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Principal Investigator: Last, first, middle Nahar Quamun

ICDDRB: Centre for Health & Population Research RRC APPLICATION FORM

RESEARCH PROTOCOL

FOR OFFICE USE ONLY

Protocol No: 2000-008 Date received: 19/4/2000

RRCApproval: Yes/ No Date:

ERC Approval: Yes/No Date:

Project Title: Operations Research on Strategies to Improve Reproductive Health Services for Adolescents in the Public Sector

Theme and key words: Adolescent Reproductive Health

Principal Investigator: Dr. Quamrun Nahar **Division:** HPED **Phone:** 2518

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Co-Principal Investigator(s):

Co-Investigator(s):

Dr. Cristobal Tunon	ORP/ICDDR,B
Dr. MA Quaiyum	ORP/ICDDR,B
Dr. Rafiqus Sultan	GoB

Student Investigator/Intern:

Collaborating Institute(s): GoB (MOH&FW)

Population: Inclusion of special groups *(Check all that apply)*:

Gender
- ☑ Male
- ☑ Females

Age
- ☐ 0 – 5 years
- ☐ 5 – 9 years
- ☑ 10 – 19 years
- ☑ 20 +
- ☐ > 65

- ☐ Pregnant Women
- ☐ Fetuses
- ☐ Prisoners
- ☐ Destitutes
- ☑ Service providers
- ☐ Cognitively Impaired
  - ☐ CSW
- ☑ Others (specify Adolescents, parents, community leaders)

Project / study Site *(Check all the apply)*:
- ☐ Dhaka Hospital
- ☐ Matlab Hospital
- ☐ Matlab DSS area
- ☐ Matlab non-DSS area
- ☐ Mirzapur
- ☐ Dhaka Community
- ☐ Chakaria
- ☑ Abhoynagar
- ☑ Mirsarai
- ☑ Patyia
- ☐ Other areas in Bangladesh _____
- ☐ Outside Bangladesh
  name of country: _____
- ☐ Multi centre trial
  (Name other countries involved)
  _____

Type of Study *(Check all that apply)*:
- ☐ Case Control study
- ☑ Community based trial / intervention
- ☐ Program Project (Umbrella)
- ☐ Secondary Data Analysis
- ☐ Clinical Trial (Hospital/Clinic)
- ☐ Family follow-up study
- ☐ Cross sectional survey
- ☐ Longitudinal Study (cohort or follow-up)
- ☑ Record Review
- ☐ Prophylactic trial
- ☐ Surveillance / monitoring
- ☐ Others

Principal Investigator: Last, first, middle Nahar Quamun

Targeted Population *(Check all that apply)*:

- [x] No ethnic selection (Bangladeshi)
- [ ] Bangalee
- [ ] Tribal groups
- [ ] Expatriates
- [ ] Immigrants
- [ ] Refugee

Consent Process *(Check all that apply)*:

- [ ] Written
- [x] Oral
- [ ] None
- [x] Bengali language
- [ ] English language

Proposed Sample size: Total sample size: 3600 [ ]

Sub-group: 600 adolescents (300 boys and 300 girls) in each of the two intervention groups and control group in each field site

Determination of Risk: Does the Research Involve *(Check all that apply)*:

- [ ] Human exposure to radioactive agents?
- [ ] Fetal tissue or abortus?
- [ ] Investigational new device?
  (specify_____)
- [ ] Existing data available from Co-investigator
- [ ] Human exposure to infectious agents?
- [ ] Investigational new drug
- [x] Existing data available via public archives/source
- [ ] Pathological or diagnostic clinical specimen only
- [ ] Observation of public behavior
- [ ] New treatment regime

Yes/No

- [ ] [x] Is the information recorded in such a manner that subjects can be identified from information provided directly or through identifiers linked to the subjects?

- [x] [ ] Does the research deal with sensitive aspects of the subject's behavior; sexual behavior, alcohol use or illegal conduct such as drug use?

Could the information recorded about the individual if it became known outside of the research:

- [ ] [x] a. place the subject at risk of criminal or civil liability?

- [ ] [x] b. damage the subject's financial standing, reputation or employability; social rejection, lead to stigma, divorce etc.

Do you consider this research *(Check one)*:

- [ ] greater than minimal risk
- [x] no risk
- [ ] no more than minimal risk
- [ ] only part of the diagnostic test

Minimal Risk is "a risk where the probability and magnitude of harm or discomfort anticipated in the proposed research are not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical, psychological examinations or tests. For example, the risk of drawing a small amount of blood from a healthy individual for research purposes is no greater than the risk of doing so as a part of routine physical examination".

Principal Investigator: Last, first, middle Nahar Quamun

Yes/No

☑ ☐ Is the proposal funded?

If yes, sponsor Name: USAID

Is the proposal being submitted for funding ? Not applicable

☐ ☐ If yes, name of funding agency: _____

Do any of the participating investigators and/or their immediate families have an equity relationship (e.g. stockholder) with the sponsor of the project or manufacturer and/or owner of the test product or device to be studied or serve as a consultant to any of the above?

IF YES, submit a written statement of disclosure to the Director.

Dates of Proposed Period of Support

(Day, Month, Year - DD/MM/YY)

Beginning date May 2000

End date October 2001

Cost Required for the Budget Period ($)

a. *Ist Year* *2nd Year* *3rd Year* *Other years*

_____ _____ _____ _____

b. ***Direct Cost :*** _____ ***Total Cost :*** _____

Approval of the Project by the Division Director of the Applicant

The above-mentioned project has been discussed and reviewed at the Division level as well by the external reviewers. The protocol has been revised according to the reviewer's comments and is approved.

Dr. Cristobal Tunon

Name of the Division Director

Signature

19.04.2000

Date of Approval

Certification by the Principal Investigator

I certify that the statements herein are true, complete and accurate to the best of my knowledge. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. I agree to accept responsibility for the scientific conduct of the project and to provide the required progress reports if a grant is awarded as a result of this application.

Signature of PI Nahar

Date: 19.04.2000

Name of Contact Person (if applicable)

Table of Contents

✓ Check here if appendix is included

Principal Investigator: Last, first, middle Nahar Quamun

PROJECT SUMMARY: Describe in concise terms, the hypothesis, objectives, and the relevant background of the project. Describe concisely the experimental design and research methods for achieving the objectives. This description will serve as a succinct and precise and accurate description of the proposed research is required. This summary must be understandable and interpretable when removed from the main application. **(TYPE TEXT WITHIN THE SPACE PROVIDED).**

Principal Investigator
Nahar Quamrun

Project Name
Operations Research on Strategies to Improve Reproductive Health Services for Adolescents in the Public Sector

Total Budget	Beginning Date	Ending Date
	May 1, 2000	October 31, 2001

Evidence from a number of studies has confirmed that adolescents in Bangladesh have limited knowledge about reproductive health matters such as, pubertal changes, fertility and reproduction, family planning and sexually transmitted diseases, including HIV/AIDS. They also have limited access to reproductive health information and services. In Bangladesh, although a growing number of non-government initiatives are implementing programmes to improve the provision of reproductive health information and services to this group, nevertheless, the effects, methodologies and approaches used in these programmes have not been properly documented and evaluated. Within the government sector, the current Health and Population Sector Programme (HPSP) intends to give a higher profile to adolescent health activities. However, the details of these activities have yet to be worked out. The Operations Research Project of ICDDR,B which has had a long history of conducting operations research with the government of Bangladesh, will take this opportunity to test a strategy to increase adolescents' knowledge about reproductive health issues and improve availability of reproductive health services for adolescents attending schools. It will also develop a methodology to create a supportive environment for school-going adolescents so that reproductive health information can be given to them and they can seek related services.

The proposed operations research study will be conducted in two rural areas of Bangladesh using the government health service delivery infrastructure. The study will use a quasi-experimental control group design where two intervention packages will be tested and compared among themselves and with a control group. As part of the interventions, 'easy to read' information materials on reproductive health will be developed and distributed among school-going adolescents. To increase the availability of reproductive health services to adolescents, adolescent friendly clinics will be introduced in some of the existing government health centres at the study sites. In addition, orientation of parents, community leaders, school teachers and health care providers will be done to create a supportive environment for adolescents, so that, reproductive health information could be provided to school-going adolescents.

It is hoped that the proposed intervention will increase adolescents' knowledge and utilization of reproductive health services. The proposed strategies, if proven successful, will be replicated by the GoB on a larger scale.

KEY PERSONNEL (List names of all investigators including PI and their respective specialties)

Name	Professional Discipline/ Specialty	Role in the Project
Dr. Quamrun Nahar	Operations Researcher	PI
Dr. Cristobal Tunon	Management Scientist	Co-Investigator
Dr. MA Quaiyum	Operations Researcher	Co-Investigator
Dr. Rafiqus Sultan	Programme Manager	Co-Investigator

DESCRIPTION OF THE RESEARCH PROJECT

Hypothesis to be tested:

Concisely list in order, in the space provided, the hypothesis to be tested and the Specific Aims of the proposed study. Provide the scientific basis of the hypothesis, critically examining the observations leading to the formulation of the hypothesis.

1. The development and introduction of especially designed 'easy to read' information materials on reproductive health can lead to significant improvement in reproductive health knowledge and utilization of related services among adolescents attending schools

2. The introduction of 'adolescent friendly clinics' increases the use of reproductive services by school-going adolescents

3. Orientation of parents, community leaders, school teachers and health care providers helps in creating supportive environment to provide reproductive health information to school-going adolescents and allow them to seek related services

Specific Aims:

Describe the specific aims of the proposed study. State the specific parameters, biological functions/ rates/ processes that will be assessed by specific methods (TYPE WITHIN LIMITS).

1. Design and test a strategy to increase adolescents' knowledge about reproductive health issues and improve availability of reproductive health services for adolescents attending schools

2. Develop a methodology to create a supportive environment for school-going adolescents to discuss reproductive health issues and to seek related services

3. Develop a methodology to evaluate the effect of adolescent reproductive health programmes

Background of the Project including Preliminary Observations

Describe the relevant background of the proposed study. Discuss the previous related works on the subject by citing specific references. Describe logically how the present hypothesis is supported by the relevant background observations including any preliminary results that may be available. Critically analyze available knowledge in the field of the proposed study and discuss the questions and gaps in the knowledge that need to be fulfilled to achieve the proposed goals. Provide scientific validity of the hypothesis on the basis of background information. If there is no sufficient information on the subject, indicate the need to develop new knowledge. Also include the **significance and rationale** of the proposed work by specifically discussing how these accomplishments will bring benefit to human health in relation to biomedical, social, and environmental perspectives. **(DO NOT EXCEED 5 PAGES, USE CONTINUATION SHEETS).**

Background

Today, at the beginning of a new millennium, the world is facing the largest generation of adolescents ever in history. Currently, one in every five persons on earth is an adolescent aged 10-19 years and 85 percent of these adolescents live in developing countries [1]. In Bangladesh, nearly 23 percent of the total population is made up of adolescents [2]. In terms of sheer numbers, young people have tremendous demographic significance.

Considering the significance of adolescents, the International Conference on Population and Development (ICPD) held in Cairo in 1994 identified adolescents as a priority target group. Under the current Health and Population Sector Programme (HPSP) of the Government of Bangladesh (GoB), adolescents have been identified as an under-served priority target group. Adolescent health has been included as part of the Essential Services Package (ESP) and a separate programme entitled "Maternal Nutrition and Adolescent Health" has been created to deal with adolescent health issues.

The Operations Research Project (ORP) of ICDDR,B: Centre for Health and Population Research, the operations research partner of NIPHP, has included, in its' workplan, the task of developing and testing strategies to address the RH needs of adolescents. In June 1999, ORP, GoB and other organizations working with adolescents held a workshop to discuss results from recent research on reproductive health needs of adolescents as part of an ongoing debate of how to improve these services. The workshop and several interactions among organizations involved, led to the conceptualization of areas of intervention that were likely to increase knowledge on reproductive health issues and improve the availability, design and utilization of reproductive health services.

Adolescent Reproductive Health Status in Bangladesh

The analysis of available data on variables such as education, nutrition, fertility and marriage, use of health services, and knowledge and use of contraceptives confirms that adolescents in Bangladesh are exposed to the same reproductive health risks as adolescents in other developing countries. For instance, a falling trend in the age of menarche combined with a rising age at marriage has resulted in an increased number of sexually mature but unmarried adolescent girls with the consequent potential for unplanned pregnancies [3,4]. The 1996-97 Bangladesh Demographic and Health Survey (BDHS) indicated that about 36 percent of teenage women have begun childbearing and that there are significant differences in rural and urban fertility [4]. Although two-thirds of adolescent males and females, in the 11-15 years age group, are enrolled in schools in urban and rural areas alike, the percentage of females enrolled in schools in the 16-20 age group is down to around one in four. Thus, this early introduction into motherhood not only increases the chances of mortality and morbidity for both mother and offspring, but also renders these women less likely to obtain

advanced educational qualifications and reduces their employment possibilities and chances of contributing to the family income [5]. Compared with other age groups, adolescents in Bangladesh also tend to have fewer contacts with the health care system, regardless of their need for specific services [4,6,7].

Existing Adolescent Programmes

GoB programmes

Over the past fifteen years, government and non-government organizations have undertaken different programmes in an effort to address the RH needs of married and unmarried adolescents. Nevertheless, by reviewing the literature and organisations working with adolescents in Bangladesh, it can be concluded that adolescents do not have access to accurate information about reproduction, fertility and fertility regulation, and that adolescent reproductive health needs are largely ignored by current programme activities [8,9]. For instance, the government has long established programmes that provide information and RH services, such as pregnancy, delivery and postpartum care, family planning, and reproductive tract infections (RTIs), through a vast infrastructure that includes contacts at clinics and visits to the homes of married women of reproductive age. However, given the emphasis on married women, only married adolescents tend to have access to these services, and there is considerable evidence that contacts between service providers and teenage married women and newly-weds are substantially lower than for married women in other age groups [4,7].

The current Health and Population Sector Programme (HPSP) of the GoB for the period 1998 to 2003 intends to give a higher profile to adolescent health activities. A new programme has been established under the Directorate of Family Planning to address the issues of maternal nutrition and adolescent health. This programme has started to develop a wide circulation of BCC materials to create awareness about the reproductive process, including safe sex, STD/HIV-AIDS, contraception and disadvantage of early marriage and pregnancy. The programme also plans to conduct some advocacy programmes by holding several divisional and national level workshops [10]. Further details of the programme have yet to be worked out.

NGO programmes

At present, more than 100 non government organizations are implementing adolescent programmes throughout the country [9]. The Adolescent Family Life Education (AFLE) is undoubtedly the main adolescent-targeted activity of most NGO programmes [8]. The current AFLE programmes are based on topics, such as social laws, rights and values, hygiene, general health, food and nutrition, sanitation, RH education, population education, and family planning.

Since the majority of births to adolescents in Bangladesh happen after marriage, the newly wed adolescents are, thus, an important target group. Some NGOs have incorporated activities with newly wed couples into their existing family planning programmes to promote delayed first birth and the use of other maternal and child health services [11]. Few NGOs have established separate health clinics for adolescents. These clinics are opened to NGO members of the community adolescent groups and also to other non-member adolescents. Although qualified medical practitioners are available to provide health services from these clinics, the managers of these programmes have expressed concerns about their low use. To improve the coverage of these clinics, satellite clinics for adolescents have also been arranged by these NGOs [8]. A number of NGOs offer supplementary non-health programmes for adolescents, such as income-generating activities (ash making, tailoring, and kitchen gardening), credit programmes, and skill-development training. As part of its adolescent programme, Concerned Women for Family Development (CWFD) encourages continued education through

peer support groups that involve both married and unmarried adolescents and provide opportunities for learning vocational skills, such as radio/TV repair, sewing and computer skills [8].

Most of the NGOs who have adolescent programmes, also have programme components that involve parents and other members of society. However, NGO managers, who are running adolescent programmes, admitted that they had encountered some opposition in the initial phase [8]. With the help of orientation and discussion meetings with parents and community leaders, community support for adolescent programmes was ensured.

Rationale

Evidence from a number of studies has confirmed that adolescents in Bangladesh do not have accurate knowledge about reproductive health (RH) issues and have limited access to accurate RH information and services [12,13]. For instance, the majority of the adolescents included in the ORP/ICDDR,B needs assessment study had no idea about changes associated with puberty (e.g., menstruation or wet dreams) until they experienced them. The study also found that, although they had aware of media campaigns on contraceptive methods, study participants had inadequate knowledge about reproduction, fertility and family planning. Knowledge about causation, symptoms, transmission and prevention of RTI/STDs and AIDS was also inadequate. The study findings also suggested that attempts to increase AIDS awareness through mass media had resulted in vague messages that were not clear as well as not perceived as relevant by adolescents. As a result, misconceptions about causation, route of transmission and prevention of this critically important problem clearly existed among the adolescents included in the study. These findings are supported by another study conducted by Haider *et.al* in 1997 [13].

Although social customs in Bangladesh discourage premarital or extra marital relationships, evidence from in-depth qualitative studies indicates that such relations exist [12,13]. There is also evidence that both adolescent boys and young men visit brothels and condoms are generally not used [12]. There is some clinic-based recorded evidence of sexual activity among male adolescents. Records from two STD clinics in Dhaka City show that 14 percent of the male clients were between the ages of 13-19 years, and among them, 17 percent were diagnosed with an STD related infection. An additional 10 percent of these adolescents complained of psychosexual disorders such as performance anxiety [14]. These findings are supported by the ORP/ICDDR,B study where around 20 percent of adolescents perceived that they had suffered from 'diseases of reproductive organs' which include STDs [12]. Other than the reproductive health problems, adolescents also suffer from general health problems. According to the ORP/ICDDR,B study, about 40 percent of adolescents were reported to suffer from general health problems in the previous three months of the reporting period. The most frequently reported health problems were fever, the common cold, headache, abdominal pain, diarrhoeal disease and skin disease [12].

The ORP/ICDDR,B findings suggest that adolescents in Bangladesh live within a community context where traditional beliefs and practices still restrict the discussion and the flow of accurate RH information in the household, the community, the school and the media. Access to accurate information on key RH issues such as sexuality, family planning, and STDs is also severely restricted at all levels. Booklets and magazines are available in the market but they contain inadequate and misleading information on these topics. In some instances, adolescents who took part in the study, mentioned that they discussed these issues with peers who also had limited knowledge on these topics. When adolescents in this study were asked about their preferred source for reproductive health information, a considerable proportion of them preferred to have this information through written materials. Nevertheless, the growth of global media networks and the availability of radio and particularly satellite and cable television exposed adolescents to other sources of information [12].

Adolescents also have limited access to the formal health care system. The study conducted by ORP/ICDDR,B revealed that, generally, adolescents did not feel comfortable seeking treatment for RH illnesses. They perceived that current health care system was to provide care to married women and children only. Thus, when young people visited health centres they felt that they were not well received and were not given information they required. In addition, there were long waiting times and limited afternoon hours. As most of them attended schools, they could not go to the health facilities during their normal opening hours [12].

Evidence suggests that despite rapid development of family planning services over the last 25 years, the RH needs of adolescents were not addressed by the government programme. Although the government had a programme of providing MCH and FP services to married women of reproductive age, including married adolescents through household visits and visits at health centres, indeed, there is evidence that contacts between service providers and adolescent married women were substantially lower than for married women in other age groups [4,7]. Further, the reproductive health needs of unmarried adolescents are largely ignored by the current GoB programme.

On the other hand, a growing number of programmes aimed at improving the reproductive health of adolescents have emerged in the NGO sector, but most of these programs are still small in scale and reach too few adolescents. A few evaluation studies about program effectiveness have been carried out but the impact of interventions on adolescents' behavior has not been measured. Moreover, existing research and evaluation studies indicate that there is a poor fit between current programs and the needs of adolescents [12].

Allied to the in-country NGO expertise of establishing RH programmes for adolescents, it can be said that there is a positive environment within the government health sector for the development of new interventions to address the RH needs of adolescents in Bangladesh, particularly for unmarried adolescents. The available evidence indicates that these needs are primarily related to their lack of access to relevant reproductive health information and services. The required interventions, however, should also take into consideration specific circumstances surrounding adolescents and information needs of others in their families and communities. The ORP of ICDDR,B has had a long history of conducting operations research with the GoB and will take the opportunity to test a mechanism to make available accurate and relevant RH information in formats that are accessible to adolescent population. The intervention will also address the need to ensure a tolerant community environment that enables the discussion of reproductive health information and the use of services by adolescents. In addition, there will be an introduction of adolescent friendly clinics at the study sites to test the effect of these clinics on the utilization of RH services by adolescent population.

Research Design and Methods

Describe in detail the methods and procedures that will be used to accomplish the objectives and specific aims of the project. Discuss the alternative methods that are available and justify the use of the method proposed in the study. Justify the scientific validity of the methodological approach (biomedical, social, or environmental) as an investigation tool to achieve the specific aims. Discuss the limitations and difficulties of the proposed procedures and sufficiently justify the use of them. Discuss the ethical issues related to biomedical and social research for employing special procedures, such as invasive procedures in sick children, use of isotopes or any other hazardous materials, or social questionnaires relating to individual privacy. Point out safety procedures to be observed for protection of individuals during any situations or materials that may be injurious to human health. The methodology section should be sufficiently descriptive to allow the reviewers to make valid and unambiguous assessment of the project. **(DO NOT EXCEED TEN PAGES, USE CONTINUATION SHEETS).**

Operational Definitions

Reproductive health (RH)

For the purpose of the study, the elements of reproductive health will include:

1. Pubertal changes
2. Fertility and reproduction
3. Family planning
4. Pregnancy care, delivery care and postnatal care
5. Safer sexual behaviour
6. STD and HIV/AIDS
7. Tetanus toxoid (TT) immunization

Reproductive Health Services

Constellation of services that include:

1. Nutrition education
2. Information and services on TT immunization
3. Information and counseling on pubertal issues
4. Information and counseling on sexuality, psychosexual issues
5. Pregnancy care and postnatal care
6. Post-abortion care
7. Information and/counseling and provision of family planning methods
8. Information and/counseling for STDs including HIV/AIDS and treatment of STDs
9. Treatment of menstrual problems

Adolescent Friendly Clinic (AFC)

Characteristics of an adolescent friendly clinic include:

1. Health facility level: sufficient privacy, comfortable surroundings, convenient hours
2. Provider and staff level: caring attitude for adolescents, specially trained staff, privacy and confidentiality honored, adequate time for client and provider interaction
3. Administrative/process level: adolescents welcomed and served, necessary referral available, affordable fees, educational materials available on site to take
4. From adolescent perspective: seek counseling, treatment and other services from the facility and recommend the facility to peers

Description of the Interventions

To achieve the objectives of the proposed operations research, two different sets of interventions will be tested with two intervention groups (Group A & B) at each of the two field sites.

A. In the **Intervention Group A**, the components of intervention will include:
1. Introduction of especially designed 'easy to read' information materials on RH to adolescents
2. Introduction of 'adolescent friendly clinics' (AFC)
3. Creation of a supportive environment for adolescents by holding orientation sessions with school teachers, parents, health professionals, and community leaders

B. In the **Intervention Group B**, the components of intervention will include:
1. Introduction of especially designed 'easy to read' information materials on RH to adolescents
2. Creation of a supportive environment for adolescents by holding orientation sessions with school teachers, parents, health professionals and community leaders

Study Design

The proposed study will be quasi-experimental non-equivalent control group in design.

	Time →		
Intervention Group A	O_1	X_a	O_2
Intervention Group B	O_3	X_b	O_4
Nonequivalent Control Group	O_5		O_6

Here,
O_1 = Pre-intervention observation in intervention Group A
O_2 = Post-intervention observation in intervention Group A
O_3 = Pre-intervention observation in intervention Group B
O_4 = Post -intervention observation in intervention Group B
O_5 = Pre-test in Control Group
O_6 = Post-test in Control Group
X_a = Intervention A
X_b = Intervention B

There will be two intervention groups with a similar but nonequivalent control group. The hypothesis is that:
O_2 would be greater than O_1
O_4 would be greater than O_3
O_{6-2} would indicate the effect of Intervention A (effect of 'easy to read' information materials, supportive environment and 'adolescent friendly clinics')
O_{6-4} would indicate the effect of Intervention B (effect of 'easy to read' information materials and supportive environment)
O_{4-2} would indicate the difference between the effect of Intervention A and B (effect of 'adolescent friendly clinics)

Sampling and Sample Size

Purposive sampling technique will be used to select study samples. The primary sample will be adolescents studying in grade VII, VIII and IX in selected secondary schools. The other study sample will be school

teachers at the intervention schools, health care providers at the intervention clinics, and parents and community leaders of the intervention sites.

The sample size for adolescents has been calculated using the following formula:

$$n = 2z^2pq/d^2$$

Here,
n = the desired sample size
z = the standard normal deviate, which is 1.96 for the 95 percent confidence limit
p = the proportion in the adolescents estimated to have knowledge about reproductive health
q = 1.0 - p
d = expected level of difference in proportion of adolescents having knowledge about reproductive health between intervention and control groups

If we expect to have 10 percent difference in knowledge level between intervention and control groups, the desired sample size will be:

$$n = 2 \times (1.96)^2 \times (0.50) \times (1.0 - 0.50)/ (0.10)^2 = 184$$

If we calculate the sample size using z = 2, then the sample size will be 200. That means we need 200 adolescents in each of the intervention and control groups. However, considering the clustering methods of sampling, the required sample size would be 200 x 1.5 = 300. Further, as the sample will include both girl and boy adolescents, thus, for each group 300 boys and 300 girls will be selected.

Study Sites

The proposed operation research study will be conducted in two rural areas: selected unions of Abhoynagar upazilla of Jessore district (high-performing area in terms of health and family planning indicators) and Patiya upazilla of Chittagong district (low performing area in terms on health and family planning indicators). The reasons for selecting these sites are that ORP has established field sites at these sites and has a longitudinal health and demographic surveillance system in these areas. Further, ORP has had a long history of working with MOH&FW in testing different operations research studies at these sites.

For each of the two intervention groups (Group A and B) and control group, two boys' schools and two girls' schools will be selected from each of the two field sites. To avoid contamination, two separate unions will be selected for testing two separate groups of interventions. If it is found that the selected unions do not have required number of schools, two side-by-side unions will be selected for a particular intervention group.

For introduction of adolescent friendly clinic (AFC), Health and Family Welfare Centres (H&FWCs) and Community Clinics (if established by then) in the selected unions will be included. The health care providers working in these health centres, headmaster/mistress and science teachers of the intervention schools, and community leaders and parents of adolescents living around the intervention schools and health centres will be the focus of the study.

Study Period

May 2000 to October 2001

Intervention Activities

Development of 'easy to read' information materials on reproductive health: An inventory of the existing information materials for adolescent RH will be done. Following the inventory, all relevant information materials will be reviewed. In addition, using qualitative data already collected by ORP through a needs assessment study conducted in early 1999, the most frequently asked questions (and answers) related to reproductive health among adolescent boys and girls will be identified. Using a series of focus groups with adolescents a database of responses to these questions in a format that is 'easy to read' by adolescents will be developed. This database will then be used to develop assorted booklets for introduction to adolescents studying at selected schools.

Development and distribution of BCC materials relating to adolescent reproductive health for adults: An inventory of the existing BCC materials relating to adolescent reproductive health will be done. After the review, if the available materials are not found to be adequate, new messages/ materials will be developed. The materials will include posters and take-away brochures for adults such as parents, teachers, health care providers and community leaders. BCC materials especially posters will be displayed at various public points such as health centres, markets and bus and train stations. Brochures will be distributed to community people during the orientation sessions.

Development of clinic guidelines for adolescent reproductive health information and services: At present, there is no clinic guideline on how to deal with adolescent clients or what are the pre-requisites for providing reproductive health services to adolescents. Thus, *clinic guidelines* will be developed with clear statements on the common reproductive health problems of adolescents and appropriate information for counseling and case management including referrals to nearby specialized facilities. The guidelines will be based on the available literature and special attention will be given to social and cultural acceptance of the clinic guidelines.

Orientation of parents, community leaders, health care providers, school governing bodies and teachers on the RH needs of adolescents: To create a supportive environment for adolescents, orientation sessions will be arranged for parents and community leaders. Sessions for women will be held at community clinics/ H&FWCs during health education sessions for other ESP services. For males, orientation sessions will be held at market places (bazar). Government health care providers will conduct these orientation sessions. Posters and brochures highlighting adolescent RH problems and role of community people in addressing those problems will be displayed and distributed during these sessions. During the whole intervention period, sessions will be held on a quarterly basis. Orientation of health care providers will also be held. Health professionals such as Upazilla Health and Family Planning Officers, Medical Officers and Upazilla Family Planning Officers will be oriented about the RH needs of adolescents. Upazilla Health and Family Planning Officers will then organize orientation sessions for Family Welfare Visitors, Family Welfare Assistants, Health Assistants, Sub-Assistant Community Medical Officers, Assistant Health Inspectors, and Family Planning Inspectors. Persons involved with school governing bodies, headmaster/headmistress and science teachers of the intervention schools will be oriented about the purpose of the intervention.

Introduction of especially designed 'easy to read' information materials to adolescents: Once the booklets are developed, they will be distributed among the study adolescents. GoB health care providers at the union level will visit the respective schools and will give an overview of the importance of introduction

of the information materials to them. They will also give them information on the availability of the related health services in the locality.

Setting up adolescent-friendly clinics: Existing/planned GoB facilities such as Health and Family Welfare Centres and Community Clinics at the sites for implementation of intervention group A will be equipped to provide adolescent-friendly services. These include:

- Orientation and training of providers on specific needs of adolescents and on clinic guidelines
- Ensuring confidentiality and privacy
- Strengthening counseling services
- Improving record keeping and monitoring systems
- Setting-up special days for adolescents (once in every fortnight)
- Displaying (poster) and distribution (take-away brochure) of BCC materials
- Ensuring confidential referral

Data collection: To assess the impact of interventions, pre and post intervention surveys on the selected indicators (KAP) will be carried out for adolescents (a draft questionnaire is attached as **Appendix II**). It should be mentioned here that the questions relating to the use of family planning methods should be asked only to the married subjects. A total of 36 case studies (12 in each of the intervention and control groups, purposive selection) will also be prepared at the beginning and end of the intervention (guidelines for conducting the in-depth interviews are attached as **Appendix III**). Twenty to thirty exit interviews with adolescent clients, will be conducted to assess the satisfaction of clients with services (the main topics to be covered in these interviews are listed as **Appendix IV**). In addition, a base-line assessment (both survey and qualitative assessment) on the selected indicators will be done for the health care providers working at the intervention health centres (Main topics to be covered in these interviews are listed as **Appendix V**). To evaluate the output of the intervention, in addition to surveys and exit interviews, service statistics at the health facilities will also be used (guidelines to look at the clinic record is attached at **Appendix VI**). To assess the effect of orientation sessions organized for community leaders and parents, selective in-depth interviews (10 to 20) will be done (the main topics to be covered in these interviews are listed as **Appendix VII**).

Record keeping: GoB health workers will maintain a register to record the number of materials distributed to adolescents. To ensure confidentiality and privacy of adolescents, a separate register will be maintained at the clinic level to record the problems reported and services provided to them without recording the particulars of the clients. For the orientation sessions at different levels, lists of attendees and the number of sessions organized will be recorded using GoB UMIS.

Key Indicators (process and outcome)

- Development of especially designed 'easy to read' information materials for adolescents
- Rate of retention of especially designed 'easy to read' information materials by the adolescents
- % of adolescents received 'easy to read' information materials, read and understand the messages
- % of adolescents perceived the information materials as relevant and useful to them
- % of adolescents having correct knowledge about: menstruation, wet dreams, reproduction, fertility, STD/RTI/HIV/AIDS, and ANC, PNC (e.g., knowledge of correct modes of transmission and means of prevention of HIV/AIDS; knowledge of the fertile period in a women's menstrual cycle; knowledge of major symptoms of pregnancy complications etc.)
- # of orientation meetings held for community people

- Change in community attitude regarding the provision of reproductive health information and services to adolescents
- # of orientation sessions held for health care providers and # of health care providers attending the sessions
- Development of clinic guidelines for health care providers
- Setting-up special afternoon hours and counseling facility for adolescents
- % of adolescents received information and counseling on RH , received FP services, TT services, antenatal care, delivery (if obstetric case is provided) and post-natal care, other RH services such as treatment for menstrual problems, RTIs/STDs, etc.
- % of adolescents using clinics and perceive services as high quality (enough time with provider, provider respectful, privacy maintained, health problem solved)

Facilities Available

Describe the availability of physical facilities at the place where the study will be carried out. For clinical and laboratory-based studies, indicate the provision of hospital and other types of patient's care facilities and adequate laboratory support. Point out the laboratory facilities and major equipments that will be required for the study. For field studies, describe the field area including its size, population, and means of communications. **(TYPE WITHIN THE PROVIDED SPACE).**

The study will be carried out in collaboration with DGHS and DFP of the MOH&FW. The MOH&FW has a well developed health infra-structure at the grass root level of rural areas. They have static clinics and satellite clinics to provide health services to the rural population. They have manpower to conduct health education sessions at the health facility level as well as at the community level, and to distribute BCC materials, including easy to read information materials to adolescents.

ORP, ICDDR,B will provide research support to the study. It has sufficient skilled manpower in conducting research relating to adolescent reproductive health, especially by applying qualitative and survey techniques. It also has expert resources in the area of training, BCC and MIS activities. It has field sites in Abhoyanagar upazilla of Jessore district and Patiya upazilla of Chittagong district from where field research activities will be closely monitored. It also has sufficient computer facilities to analyze and to write up the study report.

Data Analysis

Describe plans for data analysis. Indicate whether data will be analyzed by the investigators themselves or by other professionals. Specify what statistical softwares packages will be used and if the study is blinded, when the code will be opened. For clinical trials, indicate if interim data analysis will be required to monitor further progress of the study. **(TYPE WITHIN THE PROVIDED SPACE).**

Data gathered by the study will be analysed using a suitable statistical programme. Quantitative data will be analysed using the SPSS programme. The qualitative data will be analysed using content analysis.

Ethical Assurance for Protection of Human Rights

Describe in the space provided the justifications for conducting this research in human subjects. If the study needs observations on sick individuals, provide sufficient reasons for using them. Indicate how subject's rights are protected and if there is any benefit or risk to each subject of the study.

Ethical principles that should be applicable to this study are relating to data collection and provision of reproductive health services to adolescents. Potential risks to these procedures will be minimized through a strict adherence to confidentiality and informed consent procedures.

Participation in the study will be voluntary. As these adolescents are at or below the age of 18 years, it is felt necessary that permission should be taken from parents to include adolescents in the study. Therefore, before conducting the pre-test survey/ other qualitative methods with adolescents, addresses of the study adolescents will be collected from the respective schools. It is expected that these adolescents would live in the surrounding communities. After locating the households containing study adolescents, verbal consents will be taken from parents to include their adolescents in the study. A brief overview of the study objectives will be read aloud in Bangla to them.

Study objectives will also be read out in Bangla to all adolescents. It will be explained to them that they are free to leave or refuse to take part in the study. The interviews will be conducted at a convenient time and location. Every attempt will be made to conduct the interview privately and the results will not be made available to any other family member or other individuals under any circumstances. Field procedures will be rehearsed during training of interviewers to ensure that confidentiality is respected when making the first contact with the community, during the interview and editing of the completed questionnaires. In the process of conducting the interviews, it is possible that one or more questions may arise for which the respondent would like more information or services. Interviewers will be trained in referring such cases to the appropriate level of information or care.

The analysis of clinic information will not carry any individual identification. If abstracts of medical records are taken, the abstracting form will not include any identification of the case record or patient name. Data collection staff will be trained in abstracting procedures that minimize the risk of sharing confidential information (e.g., records will not be pooled together in a public place for review). During the dissemination of the study findings, under no circumstances, the name or identification of any of the participant of the study will be used.

Use of Animals

Describe in the space provided the type and species of animal that will be used in the study. Justify with reasons the use of particular animal species in the experiment and the compliance of the animal ethical guidelines for conducting the proposed procedures.

No laboratory animal will be used in this study

Literature Cited

Identify all cited references to published literature in the text by number in parentheses. List all cited references sequentially as they appear in the text. For unpublished references, provide complete information in the text and do not include them in the list of Literature Cited. There is no page limit for this section, however exercise judgment in assessing the "standard" length.

1. World Health Organization. Towards 2010: the challenge for adolescent health and development. Report of the meeting of the Technical Advisory Group for the WHO Adolescent Health and Development Programme, Geneva, March 25-26, 1998.

2. Hossain, M.S. Status of adolescent girls in Bangladesh,1995. Dhaka: Bangladesh Bureau of Statistics, 1996.

3. Chowdhury S, Begum,RA, Shahabuddin AKM, Seal A, Hassan Q. Age at menarche and nutritional status of adolescent girls in a rural area of Bangladesh. Paper presented at the 7th Annual Scientific Conference (ASCON VII) of the International Centre for Diarrhoeal Disease Research, Bangladesh. 14-15 February, 1998.

4. Bangladesh Demographic and Health Survey 1996-97. Dhaka: National Institute of Population Research and Training, 1997.

5. Ahmed S. Behavioural aspects of reproductive health among poor adolescents female in Dhaka, Bangladesh. MSc Thesis. London: London School of Hygiene and Tropical Medicine, 1991.

6. Islam MN, Islam MM, Yusuf HKM. Fertility and reproductive health status of married adolescents in rural Bangladesh. Dhaka: Population Development and Evaluation Unit, Ministry of Planning, Government of the People's Republic of Bangladesh, 1995.

7. Islam M, Kane TT, Barkat-e-Khuda, Hossain MB, Reza MM. Determinants of contraceptive use among the young and newlywed couples. *In:* Kane TT, Barkat-e-Khuda, Phillips JF, editors. Reproductive health in rural Bangladesh, policy and programmatic implications, volume 1. Dhaka: MCH-FP Extension Project (Rural), International Centre for Diarrhoeal Disease Research, Bangladesh, 1997:105-34. (ICDDR,B monograph, 7).

8. Nahar Q, Amin S, Sultan R, Nazrul H, Islam M, Kane TT, Barkat-e-Khuda, Tunon C. Strategies to meet the health needs of adolescents: a review. Dhaka: Operations Research Project, Health and Population Extension Division, ICDDR,B, 1999 (ICDDR,B Special Publication No 91).

9. Hossain SMI, Bhuiya I, Rob AKU, Anam R. Directory of organizations working with adolescents/youths. Dhaka: Population Council, 1998.

10. Shariar A, Nahar Q, Sultan R. Proceeding of the First Stock-taking Workshop on Adolescent Health Activities in Bangladesh. Dhaka: Operations Research Project, Health and Population Extension Division, International Centre for Diarrhoeal Disease Research, Bangladesh, 1999. (ICDDR,B special publication no. 88).

11. FOCUS on Young Adults. Reaching newlywed and married adolescents. In FOCUS. Washington D.C., 1999.

12. Nahar Q, Tunon C, Houvras I et.al. Reproductive health needs of adolescents in Bangladesh: a study report. Dhaka: Operations Research Project, Health and Population Extension Division, ICDDR,B: Centre for Health and Population Research, 1999 (ICDDR,B Working Paper No 161).

13. Population Council and READ. Study of adolescents: dynamics of perception, attitude, knowledge and use of RH care. Dhaka: Population Council, 1997.

14. Chowdhury SNM, Gomes JV, Hossain I. Strengthening STD services for men in an urban clinic based program. Dhaka: Population Council, 1997.National Institute of Population Research and Training.

Dissemination and Use of Findings

Describe explicitly the plans for disseminating the accomplished results. Describe what type of publication is anticipated: working papers, internal (institutional) publication, international publications, international conferences and agencies, workshops etc. Mention if the project is linked to the Government of Bangladesh through a training programme.

It is hoped that the proposed operations research study will have national and international impact. The proposed intervention will increase adolescents' knowledge and utilization of reproductive health services by developing and testing 'easy to read' information materials for adolescents, and by improving availability of RH services by setting-up adolescent friendly clinics. The proposed strategies, if proven successful, will be replicated by the GoB on a larger scale. The data generated from the research will be presented in national and international conferences and will be published in international journals.

Collaborative Arrangements

Describe briefly if this study involves any scientific, administrative, fiscal, or programmatic arrangements with other national or international organizations or individuals. Indicate the nature and extent of collaboration and include a letter of agreement between the applicant or his/her organization and the collaborating organization. **(DO NOT EXCEED ONE PAGE)**

The study will be a collaborative project between the Directorate General of Health Services (DGHS) and Directorate of Family Planning (DFP) of the MOH&FW and ORP of ICDDR,B: Centre for Health and Population Research. The investigators from each organization will interact closely. The DGFP and DFP will be responsible for implementing intervention activities. Investigators in ORP, ICDDR,B will be responsible for providing training, development of data collection instruments, information material, monitoring and record-keeping tools, and pre and post-intervention data collection activities. They will also be responsible for the data analysis and dissemination of the results. The investigators of the study will meet at least once a month and according to the needs of all the parties to discuss the progress of the study as well as to solve problems.

Principal Investigator: Last, first, middle Nahar Quamun

Biography of the Investigators

Give biographical data in the following table for key personnel including the Principal Investigator. Use a photocopy of this page for each investigator.

Name	Position	Date of Birth
Dr. Quamrun Nahar	Senior Operations Researcher, ORP ICDDR,B: Centre for Health and Population Research, Dhaka, Bangladesh	July 20, 1963

Academic Qualifications (Begin with baccalaureate or other initial professional education)

Institution and Location	Degree	Year	Field of Study
University of Western Australia	Master of Medical Science	1998	Community Health
University of Western Australia	Postgraduate Diploma in Primary Health Care	1995	Primary Health Care
Sher-e-Bangla Medical College Dhaka University	MBBS	1987	Medicine, Surgery and Gynaecology

Research and Professional Experience

Concluding with the present position, list, in chronological order, previous positions held, experience, and honours. Indicate current membership on any professional societies or public committees. List, in, chronological order, the titles, all authors, and complete references to all publications during the past three years and to representative earlier publications pertinent to this application. **(DO NOT EXCEED TWO PAGES, USE CONTINUATION SHEETS).**

Professional experiences

Senior Operations Researcher with the Operations Research Project (ORP) of ICDDR,B: Centre for Health and Population Research (August 1997 to date)

Research Investigator with Urban MCH-FP Extension Project, ICDDR,B (October 1991 to December 1994)

Consultant and Co-investigator of a research project entitled "Albendazole for *Giardia*", ICDDR,B: Centre for Health and Population Research (June 1990 to September 1991)

Medical Officer, Clinical Science Division, ICDDR,B: Centre for Health and Population Research (February 1989 to November 1989)

Medical Officer with Urban Volunteer Program, ICDDR,B: Centre for Health and Population Research (October 1988 to January 1989)

Principal Investigator: Last, first, middle Nahar Quamun

Research experience

Principal investigator of a study on **'the reproductive health needs of adolescents in Bangladesh'** (November 1998 - April 1999) by applying Participatory Learning and Action (PLA) techniques and survey techniques

Principal investigator of a study on **'Antenatal care services in an urban area of Dhaka, Bangladesh'** as a requirement of the Master in Medical Science degree under the University of Western Australia (January 1996 to July 1997)

Co-investigator of a study on **'the determinants of cessation of exclusive breast feeding in the urban slums of Dhaka City'** (1993 to 1994)

Co-investigator of an in-depth study on **'the perception of pregnancy risk and contraceptive use in the postpartum period among women in Dhaka slums'** (October to December 1992)

Co-investigator to analyze **the causes of death in urban slums of Dhaka** (1991)

Bibliography

Nahar Q. 'Antenatal care services in an urban area of Dhaka, Bangladesh' [abstract]. 1997. Has been accepted for publication in the Australian Journal of Medical Review (in press).

Hall A, Nahar Q. 'Albendazole as a treatment for infections with Giardia duodenalis in children in Bangladesh'. Transactions of the Royal Society of Tropical Medicine and Hygiene (1993); 87, 84-86.

Hall A, Nahar Q. 'Albendazole and infections with Ascaris lumbricoides and Trichuris trichuria in children in Bangladesh'. Transactions of the Royal Society of Tropical Medicine and Hygiene (1994) 88, 110-112.

Nahar Q, Tunon C, Houvras, I, Gazi R, Reza M, Huq NL, Khuda B "Reproductive health needs of adolescents in Bangladesh: a study report'. 1999. ICDDR,B Working paper No 161.

Nahar Q, Amin S, Sultan R, Nazrul H, Islam M, Kane TT, Khuda B, Tunon C. 'Strategies to meet the health needs of adolescents: a review'. 1999. ICDDR,B Special Publication No. 91. ISBN: 984-551-177-5.

Shahriar A, Nahar Q, Sultan R. 'Proceedings of the first stock-taking workshop. 1999. ICDDR,B Special Publication No 88. ISBN:984-551-172-4.

Salway S, Nahar Q. Ishaque M. 'Alternate Ways to Feed Infants: Knowledge and Views of Men and Women in the Slums of Dhaka City'. 1996 (ICDDR,B working paper no 58) (Urban MCH-FP working paper no 17) ISBN: 984-551-056-6

Salway S, Nahar Q, Ishaque M. 'Women, men and Infant Feeding in the Slums of Dhaka City: Exploring Sources of Information and Influence'. 1996 (ICDDR,B working paper no 59) (Urban MCH-FP working paper no 18) ISBN: 984-551-057-4

Baqui AH, Paljor N. Nahar Q. Silimperi DR. 'Infant and child feeding practices in Dhaka slums'. May 1993 (ICDDR,B working paper no 34) (Urban FP/MCH working paper no.6). ISBN: 984-551-008-6.

Salway S. Jamil K, Nahar Q (editors). :'Issue for family planning in the urban slums of Dhaka, Bangladesh: opinions anti perceptions of field level workers'. May 1993.(ICDDR,B working paper no. 37) (Urban FP/MCH working paper no.9) ISBN: 984-551-012-4.

Fronczak N. Amin S. Nahar Q. 'Health Facility Survey in Select Dhaka slums'. October 1993. (ICDDR,B working paper no.40)(Urban FP/MCH working paper no. 12) ISBN: 984-551-015-7.

Salway S. Jamil K, Nahar Q. Nurani S. 'Perceptions of Pregnancy Risk and Contraceptive use in the Postpartum Period among Women in Dhaka Slums'. November 1993 (ICDDR,B working paper no.43)(Urban FP/MCH working paper no. 15).ISBN:984-331-017-43

Principal Investigator: Last, first, middle Nahar Quamun

Biography of the Investigators (contd.)

Give biographical data in the following table for key personnel including the Principal Investigator. Use a photocopy of this page for each investigator.

Name	Position	Date of Birth
Dr Cristóbal Tuñón	Management Scientist, ORP ICDDR,B: Centre for Health and Population Research, Dhaka, Bangladesh	16 November 1948

Academic Qualifications (Begin with baccalaureate or other initial professional education)

Institution and Location	Degree	Year	Field of Study
University of Manchester, U.K.	PhD .	1981	Delivery of MCH services
University of Manchester, U.K.	M. A	19751975	Economic and Social Studies.
University of Manchester, U.K.	BA	1972	Sociology and Psychology

Research and Professional Experience

Concluding with the present position, list, in chronological order, previous positions held, experience, and honours. Indicate current membership on any professional societies or public committees. List, in, chronological order, the titles, all authors, and complete references to all publications during the past three years and to representative earlier publications pertinent to this application. **(DO NOT EXCEED TWO PAGES, USE CONTINUATION SHEETS).**

Professional Experiences

1994 - Date Team Leader, Management Improvement Team
Operations Research Project, Health and Population Extension Division,
ICDDRB: Centre for Health and Population Research

1992-1994 Project Officer, UNICEF, Health and Nutrition Section. Bangladesh

1988-1992 Management Specialist, United Nations Population Fund, Management Development Unit. Bangladesh

1983-1987 Assistant Director, Planning & Development. National Health Service, England and Wales, U.K., Bolton Health Authority

1981-1983 Management Analyst, Social Security Fund , Planning Division Panama

1975-1981 National Director, Training and Health Promotion, Ministry of Health, Panama

Principal Investigator: Last, first, middle Nahar Quamun

Research Experience

Convener, Scientific Committee Annual Scientific Conference of the International Centre for Diarrhoeal Disease Research, Bangladesh. 2000

Chair, Committee for the Review of the Promotion Criteria for Research Staff at ICDDRB. 1999

Member, Task Force for the formulation of a Unified Management Information System for the National Health and Population Sector of Bangladesh, 1999

Convener, International Expert Group Meeting on Reproductive Health Research
Capacity Development. ICDDRB and Partners in Population and Development: a South to South Initiative. Dhaka, Bangladesh,1999

Member, Scientific Committee Annual Scientific Conference of the International Centre for Diarrhoeal Disease Research, Bangladesh. 1999

Convener of the Task Force for the formulation of a Management Information System for the National Integrated Population and Health Programme of Bangladesh, 1997

Advisory Group on WHO Health for All Strategy, North Western Regional Health Authority, England. 1975-1987.

Working Party on Health Care for Ethnic Minorities. North Western Regional Health Authority, UK 1986-1987

Principal Investigator: Last, first, middle Nahar Quamun

Biography of the Investigators (contd.)

Give biographical data in the following table for key personnel including the Principal Investigator. Use a photocopy of this page for each investigator.

Name	Position	Date of Birth
Dr MA Quaiyum	Senior Operations Researcher, ORP ICDDR,B: Centre for Health and Population Research, Dhaka, Bangladesh	August 01, 1957

Academic Qualifications (Begin with baccalaureate or other initial professional education)

Institution and Location	Degree	Year	Field of Study
Dhaka Medical College Dhaka University	MBBS	1982	Medicine, Surgery and Gynaecology

Research and Professional Experience

Concluding with the present position, list, in chronological order, previous positions held, experience, and honours. Indicate current membership on any professional societies or public committees. List, in, chronological order, the titles, all authors, and complete references to all publications during the past three years and to representative earlier publications pertinent to this application. **(DO NOT EXCEED TWO PAGES, USE CONTINUATION SHEETS).**

Professional Experience

Senior Operations Researcher, Operations Research Project, Since August 01, 1997

Senior Operations Researcher, Urban MCH-FP Extension Project, October 1994 to July 1997

Project Coordinator, Introduction of Laparoscopic Technique in Bangladesh, BIRPERHT, January 1994 to September 1994

Consultant, Maternal Morbidity Study, BIRPERHT, June 1993 to December 1993

Project Coordinator, Introduction of Laparoscopic Technique in Bangladesh, BIRPERHT, June 1991 to May 1993

Program Associate, Norplant Pre-Introductory Pilot Phase, BIRPERHT, June 1989 to June 1991

Project Medical Officer, Epidemiological Study of Malnutrition and Morbidity in Rural and Urban Bangladesh, CHD, ICDDR,B, Oc 1988 to April 1989

Assistant Registrar (Medicine), Ibrahim Memorial Diabetic Hospital, Dhaka, July - October 1988

Medical Officer, Shaheed Behesti Modern Hospital Gorveh, Kurdistan, Islamic Republic of Iran Duration, January 1984 to April 198

Medical Officer, Upazilla Health Complex, Gazaria, Munshiganj, Bangladesh, July - December 1983

Principal Investigator: Last, first, middle Nahar Quamun

PUBLICATIONS

Published:

1. **Quaiyum MA,** Tunon C, Baqui AH, Quayyum Z, Khatun J. Impact of national immunization days on polio-related knowledge and practice of urban women in Bangladesh. *Health Policy and Planning* 1997;12(4)363-371.

2. **Quaiyum MA**, Tunon C, Baqui AH, Quayyum Z, Khatun J. The impact of national immunization days on polio-related knowledge and practice of urban women in Bangladesh. Dhaka: MCH-FP Extension Project (Urban), International Centre for Diarrhoeal Disease Research, Bangladesh, 1996. (ICDDR,B Working Paper No. 60; MCH-FP Extension Project (Urban) Working paper No. 19).

3. **Quaiyum MA**, Ahmed S, Islam A, Khanum PA. Strategies for ensuring referral and linkage for essential obstetric care: a review. Dhaka: Operations Research Project, International Centre for Diarrhoeal Disease Research, Bangladesh, 1999. (ICDDR,B special publication, 95).

4. Azim SMT, Tunon C, **Quaiyum MA**, Begum A, Rasul R, Sirajuddin AKM. Improving the management of field operations of evaluation of and urban field information system. Dhaka: MCH-FP Extension Project (Urban), International Centre for Diarrhoeal Disease Research, Bangladesh, 1997. (ICDDR,B working paper, 95; MCH-FP Extension Project (Urban) working paper, 33).

5. Perry HB, Begum S, Begum A, Kane TT, **Quaiyum MA**, Baqui AH. Assessment of quality of the MCH-FP services provided by field workers in zone 3 of Dhaka city, Bangladesh and strategies for improvement. Dhaka: MCH-FP Extension Project (Urban), International Centre for Diarrhoeal Disease Research, Bangladesh, 1996. (ICDDR,B working paper, 62; MCH-FP Extension Project (Urban) working paper, 20).

6. Akhter HH, Ahmed YH, Chowdhury FK, Nahar, S, Khan YA, **Quaiyum MA.** A study to determine the safety, efficacy and Acceptability of injectable contraceptive DORYXAS among Bangladeshi women", Dhaka: BIRPERHT, 1994. (BIRPERHT publication no. 99).

In Press:

1. Perry H, Begum S, Begum A, Kane TT, **Quaiyum MA**, Baqui AA. Comprehensive assessment of the quality of services provided by family planning field workers in one major areas of Dhaka city, Bangladesh. *J Health Pop Dev Countries*, 1999.

Principal Investigator: Last, first, middle Nahar Quamun

Biography of the Investigators (contd.)

Give biographical data in the following table for key personnel including the Principal Investigator. Use a photocopy of this page for each investigator.

Name	Position	Date of Birth
Dr. Rafiqus Sultan	Programme Manager, Maternal Nutrition & Adolescent Health Programme Directorate of Family Planning MOH&FW, GoB	January 23, 1954

Academic Qualifications (Begin with baccalaureate or other initial professional education)

Institution and Location	Degree	Year	Field of Study
Chittagong Medical College	MBBS	1977	Medicine, Surgery and Gynaecology

Research and Professional Experience

Concluding with the present position, list, in chronological order, previous positions held, experience, and honours. Indicate current membership on any professional societies or public committees. List, in, chronological order, the titles, all authors, and complete references to all publications during the past three years and to representative earlier publications pertinent to this application. **(DO NOT EXCEED TWO PAGES, USE CONTINUATION SHEETS).**

Professional experiences

Programme Manager, Maternal Nutrition & Adolescent Health Programme, DFP	-	16/07/98 to date
Deputy Director (CIS), DFP	-	01/11/94 to 16/07/98
Assistant Director (QA)	-	22/02/94 to 30/10/94
Medical Officer	-	23/11/79 to 15/02/94

Research Experiences

1. Ten priority areas for clinical contraception jointly with URC
2. Utilization of comprehensive EOC services in selected MCWCs and awareness among pregnant women about EOC services (ongoing)
3. Knowledge of barbers about HIV and AIDS in selected urban and rural areas of Bangladesh (ongoing)

Bibliography

1. Adolescent health programmes in Bangladesh
2. Strategies to meet the health needs of adolescents: a review, ICDDR,B publications
3. Health reforms in Gambia

Principal Investigator: Last, first, middle Nahar Quamun

APPENDIX - I

International Centre for Diarrhoeal Disease Research, Bangladesh
Voluntary Consent Form

Title of the Research Project: Operations Research on Strategies to Improve Reproductive Health Services for Adolescents at the Public Sector

Principal Investigator: Quamrun Nahar

Before recruiting into the study, the study subject must be informed about the objectives, procedures, and potential benefits and risks involved in the study. Details of all procedures must be provided including their risks, utility, duration, frequencies, and severity. All questions of the subject must be answered to his/ her satisfaction, indicating that the participation is purely voluntary. For children, consents must be obtained from their parents or legal guardians. The subject must indicate his/ her acceptance of participation by signing or thumb printing on this form.

Informed Consent Form for the Parents to interview their adolescents

Assalamu Alaikum/ Adab.

My name is ----------. I have come from ICDDR,B: Centre for Health and Population Research, Dhaka (commonly known as Cholera Hospital) which is a renowned research and service center in Bangladesh. We are conducting a research to improve the health status of adolescents in Bangladesh.

The adolescents are the future mothers and fathers, as a result, their health status has important implications for the society as well as for the nation. If we could improve the health status of adolescents according to their needs, they will be able to give birth to healthy babies and also will take part in the development of a healthy nation. In order to improve their health status we are testing some health programmes for them. As a part of that programme we will develop some information materials on certain health issues which are important for them. These materials will be distributed to them through schools. The materials will contain information on the physical changes during puberty, marriage, pregnancy, contraception, pregnancy care etc. It will also include information on some important diseases that might have serious implications on health. These include sexually transmitted diseases and HIV/AIDS. But before distributing these materials to them we would like to talk to your adolescents to assess their knowledge, attitude and behaviour regarding these issues. If you agree, I will talk to your adolescent boy/girl now and will come again after one year to see how these materials would help them in improving their knowledge on these issues.

Participation of your son/daughter to this study is voluntary and s/he will not be obliged to answer any questions s/he does not want to. I will not provide any incentive for his/her participation. However, if you have any further query, I would be happy to clarify.

Do I have your permission to continue?
Yes----------No----------

If you have any doubts or questions, please contact me at:

Address:
Telephone number:

Principal Investigator: Last, first, middle Nahar Quamun

Informed Consent Form for Adolescents

Assalamu Alaikum/ Adab.

I am ----------. I have come from ICDDR,B: Centre for Health and Population Research, Dhaka (commonly known as Cholera Hospital) which is a renowned research and service center in Bangladesh. My organization is conducting research to improve health status of the community people for many years and providing information and health care services to the people. We are interested to improve knowledge of adolescents on health, and also trying to improve services for adolescents.

In order to improve health status, we are testing some health programmes for adolescents like you. As a part of that programme we will develop some information materials on certain health issues which are important for you and these materials will be distributed to you through schools. The materials will contain information on the physical changes during puberty, marriage, pregnancy, contraception, pregnancy care etc. It will also include information on some important diseases that might have serious implications on your health. These include sexually transmitted diseases and HIV/AIDS. But before distributing these materials to you, I would like to talk to you to assess your knowledge, attitude and behaviour regarding these issues. Your parents (father or mother) have given verbal consent to talk to you regarding these issues. If you agree, then I will talk to you now and will come again after one year to see how these materials would help you in improving your knowledge on these issues. All the information that you will give me will be strictly confidential. Your name will not appear on the questionnaire or in any report. I will not share any of the information given by you with anyone.

Your participation in this study is completely voluntary. You may ask me to stop the interview at any time if you decide not to answer my questions, or you may refuse to answer any single question if it makes you uncomfortable. But I hope that you will be participating in this interview because your opinion is very important to us. I would be happy to answer your queries but I am unable to give you any money or any other incentives for this interview.

Do you agree to participate in this interview? ---------Yes----------No

If you have any doubts or questions, please contact me at:

Address:
Telephone number:

Thank you.

কিশোর-কিশোরীদের সাক্ষাত গ্রহনের জন্য তাদের বাবা-মায়েদের নিকট হতে সম্মতি পত্র

আস্‌সালামু আলাইকুম/আদাব,

আমার নাম .....। আমি আই সি ডি ডি আর বি ঃ স্বাস্থ্য এবং জনসংখ্যা বিষয়ক গবেষনা কেন্দ্র, ঢাকা (কলেরা হাসপাতাল নামে সুপরিচিত) হতে এসেছি। আই সি ডি ডি আর বি বাংলাদেশের একটি বিখ্যাত গবেষনা এবং স্বাস্থ্য সেবা কেন্দ্র। আমরা বাংলাদেশের কিশোর-কিশোরীদের স্বাস্থ্য অবস্থা উন্নতি লক্ষ্যে একটি গবেষনা শুরু করেছি।

আজকের কিশোর কিশোরীরা হচ্ছে আগামী দিনের পিতা মাতা। সুতরাং তাদের সুস্বাস্থ্য ভবিষ্যত সমাজ এবং জাতির জন্য অত্যন্ত গুরুত্বপূর্ণ একটি বিষয়। যদি আমরা তাদের চাহিদামাফিক স্বাস্থ্যসেবা দিতে পারি, তবেই এসকল কিশোর/কিশোরীরা ভবিষ্যতে একটি সুস্থ্য শিশুর জন্ম দিতে পারবে এবং একটি সুস্থ্য জাতি গঠনে অংশগ্রহন করতে পারবে। তাদের স্বাস্থ্য উন্নতির লক্ষ্যে আমরা এ সকল কিশোর-কিশোরীদের জন্য কিছু স্বাস্থ্য কার্যক্রম পরীক্ষা-নিরীক্ষা করছি। এই কার্যক্রমের অংশ হিসাবে আমরা কিশোর-কিশোরীদের কিছু জরুরী স্বাস্থ্য বিষয়ক তথ্যের সাহায্যে একটি তথ্য পুস্তিকা তৈরী করব। স্কুলে কিশোর-কিশোরীদের মাঝে এ তথ্য পুস্তিকা বিতরণ করা হবে। এ তথ্য পুস্তিকায় বয়সন্ধিকালে শারিরীক পরিবর্তন, বিবাহ, গর্ভধারণ, পরিবার পরিকল্পনা, গর্ভকালীন সেবা ইত্যাদি বিষয়ে তথ্য থাকবে। এ তথ্য পুস্তিকায় আরও কিছু জরুরী রোগ সম্পর্কে তথ্য থাকবে যা স্বাস্থ্য অবস্থাকে প্রভাবিত করে, এগুলো হচ্ছে যৌনবাহিত রোগ এবং এইডস। তথ্য পুস্তিকা বিতরনের পূর্বে উপরে উল্লেখিত বিষয় সম্বন্ধে আপনার কিশোর বয়সী ছেলে-মেয়েদের জ্ঞান, আচরন এবং অভ্যাস সম্পর্কে আমরা জানতে আগ্রহী। যদি আপনি সম্মতি দেন তবে আমি এ মুহূর্তে আপনার কিশোর বয়সী ছেলে/মেয়ের সাথে কথা বলব এবং এসকল তথ্য তাদের বিষয় ভিত্তিক জ্ঞান বৃদ্ধিতে কতখানি সহায়ক হয়েছে তা বিশ্লেষণ করার জন্য আমি এক বৎসর পর আবারও আসব।

এই গবেষনায় আপনার ছেলে/মেয়ের অংশগ্রহন সম্পূর্ণ তার ইচ্ছার উপর নির্ভর করে। এমনকি কোন প্রশ্নের ব্যাপারে তাদের আপত্তি থাকলে সে প্রশ্নের উত্তর দিতে বাধ্য নয়। তার এই অংশগ্রহনের জন্য আমার পক্ষ হতে কোনরূপ টাকা-পয়সা দেওয়া হবে না। এ ব্যাপারে আপনার আর কোনও প্রশ্ন থাকলে আমি সানন্দে উত্তর দিতে প্রস্তুত আছি।

আপনি কি এই গবেষনা চালিয়ে যেতে অনুমতি দিবেন?

_____ হ্যাঁ _____ না

আপনার যদি এ ব্যাপারে কোন সন্দেহ থাকে বা মনে প্রশ্ন জাগে, তবে দয়া করে আমার সাথে নিম্ন-ঠিকানায় যোগাযোগ করবেন:

ঠিকানা:

টেলিফোন নং:

ধন্যবাদ।

কিশোর-কিশোরীদের সাক্ষাত গ্রহনের জন্য

তাদের নিকট হতে সম্মতি পত্র

আস্‌সালামু আলাইকুম/আদাব,

আমি .....। আমি আই সি ডি ডি আর বি ঃ স্বাস্থ্য এবং জনসংখ্যা বিষয়ক গবেষনা কেন্দ্র, ঢাকা (কলেরা হাসপাতাল নামে সুপরিচিত) হতে এসেছি। আই সি ডি ডি আর বি বাংলাদেশের একটি বিখ্যাত গবেষনা এবং স্বাস্থ্য কেন্দ্র। আমাদের এই প্রতিষ্ঠান দীর্ঘদিন ধরে বিভিন্ন এলাকার জনসাধারনের স্বাস্থ্য অবস্থার উন্নয়নের লক্ষ্যে গবেষনা করে যাচ্ছে এবং স্বাস্থ্য সেবা ও স্বাস্থ্য বিষয়ক তথ্য প্রদান করছে। আমরা চাচ্ছি কিশোর কিশোরীদের স্বাস্থ্য বিষয়ক জ্ঞান উন্নত করতে, এবং তাদের জন্য স্বাস্থ্য সেবা ব্যবস্থা উন্নতি করতে।

স্বাস্থ্য অবস্থা উন্নতির লক্ষ্যে আমরা আপনাদের মত কিশোর-কিশোরীদের জন্য কিছু স্বাস্থ্য কার্যক্রম পরীক্ষা-নিরীক্ষা করছি। এই কার্যক্রমের অংশ হিসাবে আমরা আপনাদের জন্য কিছু জরুরী স্বাস্থ্য বিষয়ক তথ্যের সাহায্যে একটি তথ্য পুস্তিকা তৈরী করব এবং স্কুলে আপনাদের মাঝে এ তথ্য পুস্তিকা বিতরণ করা হবে। এ তথ্য পুস্তিকায় বয়সন্ধিকালে শারিরীক পরিবর্তন, বিবাহ, গর্ভধারণ, পরিবার পরিকল্পনা, গর্ভকালীন সেবা ইত্যাদি বিষয়ে তথ্য থাকবে। এ তথ্য পুস্তিকায় আরও কিছু জরুরী রোগ সম্পর্কে তথ্য থাকবে যা আপনার স্বাস্থ্য অবস্থাকে প্রভাবিত করে, এগুলো হচ্ছে যৌনবাহিত রোগ এবং এইডস। তথ্য পুস্তিকা বিতরনের পূর্বে উপরে উল্লেখিত বিষয় সম্বন্ধে আপনার জ্ঞান, আচরন এবং অভ্যাস সম্পর্কে আমরা জানতে আগ্রহী। এ বিষয়ে আপনার সাথে কথা বলার জন্য আপনার বাবা/মা আমাদের মৌখিক অনুমতি দিয়েছেন। যদি আপনি রাজী হন তবে আমি এ মুহূর্তে আপনার সাথে কথা বলব এবং এসকল

তথ্য আপনার বিষয় ভিত্তিক জ্ঞান বৃদ্ধিতে কতখানি সহায়ক হয়েছে তা বিশ্লেষণ করার জন্য আমি এক বৎসর পর আবারও আসব।

আপনার তথ্যের গোপনীয়তা সম্পূর্ণরূপে রক্ষা করা হবে। প্রশ্নপত্রে বা তথ্যে আপনার নাম উল্লেখ করা হবে না এবং এই এলাকার কোন বয়স্ক লোকের অথবা আপনার পিতামাতার কাছে এই বিষয়ে কোন আলোচনা করা হবে না।

আপনার অংশগ্রহণ সম্পূর্ণ আপনার ইচ্ছার উপর নির্ভর করে। এমনকি আলোচনা চলার সময়েও কোন প্রশ্নের ব্যাপারে আপনার আপত্তি থাকলে অথবা আপনি না চাইলে যে কোন সময়ে আলোচনা বন্ধ করে দিতে পারেন। তবে আমি আশা করি যে আপনি এই জরীপে অংশগ্রহন করবেন, কারন আপনার মতামত আমাদের কাছে খুবই গুরুত্বপূর্ণ। আমি আপনার যে কোন প্রশ্নের উত্তর দিতে সানন্দে রাজী আছি, কিন্তু আপনার এই অংশগ্রহনের জন্য কোনরূপ টাকা-পয়সা আমার পক্ষ হতে দেওয়া সম্ভব হবে না।

আপনি এই সাক্ষাৎকারে অংশগ্রহন করতে রাজী আছেন?

_____ হ্যাঁ _____ না

এ ব্যাপারে আপনার যদি কোন সন্দেহ থাকে বা মনে প্রশ্ন জাগে, তবে দয়া করে আমার সাথে নিম্ন ঠিকানায় যোগাযোগ করবেন:

ঠিকানা:

টেলিফোন নং:

ধন্যবাদ।

APPENDIX - II
Draft

Questionnaire for Adolescents

WORK RECORD					
	INTERVIEWED BY	SUPERVISED AND FIELD EDITED BY	OFFICE EDITED BY	CODED BY	ENTERED BY
NAME					
DATE	☐☐ ☐☐ DAY MONTH	☐☐ ☐☐ DAY MONTH	☐☐ ☐☐ DAY MONTH	☐☐ ☐☐ DAY MONTH	☐☐ ☐☐ DAY MONTH

Section A: Background characteristics

101. How old are you? (Completed years) |__|__| years

102. Sex

Male	1
Female	2

103. Religion

Muslim	1
Hindu	2
Other (specify)_____	7

104. Marital status

Unmarried	1 ⇨ Skip to Q107
Married	2
Other (specify)_____	7 ⇨ Skip to Q107

105. How long have you been married? (Write complete years; if less than one year, write '00'') |__|__| years

106. How old is your husband/wife? (Completed years) |__|__| years

107. In what class you are currently studying? |__|__|

108. What is the highest level of schooling you would like to complete?

Secondary	1
College	2
University	3
Other (specify) _____	7

109. Are you currently doing any work (other than studying/household work) from which you earn money?

Yes	1
No	2 ⇨ Skip to Q201

110. What do you do? _____

111. How much do you earn every month (on average)? _____ taka

Section B. Knowledge, attitude and behaviour on reproductive health

201. Have you ever heard of menstruation (explain in local terms)?

Yes	.....	1
No	.....	2 ⇨ Skip to Q204

202. Do you know at what age a girl usually starts menstruation?

Yes	.....	1
No	.....	2 ⇨ Skip to Q204

203 If yes, at what age? |__|__| years

204. Check Q 102; If the respondent is a female skip to Q 208, otherwise ask Q205-207 and then skip to Q 216

205. Have you heard about night emission (shopno dosh) (use local terms)?

Yes.....	1
No.....	2 ⇨ Skip to Q216

206. What do you think about night emission? Is it a normal phenomenon or a disease process?

Normal	1
Disease	2
Do not know....	9

207. What should a person do if he has night emission?

Go to a doctor/medical provider	.....	1
Go to a traditional healer	.....	2
Nothing to do	.....	3
Other (specify _____)		7
Do not know	.....	9

208. Have you had your first menstruation yet?

Yes	.....	1
No	.....	2 ⇨ Skip to Q216

209 If yes, when? (How old were you at that time?) |__|__| years

210. What measures do you take during menstruation? (Multiple answers acceptable)

		Yes	No
Use old cloths	.....	1	2
Use sanitary/cotton pads	.....	1	2
Use soap/savlon/detol	.....	1	2
Use dry/ clean clothes	.....	1	2
Avoidance of taking fish/meat /egg		1	2
Not going out of the house	.....	1	2
Abstaining from household chores	.....	1	2
Doing only light works	.....	1	2
Abstaining from religious rituals/norms	....	1	2
Abstaining from intercourse	.....	1	2
Take nutritious/good/special food	.....	1	2
Wear panty (under garments)	.....	1	2
Use separate bed		1	2
Use hot water	.....	1	2
Others (specify _____)		1	2

211. Do you face any physical problem during menstruation?

Yes	.....	1
No	.....	2 ⇨ Skip to Q216

212. What are those problems? (Multiple answers acceptable)

	Yes	No			Yes	No
Pain in lower abdomen...	1	2	Pain in waist	.....	1	2
Pain in thigh.....	1	2	Soreness of inner part of thigh.....		1	2
Irregular menstruation	1	2	Excessive bleeding	.....	1	2
Scanty bleeding	1	2	Loss of appetite	.....	1	2
Vertigo	1	2	Headache	.....	1	2
Heaviness/ tenderness in breast	1	2	Others (specify _____)		1	2

213. Have you consulted anyone regarding these problems?

Yes	.....	1 ⇨ Skip to Q215
No	.....	2

214. If no, why not?(Multiple answers acceptable)

	Yes	No
It's a normal phenomenon	1	2
Felt shy to discuss	1	2
It was not serious	1	2
Other (specify _____)	1	2

[After asking this question skip to Q216]

215. Whom did you consult with? (Multiple answers acceptable)

	Yes	No		Yes	No
Friends	1	2	Mother	1	2
Father	1	2	Grandma	1	2
Elder sister.....	1	2	Elder brother	1	2
Cousin	1	2	Aunt	1	2
Uncle	1	2	Sister-in-law.....	1	2
Neighbors	1	2	Health workers	1	2
Grandpa	1	2	Brother in law	1	2
Mother in law	1	2	FP worker	1	2
Husband	1	2	Teacher	1	2
Other (specify_____)	1	2			

216. In your opinion, what is the appropriate age for a girl to marry? (If do not know, write '99') |__|__| yrs

217. In your opinion, what is the appropriate age for a boy to marry?(If do not know, write '99') |__|__| yrs

218. Do you know of any problems that can occur when a boys and girls marry too early?

Yes	1
No	2 ⇨ Skip to Q220
Do not know	9 ⇨ Skip to Q220

219. If yes, what are those problems? (Multiple answers acceptable)

	Yes	No
Injurious to health	1	2
Can have children at young age.....	1	2
Will give birth to sick/ weak baby.....	1	2
Baby can die	1	2
Mother can die	1	2
Will create population problem.....	1	2
Couple will fight with each other.....	1	2
Will reduce sexual power.....	1	2
Mother can develop disease.....	1	2
Will hamper child rearing	1	2
Will increase poverty	1	2
Will be unable to take family responsibility	1	2
Will be unable to do household chores	1	2
There will be problem during delivery	1	2
Do not know specific reason	1	2
Others (specify _____)	1	2

220. What measures could be taken to avoid problems/ complications when an adolescent girl is pregnant? (Multiple answers acceptable)

	Yes	No
Go to see a doctor	1	2
Go to a health centre	1	2
Go to a village practitioner	1	2
Go to a traditional healer	1	2
Counseling from a health worker	1	2
Take more food	1	2
Take nutritious food	1	2
Take medicine	1	2
Take vaccine	1	2
Take rest	1	2
Not to do heavy work	1	2
Do not know	1	2
Other (specify_____)	1	2

221. During which days of the monthly cycle does a woman have the greatest chance of becoming pregnant? (Single answer acceptable) [If the respondent does not know about menstruation (in Q201), circle '88']

During her period	01
In the middle of her cycle....	02
Right after her period	03
Within 7 days of her period	04
Within 15 days of her period	05
Just before period begins	06
Other (specify _____)	77
Not applicable	88
Do not know	99

222. Is it possible for a girl who has had her first menstruation to get pregnant if she has sex only once?

Yes	.....	1
No	.....	2
Do not know	.....	9

223. There are various ways, which a couple can avoid having children or a woman can delay getting pregnant. Have you ever heard about any such method or practices?

Yes	.....	1
No	.....	2 → Check Q104; if respondent is married go to Q228otherwise skip to Q248

224. If yes, what are those methods?

	Yes	No
Pills	1	2
Condom	1	2
Injectable	1	2
IUD	1	2
Norplant	1	2
Vasectomy	1	2
Tubectomy	1	2
Withdrawal/Azal	1	2
Safe period/Rhythm	1	2
Do not know	1	2
Other _____	1	2

225. From whom/ where did you know that there are various ways, which a couple can avoid having children or a woman can delay, getting pregnant? (Multiple answers acceptable)

	Yes	No		Yes	No
Friends	1	2	Mother	1	2
Father	1	2	Grandmother	1	2
Grandfather.....	1	2	Elder sister.....	1	2
Elder brother.....	1	2	Brother-in-law	1	2
Cousin.....	1	2	Uncle.....	1	2
Aunt	1	2	Sister-in-law.....	1	2
Mother in law	1	2	Husband	1	2
Neighbors	1	2	Teacher	1	2
Health worker.....	1	2	Family Planning worker	1	2
Doctor.....	1	2	Nurse	1	2
Radio	1	2	TV	1	2
Newspaper/ magazine.....	1	2	Book/Textbook.....	1	2
Poster/ Leaflet.....	1	2	School	1	2
Hospital	1	2	Own observation	1	2
Other (specify _____)	1	2			

226. Is it bad or good for adolescents to use contraceptives? Bad..... 1
Good..... 2
Do not know 9

[If answer is 'good' or 'do not know', check Q 104, if respondent is 'married', go to Q 228 other wise go to Q 248]]

227. If yes, why is it bad? (multiple answers are acceptable)

	Yes	No
The woman will be infertile	1	2
Getting pregnant will be difficult/ delayed	1	2
The woman will be fatty	1	2
Her health will be bad	1	2
Other (specify _____)	1	2

(Check Q.104; if the respondent is 'married' ask Q228, otherwise skip to Q 248)

228. Have you ever been pregnant? Yes 1
No ..... 2 → Skip to Q243

229. How old were you when you became pregnant for the first time? |___|___| years

230. Are you pregnant now? Yes 1
No ..... 2 → Skip to Q243
Unsure ..... 3 → Skip to Q243

231. How long have you been pregnant? (duration of current pregnancy) |____| months

232. Do you have any children (living)? Yes 1
No ..... 2 → Skip to Q243

233. If yes, how many? |___|

234. Did you have any pregnancy outcome (abortion/live birth/still birth) in the last 12 months?

Yes	.....	1
No	.....	2 ⇨ Skip to Q243

235. What was the outcome (of last pregnancy)?

Abortion	1
Still birth	2
Live birth	3

236. Did you go for any antenatal care during your last pregnancy?

Yes	.....	1
No	.....	2 ⇨ Skip to Q239

237. If yes, where did you go? (Multiple answers acceptable)

	Yes	No		Yes	No
Satellite clinic (NGO)	1	2	Satellite clinic (GoB)	1	2
H&FWC	1	2	NGO static clinic	1	2
THC	1	2	MCWC	1	2
GoB dispensary	1	2	Sadar/General hospital	1	2
Specialized hospital	1	2	Private clinic	1	2
Private doctor	1	2	EPI centre	1	2
Other (specify_____)	1	2			

238. In total, how may times did you go for antenatal care? _____ times [if do not know record '99']

239. Where did you give birth?

At home	1
At hospital.....	2
Other (specify_____)	7
Not applicable	8⇨ Skip to Q241

240. Who attended the delivery?

None	1
Neighbour/ relative	2
Untrained TBA	3
Trained TBA	4
Nurse/paramedic	5
Doctor	6
Other (specify _____)	7

241. Did you have any problems/ complications giving birth?

Yes.....	1
No	2 ⇨ Skip to Q243

242. What were those problems? (Multiple answers acceptable)

	Yes	No
Difficult labour	1	2
Excessive bleeding	1	2
Cord prolapse	1	2
Retained placenta	1	2
Convulsion	1	2
Perineal tear	1	2
Still birth	1	2
Premature/ low birth weight baby	1	2
Foetal asphyxia	1	2
Other (specify _____)	1	2

243. Are you or your husband currently using any method to avoid getting pregnant?

Yes	.....	1
No	.....	2 ⇨ Skip to Q247
Pregnant	.....	8 ⇨ Skip to Q248

244. Which method you/ your husband are /is using now?

Pills	.....	01
Condom	.....	02
Injectable	.....	03
IUD	.....	04
Norplant	.....	05
Vasectomy	.....	06
Tubectomy	.....	07
Withdrawal/azal	.....	08
Safe period/rhythm	.....	09
Other (specify_____)		77

245. Who took decision regarding the choice of method (method name)?

Self	.....	1
Husband		2
Both		3
Other (specify_____)		7

246. Where did you get the method (last supply)?

Pharmacy	01
Health clinic	02
Satellite clinic	03
H&FWC	04
Health worker	05
FP worker	06
Hospital	07
Other (specify_____)	77

[After asking this question skip to Q 248]

247. If not using any method, why not (ask about the most important reason)? (single answer acceptable)

Have not yet met the spouse	....	01
Wife is away	.....	02
Wants a child	.....	03
Wife does not like	.....	04
Health reason	.....	05
In-laws restriction	.....	06
Method will cause infertility		07
FP method has side effect		08
Post-partum amenorrhoea		09
No need as the wife is very young		10
Newly married		11
Other (specify _____)		77

248. Have you ever heard that a man or woman can have diseases of his/her reproductive organs (use local terms to make them recognize STDs)?

Yes	.....	1
No	.....	2 ⇨ Skip to Q256

249. If yes, what are those diseases?(Multiple answers acceptable)

	Yes	No
Syphilis	1	2
Gonorrhoea	1	2
HIV/AIDS	1	2
Lower abdominal pain.....	1	2
Whitish vaginal discharge	1	2
Painful urination	1	2
Impotency	1	2
Urethral discharge	1	2
Other (specify _____)	1	2
Do not know exactly	1	2

250. How can a person be infected with these diseases?(Multiple answers acceptable)

	Yes	No
By sexual contact	1	2
By sexual contact with multiple partner.....	1	2
By extra marital sex.....	1	2
By sex without condom	1	2
By going to brothel	1	2
By bad spirit/evil eye	1	2
By taking injection	1	2
By blood transfusion.....	1	2
By using unclean cloth during menstruation	1	2
By using cloths of diseased	1	2
From mother to foetus	1	2
Through breast feeding	1	2
God will	1	2
Do not know	1	2
Other (specify _____)	1	2

251. What symptoms do you think a person would experience with infection with such (STD) diseases?

	Yes	No		Yes	No
Urethral discharge	1	2	Vaginal discharge	1	2
Pain in genitalia	1	2	Painful urination	1	2
Swelling in the genitalia	1	2	Ulcer in the genitalia	1	2
Fever	1	2	Weakness	1	2
Other (specify----------)	1	2	Do not know	1	2

252. Have you ever experienced any symptoms that made you think you might be infected with one of these diseases?

Yes	1
No	2 ⇨ Skip to Q256

253. If yes, what were those symptoms? (Multiple answer acceptable)

	Yes	No		Yes	No
Urethral discharge	1	2	Vaginal discharge	1	2
Pain in genitalia	1	2	Painful urination	1	2
Swelling in the genitalia	1	2	Ulcer in the genitalia	1	2
Fever	1	2	Weakness	1	2
Other (specify----------)	1	2			

254. If yes, did you seek treatment for these symptoms? Yes 1
No 2 ⇨ Skip to Q256

255 If yes, where did you seek treatment for these symptoms?

	Yes	No		Yes	No
Satellite clinic (NGO)	1	2	Satellite clinic (GoB)	1	2
H&FWC	1	2	NGO static clinic	1	2
THC	1	2	MCWC	1	2
GoB dispensary	1	2	Sadar/General hospital	1	2
Specialized hospital	1	2	Private clinic	1	2
Private doctor	1	2	Traditional healer	r	2
Homeopath	1	2	Canvasser	1	2
Pharmacy	1	2	Other (specify _____)	1	2

256. Have you ever heard about AIDS? Yes 1
No ..... 2 ⇨ Skip to Q300

257. From where/ whom did you hear about AIDS? (Multiple answers acceptable)

	Yes	No		Yes	No
Friends	1	2	Mother	1	2
Father	1	2	Grandmother.....	1	2
Grand father	1	2	Brother-in law	1	2
Mother in law	1	2	Nurse	1	2
Hospital	1	2	Husband	1	2
Elder sister.....	1	2	Elder brother.....	1	2
Cousin.....	1	2	Uncle.....	1	2
Aunt	1	2	Sister-in-law.....	1	2
Neighbors	1	2	Teacher	1	2
Health worker.....	1	2	FP worker	1	2
Doctor.....	1	2	Radio	1	2
TV	1	2	Newspaper/ magazine.....	1	2
Book/Textbook.....	1	2	Poster/ Leaflet.....	1	2
School	1	2	Own observation.....	1	2
Other (specify _____)	1	2			

258. Do you know how a person can get this disease? Yes 1
No ..... 2 ⇨ Skip to Q260

259. If yes, how? (Multiple answers acceptable)

	Yes	No		Yes	No
By sexual contact	1	2	By sex with multiple partners	1	2
By extra marital sex	1	2	By sex without condom.....	1	2
By going to brothel	1	2	By bad spirit/evil eye	1	2
By taking injection	1	2	By blood transfusion.....	1	2
God will	1	2	By sharing needle	1	2
From mother to foetus	1	2	Through breast feeding	1	2
By using utensil used by AIDS patient	1	2	Do not know	1	2
Other (specify _____)	1	2			

260. What are the different ways to prevent AIDS? (Multiple answers acceptable)

	Yes	No		Yes	No
By avoiding sex.....	1	2	By avoiding sex with multiple partners	1	2
By avoiding extramarital sex	1	2	By using condom	1	2
By taking medicine	1	2	By maintaining religious rules/norms	1	2
By using sterile needle.....	1	2	By screening blood before transfusion.....	1	2
By providing health education	1	2	By awareness raising	1	2
Do not know	1	2	Other (specify _____)	1	2

Section C. Utilization of Health services

301. Did you suffer from any health problems within the three months?

Yes	.....	1
No	.....	2 ⇨ Skip to Q401

302.If yes, what was it?(Multiple answers acceptable)

	Yes	No		Yes	No
Fever	1	2	Cough/ common cold.....	1	2
Headache.....	1	2	Abdominal pain	1	2
Burning urine.....	1	2	Urethral discharge.....	1	2
Dysentery/ diarrhoea.....	1	2	Skin problem.....	1	2
Dyspepsia/ peptic ulcer.....	1	2	Ear infection.....	1	2
Asthma	1	2	Worm infestation	1	2
Accident.....	1	2	Oral problem.....	1	2
Vaginal discharge.....	1	2	Other (specify _____)	1	2

303 Did you visit any heath facility/ anywhere for the above mentioned health problems?

Yes	.....	1
No	.....	2 ⇨ Skip to Q310

304. If yes, where did you go? (Multiple answers acceptable)

	Yes	No		Yes	No
Satellite clinic (NGO)	1	2	Satellite clinic (GoB)	1	2
H&FWC	1	2	NGO static clinic	1	2
THC	1	2	MCWC	1	2
GoB dispensary	1	2	Sadar/General hospital	1	2
Specialized hospital	1	2	Pharmacy	1	2 ⇨ Skip to Q307

Private clinic	1	2	Traditional healer	1	2 ⇨ Skip to Q307
Other (specify _____)	1	2	Private doctor	1	2

305. What time does the health center open (you visited)? _____
(If answer is 'do not know' record '99' in the space provided; If several centers are visited ask about the last center)

306. What time does the health center close (you visited)? _____
(If answer is 'do not know' record '99' in the space provided; If several centers are visited ask about last center)

307. Are you satisfied with the services received from the center(s) you visited?
(If several centers are visited ask about last center) Yes 1
No ..... 2 ⇨ Skip to Q309

308 If yes, what aspect(s) of the services satisfied you?(multiple answers acceptable)

	Yes	No
Friendly caring staff	1	2
Privacy/confidentiality maintained	1	2
Service is free	1	2
Provides quality treatment	1	2
Doctors are very good	1	2
Medicines are very good.....	1	2
Short waiting time	1	2
Other (specify _____)	1	2

[After asking this question, Go to Q401]

309. If no, what aspect(s) of the services dissatisfied you?(multiple answers acceptable)

	Yes	No
Service is expensive.....	1	2
Doctors behave badly/rudely.....	1	2
Doctors did not listen to me	1	2
Had to wait for a long time.....	1	2
Did not give any medicine.....	1	2
Doctors did not seem knowledgeable	1	2
Did not provide me with information needed	1	2
Do not have appointment system	1	2
Lack of privacy/confidentiality.....	1	2
Other (specify _____)	1	2

[After asking this question, Go to Q401]

310. If no, why you did not go? (Multiple answers acceptable)

	Yes	No
The attack was mild	1	2
Treatment costs money	1	2
No one to accompany	1	2
No one to look after children	1	2
Felt shy.....	1	2
I was forbidden	1	2
Did not have time to go	1	2
Medicines are not available	1	2
Other (specify _____)	1	2

D: Knowledge about TT and immunization status

401. Have you heard about TT vaccination (use local terms to make the respondent understand)?

Yes	.....	1
No	.....	2 ⇨ STOP the interview

402. What is the purpose of taking this vaccine?

To prevent maternal tetanus	.....	1
To prevent neonatal tetanus	.....	2
Others (specify) _____		7
Do not know	.....	9

403. How many doses of TT should be taken by a person? _____

404. If you want to be vaccinated (with TT) what are the places where this vaccine is available?

Satellite clinic (NGO)	1	2	Satellite clinic (GoB)	1	2
H&FWC	1	2	NGO static clinic	1	2
THC	1	2	MCWC	1	2
GoB dispensary	1	2	Sadar/General hospital	1	2
Specialized hospital	1	2	Pharmacy	1	2
Private clinic	1	2	Other (specify _____)	1	2
Private doctor	1	2			

405. Have you taken TT vaccine?

Yes	.....	1
No	.....	2 ⇨ STOP interview

406. If yes, how many doses? _____

407. From where did you get this vaccine?

Satellite clinic (NGO)	1	2	Satellite clinic (GoB)	1	2
H&FWC	1	2	NGO static clinic	1	2
THC	1	2	MCWC	1	2
GoB dispensary	1	2	Sadar/General hospital	1	2
Specialized hospital	1	2	Pharmacy	1	2
Private clinic	1	2	Other (specify _____)	1	2
Private doctor	1	2			

End the interview and thank the respondent for his/her time and cooperation.

Interviewer's comments (if any): _____

_____

Appendix III
Topics to be covered in the in-depth interviews (case studies) with adolescents (Draft)

1. Knowledge about pubertal changes, fertility, family planning methods, pregnancy care, delivery care, postnatal care, TT immunization and STDs including HIV/AIDS
2. Attitude towards adolescent marriage and pregnancy, pregnancy care, delivery care and postnatal care and use of family planning methods by adolescents
3. Practices relating to menstruation (girls), boys (wet dreams)
4. Use of health services relating to vaginal discharge, other STD/RTI symptoms (perceived), family planning, pregnancy care, delivery care and postnatal care (if married)
5. TT immunization status
6. Knowledge and attitude towards existing health services
7. Experiences of using reproductive health services: satisfaction, provider's attitude, waiting time, cost, client provider interaction, referral, follow-up

Appendix IV
Client Exit Interview Guide (Draft)

1. How old were you at your last birthday?
2. Are you currently going to school?
3. Are you currently married?
4. Have you ever had a child?
5. Why did you come to this facility today? For what services?
6. When did you come? How long did you wait in the centre before receiving the service?
7. Were the hours and day that you came to the facility convenient for you? If not, why not?
8. Is there another time or day that would have work better for you?
9. Overall, would you say you were satisfied with your visit to the facility today, or were you dissatisfied with your visit today?
10. Why were you dissatisfied with your visit today?
11. Do you feel that you received the information and services that you wanted today?
12. Do you feel your consultation with the provider was too short, too long, or about the right amount of time?
13. During the visit, did you have any concerns about family planning or other health issues that you wanted to discuss with the provider? If yes, did the provider listen to your concerns to your satisfaction?
14. During this visit, did you have any questions you wanted to ask? If yes, did the provider let you to ask the questions? Did the provider respond to your questions to your satisfaction?
15. During your visit, how were you treated by the provider or other staff in the clinic?
16. During your visit, did you feel that the provider's explanations were easy to understand, or did you feel that the provider was difficult to understand?
17. Did the provider say anything that made you feel uncomfortable? If yes, what?
18. Could anyone overhear the conversation you had with the provider?
19. Did anything occur to interrupt your discussion with the provider?
20. Did you meet the provider in a separate room?
21. Did the provider ask you to return for another visit?
22. Did you set a date for your appointment?
23. Were there any educational materials available in the waiting room? What topics did the materials cover?
24. Were there any signs or posters specifically targeting adolescents in the waiting room? What materials did the materials cover?
25. What needs to be done at the facility to attract more adolescents?

Appendix V
Interview Guideline for Health Care Providers (Draft)

1. Do adolescents come for services to your clinic? Are they mostly married or unmarried? Are they mostly boys or girls? Why do they come to the clinic? Why do they not come to the clinic? What health concerns bring them to the clinic?
2. In the last week, how many adolescents have come for services? What proportion were boys and what proportion were girls?
3. What is the ideal age for an adolescent girl to marry? What is the ideal age for an adolescent boy to marry?
4. What does an unmarried youth worry about when seeking reproductive health services? Probe: doctor's attitude, refusal of services, parental or spousal consent, someone may see them, etc.
5. What does a married youth worry about when seeking reproductive health services? Probe: doctor's attitude, refusal of services, parental or spousal consent, someone may see them, etc.
6. At what time is your clinic scheduled to open/close? How many days per week are services offered at this facility? What are those days? If so, could you explain? Does the facility have separate hours for adolescents? If so, what are they?
7. Is the facility close to public transportation? If yes, what type? How long does it take to walk to the most common form of transportation?
8. Is the facility close to places where adolescents spend their free time (especially boys)?
9. Is the facility close to any primary or secondary schools? How far is the facility from schools in the area?
10. Does the facility have a waiting room? Is so, could you describe it?
11. Can you please describe the space to provide services to adolescents?
12. Is it possible for anyone, other than the provider, to hear anything that the adolescent client is discussing? Explain.
13. What are the ways your facility deals with giving privacy for adolescent clients?
14. Have any of your providers been trained specifically to best serve adolescents? If yes, what types of training have they received?
15. Does your facility have guidelines for techniques staff should use with adolescents? If so, what are they?
16. Do you think your staff are skilled at working with adolescents? How do you know this?
17. Do you know whether providers are spending enough time with adolescent clients? How do you know this?
18. Does your facility have standard fees for services, or subsidized charges for adolescents? Is yes, explain the system.
19. How does your facility welcome and serve adolescents?
20. Is there a sign specifically targeting adolescent which announces that RH services are available at this facility? If yes, where is it located and what does it say?
21. Are there any staff at your facility who do outreach activities? If so, where do they go and what do they do?

Appendix VI
Guideline to Look at the Facility Records

1. What are the different types of reproductive health services did adolescent receive in the past 12 months? List them.
2. What proportion of adolescents who received any type of reproductive health services during the past 12 months were boys/girls? What are their ages?
3. What type of RH services have boys/girls received in the past 12 months?
4. Is there a particular type of RH service(s) that more boys/girls received than other types of services? If so, which service(s)?
5. How many adolescent clients are referred for? Where For what services?

Appendix VII
Guidelines to Conduct In-depth Interviews with Parents and Community Leaders (Draft)

1. Do you think that adolescents need especial attention during puberty? If yes, why do you think that special attention is needed? In what respect?
2. How can we address the especial health needs of adolescents?
3. What are the roles of parents, teachers, community leaders and health care providers in addressing the health needs of adolescents?
4. In your opinion, what is the ideal age of marriage for a girl and a boy? What are the hazards of early marriage? Under what circumstance parents of an adolescent girl married off their daughter?
5. What is the ideal age for becoming a mother? What are the health hazards of early pregnancy? How can these hazards be prevented?
6. What is your opinion about the use of family planning methods by married adolescents? What are the methods that are suitable/not suitable for adolescents?
7. What are the main health problems that are faced by adolescents (boys and girls)? What measures should be taken to combat those problems? What do you think about providing health services to adolescents from already existing health facilities? Do they need any special attention (in respect to health facility? special hour? special day? specially trained provider?) to provide health services?
8. Do you agree with the notion that adolescents are at increasing risk of STDs (use local terms)? If yes, why? If no, why not? How can adolescents be infected with STDs (bad diseases)?
9. What do you think about providing reproductive health (define the term by giving examples) information to adolescents? What would be proper way of providing them these information?

Dr Nahar, I gather some of these changes suggested by Dr Kane have already been made. Please incorporate the relevant comments

Cris

24.2.00

TO: Cris Tunon and Quamrun Nahar

FROM: Thomas T. Kane

DATE: February 21, 2000

SUBJECT: Review of ORP and CWFD Adolescent Proposals

Greetings from Hanoi. I have been on vacation for three weeks traveling with my family throughout Vietnam. My parents and son Tom, and Lisa's mother have been visiting us since January 24th and they just left to return to the U.S. on Friday February 18th. Consequently, I have only just finished reviewing the two adolescent proposal documents Jatin sent to me at the end of January. Sorry for the delay. My main comments are provided below. I have written my comments (including some editing comments) in red ink on the papers themselves which I could send to you via DHL if you wish. In any case, I will summarize the main points and comments I have below.

DOCUMENT I. Strategies to Improve Reproductive Health Services for Adolescents: An Operations Research Proposal

1. The research design/OR methodology is not clearly stated in the proposal (the methodology must be inferred from the various sections and tables from the report: it is not stated clearly and concisely and it is not specific enough);

2. You need a list of acronyms and to define the acronyms the first time they are used in the text (e.g., GoB, ORP, ESP, STD, UFHP, CWFD, HPSP, NIPHP, USAID, KAP, RH, NGO, TOT, SHPP, HIV, AIDS, ANC, PNC, RTI, BCC, MOHFW, FWV, H&FWC, MO, SACMO, HA, FPI, FWA, THFPO, TFPO, THC, CC, etc.);

3. Since it is already the year 2000 the project start-up date may need to begin in 2000 instead of 1999 (unless it is already underway, which it probably is);

4. It appears that ORP is only helping with the UFHP Baseline survey/assessment. Why isn't ORP involved with the entire evaluation of the project from the very beginning, including the follow-up/post-intervention survey/assessment? This all needs to be planned out in the very beginning of the intervention so that you will have valid and comparable results. The baseline survey/assessment only gives you descriptive information before the intervention, and not what impact the intervention had on key indicators;

5. This proposal reads and sounds more like a service intervention proposal than an operations research proposal with a detailed research methodology and study design;

6. There is little or no mention of the problem of early and adolescent marriages, low provider contact rates with adolescents on p. 3;

7. The reference to the Haider study needs a year and it needs to be clearer (which Haider study: READ or Population Council???) (see p. 3);

8. There is also little information about what kinds of sexual activity adolescents engage in and with whom (male-female, male-male, unmarried-CSW, unmarried-married, etc.) (see p. 3);

9. There are other ICDDRB work on adolescents done by ORP or underway by PHSD (see p. 3);

10. Section 4 on the Intervention: There is no mention of an intervention with RSDP or with CWFD in this proposal (p. 4) --- Is this correct and intentional?

11. Under the Objectives of 4.1.2 on p. 5, the fourth bullet **foster a supportive environment for adolescents ---** you could add by peers, parents, teachers, service providers, and community leaders ;

12. In the Conceptual Framework on Page 6 add to **distribution of information** to adolescents; **clinic guidelines** for adolescent health information and services; change **conduction of** to conduct; After the last box on the right, there really should be another box entitled Improve RH Status of Adolescents;

13. Section 4.1.4: Information should already have been provided at this point--- on the survey sample size, stratification, number of qualitative observations and interviews, and the type of design (e.g., pretest/posttest or experimental and control group design); Be more specific;

14. Can you be more specific about the indicators of correct knowledge of RH issues? (e.g., knowledge of correct modes of transmission and means of prevention of HIV/AIDS? Knowledge of the safe and fertile periods in a women's menstrual cycle?; knowledge of the major symptoms of pregnancy complications?);

15. Specify which specific data sources will be used to measure specific indicators;

16. Will information on the marital status, age, gender and education and work status of the adolescents be collected? If yes, then say so somewhere;

17. Its not clear what you mean by "case studies" on the bottom of page 8 (page not numbered);

18. Section 4.1.5.1 (c): to be more consistent the subsection should probably read "**Record-keeping, monitoring, and evaluation**";

19. On p. 9: Section 4.1.5.2 (c): Could you add one more aspect of an adolescent friendly clinic---
    - **provision of condoms for sexually active adolescent males and females**

20. On p. 9 in the box under the last column on the right entitled "Partner": It should read **MOHFW/GoB and ORP;**

21. On p. 9: Section 4.1.5.2 (c): the category **-supply of iron and medicine for dysmenorrhea** should specify **"for female adolescents"** ;

22. In the boxes on pages 9 and pages 10 under the heading "**Design**": Was having a control group or site considered for the OR design?

23. Section 4.1.2 on pages 11-12. The numbering system is complicated and out of wack. It should be 4.1.5. and the previous section on pages 8-10 should be 4.1.4.--- not 4.1.5.--- ;

24. On page 11 its says UFHP static clinics each serve 60,000 population. Is this correct? The ESP community clinics will serve only 6,000 population, right?

25. Why isn't ORP involved in a more comprehensive OR study design with UFHP, instead of just a baseline survey? The post-intervention survey should be part of the same evaluation design and should be planned and involve ORP as well.

4. Some of the CWFD interventions have been underway for some time now and were funded by different donors: e.g., the Integrated Adolescent Program in Chittagong was funded by Action Aid, and on page 6 the proposal calls for "documenation of the integrated program in Chittagong". This is something that should already have been done as part of the Action Aid project, and is more of a project description activity than an OR study.

5. The proposal needs to more specific about the content of the various intervention activities, e.g., establishment of peer networks, adolescent-friendly services; specify what specific RH information will be included in the IEC/BCC work: HIV/AIDS? Family Planning; Pregnancy Management; Nutrition; And be more specific within these health and nutrition categories;

6. The indicators and data sources listed in the boxes on pages 12-13 need to be more clearly defined and described; e.g., be more specific about the specific kinds of reproductive health knowledge the adolescents will be expected to know (e.g., modes of transmission and means of prevention of HIV/AIDS; different family planning methods, pregnancy complications, maternal nutrition during pregnancy; menstruation, safe and fertile period, RTIs, personal hygiene during menstruation, negotiation/communication skills, etc..

7. This document needs heavy editing. There are some missing words, unnecessary words, and incorrect verb tenses used throughout the draft. Throughout the report, be consistent on your sub-section headings (numbering, capitalize first letter of words, use boldface letters when appropriate) and keep the numbering system for subsections as simple as possible. A few examples of the kinds of editorial changes needed are provided below. Don't use "early eighties" and "mid-nineties" on Page 1. Use "early 1980s" and "mid-1990s". On top of Page 6 it should be Objectives. On Page 7, subsection 4.2 should read "Strategies for working adolescents" (delete the word "the" before the word "working". Same comment applies to subsection 4.3 on Page 9 (delete the word "the" before the word "adolescents". On Page 7, subsection 4.2.1 should read "Strengthening the existing clinics". The same comment applies to subsection 4.3.1 on Page 9 "Strengthening existing clinic". The second to the last bullet on Page 7 should read "Protocol design". The same comment applies to the first bullet on Page 9 should be "Protocol design" (In the same line on Page 9, the first sentence should read " A protocol will be developed which will contain a clear statement about ....." The second sentence under the first bullet on Page 9 should read: "The protocols are intended to help the service providers to manage adolescent RH services" and NOT "manage the adolescents in a proper way". On Page 13, in the row for the third objective, the research question should be rephrased as follows "Does the proposed strategy increase the utilization of RH services?" and NOT "Is the proposed strategy increase the utilization of RH services?"

26. On p. 12. Will the 1000 adolescents in the survey be evenly distributed between males (500?) and females(500?)? Are only unmarried adolescents included or will the female adolescents include some married?

27. When will the baseline survey be conducted? Ideally it should be done before the interventions start.

28. In the References on pp. 13-14: You should probably include Quamrun Nahar et al. Strategies to Meet the Health Needs of Adolescents: A Review, Special Publication of the ORP; and also possibly include ORP working paper Number 151 by Islam et al. "Determinants of Contraceptive Use among Married Teenage Women and Newlywed Couples". There are four FOCUS papers cited in these references but only one ORP paper. You could also add the reference to the Pathfinder newlywed paper by Allaudin.

29. Reference Number 4. Population Council and READ: You should put the authors of the study names in the reference: Haider, etc.....

30. The document needs editing. I have made edits throughout the document. If you want me to DHL the document, please give me the ORP mailing address, phone number and DHL billing code (if you have one). Otherwise, I can claim the DHL expense on my next trip.

DOCUMENT II: Components for Adolescent Program of CWFD (non-UFHP part)

1. This document looks more like a description of an adolescent program and its many component activities than an OR proposal;

2. The research and evaluation design is very weak; The evaluation design is not explicitly stated, such as the sample sizes, numbers of observations and categories for FGD, type of evaluation design (e.g., process, outcome, impact), type of operations research design, if any, e.g. there are no clearly defined baseline and follow-up surveys proposed; There should be a specific section on research design, monitoring and evaluation; Define what you mean by case study; define the sample size or number of research cases, categories of participants in the FGDs, number of observations and in-depth interviews for each category of adolescent, provider, parent, teacher, etc.

3. There are too many interventions and intervention activities making it difficult to evaluate each one effectively;

13 February 2000

Professor Barkat-e-Khuda
Division Director
Health and Population Extension Division
ICDDR, B
Dhaka

Dear Sir,

Subject: "Strategies to Improve Reproductive Health Services for Adolescents: An Operations Research Proposal"

Thank you very much for giving me the opportunity to review the above document. On the whole, I find the proposal is a quite thoughtful one. I, therefore, congratulate the scientists who worked out this valuable document. However, all of my specific comments are noted in appropriate places of the text. Besides those, I would like to make the following general points. I hope consideration of all the comments and views will help further improve the strategic proposal.

General points:

1. It seems to be a concept paper. Substantial elaboration of all the sections particularly pertaining to ORP will be very beneficial to make the concepts and strategies more operational e.g., design, indicators, techniques, tools etc. for evaluation.
2. The text is mixed up with the American and the British styles of English. The author/s should follow only one consistently.
3. Exit point interview often generates biased data. As the respondents often are found in a hurry to reach homes after visiting the service centres. Besides, the onlookers influence the respondents in expressing their actual views/opinions. The system also does not take care of the privacy of the respondents. Similar interview can be effectively carried out at home on the following day of visiting any service centre. Of course, this will need a list of the clients who visited the service points to locate them easily at home.
4. I was unsuccessful to clearly understand the objectives cited in the sections 3.1.2 and 3.4.2. Are those of the intervention programs run by the implementing agencies or of the ORP's proposal?

With kind regards.

Yours faithfully,

Fazlul Karim
Sr. Research Epidemiologist
RED (15th floor), BRAC Centre
75 Mohakhali C/A
Dhaka 1212

13 February 2000

Professor Barkat-e-Khuda
Division Director
Health and Population Extension Division
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Comments on the proposal entitled "Operations research on strategies to improve reproductive health services for adolescents"

Protocol No. 2000-008

P.I. - Dr. Quamrun Nahar

Summary of the project

Concern: The project aims to address the concern that the effects, methodologies, and approaches used in providing services to adolescents in Bangladesh by GoB and NGOs have not been properly documented or assessed (page 3, 1st paragraph of project summary).

Objectives: To develop and test materials and procedures to make accurate RH (presumably reproductive health) information available to adolescents in school, community, workplace and clinic settings (page 3, second paragraph of project summary).

Hypothesis: The proposed strategies will lead to increase adolescents' correct knowledge about reproductive health issues and improve availability of reproductive health services for adolescents in the GoB and NGO areas included in the study.

Specific aims

1. Design and test strategies to:
   Increase adolescents' correct knowledge about reproductive health issues
   Improve availability of reproductive health services for adolescents
   Foster supportive environment for adolescents to discuss RH issues and seek services
2. Assist service delivery organizations in the documentation, evaluation and scaling up of reproductive health programmes for adolescents.

Comments: The concern was the "inadequate documentation or lack of assessment of the adolescents reproductive health programme". Assessment, if it can be interpreted as an evaluation of existing GoB and NGO services, is certainly an important research task. Process documentation, if properly done, can provide insights for evaluation studies. In the present research proposal, the task of documentation is basically a component of technical assistance to GoB and NGOs (page 4, specific aims 2), and failed to reflect on its research relevance.

If assessment/evaluation of the existing GoB and NGO services for adolescents is the objective of this study than it can be assumed that the services are already in place. In fact, from the review of existing adolescent programmes of GoB and NGOs as presented in the proposal (page 5-6) it is apparent that the services are available. It has also been mentioned that a limited number of studies on the programme effectiveness were also carried out, however, an assessment of the impact has not been done. Thus, there is a clear need for the assessment/evaluation of the programme.

The above scenario has created a state of confusion in terms of the stated concern, objectives of the study, and the proposed activities (page 3). Of the seven activities listed, first four are to develop new interventions/materials, and the last three are technical assistance to NGOs (no mention of GoB). If evaluation of the existing programmes is the objective than development of new interventions/materials is somehow out of order. Modifications of the existing progarmme and or development of new programme/materials can wait till the evaluation. The modification can thus benefit enormously from the findings of the evaluation.

Abd. D. 5

It was mentioned in rationalizing the study that the existing health care system is inadequate to meet the needs of the adolescents. Nothing however has been said about the nature and magnitude of the adolescents health problems and their possible consequences on human life.

With reference to the technical assistance to GoB/NGO (last three activities), it may be an important part of the ORP mandate, however, has little to do with the research objectives of the present study. Thus, I do not see why they should be included in the present proposal.

Research design and methods

Four components are listed. First three relate to testing of strategies to increase knowledge, availability of services, and foster supportive environment for reproductive health. The fourth one is on technical assistance.

A pre and post study design has been proposed for the research components 1-3. Different urban and rural sites are mentioned. Urban sites included a garment factory and an NGO clinic. There was no mention of the basis of selection of the study sites and their representativeness of the target community. A mention of sample sizes was only made in the face sheet and no basis for the proposed sample sizes has been described in the proposal. As to the method of data collection, it is mentioned that focus group discussions, in-depth interview, exit interviews, and surveys will be conducted. There was no mention of the number of FGDs and exit interviews to be conducted. Also absent was the information about the inclusion criteria of the participants of FGDs and exit interviews, and the contents of the FGDs and exit interviews. Similarly no information about the contents of the in-depth interview and that of the parents was provided in the proposal. Also missing from the proposal is a description of activities to be carried out for the service providers and data to be collected from them, and methods to be adopted. One of the external reviewers also raised these concerns.

The attached questionnaire with around 135 questions is meant for adolescents of age 10-19 years. Of the total questions, 20 were on respondents' education, aspiration, and household economic condition. These questions do not have any direct relevance with the stated objectives or hypotheses of the study. A large number of question (33) are related to knowledge about family planning methods. Some of the questions included issues such as ejaculation, STDs, and HIV/AIDS. It is unclear whether these questions are enough for the study purposes because reproductive health was never defined in the proposal. Issues such as, abortion, safe delivery, and masturbation are not included in the questionnaire. While referring to STDs, diseases were referred by their biomedical names (syphilis, gonnhorea, chlamydia, trichomoniasis, and genital herpes). I wonder whether this is the best way to collect information about their knowledge among the adolescents.

Research objectives also included topics on availability of services and fostering enabling environment. Nevertheless, there were no hypotheses formulated in this regard and I did not see any items in the questionnaire to assess these aspects. No mention was also made about how the availability and enabling environment will be measured.

Under the above circumstances, I tend to conclude that as it stands the study design and methodology section of the proposal is incomplete.

No budget was included. The informed consent forms used the phrase "reproductive health" for consent. I am afraid that the respondents or their guardians will not understand what kind of questions their children are going to face if the study objective is referred by RH only. To make it fully informed, details of the topics to be discussed should be told to the respondents and their parents by mentioning topics such as ejaculation, family planning etc. Otherwise the informed consent in effect will be partially uninformed.

Face sheet: Study population should also include parents not only the adolescents, this should be corrected. It was indicated in the face sheet that the research include "observation of public behaviour", nothing about the observations was mentioned in the methodology section. The questionnaire included identifier of the

respondents, thus the subjects can be identified from the provided information through identifiers linked to the subject. The face sheet to be filled in accurately.

Investigators and their background: Some of the data will be collected by using qualitative methods. The strength of the team in relation to qualitative data collection and analys s was unclear.

Final comments: The research topic is important. The proposal as it stands is ambiguous in terms of objectives. The section on study design and methods is incomplete and very week. The topic is culturally sensitive and I clearly see a need for qualitative formative research before deciding on the method and data collection instruments.

INTERNATIONAL CENTRE FOR DIARRHOEAL DISEASE RESEARCH, BANGLADESH
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CENTRE
FOR HEALTH AND
POPULATION RESEARCH

15 March 2000

Memorandum

To : Dr. Quamrun Nahar
Health and Population Extension Division

From : David A. Sack, M.D.
Chairman, Research Review Committee (RRC)

Sub : Protocol # 2000-008

Thank you for your protocol # 20000-008 entitled "Operations research on strategies to improve reproductive health services for adolescents" which the RRC reviewed in its meeting held on 13th March 2000. The Committee was impressed with the importance of the projects, its timelines, and the importance of the investigation. However, the Committee agreed with reviewers and made following observations:

a) the protocol lacked focus and specificity and needs to be re-written to more clearly describe the methodology of the evaluation to be employed.

b) the instruments being developed could have major importance on evaluation of adolescent programmes and it would seem that key indicators need to be defined, the instrument needs to focus on these key indicators, and that these need to relate directly to the primary goals of the programmes.

c) the age-specific issues also need to be defined.

d) the methodology for selection of subjects should be stated more clearly.

You are, therefore, advised to revise the protocol to incorporate the above observations and the issues raised by the reviews from Drs. Kane and Bhuiya and resubmit the modified copy of the protocol for consideration of the Committee.

Thank you once again.

cc: Division Director
Health and Population Extension Division