommended that reproductive health education should be incorporated in the Mentoring training course and the 'peer education' approach to be applied to provide reproductive health education in the school through the Mentors. In addition, one teacher

from each school could also be trained so that he/she can guide the Mentors in providing reproductive health education. BRAC Mentoring Program can also make collaboration with other organizations having adolescent reproductive health interventions and link them with the Mentoring Program supported schools.

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