ความรับรู้ของหญิงวัยรุ่นที่ตั้งครรภ์ต่อความต้องการ การบริการและให้คำปรึกษาแก่หญิงตั้งครรภ์ ณ ศูนย์อนามัยแม่และเด็กระดับตำบลในประเทศบังคลาเทศ

โมฮัมเหม็ด นาซรูล อิสลาม

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PERCEPTION OF PREGNANT ADOLESCENT ON THEIR NEEDS OF PREGNANCY COUNSELING AND SERVICES PROVIDED THROUGH KISHOREGONJ DISTRICT MATERNITY AND CHILD WELFARE CENTER IN BANGLADESH

MOHAMMED NAZRUL ISLAM

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By : Mohammed Nazrul Islam

Program : Health Development

Thesis Advisor : Asst. Prof. Jiruth Sriratanaban M.D., M.B.A., Ph.D.

Co-Advisor : Asst. Prof. Somrat Lertmaharit M. Med. Stat.

Accepted by the Faculty of Medicine, Chulalongkorn University in Partial Fulfillment of the Requirements for the Master's degree

---------- Dean of the Faculty of Medicine

(Prof. Pirom Kamol-ratanakul, M.D., M. Sc.)

Thesis Committee

---------- Chairman

(Prof. Pirom Kamol-ratanakul, M.D., M. Sc.)

---------- Thesis Advisor

(Asst. Prof. Jiruth Sriratanaban, M.D., M.B.A., Ph.D.)

---------- Co-advisor

(Asst. Prof. Somrat Lertmaharit M. Med. Stat.)

---------- Member

(Assoc. Prof. Sompop Limpongsanurak M. D., MPH.)

โมฮัมเหม็ด นาซรูล อิสลาม : ความรับรู้ของหญิงวัยรุ่นที่ตั้งครรภ์ต่อความต้องการ การบริการและให้คำปรึกษาแก่หญิงตั้งครรภ์ ณ ศูนย์อนามัยแม่และเด็กระดับตำบลในประเทศบังคลาเทศ (PERCEPTION OF PREGNANT ADOLESCENT ON THEIR NEEDS OF PREGNANCY COUNSELING AND SERVICES PROVIDED THROUGH KISHOREGOANJ DISTRICT MATERNITY AND CHILD WELFARE CENTER IN BANGLADESH อาจารย์ที่ปรึกษา : ผศ.นพ.จิรุตม์ ศรีรัตนบัลล์, พ.บ., MBA., Ph.D., อาจารย์ที่ปรึกษาร่วม : ผศ.สมรัตน์ เลิศมหาฤทธิ์, M.Med. Stat., 100 หน้า ISBN 974-333-564-1

วัตถุประสงค์

เพื่อประเมินสัดส่วนของการรับรู้ของหญิงวัยรุ่นที่แต่งงานแล้วที่มีต่อความจำเป็นของบริการและการให้คำปรึกษาเกี่ยวกับการตั้งครรภ์ ที่ให้บริการโดย Kishoregonj District Maternity and Child Welfare Center ในประเทศบังคลาเทศ เพื่อประมาณการสัดส่วนของหญิงวัยรุ่นตั้งครรภ์ที่แต่งงานแล้วที่เคยใช้บริการและรับการให้คำปรึกษาเกี่ยวกับการตั้งครรภ์ และศึกษาหาปัจจัยที่มีความสัมพันธ์กับการใช้บริการดังกล่าว

รูปแบบการวิจัย การวิจัยเชิงพรรณนาแบบตัดขวาง

ที่ตั้ง Kishoregonj District Maternity and Child Welfare Center ในประเทศบังคลาเทศ (MCWC)

ตัวอย่าง หญิงวัยรุ่นที่แต่งงานแล้วและตั้งครรภ์ อายุ 15-19 ปี ที่จำเป็นต้องได้รับบริการและการให้คำปรึกษาเกี่ยวกับการตั้งครรภ์ที่มาฝากครรภ์ครั้งแรกที่ Kishoregonj District Maternity and Child Welfare Center ในประเทศบังคลาเทศ ระหว่างระยะเวลาการศึกษา

ระเบียบวิธีการศึกษา ใช้แบบสัมภาษณ์ที่กำหนดคำถาม-คำตอบไว้ก่อนในการเก็บข้อมูลจากหญิงวัยรุ่นที่ตั้งครรภ์ที่มาฝากครรภ์ครั้งแรกที่ MCWC ระหว่างเดือนพฤษภาคมถึงสิงหาคม พ.ศ. 2542

ผลการศึกษา

อายุเฉลี่ยของหญิงวัยรุ่นในกลุ่มตัวอย่างคือ 17.3 ปี ร้อยละ 80.1 อ่านออกเขียนได้ ที่เหลือร้อยละ 19.9 อ่านหนังสือไม่ได้ ไม่เคยเข้าโรงเรียน ร้อยละ 67.9 มีอายุอยู่ระหว่าง 16-19 ปี ร้อยละ 32.1 มีอายุระหว่าง 12-15 ปี ร้อยละ 99.2 เป็นแม่บ้าน ร้อยละ 0.8 ทำอาชีพเกษตรกรรมหรืออาชีพอิสระ ร้อยละ 93.5 นับถือศาสนาอิสลาม ร้อยละ 6.5 เป็นฮินดู หญิงวัยรุ่นที่มีการรับรู้ความจำเป็นในภาพรวมเท่ากับร้อยละ 14.2 ในขณะที่ร้อยละ 85.5 ไม่มีการรับรู้ อย่างไรก็ตามในการแยกวิเคราะห์แต่ละมิติของการรับรู้มีความแตกต่างกันบ้าง อายุ ($p=0.032$) ระดับการรับรู้ของหญิงวัยรุ่น มีความสัมพันธ์อย่างมีนัยสำคัญทางสถิติกับ ระดับการศึกษา ($p=0.003$) อายุที่แต่งงาน ($p=0.008$) การเคยรับทราบว่า MCWC ให้บริการและคำปรึกษาเกี่ยวกับการตั้งครรภ์ ($p<0.001$) ตลอดจนแหล่งของข้อมูล ($p<0.001$) ในการวิเคราะห์โดยการถดถอยโลจิสติกพหุตัวแปร พบว่า การเคยรับทราบเกี่ยวกับบริการและแหล่ง ข้อมูลมีความสัมพันธ์กับระดับการรับรู้ของหญิงวัยรุ่น

ประโยชน์จากการศึกษา

ผลการศึกษาช่วยในงานส่วนการวางแผนสุขภาพและครอบครัวในการพัฒนารูปแบบของการบริการและการให้คำปรึกษาเกี่ยวกับการตั้งครรภ์ให้มีความคุ้มค่า, ปลอดภัย, ให้ข้อมูล, สร้างทักษะซึ่งช่วยสนับสนุนและเป็นกันเองต่อวัยรุ่น พฤติกรรมการเจริญพันธุ์ที่ดี การแต่งงานที่ช้าลง และการใช้การคุมกำเนิดที่มากขึ้นของวัยรุ่น ช่วยลดความพิการ การเสียชีวิต และการเจริญพันธุ์ในแต่ละช่วงอายุซึ่งช่วยลดอัตราการเพิ่มประชากรในบังคลาเทศลงได้

หลักสูตร	การพัฒนาสุขภาพ	ลายมือชื่อนิสิต.....
สาขาวิชา	การพัฒนาสุขภาพ	ลายมือชื่ออาจารย์ที่ปรึกษา.....
ปีการศึกษา	2542	ลายมือชื่ออาจารย์ที่ปรึกษาร่วม.....

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KEY WORDS: PREGNANT ADOLESCENT, PERCEPTION ON PCS AND PREGNANCY COUNSELING AND SERVICES.

MOHAMMED NAZRUL ISLAM: PERCEPTION OF PREGNANT ADOLESCENT ON THEIR NEEDS OF PREGNANCY COUNSELING AND SERVICES PROVIDED THROUGH KISHOREGONJ DISTRICT MATERNITY AND CHILD WELFARE CENTER IN BANGLADESH. THESIS ADVISOR: ASST. PROF. JIRUTH SRIRATANABAN M.D., M.B.A., Ph. D. THESIS CO-ADVISOR: ASST.PROF. SOMRAT LERTMAHARIT M. Med. Stat. 100 pp. ISBN 974-333-564-1

Objective: To assess the proportion of married adolescent pregnant perception on their needs of pregnancy counseling and services provided through Kishoregonj District Maternity and Child Welfare Center in Bangladesh. To estimate the proportion of wanted or intended pregnancy of adolescent and to determine the constraints which are related to the attendance or use of pregnancy counseling and services.

Design: A Cross sectional Descriptive study.

Setting: Kishoregonj District Maternity and Child Welfare Center (MCWC) in Bangladesh.

Subject: Married adolescent pregnant (n = 246) aged from 15-19 years who needs pregnancy counseling and services attended for first antenatal visit to kishoregonj District Maternity and Child Welfare Center (MCWC) in Bangladesh during study period.

Method: A structured interview questionnaire was used for data collection of pregnant adolescent attended for first antenatal visit to MCWC during May to August, 1999.

Results: The socio-cultural data revealed that, the mean age of adolescent was 17.3 years. The educational level was 80.1 percent literate and 19.9 percent Illiterate (had no schooling). Marital status was 67.9 percent in the age group of 16-19 years and 32.1 percent were under the age group of 12-15 years age group. Most of the adolescents 99.2 percent were housewives and 0.8 percent were doing agriculture and self business. Majority, 93.5 percent adolescent were Muslims and 6.5 percent were Hindus. The proportion of adolescent's overall perception was 14.2 percent and 85.8 percent had no perception. The pregnancy actually wanted were 41.9 percent and 58.1 percent were unwanted or unintended. The age (P=0.032), educational level (P=0.003), age of marriage (P=0.008), ever heard MCWC provides PCS (P<0.001) and source of information (P<0.001) were found to be statistically significant with main outcome perception. In multiple logistic regression analysis, age of adolescent, religious problem to avoid getting pregnancy and source of information were found to be highly significant with the perception level of adolescent.

Implications: The results of the study will impact on both health and family planning sectors to develop most comprehensive PCS model through program intervention, social mobilization, altering the existing status of adolescents, providing information and building skills. Adolescents HRB by implementing laws and developing strategy and employing practices reduces morbidity, mortality and age specific fertility rate which declined population growth rate (GR).

หลักสูตร การพัฒนาสุขภาพ ลายมือชื่อนิสิต.....

สาขาวิชา การพัฒนาสุขภาพ ลายมือชื่ออาจารย์ที่ปรึกษา.....

ปีการศึกษา 2542 ลายมือชื่ออาจารย์ที่ปรึกษาร่วม.....

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BACKGROUND AND RATIONALE

1.1 Importance of the study:

Bangladesh has the highest population explosion country in the world. The estimated adolescent population was 23 percent of the total population 122.9 million which accounts for about 27 million, 13 million are girls and 14 million are boys (1991 Census and Hossain, 1996). This has significant implications in health, family planing, education, manpower, housing planing among others. The highest proportion of adolescents under the age of 20 giving birth 66 percent every year. Early child bearing has negative demographic, socioeconomic and socio-cultural consequences. Teenage mothers are more likely to suffer from sever complications during delivery which results in higher morbidity and mortality for both themselves and their children. Of greater practical importance is that 19 percent of birth in Bangladesh are exposed to a higher risk of death because the mother is under 18 years.[1]

Adolescent mother's nutritional status is deplorable. About 19 percent of them are short stature (shorter than cutoff point 145 cm.) and 50 percent are actually malnourished (body mass index lower than 18.5) increase the risk of difficult child birth (BDHS-1996-1997). The maternal mortality rate among the adolescents group is 5.8 per 1000 live birth. This is not only because of their age but because of their first births, which carry higher risks than second, third and fourth births. The risks of death may be two to four

times higher depending on adolescent's health and socioeconomic status. Overall, 21 percent of births to adolescent women in Bangladesh can be considered as unplanned, 20 percent as mistimed (wanted later) and 1 percent an unwanted.[2]

Bangladesh has one of the highest maternal mortality ratios in the world about 600 deaths/100,000 live births-UNICEF. About 21600 pregnancy related deaths occur/year in Bangladesh. The proportion of girls who bear a child before age 20 reaches as high as two thirds in Bangladesh. In the course of the last generation, the population has doubled and the rural population has come close to doubling. Therefore, more rigorous evaluation and research of existing program/services, new prospective studies to test alternative models and identify a set of providers for implementing successful reproductive health care program specially on pregnancy counseling and services.[3]

Adolescents are poorly informed about basic reproductive health events. The current reproductive health care often do not match the needs and health seeking behaviors of adolescents. Therefore, new prospective studies needed for implementing successful comprehensive reproductive health care model to make it cost effective, safe, more supportive and friendly to adolescent. Adolescent healthy reproductive behavior (HRB) reduces morbidity, mortality and age specific fertility rate which declined population growth rate (GR)[4]

จุฬาลงกรณ์มหาวิทยาลัย

1.2 Demographic overview of Bangladesh:

Bangladesh is a small country, it's land area of 147,570 square kilometers bounded by India on the north, west and northeast, by Myanmur on the south east, and by

the Bay of Bengal on the south. It is essentially a flat alluvial plain crisscrossed by seven principal rivers and over two hundred mini rivers, tributaries, and rivulets. Its rich soil, profuse rainfall, and humid climate provide environment for its abundant agricultural yields. Its geographical location between the Himalayas and the Bay of Bengal however, expose it to frequent flooding and cyclones.

Bangladesh is a population explosion country is presently growing on the 1.8 percent per annum. If this rate continues, it will be double in the next 40 years; aggravating further existing population density. Agriculture is the most important sector of the nation economy. It accounts for nearly 34 percent of the gross domestic product (GDP) and provides employment to about 66 percent of the workforce (BBS, 1993: 224, 104). Industry, though small, is increasing its importance as a result of foreign investments. Prospects of mineral reassures, gas, coal, oil appear to be bright in the near future. The per capita income is only US $210 (GB, 1994).[3]

Bangladesh was born on 26 March 1971 as an independent nation with the heritage of unprecedented population growth momentum, the government has been pursuing strong population policy with demographic goals. All the successive governments that came into power continued pursued the principles of conscious fertility reduction efforts with emphasis on maternal and child health activities in the country. Bangladesh is a success story in the field of population and social development that has brought international recognition. Despite relentless efforts to reduce fertility and improve health, the overall health situation remains unsatisfactory, especially infant, child and maternal morbidity and mortality are still high.[2]

1.3 Global situation of Adolescent reproductive health:

Adolescents comprise a large part of the World's population. In many countries, they form 20-25 percent of the total population. They particularly are a vulnerable group, the program of action of the International Conference on Population and Development (ICPD), held in Cairo 1994, urges governments and non-government organizations to meet the special health needs of adolescents by establishing appropriate adolescent programs. Until recently, however, very little efforts has been directed towards adolescent health.[5] According to WHO statistics of 1995, the world population is 5,881 million. The share of the adolescent population is 13.4 percent. Of this group 51 percent are male and 49 percent are female.[5]

The Center for Population Options (CPO, 1992) estimates that 15 million teenage women give birth every year worldwide. One fifth of all births that one in 15 contract a sexually transmitted disease (STD) each year, and 20 percent of all people with AIDS contracted the disease during adolescence. According to Population Reports 1995, 20-60 percent currently pregnant women aged below 20 in Africa and Latin America reported that their pregnancies were unwanted and not in right time, and about one in nine adolescents lack the contraceptive protection they need to prevent unwanted pregnancy.[6]

Today after ICPD 1994, most governments are convinced of the health benefits of providing family planing information and services, but they are still reluctant to meet the sexual and reproductive health needs of their young people, or even provide the information and education to help them understand their sexuality and make informed choices and act responsibly. Sexually active young people are less likely to use

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contraception than adults even within the marriage. The reasons for low level of contraceptive use are lack of information, lack of access, lack of decision-making and lack of power. Unmet needs for information, education and reproduction should be focused specially for young adults. In sub-Saharan Africa, it is estimated that 8 percent of unmarried women aged 15-19 have an unmet need for contraception, although the figure are as high as 25 percent in Zambia and Ghana and 34 percent on Botswana. Unmet needs are also evident in high rates of STDs, premarital conception, and unplanned pregnancy, morbidity and mortality resulting unsafe abortion among young people.[2]

1.4 Adolescent Reproductive Health situation in Bangladesh:

Bangladesh has the highest proportion of women under the age of 20 giving birth every year. The highest age specific fertility rate among 15-19 year age group in the Asia and Pacific region with a median age at first birth of 18.3 years. Adolescent reproductive health situation in Bangladesh cannot be denoted as satisfactory both in terms of program effects and actual performance. The issues presented below will give sufficient indicators about the necessity to rethink about the policies and priorities for the overall improvement in the quality of life for the Bangladeshi adolescents (UN Population Reports, 1995).

1.5 Some important facts and figures:

- About 50 percent of the female (age 10-19 years) are illiterate. Only 23 percents of 15-19 years old women have had 7 or more years of schooling.

- About 45 percent have no access to mass media.
- Only 25 percent of the female adolescents (15-19 years of age) are employed.
- In 1997, 9,40,500 children were born to women aged 15-19, 14 percent of 15-19 year adolescent give birth each year.
- The adolescent fertility rate is one of the highest in the world with 155 birth per 1000 women - a rate 5 times higher than in Sri Lanka.
- In Bangladesh, 36% of teenage women have begun child bearing, 21% are already mother and another 5% are pregnant with their first child.
- The current use rate of family planing is low at 31% among the adolescent compared to the national rate 50%.
- The extent of unmet need for family planing is highest 19 percent among the adolescent women, while unmet need is 15.8 percent nationally.
- Overall, 21 percent of births can be considered as unplanned, 20 percent as mistimed and 1 percent are unwanted.
- Almost all births (96 percent) occur at home, only 7.4 percent of deliveries are assisted by medically trained personnel.
- Even under optimal conditions, adolescent mothers are more likely than women in their 20's to suffer pregnancy related complications and to die at child birth.
- The maternal mortality ratio is 4.5/1000 live birth, but for the adolescent group MMR is 5.8/1000 live birth.
- The vast majority of Bangladeshi adolescents have evidently never heard of STDs and AIDS. Only 17 percent of adolescent married women had heard of AIDS.

- Information on sexuality is very limited in Bangladesh, where sexual relations are only condoned in the context of marriage.[2]

1.6 Significance of adolescent population:

One in every five persons on the earth, today, is an adolescent. Adolescent are, at the same time, the present, and the future of the world, of nations, and of countries. They are at increasing risk of unwanted pregnancies and contracting STDs, including HIV/AIDS.[4] The importance of the reproductive health of adolescence has started to receive increasing recognition, particularly in developing countries where four out of five of the world's young people live and where more than half of the population is under the age of 25. Early parenthood, particularly for girls, may limit or preclude social and educational development and the ability to achieve full status in society and in associated with greater morbidity and mortality.

Adolescents are the parents, leaders of the future and potential resources of the country. They will determine what happens in the world of the 21st century, to sustainable development, population growth, global security and all other matters. The transition from childhood to adulthood is difficult in any culture. Adolescents are no longer children but are not yet considered by society to be full adult. But they do become aware of their sexuality during this period, and frequently become sexually active too-many more of them than adults realize.[5]

1.7. ICPD recommended RHC package for adolescents:

Reproductive health care package includes: Possible counseling and services on sexual heath, safe sex, and unwanted pregnancies, STD, HIV/AIDS, provide access to services, provide all information. accept their right of privacy, information and consent.[7]

1.8 Major reproductive health problems of adolescent:

Among the major problem of adolescent reproductive health are those resulting from: Early marriage, despite legislation adolescent marry before 18 years, High risk of pregnancy, early child bearing, unwanted pregnancy, increased exposure to STDs, HIV/AIDS and Permanent impairment of health.[6]

1.9 Population Program Shift in Bangladesh:

In order to ensure sustained improvement in the quality of life, Bangladesh has adopted new health and population sector strategy (HPSS) for 1998-2003 to focus on reduction of infant and child mortality, improved adolescent and maternal health, and universal access to education particularly of girls, and to a full range of reproductive health care and family planing services.[2]

In the current HPSP, the new five year health program of the country, adolescent health has been recognized as a priority target area. Adolescent health care has been included as a part of the Essential Service Package (ESP). A separate program titled "Maternal nutrition and adolescent health" has been created to deal with the adolescent health issues. Under the HPSP, different strategies to address the health needs of

adolescents are underway. The following issues relating to adolescent health will also be addressed in the HPSP:

- Behavior change communication (BCC) through effective information, education and communication.
- Postponing the first birth or preventing unwanted pregnancy through proper IEC and by increasing the use of contraceptives by the newly married couples.
- Prevention of unsafe abortion due to unwanted pregnancy by giving training to service providers.
- Special antenatal and safe delivery care to pregnant women aged < 24 years.
- Creation of awareness among adolescent about RTI/STD and availability of high quality services for management of STD/RTI.
- Involvement of private and NGO sectors in promoting adolescent health.
- Intersectoral coordination among the various concerned sectors, ie education, law, labor, social welfare and youth welfare.

The government of Bangladesh is planning to allocate sufficient funds for improving adolescent health, and also to train service providers with regard to adolescent health. ICDDRB, UNICEF, UNFPA and WHO have also been helping the government to formulate a well planned policy regarding adolescent health relating to the design of the government future reproductive health interventions.[3]

CHAPTER 2

REVIEW OF RELATED LITERATURES

2.1 Understanding Adolescence:

The term "adolescence" has been defined including those aged between 10 and 19 (WHO) and "youth" as those between 15 and 24, "young people" is a term that covers both age groups, i.e. those between the ages of 10 and 24. Often, the 15-19 years age group is used to denote adolescence. True adolescence, however, being the period of physical, psychological and social maturing from childhood to adulthood, may fall within either age range. The development that takes place in adolescence is generally uneven, in that physical maturity may well achieved in advance of psychological or social maturity; in most societies, in fact reproductive capability is now established at an earlier age than in the past.

Adolescents are the parents and the leaders of the future and potential resources of the country. They will determine what happens in the world of the 21st century, to sustainable development, population growth, global security and all other matters. The transition from childhood to adulthood is difficult in any culture. Adolescents are no longer children but are not yet considered by society to be full adult. But they do become aware of their sexuality during this period, and frequently become sexually active too-many more of them than adults realize.[8]

Physical development:

Great changes occur during puberty; bone growth, fat and muscle mass increase. Lean body mass (LBM) accounts from 30-65 percent of total body weight. Adipose tissue increases at puberty and growth continues throughout adolescence. The fat cells are larger, thus, adolescents have a higher fat component. Total body water decreases with age at 16, water comprises 60 percent of body weight. Of this, approximately 20 percent of the volume is ECF. Mineral mass increases rapidly during adolescence, corresponding in gains in height. Tanner criteria-pubic hair, genitalia and breast growth. Pelvic growth results; relative to stature there is a widening of hip width.[9]

Psychological Development:

Sexual self concept revolved around concerns with assertiveness-unwillingness to have sex before marriage, controlling when sex occurs, pretending to enjoy sex, less likely to be virgins and less likely to use contraceptives. Develop puberty status on body image and relation with opposite sex peers.[10]

2.2 Pregnancy Counseling and Services (PCS):

Definition: It is a continuous process of program intervention is being given its due recognition makes free and informed choice about pregnancy. The PCS plays an important role in the choice, practice, continuation and adoption of pregnancy by the adolescents. PCS helps adolescents to:

- Decide whether they want pregnancy or not.
- To recognize their individual needs.

- To choose an appropriate methods to avoid getting pregnancy.
- To practice the chosen method safely and effectively.

PCS thus gives recognition to the adolescent's preference, needs, attitudes and values. Adoption of this perspective, therefore satisfies an ethical concern wherein each individual has the right to plan and regulate her fertility. Counseling makes an important contribution to a successful program. Through interpersonal interaction between the client and the provider counseling helps the provider to adopt the user perspective. This in turn enables the provider to understand the specific needs of the client and it allows clients scope to ventilate their doubts and concerns and clarify their suspicions. The end result of this interaction is therefore, a satisfied client, who is well informed about her intentions, will adopt PCS, practice methods effectively and will return for services.

Components of PCS:

- Contraceptive counseling and services (CCS)
- Antenatal counseling and services (ANCS)
- Intranatal counseling and services (INCS)
- Postnatal counseling and services (PNCS)

Process of counseling: Counseling is a continuous process. It is thus an ongoing dialogue between the provider and the acceptor. As the status of the acceptor changes over a period of time, so does the need of counseling. Counseling can therefore, be of two types:

- **Counseling of the prospective client:** must be told about the advantages and disadvantages of PCS and the clients decides according to their needs.

- **Counseling of the continuing client:** contacts between providers and clients only begin with the initial contact of the client to accept PCS. The greater the contact, greater the continuation rate which benefits clients immensely.

The six possible elements of counseling has been formulated in the memory aid, in the word **GATHER** which stands for:

- G – Greeting client in a friendly and helpful way.
- A – Asking clients about their needs.
- T – Telling clients about facilities.
- H – Helping clients to decide when they want.
- E – Exploring how to use the chosen method.
- R – Planning return visit.

All these six elements of counseling come sequentially and each one is extremely important and unavoidable part of the process.

To **counsel** means to advise or to consult. The fundamental requirement of good counseling in the establishment of warm rapport with the clients. This prerequisite ensures that subsequent interactions between the two side i e the acceptor and the provider will be frank, honest and constructive.[7]

PCS are no longer uncommon services offered by the health care professional to the adolescent. Adolescents frequently hold misconceptions about the requirements and consequence of intercourse, contraception, pregnancy, abortion, parenting and adoption PCS are increasingly accepted as necessary services for adolescents within the primary care setting. The counseling process should be firmly based on understanding of

adolescent psychosocial and biologic development, crisis intervention techniques, and family dynamics. The counselor needs to be a reliable information source. If the adolescent decides to go to term, programs offering comprehensive prenatal services to teenagers should be identified. Information concerning high quality, low cost abortion services also will need to be available for those who wish to terminate. It is important to monitor the quality of care given in prenatal and abortion service referrals. Few adolescents currently choose to place their babies for adoption. Counseling in this area is specially needed.[12]

2.3 Adolescent early marriage and child bearing:

American Academy of Pediatrics: Adolescent pregnancy-current trends and issues: 1998 revealed that although the prevention of unintended adolescent pregnancy is a primary goal, many adolescents continue to become pregnant.[13]

Islam M. et al. reported in their article age-specific fertility rate and the unmet need for family planning services was highest 19 percent in 15-19 year age groups of married adolescent. Small percentage of married adolescent less than 20 years are currently using modern contraceptives, and a nominal percentage using traditional methods. Existing norms that favor an early establishment of family (BDHS 1996-97).[14]

2.4 Adolescent pregnancy unplanned/unwanted:

WHO, 1996. coverage described adolescent births, are often unplanned. But the early pregnancy is unintentional. In either case pregnancy may be intended, but intentions

may be driven by circumstances which were better corrected or altered. In Kenya, pregnancies as mistimed or unwanted was 47 percent, in Latin America 44 to 76 percent, in the United States, 73 percent were unplanned.[15]

Philliber SG. et.al. showed in their article the youngest teens initiated sexual intercourse 4 years earlier than the oldest group. Emphasis on increasing availability of services for adolescent was followed by suggestions that lack of knowledge among people may also account for their unplanned pregnancies.[16]

Peckham S. reviewed of the literature, the most effective approaches for preventing unintended teenage pregnancy would appear to be the development of comprehensive advisory and family planning services, including sex education and the commitment by central and local government to tackle the adverse socio-economic factors which are associated with teenage pregnancy.[17]

2.5 Adolescent reproductive health and sexual behavior:

Cheng TL. et.al. emphasized in their article privacy and lack of confidentiality is a "significant access barrier to health care."[18]

Riley AP. reported his literature, the timing of onset of sexual activity, marriage and child bearing are important predictors of future fertility, maternal and child health, and economic wellbeing in most populations.[19]

2.6 Contraceptive knowledge and practice of adolescent:

Blanc AK. et.al reported an overview of sexual behavior and contraceptive knowledge and use among adolescent women across a large number of developing countries. Adolescents are unlikely to use a contraceptive the first time they have sex and are more likely than older women to experience a contraceptive failure.[20]

Graham A. et al. reported in their article that, despite good awareness of emergency contraception, teenagers have poor knowledge of specific details-particularly time limits and safety.[21]

2.7 Negative consequences of early pregnancy:

Rahman S. et.al explained in their article that early teenage pregnancy and its effects pose a very severe problem for the individual, for the family and society as a whole. Between ages of 15-19 years 69 percent females marry, in spite of the legal age for marriage is18 years in Bangladesh.[22]

Singh S. explained young married couples often face strong pressure to begin childbearing immediately after marriage. She has only one thing to prove-that she can bear sons.[23]

Davis S. described in this paper adolescent pregnancy and childbearing carry increased medical risk for mother and baby, as well as lasting social, academic and economic disadvantages for mother, father and children. The most serious is death from pregnancy complications.[24]

Susan MJ. et.al. explained in their article the social, economic and health consequences resulting from unintended adolescent pregnancies are well documented. Adolescents frequently encounter barriers that discourage their enrollment in the health care system and facilitate noncompliance with medical regimens.[25]

Craft N. explained in his study, nearly 15 million teenage women give birth each year, accounting for 10 percent of all birth globally. One quarter of the 500,000 women die each year from causes related to pregnancy and childbirth was teenagers.[26]

2.8 International comparison of adolescent pregnancy:

International comparisons suggest that there was a variation in median age in first intercourse of nearly two years. Thirty three percent of Swedish girls having had intercourse by the age of 16, in Canada the median age was nearly 19 and only 20 percent of girls were sexually active by the ages of 16-17. In Great Britain, The USA, the Netherlands and France the median age was just under 18 years.[27]

Caldwell JC. et al. Showed in their article in Asia, private family land ownership means that young men work for their fathers and that the right to marry usually depends on the willingness of the father to divide his property.[28]

Gavin W. Jones explained in his paper between 1995 and 2000, the number of adolescents in Asia as a whole is projected to grow by 20 percent, 85 percent in Pakistan 24 percent in India, 18 percent in the Philippines and 1 percent in Indonesia, but to decline by 7 percent in China and 10 percent in Thailand.[29]

2.9 Lessons for developing countries:

Furstenberg FF. Jr. reflects on their article sexual activity is likely to rise more sharply in societies that have easy access to the western media, that is, in countries where political freedom and free market economies prevail in U.S.A. and UK. Strong religious and political control that discourages premarital sex in Japan, Taiwan, and Korea.[30]

Braverman PK. et.al. showed in their article the Alan Guttmacher Institute has reported that the United States has the highest rate of teenage pregnancy in the industrialized world 95, and 45.5 in United Kingdom and the lowest country was the Netherlands at 14.3 per 1000.[31]

World Health Assembly Resolution stated that Young people tend to under utilize existing services or come for help dangerously late, when young people need help, counseling and services can be of great value; however, those providing services must be trained in communication skills which enhance the adolescent's ability to make decisions and choices. Training has been provided for a variety of key people who influence adolescent health, including youth leaders, policymakers, health and social welfare workers and educators.[32]

2.10 Adolescent perception in pregnancy counseling and services:

Nichols D. et al. reported on a survey that was aimed to examine the perceptions and practices concerning reproductive health programs to reduce the incidence of adolescent pregnancy in Liberia. Their most common reasons for nonuse are lack of information about family planning and inability to obtain contraceptives. These are

supply constraints. The demand for services is there; contraceptive counseling as well as safe and effective modern methods to all who need and wish to receive such services.[33]

Miller KA. et al. in their article pointed out that, women perception on normal and abnormal symptoms of pregnancy was assessed, 70% women did not know how to recognize pre term birth symptoms. It is essential that pregnant women be well informed and educated in order to preserve her own health as well as that of her unborn child. She must be able to recognize warning signs, take action and demand medical care.[34]

Mensch BS. et al. described in their article the school environment in Kenya and the ways it can help or hinder adolescents. The school is an increasingly important institution in the socialization and training of the next generation. Today, children are likely to be in school at the time of physical maturation and, therefore, exposed to non familial attitudes, and ideas emanating from teachers, peers, and a centrally designed curriculum.[35]

Rezina M. et al. described a process of diffusion of family planning information, ideas, and technology among an unanticipated audience of young, unmarried women in rural Bangladesh. The findings of this exploratory study suggest that greater attention should be paid to the contraceptive needs of young women and that continued research should be conducted with this population of women.[36]

Cernada GP. et al. revealed in their Taiwan-wide sample survey of adolescent sexual awareness, knowledge, attitude and behavior shows that secondary school students are lack of some basic knowledge about contraception and reproduction, The initial emphasis should be a good starting point for expanding the current curriculum.[37]

Mcneil P. et al. describes adolescent pregnancy is an acute problem in Jamaica many adolescent women vulnerable to the risk of pregnancies for which they are unprepared, pregnancy and childbearing were widespread.[38]

Weiss SP. et al. presented in their paper the psychosocial determinants of abstaining from sexual intercourse, practicing contraception, and avoiding pregnancy and both the goals and the skills needed to achieve individual decision making.[39]

2.11 Adolescent's needs of pregnancy counseling and services:

Islam W. et al. described in their article UNFPA support can be provided for the full spectrum of family planning information and services, including pregnancy counseling and follow up services of prenatal, intranatal and postnatal care of mothers at the primary health care level. Specific behavior change communication (BCC) message should be targeted for adolescents irrespective of marital status.[40]

Piccione JJ. et al. considered that about one young woman in five makes her first family planning visit before initiating sexual activity, there is a strong possibility that abstinence counseling could be effective. But directive counseling is accepted and encouraged with respect to contraception.[41]

American Academy of Pediatrics Committee on Adolescent gave their opinion in counseling the adolescent about pregnancy options. The physician should be aware that sexual abuse, assault, or incest might have caused the pregnancy. The options of adoption, abortion, and raising the child should be discussed thoroughly and as early as

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possible. Complete information on all available options to help the adolescent make an informed decision.[42]

Miller R. in his literature showed adolescent pregnancy is a complex and frustrating problem that exacts a large social and personal cost. Approximately 40,000 Canadian teenagers will become pregnant. With proper prevention, this number could be reduced. PCS reduces adolescent pregnancy and the associated complications.[43]

Boonmongkon P. et.al. explained in their literature, Thai adolescents, increasingly enter into sexual relations without much knowledge of sexuality, reproduction, and contraception with little emotion. They face enormous risk from STDs including reproductive tract infections (RTIs) HIV/AIDS, substance abuse, and even suicide, unwanted pregnancy and abortion in unsafe condition.[44]

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CHAPTER 3

CONCEPTUAL FRAMEWORK, RESEARCH QUESTIONS AND OBJECTIVES

3.1 CONCEPTUAL FRAMEWORK:

In this study the conceptual framework was modified based on the empirical evidence and from the literature review on adolescent attitude, knowledge, sexual and reproductive health behavior in order to emphasize the most relevant variables in relation to adolescent perception on their needs of pregnancy counseling and services (PCS).

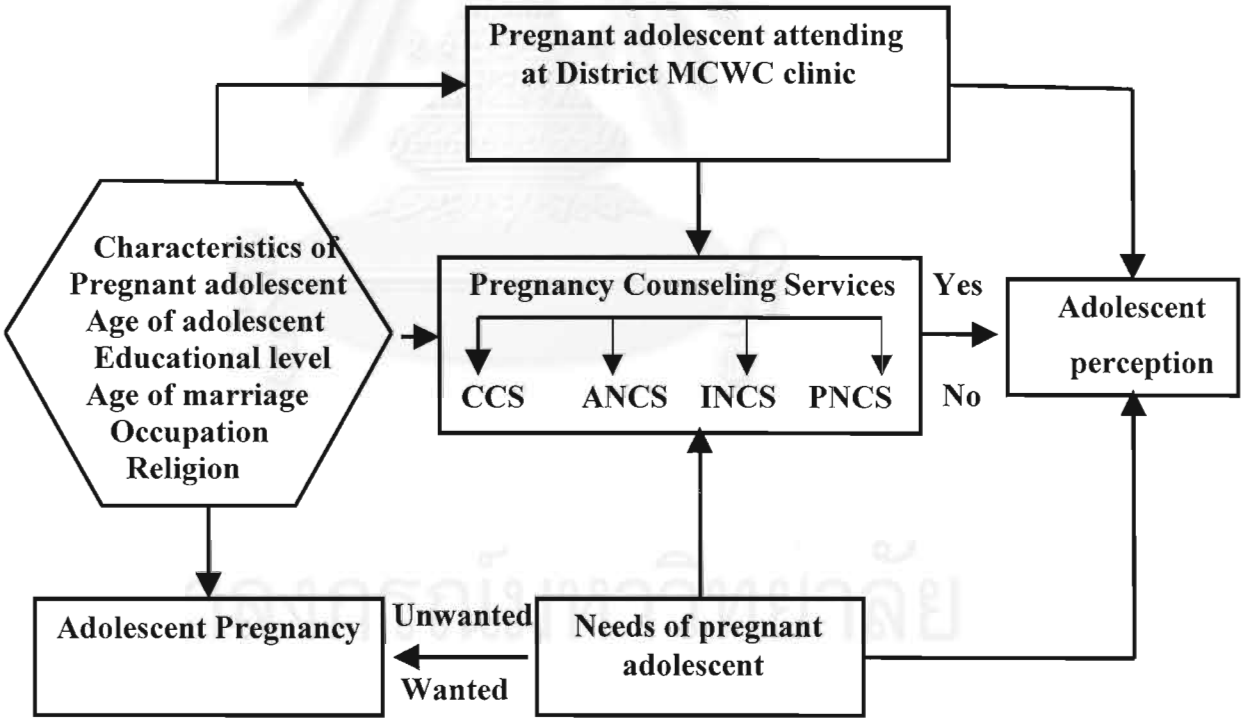

Fig: Conceptual Framework:

As shown in the following conceptual framework, the dependent variable is the perception of pregnant adolescent on their needs of pregnancy counseling and services (PCS). The dependent variable is affected by a number of independent variables. Thus background characteristics of adolescent, the different domains of PCS such as contraceptive counseling and services (CCS), antenatal counseling and services (ANCS), intranatal counseling and services (INCS) and postnatal counseling and services (PNCS) all have influence directly or indirectly in the perception level of adolescent on their needs of pregnancy counseling and services (PCS) which is conceptualized with the relevant variables.

3.2 RESEARCH QUESTION (S) :

3.2.1 Primary Research Question:

What is the proportion of pregnant adolescent perception on their needs of Pregnancy Counseling and Services (PCS) provided through Kishoregonj District Maternity and Child Welfare Center (MCWC) in Bangladesh?

3.2.2 Secondary Research Question:(s)

1. What is the proportion of wanted or intended pregnancy in adolescent?
2. What are the constraints related to pregnant adolescent using PCS provided through Kishoreganj District MCWC in Bangladesh?

3.3 RESEARCH OBJECTIVE (S):

3.3.1 General Research Objective:

To assess the proportion of perception of pregnant adolescent on their needs of PCS provided through Kishoregonj District MCWC in Bangladesh.

3.3.2 Specific Research Objective (s):

1. To estimate the proportion of wanted or intended pregnancy of adolescent attended in antenatal clinic (ANC) provided through MCWC during study period.
2. To determine the constraints which are related to the attendance or use of PCS provided through Kishoregonj District MCWC.

3.4 Study Site: Kishoregonj District MCWC in Bangladesh:

3.4.1 Location:

The research center, Kishoregonj District Maternity and Child Welfare Center (MCWC) is a Public organization lies approximately 140 km. to the north east part of the capital city Dhaka, Bangladesh. This district has 13 sub districts and the population of this catchment area is about 2.5 million. Most of the peoples are Muslims and they are very much conservative. Many resource persons including specialist, well trained doctors, nurses, midwifes and other health and FP personnel with modern facilities providing PCS for adolescent. Beside this, Sub-District hospital Health and Family Welfare Center, NGOs and one private Medical College Hospital are also providing PCS in this area. In

addition condoms and other contraceptive methods can be easily obtained from nearby shops, clinics and pharmacies which are wide spread.

3.4.2 Goals of MCH-FP services:

- Reduce maternal and infant morbidity and mortality.
- Increase mother and child survival rate.
- Improve reproductive health and overall health status of family.
- Increase contraceptive prevalence rate (CPR).

3.4.3 Services provided:

1. Family planning: provides counseling, contraception, management of complication and side effects and followup services.
2. Maternal care: includes antenatal, intranatal and postnatal counseling and services.
3. Treatment of Reproductive Tract Infections (RTIs) including STD, HIV/AIDS.
4. Child care: Treatment of common diseases, neonatal, infant and under 5 child care, growth monitoring and immunization.
5. Treatment of infertility:
6. Emergency obstetric care (EOC):
7. Training of health and family planning personnel:

Whenever adolescent come to MCWC either self motivated or referred by Health and Family Planning personnel they should be cordially received and gather information about their personal, familial, and socio-economic condition through friendly behavior. This will create her confidence on counseling and services and will make her inclined or interested to visit the center again. For conducting services antenatal checkup, complete

physical examination and necessary investigation and recording the findings in antenatal card should be ensured and advice should be given to them. Among pregnancy counseling and services sessions during antenatal and pre conception visits and conducted regular health education sessions. Adolescent women need to be motivated and provide appropriate method to prevent unwanted pregnancy, birth spacing and permanent method after delivery.

All supports including administration, technical, logistic and financial support provided by Ministry of Health and Family Welfare (MOHFW) of Bangladesh. UNFPA, UNICEF, WHO and World Bank are the main development partner providing logistic and training support.

The MCWC have well oriented record keeping system. Recording of all activities done in the center is the prime function of the concerned personnel. It gives a clear picture of the importance of organizational set activities and indicates the success or failure in delivering quality services. So the present study made use of qualitative and quantitative data sources and appropriate site for conducting this research.[45]

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CHAPTER 4

RESEARCH METHODOLOGY

4.1 RESEARCH DESIGN:

This study was a Cross sectional Descriptive study.[49]

4.2 RESEARCH HYPOTHESIS:

More than 80 percent of married adolescent pregnant have no perception on their needs of Pregnancy Counseling and Services (PCS) provided through Kishoregonj District Maternity and Child Welfare Center (MCWC) in Bangladesh.[12, 42]

4.2.1 Hypothesis Rationale:

The proportion of ever married adolescent women aged 15-19 years was about 49.5 percent in Bangladesh. There is strong and highly significant correlation exists between the median age at marriage in a population and the proportion of girls bearing a child before age 19. Adolescent pregnancies are 2/3 rd and 50 percent pregnancy are unplanned and definitely 25 percent are unwanted. Successful implementation of a new comprehensive and cost effective PCS must influence pregnant adolescent healthy reproductive behavior which reduces age specific fertility, morbidity and mortality.[3]

4.3 RESEARCH ASSUMPTIONS:

If demographic, socio-economic, cultural and programmatic factors associated with PCS seeking behavior are identified and appropriate strategic measures undertaken which encourage their enrollment and develop adolescent's perception on PCS.

4.4 KEY WORDS:

- Pregnant adolescent.
- Perception on PCS.
- Pregnancy Counseling and Services (PCS)

4.5 LIST OF VARIABLES:

4.5.1 Independent variables:

From the related literature review certain variables were found to have effects on perception of adolescents and other variables of background characteristics of adolescent were identified and included in the questionnaire to collect information.

4.5.1.1 Socio-cultural variables:

- Age of adolescent, Educational level, Marry age, Main occupation and Religion.

4.5.1.2 Decision making variables:

- Consent of marriage, Necessary of pregnancy counseling and services, Ever/never heard MCWC provides PCS, Source of information about PCS, Ever/never used PCS, Why ever/never used PCS, Method used to avoid or delay getting pregnancy, Gestational age at the time of interview, Any closed relative pregnant.

4.5.1.3 Pregnancy related variables:

- Actually want to have a baby and became pregnant at right time.

4.5.1.4 Constrain variables:

- Ever been forced or pressured during pregnancy, felt any contrast problem, Faced problem due to scarcity of trained personnel, faced any transport

Problem getting PCS and faced any religious problem to avoid pregnancy.

4.5.2 Dependent or Perception variable:

- The dependent variable are dichotomous outcome adolescent have perception or have no perception on their needs of pregnancy counseling and services (PCS).

4.5.2.1 Contraceptive counseling and services (CCS):

- Contraception, Preconception, Planned birth, Unwanted pregnancy, Fertility

4.5.2.2 Antenatal counseling and services (ANCS):

- Extra food during pregnancy, Termination of pregnancy, Complication of high risk pregnancy, Importance of antenatal checkup and TT vaccine.

4.5.2.3 Intranatal counseling and services (INCS):

- Expected date of delivery (EDD), Place where safe and aseptic delivery conducted, availability of special care for baby, complications of prolonged labor, excessive bleeding and convulsion may threaten adolescent's life.

4.5.2.4 Postnatal counseling and services (PNCS):

- Time taken to return to normal life, breast feeding increases birth spacing, postnatal complication may endanger life, source of care for postpartum morbidity, importance of routine gynecological examination.

4.6 POPULATION:

4.6.1 Target Population:

Pregnant adolescent aged from 15-19 years of Kishoregonj District and other adjacent areas of MCWC clinic in Bangladesh.

4.6.2 Population to be Sampled:

Pregnant adolescent who met the elligible criteria needs Pregnancy Counseling and Services (PCS) attended at Kishoreganj District Maternity and Child Welfare Center (MCWC) in Bangladesh during study period May to August 1999 were included in the sample. Every working day from the month of May to August 1999 assigned as a data collection day. The data collected until the desired number of sample size was met. The sample reasonably reflects the homogeneous mixture of socio-demographic, poor and well off composition of the district population.

Sample size calculation:

The sample size calculated on the basis of assumption. The counseling process may be initiated before pregnancy so as to take full advantages of the reality of the event of a real life experience. However, more than 80 percent of married adolescent pregnant have no perception on their needs of pregnancy counseling and services before their coming to the counseling unit. (Stephenson JN, 1989).

The formula for calculating the sample size depends on the types of outcome (dependent variable), the design of the study and the results of previous study. The formula was adopted to calculate the sample size which was appropriate for descriptive cross sectional study.[1 49]

$$n = \frac{z^2 \, p \, q}{d^2}$$

where as:

- n = desired sample size.
- z = the reliability coefficient at the 95% C I = 1.96.
- p = assuming that more than 80 percent pregnant adolescent have no perception on their needs of PCS.
- q = 1 - p = 1- 0.80 = 0.20.
- d = absolute precision of the study assumed 0.05 (acceptable error).
- n = **246.**

4.7. ELLIGIBILITY CRITERIA:

4.7.1 Inclusion criteria:

1. Adolescent pregnant aged from 15-19 years attended for 1st ANC visit at Kishoregonj District MCWC, during study period.
2. Adolescent pregnant who met the eligible criteria willingly co-operate in this study.

4.7.2 Exclusion Criteria:

1. Severely ill, weak, debilitated and mentally retarded adolescent pregnant.
2. Pregnant adolescent had previous visit to other clinic or hospital for pregnancy counseling and services (PCS).
3. Pregnant adolescent refused to participate in an interview.

4.8.OPERATIONAL DEFINITIONS:

4.8.1 Adolescence:

It is defined as a time between the ages of 10-19 years when young people are making the transition from childhood to adulthood. Until recently, childhood ended suddenly with early marriage for girls, and adolescence was rarely recognized as a distinct phase of life.

4.8.2 Reproductive Health (RH):

Reproductive health as, "A condition in which reproduction is accomplished in a state of complete physical, mental and social well being, and not merely the absence of disease or disorders of the reproductive process. According to the ICPD program of action document, reproductive health care is defined as "The constellation of methods, techniques and services that contribute to reproductive health and well being through preventing and solving reproductive health problems."

It is the integral part of normal human growth, development and maturation. RH is not concerned only with the physical manifestations of sexual development but also with the psychosocial relationship between men and women, girls and boys, parents and children, and between sexual partners.

4.8.3 Pregnancy Counseling and Services (PCS):

It is one of the component of reproductive health care to enable and support to make responsible voluntary decisions about child bearing and methods of family planning of their choice. It includes following counseling and services:

4.8.3.1 Contraceptive Counseling and Services (CCS):

Advise and service to pregnant adolescent to avoid unplanned or unwanted pregnancy by using safe, effective and easily available contraceptive methods.

4.8.3.2 Ante Natal Counseling and Services (ANCS):

It is the care of adolescent during pregnancy. The primary aim of ANC is to achieve at the ends of pregnancy a healthy mother and a healthy baby. Ideally this counseling should begin soon after conception and continue throughout pregnancy.

4.8.3.3 Intra Natal Counseling and Services (INCS):

The safe delivery of pregnancy with minimum injury to the infant and mother in aseptic way and readiness to deal with complications such as prolonged labor, antepartum hemorrhage, convulsion, malpresentation and prolapsed of the cord, care of the baby at delivery resuscitation, care of the cord and care of the eyes etc.

4.8.3.4 Post Natal Counseling and Services (PNCS):

Care of the mother and the new born after delivery is known as PNC. Broadly this are falls into two areas-care of the mother, which is primarily responsible of the obstetricians, and care of the new born which is the combined responsibility of pediatricians and obstetricians.

4.8.4 Age Specific Fertility Rate (ASFR):

A more precise of fertility is ASFR, defined as the number of live births in a year to 1000 women in any specified age group.

4.8.5 Pregnancy Rate (PR):

It is the ratio of number of pregnancy in a year. The number of pregnancy includes all pregnancy whether this has terminated as live births, still births, abortions or had not yet terminated.

4.9 OBSERVATION AND OUTCOME MEASUREMENT:

The main outcome measurement was perception of pregnant adolescent on their needs of pregnancy counseling and services (PCS) provided through Kishoregonj District MCWC. PCS includes socio-cultural, decision making, contraceptive, antenatal, intranatal and postnatal, pregnancy related and constraint variables which may influence directly or indirectly on the outcome perception.

4.9.1 Measurement Range:

The measurement instrument was structured for interview questionnaire. Perception on their needs of pregnancy counseling and services were measured by Likert's scale, dichotomous scale, categorical response and multiple options.

4.9.2 5 point Likert's scale:

- Strongly disagree = 1
- Disagree = 2
- No opinion = 3.
- Agree = 4.
- Strongly agree = 5.

The main outcome, perception on pregnancy counseling and services measured by the score of each component. Pregnant adolescent have perception if their score was more than 3.0 and no perception if their score was 3.0 and less than 3.0, so cut off point was

more than 3.0. However, as the mean score was (2.19), median score was (2.00), lowest score was (1.00) and the highest score was (3.90), so cut off point of perception > 3.0 was justified.

4.10 RESEARCH INSTRUMENT (QUESTIONNAIRE):

The research instrument contain bulk of information relevant to this study structured on the basis of knowledge from literature review were constructed in English. The questionnaire was translated into Bengali by language expert before administered in the study population in Bangladesh.

4.10.1 Criteria for Questionnaire Design:

- Questionnaire should be designed with having free from leading questions.
- It should contain factual questions.
- Items of question should be clear and understandable.
- 4.10.2 Literature Review:
- Have gone through many literature review.
- Not yet fertility variation study carried out in Bangladesh.
- But some information from studies elsewhere has been applied in this questionnaire.

4.10.3 Steps in Questionnaire:

- Special emphasis was given on hypothesis employed.
- Keeping in mind about privacy, confidentiality, culture and religion.
- Having sex, abortion and pregnancy before marriage were not included.

4.10.4 Expert Opinion:

- Consulted with 3 expert with relevant field and other teachers.
- Advisor, co advisor and fellow colleagues.
- Self experience has been employed during the development of the questionnaire

4.10.5 Use of Questionnaire:

- With person interview.
- Collecting data was a survey method.

4.10.6 Basic Attributes of the Question:

- Longer the questionnaire, more difficult task of response.
- Short questions were less subject to error.
- Focus on the questionnaire was on the perception of pregnant adolescent needs.

4.10.7 Sequence of question:

- Starts with pregnant adolescent identity and background
- Follows recall information about past and present history of reproductive health.
- Questionnaire will be translated into Bengali.

4.10.8 Domains of Questionnaire:

- Questionnaire contains 5 domains or parts. It contains total of 41 questions.
- Domain 1- contains socio-cultural variables- questions no.1-5.
- Domain 2- decision making variables- question no. 6-14.
- Domain 3- perception variable (Dependent variable)- question no. 15-34.
- Domain 4- adolescent pregnancy wanted or unwanted-question no. 35-36.
- Domain 5 - the constraint variables-question no. 37-41.

4.10.9 Measurement scale:

- 5 point Likert's scale was used.
- Questionnaire developed with multiple options and categorical response.
- Each question has a range of options.

4.11 PLAN FOR PRE TESTING:

Pre testing, basic assumption about the content of the study can be used. Before conducting the research, the investigator should at least know how effective a research tool was performed. Pre testing of the questionnaire was necessary to test the validity and reliability of the questionnaire. The instrument was applied on pregnant adolescent age group (15-19 years) for reliability and appropriateness of its lingual meaning, wording construct and the meaning of the items to the respondents. Minimum 10% of the study sample (n = 25) were taken for response in pilot study.

4.11.1 Validity Test:

Measurement of the content validity referred to the validation of the study. A draft questionnaire was constructed and being sent to the 6 experts of relevant field to see the feasibility and relevance of the questionnaire. Each item was examined and was given score for every item. The score were tabulated and the item correlation calculated by using the formula:

$$\mathbf{IC = \Sigma R / N}$$

Every item has the score more than 0.5 except four items has the score 0.5 and only one item has score less than 0.5. These items were corrected and re written. So,

the item correlation of the questionnaire was valid, and could be used in this study. Before data collection the questionnaire was translated into Bengali by language expert and then it was administered to the respondents.

- R = Total score of that item.
- N = Number of experts.
- Score +1 = Relatively valid items.
- Score 0 = Not sure and
- Score - 1 = Relatively irrelevant.
- Average score was 0.781. (Appendix-2).
- **IC > 0.5 ⟶ was Highly Acceptable.**

4.11.2 Reliability Test:

Reliability is the accuracy, dependability, stability, consistency and predictability of a measuring instrument. In this study, Likert's scale, dichotomous scale, multiple options, continuous and categorical response of married adolescent perception on their needs of pregnancy counseling and services was used. Internal consistency of rating scale was done by Cronbach alpha statistic, which was appropriate for attitude test. The reliability coefficient was more than 0.8, the items were highly reliable. Before data collection test-retest was done for stability of the test in the study site Kishoregonj District MCWC in Bangladesh. RC was 0.871 (Appendix-3).

RC > 0.8 ⟶ Highly Reliable.

4.12 DATA COLLECTION:

4.12.1 Training of Interviewer:

Before any data were actually collected, first to determine what will be done, and who will do it. In this study, some information, however, of a more difficult in nature that female adolescents were conservative and felt shy, unwilling, reluctant or unable to gave accurate information. Question may have to be carefully handled by well trained and experienced female interviewers that the adolescents were greatly at ease and felt more comfort and they talked more freely about a topic and data could be obtained in an easier or better way. Regardless of who they were, or what role they would play, all research assistants would participate in some type of orientation or training that explained the nature of the study and the role they would play in it. After training they would be able to understand exactly what they were going to do and how they could do it

At MCWC, 10 days extensive training course was conducted during the period of 1st and 2nd week of May, 1999 to three female doctors and two family welfare visitors to provide them thorough theoretical and practical knowledge on data collection. Special emphasis was given on procedures to be followed and confidential information was given by the adolescent. The training program was designed to orientate the interviewers with the actual situation they might face during data collection. They received training related to their assigned task-conducted an interview through specially effective training strategy:

- Consent was taken from Deputy Director, Family planning, Kishoregonj.
- Venue- Kishoregonj district MCWC clinic.

- Date-1st to 2nd week of May, 1999.
- Time-9.00 AM to 12.00 Noon on every working days.
- Subject-Data collection.
- Trainer-Researcher himself and guest research person.
- Trainee- 3 female doctors and 2 family welfare visitor (FWV).
- Ensured all information and issues were discussed.
- Spoke clearly and freely.
- Lengthy discussion and deviation from the central theme avoided.
- Civil Surgeon, Deputy Director, Family Planning, Kishoregonj and other research concerned person were invited on the closing day.
- Refreshment with snacks and coffee offered at the time of breaks.

4.12.2 Face to face interview:

Before starting data collection verbal consent were taken from each respondent adolescent and it was done by a team of well trained health and family planning personnel consisted of 3 female doctors and 2 family welfare visitors and researcher in person interview with structured questionnaire. The study was conducted among pregnant adolescent aged 15-19 years attended at Kishoregonj District MCWC, during study period. To maintain the quality of data collection, number of procedures has been established including pre coded forms, trained personnel as an interviewer, several level of data editing before data coding, spot checked by researcher and regular follow up and consulted with local advisor and other research concerned persons. The identity and

confidentiality was maintained with anonymity. So, pregnant adolescent was able to express real things without hesitation or fear.

4.12.3 Data Management:

- **Documentation and storage:** All completed questionnaire was logged in under unique identifiers, compiled and registered systematically to prevent damage and easy retrieval.
- **Data editing:** All completed questionnaire were reviewed and edited accordingly for assuring completeness and consistency of the collected information.
- **Data entry:** All completed data was entered into the computer by SPSS program. Manual error during data entry may be avoided by using data editor.
- **Data clearing:** Prior to data analysis, internal consistency of the collected information was checked by graphing and calculation.

4.12.4 Quality Assurance data:

The quality of data was ensured by scrutiny of every completed questionnaire by researcher on the day of interview. The study was also monitored by researcher during data collection and conducted reliability check for 10 percent (n = 25) of completed questionnaire. The collected data were found to be reliable and there was no variation in the information.

4.13 DATA ANALYSIS:

Keeping the study objective in mind, the data were analyzed according to the obtained results by using computer entering the data after coding into SPSS/window program. The univariate analysis was done with descriptive statistics in all independent

variables with mean. Bivariate analysis-chi square test was used for hypothesis and to test for difference in proportions. The sample sizes were small, the use of continuous X^2 distribution to appropriate frequencies introduces some bias into the calculation. Therefore, we used continuity correction to remove the bias. But in some variables expected count was less than 5 in the cell, so Fisher's Exat Test was accepted. Multiple logistic regression was done to assess the strength of association between predictors and outcome perception.

4.13.1 Part 1 Socio-cultural data:

The part 1 of the questionnaire contain socio-cultural background of adolescent. They were categorized and code was given:

Variables	Categorization
Age of adolescent	1 = 15-17 years 2 = 18-19 years
Educational level:	1 = Illiterate 2 = Literate
Age of marriage:	1 = 12-15 years 2 = 16 – 19 years
Main occupation:	1 = Housewives 2 = Agriculture and Self business
Religion:	1 = Islam 2 = Hindu

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4.13.2 Part 2 Decision making data:

The part two of the questionnaire composed of decision making variables were dichotomus and some were categorical and code was given for easy analysis:

Variables	Categorization
Consent of marriage:	1 = Parents/Closed relatives 2 = Self consent
Necessary of PCS:	1 = Not necessary 2 = Necessary
Ever/Never heard MCWC provides PCS:	1 = Never heard 2 = Ever heard
Source of information:	1 = H-FP personnel and Media 2 = Parents and Friends
Ever/Never used PCS:	1 = Never used PCS 2 = Ever used PCS
Used contraceptive method:	1 = Did not used any method 2 = Used contraceptive method
Gestational age:	1 = 6-15 weeks (early arrival) 2 = 16-36+ weeks (late arrival)
Adolescent closed relative/Friend pregnant:	1 = Did not have pregnant 2 = Have pregnant

4.13.3 Part 3 Perception Variables:

4.13.3.1 Contraceptive Counseling and Services (CCS):

In this part of the questionnaire there was five statement which includes contraceptive methods, their use and availability, importance of preconception counseling, contraception brings wanted or planned birth, contraceptive prevents

unwanted pregnancy and STD, HIV/AIDS damage fertility and even their life. During interview, adolescents were asked did they have knowledge and agree with these statement.

4.13.3.2 Antenatal Counseling and Services (ANCS):

In this domain of the questionnaire adolescent were asked did they have knowledge about the following statement: adolescent should take extra food during pregnancy, place where safe termination of pregnancy performed, complication of high risk pregnancy, importance of antenatal checkup during pregnancy and Tetanus Toxoid vaccine prevents adolescents and their baby from tetanus.

4.13.3.3 Intranatal Counseling and Services (INCS):

In this part the respondents were asked did they have any idea in the following statement which includes the expected date of delivery (EDD), the place where safe and aseptic delivery conducted, availability of special care for their baby if they needed, complications of prolonged labor and excessive bleeding and convulsion may threaten adolescent life.

4.13.3.4 Postnatal Counseling and Services (PNCS):

In this dimension, adolescents were asked about their knowledge and idea in the following information. These were time taken for return to normal life after delivery, breast feeding increases birth spacing, postnatal complication may endanger adolescents (mother) life, sources of care for postpartum morbidity and the importance of routine gynecological examination.

4.13.4 Total Perception on Pregnancy Counseling and Services (PCS):

To know the primary outcome, the proportion of pregnant adolescent perception on their needs of pregnancy counseling and services obtained by summating up all the response scores of different items divided by total response item (20) in the perception part of the questionnaire. All the responses were allocated according to 5 point Likert's scale. The analysis was done by using count command in the SPSS program and entering all item variables and labeled 1 through 5, then compute command was given and total score of the scale was obtained by adding all the item score. The average of the score was obtained by dividing total score by number of items. Re coding was given to classify as have perception = 1 and have no perception = 0. The same was followed through the analysis of sub scale of pregnancy counseling and services. For the purpose of classification criteria, arithmetic mean was calculated from the total response score. The score more than 3.0 as had perception and the score equal or less than 3.0 considered as had no perception:

$$\textbf{Mean (average) score} = \frac{\textbf{Summation of all item scores from 5 scale}}{\textbf{Number of total response item (20)}}$$

If the score was > 3.0 considered as had perception and equal to 3.0 or less than 3.0 had no perception.

4.13.5. Part 4. Pregnancy related variables:

The part 4 of the questionnaire contains pregnancy related variables were dichotomous and code was given for easy analysis:

Variables	Categorization
Adolescent Pregnancy:	1 = Unwanted 2 = Wanted
Wanted pregnancy:	1 = Not at right time 2 = At right time

4.13.6. Part 5. Constraints variables:

The part 5 of the questionnaire composed of constraint variables which were dichotomous and categorical and code was given as follows:

Variables	Categorization
Forced/Pressured to have pregnancy:	1 = Not forced or pressured 2 = Forced or pressured
Felt any contrast (matching) problem:	1 = Not felt any contrast problem 2 = Felt contrast problem
Faced scarcity of trained personnel:	1 = Not faced scarcity of trained personnel 2 = Faced scarcity of trained personnel
Faced transport problem getting PCS:	1 = Not faced transportation problem 2 = Faced transportation problem
Religion problem to avoid pregnancy:	1 = Not faced religious problem 2 = Faced religious problem

4.13.7 Statistical Analysis:

No.	Variables	Measurement Scale	Statistical methods
	Sociocultural variable:		Descriptive: Univariate analysis
1.	Age:	Continuous	Range, mean, median and SD
2.	Educational level:	Categorical	Freq. Distribution, Percentage
3.	Age of marriage:	Continuous	Range, mean, median and SD
4.	Occupation:	Categorical	Freq. Distribution, Percentage
5.	Religion:	Categorical	Freq. distribution, percentage.
6	Hypothesis test for difference in proportions.	Categorical	Bivariate analysis Chi-square test.
7.	To assess the association between main outcome perception with differrent independent variables of PCS:	Binary scale	Multiple Logistic Regression.
8.	Proportion of married adolescent pregnant ever used or never used pregnancy counseling and services.	Dichotomus scale	Chi-square test

4.13.8 Overall Perception of Pregnant adolescent on PCS:

Objectives	Variables to be measured	No in questionnaire
Proportion of married pregnant adolescent ever used PCS:	Decision making variable	6 – 14.
Proportion of pregnant Adolescent perception on PCS:	Contraceptive, antenatal, intranatal and postnatal variables	15 - 34
Proportion of adolescent pregnancies were wanted:	Pregnancy related variables	35 – 36
Proportion of pregnant adolescent faced constrain using PCS:	Constrain variables	37 –41.

4.13.9 Individual item analysis:

The individual item statement analysis of perception variable were also done by descriptive statistics as mean, standard deviation, frequency and percentage distribution of all items were obtained as strongly agree = 5, agree = 4, no opinion = 3, disagree = 2 and strongly disagree = 1.

4.14 DATA PRESENTATION:

The data was presented and interpreted by tables and graphs according to the results and outcome of the study. Range, mean, standard deviation, frequency distribution, validity, reliability and significance of the study were interpreted by statistical inference.

4.15 ETHICAL CONSIDERATION:

Ethical issues must be considered in any kind of research dealing with human being. Researcher must think of risk and benefit of the subject. Subject must be free to decide whether to take part in the study or withdraw any time from the study. There was no any risk for the subjects of adolescents. The result of this study was to do good than harm for the adolescents, community and the country. Information obtained will be published for technical purpose without mentioning the name and address of the adolescent.

The study protocol does not involve any intervention so only adolescent verbal consent was taken before interviewing to include in this study. The nature and purpose of

the study was explained before interviewing. Privacy, confidentiality and anonymity were strictly maintained. Welltrained health and family planning personnel were assisted the researcher during data collection. Formal request was made for permission of data collection in MCWC and it was obtained from Deputy Director, Family Planning, Kishoregonj (Appendix 6). Approval for research proposal for implementation was taken from Ethical Clearance Committee of Bangladesh Medical Research Council (Annex-7).

4.16 STUDY LIMITATION:

- It is an inherent weakness of cross sectional study that the sample may not the representative of whole population.
- We can not make valid generalization from unrepresentative sample.
- Perhaps the results of the study will not reflect the information of whole country, but it may be the milestone of further research.
- Muslim communities are conservative, information on having sex, pregnancy, abortion before marriage were not included in this study.
- Scope of information was limited, still it can be regarded as a pilot study, since it was the first of its kind and nature in Bangladesh.
- Male adolescents were not included in this study, but having pregnancy and decision making policies increasingly focus on male adolescent roles and responsibilities.
- There was no absolute guidelines or boundaries to measure the adolescent pregnant perception on their needs of PCS, so it was the potential limitation of this study.

CHAPTER 5

RESULTS OF THE RESEARCH

In this study eligible married female adolescent were identified and a total of 246 female adolescent were interviewed with voluntary consent to assess the objectives of the study. Data collection was done by female doctors and family welfare visitors in a friendly environment. Nobody refused to participate in an interview.

5.0 Overall Proportion of adolescent perception of PCS:

Number of adolescent interviewed	246
Number of adolescent had no perception on PCS	211
Percentage of adolescent had no perception on PCS	85.8
Number of adolescent had perception on PCS	35
Percentage of adolescent had perception on PCS	14.2

Note: 95% CI 9.84 -18.56.

As shown in table 5.0. Overall, 85.8 percent adolescents had no perception and 14.2 percent had perception on their needs of pregnancy counseling and services (PCS) as a whole.

5.1 Proportion of perception on different domains of PCS:

There were five item of every domain like contraceptive, antenatal, intranatal, and postnatal counseling and services and total of 20 items of PCS. As shown in table 5.1 below the result of proportion of perception in different domains of PCS revealed as follows:

Table-5.1 Proportion of perception on different domains of PCS:

No	Perception on different domains of PCS:	No.	%
1	Contraceptive counseling and services (CCS)	37	14.9
2	Antenatal counseling and services (ANCS)	71	28.8
3	Intranatal counseling and services (INCS)	54	22.1
4	Postnatal counseling and services (PNCS)	35	14.4

The table-5.1. Revealed the proportion of adolescents 14.9 percent had perception on CCS. Similarly on ANCS, 28.8 percent had perception was the highest level of perception. In INCS, 22.1 percent had perception, and in PNCS 14.4 percent had perception. However, the perception level in the dimensions were slightly higher than overall perception due to rounding in analysis procedure.

5.1.1 Results of proportion of perception on individual domain CCS:

Table-5.1.1 Proportion of perception on Contraceptive Counseling and Services (CCS):

No	Perception on contraceptive counseling and services (CCS):	Yes		No	
		No	%	No	%
1	Contraceptive method, their use and availability	40	16.3	206	83.7
2	Importance of pre conception counseling	22	8.9	224	91.1
3	Contraceptive brings wanted pregnancy or planned birth:	49	19.9	197	80.1
4	Contraceptive prevents unwanted pregnancy:	21	8.5	225	91.5
5	STD,HIV/AIDS damage fertility even life:	51	20.7	195	79.3
	Total	37	14.9	209	85.1

As shown in table 5.1.1. The result of perception on contraceptive counseling and services revealed as follows: Adolescent perception in (1) contraceptive method, their use and availability 83.7 percent had no perception and 16.3 percent had perception (2) importance of pre conception counseling 91.1 percent had no perception and 8.9 percent had perception (3) contraceptive brings wanted pregnancy or planned birth 80.1 percent had no perception and 19.9 percent had perception (4) contraceptive prevent unwanted pregnancy 91.5 percent had no perception and only 8.5 percent had perception. (5) STD, HIV/ AIDS damage fertility and even life 79.3 percent had no perception and 20.7 percent had perception. Overall 85.1 percent had no perception and 14.9 percent had perception.

5.1.2 Results of proportion of adolescent's perception on ANCS:

Table-5.1.2 Perception on Antenatal Counseling and Services (ANCS):

No	Perception on Antenatal coun seling and services (ANCS):	Yes		No	
		No.	%	No.	%
6	Should take extra food during pregnancy:	140	56.9	106	43.1
7	Place, where safe termination of pregnancy performed:	54	21.9	192	78.1
8	Complication of risk pregnancy:	38	15.4	208	84.6
9	Importance of antenatal checkup during pregnancy:	44	17.9	202	82.1
10	T.T. vaccine prevents you and your baby from Tetanus.	79	32.1	167	67.9
	Total	71	28.8	175	71.2

As shown in table 5.1.2. Adolescent perception in antenatal counseling and services were found that in (6) should take extra food during pregnancy was highest level

of perception 56.9 percent had perception and 43.1 percent had no perception (7) place where safe termination of pregnancy performed 78.1 percent had no perception and 21.9 percent had perception (8) complication of risk pregnancy 84.6 percent had no perception and 15.4 percent had perception (9) importance of antenatal checkup during pregnancy 82.1 percent had no perception and 17.9 percent had perception (10) T.T. vaccine prevents adolescent and their baby 67.9 percent had no perception and 32.1 percent had perception. Overall 71.2 percent had no perception and 28.8 percent had perception.

5.1.3 Results of proportion of adolescent's perception on INCS:

Table-5.1.3 Perception on intranatal counseling and services (INCS):

No	Perception on Intranatal coun seling and services (INCS):	Yes		No	
		No.	%	No.	%
11	Your expected date of delivery:	95	38.6	151	61.4
12	Place where safe and aseptic delivery conducted:	77	31.3	169	68.7
13	Availability of special care for baby if you needed:	9	3.7	237	96.3
14	Complications of prolong labor:	42	17.1	204	82.9
15	Excessive bleeding and convul sion may threaten your life:	49	19.9	197	80.1
	Total	54	22.1	192	77.9

As shown in table 5.1.3. The results of adolescent perception on intranatal counseling and services were found as follows: (11) in expected date of delivery (EDD) 61.4 percent had no perception and 38.6 percent had perception (12) place where safe and aseptic delivery conducted 68.7 percent had no perception and 31.3 percent had perception (13) availability of special care for their baby if they needed 96.3 percent had

no perception and only 3.7 percent had perception (14) complications of prolonged labor 82.9 percent had no perception and 17.1 percent had perception (15) excessive bleeding and convulsion may threaten adolescents life 80.1 percent had no perception and 19.9 percent had perception. The overall 79.9 percent had no perception and 22.1 percent had perception.

5.1.4 Results of proportion of adolescent's perception on PNCS:

Table-5.1.4 Perception on postnatal counseling and services (PNCS):

No	Perception on Postnatal coun seling and services (PNCS):	Yes		No	
		No.	%	No.	%
16	Time taken for return to normal life after delivery:	49	19.9	197	80.1
17	Breast feeding increases birth spacing:	29	11.8	217	88.2
18	Postnatal complication may endanger mothers life:	31	12.6	215	87.4
19	Sources of care for postpartum morbidity:	60	24.4	186	75.6
20	The importance of routine gynecological Examination:	8	3.3	238	96.7
	Total	35	14.4	211	85.6

As displayed in table 5.1.4. Adolescent perception on postnatal counseling and services revealed as follows: (16) time taken for return to normal life after delivery 80.1 percent had no perception and 19.9 percent had perception (17) breast feeding increases birth spacing 88.2 percent had no perception and 11.8 percent had perception (18) postnatal complication may endanger adolescents life 87.4 percent had no perception and 12.6 percent had perception (19) sources of care for postpartum morbidity 75.6 percent had no perception and 24.4 percent had perception (20) the importance of routine

gynecological examination 96.7 percent had no perception and only 3.3 percent had perception. Overall 85.6 percent had no perception and 14.4 percent had perception.

5.2 Effects of background characteristics of adolescents on perception:

5.2.1 Effects of age of adolescent on outcome perception:

Table- 5.2.1. Effects of age on outcome perception:

Age group in years	Total		Outcome				χ^2	P value
			Had no perception		Had perception			
15-17	115	46.7	105	91.3	10	8.7	4.598	0.032
18-19	131	53.3	106	80.9	25	19.1		
Total	246	100.0	211		35			

Note: Continuity correction with two tailed significant.

As shown in table-5.2.1 the socio-cultural data revealed that the highest specific proportion of the adolescents were age group 18-19. A significantly larger proportion of the age 18-19 group of adolescents had more perception about PCS than the age 15-17 group (19.1% vs. 8.7%) and P=0.032.

5.2.2. Effects of educational status on outcome perception:

Table-5.2.2. Effects of educational status on outcome perception:

Education	Total		Outcome				χ^2	P value
			Had no perception		Had perception			
	No	%	No	%	No	%		
Literate	197	80.1	162	82.2	35	17.8	8.746	0.003
Illiterate	49	19.9	49	100.0	0	0		
Total	246	100.0	211		35			

Note: Continuity correction with two tailed significant.

As shown in table 5.2.2 adolescent were illiterate of 19.9 percent (had no schooling), and 80.1 percent were literate. The most significant association was found in literate group had more perception than illiterate group of adolescents (P=0.003).

5.2.3 Effects of adolescent's age of marriage on outcome perception:

Table-5.2.3. Effects of age of marriage on outcome perception:

Age of marriage	Total		Outcome				X^2	P value
			Had no perception		Had perception			
	No	%	No	%	No	%		
12-15	79	32.1	75	94.9	4	5.1	6.941	0.008
16-19	167	67.9	136	81.4	31	18.6		
Total	246	100.0	211		35			

Note: Continuity correction with two tailed significant.

As shown in table 5.2.3 the overwhelming majority 67.9 percent of adolescent were married under the age group of 16-19 years and 32.1 percent were under the age group of 12-15 years. The significant association was found in between perception and age of marriage (P=0.008) The proportion of perception in higher marry age group 16-19 years had more perception 18.6 percent than in younger marry age 12-15 group 5.1 percent.

5.2.5. Effects of religion on outcome perception:

Table 5.2.5. Effects of religion on outcome perception:

Religion	Total		Outcome				P value
			Had no perception		Had perception		
	No	%	No	%	No	%	
Islam	230	93.5	202	87.8	28	12.2	0.003
Hindu	16	6.5	9	56.3	7	43.8	
Total	246	100.0	211		35		

Note: Fisher's exact test with two tailed significant.

As shown in table 5.2.5 majority, 93.5 percent of adolescent were Muslims and 6.5 percent were Hindus. The Muslim adolescents had less perception 12.2 percent than Hindu adolescents 43.8 percent. There was a significant association found between religion and perception (P=0.003).

5.3 Results on decision making variables on perception:

5.3.1 Effects of consent of marriage on outcome perception:

Table-5.3.1. Effects of consent of marriage on outcome perception:

Consent of marriage	Total		Outcome				P value
			Had no perception		Had perception		
	No	%	No	%	No	%	
Self consent	17	6.9	12	70.6	5	29.4	0.075
Parents	229	93.1	199	86.9	30	13.1	
Total	246	100.0	211		35		

Note: Fisher's exact test with two tailed significant.

As shown in table 5.3.1 among 246 adolescents reported that only 6.9 percent gave their consent of marriage by herself and their perception level was higher 29.4 percent than most of the adolescents 93.1 percent marriage consent was given by their parents or relatives had 13.1 percent perception.

5.3.2 Effects of necessary of PCS on outcome perception:

Table 5.3.2. Effects of necessary of PCS on outcome perception:

Necessary of PCS	Total		Outcome				P value
			Had no perception		Had perception		
	No	%	No	%	No	%	
Yes	243	98.8	209	86.0	34	14.0	0.370
No	3	1.2	2	66.7	1	33.3	
Total	246	100.0	211		35		

Note: Fisher's exact test with two tailed significant.

As shown in table 5.3.2 among those 246 adolescents girls 98.8 percent said that pregnancy counseling and services was necessary before they conceive but only 1.2 percent reported that PCS was not necessary before pregnancy and their perception level was higher than yes respondent adolescent.

5.3.3 Effects of ever heard of MCWC provides PCS on outcome perception:

Table 5.3.3 Effects of ever heard MCWC provides PCS on outcome perception:

Ever heard PCS	Total		Outcome				2 X	P value
			Had no perception		Had perception			
	No	%	No	%	No	%		
Yes	98	39.8	74	75.5	24	24.5	12.694	<.001
No	148	60.2	137	92.6	11	7.4		
Total	246	100.0	211		35			

Note: Continuity correction with two tailed significant.

As shown in table 5.3.3 in this adolescent study, they reported that 39.8 percent ever heard MCWC provides PCS had more perception 24.5 percent while 60.2 percent of adolescent never heard the information had less perception only 7.4 percent (P=<0.001).

5.3.4. Effects of source of information of PCS on outcome perception:

Table 5.3.4. Effects of source of information of PCS on outcome perception:

Source of information	Total		Outcome				P value
			Had no perception		Had perception		
	No	%	No	%	No	%	
Parents/friend	83	33.7	70	84.3	13	15.7	<.001
H.W/Media	15	6.1	4	26.7	11	73.3	
Total	98	39.8	74		24		

Note: Fisher's exact test with two tailed significant.

As shown in table 5.3.4 all adolescents were asked from what source they knew the information of PCS? Some of them, 6.1 percent knew from health and family planing worker and from different media and their perception level was more 73.3 percent than those adolescents knew 33.7 percent from their parents and friends had 15.7 percent perception It was significantly associated with perception (P=<0.001).

5.3.5. Effects of ever used pregnancy counseling and services (PCS):

Table 5.3.5. Effects of ever used PCS on outcome perception:

Ever used PCS	Total		Outcome				P value
			Had no perception		Had perception		
	No	%	No	%	No	%	
Yes	8	3.3	7	87.5	1	12.5	>0.05
No	238	96.7	204	85.7	34	14.3	
Total	246	100.0	211		35		

Note: Fisher's exact test with two tailed significant.

As shown in table 5.3.5 adolescent did not use Pregnancy counseling and services (PCS) were 96.7 percent but had more perception 14.3 percent than only 3.3 percent adolescent used PCS had 12.5 percent perception (P=>0.05).

5.3.6 Effects of contraceptive method use on outcome perception:

Table 5.3.7 Effects of contraceptive method use on outcome perception:

Method used	Total		Outcome				P value
			Had no perception		Had perception		
	No	%	No	%	No	%	
Yes	34	13.8	26	76.5	8	23.5	>0.05
No	212	86.2	185	87.3	27	12.7	
Total	246	100.0	211		35		

Note: Fisher's exact test with two tailed significant.

As shown in table 5.3.7 adolescent reported that 13.8 percent used contraceptive method before they conceive had more perception 23.5 percent than those 86.2 percent who did not use contraceptive method had 12.7 percent perception. The association was found to be positive impact between contraceptive method used and outcome perception (P=>0.05)

5.3.7. Effects of gestational age at first ANC visit on outcome perception:

Table 5.3.8. Effects of gestational age at first ANC visit on outcome perception:

Gestational Age	Total		Outcome				2 X	P value
			Had no perception		Had perception			
	No	%	No	%	No	%		
6-15	42	17.0	95	84.8	17	15.2		
16-36 +	204	83.0	116	86.6	18	13.4	0.043	>0.05
Total	246	100.0	211		35			

Note: Continuity correction with two tailed significant.

As shown in table-5.3.8 The adolescent of early visit (6-15 weeks) was 17.0 percent had more perception 15.2 percent than the late visit (16-36+ weeks) of adolescent was 83.0 percent had 13.4 percent perception. Association was found between gestational age and perception (P=>0.05).

5.3.8. Effects of friends, sister or other closed relative pregnant on perception:

Table-5.3.9. Effects of friends, sister or other close relative pregnant on perception:

Closed relative pregnant	Total		Outcome				2 X	P value
			Had no perception		Had perception			
	No	%	No	%	No	%		
Yes	147	59.8	128	87.1	19	12.9		
No	99	40.2	83	83.8	16	16.2	0.277	>0.05
Total	246	100.0	211		35			

Note: Continuity correction with two tailed significant.

As shown in table 5.3.8 The pregnant adolescent reported that 40.2 percent did not have their friend, sister or close relative were pregnant had more perception 16.2 percent than 59.8 percent had close relative pregnant 12.9 percent perception at the time of interview (p=> 0.05).

5.4 Effects of pregnancy related variables on perception:

5.4.1. Pregnancy wanted/unwanted pregnancy on outcome perception:

Table 5.4.1. Effects of wanted/unwanted pregnancy on outcome perception:

Pregnancy	Total		Outcome				2 X	P value
			Had no perception		Had perception			
	No	%	No	%	No	%		
Wanted	103	41.9	86	83.5	17	16.5	0.466	>0.05
Unwanted	143	58.1	125	87.4	18	12.6		
Total	246	100.0	211		35			

Note: Continuity correction with two tailed significant.

As shown in table 5.4.1 of 246 female adolescents 41.9 percent noticed that actually they wanted to have a baby had more perception 16.5 percent than 58.1 percent of adolescents unwanted to have a baby and their perception was 12.6 percent.

5.4.2 Effects of wanted pregnancy (right time) on outcome perception:

Table: 5.4.2 Effects of wanted pregnancy (right time) on outcome perception:

Wanted Pregnancy	Total		Outcome				2 X	P value
			Had no perception		Had perception			
	No	%	No	%	No	%		
Right time	3	1.2	2	66.7	1	33.3	1.270	>0.05
Not right time	100	40.7	84	84.0	16	16.0		
Total	103	41.9	86		17			

Note: Fisher's exact test with two tailed significant.

As shown in table 5.4.2 Among 41.9 percent wanted pregnancy, only 1.2 percent adolescent reported that they got pregnant at right time had more perception 33.3 percent than the adolescent 40.7 percent who did not get pregnant at right time had less perception 16.0 percent (P=>0.05).

5.5. Results of constrain variables on perception:

5.5.1 Effects of force/pressured on outcome perception:

Table- 5.5.1 Effects of forced or pressured on outcome perception:

Pressured for pregnancy	Total		Outcome				2 X	P value
			Had no perception		Had perception			
	No	%	No	%	No	%		
Yes	118	48.0	107	90.7	11	9.3	3.733	>0.05
No	128	52.0	104	81.3	24	18.8		
Total	246	100.0	211		35			

Note: Continuity correction with two tailed significant.

As shown in table 5.5.1 A total 52.0 percent adolescent were found to be reported that they had never been forced or pressured to have pregnancy had more perception than pressured or forced group of 48.0 percent had pregnancy 18.8% vs 9.3% (p=> 0.05).

5.5.2. Effects of contrast (matching) problem on output perception:

Table- 5.5.2. Effects of contrast problem on output perception:

Contrast Problem	Total		Output				2 X	P value
			Had no perception		Had perception			
	No	%	No	%	No	%		
Yes	181	73.6	157	86.7	24	13.3	0.269	>0.05
No	65	26.4	54	83.1	11	16.9		
Total	246	100.0	211		35			

Note: Continuity correction with two tailed significant.

As shown in table 5.5.2. Majority of the adolescent 73.6 percent expressed that they faced contrast (matching) problem had less perception 13.3 percent than 26.4 percent adolescent never faced contrast problem getting PCS and their perception was higher 16.9 percent (p= > 0.05).

5.5.3. Effects of scarcity of trained personnel on outcome perception:

Table 5.5.3. Effects of scarcity of trained personnel on outcome perception:

Scarcity of trained personnel	Total		Outcome				P value
			Had no perception		Had perception		
	No	%	No	%	No	%	
Yes	212	86.2	184	86.8	28	13.2	>0.05
No	34	13.8	27	79.4	7	20.6	
Total	246	100.0	211		35		

Note: Fisher's exact test with two tailed significant.

As shown in table 5.5.3. Most of the adolescent 86.2 percent noticed that they felt problem due to scarcity of trained personnel had less perception 13.2 percent than those13.8 percent of adolescent did not feel any problem but they had more perception 20.6 percent (p = > 0.05).

5.5.4. Effects of transportation problem on outcome perception:

Table-5.5.4. Effects of transportation problem on outcome perception:

Transport problem	Total		Output				P value
			Had no perception		Had perception		
	No	%	No	%	No	%	
Yes	15	6.1	11	73.3	4	26.7	>0.05
No	231	93.9	200	86.6	31	13.4	
Total	246	100.0	211		35		

Note: Fisher's exact test with two tailed significant.

As displayed in table 5.5.4 Most of the adolescent 93.9 percent reported that they didn't face any transport problem, but only 6.1 percent faced problem to get PCS had more perception 26.7 percent than the no respondent adolescent 13.4 percent (p= > 0.05).

5.5.5. Effects of religious problem on outcome perception:

Table-5.5.5. Effects of religious problem on outcome perception:

Religious problem	Total		Output				2 X	P value
			Had no perception		Had perception			
	No	%	No	%	No	%		
Yes	38	15.4	31	81.6	7	18.4	0.305	>0.05
No	208	84.6	180	86.5	28	13.5		
Total	246	100.0	211		35			

Note: Continuity correction with two tailed significant.

As shown in table 5.5.5 Among all adolescent respondents, only 15.4 percent had attained religious problem but they had more perception 18.4 percent than 84.6 percent did n't to avoid getting pregnancy had less perception 13.5 percent (P=>0.05).

5.6. Significant predictors included in MLR:

These variables were significantly associated or biologically important with the dependent or outcome perception on PCS.

Table: 5.6. Significant predictors included in MLR:

No	Significant predictors included in MLR	P value
1.	Outcome or Dependent variable = Perception on PCS	
2.	Independent or significant predictors:	
2.1.	Age of adolescent (15-17 and 18-19years)	0.032
2.2.	Educational level (Literate and Illiterate)	0.003
2.3.	Age of marriage (12-15 and 16-19)	0.008
2.4.	Religion (Islam and Hindu)	0.002
2.5.	Heard MCWC provides PCS (Yes or No)	<0.001
2.6.	Source of information (H-FP personnel and Media/Parents, Friends)	<0.001
2.7.	Religious problem to avoid getting pregnancy (Yes or No)	>0.05
	Had no perception = 0 and Had perception = 1	

5.7. Result of Multiple Logistic Regression (MLR) analysis:

Table 5.7. Result of multiple logistic regression analysis to predict the strength of association of character with PCS:

Variable	Coefficient	Odds ratio	95% CI	P value
Age				
15-17	1.5598	1	1.1724-	<0.05
18-19		4.7579	19.3089	
Religion problem				
No	2.2492	1	1.7680-	<0.01
Yes		9.4802	50.8331	
Source of information				
Friends/relatives	-3.2815	1	5.9814-	<0.001
H-FP worker/media		26.6243	118.4216	

Multivariate analysis was used to explore the strength of association between outcome perception and significant predictors. Multiple Logistic Regression (MLR) analysis was the best method to analyze this relationship because in this study the dependent or outcome variable was a dichotomous outcome and independent or predictor variables were dichotomous, continuous and categorical. Seven predictor variables such as age of adolescent, educational level, age of marriage, religion, heard MCWC provides PCS, source of information and religious problem to avoid getting pregnancy were statistically significant association was found and biologically important with perception were included in this model. Both outcome and predictor variables were re categorized to dichotomous variable. Multiple logistic regression method with forward stepwise (wald) was employed in this study. It was done in order to exclude unnecessary variables at different steps of the model. The significant variables were separated from the model until the significant variables ($P<0.05$) were not in the equation.

As displayed in table 5.7. Multiple logistic regression analysis allowed us to find out the significant factor, the standard error, odds ratio, p value and the 95% CI after adjusting the confounding variables. The result of multiple logistic regression revealed that: the adolescents aged 18-19 years had four times higher perception than age group 15-17 with odds ratio 4.7579 (P=<0.05). The adolescent who faced religious problem had nine times higher perception than those who faced no religious problem with odds ratio 9.4802 (P=<0.01). The adolescent's source of information was health and family planning worker and media had 26 times higher perception with an odds ratio 26.625 than the adolescent's source of information was parents and friends (P=<0.001).

5.8. Result of individual item of perception variable:

The individual item statements in four domains of (PCS) were also performed. The mean and standard deviation were calculated. Adolescent perception was measured by a level of rating scale. This is attached with appendix part (Appendix-4)

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CHAPTER 6

DISCUSSION, CONCLUSION AND RECOMMENDATION

6.1 DISCUSSION:

In Bangladesh, early marriage for female is customary and most marriages are arranged. Approximately 75 percent of the girls were married before they reach age 16 and only 5 percent of the females are married after 18 years which is the legal age of marriage for females in Bangladesh.[5] Unmet needs for information, education and communication on reproductive health and sexual behavior including pregnancy counseling and services should be focused on especially for adolescents. Despite relentless efforts to reduce fertility, maternal and infant morbidity and mortality are still high. In the past adolescent health problem was never thought of as an area of special emphasis. Adolescent reproductive health situation can not be denoted as satisfactory both in terms of program efforts and actual performance. Information on sexuality is very limited, where sexual matters are only condoned in the context of marriage and substantial policy on the subject of sex either through media or through formal education is lacking.

The program of action for International Conference on Population and Development (ICPD) draws attention to the many areas of unmet need in the field of reproductive and sexual health and reproductive right acknowledges the urgent need to address the adolescent reproductive health issues of unplanned pregnancies, unsafe abortion and sexually transmitted diseases. Information and counseling on sexuality and contraception is widely available to young people only in a few countries.

About 27 percent adolescent in Bangladesh are mothers and 6 percent are pregnant with their first child. Thus one in three teenage girls has begun child bearing. In Bangladesh there is a scarcity of data on perception among adolescents on their needs of PCS due to prevailing socio-cultural norm, inhibit disclosure of information about sexual activity of adolescents. Stephenson JN stated pregnancy counseling and services are increasingly accepted as necessary services for adolescents within the primary care setting. Since information on adolescent perception on their needs of pregnancy counseling and services is very limited in Bangladesh, there is a need to collect in-depth information on this research topic. In this regard, researcher planned to conduct a study to know the perceptive behavior on PCS of adolescent girls.

6.1.1 Overall proportion of perception on pregnancy counseling and services:

The study revealed that, the overall 85.8 percent of adolescent had no perception while 14.2 percent of adolescent had perception. Perception level was very low but the result may be compared with the study result nationally (BDHS 1993-1994) and internationally (Pediatrics, 1998). The concept of PCS, whereby prospective mothers visit health providers for regular checkups was relatively new in rural areas. Traditional antenatal care in the country included things like message and special diet for the mother to be, and certain social restrictions on her movements and activities. There does not seem to be any emphasis or special attention was given to adolescents in the national maternal and child health program despite the fact that there are substantially higher morbidity and mortality risks for adolescent mothers as well as children born to them.

Traditionally rural women would go to their mother's house for their delivery. Only 3.0 percent of adolescent mothers went to health facility for delivery in three years preceding the 1993-94 survey. In addition only 3.9 percent of mothers aged below 20 years were assisted by a doctor at the time of delivery whereas 96.6 percent of the deliveries of adolescent mothers were at home and conducted by traditional birth attendants and relatives or others, there are serious health implications for the young mother as well as their child.

6.1.2 Background characteristics of adolescent:

The mean age of adolescent is 17.4 and the highest proportion of adolescent married within the period of 18-19 years. Nearly 80.0 percent of adolescent were literate, had completed at least the primary level of education and 20.0 percent of adolescent girls were illiterate had no formal education. Current statistics (BBS, 1995) shows a sharp rise in the attendance of girls in the schools. Women representation at the higher secondary level and above was increasing steadily (Hossain,1996). Maximum resources are being utilized for the education. Primary education was made compulsory for boys and girls and food for education program started with an aim to provide education for all by 2000. As a consequence, the enrollment rate has increased to 87 percent for both sex and drop out rate has reduced. So the literacy rate is more or less similar with the findings of the study. Female education is significantly associated with counseling qualified persons for antenatal care. Women who have 5 years or more education have twice the probability of counseling a qualified person compared with illiterate adolescent.[1] Low levels of education can also restrict adolescents access to information about health practices and risks in all aspects of their lives.

The mean age of marriage was 16.0. Most of the adolescent married within 16-19 years of age, 32.1 percent married at the age of 12-15 years. According to 1991 census about half of the females in age group 15-19 were married by age 24, approximately 87.0 percent adolescent were married. Among adolescent of ages 16-19 years 91.0 percent were married. The findings of the study is related with other study, which revealed that if marriage is delayed by staying in education, the survival chance of the child of the educated mother are improved greatly. Delaying marriage and consequently first birth can have significant impact on a women's total fertility.[11,46]

The study found that overwhelmingly majority i.e 99.0 percent adolescents were housewives, only 1.0 percent adolescent were doing self business and agriculture. Participation in income generating occupations was very low for the rural female adolescents of poor background. Other study found that participation in income earning occupations by the married female adolescents was the least 9.0 percent irrespective of socio-economic status or place of residence and 92.9 percent categorized their occupation as housewives.[11]

Among all adolescents 93.5 percent were Muslims and 6.5 percent were Hindus. In Bangladesh more than 80.0 percent peoples are Muslims and nearly 20.0 percent peoples are Hindus. Buddhist and Christian, live in a specific area of the country. The study sample was not included all religious people uniformly. Religion was found to be statistically significant with seeking PCS. The Muslim adolescents were more likely seek antenatal care than Hindus. One possible reason might be that the Muslim household were relatively more visited by the health and family planning worker and educating them about the needs of pregnancy counseling and services.

6.1.3 Decision making variables:

Most of the adolescents 93.1 percent married with the consent of her parents or guardians and only 6.9 percent gave their consent by herself. It was due to traditional system of arranged marriage. The result may be compared with the result of other study. All most all 98.8 percent married adolescent agreed that pregnancy counseling and services was necessary while only 1.2 percent said that it was not necessary. A possible explanation for the relatively high conception rate among young adolescents could be that young couples do not have reliable information on, or easy access to pregnancy counseling and services.[11]

More than 60.0 percent adolescent reported that they never heard MCWC provides PCS but nearly 40.0 percent ever heard. The explanation for this discrepancy probably lies in the respondent perception on PCS.. Large proportion of adolescent may be received counseling and services from other traditional sources but not the standard ones. Those adolescent knew the information, the MCWC provides PCS, among them large number 34.0 percent knew from their parents and friends. Only 6.0 percent knew from health and family planning worker and from media. Female adolescents nominated grandmothers, elder sister, parent followed by female friends and sister in law as the most appropriate source for sexual affairs.[11, .33]

Most of the respondents 97.5 percent never used pregnancy counseling and services while only 2.8 percent ever used PCS. Majority 43.5 percent adolescent said that, their mother in law, husband and other closed relatives did not allow them to avoid getting pregnancy but nearly 54.0 percent did not use due to cause of herself like, did not know the source, importance, lack of awareness and shyness. Only 2.5 percent ever used PCS for TT vaccine, safe delivery and to knew the fetal condition.

It is to be mentioned here that, 40.0 percent adolescent knew the information but they could availed the opportunity, only 2.5 percent used PCS. It indicates higher knowledge does not necessarily lead to higher use of PCS due to pressure from husband, mother in law, and other closed relatives to have a children soon after marriage are existing norms that favor the early establishment of the family.[4]

Most of the adolescent 86.2 percent did not use any method but 13.8 percent adolescent used contraceptive method. It is important to note that, although the mean desired family size is lower among the adolescent group, demand for additional children was stronger among the relatively younger, newly wed and lower parity women were reluctant to use contraceptive method early in their reproductive lives. The current high levels of contraceptive method used by older women who have been married for some time and already have living children.

The highest proportion 83.0 percent of adolescent attended the clinic when their gestational age was 16-36+ weeks and remaining 17.0 percent was 6-15 weeks. Late attendance of adolescents in the clinic means that either they are not aware of the importance of the services, or they have inhibitions about taking pregnancy counseling and services. Simply they found that they were pregnant quite late. It was also possible that the women get older, they have more decision making power or autonomy and hence more control over their reproductive health.

About 60.0 percent of adolescent said that they have had adolescent friend, sister or closed relatives were pregnant at the time of interview. The results may be compare with other study. The extent to which peer pressure affected individual behavior can not be determined by the results of this study. There is, however,

considerable evidence that in all societies peer behavior is a model for individual behavior and this is certainly true in matters of adolescent reproductive behavior.

6.1.4 Proportion of perception on contraceptive counseling and services (CCS):

In contraceptive counseling and services (CCS), 85.1 percent of adolescent had no perception and 14.9 percent had perception, the results may be compared with other study.[24] Although many adolescents knew about contraception, relatively few adolescent women were currently using contraceptives. The low level of perception among adolescent in developing countries was not satisfactorily explained. Some researchers have assumed that, unmet need was generally attributed to inadequate knowledge of PCS, sporadic or unanticipated sexual activity, deficient services, judgmental and insensitive health and family planning workers. However, the pattern also reflects the significant barriers to take counseling and services that many adolescent faced. The barriers include lack of information about PCS, difficulty in obtaining services from providers, influenced by cultural norms prohibiting PCS use among adolescents, concern about bad effects and inability to negotiate with her partners (McCauley and Salter, 1995).

6.1.5 Proportion of perception on Antenatal counseling and services:

The study shows, the perception level was comparatively higher 28.8 percent and 71.2 percent had no perception on ANCS which may be compared with other study. The sub scale analysis revealed that adolescent should take extra food during pregnancy, perception level was highest 56.9 percent among all statement. However, there was some important statement-in ANCS to the health of the adolescents and their infant. It represents the specific developmental needs of the adolescent parent from prenatal to postnatal stage and beyond. The primary emphasis should be given to

reduce the risk to supporting counseling and education in addition to comprehensive antenatal obstetric care. Early in the pregnancy, the adolescent registered in an adolescent maternity program and introduced to a counselor, social worker along with physician, nurses and family welfare visitors initiates a supportive environment where in the adolescent is free to discuss general concerns and issues.

Although providing professional counseling support is important, peer interaction is beneficial at this time and group sessions have been found to be more effective. The use of group and individual intervention fosters the adolescent ability to make decisions during pregnancy which are most appropriate and consistent with the adolescents present life style, taking into account such factors as the age of the adolescent, the financial status, the existing support from the father, the status of family support and the psychosocial maturity, and hence increase the level of perception of adolescent.

6.1.6 Proportion of perception on Intranatal counseling and services (INCS):

In intranatal counseling and services the overall 22.1 percent had perception and 77.9 percent had no perception which is similar to other study conducted in developing countries. The sub scale analysis shows high percentage of perception in expected date of delivery 38.6 percent and place where safe and aseptic delivery conducted 31.3 percent respectively. The perception level was relatively low on availability of special care for baby if they needed only 3.7 percent, complications of prolonged labor 17.1 percent and excessive bleeding and convulsion may be threaten adolescent's life was 19.9 percent had perception.

These areas are important aspects to be improved while providing counseling and services. The information on the availability of services often do not reach to the

adolescents who need the services most. This lack of perception leads adolescent to resort to indigenous sources which consequences serious and sometimes life threatening condition. Early counseling and services with prompt recognition, proper medical attention, assurance, and confidence provide a unique opportunity to increase adolescent's perception which may influence their participation in healthy reproductive behavior as well as reduce morbidity and mortality of adolescent and their children.

6.1.7 Proportion of perception on Postnatal counseling and services (PNCS):

The total perception on postnatal counseling and services, 14.4 percent had perception which was relatively low and 85.6 percent had no perception. The result may be compared with the other study. The single item analysis, sources of care for postpartum morbidities and time taken to return to normal life after delivery the perception level was relatively high 24.4 percent and 19.9 percent respectively. The perception level was very low in the importance of routine gynecological examination only 3.3 percent, breast feeding increases birth spacing 11.8 percent and postnatal complication may endanger adolescent's life 12.6 percent.

In spite of the availability of services nation wide through public and private sector facilities the adolescent perception level was very low. Counseling and follow up services has been more emphasized in these areas. Provision for treatment for complication, health education for breast feeding, and routine gynecological examination not yet given in an organized or regular form. However, proper counseling and services reaches through door to door step with cafeteria mix approach with adequate information, education and motivation . Service delivery at the door step has been greatly appreciated by adolescents. Adolescent-provider interaction was

very inadequate. Trained birth attendants (TBA) also can play effective roles in providing counseling and services if their potentials are being properly utilized through involving them in the main streams.

6.1.8 Significant variables associated with perception:

When perception on pregnancy counseling and services was cross tabulated many variables were thought to be potential predictors of perception but some variables were found to be associated with outcome perception significantly as a whole. Some background characteristics such as age, education, age of marriage and religion were found to be statistically significant (at P=<0.05) while computed in chi-square test. There was statistically significant association was found between age of adolescent and contraceptive counseling and services (P=<0.05) which indicates higher age of adolescent had more perception than lower age group of adolescents. In antenatal counseling and services, education and age of marriage were found to be significantly associated with perception (p=<0.05). It means that the perception level was higher in literate group than illiterate group. Higher age of marriage had more perception than lower age of marriage of adolescent.

6.1.9 Association between predictors and perception by (MLR):

To know the strength of association between predictor variables and outcome or dependent variable perception, in the first model included all variables related with perception. The results were in expected direction, only the most important predictors related with perception, were included in the multiple logistic regression model then three variables such as age of adolescent, religious problem to avoid getting pregnancy and source of information were found to be statistically significant. It means that older adolescent had more perception about PCS like contraception,

pregnancy outcome. risky sexual and reproductive health behavior. The result also implied that the adolescent's source of information was from health and family planning worker and media only 6.1 percent had more perception than those who had information from parents and friends. It signifies that in social norms, grand mother, elder sister, sister in law and female friends were the source of information of sexuality and reproduction which leads adolescents to go indigenous sources. On the other hand providers were more reluctant to visit adolescent and had no proper guidelines and strategy to involve adolescents in pregnancy counseling and services. Radio and television were the main media in rural well off family but no appropriate program of pregnancy counseling and services need most for adolescents. Muslim adolescent had less perception than Hindu adolescent due to their lack of education, more conservative and due to access barrier.

6.2 CONCLUSION:

All adolescent of child bearing age who are sexually active can benefit from planning pregnancies. Counseling that access the adolescent's expectations regarding birth control, understanding factors followed by a careful explanation of the side effects of a contraceptive choice, that result in perception with contraception may reduce unplanned pregnancies. Despite the limited range of indications for counseling that we considered, a substantial percentage of adolescent potentially could have used counseling and a similar percentage of adolescent could have benefited from family planning services.

Most of these options are viable only if the adolescent is aware of their availability before attempting conception. It is the provider's responsibility to provide

preconception counseling to such adolescent or to refer them to centers where such counseling and services are available. The general practitioner knew about pregnancy counseling and considered it part of their job. Many already provided PCS, although not in a structured way. General practitioner agreed to lack of time and appropriate knowledge, which indicates a need for postgraduate training.

When consulted by a pregnant adolescent, pediatricians should be able to make a timely diagnosis and to help the adolescents understand her options and act on her decision to continue or terminate her pregnancy. Pediatrician may not impose their values on the decision making process and should be prepared to support the adolescent in her decision or refer her to a physician who can help her. In fact, PCS provided by MCWC in a less ambulatory manner and into a more consultative one. Adolescent consider this service as a reference for women's problems. They underline the lack of sexual and health counseling and services. There is demanding for counseling for infancy problem, sterility, health education and reproductive health behavior. A program promoting pregnancy counseling and services can be implemented on a statewide basis by using various health care providers to deliver the program. Participation in such a program appears to be related to improved pregnancy outcomes among adolescent. Adolescents frequently encounter barriers that discourage their enrollment in PCS and facilitate noncompliance with medical regimens. Traditional health care settings often provide for only a small portion of adolescent's service needs, ignoring other problems that place adolescents at risk. Issues of confidentiality, cost, and accessibility are additional stumbling blocks to adolescents seeking PCS. Comprehensive programs that address all aspects of adolescent development are more likely to attract adolescent girls.

Huges and McCauley argue that current health programming is falling short helping young people acquire the knowledge, skills, and behavior they need. Furthermore, several recent reviews point out that not enough is known about the effectiveness of current interventions and that a need exists for more rigorous evaluations of existing programs and for new prospective studies to test alternative models. As an interim measure, identify a set of providers for implementing successful sexual and reproductive health programs for young people, based on their review of intervention programs around the world.

Finally, we should know what adolescent women want from health providers:

Adolescent are quite explicit about what they want from health care providers. They value their privacy and identity and desire to make decisions for themselves based on correct information. Accordingly their needs from health providers are simple:

- Be confidential
- Provide them information and services they need
- Accept them as they are-never moralize or demoralize them
- Ask about and respect their opinion about services
- Make them feel welcome and comfortable
- Never judge them
- Provide services at a time within the time they have

In short, educate them, respect them and empower them to develop perception and make her enable to take appropriate decision regarding pregnancy in a proper time.

6.3 BENEFIT AND IMPLICATION:

The results of this study helps both in public and private sectors to develop most comprehensive pregnancy counseling and services model to make it cost effective and more friendly to adolescents. Recommend major interventions including a safe and supporting environment, providing information, building skills, and improving pregnancy counseling and services. Acceleration of programming for all aspects of adolescent effective sexual and reproductive health at the level of primary prevention and care. Adolescent healthy reproductive behavior, delayed marriage for girls and increase use of contraceptives reduces morbidity, mortality, and age specific fertility rate which declined population growth rate (GR).

6.4 RECOMMENDATION:

6.4.1 Developing reproductive health care package:

Government should develop commitment towards achieving pregnancy counseling and services within a shorter period of time through developing a policy guideline and specific strategies for implementation of reproductive health care package which should be integrated with the social and developmental policies.

6.4.2 Establishing comprehensive pregnancy counseling and services:

Reorganize and decentralize existing health and family planning and maternal and child health services integrated and focused on primary health care. Develop PCS center remains open for 24 hours which covers adolescent and their parents.

6.4.3 Ensure quality of care:

Special emphasis should be given on quality of care rather than coverage and demand oriented program planning rather than supply oriented program planning.

Increasing the effectiveness of MIS to make PCS programs most cost effective and friendly to adolescents which will value quality of care making services accessible and affordable to those who need most.

6.4.4 Empowering adolescent for taking decisions:

Adolescents themselves should be involved in designing, planning and implementing program for them. Provide adequate knowledge about their reproductive health and sexual behavior related issues by educating them and introducing reproductive health care based program instead of MCH-FP based program.

6.4.5 Providing safe and supporting environment:

Recommended major interventions includes providing information, building skills and providing counseling and services by specialist female doctors at the community level. So the community adolescent particularly uneducated and poor could be educated on their needs of PCS. Service should be based on respect for service seeker and pleasant client-provider relationship.

6.4.6 Developing guideline and standards:

Protocols, of how providers should serve adolescents should be clearly spelled out. Community groups such as parents, teachers, guardians and social workers should be involved in adolescent issues rooted at the socio-cultural norms of should be ensured constantly and sufficient interaction time should be allowed for free discussion about their needs.

6.4.7 Provide services for adolescents in separate settings:

Short term counseling and services have been successful at helping adolescent girls to resolve many sexual concerns. So develop and implement appropriate

counseling and services to ensure more thorough and meaningful PCS and comfortable experience to what kind of PCS related services do they need.

6.4.8 Provide privacy and maintain confidentiality;

Counselors themselves often have to be fears, anxieties and biases about sexuality with adolescents. The lack of privacy in clinics also makes it difficult for clients to raise sexual concerns with counselors.

6.4.9 Develop effective referral network system:

Effective referral network system should be developed quickly as possible and referral adolescent should be managed as a priority basis. In-country facilities and proper reporting, record keeping system with proper documentation should be encouraged for increasing adolescent participation in PCS.

6.4.10 Further research needed:

Research should be conducted to help and identify reasons why adolescent do not seek pregnancy counseling and services timely and what programs, strategies and messages seem to be more effective for adolescents and how to overcome political, cultural, structural and other barriers to improve adolescent perception on pregnancy counseling and services (PCS).

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Appendix 1

INTERVIEW QUESTIONNAIRE

Information of the Adolescent:

Dear Adolescent,

I would like to ask you some questions to know your perception on needs of Pregnancy Counseling and Services (PCS) provided through Kishoregonj District maternity and child welfare center (MCWC). Would you please answer the following questions the best describe closest to your opinion that would be most useful to improve Pregnancy Counseling and Services. Confidentiality and anonymity is our responsibility.

Information for the Interviewer:

Id. No ☐☐☐

Part 1.Sociocultural Variables:

1.How old are you? ----------(age In years) [ ] age

2.Level of education:

☐ 1. Illiterate

☐ 2. Primary level [ ] edu

☐ 3. Secondary level

☐ 4. College level

3. At what age did you got marriage? (age in years):---------- [ ] maryage

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4. What is your occupation?

☐ 1. House wife

☐ 2. Agriculture

☐ 3. Self business [ ] occup

☐ 4. Govt service

☐ 5. Others specify

5. What is your religion?

☐ 1. Islam

☐ 2. Hinduism

☐ 3. Buddhism [ ] religion

☐ 4. Christianism

☐ 5. Others

Part 2. Decision making Variables:

6. Consent of marriage:

☐ 1. Self consent [ ] consent

☐ 2. Parents consent/ Relatives

7. Do you think that pregnancy counseling and service is necessary?

☐ 2. Yes [ ] necess

☐ 1. No

8. Do you ever heard district maternity and child welfare center (MCWC) provide pregnancy counseling and services PCS)?

☐ 2. Yes [ ] heard

☐ No

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9. If yes, from what source, you know the information of pregnancy counseling and Services?

☐ 5. Parents [ ] source

☐ 4. Teacher

☐ 3 Friends

☐ 2. Health and family planning personnel

☐ 1. Media

10. Have you ever used pregnancy counseling and services since pregnancy?

☐ 2. Yes [ ] used

☐ 1. No

11. If yes or no why?

_____ [ ] why

_____

12. Did you use any method to delay or avoid getting pregnancy?

☐ 2. yes [ ] method

☐ 1. no

13. What is your gestational age now?

Specify in weeks/months ---------- [ ] gestage

54. Do you have any married adolescent friend, sister or close relative pregnant now?

☐ 2. yes [ ] pregnant

☐ 1.No

Part 3. Perception Variables:

The score which will be allocated for perception are as follows:

Strongly agree = 5.
Agree = 4.
No opinion = 3.
Disagree = 2.
Strongly disagree = 1.

3.1.Contraceptive counseling and services:

No	Do you agree that you have knowledge in:	1	2	3	4	5	variable
15.	Contraceptive methods and their use.						contrac
16.	Safe period or calendar method.						preconc
17.	Wanted or planned birth.						planned
18.	Contraceptive prevents unwanted pregnancy.						unwant
19.	STD, HIV/AIDS damage fertility even life.						fertility

3.2 Antenatal Counseling and services:

No	Do you agree with the following statement:	1	2	3	4	5	variable
20.	Maintain good health during pregnancy.						extrafo
21.	Place of safe termination of pregnancy.						termin
22.	Knowledge about complication of risk cases.						complic
23.	Importance of antenatal visit.						checku
24.	Need of prenatal services before delivery.						toxoid

3.3. Intranatal Counseling and services:

No	Do you have idea about the followings:	1	2	3	4	5	variable
25.	Your expected date of delivery.						edd
26.	Place of safe and aseptic delivery conducted.						place
27.	Availability of special care for babyou need.						availabi
28.	Bed complication of prolonged labor.						prolong
29.	Importance of routine gyne examination.						threaten

3.4. Postnatal Counseling and services

No	Do you know the importance of the followin	1	2	3	4	5	variable
30.	Rapid restoration of mothers good health.						return
31.	Breast feeding causes lactational amenorrhoea.						spacing
32.	Effects of postnatal complication.						endang
33.	Family planning services in this period.						morbid
34.	Results of the complications of new born.						routine

Part 4. Pregnancy related variables:

35. Did you actually want to have a baby

☐ 2. Yes = wanted [ ] wanted

☐ 1. No = unwanted

55. If yes, did you become pregnant at right time? (>19 years):

☐ 2 Right time = intended [ ] rt.time

☐ 1. Sooner = Mistimed

Part 5: Constrain Variables:

37. Have you ever been forced or pressured to have pregnancy?

☐ 2. Yes [ ] pressure

☐ 1. No

38. Did you feel any contrast problem?

☐ 2. Yes [ ] contrast

☐ 1. No

39. Did you face problem due to scarcity of trained personnel?

☐ 2. Yes [ ] scarcity

☐ 1. No

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40. Did you face any transportation problem during getting counseling and services?

☐ 2. Yes [ ] transport

☐ 1. No

41. Did you face any religious problem to avoid pregnancy?

☐ 2. Yes [ ] problem

☐ 1. No

Thank you very much.

Interviewers name: ----------

Signature: ----------

Date of interview: ----------

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Appendix 2

Results of item correlation score (validity): Table:-Item correlation score:

No	Expert1	Expert2	Expert3	Expert4	Expert5	Expert6	Score	IC
1	+1	+1	+1	+1	+1	+1	6	1
2	0	+1	+1	+1	+1	+1	5	0.8
3	+1	+1	+1	+1	+1	+1	6	1
4	+1	+1	+1	+1	+1	+1	6	1
5	+1	+1	+1	+1	+1	+1	6	1
6	+1	+1	+1	+1	-1	+1	4	0.6
7	+1	+1	+1	+1	0	+1	5	0.8
8	+1	+1	+1	+1	0	+1	5	0.8
9	+1	+1	+1	+1	+1	+1	6	1
10	+1	+1	+1	0	+1	+1	5	0.8
11	0	+1	+1	0	+1	+1	4	0.6
12	+1	+1	+1	+1	+1	+1	6	1
13	+1	+1	0	+1	0	+1	4	0.6
14	+1	+1	0	0	0	0	2	0.3
15	+1	+1	+1	+1	+1	+1	6	1
16	+1	+1	+1	+1	+1	0	5	0.8
17	+1	+1	+1	+1	+1	+1	6	1
18	+1	+1	+1	+1	+1	-1	5	0.8
19	+1	+1	+1	-1	+1	+1	4	0.6
20	+1	+1	+1	+1	0	+1	5	0.8
21	+1	+1	+1	+1	+1	-1	4	0.6
22	+1	+1	+1	+1	+1	+1	6	1
23	+1	+1	+1	+1	0	+1	5	0.8
24	+1	+1	+1	+1	+1	+1	6	1
25	+1	+1	+1	+1	+1	+1	6	1
26	+1	+1	+1	+1	+1	+1	6	1
27	+1	+1	0	+1	+1	+1	5	0.8
28	+1	+1	0	+1	+1	0	4	0.6
29	0	+1	0	0	+1	+1	3	0.5
30	-1	0	+1	+1	+1	+1	3	0.5
31	+1	0	0	+1	0	+1	3	0.5
32	+1	+1	+1	+1	0	+1	5	0.8
33	-1	+1	+1	+1	+1	+1	4	0.6
34	-1	+1	+1	+1	0	+1	3	0.5
35	+1	+1	+1	+1	0	+1	5	0.8
36	+1	+1	+1	0	+1	+1	5	0.8

Average score IC = 0.781.

Appendix 3

Internal consistency result of Cronbach's alpha (coefficient) of perception rating questionnaire:

Table: Internal consistency result (N = 25):

No of items	Perception variables:	Reliability coefficient
5	Background characteristic of adolescent	0.7121
5	Contraceptive counseling and services (CCS):	0.7415
5	Antenatal counseling and services (ANCS)	0.6337
5	Intranatal counseling and services (INCS	0.6521
5	Postnatal counseling and services (PNCS)	0.7092
5	Decision making variables	0.3571
30	**Total**	**0.8711**

Total RC = 0.8711.

Appendix 4

Individual Item Analysis:

Table: Respondents rating on different dimensions of perception variables:

No	Perception variables:	Strongly Disagree 1	Dis Agree 2	No opinion 3	Agree 4	Strogl agree 5	Mean	SD
1	Contraceptive methods, Their use and availability	51 20.7%	81 32.9%	74 30.1%	30 12.2%	10 4.1%	2.46	1.07
2	Importance of preconcep tional counseling	136 55.3%	84 34.1%	4 1.6%	22 8.9%	0 0%	1.64	0.90
3	Contraceptive brings wanted or planned birth	52 21.1%	101 41.1%	44 17.9%	44 17.9%	5 2.0%	2.39	1.07
4	Contraceptive prevents unwanted pregnancy	115 46.7%	70 28.5%	40 16.3%	18 7.3%	3 1.2%	1.88	1.01
5	STD, HIV/AIDS damage fertility, even life	106 43.1%	51 20.7%	38 15.4%	37 15.0%	14 5.7%	2.20	1.29
6	Should take extra food during pregnancy	8 3.3%	6 2.4%	92 37.4%	104 42.3%	36 14.6%	3.63	0.88
7	Place, where safe termina tion of pregnancy occured	92 37.4%	67 27.2%	33 13.4%	49 19.9%	5 2.0%	2.22	1.20
8	Complication of high risk pregnancy	64 26.0%	108 43.9%	36 14.6%	31 12.6%	7 2.8%	2.22	1.06
9	Importance of antenatal checkup during pregnancy	48 19.5%	72 29.3%	82 33.3%	36 14.6%	8 3.3%	2.53	1.06
10	TT vaccine prevent you, your baby from tetanus	52 21.1%	44 17.9%	71 28.9%	41 16.7%	38 15.4%	2.87	1.34
11	Your expected date of delivery	65 26.4%	35 14.2%	51 20.7%	69 28.0%	26 10.6%	2.82	1.37
12	Place, where safe and aseptic delivery performed	39 15.9%	61 24.8%	69 28.0%	60 24.0%	17 6.9%	2.82	1.17
13	Availability of special care for baby if needed	113 45.9%	105 42.7%	19 7.7%	7 2.8%	2 0.8%	1.70	0.80
14	Complications of prolonged labor	81 32.9%	104 42.3%	19 7.7%	38 15.4%	4 1.6%	2.11	1.08
15	Excessive bleeding, convul sion may threaten life	75 30.5%	79 32.1%	43 17.5%	31 12.6%	18 7.3%	2.34	1.24
16	Time taken for return to normal life after delivery	90 36.6%	76 30.9%	31 12.6%	43 17.5%	6 2.4%	2.18	1.18
17	Breast feeding increases birth spacing	165 67.1%	39 15.9%	13 5.3%	29 11.8%	0 0%	1.62	1.03
18	Postnatal complication may endanger your life	32 13.0%	145 58.9%	38 15.4%	26 10.6%	5 2.0%	2.30	0.90
19	Sources of care for postpartum morbidity	31 12.6%	79 32.1%	76 30.9%	36 14.6%	24 9.8%	2.77	1.15
20	Importance of routine gynecological examination	195 79.3%	36 14.6%	7 2.8%	6 2.4%	2 0.8%	1.31	0.72

Appendix 5

INFORMED CONSENT FORM (ICF)

I would like to ask you some questions to know your perception on needs of pregnancy counseling and services (PCS) provided through Kishoregonj District Maternal and Child Welfare Center (MCWC) in Bangladesh. Would you please answer the following questions the best describe closest to your opinion that would be most useful to improve pregnancy counseling and services (PCS). You are free to participate in this study and you have freedom if you wish to refrain from the study without any hesitation. You are allowed to abstain from answering any questions during interviewing. We are promised not to disclose your name and any information. You face no physical, mental and social problem if you will participate in this study and the clinic will continue services even you will not participate in this study. Confidentiality and anonymity is our responsibility.

Would you please agree to participate in this study? If you decide to participate in this study, please put your signature/thumb impression in the space provided below.

สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Signature/Thumb impression----------

Date ----------

Peoples Republic of Bangladesh
Office of the Deputy Director
Family planning , Kishoregonj
Bangladesh.

Memo-No-----FP/Kishoreg/88. *Date*----- 28-1-99

To
Dr.Md. Nazrul Islam.
(WHO Fellow)
M.Sc in Health Development
Chulalongkorn University.
Bangkok, Thailand.

Subject -Permission to conduct Research at kishoregonj MCWC in Bangladesh

I am very much pleased to know that you are interested to conduct your research in Adolescent Married Female needs "Pregnancy Counseling Services (Reproductive Health) provided through District MCWC as a part of your course M-Sc in Haealth Development.

you are allowed to conduct your research in our District Maternity and Child Welfare Center (MCWC), Kishoregong, Bangladesh. I would like to assured you that we will provide all types of co-operation as best as possible, if you needed.

Thank you very much for your interest and co-operation.

28/1/99

(A.B.M Siddique)
Deputy Director
Family Planning office.
Kishoregonj, Bangladesh.

Copy to information and necessary action.
1. Dr. Fahmida Sultana, Medical Officer Clinic, MCWC, Kishoregonj.
2. Office copy.

(A.B.M Siddique)
Deputy Director
Family Planning office.
Kishoregonj, Bangladesh.

Bangladesh Medical Research Council (BMRC)

Mohakhali, Dhaka-1212, Bangladesh, Phone: 8811395, 8828396
Fax: 880-2-882 8820, E-mail: bmrc@citechco.net, bmrc@bd.drik.net

Ref. No. BMRC/ERC/1998-2001/633 Date 21.12.1999

Ethical Review Committee

Dr. Md. Nazrul Islam
C/o. Late Abdul Quayum Khan
Fazol Mansion
825 Nilganj Road
P.O. & Dist. Kishorganj

Subject: Ethical Clearance

With reference to your application on the above subject, this is to inform you that your Research Proposal entitled "**Perception of pregnant adolescent on their needs of pregnancy counseling and service provided through Kishoreganj District maternity and Child Welfare Centre in Bangladesh**" has been reviewed and approved by the Ethical Review Committee of Bangladesh Medical Research Council (BMRC).

You are requested to please note the following ethical guidelines as mentioned at page 2 (overleaf) of this memo.

Dr. Harun-Ar-Rashid
MD, PhD
Director
20/12/99

CurriculumVitae

1. **Personal:**
   - a. Name: Md. Nazrul Islam.
   - b. Father's name: Late Mofiz Uddin Ahmed.
   - c. Date of birth: !st January, 1956.
   - d. Permanent address: Village-Faridpur, P.O. Nalbaid, Thana- Kuliarchar, Dist. Kishoregonj, Bangladesh.
   - e. Nationality: Bangladeshi by birth.

2. **Civil status:**
   - a. Marital status: Married.
   - b. Spouse occupation: Govt. Service (MBBS doctor).
   - c. Number of children: 2, Son- date of birth-17th August, 1989. Daughter-date of birth-27th December, 1991.
   - d. Religion: Islam (sunni).
   - e. Employee: Ministry of health and family welfare, Bangladesh.
   - f. Date of joining: 7th July, 1982.

3. **Academic record:**

Degree	University	Year	Result
a. MBBS	Dhaka University	1982	Passed
b. DPH	Dhaka University	1987	Stood first
c. M.Sc in Health Development;	Chulalongkorn University, Bangkok, Thailand.(Thesis part)		

4. **Length of govt. Service:** 17 years in Hospitals and Community health center.

5. **Present employment status:** Mid level manager of health and family planning services.

6. **Professional experience:**

Experience	Institute	Period
a. Inservice training	MMCH	One year
b. Foundation training	BARD	Two months
c. Health service management	NIPSOM	One month

   d. Training on EPI, Diarrhea, Tuberculosis, Cancer, Breast feeding, Safety food, Workers health and Epidemiological surveillance.

7. **Language Efficiency:** Excellent in reading, writing and speaking in English.

8. **Address of correspondence:** C/O Late Abdul Quayum Khan, Fazol Mansion. 825-Nilgonj Road, Dist. Kishoregonj. Bangladesh.

9. **Research Experience:**
   a. Review of health and rehabilitation activities of Bangladesh Protibondhi Foundation in respect of Handicapped children.
   b. Perception of pregnant adolescent on their needs of pregnancy counseling and services provided through Kishoregonj District Maternity and Child Welfare Center in Bangladesh.