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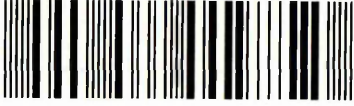
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**Exploration of adolescent sexuality and pregnancy
in Sri Lanka
- A Quantitative Approach**

Dr. Neelamani Sandhaya Rajapaksa Hewageegana

A thesis submitted in partial fulfilment of the requirements of
Sheffield Hallam University
for the degree of
Doctor of Philosophy

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ABSTRACT

Justification: Rigorous research into the patterns and determinants of adolescent pregnancy in Sri Lanka is scarce. Compared to many Western populations and other South Asian countries, levels of adolescent pregnancy are low in Sri Lanka. Nevertheless, anecdotal evidence indicates that pregnancies outside of marriage are stigmatized among large sections of the population and that unwanted adolescent pregnancies, illegal abortions and suicides linked to adolescent pregnancy are a concern. Evidence shows low levels of knowledge and restricted access to contraception for adolescents in Sri Lanka. There is a need for more reliable data on adolescent sexuality and pregnancy encompassing a wider range of views in order to shape a culturally appropriate policy and practice response to meeting the reproductive health needs of Sri Lankan adolescents.

Objective: To understand the context and patterns of adolescent pregnancy and sexual behaviour in a district in Sri Lanka.

Methodology: Population based questionnaire surveys of random samples of pregnant adolescents (n=450, interviewer-administered), their partners (n=150, interviewer-administered) and school going adolescents (n=2,020, self-completion). Descriptive and multivariate analyses were performed for each sample separately, followed by an integration of the data across the three data sources.

Findings: Out of the 450 pregnant adolescents, 409 (91%) were in their first pregnancy. From this 409; 121(30%) were <18 years and 288 (70%) ≥ 18 years old. 263 (64%) pregnant adolescents reported that they had planned their pregnancies and 146 (36%) had not planned. Among the 150 partners, 100 (67%) reported they had planned the pregnancy and 50 (33%) had not planned the pregnancy. Among the 2,020 school adolescents (521 boys and 1,499 girls), just 1.5% of the girls and 8.8% of the boys reported experience of a sexual relationship, and only 0.3% of girls and 5.7% of boys had experienced an intimate sexual relationship.

Adolescent pregnancies, whether planned or unplanned, were found to be largely welcomed, and adolescent pregnant girls were living within stable and supportive family environments. Pregnant adolescents parents' low education level, parents having married earlier than 18 years, and pregnant adolescents' siblings having children were more apparent compared to the school adolescent girls hinting that pregnant adolescents are from a subculture within which early childbearing is the norm.

Conclusions and Recommendations: Findings confirm that pre-marital adolescent sexual activity was not generally condoned and remains rare. Relationships are predominantly monogamous. Gender difference in sexual activity exists. Reproductive health knowledge was very low across the samples and requires attention. Although the majority of pregnancies were planned and welcomed, given the inter-generational consequences of early childbearing, policy makers must find ways to tackle the structural and cultural factors that hamper a shift towards later childbearing among certain sections of the population. A proper collaboration between the education, health and community action can harness a long-term sustainable adolescent risk reduction and adolescent development. The difference of the age of consent (16 years) and the legal age of marriage (18 years) require policy debate.

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LIST OF ABBREVIATIONS

AIDS	- Acquired Immune deficiency syndrome
ARH	- Adolescent Reproductive Health
CHDR	- Child Health Development Record
CEDAW	- Committee on the Elimination of Discrimination against Women
DH	- District Hospital
DHS	- Demographic Health Survey
df	- Degree of Freedom
F.H.B	- Family Health Bureau
GH	- General Hospital
G.C.E.	- General Certificate Examination
HIV	- Human Immunoglobulin Virus
H-L	- Hosmer–Lemeshow test
ICCPR	- International Covenant on Civil and Political Rights
IUCD	- Intrauterine Contraceptive Device
i. e.	- That is/in other word
KAP	- Knowledge Attitude Practice
L.R	- Likely Hood Ratio
MCH	- Maternal and Child Health
MOMCH	- Medical Officer Maternal and Child Health
MIS	- Management Information System
MOH	- Ministry of Health
MOH	- Medical Officer of Health
MTP	- Medical Termination of Pregnancy
N/A	- Not applicable
NSPCC	- National Society for the Prevention of Cruelty to Child
OR	- Odds Ratio
PHI	- Public Health Inspector
PHM	- Public Health Midwife
PHNS	- Public Health Nursing Sister
PI	- Principal investigator
RDHS	- Regional District Health Services
RSPHNO	- Regional Supervising Public Health Nursing Officer
SAS	- Statistical Analyzing System
SD	- Standard deviation
SLMA	- Sri Lanka Medical Association
SPSS	- Statistical Package for Social Science
SPHM	- Supervising Public Health Midwives
SRE	- Sexual and Reproductive Education
SRH	- Sexual and Reproductive Health
STD	- Sexually Transmitting Diseases
TOT	- Training for trainers
USA	- United State of America
UK	- United Kingdom
UNFPA	- United Nations Family Planning Association
UNICEF	- United Nations Children Fund
VOG	- Visiting Obstetrician and Gynecologist
WHO	- World Health Organization

LIST OF ANNEXURE

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SECTION – 01

CHAPTER 1 – BACKGROUND

CHAPTER 2 - LITERATURE REVIEW

CHAPTER 3 - METHODOLOGY AND METHODS

CHAPTER 4 - REFLECTIONS ON THE RESEARCH PROCESS

CHAPTER 1
BACKGROUND

1.1. INTRODUCTION AND JUSTIFICATION

Adolescents around the world are coming of age in societies engaged in their own rapid, sometimes chaotic, transitions. How these adolescents take their place in a world evolving at breakneck speed determines not only the future of their individual lives but that for the entire planet. WHO considers "adolescence" to be the period between 10 and 19 years of age, which generally encompasses the time from the onset of puberty to the full legal age of marriage. The current generation of 10-19 year olds is approximately 1.2 billion of world's population and the majority of them are living in developing countries (UNFPA, 2003).

About 22% of Sri Lanka's population of 19.3 million consists of adolescents (UNICEF, 2004). Adolescents have unique reproductive health needs when compared to adults, and the behaviours adopted in adolescence have important implications for later wellbeing. Unfortunately, in many parts of the world, reproductive health needs of adolescents are often poorly understood or neglected (WHO, 2006) especially in South Asian countries such as Sri Lanka (WHO, 2003; UNICEF, 2004).

Considerable global academic and policy debate has been undertaken in recent years around Adolescent Sexual and Reproductive Health issues (ARH). Topics have included: sexual behaviour leading to pregnancy at younger ages (Lawlor and Shaw, 2004) the impacts of adolescent pregnancy at a societal and individual level (Singh, 2003; Ventura *et al.*, 2004) and health impacts to mother and child in adolescent pregnancy (Gortzak-Uzman *et al.*, 2001; Abu-Heijal and Al-Dakheil, 2002). Means of promoting responsible sexual and reproductive behaviour have also received significant attention.

Parallel to this global context, increasing sexual activity reported at younger ages, early termination of education due to pregnancy and adolescent suicides related to pregnancy (WHO, 2008) have led to increased prominence of reproductive health issues in the fields of education and health, as well as among the general public in Sri Lanka.

Adolescent child bearing is an important reproductive health concern for two reasons. First, there is reason to believe that adolescent pregnancies may represent a violation of the concerned woman's right to informed choice on whether and when to have a child.

Second, child bearing in adolescence may have wide ranging adverse social, economic, psychological and health consequences for the woman concerned. Some of these include truncated education, limited options for income earning and, more importantly, having to shoulder responsibilities and make decisions that call for greater experience and maturity. In developing countries, early child bearing (15-19 years) also has a greater relative risk of dying in pregnancy and delivery when compared with women aged 20-24 years, from around 80% higher to as much as 400% (World Health Organization, 2004).

Why does Sri Lanka need a study of adolescent sexuality and pregnancy?

Sri Lanka, the study setting, has impressive health and social indicators for a low-income country. Sri Lanka has one of the most literate populations amongst developing nations (Gnanissara, 2002).

An education system which dictates nine years of compulsory schooling for every child is in place, with 97% of children entering the first grade (World Bank, 2005). The literacy rate for the overall population is 92%, and 83% of the total population has a junior secondary education (World Bank, 2005). With all these indicators it could be argued that school would have been the ideal setting to address reproductive health issues in Sri Lanka (Agampodi *et al.*, 2008). However, to-date the Sri Lankan education system has not incorporated a comprehensive ARH programme (Godamune, 2008; De Silva *et al.*, 2003). Though initiation has been taken to incorporate a few reproductive lessons (contraception not included) in to the school curriculum, adolescents have reported that their school teachers do not adequately address reproductive health topics (Thalagala and Gunawardana, 2006) and in addition, most of the time the periods designed to teach reproductive health are taken for other lessons which are crucial for competitive examinations. (Agampodi *et al.*, 2008). A recent national survey has indicated that knowledge regarding sexual and reproductive health matters such as sexually transmitted diseases (STDs) and contraceptive use among the Sri Lankan adolescent population is poor (UNICEF, 2004).

There is also little public awareness about ARH in Sri Lanka, primarily due to cultural taboos that have made it difficult for parents, teachers and community leaders to openly discuss key issues among themselves or with adolescents (Godamune, 2008). As a result, channels of communication, such as mother-daughter discussions, teacher-student discussion or peer-to-peer programmes through which adolescents might receive information on safe sex, relationships, reproductive health, and related issues are not widely available to Sri Lankan adolescents (Godamune, 2008).

At the same time, evidence from a number of sources highlights the need for a research and policy focus on ARH in Sri Lanka. The rate of adolescent pregnancy in Sri Lanka is low in comparison to other South Asian countries (7.7 %) (Annual Health Bulletin, 2007), and evidence suggests an overall decline in the prevalence of adolescent pregnancy since 1963 (Table 1.1).

Table 1.1: Age specific fertility rates from 1963 to 2000 in age group 15 to 19

Age Group yrs	Age Specific Fertility rate (per 10000 women)					
	1963	1974	1981	1982-1987	1988-1993	1995-2000
15-19	52	31	34	38	35	27

Source: Registrar General Department

Nevertheless, there is some evidence that the number of adolescent pregnancies that are unwanted remains high, and may even be growing, resulting in worrying levels of abortions (Wijesingha, 2004). In addition, there are regions and sub-groups within Sri Lanka where adolescent pregnancy is still a public health problem. Women who become pregnant out of wedlock are demoted to very low social positions, leading some pregnant adolescents to commit suicide (WHO, 2008). Most of all, adolescent sexuality does not appear to be acknowledged socially, not even among friends (WHO, 2008). The social stigma attached to adolescent pregnancy means that a pregnant or delivered adolescent will not be accepted within the school system.

Additional health concerns for childbearing adolescent girls relate to the poor nutritional status of many female adolescents in the country (Piyasena and Mahamithawa, 2001). Complications of pregnancy, delivery, and puerperium are also significant threats and causes of morbidity and mortality among adolescent girls (De Silva *et al.*, 2003). Family planning can reduce the morbidity and mortality associated with adolescent pregnancies by enabling adolescent girls to postpone childbearing.

However, adolescents are usually excluded from most of the family planning or reproductive health services currently provided in Sri Lanka (De Silva *et al.*, 2003).

Though a number of small-scale studies have been completed in Sri Lanka, there is a need for reliable data gathered in a scientific manner on adolescent pregnancies encompassing a wider range of views. Previous research in Sri Lanka has tended to focus on clinic/ hospital population and has looked mainly at medical risk factors (Marasingha, 1997; Ranathunga, 1997; Linganathan, 2006; Goonewardene and Deeyagaha, 2005; Gunarathne and Goonewardane, 2001). In doing so, social, family, peer and partner influences and other related factors that shape and influence individual choices and behaviours, as well as policies and programmes, have not been examined. The current research contributes towards filling this significant knowledge gap. The above factors justify a detailed, population-based study of adolescent pregnancy to provide research-based evidence that can help to shape a culturally-appropriate policy and practice response to meeting the ARH needs of Sri Lankan adolescents.

Whilst there is a large and growing body of academic and policy literature that discusses these issues, the bulk of this material relates to the USA and the UK, with questionable applicability to the Sri Lankan context. Furthermore, there are opportunities to gain greater insight into the factors that contribute to adolescent pregnancy through studies that focus not only on adolescent girls but that also engage with male partners and the wider context of young people's lives including the school setting. The current study originates from these latter issues.

1.2 AIM

To contribute to the knowledge of adolescent sexuality and pregnancy in Sri Lanka and to inform a culturally appropriate policy response to adolescent reproductive health needs.

1.3. OBJECTIVES

1.3.1. General Objective

To conduct a rigorous population-based study including both adolescent boys and girls to explore the patterns and context of adolescent sexual behaviour and pregnancy in a district in Sri Lanka.

1.3.2. Specific objectives

1. To describe the context of adolescent pregnancy in the district of study;
2. To describe the socio-economic and demographic characteristics of pregnant adolescents and their partners;
3. To assess the knowledge, attitudes and practices relating to sexuality and reproduction among pregnant adolescent girls and their partners;
4. To assess the knowledge, attitudes and practices relating to sexuality and reproduction among school-going adolescent girls and boys;
5. To compare the characteristics of pregnant adolescent girls younger than 18 years with pregnant adolescent girls 18 years and over;
6. To compare the characteristics of pregnant adolescent girls who planned their pregnancy (intended) and those who did not plan their pregnancies (unwanted/unintended);
7. To identify factors that may increase the likelihood of unwanted/ unintended adolescent pregnancy;
8. To recommend measures to policy-makers in the health and education sectors to address the Adolescent Reproductive Health (ARH) needs of the Sri Lankan adolescents.

1.4. OVERVIEW OF THE THESIS

The thesis consists of ten chapters, organised into three sections. Section 1: Background, rationale methods and reflection; Section 2: Empirical findings; Section 3: Discussion and Recommendations.

Section 1: Background, rationale and methods includes: Background; Literature review Methodology and the Reflections on the research process. Section 2 gives the findings of the three samples in three chapters: pregnant adolescent, partners and school adolescents. Sections 3 includes the Discussion and Recommendations and is organised into three chapters: Discussion I: Integration of the Findings; Discussion II: Implication for policy, practice and further research and lastly, Conclusions and Recommendations.

Chapter 1 gives the background and rationale of my study. In Chapter 2, I review the existing literature and this is organised in three sections. Firstly, I draw on existing evidence to consider the context within which adolescent sexuality and pregnancy occurs in Sri Lanka. Secondly, I consider the wider aspects of sexuality and sexual activity and in the third section, I present an overview of the legal and cultural framework within which adolescent sexual activity and pregnancy is situated in Sri Lanka. Chapter 3 describes the methodology adopted and the research methods employed to generate, analyse and interpret the data in order to address the study objectives identified above. In Chapter 4, I provide a detailed reflexive account of the process of designing and conducting the study. Given the highly sensitive and contentious nature of the study's focus, it is important to reflect on how the wider socio-political context shaped and informed the study's focus and approach. I also reflect on my own relationship to the study topic and the ways in which my personal and professional identity and experiences have been brought to the research. Having provided this important context, I turn to Section 2 which gives the empirical results of my study. In Chapter 5, I provide the analysis of the Interviewer-administered questionnaire to the pregnant adolescents. First, general background information on the 450 pregnant adolescents is presented. Then the focus is on 409 adolescents who were in their first pregnancy. The second part of the chapter draws comparisons between those who were aged under 18– the legal age at marriage – and those who were aged 18 years or over at the time of the survey; as well as between those who said they had planned their pregnancies and those who had not planned their pregnancy. In Chapter 6,

the focus is on the male partners of pregnant adolescent girls, presenting the analysis of the interviewer-administered questionnaires conducted with the men. First, general background information on the 150 partners of pregnant adolescents is presented and then, I present data related to the partner that may increase the likelihood of unintended adolescent pregnancy. In Chapter 7, findings from the analyses of the self-administered questionnaire to school adolescents are presented. The school adolescents' results are presented in three parts. Firstly, the background information on the 2,020 school adolescents is presented. Secondly, their sexual knowledge, attitudes and practices are explored. Finally, analysis is focused on those girls and boys who reported that they were sexually active and I examine a range of variables that are potential predictors for sexual behaviour. Section 3 of my study follows. The Discussion is arranged in two chapters; in chapter 8 methodological aspects: strengths, weaknesses limitations representativeness, theoretical perspectives are discussed. Further the findings are integrated across the three components to provide additional insight into the context and patterns of adolescent sexuality and pregnancy. Chapter 9 draws out the implications of the study findings for policy, practice and further research. Lastly, Conclusions and Recommendations are presented in Chapter 10.

CHAPTER 2

LITERATURE REVIEW

2.1. INTRODUCTION

In this chapter, I identify both what we can draw on from earlier conceptual and empirical work to inform the present study, and also the significant gaps in understanding the context within which adolescent sexuality and pregnancy occurs in Sri Lanka.

This review consists of three sections. Firstly, I draw on the existing body of evidence from both developed and developing countries to examine socio-cultural factors that appear to serve as predictors of adolescent pregnancy.

From the vast amount of literature perused, I have carefully synthesised the evidence into the summary I present here organising the material so that I could draw out the relevant contributions of theory and the relevant empirical findings to inform my work and identify the gaps in current understanding.

Secondly, I consider the wider aspects of sexuality and sexual activity. In particular, I examine the evidence relating to initiation of sexual intercourse and the context within which it occurs including attitudes and knowledge regarding contraception.

In relation to both of these sections, the evidence base is heavily dominated by the USA and other western countries, and this raises questions about its applicability to the context of the current study. However, there is a growing literature on Adolescent Reproductive Health (ARH) in Asia, the findings of which are more readily applicable to the context within which my study is situated. I appraised global literature according to methodological soundness, with preference given to larger scale studies, and relevance to Sri Lanka. I then searched specifically for studies conducted in South Asia, and filtered these on the basis of quality and rigour. When other methodologically sound data were not present, hospital-based data as well as studies excluding South Asia were included. The review covers both published and unpublished literature. Manual searches of pertinent literature were done in addition to electronic searches. Informal consultations with renowned people in Sri Lanka were undertaken to clarify understanding of those areas where there was a lacuna of information.

In the third section, I present an overview of the legal and cultural framework within which adolescent sexual activity and pregnancy is situated in Sri Lanka.

Globally 15 million adolescents under the age 20 give birth each year which amounts roughly to 11% of all births worldwide. Almost 95% of these births occur in developing countries. The adolescent fertility rate worldwide was estimated to be 55.3 per thousand for the 2000-2005 periods, meaning that, on average, about 5.5% of adolescents give birth each year (WHO, 2008).

Adolescence is that period between childhood and adulthood and is characterised by substantial physical, cognitive and social development. It is universally accepted that adolescence is a period of sexual maturity that transforms a child into a biologically mature adult capable of sexual reproduction. Adolescence has been described as a period of sexual development from the initial appearance of secondary sexual characteristics to sexual maturity, psychological development from child to adult identification (WHO, 2004). Nonetheless, adolescence is the age when most people begin to explore their sexuality and have sexual relationships (WHO, 2004). Sexual development, sexual activity and reproductive capability increase with age (Kristin, McIntosh and Moore, 2007).

Definitions of adolescence vary according to the culture and society as well as according to the discipline. Each discipline has its emphases (social work tends to concentrate on problems of youth, psychology has a preoccupation with adolescent vulnerability in the quest for identity, anthropologists tend to emphasize local or indigenous features and particularly life events Examples include: menstruation, initiation ceremonies, marriage). The United Nations considers adolescents to be young people aged 10–19 years and youth to be those aged 15–24 (United Nations Population Fund, 1999), whilst WHO defines adolescents as all people aged 10–19 (WHO, 1975). For the purpose of this study, the age range defined by WHO, 10 to 19 years is adopted as the period of adolescence while recognizing that adolescence is as much a life stage as it is a chronological age (WHO, 2011).

For many years, there have been divergent views with regard to sex and young people. Many argue that sexual activity in and of itself are wrong if the persons are not married. Others agree that it is better for teenagers to abstain from sex but are primarily concerned about the negative consequences of sexual activity, namely unintended pregnancy and Sexually Transmitted Diseases (STDs) (WHO, 2006). Unwanted adolescent pregnancy is an important public health issue. It is common, largely

preventable and associated with negative development, both for those adolescents who become pregnant and for their children.

2.2. IDENTIFYING THE CONTRIBUTING FACTORS/ PREDICTORS OF ADOLESCENT PREGNANCY

2.2.1. Research Theories and Empirical Evidence

Many theories seek to explain adolescent sexuality and many research studies have identified numerous factors related to adolescent sexuality that lead to pregnancy. Broadly speaking, theories can be divided into those that take a psycho-sexual perspective focusing on sexual drives and psychological functioning (Freud, 1953; Freud, 1969; Blos, 1988) and the more social theories; psycho-social (Erikson, 1968; Marcia, 1976), sexual socialisation (Lerner and Spanier, 1980) and bio social model. For instance Udry *et al.*, (1986) focus on the cultural factors that mediate the sexual drive process. Bandura's work on social cognitive theory has been particularly influential where the internal standards that regulate one's social and moral behaviour are emphasised and adolescents are seen to develop moral standards from a variety of influences (Bandura; 1986, 1989). Let us now see the contributing factors in depth.

The importance of group norms is recognized in many theories including social-cognitive theory (Bandura, 1989) and the Theory of Reasoned Action (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980). Many other theories recognize the importance of connectedness to family or other groups (Kirby, 2001). Hawkins, (1999) in social development theory, recognizes the interaction between connectedness to a group and the impact of that group's norms. However, the impact of the group's norms will be greater if the adolescents are closely connected to the group than if they are not (Kirby, 2001). Kirby, (2001) illustrated through innumerable studies in the USA that the norms of individuals to whom teenagers are attached (Examples include: family members, close friends and romantic partners) were strongly related to and consistent with the adolescents' own sexual and contraceptive behaviour.

Empirical work that derives from this perspective has explored a number of sources of influence but in this review, particular attention is given to: Socio-economic status, ethnicity, family, school, peers, partner of pregnant adolescent and community norms.

2.2.2. Socio- economic background

The association between poverty and adolescent childbearing is evident in both developing and developed countries (WHO, 2007). There is a complex relationship between the two. Socio economic disadvantages can both be a cause and a consequence of adolescent childbearing (Buvinic, 1998). A tendency to early childbearing has the effect of contributing to intergenerational transmission of social and economic disadvantage (McCulloch, 2001). A number of studies have sought to explore the relationship between these two factors.

Numerous studies have shown an association between adolescent pregnancy, and negative social and economic effects on both the mother and her child. However, recent reviews have found the evidence inconclusive about whether adolescent pregnancy is the cause or consequence of adverse socioeconomic factors.

Socio-economic status, educational attainment, cultural factors and family structure were all identified as risk factors for teenage pregnancies in South Asia (Bernnan, 2005; Khandait *et al.*, 2000; Goonewardena *et al.*, 2005; Weerasekera *et al.*, 1997; Shrestha *et al.*, 2002; Rashid, 2006; Sharma *et al.*, 2001).

Studies from both developed and developing countries have demonstrated that girls who grow up in socio-economically disadvantaged families are more likely to become pregnant in their adolescence. Kirby *et al.*, (2001) showed that in California, the proportion of families living below poverty level within a given postal district was highly related to the birth rate among young adolescents. Singh *et al.*, (2001) reported similar findings from their study of five developed countries. In Canada, France, Great Britain, Sweden and United States, those who became pregnant in their adolescence were more likely to come from low income families as compared to their non-pregnant peers. Similar findings are reported from a number of South Asian studies. Sharma *et al.*, (2001) compared seventy adolescent pregnant women in Nepal with 70 first time pregnant women in the 20 to 29 years age group. They concluded that teenage pregnant

women were less educated, had poor economic backgrounds and were more likely to have accidental pregnancies as compared to the older group. Using a retrospective questionnaire, Shrestha, (2002) demonstrated that the incidence of teenage pregnancies was significantly higher in the lower social classes (52%) than in the higher social classes (26%) in Nepal. Buhiya *et al.* (2000) researching in Bangladesh showed that socio demographic factors were related to sexual activity and adolescent pregnancy. Structural and social inequalities and poverty all made young people extremely vulnerable to teenage pregnancy (Khandait *et al.*, 2000; Rashid, 2006).

Two studies have been undertaken in Sri Lanka with the objective of determining the factors associated with teenage pregnancy. These studies performed by Goonewardene and Deeyagaha, (2005) and by Linganathan, (2006) were very similar in design. Both were hospital based case control studies involving first time pregnant adolescents under the age of 19 years and controls were first time pregnant mothers between ages 20-24 years. The conclusions derived from both studies were very similar and support the wider evidence. They both reported that teenage pregnancy was strongly associated with poor socioeconomic background and that the socio economic status of the pregnant adolescent was much lower than those in the control group. Although these were not population based studies, these findings are likely to be reliable in a country where 98% of all deliveries occur in hospitals.

2.2.3. Race and ethnicity

There is a limited body of evidence that has examined the relationship between minority ethnic status and the likelihood of adolescent pregnancy. Understanding the relationship between these two factors is complex because they are influenced by social and cultural norms around the age of childbearing. Notwithstanding this, there is some indication that adolescent pregnancy can be a norm in some cultures (Hingginbottom *et al.*, 2006).

Literature across the continents shows that ethnicity is one of the most powerful factors differentiating early from later initiators of sexual activity leading to early or late child bearing. Ventura and Freedman, (2000) shows that in USA in 1997, birth rates for adolescents (15–19 years) were 36 for non-Hispanic white people, 88.2 for black people, 71.8 for native Americans and 97.4 for Hispanics. In Australia, teenagers who

gave birth were more likely to be Australian born Aboriginal (Karin *et al.*, 2002). These findings suggest that being part of a minority ethnic community may increase likelihood of early pregnancy. There is a paucity of evidence on ethnicity related to adolescent pregnancy from Sri Lanka.

2.2.4. Family

Psychological theories assume that values, standards and behavioural patterns are transmitted via parent-child relationships (WHO, 1998). In terms of adolescent pregnancy, the evidence indicates that a number of factors seem to be important. Those who become pregnant as teenagers are more likely to have mothers who were also teen parents (Pogarsky *et al.*, 2006).

Many reproductive health reviews show that the family play a major role in adolescent pregnancy and there are many resarches supporting this view point. Resnick, (2000) and Bernat and Resnick, (2006) evaluated research conducted in the previous decade to ascertain healthy youth development strategies. They reported that parent higher educational levels, parental supervision, setting expectations, and parent/ child “connectedness” were clearly associated with decreasing risky sexual behaviour. While parents clearly cannot determine their children’s decisions about sex, the quality of their relationships with their children can make a real difference (Miller, 1998). These factors have received consideration in developed countries. A good parent child connectedness is recognised as one of the major protective factors of adolescent health and risk taking behaviour (DeVore and Ginsburg, 2005; Ackard *et al.*, 2006; Renee *et al.*, 2000; Resnick, 2000). Overall, closeness between the parents and their children, shared activities, parental presence in the home, parental caring and concern are all associated with a reduced risk of early sex and adolescent pregnancy (Blum and Rinehart, 2000). Adolescents who are close to their parents and feel supported by them are more likely to abstain from sex, wait until they are older to begin having sex, have fewer sexual partners, and use contraception more consistently (Miller, 1998).

The impact of the parent-child connectedness on teenage sexual activity has not received attention in developing countries. Despite differences in the form and function of family in Sri Lanka compared to western settings, it seems reasonable to assume that family characteristics may still have relevance to understanding adolescent pregnancy. Some work from Sri Lanka has demonstrated the value of family to adolescent development and stability. Masilamani, (2003) shows that in many South-Asian countries, the family has a strong influence on adolescents. In a Sri Lankan national survey, the majority of school going adolescents perceived their families as intimate and close (60%) and considered the family as their refuge (52%) for a problem (UNICEF, 2004). A large proportion was proud of their families. For a significant proportion, their hero was a family member. Mothers were identified as the most trusted and liked personal confidantes of adolescents irrespective of age, sex or socio-economic status. Seventy six per cent of the school going adolescents in this survey indicated a parent as the most trusted person at home, with 61% opting for the mother and 15% for the father.

Although parents have been found to be influential source of information and advice for children, this does not necessarily translate into parent-child discussions about sex. Adolescents offer various reasons as to why they do not talk with their parents about sex, including concerns about their parent's reaction (83%); worry that their parents will think they are having sex (80%), embarrassment (78%), a feeling that they don't know how to bring the subject up (77%), and the belief that parents won't understand (64%), (2002 survey of young people age 15-17), (Blum *et al.*, 2000). While parents are perceived to be the logical source of information, they often do not discuss sexual issues with their children because they are embarrassed by the subject. Parents and other adults often report that they are uncomfortable talking about sex and pregnancy with adolescents and that they shy away from taking a clear position on these issues. This may be due to uneasiness about imposing one's values on another (Blum *et al.*, 2000). It may also be because parents rarely had adult role models who discussed these issues when they were adolescents. Most adolescents (69%) agree it would be much easier for them to postpone sexual activity and avoid adolescent pregnancy if they were able to have more open, honest conversations about these topics with their parents (2002 survey of young people age 12- 19). Whitaker and Miller, (2000) researching on peer influence have identified adolescents whose parents discuss sexuality with them face peer pressure better than those whose parent do not. However, even when there is

good communication between parents and children and a willingness to discuss sexual matters, parents' skills and knowledge on reproductive health and the cultural barriers may hinder this process, especially in Asian cultures.

Work by Shireen Jejeebhoy has provided some insights into the situation in India (Jejeebhoy, 1998; Jejeebhoy *et al.*, 2005; 2006). Jejeebhoy has pointed out in her studies that sexual behaviour; sexual awareness and attitudes remain poorly explored topics in India. As shown by Jejeebhoy (Jejeebhoy *et al.*, 2006), Indian mothers expect their adolescent children, particularly daughters, to remain uninformed about sex and reproduction which is considered to be embarrassing, distasteful, and dirty subjects, not to be discussed with their adolescent daughters. There is a dearth of published evidence from Sri Lanka. However personal communication with experts in the field suggests that the issues identified by Jejeebhoy apply to the Sri Lankan context (Personal communication – Director FHB, 2011).

A happy home environment had been found to be conducive for delaying sexual activity in adolescents as well as protecting teenagers from risky behaviours. A cohort study was done with a sample of rural Euro-American grade 9 students (N = 505; 251 girls and 254 boys). Students were re-assessed in grade 12; a conclusion derived from this study was that living in stable households and environments were conducive to delayed sexual intercourse (Bingham and Crockett, 1996).

Harden *et al.*, (2009) systematically examined research relating to policy initiatives aimed at tackling the social exclusion associated with unintended teenage pregnancy and young parenthood. Two main themes associated with early parenthood which had emerged from the qualitative studies are, poor material circumstances and unhappy childhoods.

Family structure research has shown that divorce can be a major force in shaping children's lives. Marital disruption is associated with cognitive, emotional, and behavioural problems and lowered academic achievement in children who have experienced this (Amato and Keith, 1991; Hetherington, 1989; Wallerstein, 1988). Moore *et al.*, (1995) reported that the disruption of parents' marriage and living with a single parent are related to earlier onset of adolescent sexual behaviour. These researchers speculate that this finding may be explained by lower family incomes,

disadvantaged neighbourhoods, less supervision and parental modelling, and more permissive attitudes in single parent families.

Amato and Keith, (1991) in their meta-analysis of the influence of divorce on children's adjustment, discovered that the largest impact occurred in the arena of behaviour problems. In Amato and Keith, (1991) study, children of divorce were twice as likely as children from intact families to display outcomes of dropping out of school, teenage pregnancy, teenage idleness, and truancy.

McLanahan, (1999) examined the relationship between family structure and early family formation among women. The results showed that the proportion of young women who experienced teenage pregnancy was significantly higher for respondents coming from a non-intact family compared to women from two-parent households.

In the adolescent period socioeconomic development from dependence to relative independence is supposed to take place (WHO, 2004). The western family environment differs substantially from the Sri Lankan. Sri Lankan youngsters go through what could be defined as a very prolonged adolescence. The social norm is that they continue to live in the family home and are financially dependent on their parents until they marry. The Sri Lankan family is a closely knit structure and family break-up is uncommon. In Sri Lanka the annual average rate of divorce is 0.25 % (WHO, 2004). However, this low divorce rate cannot be assumed to be an indicator for marital harmony and a happy home environment. In Sri Lanka, the extended family unit and social and cultural norms compel individuals to continue in a marriage union however uncomfortable and abusive the relationship between husband and wife might be (Personal communication, Provincial Director Education - Uva, 2009). Therefore a stable family and parental presence does not necessarily ensure that the environment the adolescent lives in is happy and secure (Plan Sri Lanka, 2008).

Increasingly in the recent years, maternal economic migration has become a reality for many Sri Lankan families and results in prolonged family disruption (Plan Sri Lanka, 2008; Wijemanna, 2005). There is some indication from the literature that when mothers go abroad for work it becomes a significant factor that contributes to a Sri Lankan adolescent's unhappy childhood (Plan Sri Lanka, 2008; Wijemanna, 2005).

Parental Alcoholism

A branch of research has developed around the issue of parental or familial alcoholism's effects upon children and adults (Russell, 1990). Research shows that Children Of Alcoholics (COAs) are at risk for a plethora of negative outcomes, including early onset of alcohol and drug use and lowered academic achievement (Chassin *et al.*, 1993; Hill and Yuan, 1999; McGrath, Watson, and Chassin, 1999). Individuals with family members who abused alcohol were also more likely to show alcohol and hard drug abuse or dependence in adolescence (Kilpatrick *et al.*, 2000). Having an alcoholic parent is associated with earlier marriages, increased marital problems, and greater likelihood of divorcing in adulthood (Dawson, Grant, and Harford, 1992; Goodwin *et al.*, 1977; Parker and Harford, 1988).

Sexually active sibling

East, (1999) and Pogarsky *et al.*, (2006) reports that having a sibling who was pregnant as a teenager increased the likelihood that a girl will become pregnant in her teen years. In addition, Kirby, (2001) reviewing studies in 1990's showed that those with sexually active siblings or pregnant/parenting teenage sisters have an increased risk of adolescent pregnancy. This point of view of the sibling pregnant or parenting can be substantiated as siblings may be exposed to the same predictors of pregnancy. Another aspect to consider is whether this is a subculture where early sexual activity and pregnancy is a norm.

It is imperative to understand how the family variables such as parents' marital status and norms of early child bearing in the family are linked with adolescent pregnancy. How parents' connectedness and communication influences adolescent pregnancy deserves attention in terms of protective and risk factors of adolescent pregnancies in Sri Lanka.

2.2.5. School environment and educational achievements

Schooling is critical to a young woman's prospects throughout her life. The amount of schooling a woman obtains affects her occupation, her income, her chances of marriage, her risk of poverty and more generally the quality of her own life and that of her children. The timing of family formation plays a critical part in the amount of schooling a young woman obtains (Hofferth *et al.*, 2001).

Bongaarts and Cohen, (1998) argues that the prevalence of secondary schooling during adolescence has markedly increased resulting in a larger proportion of the period of adolescence for boys and girls spent in school. This has led to an increased schooling which has postponed the age at marriage, and thereby the age of socially sanctioned sexual relations (WHO, 2004). It is important to note that the length of schooling varies substantially between and within countries. Whereas in most developed countries, the majority of adolescents spend the larger proportion of their adolescence in school, this pattern is not repeated in all developing countries. For example, in Bangladesh, there is a low school enrolment for girls and child marriage is recognised to exist (Amin, 1996, 1998; Amin *et al.*, 2002). In Sri Lanka however, there is high school enrolment and unlike in most Asian countries, secondary school enrolment is equal for boys and girls (De Silva, 1997).

According to Ravitch, (2000) the overarching goal of schools in the twenty-first century should be effective schools concentrating on their fundamental mission of teaching and learning for '*all children*'. Though Ravitch, (2000) describes this effectiveness in the schooling system by looking at the American education reforms, this statement is valid to any school system in the world. However a concern about Ravitch's statement is that it focuses only on the teaching and learning and ignores the wider context within which school based education occurs.

A two-year longitudinal study of 10,000 nationally representative female high school sophomores in the United States (Hanson *et al.*, 1987) revealed that educational aspirations and good behaviour at school acted as protective factors against teenage pregnancy. Conversely, Santelli and Beilinson, (1992) identified the importance of 'the school environment' on sexual activity. Negative school experiences have been linked to early sexual activity. Adolescent's negative school experiences has been shown to

be associated with early sexual activity as well as adolescents attitude towards schooling. Negative educational experiences (in terms of completion, achievement, and aspirations) have been found to be risk factors for sexual behaviour and pregnancy, which are found to serve as alternative sources of rewards and identity (Santelli and Beilensen, 1992). However, Santelli and Beilensen, (1992, p 273) recognise that adolescents' school experiences are themselves influenced, and in part determined, by personal, family or other social resources that individually and collectively contribute to protection of the adolescent from pregnancy.

Linganathan, 2006 showed that teenage pregnancies were strongly associated with low education level, poor socio economic background, ($p < 0.001$) and 31% of them were not even educated up to grade five. Similar findings to that of Liganathan's study were found in two studies from Sri Lanka (Gunarathne and Gunawardana, 2001; Goonewardene and Deeyagaha, 2005). Goonewardane, (2001) study compared 113 teenage mothers and 281 primigravide who were 28 years of age. Results in these Sri Lankan studies showed that teenage mothers were less educated.

Adolescents participating in sports and other extracurricular activities have been debated over the years. Guest and Schneider, 2004 argue that being involved in extracurricular activities is an important part of the life of a well-rounded adolescent. Darling *et al.*, 2005 argue in favour of sports while Eitle and Eitle, 2002 argue against extracurricular activities including sports.

Ambition is having a desire for your future and working towards it. Harden *et al.*, (2009) synthesising research evidence to identify effective, appropriate and promising approaches for prevention and support of adolescent pregnancy identified that adolescents having an ambition can help delay early sexual activity and parenthood. Supametaporn *et al.*, (2010) studied to understand how and why young Thai women manage to avoid heterosexual intercourse. In this study it was revealed that the resolve of Thai girls could effectively help them accomplish their ambition. According to the solutions adolescents' decision might include commitment to study well, consideration before entering a romantic relationship, living up to parents' expectations and postponing sexual intercourse until the appropriate time.

A qualitative study conducted in a semi urban setting (Beruwala MOH area) in Sri Lanka with a convenience sample of 32 adolescents between 17–19 years of age participating in four focus group discussions showed that school health programs in Sri Lanka currently do not address sexuality issues and opportunities are inadequate for adolescents to learn about reproductive health issues (Agampodi *et al.*, 2008). Further the study revealed that the adolescents were concerned about the negative attitudes of parents, teachers and society, which was recognized as a barrier by the adolescents, mostly by the girls. The adolescents have reported that most of their mothers treated them as small kids (Agampodi *et al.*, 2008). These findings are valuable as the adolescents are school children. Agampodi *et al.*, (2008) spoke about two aspects of school education as alternative/ competing forces to childbearing- a reason to delay and school as a place for sex education.

2.2.6. Peers

'Father of adolescence' Granville Stanley Hall, was of the view that adolescents were in search of a unique social identity for themselves and adolescents are frequently confused about what is 'right' and what is 'wrong.'. G. Stanley Hall noted that the adolescent period is one of 'Storm and Stress' and, according to him, conflict at this developmental stage is normal and not unusual (Hothersall, 2003). Many teenagers will get through this period and never experience such 'Storm and Stress'; others may experience it to the fullest extent of the definition. The role played by the peers in the developmental stage of adolescence is crucial. Bandura, (1989) argues that socially, for the first two or three years of life, family remains the paramount influence and from there onwards the peer groups play a major role. Though this assumption is not necessarily applicable in all places, it may be relevant where family interactions are weak and child is in an unhappy home environment.

Friends have been identified as one of the most powerful source of social influence on adolescents from reviews of early USA research conducted by Resnick, (2000); Kirby, (2001) and Manlove, (2001).

Eccles and Barber, (1999) established that the peer group was a powerful place for identity formation and consolidation throughout the adolescent period. This conclusion was arrived at by assessing potential benefits and risks associated with adolescent

participation in five types of activities: pro-social (church and volunteer activities), team sports, school involvement, performing arts, and academic clubs. A self-administered questionnaire was the data collecting tool in Eccles and Barber, (1999) study sample of 1,259 mostly European American adolescents (approximately equal numbers of males and females). The gap in this study is that only adolescents' mothers' education level was assessed as a family variable. Adolescents do not thrive in isolation, and the family environment including the siblings does affect ones behaviour as well as their decision and ability to participate in any activity. However, in 2002, Eccles further established that the impact of peer relationships on behaviour declines when adolescents get older and more confident in their abilities, social status, and own goals and values.

According to Savin and Berndt, (1990) a youth's increasing focus on peer relationships as indicated by increase in both the time they spend with peers and their engagement in activities done with peers, is a major change during adolescence. Sometimes this may lead to less attention to academic work and more to unaccepted behaviour leading to an unsuccessful transition to adulthood. In contrast, Bateman, (2002) found that students define a supportive peer community as one that shares their values and educational goals, actively supports their learning needs, provides a safe and pro-social environment in which adolescents can learn and value their contributions. This perception of students is conducive to a mentally and physically healthy peer relationship. Adolescent peers' educational aspirations have been found to play a role in the choices that teens make about sex in several USA studies. Teens whose peers are high achievers, who have strong educational aspirations, and who avoid other risk taking behaviours are less likely to have sex at an early age than those whose friends do not share these characteristics (Bearman and Brückner, 1999; Kasen *et al.* 1998; Meschke *et al.*,2000). The evidence of USA studies on risky behaviours of peers shows links to adolescent early sexual activity. Bearman and Brückner, (1999) view was based on a nationally representative sample in America. Kasen *et al.* (1998) sample consisted of adolescents in 150 public high schools in two upstate New York counties from the 1980s and early 1990s, Meschke *et al.*, 2000 research was a longitudinal study of middle and high school students in a large, metropolitan school district in the Western United States.

Furthermore several other longitudinal studies in America have found that teenagers who have sexually active friends are more likely to report having had sex than those who do not have sexually active friends (Carvajal *et al.*, 2000, Whitaker and Miller, (2000) and Marin *et al.*,(2000). These studies were carried out in contrasting settings: Carvajal *et al.*, 2000 was a urban study, Whitaker and Miller, 2000 study was based on a sample of black and Hispanic teens in Alabama, New York City, and San Juan, Puerto Rico from the 1990s, Marin *et al.*, 2000 study was on a sample of middle school students in an urban area of Northern California. This developed world research may not be exactly applied to the Sri Lankan situation with its socio-economic and cultural differences, but globalisation and media influence should be taken into account. The findings such as early childbearing being the norm of some communities may be relevant to Sri Lanka and deserves investigation.

Among Sri Lankan peers, romances are accepted and encouraged, and are even sources of prestige but they remain unacceptable to the parents. The couple and their friends generally think of such romances as ‘young love’ and do not expect them to lead to sexual intercourse. The intensity of an idealized ‘young love’ relationship can lead to tragedy if the relationship does not lead to marriage. As de Munck, (1996) and WHO, (2008) show that the breakup of such adolescent love relationships has long been a leading cause of suicide in Sri Lanka. Silva, (2000) postulated that rejection by love partners or family members may precipitate an impulsive suicide attempt as it represents the end-result of several, accumulated life frustrations. In a case-control study of young people who were admitted to a rural hospital following attempted suicide, Thalagala, (2003) found that there is indeed a precipitant, such as family discord, combined with other risk factors prior to a suicide attempt.

2.2.7. Adolescent's partner

The work that looks at dyadic relationship suggests that individual behaviour is importantly shaped by the character of person they are interacting with. In a variety of settings, evidence shows that women's reproductive health decision making is influenced by men's decision-making, behaviours, attitudes regarding contraceptive use, fertility, STI and HIV transmission (McDougalla, 2011). According to WHO, (2007), male partners of pregnant adolescents were older and less likely to be in school. Research by Adams and colleagues (Adams *et al.*, 2001) indicates that young adolescents rate romantic partners to be at least as influential as friends on their thoughts, feelings, and behaviour. Participants in Adams *et al.*, (2001) study were a total of 70 females and 38 males, Anglo-American youth. They were in their early (n=48), mid- (n=29), and late (n=31) adolescence. The findings suggest that partners could be important socializing agents of adolescents. Valerie *et al.*, (2008) study was a prospective study of an ethnically mixed US sample which examined romantic partners. They concluded in their study that romantic partner's characteristics affect the psychosocial functioning of young adolescents. However, Blum *et al.*, (2000) is of the view that adolescents who have dated or who have been in a romantic relationship are more likely to have had sex than those who have not dated or who are not in a relationship. In the studies evaluated in USA it is seen that more than two thirds of adolescent girls' sexual partners are the same age or within a few years older and the sexual activity is consensual in nature (Sexuality Information and Education, (2004). Kirby, (2001) reviewing research shows that if teenagers have a boyfriend or girlfriend who is three or more years older, they are much more likely to have sex at any given age. A partial, but probable, explanation for this is that older boyfriends and girlfriends have more permissive norms and expectations about sex. Teare and English, (2002) however, draw attention to the fact that sexual relationships between adults and minors may be coercive or exploitative, with detrimental consequences for the health of both the teenager and any offspring resulting from the union.

The characteristics of teenagers' sexual partners play a role in their reproductive health behaviours but there are limitations observed in partner studies. Many researches and findings are based on the data from nationally representative data from the National Longitudinal Study of Adolescent Health in USA or U.K. The cultural, socio-economical variations need to be considered when interpreting these data. Many studies

rely on self-report of data on the sensitive topic of adolescent sexuality. Some adolescents may be unwilling to report sexual activity in an interview and may not fully report their experiences. Additionally, reports of partner characteristics rely on the report of the respondent. In short-term relationships, individuals may not be fully aware of their partner's exact age or other characteristics.

Whether there is a relationship between the age, education of the partner and early adolescence pregnancy, whether the partner or adolescent have used contraceptives in the first sexual intercourse, whether there is a contraceptive failure and whether the partner is supportive to the adolescent in her pregnancy period are questions that need to be researched in the Sri Lankan context.

Few studies have examined the influence of partners' characteristics on individuals' contraceptive use. Partner's age was shown related to the use of condoms and other contraceptives. Abma *et al.*, 1998 had shown that differences in age may reflect differences in power or communication, which may affect the ability of one of the partners to protect herself or himself. Kathleen, (2001) is of the view that when adolescents have relationships with partners whose characteristics differ from theirs, then they are less likely to use condoms or other contraceptive methods.

2.2.8. Personalities, Values, Attitude, Belief, Subcultures and Religion

The norms and values of religion and culture are powerful forces in the lives of people. Religion has been found to be strongly related to adolescent sexual intercourse. The tendency to be devout and observant of religious custom and teaching is more important than any specific affiliation. Miller and Olson, (1988) and Thornton and Camburn, (1987) found that adolescents who were members of churches that teach sexual abstinence before marriage were significantly less likely to have had sexual intercourse, compared to those affiliated with other denominations. The study of religion and adolescent sexual behaviour of Thornton and Camburn, (1989) shows that the effects operate in both directions; more religious adolescents are less likely to engage in sexual intercourse, and adolescents who become sexually active at young ages have a tendency to become less religious.

There is some evidence for mediating differences in attitudes of black and white adolescents. Black adolescents appear to be more tolerant of sexual activity outside marriage, rate marriage as less important than do whites, and perceive a greater tolerance in their neighbourhood for an out-of-wedlock birth (Moore *et al.*, 1989; Moore, 1986). The sub-cultural view argues that family-related values, attitudes, and norms account for different adolescent pregnancy rates in the African-American and mainstream Anglo culture. Franklin, (1988) has stated that children are more highly valued by African-Americans for both intrinsic and instrumental reasons. Sub-cultural factors discussed by Murry, (1992) include community and peer group acceptance of early sexual behaviour and childbearing, the influence of maternal and sister sexual activity, and growing up in, and greater acceptance of, large families.

It has been argued (DeLamater *et al.*, 2000) that social institutions, especially the family and religion, control sexuality in three ways. First, these institutions provide a specific perspective on the meaning of sexuality that defines the norms for individual conduct. Second, persons in institutional roles use these norms about the meaning of sexual behaviour as the basis for informal controls. Third, formal rules often constrain sexual behaviour through fear of institutional sanctions.

Several personality measures have been found to be associated with early onset of sexual intercourse. Feeling of invulnerability and not associating consequences with actions is a characteristic of adolescents. Infallibility is a common belief among adolescents which makes them more prone to risk-taking behaviours (Chilman, 1980 a, 1980 b, 1980 c). In their 10-year longitudinal study, Donovan, Jessor and Costa, (1988) found that adolescents who experienced sexual intercourse sooner placed a higher value on and expectation for independence and a lower value on and expectation for academic achievement; they were more socially critical, more tolerant of deviance, and less religious.

In another longitudinal study (Vernon, Green, and Frothingham, 1983), levels of self-esteem did not differentiate those who became pregnant from those who did not. But Miller, Christensen, and Olson, (1987) found self-esteem to be positively related to sexual intercourse experience among adolescents who believed that premarital sex was usually or always right, and negatively related to sexual intercourse among those who believed it was wrong. How self-esteem influences sexual behaviour, or sexual behaviour influences self-esteem, appears to depend on the normative context.

2.2.9. Adolescent risky behaviour

Much of the research examining adolescent risky behaviours is centred on the factors that predict or co-vary with their occurrence. Risk factors are those variables that increase the likelihood that a certain negative outcome; in this case, risky adolescent behaviour such as substance use, early sexual activity, and delinquency will occur. Protective factors buffer the influence of risk factors on outcomes. Literature covers a vast array of risk factors that are thought to act as precursors to adolescent risky behaviour.

There is some evidence that the risk factors for initiation of risky behaviours may be distinct from risk factors for continued behaviours (Scheier and Newcomb, 1991). Weber *et al.*, (1989) argues that there are two distinct pathways of adolescent alcohol use. In this view, normally socialized adolescents consume alcohol at a steadier pace while those who are problem prone show more rapid acceleration of alcohol involvement after initiation occurs. Scheier *et al.*, (1997) suggests that social learning factors such as peer and adult models and normative expectations are important ingredients in predicting initial stages of adolescent alcohol use. Personality components may be a key part of alcohol abuse later in young adulthood. These researchers found that several psychological factors-behavioural control, depression, anxiety, and external locus of control, antisocial behaviour and low self-esteem were significant predictors of alcohol consumption and change in drinking patterns from onset to more problematic drinking.

The Problem Behaviour Theory presents one way of categorizing the risk factors predictive of adolescent risky behaviour. Leading theorists, Jessor, Donovan and Costa, (1991) describe the three major systems of psychosocial risk and protective factors that are responsible for occurrence of risky behaviour as the personality system, the perceived environment system, and the behaviour system. When the variables in a given system are geared up for the occurrence of a problem, that system is in a state of proneness. When all three systems are in this state, then an individual shows overall psychosocial proneness toward a particular problem behaviour.

This approach implies that adolescent risky behaviours such as early substance use, early sexual activity, and delinquency are symptoms of an underlying trait (Jessor and Jessor, 1977). Using longitudinal data, Donovan, Jessor, and Costa, (1988) concluded that a single common factor was responsible for the positive associations among a number of adolescent antisocial behaviours, including problem drinking, marijuana use, early sexual intercourse and delinquency.

Using data from the National Longitudinal Study of Adolescent Health, Resnick, *et al.*,(2010) examined the relationships of family, school, and individual risk and protective factors with the adolescent risky behaviours of suicide ideation and attempts, violence, cigarette use, alcohol use, marijuana use, age of sexual initiation, and pregnancy history. Among the many results reported, there was evidence that low Grade Point Average and being held back a grade in school were associated with more substance use and sexual behaviour. Family-related variables, such as parent or family connectedness, as well as school connectedness served as protective factors against all adolescent risk behaviours except for pregnancy. Parental attitudes also played a protective role in initiation of sex. Parents who were more disapproving of early sex initiation were more likely to have children with later age of onset of sexual behaviour.

2.3. FACTORS RELATED TO SEXUALITY AND REPRODUCTION

2.3.1. Age at menarche

The most evident sign of sexual maturity in girls is menarche, the onset of the first menstrual period. Menarche signifies the beginning of reproductive capabilities and the time when secondary sexual characteristics develop. It is a visible physiological marker of the transition from childhood to adulthood (Padez, 2003; WHO, 2007). Menstruation generally begins between the ages of 10 and 16. In a large national survey a total sample of 15760 adolescent girls were surveyed in Sri Lanka and 62% reported to have attained menarche by 13 years (UNICEF, 2004). The mean age of menarche in this UNICEF study was 12.5 years (SD = 1.8yrs) with a median age of 13 years (UNICEF, 2004).

A number of studies have documented the trend in a fall in age at menarche, which implies an earlier onset of adolescence, sexual maturity and the ability to reproduce. This trend is commonly attributed to a variety of environmental, genetic and socio-economic factors, including improved nutrition and exposure to modern social life. As a result, young girls are biologically mature enough to engage in sex and become pregnant at an earlier age, although they may not be emotionally and psychologically mature enough to understand the implications (Bongaarts and Cohen, 1998; WHO, 2004). Chilman, (1980a, 1980b, 1980c) have argued that adolescent sexual behaviour is strongly influenced by cultural norms. Visually apparent changes in secondary sexual characteristics are signals to the individual and to others of the adolescent's sexual potential, but socio-cultural factors determine how that potential will be expressed.

2.3.2. Sexual activity

Sexual activity covers a range of behaviours from fondling to penetrative sex between persons to self-activities. Sexual activities in adolescents increase with age (Kristin, McIntosh and Moore, 2007). Sexual activity begins in early adolescence for many men and women in Asia. Unlike other sub-regions, the onset of sexual activity in South Asia occurs largely within the context of marriage but age at marriage is relatively low for both men and women in some countries. A multi-centre study carried out in India showed that there is a double standard in sexual activity for men and women as a higher percentage of men aged 15-19 (16 per cent) than women (3 per cent) reported being sexually active. The average age at their first sexual encounter was 16 for men and 18 for women. It was noted that the average age at first encounter was declining with time (Family Planning Association of India, 1995).

The UNICEF, (2004) survey conducted among 15-19 year olds in Sri Lanka showed that children out of school were the most sexually active. The UNICEF study revealed that almost 22% of out of school adolescents was sexually active; school adolescents' sexually activity is comparably low (school boys 14% and school girls 2%). Out of school adolescents may have dropped out of school for many reasons. One reason itself may be due to being sexually active. Many Sri Lankan government schools do not tolerate adolescents' risky behaviours: sexual activity, smoking or drinking. When such behaviour is observed, firstly they will be warned and if not heeded they will be expelled from school. These strict rules may have controlled the behaviour of the

school adolescents but blurred the future of some vulnerable adolescents. Many community based research studies conducted by Government Organizations and Non Governmental Organizations link the open economy, incorrect but stimulating information through mass media, the long standing conflict situation, problems within the family and parental migration for employment as major contributing factors that have aggravated early sexual behaviour and reproductive ill health (SRH) among adolescents in Sri Lanka (Plan Sri Lanka, 2008; Wijemanna, 2005).

2.3.3. Risky sexual behaviour

The logical concerns arising from adolescent sexual behaviour are pregnancy, parenthood, infection with a sexually transmitted disease, and exposure to the Human Immunodeficiency Virus (HIV). Individuals who begin having sex at earlier ages are exposed to risk for a greater length of time, are less likely to use contraception, have more sexual partners and are involved in high risk sexual behaviour, such as substance use before intercourse (Moore *et al.*, 1995). Moore *et al.*, (1995) also reported that another possible concern about early sexual behaviour is that first sexual experiences are often coercive and that more than one third of the first sexual experiences that occurred before age 15 among females were not voluntary. Coercion is damaging in itself, but it is also associated with improper or none use of contraception (Abma *et al.*, 1998).

Precocious sexual behaviour often has as its consequence teenage pregnancy, which in turn is related to several negative adult outcomes. Teenage parents, in comparison to their counterparts, are more likely to receive less education, be poor and receive welfare as adults (Hayes, 1987; Rosenheim and Testa, 1992). There is some evidence though that a particular subset of women may actually find some success later in adulthood even when following an alternative life course to the traditional route of high school graduation, employment, marriage, and childbirth (Furstenberg, Hughes and Brooks-Gunn, 1992; Hamburg and Dixon, 1992). African American young women who are from extremely disadvantaged situations and who see few available employment options may start a series of life events with childbirth.

2.3.4. *Non consensual sex*

Definitions of non-consensual sex vary. However, all definitions rest on a common foundation: a lack of full and free choice in decisions to engage in sexual relations. Physical force or the threat of it can rob victims of their choice. But intense psychological, emotional, and financial pressure or a fear of social consequences also can compel individuals to relinquish their right to resist unwanted sexual advances.

Finkelhor, (1984) argues that the psychological and emotional legacies of violence are clearly significant. A strong theme from research evidence is the impact on sense of self in the world. Sexual violence can lead to development of a self-identity making young women more likely to engage in early sexual activity (linked by research to teenage pregnancy) and/ or become vulnerable to targeting by older men (Finkelhor, 1984).

Recent studies on young people's sexual health also show that young women are subject to emotional pressure/ manipulation to consent to sex, whilst also reporting instances of rape and assault (Hoggart, 2006a; 2006b; Hoggart and Phillips, 2009; Maxwell and Aggleton, 2009). A recent survey found that almost a quarter of 14 year old girls have been coerced into sexual acts (WAFE/Bliss, 2008). While there is limited data on sexual violence in young people's relationships, one study in the United Kingdom of 489 young people found that almost one in five girls (17.9%) reported that their boyfriends had either attempted to force, or had forced, sexual intercourse within the past year (Hird, 2000). National Society for the Prevention of Cruelty to Child (NSPCC) study reveals that one in three teenage girls have experienced sexual violence from a partner, and that 70% reported this having a negative impact on their welfare. For a minority the sexual violence was ongoing in their relationship (Barter *et al.*, 2009). Research on the prevalence of sexual abuse more broadly is relevant here, with the most current prevalence study confirming that girls and young women are more likely to be sexually victimised than boys and young men: around 21% of girls and 11% of boys had experienced some form of sexual abuse (May-Chahal and Cawson, 2005).

McFarlane, (2007) points out that pregnancies conceived through non-consensual sex are unintended; therefore understanding the links between teenage conception and

sexual coercion will inform approaches to reduce unplanned pregnancies. The international evidence base on links between teenage conception and non-consensual sex has focused on two key areas: historical sexual abuse as a precipitating factor and current intimate partner violence.

A number of themes emerge from studies exploring adolescent pregnancies as a consequence or legacy of childhood sexual abuse: disruption to young women's lives and enhanced vulnerability to re victimisation, substance misuse, mental health issues, poor school attendance (Erdmans and Black, 2008), more active and positive endeavours to become pregnant and a decreased likelihood of using contraception (Saewyc *et al.*, 2004).

With respect to intimate partner violence, the overarching theme is coercive control (Stark, 2007) that limits women's ability to retain autonomy over sexual intimacy, including use of contraception. This manifests in the need to hide contraception from abusive partners and the lack of decision making power about contraception and reproduction (Williams *et al.*, 2008) and limitations on young women's ability to negotiate the condom use (McFarlane, 2007). The key conclusions by a number of researchers, centre on gendered power within intimate relationships including young men's sense of entitlement to sex from partners (McFarlane, 2007; Jewkes *et al.*, 2001; Rosen, 2004; Firmin, 2010).

It is known that young women and young men with histories of sexual abuse are less likely to use any form of contraception (Saewyc *et al.*, 2004). The reasons behind this are unexplored, and may be related to the active desire for motherhood outlined above.

Links between violence and sexual health are both direct and indirect (National Crime Victimization Study, 2000). Reported sexual violence is only the tip of the iceberg. However, interview based community studies from the USA have shown that rape and sexual assaults occur to females 12 years and above at a rate of 2.1 per 1000 persons. Males were sexually assaulted at a rate of 0.1 per 1000 persons (Rennison, 2001). Rennison, (2001) and Waidyaratne, (2001) shows that approximately 80% of all sexual assaults are committed by a friend, acquaintance, or family member of the victim and majority of victims are from low socio economic stratum. However, there are many cases of alcoholism when the father was the alleged assailant.

The problem of parental migration for employment of Middle Eastern countries has been highlighted in the media as one of the root causes for increased sexual abuse of children and adolescents in Sri Lanka. According to Central Bank statistics in 2002, around 204,000 Sri Lankans were working as migrant workers abroad. A father using the adolescent daughter as a substitute for his wife who has gone abroad is a well-accepted fact among sociologists in the explanation of reasons for incest in Sri Lanka (Plan Sri Lanka, 2008).

DiCenso *et al.*,(2002) shows from the systematic reviews of sex education that sex education enhance knowledge but do not significantly transform behaviour in the long term, particularly in contraceptive use (Wight *et al.*, 2002). It has long been a concern of experts on violence against women that sex education does not adequately address the landscapes of consent and coercion that young people are negotiating (Holland *et al.*, 1998; Coy *et al.*, 2008). A study in Haringey, where young women reported experiences of sexual violence and coercion to researchers, recommended that SRE in schools facilitate more discussion on sexual pressure (Hoggart, 2006b).

These circumstances are in themselves indicators of increased likelihood of adolescent motherhood (Erdmans and Black, 2008), meaning that delineating the route from sexual abuse to adolescent pregnancy is complex, but it is logically possible that the recognized markers are consequences of childhood sexual abuse, including how it is coped with. Thus addressing childhood sexual abuse and its legacies explicitly becomes an important policy focus, and may reduce teenage conceptions (Noll *et al.*, 2008).

2.3.5. Contraception

The World Health Organization, (1998) showed that many young women do not have accurate or adequate information about effective contraception and most reproductive and family planning programs have not paid enough attention to the special needs of the adolescents, which stands true still in many developing countries. In contrast WHO, (2004) shows that the low adolescent pregnancy rate in European countries even though sexual activity starts at an early age is due to adequate contraception often being available for adolescents.

Teenagers' choices to become sexually active and to use contraception, as well as their ability to obtain and use contraception if this choice is made, are influenced by many factors. These factors operate at the individual level (Examples include: knowledge, attitudes and beliefs, future expectations, substance use), the interfamilial level [Examples include: socioeconomic status, family structure, parent-child communication (Miller, 1998)], the extra familial level [Examples include: peer influences, sexual health education at school, health services, partner related factors (Wight *et al.*, 2002)] the community level [Examples include: norms and values concerning teenage pregnancy) and lastly whether consensual sex or not (Saewyc *et al.*, 2004)].

The theory of planned behaviour predicts that positive general attitudes toward contraceptive use and perceptions of stronger pressure to use a contraceptive method will translate in to greater intentions to use a contraceptive method in the future (Ajzen and Fishbein, 2005). It is been documented that adolescents with prior sexual abuse have a decreased likelihood of using contraception and more active and positive endeavours to become pregnant (Saewyc *et al.*, 2004).

The cognitive skills developed during adolescence are crucial to successful contraceptive practice because most birth control methods require at least a minimal ability to plan for, acquire, and utilize them at the appropriate time. Early adolescents may not have the ability to control the use of contraceptive in sexual situations due to lack of the skills necessary to exercise that control. Therein early adolescents may not have skills developed yet to apprehend the decision making skills, negotiating skills to convince the partner, let alone using these methods correctly.

Adolescents, whose parents are clear about the value of abstinence, and / or about the dangers of unprotected intercourse, are more likely to delay first sex and to use contraception (Blum and Rinehart, 2000). In other words, parents who provide clear messages about the value of delaying sex have children who are less likely to have intercourse at an early age, and those parents who discuss contraception are also more likely to have children who use contraception when they become sexually active (Stanton and Burns, 2003).

The studies conducted in Sri Lanka indicate that there is a gap in knowledge of the pregnant adolescents regarding contraceptives. Linganathan, (2006) explained that only 24.3% of teenage mothers are aware of contraception compared to 46.3% in the control group who were 20 to 24 years. Another study done at Teaching hospital, Galle in 1999 found that teenage mothers (primi mothers of < 19 years) had a lower awareness and knowledge of different methods of contraception than the control group (primi mothers of 19-28 years) with a $p < 0.001$. The low contraceptive usage among the teenagers was found due to lack of knowledge and fear of side effects. More than 75% of teenagers did not plan their family size and future pregnancies. The rate of unwanted pregnancy in teenagers was 62% and it was significantly higher than the controls where it was 18% ($p < 0.001$) (Gunaratna and Goonewardene, 2001).

A higher level of knowledge about contraception, however, does not always translate into a higher level of contraceptive use. Catania *et al.*, (1990) note that communication skills have been shown to promote contraceptive behaviour, including condom use, and the help seeking norms.

Due to the well-established primary health care system, contraceptive use is relatively high among married adolescents in Sri Lanka. In 2000, 65% and 79% of ever-married adolescent women ages 15–19 and 20–24, respectively, reported using a method of contraception; 55% and 66% of the same groups used modern methods. According to the Demographic and Health Survey, 2000 in Sri Lanka, contraceptive prevalence rate has increased to 70% in 2000 from 67% in 1993. Contraceptive prevalence is the percentage of married females of reproductive age group using a contraceptive method. This does not reflect the unmarried adolescents.

Even if adolescents have heard of the methods and knew how to use it there will be difficulties in obtaining contraception due to cultural taboos, contraceptive use among unmarried adolescents is far less widespread (Personal communication – Director FHB 2011).

There is a great paucity of data on these issues according to De Silva, (2000); Rajapaksa and De Silva, (2000). Saewyc *et al.*, (2004) reports that teenage women will have low access to contraception or not be in a position to use it regularly. In addition, Goonewardene *et al.*, (2005) demonstrated that the 48.4% adolescents who were

between 13 and 16 years would have delayed pregnancy if they have thought about contraception. Hence, the lack of knowledge of contraceptives on one hand and access to contraceptive services and supplies on the other may prevent adolescents from using contraceptives even when they want to protect themselves from pregnancy.

As it is reported in the American Academy of Paediatrics, (1999) if a contraceptive requires a prescription or insertion by a clinician, adolescents who wish to use such form will seek them only after they have been sexually active for more than one year. In order to avoid unwanted pregnancies, sexually active adolescents should have access to contraceptives without stigmatization and taboo and over the counter.

Contraceptive use among adolescents varies markedly, from 7% in India to 36% in Indonesia. Such variation is less marked among women aged 20-24 (De Silva, 1997). These findings highlight the need for spacing methods for sexually active adolescent women, since pregnancy among adolescents is associated with high risk of mortality and morbidity.

Jejeebhoy, (2000) argues that reluctance and fear among adolescents to report sexual experience due to cultural standards will inhibit sexually active female adolescents from seeking contraceptive services.

In a study done at the University Obstetrics Unit, Teaching Hospital Galle, the proportion of unplanned pregnancies, and the possible effects of contraceptive counselling were compared in two groups of pregnant teenagers (13-16 years, n = 95 and 17-19 years, n = 250) and a control group of pregnant women (20-24 years, n = 275). Results show that: younger teenagers were significantly less educated than the controls; the younger teenagers had a much higher proportion (54%) of unplanned pregnancies compared to the controls (16%); a significantly higher proportion of younger teenagers (48%) and older teenagers (25%), if counselled, would have delayed their pregnancies compared to the controls (10%). The conclusions derived was that: large proportion of these pregnancies were unplanned and could have been prevented by counselling and providing access to contraceptives (Goonewardene and Deeyagaha, 2005).

2.4. LEGAL AND CULTURAL FRAMEWORK ON SEXUALITY AND REPRODUCTION

School participation rates for the 15–19 year-old age group were 55.3% for girls and 55.4% for boys even a decade ago (UNFPA, 2001). The incidence of sexual activity among school adolescents in Sri Lanka is exceptionally low (UNICEF, 2004) by international standards, primarily due to socio-cultural reasons. In socio-cognitive theory, evaluative social outcomes influence behaviour mainly through their informational and motivational functions (Bandura, 1986). First, outcomes convey information about the social norms and the system of sanctions governing gender-linked behaviour. Secondly anticipated outcomes serve as incentives and disincentives for action. Forethought converts foreseeable outcomes into current motivators of behaviour (Bandura, 1991). People pursue courses of action they believe will bring valued outcomes and refrain from those they believe will give rise to aversive outcomes. Margaret Mead, (2009) attributed the behaviour of adolescents to their culture and upbringing, as the majority of problems associated with adolescence in western society are not present in other cultures.

When extrapolating the studies done in the west, the differences in cultures need to be noted. As Coates, (1999) identified the patterns of closeness may not be generalized beyond the same culture as romantic relationships vary widely across settings and groups. Tang and Zuo, (2000) have shown that Asian cultural customs view adolescents' developing interest in the opposite sex as inappropriate. A child's main responsibility at the adolescent age is viewed as the need to concentrate on academic work, with romance viewed as a distraction (Kim and Ward, 2007; Louie, 2004; Nguyen, 1989; Yu, 2007). Asian parents generally believe that dating leads to marriage and it is thus not generally condoned at adolescence (Kibria, 1993; Tang and Zuo, 2000).

Globalization and media are influencing rapid changes in Sri Lanka though Victorian values are still been condoned by the majority. Dating is still not common unless one is registered to get married. For Sri Lankan early adolescents, involvement in romantic relationships is not the norm. A Sri Lankan adolescent girl is normally chaperoned by an adult if she is to go out in public and she is to avoid interactions with unknown persons. Though love affairs are not uncommon these are usually intensely romantic

relationships. It involves passing notes to one another (now texting through mobile phones), clandestine meetings often arranged with the help of friends, and hand holding or kissing. They seldom lead to receptive-penetrative sex and it is hardly ever tolerated even by a girl in a romantic relationship (Personal communication - Director FHB, 2011). This is keeping up to the feminine stereotype, the expression “the man gets as far as the woman allows”. The adolescent girls have a double task: on one hand, to keep in check the “naturally” uncontrollable sexuality of her male partner; on the other hand, to control her own sexuality in order to be publicly recognized as a respectable girl.

Pregnancy in adolescence (i.e. in a girl <20 years of age) is by no means a new phenomenon (WHO, 2004). For most of history, teenage pregnancy has not been seen as a problem at all but as something normal and desirable. In South Asia the early marriage of adolescents is common; and 25–35% of adolescent girls in Pakistan, Bangladesh, India and Nepal begin childbearing as early as 17 years (UNFPA, 2001) while in Sri Lanka – the birth rate per 1000 females (15–19) is 20 (WHO, 2004) .

Today, parents, politicians and physicians warn against adolescent child birth, and the governments of most of the countries are trying to reduce it. The reason for this change is that teenage parenthood has come to be regarded as a significant disadvantage in a world which increasingly demands an extended education and in which delayed childbearing, smaller families, two income households, and careers for women are increasingly becoming the norm. Another reason for adolescent pregnancy to be a problem is its strong association with a range of disadvantages for the adolescent mother, for her child and for society in general (WHO, 2011; WHO, 2010; WHO 2007).

Arai (2005) reports the findings of a qualitative study of neighbourhood and peer influences on the transition from pregnancy to fertility among 15 young mothers in three English locations. Data were also collected from nine local health workers. However, the data did suggest that early childbearing might be normative in some communities, which may be true to some Sri Lankan communities who may not perceive adolescent pregnancy as undesirable or problematic. In the General Hospital in Anuradhapura (Sri Lanka), during 2 years, 16,299 women gave birth, among whom 1600 (9.8%) were adolescents (Weerasekera, 1997). Promotional campaigns had to be

sensitive to local cultural and religious beliefs. (UNFPA, 2001). Therefore, the cultural taboos that have inhibited open discussion on ARH issues in Sri Lanka have also hampered marketing campaigns to promote greater use of contraceptives. The sexual behaviour of adolescents is, in most cases, influenced not only by their community norms and mores, and their sexual orientation, but also by the issues of social control such as laws; age of consent, age of marriage.

2.4.1. Definition of child

In Sri Lanka, a child is defined in the penal code, as well as the Children's Charter 1992 as a person 0-18 years (WHO, 2008). The rights of children, including female children, are enshrined in the Constitution and in the Children's Charter of 1992 in Sri Lanka. Public interest in the protection of girl children has grown in recent times because of the publicity surrounding child prostitution and gross acts of abuse committed against children. The 1995 amendment to the penal code enhanced the protection of children and strengthened the punishment for offenses committed against children. Such offenses include cruelty to children, sexual exploitation of children, child pornography, and incest. The National Child Protection Authority of Sri Lanka has been empowered to act expeditiously to protect and prevent child abuse (UNFPA, 2001).

2.4.2. Age of consent

Traditionally, across the globe, the age of consent for a sexual union was a matter for the family to decide, or a tribal custom. In most cases this coincided with signs of puberty, menstruation for a woman and pubic hair for a man. Subsequently it became formalised within a legal framework with a legally determined minimum age of consent.

When used in relation to sexual activity, the age of consent is the minimum age at which a person is considered to be legally competent to consent to sexual acts. Age of consent worldwide range between 13 and 21 years, the mode is 16 years. Some countries have kept it open as "Marriage" (Criminal Law, 2007).

Sri Lanka's criminal law recognizes that there is a common age of sexual consent for boys and girls at 16 years. Statutory rape is defined as heterosexual sexual intercourse with a girl below 16 years. In 1998 the law was amended as any sexual act with a person below age 16 year is considered as an offence of grave sexual abuse against both boys and girls. (Penal Code S.363 (e) as amended 1995, S.365 (b) (a) as amended 1998).

2.4.3. Consent to marry

Consent to marry has been an important requirement of marriage under the marriage legislation in Sri Lanka for over a century. [Early marriage legislation, Kandyan Marriage and Divorce Act, (1951), and General Marriages Ordinance (1907)]. This legislation was amended in 1995 to raise the minimum age of marriage for the Kandyan girls from 14 years, and harmonize it with the age of 18 years. This amendment reinforced the national standards prohibiting forced marriage, and harmonizes Sri Lankan national law with CEDAW (Committee on the Elimination of Discrimination against Women) and other international standards. The legislation has been reinforced by the ICCPR Act, 2007 (International Covenant on Civil and Political Rights) which recognizes the child's right to identity [Art 2].

The increase in the legal age at marriage from 14 to 18 has been identified as one of the most significant legal reforms for Sri Lankan women's health and reproductive health rights. It has contributed towards reducing the incidence of adolescent pregnancies (Annual Health Bulletin, 2000) the details of which are shown in table 2.1. It is important to note the consequence of the disjunction between the legal age of intercourse and marriage which has occurred as a result of this legislation. Although a 16 year old adolescent in Sri Lanka can legally have sex, she is two years below the legal age of marriage; however sex before marriage is socially unacceptable.

Each country has laws that relate to sexual activities of individuals other than age of consent and age of marriage ranging from rape laws to sexual harassment. Sexual activities involving individuals of non-consenting age (children and adolescents) are dealt with by severe punishments because they are not developmentally prepared and cannot give consent, or because they violate the laws or social taboos of society. According to the rape laws of Sri Lanka, a man is said to commit rape when "he has

sexual intercourse with a woman with or without her consent when she is under 16 years of age unless the woman is married according to Islam law and his wife who is over twelve year of age and is not judicially separated from the man” (Penal Code, 1998).

2.4.4. Age at marriage

Socio-economic development, such as improved education, increased urbanization, more employment opportunities and greater access to communication technologies, has a potential influence on age at marriage (WHO, 2007).

Due to strong social control and discouragement of premarital sex, age at marriage was relatively high in Europe during the 18th and 19th centuries. If conception occurred this was usually followed by an early marriage. As economies developed and as the education and training of young people was extended, parental authority was undermined leading to declining of social control by parents and family (WHO, 2004).

Generally, in developing countries, marriage occurs earlier than in developed regions. Women and their families are anxious to prove the fecundity of the newlywed and therefore marriage is often translated into immediate childbearing. Therefore in a number of countries age at marriage is an important factor determining the age at which the first pregnancy occurs (WHO, 2004).

As marriage determines largely the onset of sexual activity - at least for women - in most of the countries in Asia and the Pacific, age at marriage has been considered important in this respect. The age at marriage for women has been low in most of the countries in comparison with that for men, especially in the South and South-East sub regions. For example, as shown in Bangladesh, about 50% of women aged 20-24 were married by age 15 and 80% by age 20. Similarly, India and Nepal show a high rate of adolescent marriages, with 71% and 76% of women married by age 20, respectively. Bangladesh shows the most dramatic difference, with 8 per cent of boys compared with 76 % of girls married in the age group 15-19 (De Silva, 1997).

In India, although the legal age at marriage is 18 for females and 21 for males, early marriage continues to be the norm (by age 15 as many as 26% of females are married). By the age of 18, this figure rises to 54%. Most reproduction in India occurs within marriage, so the low age at marriage automatically links to early onset of sexual activity, and thereby fertility (Gupta, 2000). Low involvement of teenage girls in decision making also contributed to early pregnancy. Most adolescent marriages (80%) were arranged by parents without the girl's consent.

Table 2.1 shows that over the years, age at first birth have increased in the teenagers while the number of pregnancies have reduced.

Table 2. 1: Mothers' age at first delivery from 1996 to 2003

Mothers Age at first delivery	1996	1997	1998	1999	2000	2001	2002	2003
12	15	01	02	00	00	02	00	00
13	19	19	26	25	10	22	24	34
14	105	99	117	127	117	96	151	127
15	641	575	615	566	576	564	508	584
16	2,303	2,203	1,874	1,939	1,917	1,974	1,729	1,689
17	4,643	5,172	4,729	4,291	4,459	4,503	4,341	3,906
18	9,279	8,651	9,073	9,208	8,929	8,940	8,386	8,242
Total	17,005	16,720	16,436	16,156	16,008	16,101	15,139	14,582

Source: Registrar General Department

It is also important to note that during the past century, females' average age at marriage in Sri Lanka has increased by almost seven years. Delays in marriage and their impact on the birth rate led Kirk to refer to Sri Lanka as "the Ireland of Asia." (De Silva, 1997). Caldwell and others identified Sri Lanka as a leader in third world Asia's change in marriage patterns; by the mid-1970s Sri Lankan women were marrying not at puberty, but a decade after that (Caldwell *et al.*, 1989). The age at marriage for women increased from 18.1 years in 1901 to 24.6 in 2000, and the last DHS 2006/2007 reports the age of marriage as 25.1. (DHS, 2000; 2006/2007). Additionally it reports that no more than 9 % of women, including Muslims, marry at an age younger than 20 (DHS, 2000). Sri Lanka is the only South Asian country in which 75% of the women marry in their 20s.

Although 18 years is the legal age at marriage in Bangladesh and Sri Lanka, adolescents younger than 18 do marry within the legal system. According to Amin (Amin, 1996, 1998; Amin et al., 2002), age misreporting is common in rural Bangladesh primarily because age is not recorded at the time of birth. In Sri Lanka registering of vital statistics are very high but the misappropriation of age of young adolescents is seen as a deliberate exaggeration of age for married girls since 18 years is the legal age at marriage.

2.4.5. Abortion

Unsafe abortion is defined as a procedure for terminating an unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking the minimal medical standards (WHO, 2008). Many adolescents are aware of abortion and its complications, but strong social condemnation and social stigma attached to unmarried pregnancies is of greater concern for young girls than the risk of death and illness associated with unsafe abortion (Rogo, 1999; WHO, 2007)

Every year, an estimated 2.0 - 4.4 million adolescents globally resort to abortion. In comparison with adults, adolescents are more likely to delay the abortion and delay in seeking abortion. This could be due to delays in recognizing or admitting the pregnancy, multiple means and attempts to induce the abortion, and cost consideration (Olukoya *et al.*, 2001).

Religion and cultural norms appear to be strong determinants influencing the view of health-care providers on abortion (WHO, 2007). Around the world, laws governing induced abortion range from those prohibiting abortion to liberalising abortions, with no explicit exceptions to those establishing it as a right of pregnant women. By the year 1990, some 52 countries containing 25% of the world population, fell in to the most restrictive category, where abortions are prohibited except when the woman's life is endangered if the pregnancy is carried to term (Henshaw *et al.*, 1999).

In India, the Medical Termination of Pregnancy (MTP) Act legalised abortion in 1971. In 2002, Nepal legalized abortion and began offering abortion services in public hospitals. Anyhow complication and deaths due to induced abortions still exist and health system barriers can be seen as an insufficient number of trained providers,

inequitable distribution of services, and excessive costs have been shown among the reason for the failure (WHO, 2004).

Abortion remains illegal in Sri Lanka under Article 303 of the penal code of 1883. Any person conducting an abortion may be liable to 7 years of imprisonment. The penal code of Sri Lanka which is derived from the 19th century English Law adopts a strict attitude to abortion and fails to take in to account gender factors when defining criminal liability. Under the present law, induced abortions can be performed only when woman's life is in danger which is termed as medical termination of pregnancy. De Silva, and Hobbs (2000), argued that there is a wide disagreement as to the extent of legalization or non-legalization of abortion. Presently there is an on-going debate on the issue of abortion law in Sri Lanka. However there seems to be no consensus arrived at yet (WHO, 2008).

Despite the legal situation, abortions do occur in Sri Lanka. A study in 1993 of 322 women who had experienced one or more induced abortions found that just over 80 % of those abortions had taken place at a private clinic, hospital, or in a government hospital (Senanayake, 1990). Although abortion is illegal in Sri Lanka the indications are that a substantial proportion of those seeking abortion are adolescents. Approximately 19% of abortion seekers interviewed in two separate studies were identified as age between 15–24. The majority of abortion seekers were married women (Rupasinghe, 1984).

This chapter provided empirical data and insight into socio economic background, race and ethnicity, family, school, peer pressure on adolescents and the legal position related to adolescents' sexuality and reproduction. There is limited evidence on ARH issues, such as adolescents' sexual activity, contraceptive use, non-consensual sex and pregnancy from Sri Lanka. These issues are no doubt sensitive to discuss and difficult subjects for data collection. However there are limitations of applying findings from the West to the Sri Lankan setting. For political commitment for a coherent ARH policy, initiative data should be made available. This study originates to address this gap and to provide data for policy direction to address the operational barrier to ARH in Sri Lanka.

CHAPTER 3

METHODOLOGY AND METHODS

3.1. GENERAL OUTLINE

The study adopted a quantitative survey approach, generating data from population-based samples of (i) pregnant adolescent girls (ii) the partners of pregnant adolescent girls (iii) school-going adolescent girls and boys.

Definitions

Adolescent : Individuals 10-19 years of age at the time of data collection.

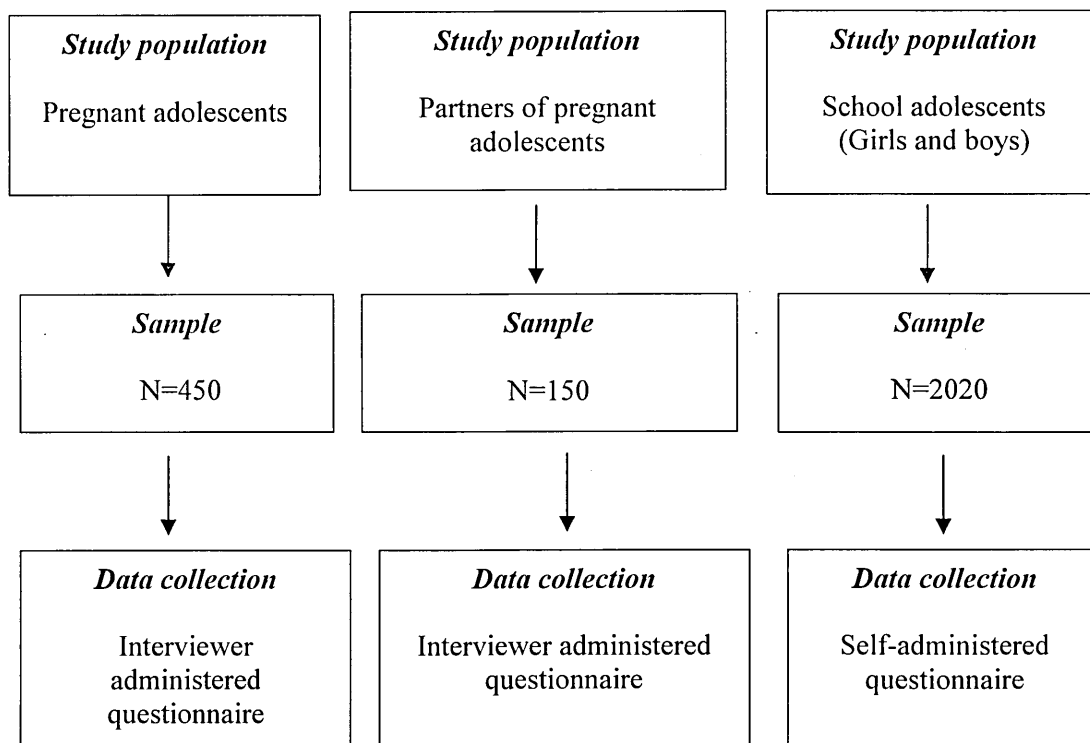
Partner : The person from whom the pregnant adolescent conceived. The term partner was used rather than the term spouse, since the latter term does not accurately describe all situations in which these adolescents would have become pregnant. The laws, customs and practices of each community determine who will be registered as a partner.

Generating data from population-based samples of pregnant adolescent girls, the partners of pregnant adolescent girls and school-going adolescent girls and boys in a quantitative survey approach was selected as it was considered the most appropriate approach to enable me to answer my research questions. A broad, multi-component design was important because it provided a greater opportunity to develop detailed understanding and insights into the multifaceted processes impacting upon adolescent pregnancy as compared to a study that collected data only from adolescent girls who had become pregnant.

Qualitative and quantitative approaches to health services research each have their strengths and limitations (Carr, 1994). It is increasingly recognised that combining qualitative and quantitative approaches can lead to a more detailed understanding of health issues, particularly where the focus is on the social and cultural determinants of health related behaviours (Carr, 1994). Nevertheless, studies that adopt a purely quantitative methodology can provide important findings, and are appropriate where the aim is to identify the prevalence of particular behaviours or conditions and describe patterns between sub-groups at a population level. In the present study, the primary objective was to describe the levels and patterns of adolescent sexual behaviour and context of pregnancy within a population in Sri Lanka. Therefore, I

adopted a quantitative approach, informed by a wide reading of theoretical and empirical work that had adopted a range of methodologies. Furthermore, given the low level of understanding of, and indeed interest in, the subject matter in Sri Lanka, it was felt that a quantitative study would produce the most influential findings at this time. With prior experience of conducting population based quantitative work, I was well placed to design and undertake a quantitative study. My personal skills were complemented by solid Public Health system present in Sri Lanka that allowed the implementation of a rigorous quantitative study. That said, I recognize that there are limits to the research questions that can be addressed through this kind of quantitative survey method, and that complementary qualitative approaches would help to elucidate additional dimensions of the topic area. For instance, to explore sexual activity and pregnancy in depth in an unstructured way to generate richer understanding of the full range of opinions and experiences, a qualitative approach could be subsequently done.

Figure 1: An overview of the study



An overview of the study components are presented in Figure 1 above.

3.2. STUDY SETTING

3.2.1. Geographic and demographic

The study was set in Badulla district which is located in the south-eastern part of the central hill country in Sri Lanka. The land area of Badulla district is approximately 2,828 sq. km, which is 4.3% of the total land area of the island. According to the Department of Census, estimated midyear population for 2012 is 858,091 and the crude birth rate is 17.6 per 1,000 populations for 2012. The infant mortality rate was 8.5 per 1,000 live births in 2007 (FHB 2012). The maternal mortality rate was 41.6 per 100,000 live births in 2009 (FHB 2012). Badulla district was one of the districts with a high adolescent pregnancy rate (7.16 per 1000 in 2007; when 1000 of adolescent population is considered there are seven adolescents pregnant) (RDHS Badulla 2007). One fifth of the population in Badulla district consists of tea plantation (estate) population and teenage pregnancies are common among this population. The indigenous “Vedddhas” population of 1,375 lives in the Mahiyanganaya Medical Officer of Health (MOH) area in Badulla district. Adolescent pregnancies are common in this population as well.

3.2.2. Reproductive Health (RH) services

In Sri Lanka, Reproductive Health (RH) services are delivered as an integrated part of the family health program. In the delivery of RH services, the Ministry of Health uses its well-developed health infrastructure consisting of a network of medical institutions (larger, intermediate and smaller peripheral institutions) and Medical Officer of Health. The latter are responsible for preventive and promotive aspects of health including domiciliary services in MCH and family planning. Medical Officer of Health area is a clearly defined area, which is congruent with the administrative divisions of the country. MOH areas, are managed by a Medical Officers of Health, and are supported by a team of public health personnel comprising Public Health Nursing Sisters (PHNS), Public Health Inspectors (PHIs), Supervising Public Health Midwives (SPHMs) and Public Health Midwives (PHMs).

The field family health service delivery is conducted through the Medical Officer of Health (MOH). A MOH covers an average population of around 60, 000. A MOH area is further divided into Public Health Midwife (PHM) areas where the average population is around 3000. A PHM is responsible for providing all family health services at a grassroots level for her area. Midwives do home visits to pregnant and postpartum mothers. They also visit households with a child under five years as well as all couples, registered in her “Eligible family register” within the age range of 15 years to 49 years to provide them with family planning guidance. In addition, even if not registered under that particular MOH area, services are rendered at the Medical Officer of Health area by MOH, PHNS (Public Health Nursing Sister) to any person who seeks services.

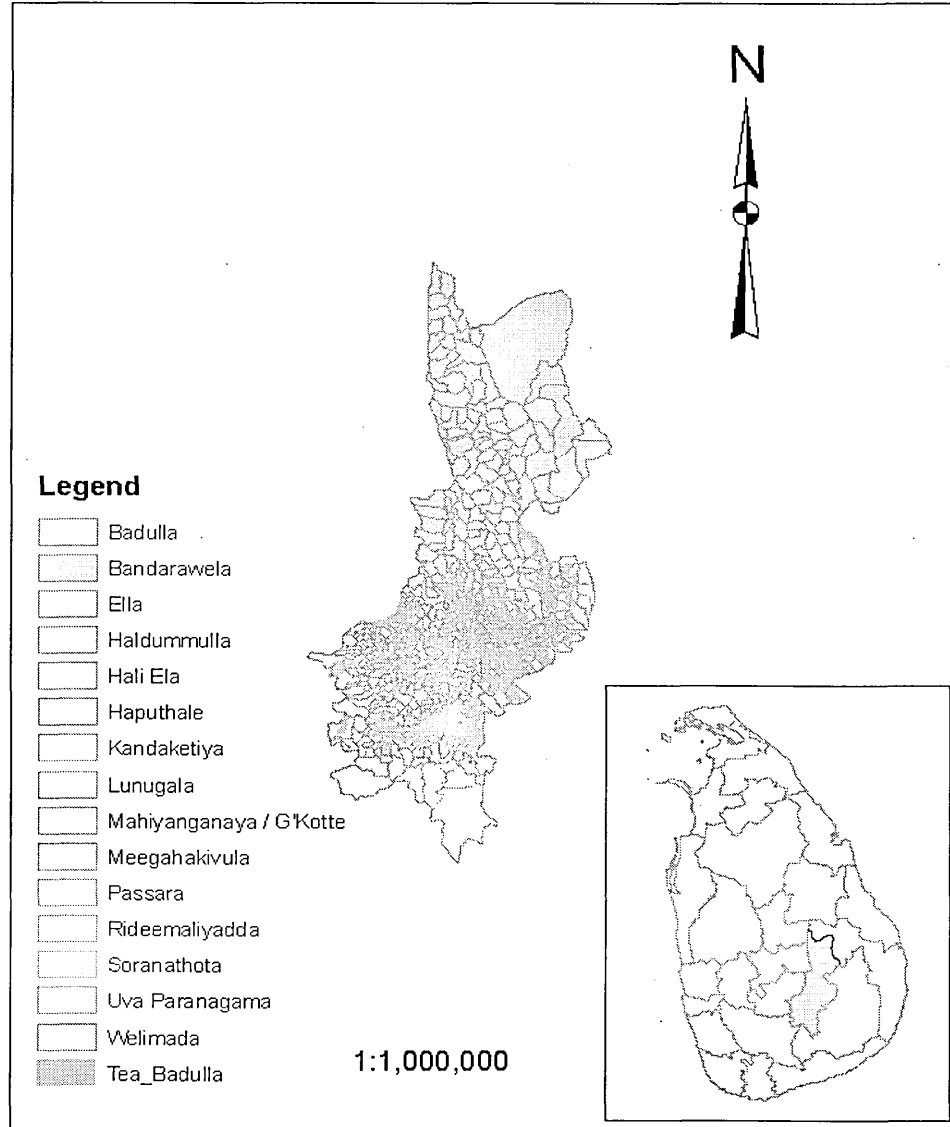
In the plantations, the populations receive field maternity service through midwives of the plantation sector. The midwives in the plantation sector provide antenatal, natal and postnatal care including family planning and some elements of infant and childcare. The Plantation midwife works in the maternity ward as well as provides field services. There are two categories of midwives employed in the plantations: “registered midwives” who have received similar training to the government midwives, and “trained midwives” who are not registered and not qualified and are like traditional birth attendants, who will have received an orientation training of less than one month in a government maternity ward. The Sri Lankan government is in the process of integrating the plantation health care services into the national health care system in a phase-out manner. Indigenous population groups (Veddha) also live in an area in Badulla district and experience a high teenage pregnancy rate. This group is entitled to same services through government field midwife/ family health worker.

Badulla District was selected for the study for both practical and logistical reasons and because of the relevance of the study's focus for this area.

Firstly, according to the Demographic and Health Survey (DHS, 2000) the socio economic factors of Badulla are comparable with the other parts of the country suggesting that the study findings may have some generalizability to the other parts of the country. Secondly, pregnant women having an antenatal check-up in the district of study has been estimated as 99.4 % in the last Demographic Health Survey

(DHS, 2006/2007) and the primary source of antenatal care is through field midwives whose registers therefore provided a suitable sampling frame from which the pregnant adolescent sample could be drawn. Thirdly, Badulla district was one of the districts having a high adolescent pregnancy rate in the country. Fourthly, one fifth of the population in Badulla district consists of tea plantation (estate) population and there is also an indigenous population (1,375) in an area in Badulla district as well. Teenage pregnancies are common in these two populations. Finally, at the time of the study, the Principal Investigator was working in Badulla District and had strong field-level networks, making the collection of data possible.

Figure 2: Map of Badulla district showing Medical officer of health area and the distribution of the tea plantations.



3.3. ETHICS AND CONSENT

The approval of the Ethics Committee of the Sri Lanka Medical Association (SLMA) and the Faculty of Health and Wellbeing's Ethics Committee at Sheffield Hallam University was obtained. Permission to undertake the study was also obtained from relevant authorities.

The study employed interviewers who could speak the local languages, Sinhala and Tamil. They were culturally-competent due to prior experience of working with the different ethnic groups. Respondents were matched with an interviewer speaking their own first language and with whom they felt comfortable. Questionnaires were also produced in both languages taking care to ensure conceptual equivalence. All ethical considerations were included in the training of investigators. Participant information sheets provided sufficient information presented in an appropriate format and language for the participants to enable them to decide whether or not to participate.

Confidentiality and anonymity were ensured at every step. The questionnaires carried only a serial number, while the data sheet with the address and the name of the participants answering the interviewer administered questionnaires were kept separately with the consent form.

Specific ethical considerations that arose in relation to each component of the study will be discussed within each component.

3.4. COMPONENT I – ADOLESCENT PREGNANT GIRLS

3.4.1. Study Population

All pregnant girls aged 19 years or under in the district of study in the study period 15/07/2008 to 14/07/2010 was taken as the study population.

3.4.2. Sampling

a) Inclusion criteria

Pregnant adolescents living in Badulla district

b) Sample Size – Pregnant adolescents

A sample size calculation was performed based on the desire to estimate the percentage of adolescent pregnant girls who were married with an accuracy of +/- 5%. The assumption made was that around 50% of pregnant adolescents would be married (DHS, 2000), non-response level will be 15% (Naing *et al.* 2006) and the required sample size was calculated using the following formula (Lwanga and Lemeshow, 1991):

$$n = \frac{Z^2 P(1-P)}{d^2}$$
$$n = \frac{(1.96)^2 (50)(50)}{5^2} = 384$$

Assumption of 15 % non-response rate (Naing *et al.* 2006), N =450

Significance level Z score corresponding to an alpha error of 5%.

N = Sample size d = Limit of the accuracy desired or margin of error.

P = Approximate estimate for the proportion of occurrence of event being measured/proportion of interest. The estimated proportion of pregnant adolescents who would be married 50% (DHS,2000).

c) Sampling frame

“Pregnant Mothers Register” was used as the sampling frame. The registration of pregnancies in this register was 92% (Hewageegana, 2006), making it straightforward to identify girls who were eligible for inclusion in the study. The pregnant mothers register is also well maintained in the plantation sector as well. In the plantation sector even in the absence of a midwife, these registers are maintained by other categories of staff such as the crèche attendants (those who look after children in the day care). Therefore, drawing the sample from the pregnant mothers register was feasible.

Table 3.1 details pregnant adolescents and pregnant adolescents under the care of the MOH areas in Badulla District in 2007 and the distribution of the final sample of pregnant adolescents achieved by MOH area.

Table 3.1: Pregnant women and pregnant adolescents under care by MOH area in Badulla District-2007 and the sample of pregnant adolescents by MOH area

MOH Area	Total pregnant women registered for the year 2007	Pregnant ≤19 years 2007		Survey sample of Pregnant Adolescents
		No	%	No
01 Badulla	1,185	76	6.4	27
02 Bandarawela	1,077	82	7.6	34
03 Ella	652	39	6.0	28
04 Giradurukotte	733	52	7.1	33
05 Haldumulla	570	23	4.0	17
06 Haliella	680	73	10.7	50
07 Haputhale	1,642	72	4.4	19
08 Kandakatiya	519	17	3.3	15
09 Mahiyanganaya	936	77	8.2	39
10 Meegahakiula	305	12	4.0	16
11 Passara	1,006	61	5.8	26
12 Ridimaliyadha	1,062	74	6.9	31
13 Soranathota	476	13	2.7	12
14 UvaParanagama	1,498	133	8.9	40
15 Welimada	1,770	248	14.0	63
Total-Badulla District	14,111	1,052	7.45*	450

(Source: Badulla District 509 returns 2007)

*7.45% (there are seven adolescent deliveries in 100 deliveries. Out of every 100 births in Sri Lanka, 7 are to adolescents (Abeykoon & Wilson, 1998).

d) Selection of pregnant adolescents

The total sample of 450 pregnant adolescents was arrived at by taking samples from each MOH area in proportion to the adolescent pregnancy rate of the year previous to data collection. This method ensured that the sample was representative of urban, rural and plantation population as well as by ethnicity.

All the midwife areas were written down in alphabetical order by each MOH area. Next, the midwife areas within a MOH area were randomly reorganised and documented. All clinic schedules of midwives were collected. Interviewers then randomly selected a clinic date from the list compiled starting from the 1st midwife area. They visited the clinic and adapted the following procedure;

1. All pregnant adolescents who attended the clinic that day were selected from the pregnant mothers register. Every second pregnant adolescent were taken according to the number allocated in the clinic. These adolescents were invited to participate in the study and her verbal consent was gained if she is willing.
2. If the pregnant adolescent was under 18 years, permission was sought from the adolescent's parents, guardians or the partner of the pregnant adolescent who had accompanied her to the clinic.
3. Written consent of the adolescent to participate in the study was sought/obtained.

The maximum number taken from any one clinic was eight to ensure an even spread across the study site. Midwife areas by MOH area were visited in rotation according to the clinic schedules until the required numbers of pregnant mothers were recruited from each MOH area. A midwife area was revisited by the data collector only when she had completed one round of visiting the midwives in the random selected order of the list.

There are ten MOH areas with plantation sector in Badulla district. In collecting the sample from the plantation sector, names of the plantations were written in alphabetical order by the ten MOH areas and a randomly selected list per MOH area was compiled. The data collector visited the clinics according to the clinic schedule and interviewed a maximum of three pregnant adolescents per clinic.

In the district of the study, 98% of births take place in the institutions (Provincial Health statistics, 2007). Provision was also made in the study for those few adolescent girls from Badulla district who had not been registered by the midwife prior to coming for the delivery. The data collectors were informed when they came to hospital for delivery. If they were not in labour, they were interviewed and included in the study (four such cases were included in the sample).

To ascertain the feasibility of conducting the study and to do the necessary adjustments to the sampling frame, method of data collection and the study instruments, a “methodological study” (Abramson and Abramson, 1999 and Moser and Kalton, 1971) was carried out in a Public Health Midwife (PHM) area outside the study setting. The purpose of this was to ascertain whether the pregnant mothers register could be used as the study frame, the suitability of the study instruments, the number of interviews that could be done in a clinic session and any other issues arising in relation to conduct of the interview.

The prior plan was to use the clinic schedules available at the centre, to randomly select the PHM and then the clinic and go to the area without giving prior notice and to interview randomly selected pregnant adolescents who came to the particular clinic from the pregnant mothers register, so that selection bias was minimised. In the methodological study, it became apparent that there was no guarantee that pregnant adolescents would be present at every clinic. For logistical purposes, therefore the procedure was amended. When the random selection of the PHM area was done, the selected clinic was given prior notice of the date when the interviewer would visit. This enabled the public health midwife to ensure that at least five pregnant adolescents were booked for the scheduled clinic to allow an invitation to participate in the study to be extended to them.

3.4.3. Study instrument

An Interviewer-administered questionnaire (Q₁) was the instrument of data collection from the pregnant adolescents. Tool development was done in several steps.

Steps in tool development

Step 1

The interviewer-administered questionnaire (Q₁) for use with pregnant adolescent girls was carefully designed through an interactive and iterative process. The draft questionnaire was developed on the basis of background literature review and contextual knowledge.

Step 2

This draft was then discussed with a panel consisting of PhD students and researchers in different fields at Sheffield Hallam University in UK. In Sri Lanka, the questionnaire was discussed with a panel consisting of a Paediatrician, a Visiting Obstetrician and Gynaecologist (with both hospital and community-based responsibilities), a Medical Officer (Maternal and Child Health) and Public Health Nursing Sister and the questionnaire was modified in the light of their comments. The questionnaire was designed in English, translated to Tamil and Sinhala and then retranslated to English by a third party.

Step 3

Pre testing of the instrument was done outside the study area. The questionnaire was designed with the filters and codes inbuilt. Guidelines about how particular question should be handled were given in a text box in the questionnaire. The questionnaire consisted of ten sections (Annexure 2_A)

Interviewer administered questionnaire (Q₁)

- Section 1** Respondent socio-demographic information
- Section 2** School environment
- Section 3** Family setting
- Section 4** Puberty experience
- Section 5** Sexual Exposure
- Section 6** Knowledge, attitudes and practices relating to reproductive health
- Section 7** Information related to pregnancy
- Section 8** Information regarding partner
- Section 9** Relationships of peers
- Section 10** Antenatal history

3.4.4. Training of investigators and Data collection

Two female interviewers with prior experience in data collection were chosen; one for the non-plantation area and one for the plantation sector. Both were fluent in Sinhala and Tamil and both had prior experience of working with the different ethnic groups.

I undertook comprehensive training of these interviewers, giving a full explanation of the study objectives, selection of the study units, inclusion and exclusion criteria, and interviewing techniques. Special emphasis was placed on clarification and probing to ensure uniformity. Group work, role-play and mock interviews were conducted as part of the training to give the investigators a chance to experience asking and answering the questions and to achieve a uniform degree of performance.

All ethical considerations were included in the training of investigators. The importance of obtaining consent, explaining the purpose of the study and ensuring confidentiality were emphasized in the training. An explanation on obtaining the information such as name and address for the purpose of referral, if necessary, and the fact that giving this information was optional, was highlighted. The following issues were also emphasised in the training: how to handle the situation if an illegal abortion was revealed and how to respond sensitively when a sexual abuse or rape was divulged.

3.4.5. Ethical concerns

Informed consent was obtained from all participants. In the case of pregnant adolescents who were aged under 18 years, consent was also taken from the partner or parent with whom the respondent was living or who had accompanied the respondent to the interview. If an adolescent girl wanted to participate but her parents did not agree it was agreed from the beginning not to enrol such an adolescent if she was underage.

In case of an illegal abortion

If the adolescent disclosed that she had attempted to arrange or had undergone an illegal abortion, this information was kept confidential. If the adolescent needed to be referred to specialist care due to complications or for counselling, this was done immediately through the normal stipulated system and, though it was not a part of the research procedure, all was documented.

The interviewer did not inquire where the abortion had been performed. There was no notification. The researcher did not act as a “police officer” or a fault finder. Any relevant issues were addressed with the best interest and welfare of the adolescents at heart. This was undertaken outside the research component by the Medical officer Maternal and Child Health. There were ten adolescents who had tried to get abortions; five by oral drugs and liquids and five by vaginal methods. None were having adverse effects and were being monitored for a healthy delivery.

In case of a sexual abuse or rape

If the adolescent was willing to accept help through the health system, the case was referred to the Medical Officer Maternal and Child Health. She liaised with the Visiting Obstetrician and Gynaecologist, psychotherapist or any other professionals depending on the need of the adolescent. The interviewer was advised not to handle these issues inside the research. All actions taken or reported were documented and informed to the supervisors of the study by the Principal Investigator. The research role and the services role were well defined and made clear. There were five such cases; one incest and four by partners.

Ensuring the safety of the participants and interviewers

As it was a culturally sensitive study, all precautions were taken during data collection from the pregnant adolescents. The area Medical Officer of Health was notified. Data collection from adolescent pregnant girls was carried out with individuals who had given prior verbal consent to the area midwife. All the safety precautions of the data collectors were taken while respecting the privacy and the anonymity of respondents. Whenever needed, the area midwife accompanied data collectors to the pregnant adolescent's home and the data collectors travelled in government vehicles with drivers. There was little danger of the focus of the data collectors' work becoming known and participants therefore becoming identified locally as someone who was pregnant underage, as the data collectors were in the supervisory grade and visited the field in their working capacity for a number of reasons.

After the interviewer administered the questionnaire to a pregnant adolescent, the interviewer spent a few more minutes with them talking about day-to-day things to ensure that the respondents were not left in a negative frame of mind and to make sure that no distress had been caused by the interview process. There was provision for referral for support if this was felt necessary. No incidents of respondents noticeably upset were reported and therefore no specific actions needed to be taken, although there were many incidents where the adolescents cried out of relief because they had been given the opportunity to tell their story.

I also supervised the data collection and performed a re-check on some of the variables for a selection of the interviewer-administered questionnaires. Basic information on 50 of the questionnaires was checked against pregnancy records to ensure accuracy of reporting.

Although the original sample size calculation was based on an assumption of 15% non-response or incomplete interviews, all 450 identified participants were successfully interviewed. The very high participation rate is explained in part by the fact that recruitment was undertaken by the local midwives who were providing care to the adolescent girls and were trusted individuals. I am confident that the pregnant adolescents had no coercion or pressure to take part in the study.

Participant recruitment for Component I of the study continued until the target of 450 mothers was achieved with the desired distribution across the MOH areas as per table 3.1. The sample was collected from 179 PHM area field clinics and 21 estate clinics. Additionally, interviews were conducted at the hospital with four adolescents who had not been registered by the midwife.

3.5. COMPONENT II: MALE PARTNERS OF PREGNANT ADOLESCENTS

3.5.1. Study Population

For this element of the study, the study population from which I intended to extrapolate findings were all husbands /partners of pregnant adolescents in the study district. All partners of pregnant girls aged 19 years or under in the district of study in the study period 15/07/2008 to 14/07/2010 was taken as the study population.

3.5.2. Sampling

a) Inclusion criteria.

Partners of pregnant adolescent in the Badulla district.

b) Sample Size – partners of pregnant adolescents

The original study design intention was to recruit a sub-sample of the husbands/partners of the girls who took part in Component I. Bearing in mind the logistical and resource constraints a pragmatic decision was taken to administer a structured survey interview to 30% of all husbands/partners of girls who had been interviewed in the Component I survey, i.e. 150 in number.

c) Sampling frame

“*Pregnant Mothers Register*” was used as the sampling frame. Partners were identified in relation to the pregnant adolescents in the register.

d) Selection of partners of pregnant adolescents

The following procedure was adopted to identify and recruit the required number of husbands/partners to the study.

Information sheets completed for each of the pregnant adolescents were separated from the questionnaires and filed by MOH area. The required numbers of partners were identified (as shown in Table 4.2) and this number of information sheets was randomly selected for each MOH area. The name, address and the Public Health Midwife area of the pregnant adolescent were noted by the Principal Investigator and

listed by MOH area and cross checked with the pregnant mothers registers. Then these were given to the data collector. The data collector informed the midwife of the area of the date of his visit. The midwife or the Public Health Inspector, whoever it was felt could relate to the partner most, then approached the partner and invited him to participate in the study, taking preliminary verbal consent. The venue for interview was chosen by the respondent. When a partner identified was unwilling to participate (thirty six refused to participate), his refusal was noted and the partner of another pregnant adolescent was chosen from the same MOH area as a replacement.

For logistical reasons (which will be discussed in full in chapter 4), only 37 of the partners of pregnant adolescents in component I were recruited. The remaining 113 were partners of other pregnant adolescents from the same Medical Officer of Health area who were not in Component I (Table 3.2).

Table 3.2 Distribution of partners of pregnant adolescents by MOH area

MOH area	Partner of a pregnant adolescent from Component 1	Partner of other pregnant adolescent from the MOH area	Total
Badulla	3	6	9
Bandarawela	3	8	11
Ella	2	7	9
Giradurukotte	3	8	11
Haldumulla	2	4	6
Haliella	3	14	17
Haputhale	2	4	6
Kandakatiya	1	4	5
Mahiyanganaya	5	8	13
Meegahakiula	3	2	5
Passara	3	6	9
Ridimaliyadha	0	10	10
Soranathota	1	3	4
Uva Paranagama	3	11	14
Welimada	3	18	21
Total	37	113	150

3.5.3. Study instrument

An interviewer-administered questionnaire (Q₂) was the instrument of data collection from the partners of pregnant adolescents. Tool development was done in several steps.

Steps in tool development

Step 1

The interviewer-administered questionnaire (Q₂) for use with partners of pregnant adolescent girls was carefully designed through an interactive and iterative process. The draft questionnaire was developed on the basis of background literature review and contextual knowledge and it was largely mirroring, but shorter in length than that used with the pregnant adolescent girls.

Step 2

The draft questionnaire was then discussed with a panel consisting of a Medical Officer (Maternal and Child Health), Medical Officer (Planning), three public health inspectors and two midwives and modified in the light of their comments. The questionnaire was designed in English, translated to Sinhala and Tamil, and retranslated to English by a third party to check for conceptual equivalence.

Step 3

Pre-testing of the instrument was done outside the study area. The partners who participated in the pre testing suggested that it would be better if some of the personal questions were self-completion if the person could read and understand. The interview schedule and training was modified in the light of this input.

The questionnaire was designed with the filters and codes inbuilt. The guidelines to be followed about how the particular question should be expedited were given in a text box in the questionnaire. The questionnaire consisted of five sections (see Annexure 2_B for the full English version).

Interviewer administered questionnaire to partners (Q₂)

Section 1 Respondent's socio-demographic information

Section 2 School environment

Section 3 Sexual exposure

Section 4 Knowledge attitude and practices relating to reproductive health and contraception

Section 5 Information related to partner's pregnancy

3.5.4. Training of investigator and Data collection

For this component of the study, a male Public Health Inspector who could speak Sinhala and Tamil and who was culturally-competent due to prior experience of working with the different ethnic groups was chosen as the interviewer. Questionnaires were also produced in both languages paying care to ensure conceptual equivalence.

I undertook comprehensive training of the interviewer, giving full explanation of the study objectives, selection of the study units, inclusion and exclusion criteria, and interviewing techniques. Special emphasis was placed on clarification and probing to ensure uniformity. Group work, role-play, and mock interviews were conducted as part of the training to give the investigator a chance to experience asking and answering the questions and to achieve a uniform degree of performance. The training of the interviewer for the partner data collection was done not with pregnant adolescent data collector training but later, following a similar approach as this had proved to be effective.

All ethical considerations were included in the training of the investigator. The importance of obtaining consent, explaining the purpose of the study and ensuring confidentiality were emphasized in the training. An explanation on obtaining the information such as name and address for the purpose of referral, if necessary, and the fact that giving this information was optional, was highlighted.

3.5.5. Ethical concerns

Informed consent was obtained from all participants. Anonymity and confidentiality was ensured.

Ensuring the safety of the participants and interviewer

As it was a culturally sensitive study, all precautions were taken during data collection from the partners of the pregnant adolescent. The area Medical Officer of Health was notified. Data collection from partners of pregnant adolescents was carried out with individuals who had given prior verbal consent to the area midwife or the Public Health Inspector.

After the interviewer administered the questionnaire to the partner of the pregnant adolescent, the interviewer spent a few more minutes with them talking about day-to-day things to ensure that the respondents were not left in a negative frame of mind and to make sure that no unintended distress had been caused by the interview process. On many occasions the respondents commented on how they had enjoyed participating in the survey and several identified that they had greater awareness of the need to give more support to their adolescent partner.

I checked 10 of the 37 tallying partners' questionnaire for the age of the partner mentioned in pregnant adolescent's questionnaire and the age of the pregnant adolescent girls mentioned in the partner's questionnaire. Feedback of the results was given to the interviewer to improve his accuracy. Participant recruitment for Component II of the study continued until the target of 150 partners was achieved with the desired distribution across the MOH areas as per table 3.2.

3.6. COMPONENT III: SCHOOL ADOLESCENTS

3.6.1. Study Population

For this component of the study, the study population was all adolescents aged 16 to 19 years who were studying in classes from Grade 11 to 13 in the government schools in the district of study in the study period 01/01/2010 to 30/06/2010.

3.6.2. Sampling

(a) Inclusion criteria

School adolescents in grade 11 to 13 in the government schools in the Badulla district

(b) Sample Size

A sample size calculation was performed based on the desire to estimate the percentage of adolescents who were sexually active in each school zone with an accuracy of +/- 5. The assumption made, based on recent estimates for Sri Lanka, 30% of adolescents would be sexually active (UNICEF, 2005), Non-response calculated as 25% (Naing *et al.* 2006 advised the non-response to be 15% to 20%. Due to the sensitiveness in the subject 5% more than the upper limits advised by Naing *et al.* 2006) and the required sample size was calculated using the following formula (Lwanga and Lemeshow, 1991):

$$n = \frac{Z^2 P (1 - P)}{d^2}$$
$$n = \frac{(1.96)^2 (30)(70)}{5^2} = 323$$

Assumption of 25 % non-response rate, n =404

Significance level Z score corresponding to an alpha error of 5%

n = Sample size

d = Limit of the accuracy desired or margin of error.

P = Approximate estimate for the proportion of occurrence of event being measured/proportion of interest. The estimated proportion of adolescents who are sexually active 30% (UNICEF, 2004).

Considering that I wanted to analyse the data by gender, the sample size calculated above suggested that I should recruit around 800 students to the sample to achieve the desired precision. However, this was taken as a guide and in practice it was desirable to recruit a reasonable sample size from each school zone in order to satisfy stakeholders within the educational system. I therefore decided to recruit 404 students from each of the five school zones. An equal sample size of boys and girls was aimed for from each school zone as far as possible though no formal stratification was employed across sex.

(c) Sampling frame

The sample frame used for recruitment of respondents was the ‘Register of schools’ of the Department of Education (Uva). Data was collected in all 5 school zones to achieve a representative sample size of both boys and girls (Table 3.3).

Table 3.3: School zones, schools with grade 10 and above, schools the data collected, completed questionnaire by school zone and number entered to data base

School Zone	No. of schools in zone	No. of schools with grade 10 and above	No. of schools data collected	Total completed questionnaires	Average no. of respondents per school	Total questionnaires entered into database
Badulla	177	112	5	613	80	404
Passara	84	46	4	411	100	404
Bandarawe	138	94	4	518	100	404
1						
Mahiyanga	117	65	4	406	100	404
Welimada	115	79	5	460	80	404
Total		396	22	2,408	109	2,020

(Source: Uva education department, 2008)

(d) Selection of school adolescents

There are five school zones in the study district. Firstly the schools with grade 10 to 13 were chosen. The schools were listed zone-wise in alphabetical order. The majority of schools were mixed, with a smaller number of girls-only schools. Secondly, one school was randomly chosen from each school zone and visited for data collection. All boys and girls in the selected schools who were in Grades 11-13 were eligible to take part.

On the day of administering the questionnaire the adolescents who had received parental permission and who themselves were willing to participate were recruited. Following completion of data collection at the first school, a subsequent school was randomly selected and visited, and the process was repeated until the sample size was achieved. Within each zone, schools were visited until a minimum of 404 students completed the questionnaire. The number of respondents recruited per school ranged from a minimum of 80 to a maximum of 110.

Inevitably, due to the school-based sampling approach, we recruited more than the required 404 in each zone (as once a school was selected all willing students then received and completed the questionnaire). In addition, in Badulla zone I faced pressure from several principals to include their school in the study (not taken for this analysis). Therefore, to maintain consistency across the zones and ensure that the random sampling procedure was maintained as far as possible, data entry was stopped after 404 valid questionnaires had been entered for each school zone. Overall, we were more successful in recruiting girls than boys so that the final sample comprised of roughly three quarters girls and one quarter boys. In retrospect, it might have been preferable to include some kind of stratification by sex and to introduce additional measures to ensure that boys were better represented in the sample, but this would have added further complexity to an already resource-intensive study.

An investigation suggested that the reason for fewer boys was not due to large numbers of refusals but rather because fewer boys were present at school due to sports festival, as well as choosing to study at home during the final exam period.

3.6.3. Study instrument

A self-administered questionnaire (Q₃) was the instrument of data collection from the school adolescents.

A self-administered questionnaire was chosen as the data collection tool for this component of the study for two reasons. Firstly because of the anonymity it provided and secondly because it enabled collection of data from a large sample within the available resources.

Tool development was done in several steps. The design of the self-administered questionnaire was carried out using an interactive and iterative process. The multiple steps in the process resulted in part from the concerns raised by the education department which are detailed in chapter 4.

Steps in tool development

Step 1

A thorough literature review was undertaken to identify potential topics of focus.

Step 2

To gain an understanding of the adolescent population of focus from their own perspectives, a group of thirty student leaders was invited to participate in an open discussion session; fourteen boys and sixteen girls participated. After receiving an introductory talk from me on life skills, the adolescents were divided into three groups and the following topics were given for discussion and debate:

1. Challenges faced in adolescent period.
2. Problems encountered in achieving future goals.
3. What should wider society know about adolescents?

The adolescents were given the choice of how to present their conclusions to the rest of the group. One group made a poster, one group performed a drama, and one group wrote four verses. Their presentations provided a wealth of knowledge that informed the content and wording of the self-administered questionnaire for the adolescents.

For example they identified the need to include how they perceived their performance in school as well as the opinion of schooling. Other questions developed through this process included those about home environments and those concerning risk behaviours.

Step 3

The draft self-administered questionnaire was developed in Sinhala and then discussed with Medical Officer (Maternal and Child Health), Medical Officer (Planning), three Public Health Inspectors, two midwives, two teachers and one parent. The purpose of this was to ensure comprehensiveness and suitability.

Step 4

The questionnaire was reviewed by a larger panel of 21 which included educationalists, sociologists, youth workers and parents. The purpose of this was to assess its acceptability for use in an educational setting and to obtain approval from a range of stakeholders. As a result of this consultation, the questionnaire was further modified. The word “intercourse” (“sansargaya”) was removed and the alternative “intimate sexual relationship” (“Sameepa lingika asura”) was introduced. Many questions were kept open-ended as advised by the panel with the stated intention of not promoting sexual activity.

In the final version, the self-administered questionnaire for school-going adolescents (Q₃) comprised open and close-ended questions. In the closed-end questions, opportunity was given for respondents to add any additional views under ‘other’ options to allow for the possibility that the identified options did not cover all possibilities. The questionnaire discussed and approved by the panel was subsequently translated to English and Tamil.

Step 5

Pre-testing of the instrument was done with a group of students (male and female) outside the study area. Feedback from the students indicated that prior to the questionnaire being given out for completion it would be useful to start with a lecture or discussion on “adolescents” as an ice-breaker. Additionally they identified the importance of ensuring that teachers were not present during completion of the questionnaire and assuring respondents that teachers would not have access to the completed questionnaires.

Their views also informed a number of changes to the structure of the questionnaire. For example, the sequence of the questions was adjusted (Examples include: sexual activity questions not to be at the end of questionnaire as this meant there was the possibility of respondents who were answering this section being identified by other students sitting nearby). Extra space was inserted to ensure enough room to write any other responses which were not mentioned in the closed answer options. Additionally, the completion instructions were further refined.

The questionnaire was designed with the filters and codes inbuilt. The guidelines to be followed about how the particular question should be expedited were given in a text box in the questionnaire. Questionnaire Q₃ comprised the following 10 sections (see Annexure 2_C for the full English version).

Self-administered Questionnaire (Q₃)

- Section 1** Respondent's socio-demographic information and information regarding Schooling
- Section 2** Family and connectedness
- Section 3** Religious practice and religiosity
- Section 4** Risk behaviour
- Section 5** Peers and relationships
- Section 6** Sexual experiences
- Section 7** Use of Contraception
- Section 8** Knowledge and attitude to reproductive health
- Section 9** Knowledge, attitude and practice of health and well being
- Section 10** Support and education

3.6.4. Training of investigators and Data collection

For this component of the study, I worked alongside two health educators, one male and one female who had prior experience in data collection. Questionnaires were produced in both local languages paying care to ensure conceptual equivalence.

I trained the two data collectors, giving full explanation of the study objectives, selection of the schools, discussing with school principals of the importance of the study, arranging with the principals the dates for data collection, reminding the

school before the date, providing parent approval letters. Ethical considerations were also included in the training of the investigators. The importance of obtaining the adolescents parental consent, explaining the purpose of the study and ensuring confidentiality were emphasized in the training.

Table 3.3 gives the number of schools by school zones and by Medical Officer of Health area. The students with prior permission from their parents and who were willing to participate were gathered in the school hall. The seating arrangements were arranged as in an examination to prevent collective answering or copying and to ensure privacy (Annexure 6).

3.6.5. Ethical concerns

Permission to participate in the study was sought from both the adolescents themselves and their parents using a letter. One week prior to data collection, the data collectors visited the selected schools, spoke with the Principal and provided study information sheets together with a covering letter and a consent form. These were distributed to the adolescents to discuss with their parents. The adolescents were required to return the signed consent form on the day of questionnaire administration. Verbal reminders were provided. Only the adolescents who presented a signed parental consent form and who themselves were willing to participate (almost 90%) were recruited.

3.7. DATA MANAGEMENT AND CLEANING

This section covers all three components of the study.

The data was initially coded. Missing data was coded as “9”. A sample of coded questionnaires was checked for quality and consistency prior to data entry. The data was then entered into the database. Initial checks were conducted on the database to ensure accuracy. Logical and range checks were done to identify outliers and inconsistent data. Such values were checked with the original questionnaires and corrected where data entry error was found. Double entry was not undertaken due to resource constraints but manual checking did not indicate a high level of data entry error.

All data was transported from the data collection points to the data storage centre in official vehicles. All questionnaires were stored in a locked cupboard. Questionnaires were stored separately from the consent forms. I was the only person who had access to both. Data stored on the computer were identified only by the serial number and were kept on a password-protected computer.

3.8. DATA ANALYSIS

A data analysis plan was developed for each of the three datasets on the basis of the study objectives. I present below the common plan for all three data bases, and provide more detail of the specific analyses undertaken in the findings chapters that follow below.

Descriptive statistics were performed on the background characteristics of the entire samples. These comprised frequency and percentage distribution of the following: demographic and socio-economic characteristics; education, school activities and the school environment etc.

Open-ended questions and direct questions and answers were categorized as “correct” or “incorrect”. Reproductive health knowledge of the respondents was assessed through a range of questions. The respondents answered ‘yes’, ‘no’ or ‘don’t know’ to each of the questions. The knowledge was assessed by asking every question separately. The knowledge was assessed as satisfactory if the respondents answered correctly all the questions selected in the assessment.

To be able to cross tabulate and later for binary logistic regression, the dependent variables were made dichotomous. For example, in the pregnant adolescent data collection, those who clearly said that they had planned their pregnancy were taken as one group. The two categories 'neither planned or unplanned' and 'unplanned' were combined to form the second group. Re-categorisation was done having examined the distribution of the variables and considered the most appropriate groupings to use in relation to the study questions.

The data were analysed separately in relation to dependent variables, Examples include: unplanned pregnancy and underage pregnancy (below 18 years) in the pregnant adolescent; unplanned pregnancy in partner of pregnant adolescent; sexually active girl or boy in school adolescents. The independent variables included were: attitude and response to pregnancy/sexual activity; socio-demographic and education factors; sexual experiences; reproductive health knowledge; sources of information and support to adolescents; knowledge, attitude and practices etc.

Cross tabulation with Pearson chi square tests was done to determine associations between independent variables and the dependent variables. In the cross tabulation, when a cell value was less than five, Fisher's exact test was performed and p value was taken. Unadjusted and Adjusted Odds ratios and 95% confidence intervals were calculated.

Multivariate logistic regression analysis using the dependent variable (for Examples include: underage pregnancy, unplanned pregnancy in the pregnant adolescents' sample) was done to control for confounding factors. Variables with an unadjusted odds ratio and $p < 0.25$ were selected to enter to forward stepwise models. The Pearson correlation (r^2) was examined to identify any issues of multi-collinearity between variables. In the forward stepwise (L.R.) model (SAS, 1989) the model picks the variable with less p value when collinearity exist between variables.

The models were interpreted by the model against a constant only model if showing statistically significant difference, looking at the Chi square value, the significance (p value) and the df. The acceptance of the model was assessed. The Model fitness was assessed by looking at the Hosmer and Lemeshow test (H-L goodness-of-fit) significance. By the Nagelkerke's R^2 value the relationship between determinants and outcomes were assessed. Wald criterion was looked at to find whether determinants are significant. Finally Odds Ratio (OR) indicated the odds of having the outcomes. The odds ratio is a relative measure of risk, telling us how much more likely it is that someone who is exposed to the factor under study will develop the outcome as compared to someone who is not exposed (Westergren *et al.*, 2001).

3.9. OVERVIEW OF LINK BETWEEN BACKGROUND LITERATURE, RESEARCH QUESTIONS AND PROPOSED ANALYSES

Having presented the details of the methodology and methods that I employed, I complete this chapter by summarising in Table 3.4, the key links between the existing literature which I reviewed in chapter 2, the specific research questions to be addressed, and the proposed analyses to be performed.

Table 3.4: Summary of the link between the existing literature, research questions, data set and data analysis to be performed

From the literature	From the data	Data set	Analysis to be performed
The socio-cultural context of adolescent pregnancy varies across time and space. Adolescent pregnancy can be a norm in some cultures (Hingginbottom, <i>et al.</i> , 2006)	What proportion of the pregnant adolescents was married?	I	No and %
	Did they plan their pregnancy?		
	Were they pleased to be pregnant?		
	How well were they supported?		
	Were there differences between the pregnant adolescents <18 compared to ≥18?	I	Cross tab, Chi square, p value, regression analysis, odds ratio
	Were there differences between those who planned and those who did not plan their pregnancy?	I	Cross tab, Chi square, p value, regression analysis, odds ratio
Any differences between the partners of pregnant adolescents who planned their pregnancy and those who did not?	II	Cross tab, Chi square, p value, regression analysis, odds ratio	

Individual and Family variables

From the literature	From the data	Data set	Analysis to be performed
Low socioeconomic status is a predictor of adolescent pregnancy (Bernat and Resnick, (2006) and Resnick (2000); Kirby, (2001); Miller and Moore, (1990).	Is there a difference between the socio economic status of the pregnant adolescents <18 compared to ≥18?	I	Cross tab, Chi square, p value, regression analysis, odds ratio
	Is there a difference between the socio economic status of the pregnant adolescents who planned their pregnancy and those who did not?	I	Cross tab, Chi square, p value, regression analysis, odds ratio
	Is there a difference in socio economic status between sexually active and non-sexually active school adolescents?	III	Cross tab, Chi square, p value, regression analysis, odds ratio
	Is there a difference between socio economic status of school adolescent girls and the pregnant adolescents?	I & III	% difference
	Does unplanned pregnancy occur more frequently in those from minority ethnic populations?	I	Cross tab, Chi square, p value, regression analysis, odds ratio
Having sexually active siblings or pregnant/parenting teenage sister, is associated with a higher risk of adolescent pregnancy. Miller and Moore, (1990) ;Kirby, (2001); East, (1999) and Pogarsky <i>et al.</i> ,(2006)	Among school adolescents, are those who are sexually active more likely to have siblings with children?	III	Cross tab, Chi square, p value, Regression analysis, odds ratio
	Are pregnant adolescents more likely than school adolescent girls to have siblings with children?	I & III	% difference
Having a mother who became pregnant as a teen is associated with adolescent pregnancy (Pogarsky <i>et al.</i> ,(2006) and East, (1999)	Are pregnant adolescents more likely than school adolescents to have mothers who had a teen pregnancy?	I	Cross tab, Chi square, p value Regression analysis, odds ratio
		I&III	% difference

Individual and Family variables

Parents discussion of sexual matters with children can help them face peer pressure Whitaker and Miller, (2000), Stanton and Burns, (2003)	Is there a difference in parent-child communication between those pregnant <18 compared to those ≥ 18?	I	Cross tab, Chi square, p value Regression analysis, odds ratio
	Is there a difference in parent-child communication between those who planned and those who did not plan their pregnancy?	I	Cross tab, Chi square, p value. Regression analysis, odds ratio
	Is there a difference in parent-child communication between school adolescents who are sexually active and those who are not?	III	Cross tab, Chi square, p value. Regression analysis, odds ratio
	Is there a difference in parent-child communication between pregnant adolescents and school adolescents?	I&III	% difference
Parent/child “connectedness” prevent adolescent pregnancy (Bernat and Resnick, (2006) and Resnick, (2000); Kirby, (2001) Miller and Moore, (1990). DeVore and Ginsburg, (2005); Ackard <i>et al.</i> (2006); Renee <i>et al.</i> , (2000); Blum and Rinehart, (1998)	Is there a difference in parent-child relationship between those pregnant < 18 compared to those ≥18?	I	Cross tab, Chi square, p value, Regression analysis, odds ratio
	Is there a difference in parent-child relationship between those who planned and those who did not plan their pregnancy?	I	Cross tab, Chi square, p value, regression analysis, odds ratio
	Is there a difference in parent-child relationship between sexually active and non-sexually active school adolescents?	III	Cross tab, Chi square, p value, regression analysis, odds ratio
	Is there a difference in parent-child relationship between school adolescents compared to pregnant adolescents?	1 & III	% difference

Individual and Family variables

Higher educational levels of parents contribute towards prevention of early pregnancy (Bernat and Resnick, (2006) and Resnick, (2000); Kirby, (2001); Miller and Moore, (1990).	Is there a difference in the level of education between school adolescents who are sexually active and those who are not?	III	Cross tab, Chi square, p value Regression analysis, odds ratio
	Are there educational differences between the partners of planned and unplanned adolescent pregnancies? And those who did not?	II	Cross tab, Chi square, p value Regression analysis, odds ratio
	Is there a difference in parental educational level between school adolescents and pregnant adolescents?	I & III	% difference
Happiness as a teenager and home environment are related to adolescent pregnancy and early sexual activity Harden <i>et al.</i> , (2009); Plan Sri Lanka, (2008); Wijemanna, (2005)	Are pregnant adolescents <18 years more likely than adolescents pregnant ≥18 to be unhappy as teens?	I	Cross tab, Chi square, p value Regression analysis, odds ratio
	Are the pregnant adolescents who planned their pregnancy more likely than adolescents who did not plan, been happy as teens?	I	Cross tab, Chi square, p value. Regression analysis, odds ratio
	Is there a difference in the home environment between school adolescents who are sexually active and those who are not?	III	Cross tab, Chi square, p value. Regression analysis, odds ratio

Sexual experiences

Sexual abuse lead to unwanted adolescent pregnancy McFarlane, (2007); Erdmans and Black, (2008); Noll <i>et al.</i> , (2008)	Are the pregnant adolescents <18 years more likely than the adolescents pregnant ≥ 18 to have had non- consensual first intercourse?	I	Cross tab, Chi square, p value Regression analysis, odds ratio
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Non-consensual intercourse is associated with non-use of contraception Saewyc <i>et al.</i> , (2004)	Are those pregnant adolescents' who planned their pregnancy more likely than those who did not plan their pregnancy to have had consensual first intercourse?	I	Cross tab, Chi square, p value Regression analysis, odds ratio
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	Are the partners who planned their pregnancy more likely than the partners who did not plan their pregnancy to have consensual first intercourse?	II	Cross tab, Chi square, p value Regression analysis, odds ratio
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	Among the school adolescents, what proportion of first intercourse was non-consensual?	III	%
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Schooling

From the literature	From the data	Data set	Analysis to be performed
A relation exist between the school performance of adolescents and with dropping off from school Santelli and Beilensen (1992); Harden <i>et al.</i> ,(2009); Kirby,(2002)	Are there differences in school performance between those pregnant 18 compared to those ≥ 18 ?	I	Cross tab, Chi square, p value, regression analysis, odds ratio
	Is there a difference in school performance between the partners who planned their pregnancies compared to those who did not plan their pregnancies?	II	Cross tab, Chi square, p value Regression analysis, odds ratio
	Is there a difference in school performance between pregnant adolescents and school adolescents?	I & III	% difference
Educational aspirations can act as a protective factor against adolescent pregnancy Hanson <i>et al.</i> , (1987)	Are non-sexually active school adolescents more likely to have career ambitions than those who are sexually active?	III	Cross tab, Chi square, p value, regression analysis, odds ratio
	Are school going adolescents more likely to have career ambitions than pregnant adolescents?	I&III	% difference
Extracurricular activities may have potential benefit to prevent adolescent pregnancy Eccles and Barber, (1999)	Are non-sexually active school adolescents more likely to participate in extracurricular activities/sports compared to those who are sexually active?	III	Cross tab, Chi square, p value Regression analysis, odds ratio
	Are school adolescents more likely to report participation in extra-curricular activities/sports compared to pregnant adolescents?	I&III	% difference

Negative experiences of schooling are associated with early parenthood Santelli and Beilinson, (1992); Harden <i>et al.</i> , (2009)	Are there differences in attitude to schooling between those pregnant <18 compared to those ≥18	I	Cross tab, Chi square, p value, regression analysis, odds ratio
	Are there differences in attitude to schooling between those who planned and those who did not plan their pregnancy?	I	Cross tab, Chi square, p value, regression analysis, odds ratio
	Are there differences in attitude to schooling between sexually active and non-sexually active school adolescents?	III	Cross tab, Chi square, p value, regression analysis, odds ratio
	Are there differences in attitude to schooling between partners who planned and those who did not plan pregnancy?	II	Cross tab, Chi square, p value Regression analysis, odds ratio
	Are there differences in attitudes to schooling between pregnant and school adolescents?	I & III	% difference

CHAPTER 4

REFLECTIONS ON THE RESEARCH PROCESS

In this chapter I provide a personal account of the context within which this study was conducted. Firstly, I explain how my developing interest in adolescent sexual health has been shaped and informed by 27 years of clinical experience leading to my commitment to undertake this study. I then go on to describe the substantial challenges that I faced in undertaking the fieldwork for the study, the measures that I took to address these and the impact that they had on the study itself.

Reflecting back over the course of my career in reproductive health and community medicine, I am mindful of the many experiences and insights that have helped to shape my understanding of the complex nature of adolescent sexuality. A brief overview of some of those which had a profound effect and left a lasting impression on me serves to illustrate my journey.

In the early stages of my career, whilst working as a District Medical Officer in a rural hospital (District Hospital Koslanda), I reviewed a patient who was 32 weeks pregnant and showed no signs of being in labour. During the course of her journey home, she went into premature labour and delivered the baby. In my clinical judgement I had not taken account of the journey she had to take and the terrain that she had to cover to reach her rural village. This incident impressed on me the vital importance of understanding the socio-environmental context of people's individual lives and experiences in medical decision making.

In terms of my developing interest in adolescent sexuality, I recall two incidents that have had a particularly powerful impact on me and underlined my growing commitment to develop services that could support adolescent sexual development and help to protect them from the unwanted consequences of early sexual activity. During the time of my private practice, I remember the case of an 18 year old healthy looking girl, a new entrant to university. She reported missing her menstrual cycle consecutively for 2 months. Though found positive in the pregnancy test, she insisted she was a virgin. In further discussion, she revealed being involved in intercrural sex. At this point, I became aware of the importance of sex education and started to ponder on the lack of adequate information on reproductive health within the educational system.

The potential consequences for those girls who become pregnant were powerfully reinforced by a further incident involving a 16 year old pupil. She was a high achieving pupil with career ambitions and parental expectations. She was an active school prefect who helped us in one of the school health inspections. At the end of the school program she complained of an abdominal pain and so I performed an abdominal examination which revealed a fundus of 14-16 weeks. Though our community based family health worker visited her at home within two weeks, this girl had eloped. This incident reinforced me the extreme vulnerability of those school going adolescents who do become pregnant and the devastating impact of pregnancy on some girls.

One further incident reinforced me the extreme vulnerability of some pregnant adolescents as a result of gender pressures and a lack of autonomy. I had to investigate the death of a 15 year old pregnant girl as the Medical officer of Maternal and Child Health. The dead adolescent was five months pregnant and had succumbed to domestic violence. She was attractive and physically well developed. Her aunt had proposed to the girl's parent's that she would take care of her and help her in her schooling as she did not have any daughter of her own. As a result the girl went to live with the aunt and her cousin. She subsequently became pregnant by her cousin and died as a result of violence inflicted by him.

One final incident made me aware of the rapid changes in the perception of relationships that are occurring among adolescents in my country. I conducted an adolescent school awareness program where the students were given the opportunity to write questions/ doubts about reproductive issues. One of the questions that was asked was, "I thought I am the serious relationship (*in Sinhalese, serious "kalla"*) my boyfriend is having, but recently I understood I am one of the fun relationships (*in Sinhalese, fun "kalla"*) my boyfriend is having; what am I to do?" In an education system where relationships are not accepted in school age, the question indicated changing attitudes towards relationships and an apparent acceptance of a variety of different types of relationships. This was an eye opener for me and gave me an insight into the vital importance of interacting with adolescents and listening to what they have to say in order to understand their perspectives, how they see the world and what their needs are.

These and many other clinical experiences shaped my decision to undertake this study. I was aware of the dearth of research conducted in Sri Lanka and the limited relevance of those that have been conducted elsewhere to the Sri Lankan context. I identified a clear need to address this gap in knowledge, by generating empirical data on the complexities of adolescent pregnancy in Sri Lanka.

My position as Regional Director of Health at that time meant that I was well placed to conduct the study. I had sufficient authority and access to resources that enabled me to conduct a study that was sufficiently large scale that it had the potential to shape and inform national level policy and practice. Having worked over two decades in the district of study in various capacities, I had very well established relationships with all the field health workers and I was able to involve staff who had the necessary skills and expertise to establish trust relationships with and collect data from the study participants. I also had long standing and established relationships with the regional education authorities and many of the important gate keepers in the educational system. At the start of the study, I was acutely aware of the sensitivity of the subject that I wished to research and anticipated that I would encounter some difficulties. However, I did not anticipate the degree of resistance that I encounter and the potential consequences that this would, not only on the study itself, but on study participants and the health care staff working in this area.

In order to undertake the study, I was required to gain ethical approval from the Sri Lanka Medical Association and approval to undertake the study from the National Ministry of Health. Obtaining these was straightforward. Additionally, because part of the study was to be conducted in schools, I needed the approval from the National Ministry of Education. This was highly problematic and I faced many obstacles in the initial stages of the study. The National Ministry of Education is responsible for the overall management of the education system in the country. There are two systems of management of the Provincial schools. There are nationally managed schools and provincially managed schools. In 1992, 25 'most popular schools' in the district of study was acquired by the National Ministry of Education. Tamil speaking schools Saraswithi (Badulla), Passara Maha Vidyalaya (Passara), Gurthalawa Muslim school (Welimada) were among them. National schools are managed directly by the National Ministry of Education. The Provincial schools are under the management of the Provincial Education Ministry. However, the Provincial Director of Education liaises

between the National and Provincial education systems to provide an accessible quality education to all students in the province. Approval from the Provincial Education Ministry was taken. However, the central education Ministry did not want to give me written permission to administer the questionnaire to school adolescents since it was considered suitable only for the students in the universities. The inclusion of questions related to reproductive health was considered inappropriate for the school adolescents. In order to overcome this difficult situation, I had many discussions with the provincial heads including the Provincial Minister of Education and the Provincial Secretary of Education to convince them of the need to ascertain the views and experiences of school-aged adolescents. The solution arrived at was the convening of a panel to review the questionnaire with the District Secretary taking the leadership. This was possible due to the administrative decentralisation and devolution of power under the 13th amendment in Sri Lankan constitution creating provincial councils in 1989. The powers of the local administration were given to the Divisional Secretariats in 1991 renaming the Government Agent as the District Secretary under whom the Divisional Secretaries were placed.

Devolving the responsibility to the level of the District secretary resulted in two outcomes. The first of these was increased involvement of key stakeholders in development of the questionnaire. The District Secretary (Government Agent) Badulla appointed a team of 21, including himself and the Provincial Director of Education, to review the draft Sinhala questionnaire. Officers from the medical field, educationalists, and sociologists, officials from youth services and social services as well as parents were in this team. As a result of their input the questionnaire was modified. The word “intercourse” (in Sinhalese, “sansargaya”) was removed and the alternative term “intimate sexual relationship” (in Sinhalese, “Sameepa lingika asura”) was introduced. Many questions were kept open-ended as advised by the panel with the stated intention of not promoting sexual activity. In the final version, the self-administered questionnaire for school-going adolescents (Q₃) comprised open-ended and close-ended questions. In the close-ended questions, opportunity was given for respondents to add any additional views under ‘other’ options presuming that the identified options did not cover all possibilities.

The second outcome that resulted was that the project came to the attention of the media. A forum was held to present details of the proposed study to selected officials with the leadership of the Government Agent/District secretary. The Provincial Director of Education, other officials from the Department of Education, officials from the Department of Health, three parents and a small number of sociologists attended this meeting. The meeting was picked up by media personnel. A journalist interviewed the Government Agent and publicised information about the project in newspaper articles and television reports. The angle that they took in the report was to focus on adolescent pregnancy as a problem in the district of data collection. To compound the problems, a national level government official at the same time went on air and said that the legal age at marriage is 18 years and that marriage registrars who marry girls under 18 years should be punished.

Two things occurred as a result of this. Firstly, there was a tightening of the regulations around eligibility for marriage. Registrars started to request proof of age documentation from girls who wished to marry. Secondly, the law enforcement officers started to focus attention on the midwives who provide antenatal care to underage girls. A situation developed whereby whenever the police became aware that a midwife had been providing care to an underage pregnant adolescent, police required the midwife to come to the police station and give a statement. During one of these occurrences, one of the midwives was humiliated by a female member of the police force who accused her of condoning sexual activity by providing contraceptives to children.

In my position as Provincial Director of Health, I managed to stop this harassment in my province by speaking to the DIGs (District Inspector Generals) so that the midwives would be able to continue providing services to this vulnerable population. Nevertheless, legal enforcements continued for many months in other provinces of the country and in some instances the authorities went as far as to remand the partners of adolescent pregnant girls.

In response to the situation, the coordinator of Family Health Bureau and the Director of Maternal Child and Reproductive Health in Sri Lanka drafted a letter dated 21/12/2010 (Annexure 4_A). It advised that underage pregnancy was a child protection issue which needed to be managed within the appropriate framework. It also emphasised the requirement of the health personnel to report those pregnant under 16

years to the child protection authority in order that they could be managed within the appropriate legislative framework. The midwives were able to use this letter as support for their course of action when they were interrogated for breaking the law. A subsequent letter from the attorney general (Annexure 4B) provided further clarification stating that only sexual abuse to be reported to the police. However, this highly complex and contentious issue continues to provide difficulties for the health personnel working in this area.

This situation had a serious impact on my data collection, as it became hard to collect data from partners of the adolescent pregnant girls. When the data collectors attempted to recruit them to the study, many of them were very reluctant to participate because they were fearful of potential legal ramifications of providing detailed information about themselves. These fears were well founded; during the study period several partners of adolescent pregnant girls were arrested in other parts of the country and there was a great deal of media attention on the issue.

As a result of the extreme negative publicity that the study attracted, it proved impossible to recruit a sufficient number of respondents from among the partners of the pregnant adolescents who had already been successfully interviewed. This made the data collection very sensitive and for a few months we decided to halt the data collection. During this period, some of the already interviewed pregnant adolescents gave birth and their partners therefore became ineligible for inclusion in the study. In addition, several partners of the adolescents were in the Armed Forces and therefore were difficult to recruit because they were only in the area for short periods of time during vacation.

This combination of factors meant that less than 50% of identified partners of adolescent girls already interviewed were recruited after several months of fieldwork. I therefore took a pragmatic decision to extend recruitment to include partners/husbands of any pregnant adolescent within the particular community based primary health care area named the Medical Officer of Health (MOH) area, who gave their consent. In this way, over an extended period of field data collection, we were able to recruit sufficient men to fill the gap created by the refusals and achieve the target sample of 150 partners/husbands distributed across the MOH areas as originally planned. While this approach inevitably meant that I did not achieve a sample of men

matched with their pregnant female partners (just 37 being of this type), it did ensure that I had a sufficient number of male partners to conduct meaningful analyses for this component of the study.

Although there were considerable difficulties associated with conduct of the study, there are many positive effects that have come out of the situation in terms of the project and the wider situation. There is work that has been triggered around the country giving greater legal clarity around underage sex and the importance of a clear framework that health professionals can work within. There is now greater clarification of legal boundaries in place which provides better legal protection for the professional and those they are working with.

To get the approval for my data collection in the Provincial schools a wide range of stakeholder interaction took place. This provided fruitful discussion around adolescent sexuality. This meaningful relationship was absolutely critical in terms of taking work forward in this area and has led to the development of productive alliances and collaborative working relationships.

The difficulty that arose in the partners' data collection also can be considered as an opportunity to expand the sample. From the pregnant adolescents, few variables regarding their partners were collected. As detailed in Chapter 3, 117 of the 150 males were not affiliated with the pregnant adolescents used in the study as only 37 of the partners of these pregnant adolescents were able to participate. As all the 150 males were not the partners of pregnant adolescents in the study, we were able to expand the study sample by including a further 117 (150-37) partners of pregnant adolescents into the study. With all the difficulties faced, more information about more pregnant adolescents and their partners was achieved at the end of the research.

The learning opportunity that I and my team received through this study process is invaluable. I held a group discussion to understand the lessons learnt from this study with the data collectors and the Medical officers of Maternal Health (One is the Deputy Director of health in Badulla district at present) who were involved in the study from the beginning. The key themes emerged were the attitude change which occurred, the sensitiveness and the shift of health care to sexually active and adolescent pregnant girls resulted from the study. Prior to data collection there was a view that adolescent

pregnancy resulted from a biological necessity coupled with risky adolescent behaviour, some had also been aware of the socio-economic and familial factors surrounding the subject. All have taken forward a healthcare agenda that recognises and responds to the adolescent perspective in the scope of their work. I detail a few of the interventions that were initiated as a result of this study in the discussion section of this thesis.

The journey of my PhD thus became one of challenges and one with self-satisfaction and full of happy memories. The beneficiaries of the study will not only be the ones who were directly involved in the study but all the health workers and the future adolescents.

SECTION - 02

CHAPTER 5 – FINDINGS FROM PREGNANT ADOLESCENTS

(COMPONENT I)

CHAPTER 6 - FINDINGS FROM PARTNERS

(COMPONENT 11)

CHAPTER 7 - FINDINGS FROM SCHOOL ADOLESCENTS

(COMPONENT III)

CHAPTER 5

FINDINGS FROM PREGNANT ADOLESCENTS (COMPONENT I)

INTRODUCTION

In this chapter, I present the findings from the analyses of the interviewer-administered questionnaire with pregnant adolescents. I will be addressing the following research questions in this chapter: What are the socio-economic and demographic characteristics of pregnant adolescents? What knowledge, attitudes and practices relating to sexuality and reproduction are found among pregnant adolescent girls? Are there differences in the characteristics of pregnant adolescent girls aged younger than 18 years and those pregnant adolescent girls aged 18 years and above? Are there differences in the characteristics of pregnant adolescent girls who report that they planned their pregnancy (intended) and those who did not plan their pregnancy (unintended)? And lastly, what are the factors that may increase the likelihood of unintended adolescent pregnancy?

The results are presented in two parts. First, general background information on the 450 pregnant adolescents is presented to provide an overview of their individual and family characteristics. Next, I focus on the analysis of the 409 adolescents who were in their first pregnancy and examine a range of variables that are potential predictors of adolescent pregnancy. This second part of the chapter also draws comparisons between those adolescents who were aged under 18– the legal age at marriage – and those that were aged 18 years or over at the time of the survey, as well as between those adolescents who said they had planned their pregnancies with those who had not planned their pregnancy.

5.1. BACKGROUND DESCRIPTIVE CHARACTERISTICS OF THE SAMPLE OF PREGNANT ADOLESCENTS

5.1.1. Study population, demographic and socio-economic characteristics

Table 5.1 shows the proportion of the sample of pregnant adolescents interviewed by Medical Officer of Health (MOH) area. The largest proportion of the sample collected for analysis 63 (14%) came from Welimada MOH area and the lowest (3 %) from Soranathota MOH area. The sample was drawn in proportion to the previous year <20 years birth rate by MOH area.

Table 5.1: Distribution of adolescent pregnant mothers by MOH area

MOH area	Frequency	% Distribution
Badulla	29	6.4
Bandarawela	34	7.6
Ella	27	6.0
Giradurukotte	32	7.1
Haldumulla	18	4.0
Haliella	48	10.7
Haputhale	20	4.4
Kandakatiya	15	3.3
Mahiyanganaya	37	8.2
Meegahakiula	18	4.0
Passara	26	5.8
Ridimaliyadha	31	6.9
Soranathota	12	2.7
Uva Paranagama	40	8.9
Welimada	63	14.0
Total	450	100.0

Respondents were asked to report their current age in completed years and this was cross-checked against their reported date of birth, both of which tend to be reasonably accurately reported in Sri Lanka. As shown in table 5.2, the age of the pregnant adolescents ranged from 14 to 19 years (mean =17.93, SD = 1.03) in the sample collected; one hundred and thirty of the respondents (29%) were under the age of 18 years, including four who were 14 years of age.

As expected, given their dominance in the population more generally, the largest ethnic group represented in the study sample was Sinhalese (344, 76%), with 54 (12%) of the sample, reporting themselves as Tamil and 52 (12%) as Moor. In fact, the percentage of Moors and Tamils represented in the sample is slightly higher than their percentage among the adolescent female population more generally, suggesting a higher rate of adolescent pregnancy among these groups than among the Sinhalese.

There is a close overlap between ethnicity and religion in Sri Lanka. The great majority of the Sinhalese respondents reported their religion as Buddhism and the great majority of the Tamil respondents reported Hinduism as their religion, with just one respondent and two respondents from each ethnic group respectively identifying themselves as Christian/ Catholic. All the Moor respondents identified their religion as Islam.

The majority of respondents (391, 87%) reported that they were married at the time of the interview, though this was found to vary by both age and ethnic group. Thus, while 97% of the respondents who were aged 18 years or over reported themselves to be married, this figure was just 62% among respondents who were aged under 18 years. Among the respondents who reported themselves as Moor, 100% were currently married, compared to 88% among the Sinhalese and 70% among the Tamil respondents. This is an important difference reflecting the fact that Sri Lankan Muslims can be excluded from the standard age at marriage regulation because the Muslim Marriage and Divorce Act of 1951 states that a girl must be 12 years of age or have a Quazi's permission to marry before contracting into marriage. This is applicable only for Muslims in Sri Lanka (Legal profile Sri Lanka, 2011). The distribution of pregnant adolescents according to their reported family income level at the time they met their partners/husbands is also shown in table 5.2. Sixty eight (15%) of the respondents said they had a deficit financial situation, while 198 (44%) reported 'break even' (income and expenses were almost equal), and 184 (41%) reported surplus enough to save.

Table 5.2: Socio-economic and demographic characteristics of the pregnant adolescents

Characteristic	Frequency	% distribution
<i>Age in years</i>		
14	4	0.9
15	5	1.1
16	32	7.1
17	89	19.8
18	166	36.9
19	154	34.2
<i>Marital status at the time of interview</i>		
Married	392	87.1
Living together	53	11.8
Single, never married	5	1.1
<i>Ethnicity</i>		
Sinhalese	344	76.4
Tamil	54	12.0
Moor	52	11.6
<i>Religion</i>		
Buddhism	343	76.2
Hinduism	50	11.1
Islam	52	11.6
Catholicism/Christianity	5	1.1
<i>Family income at the time of meeting partner</i>		
Deficit	68	15.1
Break even	198	44.0
Surplus, able to save	184	40.9
Total N	450	100

5.1.2. Education, literacy, school activities and the school environment of the pregnant adolescent

Respondents were asked a series of questions relating to their school experiences and educational achievement. Overall, as shown in table 5.3, respondents reported positive experiences and outcomes, typical of girls' educational achievement in Sri Lanka. Just six (1%) pregnant adolescents had no formal education, with the majority of respondents (57%) reporting that they had been educated to above grade 10. Similarly, around 90% of respondents were found to be able to read easily when given a simple text in their own language to read, while thirty (7%) could not read at all. Over 82% of respondents reported that they liked school 'very much' and over 40% had an opinion that their school performance was 'excellent' or 'above average' in the last class attended. A large proportion of the sample (68%) also reported engagement in extra-curricular activities including sports.

Table 5.3 Distribution of pregnant adolescents according to their level of education, literacy and their opinion regarding schooling and performance in last class

Characteristics	Frequency	% distribution
<i>Educational level</i>		
No formal education	6	1.3
Grade 1-5	16	3.6
Grade 6-10)	171	38.0
GCE(O/L) or equivalent	237	52.7
GCE (A/L) or equivalent	20	4.4
<i>Literacy level</i>		
Can read easily	403	89.6
Can read with difficulty	17	3.7
Cannot read at all	30	6.7
<i>Opinion of schooling</i>		
Like very much	373	82.9
Enjoy to some extent	32	7.1
Neither like nor dislike	30	6.7
Dislike	8	1.8
Did not attend school	7	1.5
<i>Opinion of adolescent on her performance in her last class</i>		
Excellent	44	9.8
Above average	150	33.3
Average	191	42.4
Below average	58	12.9
Did not attend school	7	1.6
Total	450	100

5.1.3. Characteristics of the mother and father of the pregnant adolescent

The respondents were also asked for details about their family living arrangements and their parents' characteristics. Reported age of mothers ranged from 31 to 67 years of age, whilst fathers' ages ranged from 32 to 72 years. Fifty three respondents (12%) were unable to state their father's age. Almost all respondents reported that both their father and mother were currently married (99%) and that they were living with their mother (93%) and father (95%) at the time they met their partner/husband. In a small number of cases where respondents had not been living with their parents, this was due mainly to the parent living abroad or working far from home. As shown in table 5.4, 35% of respondents reported their mothers' age at marriage to be under 18 years, while 59% reported it to be 18-29 years (the range being from 14 to 33 years). Reported ages at marriage for fathers were, as expected, older, ranging from 16 to 42 years, with 64% of respondents stating that their father got married between the ages 18 and 29 years.

Respondents' reports of their parents' educational status showed that mothers and fathers tended to be less educated overall than the respondents themselves, reflecting rising educational achievement over the generations. Nevertheless, 58% of mothers and 52% of fathers had attended secondary school.

Table 5.4: Summary distribution of variables describing father and mother of pregnant adolescent

Characteristic	Mother n=449*		Father=449*	
	No.	%	No.	%
<i>Marital status of the parents</i>				
Currently married	445	98.8	445	98.8
Separated/divorced	4	0.8	4	0.8
No longer alive	1	0.4	1	0.4
<i>Age at marriage of the parents</i>				
<18	158	35.1	26	5.9
18-29	266	59.2	286	63.6
≥30	14	3.1	69	15.4
Don't know	11	2.6	68	15.1
Range	14 to 33		16 to 42	
<i>Educational level of the parents</i>				
No formal education	70	15.6	59	13.1
Grade 1-5	120	26.7	84	18.7
Grade 6-10	143	31.9	171	38.1
O/Level and above	75	16.7	70	15.6
Don't know	41	9.1	65	14.5
<i>Adolescent living with parents when she meets partner/husband</i>				
Yes	418	93	426	95
No	31	7	23	5
Total	449*	100	449*	100

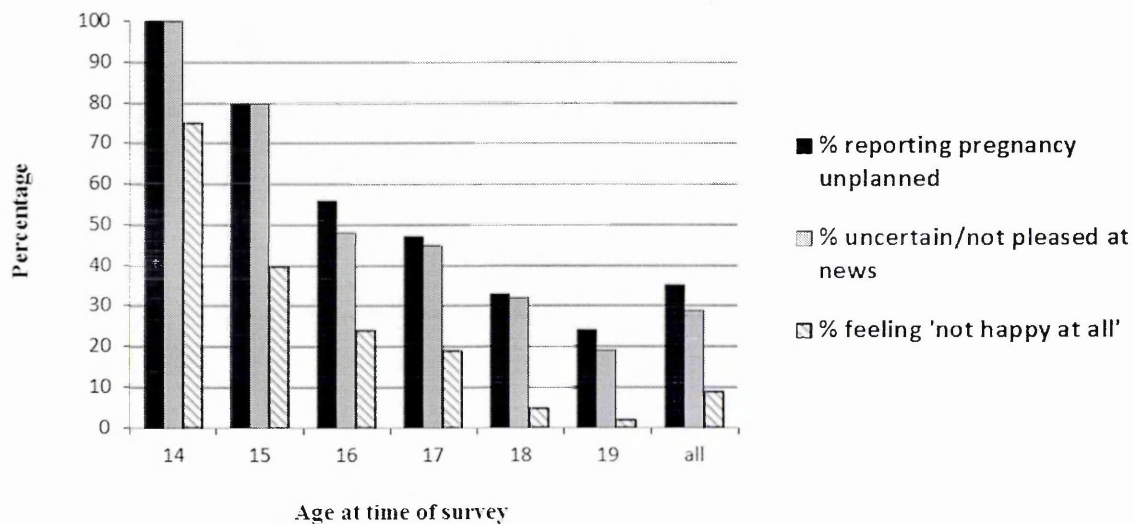
*One deceased

5.1.4. Stage of pregnancy, attitudes and responses to pregnancy

Of the 450 respondents, 409 were pregnant for the first time. All the fourteen and fifteen year old pregnant adolescents were in their first pregnancy, whereas 29 (91%) of the 16 year olds, 83 (93%) of the 17 year olds, 152 (92%) of the 18 year olds and 136 (88%) of 19 year olds were pregnant for the first time. At the time of the survey 117 (26%) pregnant adolescents were less than 12 weeks pregnant, 236 (52%) between 13 and 28 weeks, 39 (9%) between 29 and 32 weeks, 34 (8%) between 33 and 36 weeks and 24 (5%) were in their last month of pregnancy.

All respondents in the survey were asked a series of questions aimed at ascertaining whether the pregnancy was intended or not and how it had been received by the young woman herself and her family. Figure 3 below plots three variables side-by-side: the percentage of respondents who reported that their pregnancy was unintended/unplanned (including the small number of 34 (8%) who reported 'neither planned nor unplanned'); the percentage who reported that they were uncertain or were not pleased by the news of pregnancy; and the percentage who reported that since being pregnant they were feeling 'not happy at all', for the sample overall and according to the age of the respondent.

Figure 3: Responses to pregnancy by age of the respondent at the time of survey



Overall, 263 (64%) respondents stated that their current pregnancy was planned and intentional, with 34 (8%) reporting that the pregnancy was 'neither planned nor unplanned' and 112 (28%) stated that it was unplanned. However, it can be seen in figure 3 that there was a strong association with age. While 100% of respondents aged 14 at the time of the survey reported that their pregnancy was not intended, on not planned or uncertain, this percentage drops sharply to less than 80% for the 15 year olds and then steadily declines across the ages to around 25% for respondents aged 19 years. Looking at the figures for the sample overall, it can be seen that the percentage reporting that they were uncertain or not pleased at the news of the pregnancy is less than the percentage for whom the pregnancy was unplanned (29% compared to 35%), and that the percentage reporting that they are 'not happy at all' since being pregnant is lower again at 9%, while 12% were ambivalent. Indeed, 79% of the sample reported that they were 'very happy' since being pregnant, suggesting that for a majority of the adolescents pregnancy was not seen as a problem and that even for those that had not planned their pregnancy, most had subsequently adjusted to their situation. It is important to highlight, however, that the findings paint a different picture for the young girls in the sample. As shown in figure 3, among the 14 year olds 100% were uncertain or not pleased by the news of their pregnancy and 75% were 'not happy at all'; the figures for the 15 year olds were for 80% both uncertain or not pleased and 'not happy at all'. It was also revealed that 26 (6%) respondents who were in their first pregnancy wished to get rid of the pregnancy and 10 (2%) reported actually trying to do so. Table 5.5 shows that some girls in all the age-groups reported wishing to get rid of the pregnancy; this being the case for 75% of those aged 14 years of age, declining to 8% at age 17 and to just 1% at age 19 years. Pregnant adolescents who report having tried to get rid of the pregnancy is a matter of concern as abortion is not generally legal in Sri Lanka, being only legally sanctioned when the mother's life is endangered due to the pregnancy.

Table 5.5: Pregnant adolescents reporting that they wished and had tried to get rid of the pregnancy by age

Variable	Age in years						
	14 N=4	15 N=5	16 N=32	17 N=89	18 N=166	19 N=154	All N=450
N(%)Wished to get rid of pregnancy	3(75)	1(20)	5(16)	7(8)	8(5)	2(1)	26(6)
N (%) Tried to get rid of pregnancy	2(50)	0(0)	2(6)	3(3)	3(2)	0(0)	10(2)

5.2. EXPLORING POSSIBLE PREDICTORS OF ADOLESCENT REGNANCY AMONG THOSE PREGNANT FOR THE FIRST TIME BY CROSS TABULATION

Having presented some background information on the total sample of 450 pregnant adolescents who participated in the survey and further having described the extent to which these pregnancies were planned and welcomed, I now consider a number of factors that may help describe in more detail the context within which these girls became pregnant.

In this part, the 41 pregnant adolescents who were not in their first pregnancy have been excluded as their age and intention in their first pregnancy could have been different. The analyses that follow are therefore based on the 409 women for whom this pregnancy was their first.

From the 409 first time pregnant adolescents, there were 288 (70%) adolescent girls whose ages were 18 and over. There was a sub group of the adolescent population 121 (30%) who were younger than 18 years. Further, among the 409 first time pregnant adolescents there were 263 (64%) adolescent girls who said they planned their pregnancy. There was a sub group of the adolescent population 146 (36%) who said their pregnancies were not planned.

Further analysis will be done by cross tabulation to explore the factors that distinguish between the two groups, by the two outcomes,

1. Pregnant adolescents by age category
2. By intention (planning) of pregnancy.
3. By partner variables

5.2.1. Exploring possible predictors of adolescent pregnancy among those pregnant for the first time, including comparisons between adolescents, those who are younger (<18 years) and those who are older (18+ years)

More in depth examination is undertaken to explore whether factors differ between the pregnant adolescents who were younger and those who were older. Figure 3 showed a gradual decrease with age in the percentage of adolescents who reported negative responses to pregnancy. There was a suggestion that the 14 and 15 year olds stand out from the rest of the sample as being less likely to be married and particularly unlikely to have planned and welcomed their pregnancy. However, the small number of adolescents aged 14 and 15 makes it difficult to explore their characteristics in detail separately and I therefore chose to categorise the adolescents into those aged under 18 and those aged 18 years or over. Eighteen years of age is also justified as the cut-off because this is the current legal age at marriage and childbearing outside of marriage is widely proscribed in Sri Lankan society.

Attitude and responses of adolescents to pregnancy

Table 5.6 presents the variables relating to planning and reception of the pregnancy for the 409 adolescents as a whole and for the two age-groups compared. As already described, the majority of adolescents reported that they had planned their pregnancy (64%) and that they welcomed the news of being pregnant (71%). Comparisons between the two age groups confirmed that more of the older group expressed positive attitudes and mood in pregnancy. The differences between the two groups were highly statistically significant. Of particular note is that while just 3% of the older group reported not feeling happy at all in pregnancy, this figure was 23% among the younger

women. Close to 6% of the younger group reported attempting to get rid of their pregnancy compared to around 1% of the older group.

Table 5.6: Attitude and response to pregnancy among 409 first-time pregnant adolescents by age-group

Variable	Total N=409		<18 years N=121		≥18 years N=288		χ^2	P
	N	%	N	%	N	%		
Intention of pregnancy								
Pregnancy planned	264	64.5	58	47.9	206	71.5	20.69	<0.001
Reaction to pregnancy								
News of pregnancy welcomed	291	71.1	61	50.4	230	79.9	35.91	<0.001
Wished to get rid of the pregnancy	23	5.6	4	3.3	19	6.6		0.56†
Attempted to get rid of the pregnancy	10	2.4	7	5.8	3	1.1		<0.001†
Feeling happy during pregnancy								
Feeling very happy	323	78.9	74	61.1	249	86.5	32.77	<0.001
Feeling somewhat happy	49	11.9	19	15.7	30	10.4	2.25	0.13
Feeling not happy at all	37	9.2	28	23.2	9	3.1	41.38	<0.001

†Fisher's exact test

(1) Socio-demographic and education factors

I turn first to examine some of the socio-demographic and educational factors that may be predictors of adolescent pregnancy, namely ethnicity and education of the first time pregnant adolescent. I present here only the most relevant for discussion.

Among the total 409 pregnant adolescents, 12% were Tamil and 12% Moor. This was 16% and 17% among the younger group respectively, and 10% and 9% among the older age-group, a difference that was statistically significant ($p < 0.001$) compared to the Sinhalese ethnic majority.

As shown in table 5.7, there was no significant difference between the educational levels of the two age groups. However the younger adolescents had a significantly lower literacy level, ($p < 0.001$). This finding clearly poses the question of the level of education some of the younger pregnant adolescents have received as there seem to be students who had completed their primary level of schooling but remained unable to

read. This corresponds well with the next question analysed as there was a statistically significant difference with the opinion of schooling ($p=.003$). The younger adolescents said they neither liked school nor disliked school more than the older adolescents. Furthermore, the younger adolescents did not have an ambition of a career with a statistically significant difference with the older ($p=0.02$).

Table 5.7: Ethnicity, literacy, level of education, opinion of schooling and ambition among first-time pregnant adolescents by age-group

Variable	Total N = 409		< 18 Years N = 121		≥ 18 years N = 288		χ^2	P
	N	%	N	%	N	%		
<i>Ethnicity</i>								
Sinhalese	313	76.6	81	66.9	232	80.6	8.991	0.001
Tamil	48	11.7	19	15.7	29	10.1		
Moor	48	11.7	21	17.4	27	9.4		
<i>Literacy</i>								
Read easily	371	90.7	101	83.5	270	93.8	10.68	0.001
Read with difficulty	38	9.3	20	16.5	18	6.2		
<i>Educational Level</i>								
Less than five	6	1.5	2	1.7	4	1.4	2.73	0.255
Secondary	386	94.4	117	96.7	269	93.4		
Advance level	17	4.2	2	1.7	15	5.2		
<i>Opinion of schooling</i>								
Liked very much or enjoyed to some extent	339	82.9	90	74.4	249	86.5	8.76	0.003
Neither like nor dislike or disliked	70	17.1	31	25.6	39	13.5		
<i>Ambition of a career</i>								
Had an ambition	258	63.1	66	54.5	192	66.7	5.375	0.02
No ambition	151	36.9	55	45.5	96	33.3		

(2) Growth, puberty and sexual experiences of pregnant adolescent

As reported in table 5.8, the reported age at menarche in the sample of respondents ranged from 6 to 17 years, with a mean of 12.8 years and a standard deviation (SD) of 1.6. Around 15% reported having had their menarche before twelve years of age. Using a cut-off of 12 years, a comparison showed that those pregnant adolescents who were aged 18 years and older were significantly less likely to have had menarche under 12 years than those younger than 18 ($p < 0.001$).

Table 5.8: Age at menarche, first sexual experience and first intercourse among first-time pregnant adolescents by age-group

Variable	Total N=409*		< 18 years N=121		≥18 years N=288		χ^2	P
	N	%	N	%	N	%		
<i>Age at menarche of the pregnant adolescent</i>								
≤ 8 years	11	2.7	6	4.9	5	1.7		
9 -11 years	49	12.0	20	16.5	29	10.1		
≥12 years	349	85.3	95	78.6	254	88.2	5.63	0.01
<i>Age at first sexual experience</i>								
<16 years	62	15.1	37	30.6	25	8.7	31.69	<0.001
≥16 years	347	84.9	84	69.4	263	91.3		
<i>Age at first sexual intercourse</i>								
<16 years	28	6.9	24	19.9	4	1.4	45.35	<0.001
≥16 years	381	93.1	97	80.1	284	98.6		

**Chi squared test was performed on the cross-tabulation of the binary categorised variable' <12 years with ≥12 years and current age <18 years versus ≥18 years.

The reported age at first sexual experience (kissing, cuddling, petting etc.) and the age at first sexual intercourse were categorised as: age below 16 years and 16 years and above. In the total sample analysed, the reported age of the adolescent at her first sexual experience ranged from 13 to 19 years (mean age 16.6; SD 1.2), and 15% reported their first sexual experience at under 16 years. Among the older age-group, age at first sexual experience also ranged from 14 to 19, but just 9% reported that this had happened at under 16 years, whereas among the younger age-group, 31% reported their first sexual experience at under 16 years. The pattern was even more striking for age at first sexual intercourse, with 7% of the total sample reporting this at under 16 years. Only 1% of the older group had their first sex before 16 years as compared to the younger group (20%) of having sex earlier, this was a highly statistically significant difference.

Figure 4 Distribution of pregnant adolescents by age at first sexual experience and age at first sexual intercourse

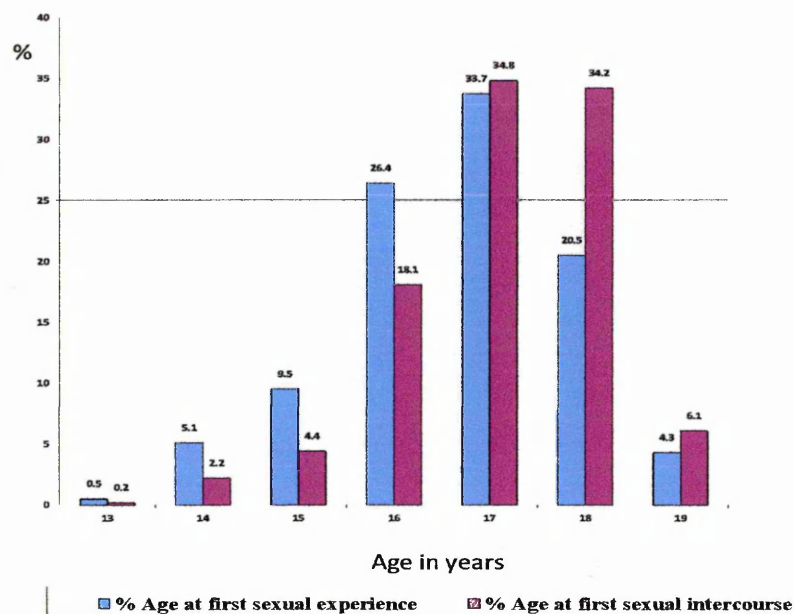


Figure 4 shows the distribution of age at first sexual experience and age at first sexual intercourse by single year of age for the whole sample of 409 adolescents. It can be seen that first sexual experience and intercourse ranged from 13 to 19 years. Highest percentage of first sexual experience (initiation of sex) is reported at the ages of 16 and 17 years while first sexual intercourse is reported at 17 and 18 years.

I turn now to consider the respondents' reports regarding the circumstances of, and their reactions to, their first sexual experiences (Table 5.9). Overall, the picture is predominantly one of young women who were willing participants in these sexual encounters. As shown in Table 5.9, when the total sample was considered, 385 (94%) adolescents stated that they planned their first sexual experience to happen, and slightly fewer - (378, 92%) - wanted the first intercourse to happen. A small minority reported not wanting their first sexual experience (9, 2%) and slightly more (10, 2%) not planning their first sexual intercourse to happen.

The first sexual experience was forced upon three adolescents and the first sexual intercourse was forced upon five of the adolescents in the sample.

Similarly, just 12 (3%) respondents reported that they regretted having their first sexual experience and 15 (4%) that they regretted having their first sexual intercourse (Table 5.9). However, it is important to note that the attitudes expressed by the pregnant adolescents in relation to first sexual experience and first sexual intercourse significantly differed ($p < 0.05$) between the two age groups, with the younger group being more likely to express negative feelings/responses (Table 5.9).

Table 5.9: Distribution of pregnant adolescents according to attitude at first sexual experience and first intercourse by age-group

Variable	Total N=409		<18 years N=121		≥18 years N=288		χ^2	P
	N	%	N	%	N	%		
<i>Whether adolescent wanted the first sexual experience</i>								
Wanted to happen	385	94.2	109	90.1	276	95.8	5.09	0.02
Was not sure	12	2.9	5	4.1	7	2.4		
Did not want	9	2.2	6	5.0	3	1.0		
Happened forcefully	3	0.7	1	0.8	2	0.7		
<i>Pregnant adolescent reflecting how she felt after her first sexual experience</i>								
Glad it happened	378	92.4	107	88.4	271	94.1	3.90	0.05
Was not sure	19	4.6	7	5.8	12	4.2		
Regret	12	2.9	7	5.8	5	1.7		
<i>Whether adolescent wanted the first sexual intercourse</i>								
Wanted it to happen	379	92.7	104	86.0	275	95.5	11.37	<0.001
Was not sure	15	3.7	5	4.1	10	3.5		
Did not want	10	2.4	08	6.6	02	0.7		
Happened forcefully	5	1.2	4	3.3	1	0.3		
<i>Pregnant adolescent reflecting how she felt after her first sexual intercourse</i>								
Glad it happened	375	91.7	102	84.3	273	94.8	12.28	<0.001
Was not sure	19	4.6	07	5.8	12	4.2		
Regret	15	3.7	12	9.9	3	1.0		
<i>Pregnant adolescent reflecting how she feels about age at first intercourse</i>								
Too young	280	68.5	112	92.6	168	58.3	46.1	<0.001
About right	122	29.8	08	6.6	114	39.6		
Other	07	1.7	01	0.8	06	2.1		

Chi square tests were performed on the cross-tabulation of the binary categorised variables 'wanted it to happen and 'not sure' versus 'did not plan/happened forcefully' and 'glad it happened' and 'not sure' versus 'regret' and 'too young' versus 'about right/other' against current age < 18 versus 18+ years.

Interestingly, however, the respondents' current reflections on the age at which they had had their first sexual intercourse showed a somewhat different picture. From the total sample, 280 (68%) felt that they had been 'too young' when they had their first sexual intercourse (Table 5.9). Again, a significant difference emerged between the younger and older groups, with 58% of the 18 years and over group expressing this opinion compared to 92% of those aged under 18 years ($p < 0.001$).

Respondents were also asked about their attitude towards sexual intercourse before marriage, and here, a number of the sample expressed opinions that clearly conflicted with their own behaviour. Overall, 97% said that they did not think sexual intercourse before marriage was acceptable, with the proportions being very similar in both the younger (98%) and the older (97%) groups (Table 5.9).

Given the somewhat contradictory responses that some respondents gave, it is interesting to examine their own explanations for why they engaged in sexual intercourse the first time. Respondents were asked an open-ended question: ‘So, thinking about the first time you had sexual intercourse willingly, what motivated you to plan to have sexual intercourse that first time?’ and the open ended responses were coded manually. Table 5.10 presents the responses given and illustrates that around 44% of respondents gave reasons other than already being married, most of which suggested that the adolescent was in a relationship that they considered serious. Given that 56% of the 409 respondents were married and a further 27% living together at the time of the survey, and all reported just one sexual partner, it suggests that many of these first sexual encounters were indeed with men who later became stable partners. At the time of survey all pregnant adolescents, except five, stated that they were living with their husband or partner.

Table 5.10: Reasons given by adolescents for their first intercourse

Reasons	N	%
After marriage	217	53
Eloped and living together	106	26
Believing the boy friend	41	10
Eloped and 'married'	12	3
With intention to get married	8	2
Leading from kissing	8	2
Afraid the boyfriend will get angry	8	2
Because of love	4	1
By force	5	1
Total	409	100

(3) Reproductive health knowledge of pregnant adolescents

Reproductive health knowledge of the respondents was assessed through a range of questions. The respondents answered 'yes', 'no' or 'don't know' to each of the following questions: 'Can a girl get pregnant after a sexual relationship with a man?' and 'Can a woman become pregnant in her first unprotected sexual intercourse?' Knowledge of the fertility period was assessed by asking, 'Given that a woman is having sexual intercourse, when during her monthly menstrual cycle do you think pregnancy is most likely to occur?' and respondents were asked to choose from four possible answers or to state 'don't know'. Answering all these three questions correctly was taken as having satisfactory knowledge.

As shown in table 5.11, from the overall sample 367 (90%) of the adolescents knew that they can get pregnant after sexual intercourse. However, less than half (189, 46%) of the adolescents reported that they thought a girl could become pregnant the very first time she has intercourse. The proportion who knew when in the menstrual cycle it was most likely to become pregnant was much lower; just 71 (17%).

Table 5.11: Reproductive health knowledge among first-time pregnant adolescents by age-group

Variable	Total		<18		≥18		χ^2	p
	N = 409		N=121		N=288			
	N	%	N	%	N	%		
1 Knew can get pregnant after sexual intercourse	367	89.7	100	82.6	267	92.7	9.34	0.002
2 Knew possibility of pregnancy at the very first unprotected intercourse	189	46.2	46	38.0	143	49.7	5.32	0.07
3 Knows the time during the menstrual cycle when a woman has the greatest risk of becoming pregnant (fertility period)	71	17.4	12	9.9	59	20.5	14.5	0.006
4 Overall Satisfactory knowledge	49	12.0	9	7.4	40	13.9	3.35	0.06

More of the older pregnant adolescents answered all the three questions correctly than the younger adolescents, and the difference was statistically significant ($p < 0.05$), though the levels of knowledge were low in both groups. Considering all of the above three questions together, only 49 (12%) got all questions right and were considered as having satisfactory knowledge.

(4) Sources of information and support to adolescents

In the following section, I will be exploring the family connectedness and communication of the adolescent. The questionnaire included a number of questions that aimed to elicit information on the adolescents' sources of support and information in relation to puberty, growing up and sexuality and to understand which people are supportive or stressful to the respondent in her pregnancy. Further, a question was asked whether the adolescent was happy in her pregnancy, bearing in mind that suicide is a major cause of death in adolescents with unplanned pregnancies in Sri Lanka (WHO, 2008).

Respondents were asked in general terms about their relationship with their parents during their teenage years and how easy they felt discussing matters of importance with their mother and father (Table 5.12). According to the response given, 358 (88%)

adolescents were very close to their mother, with older adolescents reporting this significantly more than the younger adolescents.

Only 16 (4%) of adolescents described their relationship with their father as “very close”. While only 11 (3%) of the adolescents said they were not close/distant from their mother, 85 (21%) adolescents reported they were not close/ distant from their father.

Three hundred and thirty six (82%) pregnant adolescents said it was very easy to discuss matters of importance with their mother. A significantly greater proportion of the older pregnant adolescents reported that it was easy to discuss matters of importance to them with their mother than the younger adolescents. Only 6 (2%) adolescents found it very easy to discuss matters of importance with their father during their teenage years.

When the adolescents were asked ‘Thinking about your teenage years, how happy would you say you have been at home before meeting your partner?’ pregnant adolescents chose between ‘very happy’, ‘somewhat happy’ and ‘not happy’. Three hundred and fourteen (77%) said they were very happy. There was a statistically significant difference between the older groups who were happier than the younger group.

Table 5.12: Distribution of pregnant adolescents according to being happy as a teen, relationship and discussion with parents by age-group

Variable	Total N=409*		<18 N=121*		≥18 N=288*		χ^2	P
	N.	%	N.	%	N	%		
Happy as a teen								
Very happy	314	76.8	83	68.6	231	80.2	6.44	0.011
Somewhat happy	70	17.1	29	23.9	41	14.2		
Not happy	25	6.1	9	7.5	16	5.6		
Relationship								
Mother*								
Very close	358	87.6	97	80.2	261	90.8	5.41	0.004
Somewhat close	39	9.6	21	17.4	18	6.3		
Not close/distant	11	2.8	3	2.5	8	2.9		
Father*								
Very close	16	3.9	6	5.0	10	3.5		0.326†
Somewhat close	307	75.2	83	68.6	224	78.0		
Not close/distant	85	20.8	32	26.4	53	18.4		
Discussion								
Mother*								
Very easy	336	82.2	90	74.4	246	85.7	7.08	0.009
Somewhat easy	62	15.2	29	24.0	33	11.4		
Not easy at all	10	2.4	2	1.7	8	2.8		
Father*								
Very easy	6	1.5	1	0.8	5	1.7		0.426†
Somewhat easy	135	33.1	42	34.7	93	32.4		
Not easy at all	267	65.3	78	64.5	189	65.9		

†Fisher's exact test * one mother and father dead

Table 5.13: Distribution of adolescents according to their different sources of information regarding puberty by current age-group

Source of information	Total N=409		<18 years N=121		≥18 years N=288		χ^2	P
	N	%	N	%	N	%		
School	168	41.1	46	38.0	122	42.4	0.66	0.41
Books	79	19.3	17	14.0	62	21.5	3.05	0.08
Mother	251	61.4	69	57.0	182	63.2	1.36	0.24
Father	3	0.7	01	0.8	2	0.7	-	0.65†
Sister	40	9.7	7	5.8	33	11.5	3.0	0.77
Relative	13	3.2	3	2.5	10	3.4		0.43†
Friend	53	13.0	17	14.0	36	12.5		0.67

†Fishers exact test. Multiple responses possible.

Table 5.13 shows that the source of information regarding puberty most commonly reported was their mother (251, 61%), followed by school (168, 41%), with 79 (19%) reporting that they had accessed information from books. There was no significant difference in the source of information about puberty reported by the two groups compared.

Respondents were also asked whether they had had any concerns or problems during puberty and if so, whether they were able to discuss these problems with anyone. Around 57% of respondents reported such problems with no significant difference between the two groups. The people with whom adolescents reported being able to discuss such problems is shown in table 5.14.

Table 5.14: Distribution of adolescents according to the person with whom able to discuss problems/concerns regarding puberty by age category

With whom concerns of puberty are discussed	Total N=234		<18 years N=71		≥18 years N=163		χ^2	P
	N	%	N	%	N	%		
Teachers	7	2.9	2	2.8	5	3.1		0.65†
Mother	188	80.3	53	74.6	135	82.8	0.32	0.56
Father	0	0	0	0.0	0	0	-	-
Sister	13	5.6	6	8.5	7	4.3	-	0.15†
Relative	27	11.5	9	12.7	18	11.0	0.19	0.65
Friend	10	4.3	4	5.6	6	3.7	-	0.33†

†Fishers exact test used when the differences in cell values were less than 5. Multiple responses possible

As above, mothers were by far the most commonly stated person, followed by relatives. Interestingly, not a single respondent identified their father as someone they could discuss such problems with. Multiple answers were possible in this section but only eleven adolescents gave multiple responses.

Table 5.15: Distribution of pregnant adolescents according to their feeling about the degree of support given by partner and family members during pregnancy by age-group

Feeling about the degree of support	Total		<18 years		≥18 years		χ^2	P
	N=409		N=121		N=288			
	N	%	N	%	N	%		
Very well supported	386	94.4	104	86.0	282	97.9	22.93	<0.001
Somewhat supported	16	3.9	10	8.2	6	2.1		
Not supported at all	7	1.7	7	5.8	0	0.0		

*Chi squared test was performed on the cross-tabulation on bivariate variable 'very well supported' versus 'somewhat support/not supported'

The adolescents were asked how supported they had felt since they became pregnant (Table 5.15). Overall, 94% of the sample felt 'very well supported' and a high proportion of both groups felt this way; 86% and 98% of the younger and older groups respectively. However, the difference between the two groups was statistically significant. Seven adolescents felt that they were not supported at all and all seven of them were in the age group younger than 18 years (Table 5.15).

Respondents were asked to name any sources of support that they received during their pregnancy and they could give multiple responses (Table 5.16). The primary source of support most commonly reported was their partner/husband (389, 95%) and interestingly there was no significant difference in the proportion of the younger and older groups who reported this source of support. The respondents also commonly mentioned their mother (369, 90%) as a source of support and their father next (317, 78%). However, the proportion of adolescents stating their parents as a source of support was significantly different in the two groups, the older pregnant adolescents being more likely to mention their parents than their younger counterparts (Table 5.16).

Table 5.16: Distribution of pregnant adolescents according to sources of support by age-group

Source of support	Total		<18 years		≥18 years		χ^2	P
	N = 409		N=121		N=288			
	N	%	N	%	N	%		
Teachers in school	0	0.0	0	0.0	0	0.0		
Mother	369	90.2	100	82.6	269	93.4	11.15	<0.001
Father	317	77.5	81	66.9	236	81.9	10.97	<0.001
Sister	65	15.9	17	14.0	48	16.7	0.44	0.5
Friends	13	3.2	5	4.1	8	2.8	0.51	0.47
Husband/partner	389	95.1	113	93.4	276	95.8	1.09	0.29

†Fishers exact test Multiple responses possible

Despite the generally positive picture regarding support in pregnancy, 22 (5%) of the pregnant adolescents reported that they had some person who was causing stress to them during the pregnancy. Seventeen (14%) of these were in the younger age group and the difference was statistically significant ($p < 0.001$). Eight of these pregnant adolescents (2%) identified their mother, 9 (4%) their father, 1 (0.2%) a sister and 2 (0.4%) their husband or partner, as the source of stress in pregnancy. Citing the mother and father as stress factors was significantly more common among the younger adolescents than the older adolescents. Multiple responses were allowed in this section. The adolescent who cited the teacher as a stress factor mentioned her father and her partner too and she was only 14 years old. Seven mentioned both the mother and father together.

A question on general happiness during pregnancy also gave a broadly positive picture with the majority, 323 (79%) of the adolescents reporting feeling ‘very happy’ in the pregnancy (Table 5.17). However, this figure was only 61% of the adolescents younger than 18 compared to 86% in the older group, which was a statistically significant difference. From the pregnant adolescents 37 (9%) felt they were not happy at all (Table 5.17), with most of these being in the younger group.

Table 5.17: Distribution of adolescents according to feeling happiness at home at the time of survey by age group

Level of happiness	Total N=409		<18 years N=121		≥18 years N=288		χ^2	P
	N	%	N	%	N	%		
	Very happy	323	79.0	74	61.2	249			86.4	32.77	<0.001
Somewhat happy	49	12.0	19	15.7	30	10.4		
Not happy at all	37	9.0	28	23.1	09	3.1		

Chi squared test was performed on the cross-tabulation on bivariate variable 'very happy' versus 'somewhat happy/not happy at all

(5) Peer interaction of the adolescent

When sources of information and support are considered, it shows that the mother of the adolescent plays a key role. Though past literature has tended to place greater emphasis on peer influence and support, the above findings show that, in this context, the pregnant adolescents have not turned to friends either for information or for support.

In order to probe more, a few direct questions regarding peers were also included to understand what role they play in these adolescent pregnant girls' lives.

Table 5.18 shows that 247 (60%) pregnant adolescents said that they had friends who had intimate relationships when she herself became pregnant. Sixty nine (57%) adolescents younger than 18 had friends having intimate relationships at the time she became pregnant compared to 178 (62%) in the group 18 years and older. There was no significant difference between these two groups in this regard, and the findings suggest that having intimate relationships was not unusual among the respondents' peer groups.

Table 5.18: Distribution of adolescents according to peer interaction at the time of adolescent becoming pregnant by age-group

Peer interaction	Total N=409		<18 N=121		≥18 N=288		χ^2	P
	N	%	N	%	N	%		
1. Friends having intimate relationships	247	60.4	69	57.0	178	61.8	0.81	0.36
2. Friends having children	229	56.0	51	42.1	178	61.8	13.33	0.00
3. Discussed sexual relationships with friends	44	10.8	09	7.4	35	12.2	1.97	0.16
4. Discussed how girls get pregnant	48	11.7	09	7.4	39	13.5	3.06	0.08

Overall, 229 (56%) respondents said their close friends had children of their own by the time the respondents became pregnant, 51 (42%) adolescents who were younger than 18 years and 178 (62%) adolescents aged 18 and over had friends with children by the time the adolescents in the study group became pregnant themselves. This difference was statistically significant and not unexpected since friends of the adolescents in the older age group would also tend to be older.

Only 44 (11%) said they had discussed sexual relationships with friends, and only 48 (12%) had discussed how girls get pregnant with friends. Both variables did not show a significant difference between the two groups compared. These results tally with the findings presented above on sources of information and suggest that young female adolescents do not have friendships that are productive in terms of information and support and at this stage friends do not seem to play an important role in this aspect of the adolescents' lives.

(6) Knowledge, attitude and practice of contraception

As shown in table 5.19, 95 (23%) adolescents reported that they had used a contraceptive method to prevent this pregnancy but had not been successful. Out of these, 12% reported being on the pill and 9% reported practising natural methods (avoiding fertile period, withdrawal).

There was a significant difference (Pearson Chi Square, p value=0.01) in the percentage of adolescents not using a method of contraception at the time of becoming pregnant, between the two age-groups. Those under 18 years were more likely to have used a contraceptive before conceiving more than the older group (Table 5.19, Table 5.21). Altogether, 314 (77%) reported not using a contraceptive method prior to pregnancy. Only 5 (1.2%) adolescents had used condoms, four of whom were younger than 18 years. 51 (13%) had used contraceptive pills. Only one adolescent had used the post coital pill. None had used an intrauterine device (IUD) or implant (Table 5.19).

Eight adolescents had not used a contraceptive method due to factors beyond their control. Seven (2%) adolescents, all below 18 years of age, had not used a method as they did not think they would become pregnant. 24 (6%) reported not using a method as they did not know any method to use (Table 5.19).

There was a significant difference in the percentage stopping the contraceptive method they were using to become pregnant between the two age groups. The older age group were more likely to have stopped contraception in view of conception (Table 5.19). The younger group had a significantly higher rate of method failure in using natural methods and condoms as compared to the older group (Table 5.19).

Table 5.19: Distribution of adolescents according to the reason for non-use of contraceptive or failure of contraceptive at the time of becoming pregnant by age-group

	Total N=409		<18 years		≥18 years		χ^2	P
	N	%	N 121		N 288			
			N	%	N	%		
Planning for conception								
Did not use contraceptive as planned to conceive	157	38.4	40	33.0	117	40.6	2.36	0.12
Stopped contraceptive to conceive	89	21.8	18	14.9	71	24.6	4.77	0.02
Did not use a contraceptive method due to other factors								
Partner/husband opposed	4	1.0	1	0.8	3	1.0	-	0.65†
Mother opposed	1	0.2	0	0.0	1	0.3	-	0.7†
Mother-in law opposed	1	0.2	0	0.0	1	0.3	-	0.7†
Did not use due to religion	2	0.5	1	0.8	1	0.3	-	0.5†
Irregular menses	1	0.2	0	0.0	1	0.3	-	0.7†
Miscellaneous								
Never thought would become pregnant	7	1.7	7	5.8	0	0.0	-	0.001
Did not know a method	24	5.9	10	8.2	14	4.9	1.78	0.18
Sexual abuse	2	0.5	1	0.8	1	0.3	-	0.5†
Used contraceptive /planned to use								
Stopped due to side effects	26	6.3	5	4.1	21	7.3	1.43	0.23
Failure due to not taking /performing properly								
Natural method	37	9.0	17	14.0	20	6.9	5.21	0.02
Pills	51	12.5	16	13.2	35	12.1	0.9	0.76
Emergency pill	1	0.2	1	0.8	00	0.0	-	0.29
Condom	5	1.2	4	3.3	01	0.3	6.16	0.01
Injection	1	0.2	0	0.0	01	0.3	-	0.7†

†Fisher's exact test

Table 5.19 shows that 157 (38%) adolescents did not use a contraceptive as they wanted a baby. Further 89 (22%) had stopped using a contraceptive to conceive. Table 5.19 further elaborates the reason for non-use of contraceptives or failure of contraceptives at the time of becoming pregnant. Around half of the adolescents (210, 51%) had ever used a contraceptive. From the adolescents who used a contraceptive method, 115 (55%) had discontinued the method and 95 (45%) had not used the method properly or had had a method or user failure.

Table 5.20: Distribution of pregnant adolescents with a satisfactory knowledge of contraceptives by age-group

Satisfactory knowledge	Total		<18 years		≥18 years		χ^2	P
	N =409		N =121		N= 288			
	N	%	N	%	N	%		
Condom	119	29.1	23	19.0	96	33.3	8.45	0.003
Pill-	157	38.4	67	55.4	90	31.2	20.91	<0.001
Post coital pill-	9	2.2	3	2.4	6	2.1	-	0.5†
Injection	181	44.3	38	31.4	143	49.6	11.47	<0.001
IUCD	38	9.3	7	5.8	31	10.7	2.5	0.11
Implant	9	2.2	3	2.5	6	2.1	-	0.5†
Withdrawal	39	9.5	15	12.4	24	8.3	1.63	0.2
Avoiding fertile period	36	8.8	8	6.6	28	9.7	1.02	0.3

As per table 5.20, the knowledge on methods of contraception was assessed as satisfactory if the pregnant adolescent knew the method, knew how to use the method, knew where the method was available and was able to get hold of the method if needed. It is noteworthy that overall satisfactory knowledge on IUCD, withdrawal method, avoiding fertility period was less than 10% and the least known were the emergency pills and implants (2%).

There was a significant difference between the younger and older pregnant adolescents in their knowledge regarding condoms, the pill and Depo-Provera injection. The knowledge in pregnant adolescents 18 years and over regarding the condom and Depot-provera injection was significantly better than the younger ones, but the under 18 pregnant adolescents were significantly more knowledgeable about the pill than the

older adolescents ($p < 0.001$). It should be remembered that knowledge reported at the time of the survey does not accurately reflect the knowledge that they had when they became pregnant. These pregnant adolescents were now in contact with their area midwife and they may have acquired knowledge at the clinics as well as during the home visits of the midwives. Therefore it is possible that knowledge levels before pregnancy were much lower than at the time of the survey.

Table 5.21: Distribution of adolescents according to knowledge and use of a method of contraception by age-group

Knowledge and use of contraceptive method	Total N=409		<18 years N=121		≥18 years N=288		χ^2	P
	N	%	N	%	N	%		
Knows at least satisfactorily one method	351	85.8	98	81.0	253	87.8	3.28	0.07
Had used a method	210	51.3	61	50.4	149	51.7	0.06	0.8
Used on the first sexual intercourse	57	13.9	15	12.4	42	14.6	0.34	0.56
Used before conceiving but failed	95	23.2	38	31.4	57	19.8	6.43	0.01

The majority of adolescents (351, 86%) knew about at least one contraceptive method at the time of the survey and 210 (51%) reported that they had used a method, but only 57 (14%) had used a method on their first sexual encounter and 95 (23%) had used a method at the time of conceiving but had failed (Table 5.21).

There was a significant difference between the older and younger adolescents in use of contraception before pregnancy. Significantly, younger adolescents reported that they had been using contraception and therefore that they had experienced contraceptive failure than the older adolescents among whom more had wanted to get pregnant (Table 5.21).

5.2.2. Exploring possible predictors of adolescent pregnancy among those pregnant for the first time, including comparisons between those who planned their pregnancies and who did not plan their pregnancies

When the planning and reception of pregnancy was analysed, the majority of adolescents reported that they had planned their pregnancy (64%) and that they welcomed the news of being pregnant (71%). Planning and not planning a pregnancy may have an impact during the pregnancy on the outcome of the pregnancy as well as on the life of the adolescent and on the unborn child. A small proportion reported wanting and trying to get rid of the pregnancy. Therefore understanding more in depth what are the determinants which lead to unplanned pregnancy is needed. Therein now I turn to explore possible predictors of adolescent pregnancy among those pregnant for the first time, including comparisons between those who said they planned their pregnancies and those who did not plan their pregnancies.

Pregnant adolescents were asked whether they had planned their pregnancy or not. When the question 'Would you say that this pregnancy was planned by you?' was asked, there were 263 (64%) first time pregnant adolescents who said their pregnancies were planned while 33 (8%) replied it was neither planned nor unplanned. One hundred and thirteen (28%) said that the pregnancy was unplanned or unintended. To be able to apply cross tabulation and later for binary logistic regression, the variable was made dichotomous. Those who clearly said that they planned their pregnancy were taken as one group. The group who said, neither planned or unplanned and unplanned were included in the second group (146, 36%). Next, I turn to find predisposing factors for an unplanned pregnancy in the two groups of adolescents they planned or did not plan their pregnancies.

I have cross tabulated and presented only the variables with significance in chi square analysis in this section.

Table 5.22: Distribution of adolescents by age and ethnicity according to planning or not planning their pregnancy

Variable	Total		Planned pregnancy		Pregnancy unplanned		χ^2	P
	N=409		N=263		N=146			
	N	%	N	%	N	%		
<i>Age in years</i>								
14	4	1.0	0	0.0	4	2.7	28.5	<0.001
15	5	1.2	1	0.4	4	2.7		
16	29	7.1	13	4.9	16	11		
17	83	20.3	44	16.7	39	26.7		
18	152	37.2	103	39.2	49	33.6		
19	136	33.3	102	38.8	34	23.3		
<i>Older adolescents vs. young</i>								
18 and over	288	70.4	205	77.9	83	56.8	20.59	<0.001
Younger than 18	121	29.6	58	22.1	63	43.2		
<i>Ethnicity</i>								
Sinhalese	313	76.5	192	73.0	121	82.9	10.58	0.005
Tamil	48	11.7	30	11.4	18	12.3		
Moor	48	11.7	41	15.6	7	4.8		

There is a significant difference between planning the pregnancy across the ages and ethnicity as shown by table 5.22.

Analysis by ethnicity shows that significantly more Moor (41, 85%) adolescents reported that they had planned their pregnancies as compared to the Sinhalese (192, 62%) and the Tamil (30, 63%) adolescents. This difference is due in part to the acceptability and legal status of early marriage in the Moslem population.

Table 5.23: Distribution of pregnant adolescents according to attitude at first sexual experience and first intercourse by planned or unplanned pregnancy

Variable	Total		Planned pregnancy		Pregnancy unplanned		χ^2	P
	N=409		N=263		N=146			
	N	%	N	%	N	%		
<i>Whether adolescent wanted the first sexual experience</i>								
Wanted to happen	385	94.1	255	97.0	130	89.0	17.9	<0.001
Was not sure	12	2.9	7	2.7	5	3.4		
Did not want	9	2.2	1	0.4	8	5.5		
Happened forcefully	3	0.8	0	0.0	3	2.1		
<i>Pregnant adolescent reflecting how she felt after her first sexual experience</i>								
Glad it happened	380	92.9	253	96.2	127	87.0	14.9	<0.001
Was not sure	17	4.2	8	3.0	9	6.2		
Regret	12	2.9	2	0.8	10	6.8		
<i>Whether adolescent wanted the first sexual intercourse</i>								
Wanted it to happen	379	92.7	252	95.8	127	87.0	15.7	<0.001
Was not sure	15	3.7	8	3.0	7	4.8		
Did not want	10	2.4	1	0.4	9	6.2		
Happened forcefully	5	1.2	2	0.8	3	2.1		
<i>Pregnant adolescent reflecting how she felt after her first sexual intercourse</i>								
Glad it happened	375	91.7	248	94.3	127	87.0	10.1	0.006
Was not sure	19	4.6	11	4.2	8	5.5		
Regret	15	3.7	4	1.5	11	7.5		
<i>Pregnant adolescent reflecting how she feels about age at first intercourse</i>								
Too young	280	68.5	174	66.2	106	72.6	46.1	0.029
About right	122	29.8	87	33.1	35	24.0		
Other	7	1.7	02	0.8	05	3.4		

As shown in table 5.23, the adolescents who said they planned their pregnancies were significantly more likely to report that they had wanted (consensual) their first sexual initiation and intercourse than the adolescents who said they did not plan their pregnancies. The adolescents who said they did not plan their pregnancies had reported that they did not want (non-consensual) their first sexual initiation and first intercourse. Though as already noted above, majority of the respondents across the groups reported wanting the sexual encounters to happen. Significantly more adolescents who had planned their pregnancies were glad about initiation of sexual activity (253, 96%) and their first intercourse (248, 94%) than the adolescents who had not planned their pregnancies.

Though the actual numbers and percentages are small, significantly more adolescents who reported they had not planned their pregnancies had not had consensual sex. Their initiation of sex (8, 6%), and first intercourse (9, 6%) had been unwanted or they have reported they had been forced in to their initiation of sex (3, 2%), and been forced in to their first intercourse (3, 2%). They further have responded that they regretted the initiation (10, 7%) as well as regretted the first sexual intercourse (11, 8%).

Table 5.24: Distribution of adolescents according to the reaction to pregnancy and feeling happy in pregnancy by planned and unplanned pregnancy

Variable	Total		Planned pregnancy		Pregnancy unplanned		χ^2	p
	N=409		N=263		N=146			
	N	%	N	%	N	%		
Reaction to pregnancy								
News of pregnancy welcomed	291	71.1	257	97.7	34	23.3	25.7	<0.001
Wished to get rid of the pregnancy	23	5.6	2	0.8	21	14.4	62.9	<0.001
Attempted to get rid of the pregnancy	10	2.4	2	0.76	8	5.5		<0.005†
Feelings during pregnancy								
Feeling very happy in pregnancy	323	79.0	259	98.5	64	43.8	168.4	<0.001
Feeling somewhat happy in pregnancy	49	12.0	4	1.5	45	30.8		
Feeling not happy at all in pregnancy	37	9.0	1	0.4	36	24.7		

†Fisher's exact test

As would be expected, table 5.24 shows that significantly more adolescents who planned their pregnancies welcomed the news ($p < 0.001$) as compared to their counterparts who had not planned their pregnancies. Significantly more adolescents who did not plan their pregnancies (146, 55%) wished to get rid of the pregnancy (21, 14%) ($p < 0.001$) and had attempted to get rid of their pregnancy (8, 5%) ($p = 0.005$). Significantly more adolescents who planned their pregnancies were feeling happy in the pregnancy than the non-planners ($p < 0.001$), though around 74% of those who had not planned the pregnancy were, nevertheless, feeling 'very happy' or 'somewhat happy'.

Table 5.25: Distribution of pregnant adolescents according to their relationship and communication with their mother by planned and unplanned pregnancy

Variable	Total		Planned pregnancy		Pregnancy unplanned		χ^2	P
	N=409		N=263		N=146			
	N	%	N	%	N	%		
<i>Happy as a teen</i>								
Very happy	314	76.8	217	82.5	97	66.4	13.6	<0.001
Somewhat happy	70	17.1	37	14.1	33	22.6		
Not happy	25	6.1	9	3.4	16	11.0		
<i>Relationship with Mother</i>								
Very close	358	87.6	238	90.5	120	82.2	6.9	0.03
Somewhat close	39	9.6	21	8.0	18	12.3		
Not close/distant	11	2.8	4	1.5	7	4.5		
<i>Discussion with Mother</i>								
Very easy	336	82.2	228	86.7	108	74.0	10.6	0.005
Somewhat easy	62	15.2	31	11.8	31	21.2		
Not easy at all	10	2.4	4	1.5	6	4.1		

A high statistical significance is shown in the adolescents who said that they were very happy as teens when they met their partners and who said they were somewhat happy or not happy at all in planning of pregnancy. 'Not very happy' teens are represented with statistical significance in the unplanned group.

Table 5.25 further shows that there is a significant difference in the relationship ($p = 0.03$) and discussion ($p = .005$) the adolescents who planned their pregnancies had with their mothers as compared to the ones who had not planned their pregnancies. When we look at the total figures the percentage that say 'not easy at all' or 'not close' are very similar in the two groups. Though there is a significant difference, a high

proportion of both groups reported a good mother-daughter relationship and the ease of discussion with the mother was also high in both groups.

Table 5.26: Distribution of pregnant adolescents according to their feeling about the degree of support given by others during pregnancy by planned and unplanned pregnancy

Feeling about the degree of support	Total		Planned pregnancy		Pregnancy unplanned		χ^2	P
	N=409		N=263		N=146			
	N	%	N	%	N	%		
Very well supported	386	94.4	263	100	123	84.2	43.9	<0.001
Somewhat supported	16	3.9	0	0.0	16	11.0		
Not supported at all	7	1.7	0	0.0	7	4.8		

While all respondents in the planned pregnancy group reported that they were 'very well supported', there was a small proportion (4.8%) of adolescents in the unplanned group who felt 'not supported at all' and a further 11% who felt only 'somewhat supported' (Table 5.26).

5.2.3. Exploring possible predictors of adolescent pregnancy among those pregnant for the first time, analyzing respondent's partner variables

Respondent pregnant adolescents were asked to report the age, educational level and the occupation of their partners. Here, I have cross tabulated the information provided by the pregnant adolescent regarding her partner/husband with selected variables of the pregnant adolescent to give us an in depth understanding of the partner/husband's role in adolescent pregnancy.

Table 5.27: Respondent's age cross-tabulated with the partner's age gap

Partner age gap in years	Adolescent's age in years													
	14		15		16		17		18		19		Total	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Same age	0	0	0	0	0	0.0	5	6.0	11	7.2	17	12.5	33	8.1
< 3	0	0	1	20	9	31.1	22	26.4	47	30.9	42	30.9	121	29.6
3 to 5	0	0	0	0	3	10.3	11	13.3	16	10.6	16	11.8	46	11.2
6 to 9	1	25	3	60	12	41.3	32	38.6	55	36.2	46	33.8	149	36.4
10 ≤	3	75	1	20	5	17.3	13	15.7	23	15.1	15	11.0	60	14.7
Total	4	100	5	100	29	100	83	100	152	100	136	100	409	100

As shown in table 5.27, only 8% of the adolescents' partners or husbands were the same age as the adolescent. None of the partners of the adolescents aged 14 to 16 years were the same age. A point of note is that almost 62% of partners of the adolescents were 3 years or more older than the adolescent. More than 51% were more than 5 years older and almost 15% were more than 10 years older.

As shown in table 5.28, there were 19 (5%) partners who were adolescents themselves, 238 (58%) were within 20 to 24 years of age, 124 (30%) were within the age of 25 to 29 years and 28 (7%) were thirty years and above.

The majority of the partners of the adolescents (235, 58%) had an education up to G.C.E. Ordinary Level, while 151 (37%) had only a primary education. Seventeen (4.2%) had been educated up to G.C.E. Advance Level and 6 (1.5%) have had no schooling as reported by the respondent. The education level showed a significant difference among the age categories (Table 5.28).

Table 5.28: Partners' and selected respondent variable cross tabulated with the partners' age categorization

Variable	Partner age categorization										χ^2	P
	Total N=409		≥ 19 N= 19		20 to 24 N =238		25 to 29 N=124		≥ 30 N=28			
	No	%	No	%	No	%	No	%	No	%		
<i>Age of pregnant adolescent in years</i>												
14	4	1.0	0	0.0	2	0.8	1	0.8	1	3.6	86.8	0.42
15	5	1.2	1	5.3	3	1.3	1	0.8	0	0.0		
16	29	7.1	2	10.5	20	8.4	6	4.8	1	3.6		
17	83	20.3	6	31.6	54	22.7	18	14.5	5	17.9		
18	152	37.2	4	21.1	90	37.8	49	39.5	9	32.1		
19	136	33.2	6	31.6	69	29.0	49	39.5	12	42.9		
<i>Age gap of the couple in years</i>												
≤ 5	149	36.4	19	100	130	54.6	0	0.0	0	0.0	3.22	<0.001
6 to 9	200	48.9	0	0.0	107	45.0	93	75.0	0	0.0		
≥ 10	60	14.7	0	0.0	1	0.4	31	25.0	28	100		
<i>Partner's education level</i>												
A/ Level	17	4.2	3	15.8	7	2.9	4	3.2	3	10.7	23.6	0.005
O/ Level	235	57.5	9	47.4	129	54.2	85	68.5	12	42.9		
6 to 10	151	36.9	6	31.6	100	42.0	33	26.6	12	42.9		
No schooling	6	1.5	1	5.3	2	0.8	2	1.6	1	3.6		
<i>Financial level of respondent when meeting partner</i>												
Surplus, can save	173	42.3	9	47.4	96	40.3	54	43.5	14	50.0	16.6	0.01
Breakeven	172	42.1	2	10.5	111	46.6	49	39.5	10	35.7		
Deficit	64	15.6	8	42.1	31	13.0	21	16.9	4	14.3		

As shown in table 5.28, majority of the partners' age were between 20 to 29 years.

Table 5.28 further shows that, 173 (42%) respondents have been of the view that they were in a reasonable financial situation and able to save. This view was perceived more by the adolescents who had partners under 19 years of age (9, 48 %) and those who had partners aged 30 and over (14, 50%) as compared to other categories. This difference was statistically significant (p=0.01).

Table 5.29: Discussing matters of importance by respondent with mother and father analyzed by the age category of the partner

Variable	Partner age categorization										χ^2	p
	Total N=409		≤19 N= 19		20 to 24 N =238		25 to 29 N=124		≥30 N=28			
	No	%	No	%	No	%	No	%	No	%		
<i>Discussing with the mother</i>												
Very easy	336	82.2	12	63.2	189	79.4	111	89.5	24	85.7	14.1	0.029
Somewhat easy	63	15.4	5	26.3	43	18.1	11	8.9	4	14.3		
Not easy at all/difficult	10	2.4	2	10.5	6	2.5	2	1.6	0	0.0		
<i>Discussing with the father</i>												
Very easy	6	1.5	0	0.0	5	2.1	0	0.0	1	3.6	6.75	0.345
Somewhat easy	136	33.3	8	42.1	71	29.8	48	38.7	9	32.1		
Not easy at all/difficult	267	65.3	11	57.9	162	68.1	76	61.3	18	64.3		

There was a significant difference in discussing with the mother across the partner age categorisation. While almost 80% (336) found it very easy to discuss with their mother, only 63 % (12) adolescents with partners under 19 years found it very easy to discuss with their mother (Table 5.29).

Almost 65% (267) found it was not easy at all and difficult to discuss matters of importance to them with their father. A gap in communication with the father was seen across the sample.

Table 5.30: Distribution of adolescents on intention of pregnancy and happiness in pregnancy by the age category of the partner

Variable	Total		Partner age categorization								χ^2	P
	N=409		≤19		20 to 24		25 to 29		≥30			
	No	%	No	%	No	%	No	%	No	%		
Intention of pregnancy												
Pregnancy planned	263	64.3	9	47.4	147	61.8	91	73.4	16	57.1	8.1	0.04
Happiness in pregnancy												
Very happy	324	79.2	11	57.9	185	77.7	105	84.6	23	82.1	15.6	0.01
Somewhat happy	48	11.7	2	10.5	33	13.9	11	8.9	2	7.1		
Not happy at all	37	9.1	6	31.6	20	8.4	8	6.5	3	10.7		

Planned pregnancies were significantly fewer in the two extremes (age category of the partner 19 years or less and 30 years and over) (Table 5.30). Adolescents whose partner was aged 19 years or less reported only 9 planned pregnancies (47%). Adolescents whose partner was aged 30 years and over reported 16 (57%) planned pregnancies. The highest numbers of planned pregnancies were reported by adolescents whose partner was in 25 - 29 year age category (91, 73%). The difference in the rate of planned pregnancies across partners' age group was statistically significant ($p=0.04$).

Among those having a partner aged 19 years or less, only 11 (58%) said they are very happy in pregnancy and 6 (32%) of adolescents married to partners age 19 or younger and 11% of adolescents married to partners over 30 years reported that they are not happy at all. These differences were statistically significant (table 5.30).

Table 5.31: Use of contraceptives by the age category of the partner

Variable	Total		Partner age categorization								χ^2	P
	N=409		≤19		20 to 24		25 to 29		≥30			
	No	%	No	%	No	%	No	%	No	%		
Used contraceptive before pregnancy												
Used	130	31.8	8	42.1	84	35.3	25	21.0	13	46.4	13.3	0.004

All adolescents were asked whether they used contraceptives during the time before pregnancy (Table 5.31). One hundred and thirty (33%) have used contraceptives though it had failed due to a number of reasons. The use of contraception was highest among adolescents who had partners aged 19 years or less (8, 44%) and 30 years or more (13, 50%)

Table 5.32: Distribution of the pregnant adolescent by partners' category of employment

<i>Category of employment</i>	N	%
Skilled	2	0.5
Semiskilled	253	61.9
Unskilled	137	33.5
Not employed	17	4.1
Total	409	100.0

Majority of the pregnant adolescents reported that their partners were engaged in semiskilled occupations and a minority reported they were in skilled employment or not employed (Table 5.32).

5.3. EXPLORING POSSIBLE PREDICTORS OF ADOLESCENT PREGNANCY BY LOGISTIC REGRESSION

From the 409 first time pregnant adolescents, there were 288 (70%) adolescent girls whose ages were 18 and above. There was a sub group of the adolescent population (121, 30%) who were younger than 18 years. The cross tabulations showed that there are statistically significant differences between these two groups.

Further, among the 409 first time pregnant adolescents there were 263 (64%) adolescent girls who said they planned their pregnancy. There was a sub group of the adolescent population (146, 36%) who said their pregnancies were not planned. The cross tabulations showed that there are statistically significant differences between these two groups too. Therefore, further analysis will be done by binominal regression models to explore the factors that distinguish between the two groups, by the two outcomes,

1. Pregnant adolescents by age category
2. By intention (planning) of pregnancy.

In both models, the logistic regression analysis is performed on the first time pregnant adolescents (N=409). Variables were selected by looking at the unadjusted odds ratio and if $p < 0.25$ those variables were included in the model. Unadjusted and adjusted tables are given as annexure.

5.3.1. Exploring possible predictors of underage pregnancy by logistic regression

There were 288 (70 %) pregnant adolescents whose age was 18 or above and 121 (30%) who were younger than 18 years. The logistic regression model was useful to identify the presence of determinants of adolescent pregnancy or absence of a characteristic or outcome (pregnancy before 18 years of age) based on values of a set of predictor variables. The logistic regression coefficients were used to estimate odds ratios for each of the independent variables in the model. The logistic regression analysis presented as table 5.33 was conducted to identify the determinants of early pregnancy related to the adolescents pregnant (N=409). Variables with an unadjusted odds ratio and $p < 0.25$ were first selected. Then Pearson correlation (r^2) was examined to identify any issues of multi-collinearity between particular variables so that care could be taken in selecting which variables should be entered into the models

(Annexure 5A). Ethnicity, economy, literacy, level of education, perceived performance, ambition of a career, relationship with the mother, happiness as a teen, wantedness of the first intercourse, knowledge on possibility of pregnancy in first intercourse, age of the partner and age difference between the partners were variables included into the Forward step-wise (L.R.) model.

Table 5.33: Forward stepwise model on factors related to dependent variable pregnancies under 18 years

		B	S.E.	Sig.	OR	95.0% C.I. for OR	
						Lower	Upper
Step 1 ^a	Intercourse not wanted	1.391	.390	.000	4.02	1.871	8.64
	Constant	-.99	.115	.000	.37		
Step 2 ^b	Not Literate	.94	.356	.009	2.55	1.27	5.12
	Intercourse not wanted	1.25	.399	.002	3.49	1.59	7.63
	Constant	-1.07	.122	.000	.34		
Step 3 ^c	Not Literate	.89	.360	.014	2.43	1.20	4.92
	Intercourse not wanted	1.19	.403	.003	3.29	1.49	7.26
	Mother relation not close	.76	.315	.016	2.14	1.15	3.97
	Constant	-1.17	.130	.000	.31		
Step 4 ^d	Ethnicity			.022			
	Tamil	.59	.341	.084	1.80	.92	3.51
	Moor	.79	.331	.016	2.21	1.16	4.24
	Not Literate	.76	.374	.041	2.15	1.03	4.46
	Intercourse not wanted	1.21	.407	.003	3.35	1.51	7.43
	Mother relation not close	.83	.318	.009	2.30	1.23	4.29
	Constant	-1.35	.150	.000	.26		

a. Variable(s) entered on step 1: Wantedness of first Intercourse
Baseline : Wanted first intercourse

b. Variable(s) entered on step 2: Literacy
Baseline : Can read easily

c. Variable(s) entered on step 3: Relationship with the mother.
Baseline : Very close relationship with the mother

d. Variable(s) entered on step 4: Ethnicity
Baseline : Sinhalese

The step-wise model against a constant-only model shows a statistically significant difference. This indicates that the determinants as a set distinguished between who were 18 years and over and who were younger than 18 years (Chi square = 32.777, $p < .001$ with $df = 5$). Hosmer and Lemeshow test (H-L goodness-of-fit) ($p=0.813$) shows that it is an adequately fitting model.

Nagelkerke's R^2 of 0.110 indicates a weak relationship between risk factors and outcome. i.e. only 11% of the differences in outcomes can be accounted for by these determinants. Anyhow, the Wald criterion demonstrated that the adolescent's ethnicity ($p=.022$), literacy ($p=.041$), wanting the first intercourse ($p=.003$) and relationship with the mother ($p= .009$) are statistically significant determinants for a pregnancy under 18 years of age. Economy, level of education, perceived performance, ambition of a career, knowledge on possibility of pregnancy in first intercourse, age difference between the partners were not significant determinants for under 18 pregnancy.

The estimate odds ratio values indicate that: A moor adolescent girl had twice the odds of becoming pregnant under 18 years compared to a Sinhala girl and this is significant at 5% level. Tamil girls did not differ significantly from Sinhalese girls. A girl who cannot read easily has two times the odds of becoming pregnant under 18 years compared to a girl who reads easily. The odds of an underage pregnancy were three times higher among girls who reported that they did not want their first intercourse than among those who reported that first intercourse was wanted. A girl who does have a very close relationship with her mother has almost two times the odds of becoming pregnant underage compared to a girl who finds s very close to her mother.

When considering the adolescent factors, table 5.33 elaborates that a girl with a low literacy state, who does not have a close relationship with her mother and having unwanted first intercourse was more likely to have an underage pregnancy. Moor girls were more likely to be underage as well.

5.3.2. Exploring possible predictors of unplanned pregnancies by Logistic regression

There were 263 (64%) adolescent girls who said that they planned their pregnancy and 146 (36%) who said their pregnancies were not planned. The logistic regression analysis presented as table 5.34 was conducted to identify the determinants of unplanned pregnancy related to the pregnant adolescents (N=409). Variables were selected by looking at the unadjusted odds ratio and if $p < 0.25$ (Annexure 5B) were entered to the model. Ethnicity, economy, literacy, opinion of schooling, school performance, adolescent's relationship with the mother, discussion with the mother, happiness as a teen, wantedness of initiation of sex, wantedness of first sexual intercourse, age at menarche, partner's age and age gap of the partner had a $p < 0.25$ and were introduced in to the step wise model.

Table 5.34: Forward stepwise model on factors related to dependent variable unplanned pregnancies

		B	S.E.	Sig.	OR	95.0% C.I. for OR	
						Lower	Upper
Step 1 ^a	Not happy as a teen	.868	.239	.000	2.38	1.49	3.81
	Constant	-.805	.122	.000	.45		
Step 2 ^b	Intercourse not wanted	1.181	.401	.003	3.26	1.49	7.14
	Not happy as a teen	.841	.242	.001	2.32	1.44	3.76
	Constant	-.890	.127	.000	.41		
Step 3 ^c	Ethnicity			.009			
	Tamil	-.222	.335	.508	.80	0.415	1.55
	Moor	-1.317	.434	.002	.27	0.11	0.63
	Intercourse not wanted	1.259	.415	.002	3.52	1.56	7.94
	Not happy as a teen	.820	.249	.001	2.27	1.39	3.69
	Constant	-.742	.136	.000	.48		

a. Variable(s) entered on step 1: Teen happiness.
Base line: Very happy as a teen

b. Variable(s) entered on step 2: Wantedness of first intercourse.
Base line: first intercourse wanted

c. Variable(s) entered on step 3: ethnicity.
Baseline: Sinhalese

The table 5.34 presents the step-wise model against a constant-only model showing a statistically significant difference. This indicate that the determinants as a set distinguished between who planned their pregnancies and who did not (Chi square = 33.838, $p < .001$) with $df = 4$. Hosmer and Lemeshow test (H-L goodness-of-fit) ($p = 0.993$) shows that it is an adequately fitting model. Nagelkerke's R^2 of .109 indicates a weak relationship between determinants and outcome. i.e. only 10% of the differences in outcomes can be accounted for by these determinants. Anyhow the Wald criterion demonstrated that, adolescent's ethnicity ($p = .009$), wanting the first intercourse ($p = .002$) and being happy as a teen ($p = 0.001$) are statistically significant determinants for an unplanned pregnancy. Economy, literacy, perceived school performance, relationship with the mother, discussion with the mother, wantedness of first sexual experience, age at menarche, age of the partner and age difference between the partners were not significant determinants in unplanned pregnancy.

OR values indicate that a girl who did not want her first intercourse to happen is at three times the odds of having an unplanned pregnancy compared to a girl who wanted her first intercourse to happen and that when an adolescent is not happy as a teen she is at two times the odds of having an unplanned pregnancy compared to a girl who had been happy at home.

Compared to the Sinhalese and Tamils, Moor adolescent girls were significantly less likely to report their pregnancy as unplanned (OR 0.73).

When considering these adolescent factors, table 5.34 elaborates that a girl who is not happy at home and whose first intercourse is unwanted is most likely to have an unplanned pregnancy. Additionally, a moor girl's pregnancy was much more likely to be planned than that of a Sinhalese or a Tamil girl.

Box 5.1: Summary of overall findings and the difference between sub groups

Predictor Areas	Overall finding	Difference between adolescents	
		Younger and older	Who planned their pregnancy and those who did not
a) Age and Planning pregnancy	Majority (64%) said they planned their pregnancy.	48% from the 121 younger than 18 years and 71% from the 288 who are 18 and over have planned their pregnancy. The difference in the two groups is statistically significant in bivariate analysis.	The majority of those who planned their pregnancy were over 18 years (78%).
b) News of pregnancy welcomed	Majority (71%) welcomed the news of pregnancy.	50% younger and 80% older welcomed the news of pregnancy. The difference is statistically significant in bivariate analysis.	97% who planned and 23% who did not plan welcomed the news of pregnancy. The difference is statistically significant in bivariate analysis.
c) Happy in pregnancy	Majority (79%) very happy.	61% younger and 86% older were very happy. The difference is statistically significant in bivariate analysis.	Those who did not plan their pregnancy were significantly less likely to be happy in pregnancy (99% vs. 44%).
d) Degree of support in pregnancy	Majority (95%) well supported by the partner and parents.	90% in the younger group and 99% in the older group were very well supported. The difference is statistically significant in bivariate analysis. Parents were noted as a source of stress by a few adolescents who were younger than 18 years.	A significantly greater proportion of those who planned their pregnancy were very well supported in their pregnancy (100% vs. 84%).

Predictor Areas	Overall finding	Difference between adolescents Younger and older	Who planned their pregnancy and those who did not	
e)	First sexual experience	<p>Majority (85%) over 16 years Ranged from 13 to 19 years.</p> <p>Majority (90%) wanted first sexual experience to happen.</p> <p>Majority (92%) was glad about the first sexual experience.</p>	<p>70% younger and 91% older over 16 years. The difference is statistically significant in bivariate analysis.</p> <p>88% younger and 94% older wanted the first sexual experience. The difference is statistically significant in bivariate analysis</p> <p>89% younger and 94% older wanted the first sexual experience. The difference is statistically significant in bivariate analysis.</p>	No Statistical significance.
f)	First sexual intercourse	<p>Majority (93%) First sexual intercourse over 16 years. Ranged from 13 to 19 years. Highest in age 16 to 17.</p> <p>Majority (93%) wanted first sexual intercourse to happen.</p> <p>Majority (92%) was glad about the first sexual intercourse.</p>	<p>80% of younger group and 99 % of older group had first intercourse over 16 years. The difference is statistically significant in bivariate analysis. Underage pregnant adolescent had odds three times higher of having a non-consensual first intercourse as the older group in the multivariate analysis.</p> <p>86% of younger group and 96% of older group wanted the first sexual intercourse to happen The difference is statistically significant in bivariate analysis.</p>	The odds of an unplanned pregnancy were three times higher among those who reported non-consensual first intercourse.

Predictor Areas	Overall finding	Difference between adolescents Younger and older	Who planned their pregnancy and those who did not
g) Civil Status	56% married, 27% living together. Except five, others were living with partners.	No Statistical significance.	No Statistical significance.
h) Number of partners	100% had had only one partner.	-	-
i) Knowledge on reproductive health	Majority (90%) was aware that pregnancy is possible after sexual intercourse. 46% was aware that pregnancy is possible after first unprotected sexual intercourse. Only 17% was aware of the fertility period.	81% younger and 93% older were aware of pregnancy after intercourse. The difference is statistically significant in bivariate analysis. 38% younger and 50% older were aware of pregnancy after first sexual intercourse. The difference is statistically significant in bivariate analysis.	No statistical significant difference. No statistical significant difference. No statistical significant difference. No statistical difference. No statistical difference.
Contraceptive knowledge and usage	Majority (86%) knows at least one method of contraception. Majority (51%) have used a method of contraception. Only 14% used on first intercourse.	10% younger and 21% older were aware of fertility period. The difference is statistically significant in bivariate analysis. No statistical difference. No statistical difference.	No statistical difference.
		More of the older pregnant adolescents answered all the three questions correctly than the younger adolescents, and the difference was statistically significant ($p < 0.05$), though the levels of knowledge were low in both groups.	

Predictor Areas	Overall finding	Difference between adolescents Younger and older	Who planned their pregnancy and those who did not
j) Ethnicity	Majority (76%) of the sample was Sinhalese. The Moor (12%) and the Tamil (12%) were more than the population distribution.	Moor pregnant, <18 years 17% ≥18 years 9%. The difference was statistically significant in bivariate analysis. Moor pregnant adolescent has two times odds of being in the underage group compared to Sinhalese.	Planned 16% unplanned 5%. Moor pregnant adolescents are more likely to have planned their pregnancies as compared to the Sinhalese and Tamil.
k) Economic situation	A majority of pregnant adolescent reported their economic situation as breakeven (44%) or surplus (41%) at the time of meeting the partner.	No statistical significant difference.	No statistical significant difference.
l) Education	Majority (91%) was literate and had a secondary education (94%).	<18 years 84%, ≥18 years 94% could read easily. The difference was statistically significant in bivariate analysis. Adolescents who had a low literacy had two times the odds of being in the underage group compared to the adolescents who could read easily.	No statistical significant difference.
	Majority (55%) reported their school performance average or below average.	No statistical significant difference.	No statistical significant difference.
	Majority (83%) had a positive opinion of schooling.	<18 years 74%, ≥18 years 87% had a positive opinion of schooling. The difference was statistically significant in bivariate analysis.	No statistical significant difference.

	Predictor Areas	Overall finding	Difference between adolescents Younger and older	Who planned their pregnancy and those who did not
m)	Ambition	Majority (63%) had an ambition of a career.	<18 years, 55%, ≥18 years 67% had a career ambition. The difference was statistically significant in bivariate analysis.	No statistical significant difference.
n)	Puberty	Majority (85%) had attained menarche at the age 12 years or more. The majority understood menarche. Their mothers were the most common source of information and support.	21% younger and 12% older attained menarche before 12 years of age. In the bivariate analysis early age at menarche was associated with under age pregnancy with a statistical significance.	No statistical significant difference.
o)	Mother daughter discussion	The majority (82%) reported good mother-daughter communication.	74% of the younger and 86% of the older group found it very easy to communicate with their mother. The difference was significant in bivariate analysis.	Those who planned their pregnancy were significantly more likely to report good mother-daughter communication (87% vs. 74%).

Predictor Areas	Overall finding	Difference between adolescents Younger and older	Who planned their pregnancy and those who did not
p) Teen happiness	Majority (77%) of adolescents have been happy as teens.	69% of young and 80% old have been very happy as teens. The bivariate analysis showed adolescents who had not been very happy as teen more likely to be in the underage group.	Those who planned their pregnancy were significantly more likely to have been happy as teens (83% vs. 66%). Adolescents who said their pregnancies were not planned had two times odds of having been not very happy as a teen compared to those who had planned in the multivariate analysis.
q) Friends and school	Friends are not an important source of sexual information or support. School and teachers do not feature as sources of support or information but the majority have had positive school experiences. Majority (60%) of friends were sexually active.	In the bivariate analysis it showed that adolescents who had friends with children were more likely to be in the older group reflecting their generally older age group.	No statistical significant difference.

In this chapter, univariate, bivariate and multivariate analyses were done to understand the adolescents who are pregnant in their adolescences. Further analysis were done to understand the predictors for very young pregnancies as well as to understand whether there are differences when the adolescents say they planned or not planned their pregnancies.

Low literacy rate, ethnicity, not having a close relationship with the mother were seen as determinants of under 18 adolescent pregnancies. While for unplanned pregnancies determinants were ethnicity and not being happy as a teen. An adolescent not wanting her first intercourse was related to both unplanned pregnancy as well as under age pregnancy.

I will draw comparisons between the girl adolescents in schools and the 409 adolescent girls who were pregnant in section 3 in Chapter 8, where I will be discussing my findings.

Next chapter (Chapter 6) will be on the partners of pregnant adolescent girls.

CHAPTER 6

FINDINGS FROM PARTNERS

(COMPONENT 11)

INTRODUCTION

In chapter five, I analysed the factors related to pregnant adolescent girls (Component 1). In this chapter the focus is on the partners of pregnant adolescent girls. This chapter presents the analysis of the interviewer-administered questionnaires with partners of pregnant adolescents.

The following research questions are addressed in this chapter:

- What are the socio-economic and demographic characteristics of partners of pregnant adolescents?
- What are the knowledge, attitudes and practices relating to sexuality and reproduction of the partners of the pregnant adolescent girls?
- Are there differences in the characteristics of partners of the pregnant adolescent girls who report that they planned their pregnancy (intended) and those who report they did not plan their pregnancy (unintended)?

Finally I will present data related to the partner that may increase the likelihood of unintended adolescent pregnancy.

6.1. BACKGROUND DESCRIPTIVE CHARACTERISTICS OF THE SAMPLE OF PARTNERS OF PREGNANT ADOLESCENTS

In this component, the sample size was 150. The sample comprised of partners of 37 pregnant adolescents in Component 1 and the balance 113 (74%) were partners of other adolescent pregnant girls. The respondents were asked for the age of their partners (Table 6.1).

Table 6.1: Distribution of the respondents' by age of the partners.

<i>Age in years</i>	<i>No</i>	<i>%</i>
15	2	1.3
16	8	5.3
17	31	20.7
18	46	30.7
19	63	42.0
Total	150	100

Table 6.1 illustrates that the respondents are partners of adolescents' age ranging from 15 to 19 years. The majority (42%) of the pregnant adolescent were over 18 years of age. 27% were under 18 years of age.

6.1.1. Study population, demographic and socio-economic characteristics

The age of the respondents ranged from 18 to 37 years [mean =24.2, (SD = 3.7)]. Only 9 (6%) respondents were adolescents. The majority (50%) were between 20 to 24 years of age, while 9% were above 30 years of age (Table 6.2).

Table 6.2: Socio-economic and demographic characteristics of the partner of the pregnant adolescents

<i>Characteristic</i>	<i>Frequency</i>	<i>% distribution</i>
<i>Age in years</i>		
Under 20	9	6.0
20-24	75	50.0
25-29	52	35.0
30-34	13	8.5
>35	1	0.5
<i>Marital status at the time of interview</i>		
Married	131	87.3
Living together	19	12.7
<i>Ethnicity</i>		
Sinhalese	124	82.7
Tamil	8	5.3
Moor	18	12.0
<i>Religion</i>		
Buddhism	124	87.7
Hinduism	7	4.7
Islam	17	11.3
Catholicism/Christianity	2	1.3
<i>Family income now</i>		
Surplus, able to save	36	24.0
Break even	73	48.7
Deficit	41	27.3
Total (N)	150	100.0

As shown in table 6.2, the largest ethnic group represented in this study sample was Sinhalese (83%). Moor representation in the sample is slightly higher than to the district ethnic distribution, suggesting a higher rate of adolescent pregnancy among this group. Additionally, according to the Muslim Marriage and Divorce Act of 1951, a girl only needs to be 12 years of age or have a Quazi's permission to marry before contracting into marriage. When a cross tabulation was done with partners ethnicity with the adolescents age, no significance difference was seen with ethnicity.

The distribution of partners according to their reported family income shows that 27% had a deficit financial situation while 49% could 'break even' (income and expenses were almost equal) while 24% reported a surplus and able to save.

6.1.2. Education, literacy, the school environment and employment of the respondents

In this study the respondents were given a simple text in their own language to read and 90% were able to read easily while five (3%) could not read at all.

As shown in table 6.3 the majority of respondents (57%) reported that they had been educated above grade 10. This is in par with the male educational achievement in Sri Lanka. Two (1.6 %) had no formal education. When their opinion of school was asked, 95 (63%) reported that they liked schooling very much.

One hundred and twenty six (84%) of the partners were employed at the time of survey. Of those, 3 (2%) were in skilled occupation, 45% in semi-skilled occupations and 37% in unskilled employment. Most likely the categorisation of the employment of the partners of pregnant adolescent reflects the socio-economic status of the sample studied.

Table 6.3: Distribution of partners of pregnant adolescents according to their level of education, literacy, their opinion regarding schooling and employment

<i>Characteristics</i>	<i>Frequency</i>	<i>% of distribution</i>
<i>Educational level</i>		
No formal education	2	1.3
Grade 1-5 (primary)	9	6.0
Grade 6-10 (secondary)	61	40.7
GCE(O/L) or equivalent	59	39.3
GCE (A/L) or equivalent	19	12.7
<i>Literacy level</i>		
Can read easily	135	90.0
Can read with difficulty	10	6.7
Cannot read at all	5	3.3
<i>Opinion of schooling</i>		
Liked very much	95	63.3
Enjoyed to some extent	39	26.0
Neither liked nor disliked	10	6.7
Disliked	3	2.0
Strongly disliked	1	0.7
Did not attend school	2	1.3
<i>Employment</i>		
Skilled	3	2.0
Semiskilled	67	44.7
Unskilled	56	37.3
Not employed	24	16.0
Total (N)	150	100.0

6.1.3. Sexuality

Having presented some background information, I will now elaborate the details about the first sexual experience and the first intercourse of the respondents.

(a) First sexual experience (initiation of sex) of the respondents

The reported age at first sexual experience (kissing, cuddling, petting) by the men ranged from 12 years to 37 years [mean =21.3, (SD = 3.9)]. The initiation had been with the girlfriend or wife in 94% of the respondents, in five (3 %) with a relation. Four (0.7%) revealed that it was with a stranger. Six respondents had initiated sex with partners of same sex.

Table 6.4: Distribution of the respondents according to the factors related to first sexual experience

<i>Variable</i>	<i>No</i>	<i>%</i>
<i>First sexual experience partners gender</i>		
Same sex	6	4.0
Opposite sex	144	96.0
<i>First sexual experience with whom</i>		
Girlfriend	60	40.0
Wife	81	54.0
Relation	5	3.3
Stranger	4	2.7
<i>Age of the person with whom initiation of sex took place compared to the respondent</i>		
Same/similar age	21	14.0
<5 years older	5	3.3
6 to 10 years older	1	0.7
>11 years <	2	1.3
< 5 years younger	59	39.3
6 to 10 years younger	44	29.3
11 years < younger	16	10.7
Do not know	2	1.4

Fourteen percent reported that their first sexual experience had taken place with some one of the same age. In 79% of cases it had been with a person younger than the respondents and in eight (5%) the partners were older. Two (1%) respondents said they do not know the age of the person with whom they had their first sexual experience with (Table 6.4).

(b) First sexual intercourse of the respondents (partners)

Table 6 5: Distribution of the respondents according to the factors related to the first sexual intercourse

<i>Variable</i>	<i>No</i>	<i>%</i>
<i>First sexual intercourse-gender</i>		
Same sex	10	6.7
Opposite sex	140	93.3
<i>First sexual intercourse with whom</i>		
Girlfriend	59	39.3
Wife	81	54.0
Stranger	9	6.0
Lover	1	0.7
<i>Age difference with whom initiation of sex took place</i>		
Same/similar age	16	10.7
<5 years older	8	5.3
6 + older	0	0.0
< 5 years younger	54	36.0
6 to 10 years younger	48	32.0
11 years + younger	23	15.3
Do not know	1	0.7

The age at first sexual intercourse ranged from 16 to 37 years [mean 22.5 (SD 3.7)]. As per table 6.5, first sex was with the opposite sex in 93%. Sixteen (11%) respondents said their first sexual partners were similar in age while 8 (5%) were older than the respondent. Most number of first sexual experiences (initiation of sex) and first sexual intercourse were reported at the ages 20 to 22 years.

When they were asked with whom they had their first sexual experience, the answer given by 140 (93%) was with a girlfriend or with their wife. Later when they were asked with how many partners they have had intimate sexual experience up until the date of the survey, 130 (87%) had said with only one. This shows that the adolescent pregnant girls were in stable relationships with these partners.

I now turn to present respondents' view regarding the circumstances of and their reaction to their first intercourse (Table 6.6).

Table 6.6: Distribution of respondents' according to their attitude regarding first sexual intercourse and intercourse in general

<i>Variable</i>	<i>N</i>	<i>%</i>
<i>Whether respondent wanted the first sexual intercourse</i>		
Wanted	124	82.7
Was not sure	24	16.0
Happened forcefully	2	1.3
<i>Respondent reflecting how he feels about his age at first intercourse</i>		
Too young	8	5.3
About right	135	90.0
Too old	7	4.7
<i>Respondent's view on intercourse before marriage</i>		
Accept intercourse before marriage	35	23.3
Do not accept	115	76.7
<i>Number of partners ever having intimate sexual relationships</i>		
One	130	86.7
Two	10	6.7
Three	7	4.6
>3	3	2.0

Overall, the picture is predominantly one of partners who were willingly participating in the sexual encounter. As shown in table 6.6, when the total sample was considered, 124 (84%) men have said they wanted their first intercourse to happen. A small minority had been ambivalent (24,16%). Two (1%) has said that it had happened by force (Table 6.6).

Interestingly, however, the respondents' current reflections on the age at which they had had their first sexual intercourse showed that eight (5%) thought their age at first sexual intercourse was too young, seven (5%) were of the opinion they were too old. The difference emerging is understood to reflect the range of first intercourse which was from 16 to 37 years.

Respondents were also asked about their attitude towards sexual intercourse before marriage. Overall, 77% said that they did not think sexual intercourse before marriage was acceptable. Thirty five (23%) accepted intercourse before marriage. There were 41 (27%) with underage female adolescent partners. These respondents expressed opinions almost clearly agreed with their own behaviour.

The majority had only one sexual partner while almost a very small proportion had two or more (10, 7%). Therefore overall data indicate a very high percentage of monogamy among the majority of the respondents.

6.1.4. Knowledge attitude and practice of contraception

Respondents were asked a series of questions to ascertain their views and the practices of contraception. While answering yes or no to every method, the opportunity was given to list all the methods ever used by them. More than half of the respondents (100, 66%) had ever used a contraceptive. Among the respondents who named modern methods (pills, injections, implants, condoms), only 21 (14%) of respondents had ever used condoms, all the other methods being used by their partners. Fourteen (9%) had used natural methods (Table 6.7).

Table 6.7: Distribution of respondents according to the method of contraceptive ever used by him or his partner

<i>Contraceptive method</i>	<i>No.</i>	<i>%</i>
Not used any method	50	33.3
Condom	21	14.0
Pill	63	42.0
IUD	0	0.0
Injection	2	1.3
Implant	0	0.0
Withdrawal	8	5.4
Avoiding fertility period	6	4.0

I will now explore whether respondents used a contraceptive method at the time their adolescent partner became pregnant (Table 6.8), and if they did, what method was used and what caused the failure and if a contraceptive method was not used, the reason for non-use.

Altogether, 106 (71%) reported not using a contraceptive method at the time of the conception. Furthermore, 87 (58%) of the respondents reported that they did not use a method of contraception as they planned their partner to conceive. Only two men had not used a contraceptive method due to factors beyond their control; partner opposition and parents' opposition were the reasons given. Seven (4.5%) had not used a

contraception as they did not think their partner would become pregnant. Nine (6%) reported they did not know any method to use (Table 6.8).

As shown in table 6.8, 44 (29%) of the men reported that they had used a contraceptive method though their adolescent partners got pregnant. Out of these, 30 (20%) reported partner taking pills and 6 (4%) reported practising natural methods (avoiding fertile period, withdrawal). Only two respondents had said the adolescent partner had taken the injection. None had used an intrauterine device (IUD) or implant. One had been afraid to use any method (Table 6.8). In-depth discussion between the interviewers and respondent indicated that at the time of pregnancy there was a gap in knowledge about contraceptive methods. This suggests that user failure rather than method failure was the most important factor. Six (4%) who have practised natural methods had not known the failure rates of such methods. The reasons identified for the condom failure by the interviewers were burst condom, not wearing the condom throughout the act and not wearing the condom properly.

Table 6.8: Distribution of respondents according to the reason for non-use of contraceptive or failure of contraceptive at the time of partner becoming pregnant

<i>Variable</i>	<i>Total N=150</i>	
	<i>No</i>	<i>%</i>
<i>Reason for not using a contraceptive</i>		
Did not use FP as they planned to conceive	87	58.0
Partner did not like.	1	0.7
Parents opposed	1	0.7
Never thought would become pregnant	7	4.7
Did not know a method	9	6.0
Afraid to use	1	0.7
<i>Contraceptive used and failed</i>		
Natural method	6	4.0
Pills	20	13.3
Post coital pill	10	6.7
Condom	6	4.0
Injection	2	1.2

Next, I turn to understand the reproductive and sexual health awareness of the respondents.

6.1.5. Reproductive and sexual health knowledge of partners

Knowledge, attitude and practice of contraception were assessed as satisfactory if the respondents knew a contraceptive method, knew how to use the method, knew where the method was available and were able to get hold of the method if needed.

Table 6.9: Distribution of respondents with a satisfactory knowledge of contraceptives

<i>Contraceptive method</i>	<i>Respondents' with satisfactory knowledge</i>	
	<i>No.</i>	<i>%</i>
Condom	106	70.7
Pill-	90	60.0
Post coital pill-	22	14.7
Injection	23	15.3
IUCD	6	4.0
Implant	2	1.3
Withdrawal	31	20.7
Avoiding fertile period	27	18.0

As table 6.9 shows, at the time of the survey the majority knew about the condoms (71%) and contraceptive pills (60%) satisfactorily. It is noteworthy that, overall, satisfactory knowledge about withdrawal method, avoiding fertility period and post coital pill were more than the pregnant adolescents'. The least known was the implant (1%).

Table 6.10: Distribution of respondents according to knowledge and use of a method of contraception

<i>Knowledge and use of contraceptive method</i>	<i>No</i>	<i>%</i>
Knows satisfactorily at least one method correctly now	120	80.0
Had ever used a method	100	66.7
Used on the first sexual intercourse	22	14.7
Used before conceiving but failed	44	29.3

The majority of respondents 120 (77%) was aware of at least one contraceptive method at the time of the survey and 100 (67%) reported that they or their partners had ever used a method of contraception. Only 22 (15%) had used a method on their first sexual encounter and 44 (29%) had used a method at the time of conceiving which had failed (Table 6.10).

The knowledge on reproductive health was assessed based on the response to three questions (Table 6.11).

Firstly, the respondents answered ‘yes’, ‘no’ or ‘don’t know’ to the question, ‘Can a girl become pregnant in her first unprotected sexual intercourse?’. Secondly, respondents were asked to choose from four possible answers or to state ‘don’t know’ to the question assessing the knowledge of the fertility period; ‘Given that a woman is having sexual intercourse, when, during her monthly menstrual cycle, do you think pregnancy is most likely to occur?’ and lastly, level of knowledge was assessed whether at least one contraceptive method was known correctly by asking regarding how to use contraceptive, where to get and ability to use if needed.

Those who could answer all three questions correctly were considered to have a satisfactory level of knowledge in reproductive and sexual health.

Table 6.11: Distribution of respondents according to their reproductive health knowledge

<i>Knowledge on reproductive health</i>		<i>Respondents</i>	
		<i>No.</i>	<i>%</i>
1	Knew about the possibility of pregnancy at the very first unprotected intercourse	97	64.7
2	Knew the time during the menstrual cycle when a woman is at the greatest risk of becoming pregnant(fertility period)	32	21.3
3	Satisfactorily knows at least one contraceptive method correctly	120	80.0
4	Overall Satisfactory knowledge	16	10.3

As shown in table 6.11, from the overall sample 97 (65%) of the respondents knew that their partners could get pregnant as a result of the very first sexual intercourse. However, about a quarter (32, 21%) knew when in the menstrual cycle she was most likely to become pregnant. Seventy seven per cent knew at least one contraceptive method correctly. Altogether only 16 (10%) managed to answer all three questions correctly and were considered to have a satisfactory level of knowledge on reproductive health.

Similarly as in the pregnant adolescents, the level of knowledge reported by the partners at the time of the survey does not accurately reflect the knowledge that they had when their adolescent partner became pregnant. The homes of the partners of pregnant adolescents would have been visited by midwives as well as by the PHI (Public Health Inspector) and these officers may have met the partner and the pregnant adolescent. The respondent may also have acquired knowledge accompanying the adolescent to the clinics as well as during health workers home visits. Therefore it is possible that knowledge levels before the adolescent partner became pregnant were much lower than at the time of the survey.

6.1.6. Response to pregnancy and support to the pregnant adolescents

I next turn to focus on the male partners' attitude on intention and response to the pregnancy (Table 6.12). The respondents were asked a few questions regarding their adolescent partners in order to understand the attitude of the male for pregnancy resolution.

Table 6.12: Distribution of the respondents according to their intention to conceive and response to pregnancy

<i>Intention</i>	<i>No</i>	<i>%</i>	<i>Response</i>	<i>No</i>	<i>%</i>
Planned	100	66.7	Welcomed	128	85.3
Uncertain	19	12.7	Mixed feeling	19	12.7
Unplanned	31	20.6	Not welcomed	3	2.0
Total	150	100.0	Total	150	100.0

All respondents in the survey were asked a series of questions aimed at ascertaining whether the pregnancy was intended or not and how it had been received by the partner himself and his family. Table 6.12 shows that the percentage of partners who reported that the pregnancy was welcome is more than the percentage who said they planned the pregnancy. The percentage who were uncertain or had mixed feeling are the same, but definitely the percentage who said the pregnancy was not welcome (2%) is much lower than the percentage who reported the pregnancy was unplanned (20%).

The data in table 6.12 shows that, even though some males have been uncertain in the intention of making a child or were not pleased at hearing the news of the pregnancy they had eventually welcomed the pregnancy of their adolescent partner. This suggests that most had subsequently adjusted to the situation of their adolescent partner being pregnant and did not look at the adolescents pregnancy as a problem.

I turn now to explore the support the respondents had given to their pregnant adolescents as well as the support they had received from others (Table 6.13).

Table 6.13: Respondents' feeling about the degree of support given by him to his adolescent pregnant partner and about the degree of support received by him

<i>Perception of the degree of support</i>	<i>Support given by him</i>		<i>Support received by him</i>	
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
Very well supportive	119	79.3	120	80.0
Somewhat supportive	30	20.0	29	19.3
Not supportive at all	1	0.7	1	0.7

In answer to a question regarding the support they gave to their adolescent partners, respondents disclosed that 119 (79%) were supporting their partner very well while 30 (20%) respondents perceived that they were only somewhat supportive. One respondent felt he was not supportive to his adolescent partner at all (Table 6.13).

When questioned about the support he had been given during the time his adolescent partner was pregnant, 80% of the sample felt 'very well supported' (120, 80%) while two (19%) perceived that their family members were somewhat supportive and one felt others were not supporting him at all.

6.2. EXPLORING POSSIBLE PREDICTORS OF UNPLANNED PREGNANCY BY CROSS TABULATION

Having presented knowledge, attitudes and practices relating to sexuality and reproduction of the partners of the pregnant adolescent girls, I next turn to explore whether any characteristics differed significantly between the two groups; whose pregnancies were planned and the other group whose pregnancies were unplanned. When the question 'Would you say that this pregnancy was planned by you?' was asked, there were 100 (66.7%) partners who said their pregnancy was planned while 19 (12.7%) replied neither planned nor unplanned. Thirty one (20.7%) said that the pregnancy was unplanned or unintended. To be able to apply cross tabulation and later for binary logistic regression, the variable was made dichotomous. Those who clearly said that they planned their pregnancy were taken as one group. The group who said, neither planned or unplanned and unplanned were included in the second group (50, 33.3%).

More in depth examination was undertaken to explore whether factors differ between the planned pregnancy and unplanned pregnancy groups. Here, I have cross tabulated and presented only the variables with significance in chi square analysis in table 6.14.

Table 6.14: Cross tabulation of partner characteristics according to planning or not planning the pregnancy

<i>Variables</i>	<i>Total</i>		<i>Planned pregnancy 100</i>		<i>Unplanned pregnancy 50</i>		<i>X²</i>	<i>P</i>
	<i>No</i>	<i>%</i>	<i>No</i>	<i>%</i>	<i>No</i>	<i>%</i>		
<i>Age</i>								
<i>Age in years</i>								
20 to 29	127	84.7	83	83.0	44	88.0	64.2	0.04
30 or above	14	9.3	13	13.0	1	2.0		
19 or less	9	6.0	4	4.0	5	10.0		
<i>Age difference</i>								
Age difference 5 years or less	69	46.0	39	39.0	30	60.0	6.432	0.04
6 to 9	55	36.7	40	40.0	15	30.0		
10 years or more	26	17.3	21	21.0	5	10.0		
<i>Adolescent age</i>								
Adolescent partners age 18 or more	108	72.0	79	79.0	29	58.0	7.292	0.007
Under 18 years	42	28.0	21	21.0	21	42.0		
<i>Education</i>								
Advance level	19	12.7	14	14.0	5	10.0	8.44	0.033
Secondary	120	80.0	83	83.0	37	74.0		
Primary or less	11	7.3	3	3.0	8	16.0		
<i>First intercourse</i>								
First intercourse wanted	124	82.7	88	88.0	36	72.0	5.955	0.015
Uncertain/Not wanted	26	17.3	12	12.0	14	28.0		
<i>Contraceptive</i>								
Contraceptive not used	128	85.3	92	92.0	36	72.0	13.9	<0.001
Used contraceptive	22	14.7	8	8.0	14	28.0		
<i>Attitude to pregnancy</i>								
Pregnancy welcomed	128	85.3	100	100	28	56.0	51.5	<0.001
Not welcomed	22	14.7	0	0.0	22	44.0		

The majority of partners who were with older pregnant adolescents said they had planned their pregnancies. The differences between the two groups (adolescent partner 18 and over or younger) were highly statistically significant. The age of the respondents' adolescent partners had a bearing on whether the respondents wanted a pregnancy or not. If the adolescent partner was 18 or more, respondents had planned the pregnancy with a statistically significant difference. An age gap of more than 10 years was statistically significantly associated with wanting the pregnancy. Respondents who had planned the pregnancy had not used contraception with a statistically significant difference.

Table 6.14 shows that the respondents who were 30 and above statistically significantly planned for their partner to conceive while almost half of the respondents who were under 30 did not plan for pregnancy with a statistically significance difference. This shows that, though their adolescent partners were pregnant now, these respondents, though on a sexual relationship, were not planning to make a family. It is pertinent to note that the majority of them (36, 72%) had not used a contraceptive either (Table 6.14).

Table 6.14 further shows that the majority of the respondents with a primary education did not want pregnancy with a statistical significant difference. Understandably, those who had planned for their partner to conceive had welcomed the news of the pregnancy too.

6.3. EXPLORING POSSIBLE DETERMINANTS OF UNPLANNED PREGNANCY BY LOGISTIC REGRESSION

There were 100 (67%) partners who said they had planned their adolescent partners to be pregnant. There was a sub group of the male population 50 (33%) who did not plan the pregnancy. The cross tabulation showed that there are statistically significant differences between these two groups. Further analysis was needed to identify whether there are variables specifically associated with the likelihood of unplanned pregnancy.

I used the logistic regression as it is useful to identify the presence of determinants of adolescent pregnancy or absence of a characteristic or outcome (unplanned pregnancy) based on values of a set of predictor variables. The dependent variable was made dichotomous to use in binominal regression. Further, the logistic regression coefficients were used to estimate odds ratios for each of the independent variables in the model.

The logistic regression analysis presented as table 6.15 was conducted to identify the characteristics of men who reported unplanned pregnancy related to the partners of pregnant adolescents (N-150). Variables were selected by looking at the unadjusted odds ratio and if $p < 0.25$ (Annexure 5c) were entered to the model. Marital status, age, age difference between the partners, whether the pregnant adolescent was 18 years or younger, educational attainment, opinion of schooling and knowledge of at least one

method of contraception were the variables included into the Forward step- wise (L.R.) model as the $p < 0.25$.

Table 6.15: Forward stepwise model on factors related to dependent variable unplanned pregnancy

<i>Determinants</i>		<i>95.0% C.I. for EXP(B)</i>					
		<i>B</i>	<i>S.E.</i>	<i>Sig.</i>	<i>OR</i>	<i>Lower</i>	<i>Upper</i>
Step 1 ^a	Adolescent < 18 years	1.002	.377	.008	2.724	1.300	5.707
	Constant	-1.002	.217	.000	.367		
Step 2 ^b	Education			.037			
	Secondary education	.219	.570	.701	1.245	.407	3.804
	Primary education	2.007	.873	.021	7.442	1.346	41.158
	Adolescent < 18 years	1.001	.388	.010	2.722	1.272	5.822
Step 3 ^c	Constant	-1.336	.549	.015	.263		
	Age difference of the partners			.036			
	Age difference 6 to 9	-.764	.414	.065	.466	.207	1.048
	Age difference 10 years or more	-1.349	.598	.024	.259	.080	.838
	Education			.046			
	Secondary education	.026	.585	.964	1.026	.326	3.228
	Primary education	1.836	.888	.039	6.271	1.101	35.725
Adolescent < 18 years	1.097	.402	.006	2.995	1.363	6.580	
Constant	-.730	.597	.222	.482			

a. Variable(s) entered on step 1: Adolescent partners' age
Baseline: Adolescent Older than 18 years

b. Variable(s) entered on step 2: Education
Baseline: Education- Advance level

c. Variable(s) entered on step 3: Age gap with the adolescent partner
Baseline: Age difference of the partners 5 years or less

Chi square = 21.725, $p < .0001$ with $df = 5$. Hosmer and Lemeshow test (H-L goodness-of-fit) ($p = 0.921$) shows that it is an adequately fitting model.

Nagelkerke's R^2 of .187 indicates a weak relationship between determinants and outcome. i.e. only 19% of the differences in outcomes can be accounted for by these determinants. The Wald criterion demonstrated that when adolescent girls were younger than 18 years ($p = .006$), age difference between the partners ($p = .036$) and

education of the partner ($p=.046$) were statistically significant determinants of an unplanned pregnancy. Civil status, opinion of schooling, age of the partners and knowledge of at least one method of contraceptive were not significant determinants in the presence of these three.

The estimated Odds Ratio (OR) values indicate that an age difference between the partners of 10 years or more decreased the odds of an unplanned pregnancy to 24% of that for partners whose age differed by 5 years or less, and this was statistically significant at the 5% level. An age difference of 6 to 9 years between partners was not found to be significantly different to an age difference of 5 years or less in its effect on unplanned pregnancy. When the age difference between the partners was 10 years or more, it was related to planning of pregnancy compared to an age difference 5 or less. Partners who had only a primary education have 6 times odds of an unplanned pregnancy compared to those with an advance level education. When the adolescent girl is younger than 18 years, there were nearly 3 times the odds of an unplanned pregnancy compared to those who are 18 years or over.

Box 6.1 Summary of findings, overall findings and difference between groups

	Predictor Areas	Overall finding	Difference between planned and unplanned pregnancy
a)	Planning pregnancy	Majority (67%) said they planned their pregnancy.	
b)	News of pregnancy welcomed	Majority (85%) welcomed the news of pregnancy.	100% who planned and 56% who did not plan the pregnancy welcomed the pregnancy. The difference is statistically significant in bivariate analysis.
c)	Degree of support when his partner is pregnant	Majority (80) were well supported by the others.	No statistically significant difference.
d)	First sexual experience	Majority (96%) were over 16 years. Ranged from 12 to 37 years. Majority (90%) had wanted first sexual experience to happen. Majority (92%) was glad about the first sexual experience.	No statistically significant difference.
e)	First sexual intercourse	All (100%) were over 16 at first sexual intercourse Range - 16 to 37 years. Majority (83%) had wanted first sexual intercourse to happen.	No statistically significant difference. Bivariate analysis showed that male partners whose attitude towards their sexual experiences was uncertain (n=24) or forced (n=2) were more likely to report the current pregnancy as unplanned. Adolescents who said their pregnancies were not planned had odds three times higher of having had a non-consensual first intercourse as the planned group in multivariate analysis.
	Accept intercourse before marriage	Majority (77%) do not accept intercourse before marriage.	No statistically significant difference.

	Predictor Areas	Overall finding	Difference between planned and unplanned pregnancy
f)	Civil Status	87% married, 13% living together.	No relationship with civil status
g)	Number of partners	87% one partner	No statistically significant difference.
h)	Knowledge on reproductive health	Almost 65% was aware that pregnancy is possible after first unprotected sexual intercourse. Only 21% was aware of the fertility period Overall satisfactory knowledge 10%.	No statistical significant difference. No statistical significant difference.
i)	Contraception	Majority(77%) knew at least one method of contraception Majority (67%) had ever used a method of contraception. Only 15% used contraception on first intercourse. 29% reported contraceptive usage at the time of conception.	No statistical significant difference. No statistical significant difference. No statistical significant difference. No statistical significant difference.
j)	Ethnicity	The majority (83%) of the sample was Sinhalese. Moor (5%) and Tamil (12%). Moor representation is greater than the population distribution.	No statistical significant difference.
k)	Economic situation	A majority of partners reported their economic situation as breakeven (49%) or surplus (24%). The majority (82%) were in semiskilled or unskilled employment.	No relationship with economy. No relationship with occupation.

	Predictor Areas	Overall finding	Difference between planned and unplanned pregnancy
l)	Education	Majority (90%) was literate and had an education above secondary (52%) level.	Of partners who had only a primary education, 3% had planned their pregnancy and 16% had not planned their pregnancy. The difference was statistically significant in bivariate analysis. Partners who have only a primary education have 6 times odds of an unplanned pregnancy compared to those with an advance level education.
		Majority (63%) had a positive opinion of schooling.	No statistical significant difference.
m)	Age	Majority (85%) were between 20 to 29 years.	Of partners over 30 years 13% had planned the pregnancy. 2% did not plan the pregnancy. The difference is statistically significant in bivariate analysis.
n)	Age difference of partners	37% age gap 6-9 year and 17% age gap was more than 10 years.	Partners with an age gap difference of 10 years or more were significantly protected from an unplanned pregnancy.
o)	Adolescents' partners age	Majority (72%) were 18 and over.	Male partners who had adolescent partners under 18 years of age were 3 times the odds of an unplanned pregnancy compared to those who had girl partners 18 years or over.

In this chapter we understood the factors related to the partners of pregnant adolescents.

In the next chapter we are going to understand the school adolescent girls and boys. In chapter 8, I will explore the variables which were commonly asked from the pregnant adolescents and their partners to ascertain whether the answers differ or are similar.

CHAPTER 7

FINDINGS FROM SCHOOL ADOLESCENTS (COMPONENT III)

INTRODUCTION

In this chapter, I present the findings from the analyses of the self-administered questionnaire to school adolescents addressing the following research questions: What are the socio-economic and demographic characteristics of the school adolescents? What are the knowledge, attitudes and practices relating to sexuality and reproduction among school adolescents, both girls and boys? And finally, what factors are associated with sexual activity among school-going adolescents?

The results are presented in three parts. In the first part (7.1), I present the background information on the 2020 school adolescents who participated in this component of the study. In the second part (7.2), I go on to provide a more detailed analysis of the sample. Firstly in terms of their social situation, their school activities, their family relationships, sources of support and their risk behaviours. I then go on to focus on three components related to sexuality; sexual attitude, sexual behaviour and sexual and reproductive knowledge. In the third and fourth part (7.3 and 7.4) I focus the analysis on those girls and boys who reported that they were sexually active and examine a range of variables that are potential predictors for sexual behaviour.

7.1. BACKGROUND CHARACTERISTICS OF SCHOOL ADOLESCENTS

7.1.1. Study population, demographic and socio-economic characteristics

Table 7.1 shows the proportion of the sample of adolescents who participated in the survey by school zones, age and gender in the study district.

Table 7.1: Distribution of school adolescents who participated by gender and school zone

School Zone	Gender					
	Total		Male		Female	
	No	%	No	%	No	%
Badulla	404	20.0	28	5.4	376	25.1
Bandarawela	404	20.0	40	7.6	364	24.3
Mahiyangana	404	20.0	138	26.5	266	17.7
Passara	404	20.0	177	34.0	227	15.1
Welimada	404	20.0	138	26.5	266	17.8
Total	2,020	100	521	100	1,499	100

As shown in table 7.1, four hundred and four adolescents participated from each school zone. In the total sample there were 521 (26%) males and 1499 (74%) females. There is low participation of males in Badulla (5%) and Bandarawela (8%). Highest male participation was from Passara school zone (34%). There were a few reasons for the less participation of boys: In Badulla and Bandarawela school zones there were sports meets at the time of data collection and more boys than girls participated in sports. Also on the date of data collection and more girls had been present. As noted in the methodology chapter, if some kind of stratification by sex had been introduced, boys could have been better represented. The 521 boys who are in the cross section sample are representative of the school boys' population in the district.

Respondents were asked to report their current age in completed years. As shown in table 7.2, the age of the school adolescents girls and boys ranged from 16 to 19 years [mean =16.91 (SD = 0.735)]. Among the female respondents, the majority (49%) were 17 years of age. The largest ethnic group represented in the study sample were Sinhalese (97%), 24 respondents (1%) were Tamils of which 20 were females and 4 were males. There were 29 (1%) Moor adolescents consisting of five males and 24 females. Only the mixed ethnicity government schools were included in the sample.

The Moor and Tamil only schools are outside the provincial school system. The majority (96%) of the sample were Buddhists whereas Catholics comprised of 2%, Islam almost 2% and Hindu 0.3%.

Table 7.2: Socio-economic and demographic characteristics of the school adolescents by gender

Characteristics	Total		Male		Female	
	N=2,020		N=521		N=1,499	
	N	%	N	%	N	%
Age in years						
16	748	37.0	289	55.5	459	30.6
17	891	44.1	159	30.5	732	48.8
18	355	17.6	65	12.5	290	19.3
19	26	1.3	8	1.5	18	1.2
Ethnicity						
Sinhalese	1,967	97.4	512	98.3	1455	97.0
Tamil	24	1.2	4	0.8	20	1.4
Moor	29	1.4	5	1.0	24	1.6
Religion						
Buddhism	1,946	96.3	507	97.3	1,439	96.1
Hinduism	6	0.3	1	0.2	5	0.3
Islam	30	1.5	4	0.8	26	1.7
Catholicism/Christianity	38	1.9	9	1.7	29	1.9
Economy						
Deficit	329	16.3	82	15.7	247	16.5
Break even	1,049	51.9	290	55.7	759	50.6
Surplus able to save	642	31.8	149	28.6	493	32.9

Sixteen per cent (16%) of the adolescents said that they have a deficient family economy (Table 7.2).

7.1.2. Characteristics of mother, father, siblings and the home environment of the school adolescent

As reported in table 7.3, 25 (1.2%) of mothers and 20 (1%) fathers of the adolescents were working abroad. The majority of girls and boys reported that their mother and father had an education up to O/Level. These figures are on par with the high secondary school attainment in Sri Lanka. The majority of the girls and boys reported that their parents were married over 18 years of age. This is keeping on a par with the Sri Lankan age at marriage.

26 (1.2%) school students reported that their mothers were deceased while 87 (4%) reported their fathers were deceased. When compared to the girls (5%) a lower percentage of boys (2%) reported that their father had deceased. One possible explanation for this difference is the economic necessity for boys to leave school and to assume a wage earning role in the family when father is deceased.

Table 7.3: Selected characteristics of mother, father, siblings and the home environment of the school adolescent

Characteristics	Total N=2,020		Male N=521		Female N=1,499	
	No	%	No	%	No	%
Place of living						
Mother In Sri Lanka	1,995	98.8	514	98.7	1,481	98.8
Abroad	25	1.2	7	1.3	18	1.2
Father In Sri Lanka	2,000	99.0	518	99.4	1,482	98.9
Abroad	20	1.0	3	0.6	17	1.1
Mother's education						
No formal education	34	1.7	8	1.5	26	1.7
Grade 1-5 (primary)	107	5.3	32	6.1	75	5.0
Grade 6-10 (secondary)	256	12.7	75	14.4	181	12.1
O/Level and above	1,548	76.6	376	72.2	1,172	78.2
Don't know	75	3.7	30	5.8	45	3.0
Father's education						
No formal education	22	1.1	3	0.6	19	1.3
Grade 1-5 (primary)	85	4.2	26	5.0	59	3.9
Grade 6-10 (secondary)	150	7.4	43	8.3	107	7.1
O/Level and above	1,647	81.5	414	79.5	1,233	82.2
Don't know	69	3.4	19	3.6	50	3.3
Not answered	47	2.3	16	3.0	31	2.1
Mother's age at marriage						
<18	41	2.0	10	1.9	31	2.1
≥18	1,430	70.8	309	59.3	1,121	74.8
Don't know	453	22.5	172	33.0	281	18.7
Not answered	96	4.7	30	5.7	66	4.4
Father's age at marriage						
<18	28	1.4	7	1.3	21	1.4
≥18	1,429	70.7	310	59.5	1,119	74.6
Don't know	473	23.4	174	33.4	299	19.9
Not answered	90	4.5	30	5.8	60	4.1
Siblings having children						
	48	2.4	20	3.8	28	1.9
Home environment						
Peaceful	1,837	90.9	461	88.5	1,376	91.8

48 (2%) adolescents reported that their siblings had children (Table 7.3). The students were asked 'How would you categorise your home environment'. The answers given to select were, 'peaceful', 'with quarrels', 'bad', 'very bad' and 'any other (specify)'. Students were advised to mark the most appropriate. Next an open ended question was posed to the students to explain the answer given to the home environment.

A majority of school adolescents appear to have lived in a peaceful home environment (Table 7.3). The explanations offered by boys and girls for describing the home environment as 'peaceful' were almost similar: unity of the family, better understanding among the family members, love among the family members, discussing issues among the family members and overall happiness.

The reasons for quarrels and bad family environment identified by girls and boys were also similar. Economic problems and drinking of the father were the main reasons. Other reasons mentioned were misunderstandings, father's extramarital relationships and the separation of the father and mother.

7.2. EXPLORING IN DEPTH THE SCHOOL ADOLESCENTS' CHARACTERISTICS BY CROSS TABULATION

Having presented some background information on the total sample (2,020) of school adolescents, I will now present a more detailed analysis of the sample. Further analysis will be done by cross tabulation. In this section, I analyse the data by gender of the school adolescents (male vs. female).

In the school sample, there were 521 boys and 1,499 girls. Firstly I examine whether there are differences in the boys and girls in their school related activities, in their family relationships, communication and sources of support.

7.2.1. Adolescents school related activities

Respondents were asked a series of questions relating to their school experiences and educational achievements (Table 7.4).

Table 7.4: Distribution of school adolescents by gender and school related activities

School related activities	Total N=2,020		Male N=521		Female N=1,499		x ²	P
	No	%	No	%	No	%		
	Grade							
11/O Level	593	29.4	280	53.7	313	20.9	20.5	<0.001
Grade 12	980	48.5	162	31.1	818	54.6		
Grade 13	447	22.1	79	15.2	368	24.5		
Opinion of adolescent on their performance in class								
Excellent	391	19.3	127	24.4	264	17.6	48.3	<0.001
Above average	842	41.7	167	32.1	675	45.0		
Average	777	38.5	218	41.8	559	37.3		
Below average	10	0.5	9	1.7	1	0.1		
Participating in								
Sports	556	27.5	280	53.7	296	19.7	100.1	<0.001
Other extracurricular activities	1,158	57.3	396	76.0	762	50.8	2.67	0.10
Have								
A Hobby	1,910	94.6	482	92.5	1,428	95.3	5.67	0.01
An ambition	1,929	95.5	482	92.5	1,447	96.5	14.49	<0.001

As reported in table 7.4, over 60% considered that their school performance was 'excellent' or 'above average'. More boys (24%) perceived their performance to be excellent than the girls (18%). This difference was statistically significant. Half of the girls reported that they were taking part in extracurricular activities whereas a much smaller proportion (12%) was involved in sports activities. Overall, girls were substantially less likely than boys to report involvement in either sports or extracurricular activities. The vast majority of boys and girls reported that they had a hobby and a career ambition.

7.2.2. Adolescents relationship and communication with parents

Next, we turn to find out whether there are differences in the relationship and communication with their parents among these two groups. A very high proportion of girls and boys reported a close relationship with their mother and their father (Table 7.5).

As table 7.5 shows, the majority of the adolescents communicated well with their parents. However we note that a substantial minority (11% of the boys and 15% of the girls) reported that it was 'not easy at all to discuss' with their mother. Additionally 15% of the boys and 13% of the girls reported that it was 'not easy at all to discuss' with their father.

Table 7.5: Distribution of adolescents according to gender, relationship with parents and discussing matters of importance

Relationship and communication	Total N=2,020		Male N=521		Female N=1,499		x ²	P
	No	%	No	%	No	%		
Relationship								
Mother								
Very close	1,768	87.5	443	85.0	1,325	88.4	7.57	0.18
Somewhat close	200	9.7	65	12.5	135	9.0		
Not close/distant	26	1.3	6	1.2	20	1.3		
Mother deceased	26	1.3	7	1.3	19	1.3		
Father								
Very close	1,368	67.7	364	69.9	1,004	67.0	35.5	<0.001
Somewhat close	424	21.0	85	16.3	339	22.6		
Not close/distant	141	7.0	60	11.5	81	5.4		
Father deceased	87	4.3	12	2.3	75	5.0		
Discussion								
Mother								
Very easy	1,234	61.1	194	37.2	1,040	69.4	22.9	<0.001
Somewhat easy	654	32.4	263	50.6	391	26.1		
Not easy at all	106	5.2	57	10.9	49	3.3		
Mother deceased	26	1.3	7	1.3	19	1.3		
Father								
Very easy	649	32.1	160	30.7	489	32.6	52.2	<0.001
Somewhat easy	1,013	50.1	272	52.2	741	49.4		
Not easy at all	271	13.4	77	14.8	194	12.9		
Father deceased	87	4.3	12	2.3	75	5.0		

A small number of questions on the two broad topics of religion and health were asked. In order to gain some insight into those core values and beliefs that inform attitudes towards sexuality and sexual health. As can be seen from table 7.6, for the majority of the adolescents and their parents, religion plays an important part in their life.

Table 7.6: Distribution of school adolescents by gender and their perception regarding the importance of religion

Importance		To adolescent			To mother			To father		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Very important	% within Gender	72.9	77.6	76.4	67.9	64.6	65.4	60.3	58.4	58.9
Fairly important	% within Gender	18.0	16.0	16.5	24.2	28.2	27.2	31.7	35.2	34.3
Not very important	% within Gender	7.1	5.4	5.8	3.6	3.8	3.8	4.6	2.7	3.2
Not important at all	% within Gender	1.3	0.3	0.6	1.5	0.5	0.7	1.3	0.3	0.6
Don't know	% within Gender	0.6	0.7	0.6	2.7	2.9	2.9	2.1	3.4	3.0
	% within Gender	100	100	100	100	100	100	100	100	100
	χ^2			10.6			9.03			14.5
	P			0.031			0.06			0.01

Health as a core value is also very important to the adolescents. The vast majority of those who expressed an opinion agreed or strongly agreed that it was most important to them and that the maintenance of good health was the responsibility of the individual (Table 7.7).

Table 7.7: Distribution of adolescents by gender and attitude on health.

Attitude		People should be responsible for their health			Health is what is most important		
		Gender			Gender		
		Male	Female	Total	Male	Female	Total
Strongly agree	% within Gender	67.6	77.9	75.2	72.9	88.0	84.1
Agree	% within Gender	17.5	16.7	16.9	8.8	5.9	6.7
Disagree	% within Gender	0.8	0.3	0.4	2.5	1.1	1.5
Strongly disagree	% within Gender	1.3	0.5	0.7	0.2	0.1	0.1
No opinion	% within Gender	12.9	4.5	6.7	15.5	4.9	7.6
	% within Gender	100	100	100	100	100	100
	χ^2			50.7			78.5
	P			<0.001			<0.001

7.2.3. Support and sharing of adolescents

The next set of questions seeks to understand who adolescents turn to when they have problems and who provides them with the support. It provides a more detailed insight into the nature of the parent-child relationship recognising that even within excellent parent child relationships, the extent to which an adolescent feels able to turn to their parents for information and support cannot be assumed. It also provides valuable insights into the role of friendships for Sri Lankan adolescents.

The respondents were asked to identify their most important source of general support through the question 'If you have a problem, who would you find it easier to discuss it with'. They were provided with multiple options and asked to circle only one answer. As reported in table 7.8, girls are most likely to turn to their parents (57%), when faced with a problem as compared to the boys (34%). This difference was statistically significant. One third of the boys (32%) and 21% of girls said they would turn to a friend.

Although the question did not enable them to specify whether mother or father was the most likely source of support, it is reasonable to assume that they would most likely turn to their mothers on the basis of the findings on parent-child relationships reported earlier in this chapter.

Table 7.8: Distribution of adolescents by gender and to whom adolescents turn in a problem

	Total		Male		Female		x²	P
	No.	%	No.	%	No.	%		
Parents	1029	50.9	176	33.8	853	56.9	134.4	<0.001
Siblings	257	12.7	58	11.1	199	13.3		
Friend	485	24.0	164	31.5	321	21.4		
Teacher	43	2.1	12	2.3	31	2.1		
Any other	206	10.2	111	21.3	95	6.3		

Table 7.9: Distribution of adolescents by gender and with whom adolescents discuss sexual issues

	Total N=2,020		Male N=521		Female N=1,499		x ²	p
	No.	%	No.	%	No.	%		
Parent	690	34.2	15	2.9	675	45.0	41.6	<0.001
Siblings	287	14.2	119	22.8	168	11.2		
Friend	457	22.6	145	27.8	312	20.8		
Teacher	35	1.7	9	1.7	26	1.7		
Doctor	106	5.2	57	10.9	49	3.3		
No body	440	21.8	174	33.4	266	17.8		
Any other	5	0.2	2	0.4	3	0.2		

The adolescents were then asked to specifically identify their most likely sources of sexual advice and support. As shown in table 7.9, parents remained an important source of support, although for a smaller proportion of the sample. The gender difference in responses is striking; whereas the majority of the girls felt that they could turn to their parents, few of the boys felt that they could. Peers and siblings are important for both, although they appear to be a more important source of support for boys. It is worthy of note that a substantial proportion of both boys and girls felt that they turn to nobody to discuss sexual issues (Table 7.9). This is a matter of some concern particularly in relation to the boys given that one third gave this response. However, in interpreting these results we need to remember that the male sample was younger and it may be therefore that a proportion of them had not encountered problems and they were answering the question in a hypothetical way.

Table 7.10: Distribution of adolescents by gender and from whom adolescents would like to learn regarding sexual issues

	Total N=2,020		Male N=521		Female N=1,499		x ²	P
	No.	%	No.	%	No.	%		
Parents	253	12.5	43	8.3	210	14.0	37.9	<0.001
Sibling	4	0.2	1	0.2	3	0.2		
Friend	114	5.6	41	7.9	73	4.9		
Teacher	185	9.2	49	9.4	136	9.1		
TV/Radio	28	1.4	16	3.1	12	0.8		
Book/Journal	235	11.6	47	9.0	188	12.5		
Health personnel	413	20.4	99	19.0	314	20.9		
Doctor	367	18.2	100	19.2	267	17.8		
Any other	421	20.8	125	24.0	296	19.7		

Although the adolescents regarded their parents and peers as the most important sources of advice and support, they did not identify them as their preferred sources of sexual information. As table 7.10 indicates, there was a consensus of agreement between the boys and girls about their preferred source of information with doctors and other health personnel identified most commonly. A number of factors may be influencing and shaping their responses. Firstly, a desire for factually accurate information and an acknowledgement that medical personnel rather than friends are much more likely to be able to provide that information. Secondly, the preference for acquiring such information in a detached and professionally defined context. Thirdly, it may simply reflect the current situation where there is little sharing of sexual knowledge through none medicalized information networks. Notwithstanding the reasons for their responses, the findings demonstrate the important role that health personnel have to play in sex education.

7.2.4. Adolescents' risky behaviour

A series of questions sought to determine the extent to which the adolescents engaged in a range of risk behaviours.

Table 7.11: Adolescents' practice of risky behaviours

	Total N=2,020		Male N=521		Female N=1,499		x ²	P
	No	%	No	%	No	%		
Ever smoked-Yes	182	9.0	140	26.9	42	2.8	27.3	<0.001
Smoked last week	66	3.3	45	8.6	21	1.4	64.0	<0.001
Had ever taken intoxicating substances	256	12.7	182	34.9	74	4.9	31.4	<0.001
Intoxicating substances taken last week	61	3.0	56	10.7	5	0.3	32.6	<0.001
Have watched/seen pornography	245	12.1	65	12.5	180	12.0	.079	0.778
Watched at home	75	3.7	41	7.9	34	2.3		
Watched at a friend's place	85	4.2	45	8.6	40	2.7		
Internet cafe	26	1.3	12	2.3	14	0.9		
Mobile Phone	73	3.6	34	6.5	39	2.6		
Any other	7	0.3	5	0.9	2	0.1		

Nine per cent reported that they had ever smoked. As one would expect, there is a statistically significant difference in ever smoking between the boys (27%) and the girls (3%). A further question asked them about their recent smoking habits in order to better

determine the proportion who are smoking regularly. As only 9% of boys and 1% of girls reported that they had smoked the week before the data collection, this suggests that two thirds of those who have ever smoked do not have an established smoking habit.

Overall a higher proportion reported alcohol consumption with similar patterns of usage. Overall, the boys were substantially more likely than the girls to report having ever taken intoxicating substances (35% of boys and 5% of girls). A smaller proportion of boys and girls had done so in the week previous to data collection. In response to the open ended question “What are the intoxicating substances used?” the most common responses were liquor (boys 5% and girls 1%), and beer (boys, 2%, girls 0.7%).

The final questions in this section concerned access to pornography. As table 7.11 demonstrates, a significant minority of the adolescents reported that they had ever watched with comparable rates between males and females (13% males and 12% females) Among those who had watched pornography, the most common place where they had viewed it was at home, either their own or their friend’s home. An internet cafe was identified by a small proportion, more frequently by boys than girls.

7.2.5. Adolescent sexual attitudes and behaviour

We now go on to focus specifically on aspects of sexuality. We examine the respondents’ attitudes towards adolescent sexual relationships and their own reported behaviours. These were measured through the use of three sets of questions that asked about different levels of relationship. These were designed to reflect the way that sexual relationships are thought about and categorized in Sri Lanka and the language in which they are described. The first question asked about relationships that were more than a friendship and the next two explored those involving sexual activity. The first of these which asked ‘have you ever had any experience of a sexual relationship?’ was designed to establish attitudes towards and engagement in relationships involving intimate sexual contact and activity. Positive responses to this question identified the proportion of the sample that was sexually active. A further question which inquired about experience of an ‘intimate sexual relationship’ was designed to ascertain the proportion of those who had engaged in penetrative sexual intercourse. As discussed in detail in earlier chapters, the wording of this question arose as a result of the modification of the questionnaire in

response to parental input where the word 'intercourse' was replaced by the phrase 'intimate sexual relationship'.

Table 7.12: Adolescents' attitude and practices on relationship

Attitude and practice	Total N=2,020		Male N=521		Female N=1,499		x ²	P
	No	%	No	%	No	%		
Accept relationships	566	28.0	203	39.0	363	24.2	41.6	<0.001
Had a relationship	417	20.6	196	37.6	221	14.7	90.2	<0.001
Accept sexual relationships	227	11.2	107	20.5	120	8.0	60.8	<0.001

To ascertain their attitudes towards relationships, a close ended question asked 'do you think it is acceptable for girls and boys of your age to have a relationship that is more than just a friendship?' Twenty eight per cent of the adolescents said it was acceptable (Table 7.12). Significantly more boys than girls found it acceptable (39% vs. 24%). Next they were asked 'Have you ever had a relationship that is more than a friendship?' 21% adolescents said that they have had such a relationship. There was a large and significant difference between the proportion of boys and girls that have had such a relationship (38% vs. 15%) (p =0.001).

To identify their attitudes towards sexual activity they were asked 'Do you think it is acceptable for girls and boys of your age to have a sexual relationship?' Eleven per cent of adolescents considered that it was acceptable for someone of their age to be involved in a sexual relationship at their age. More boys (21%) than girls (8%) were of this opinion.

A further question about the acceptability of pre-marital intercourse for males and females identified gender attitudes towards sexual activity. As Table 7.13 indicates, the majority of boys and girls do not support pre-marital intercourse for girls. A substantial although smaller proportion does not support it for boys. There are gender differences in terms of both response and standards with a greater proportion of both boys and girls holding the opinion that loss of virginity prior to marriage is less acceptable in a girl than a boy.

Table 7.13: Distribution of adolescents according to gender and the attitude of adolescent regarding virginity of girls and boys.

Attitude on virginity		Girls should be virgin			Boys should be virgin		
		Male	Female	Total	Male	Female	Total
Strongly agree	% within Gender	42.4	73.4	65.4	31.1	56.5	50.0
Agree	% within Gender	11.3	9.5	10.0	13.1	9.7	10.6
Disagree	% within Gender	5.0	1.2	2.2	14.2	1.5	4.8
Strongly disagree	% within Gender	1.3	0.5	0.7	3.8	0.8	1.6
No opinion	% within Gender	39.9	15.5	21.8	37.8	31.4	33.1
	% within Gender	100	100	100	100	100	100
	χ^2	19.3			21.0		
	P	<0.001			<0.001		

In response to the question 'Have you ever had any experience of a “Sexual” relationship', almost 9% boys and 1% of girls reported that they were sexually active. A smaller proportion indicated that they have had sexual intercourse in response to the question that asked about their experience of an intimate sexual relationship. In all these findings the differences between the males and females were statistically significant ($p < 0.001$) (Table 7.14).

Table 7.14: Adolescents' practices on sexuality

Attitude and practice	Total N=2,020		Male N=521		Female N=1,499		χ^2	P
	No	%	No	%	No	%		
Have experienced a sexual relationship	69	3.4	46	8.8	23	1.5	62.6	<0.001
Have experienced an intimate sexual relationship	35	1.7	30	5.8	5	0.3	66.7	<0.001

7.2.6. Reproductive and sexual health knowledge of the school adolescents

Reproductive health knowledge of the respondents was assessed through a range of questions. The respondents answered ‘yes’, ‘no’ or ‘don’t know’ to the questions: ‘Can a girl become pregnant in her first intimate sexual relationship?’ and ‘Can a person get sexually transmitted disease at the very first intimate relationship?’ They were then asked to identify one method by which pregnancy could be prevented and to name one method to prevent spread of sexually transmitted diseases. Answering all these four questions correctly was taken as having a satisfactory knowledge.

Table 7.15: Distribution of adolescents according to gender, knowledge and attitude regarding reproductive health (RH) practices

Knowledge on RH	Total		Boys		Girls		χ^2	P
	No	%	No	%	No	%		
1. Knew that one can get pregnant after first sexual intercourse	365	18.1	116	22.3	249	16.6	83.4	0.004
2. Able to name correctly a method of prevention of pregnancy	227	11.2	51	9.8	176	11.7	1.48	0.22
3. Knew about the possibility of sexually transmitted disease at the very first intimate sexual contact	473	23.4	128	24.6	345	23.0	3.4	0.17
4. Able to name correctly a method of prevention of sexually transmitted diseases.	122	6.0	40	7.7	82	5.5	3.3	0.06
5. Overall Satisfactory knowledge	8	0.4	1	0.2	7	0.5	0.74	0.39

Chi square tests were performed on the cross-tabulation of the binary categorised variables: Yes vs. no or don't know

Overall, less than 1% of the boys and the girls answered all four questions correctly and demonstrated a satisfactory level of sexual knowledge (Table 7.15). There were substantial differences in the proportion of correct answers given to the two types of questions with the closed ended questions producing a higher proportion of correct answers than the open ended questions. The opportunity to guess the correct answer to the closed ended questions may account in part for the marked differences between the proportions of correct responses for the two types of question and may therefore be a less accurate way of assessing actual knowledge than the open ended questions. Notwithstanding this option, less than one fifth of the adolescents correctly identified that first intercourse could result in pregnancy. Interestingly, a significantly higher proportion of boys than girls correctly identified the possible pregnancy implications of first intercourse (22% vs. 17%) although their contraceptive knowledge levels were lower than the girls'. Overall, contraceptive knowledge was very low with only 11% of the total sample able to correctly name a method of contraception.

The same methods of prevention of pregnancy were identified by the boys and the girls and in the same proportions by the two groups. The five most frequent answers given are as follows; tablets (boys 4%, girls 9%), tablets and condoms (boys 2 %, girls 0.7 %) and family planning methods (boys 0.76 %, girls 0.4 %). It is interesting to note no-one identified abstinence as a method. A small number of adolescents (boys 3%; girls 2 %) incorrectly identified abortion as a method of pregnancy prevention. A further three boys and four girls answered 'taking drugs' however it is not clear from their responses the drug taking they were referring to and whether they meant contraceptive or tablets to induce abortion.

Sexual health knowledge levels were also very low and largely comparable between the two groups. Less than one quarter of both the boys and girls correctly identified that a sexually transmitted disease could be transmitted at first intercourse and a substantially smaller proportion, only 6% of the sample, was able to correctly name a method of preventing transmission of infection. In response to this open ended question, the boys and girls responses were similar in terms of the methods identified and the frequency with which they were identified. The five most common responses were; condoms (boys 1.5 %, girls 0.2 %), not to have sexual contacts (boys 1.5 %, girls 1.9 %), not to have sexual contact with unknown persons (boys 1.9 %, girls 1.7 %), not to have sexual contacts before marriage (boys 0.5 %, girls 0.1 %) and have one partner

(boys 0.95 %, girls 1.5 %). A further small proportion of responses (boys 1 %, girls 0.6 %) identified “staying clean” as a method of prevention. It is not possible to know what they meant by this, whether it was a reference to hygiene or to sexual abstinence.

The questionnaire asked two further questions. Neither of these was included in the overall knowledge assessment score. The first of these assessed knowledge of the fertility period by asking, ‘Given that a girl is having an intimate sexual relationship, at what time during her monthly menstrual cycle, do you think pregnancy is most likely to occur?’. Respondents were asked to choose one answer only from four possible answers or to state ‘don’t know’. As can be seen in table 7.16; the vast majority had no idea and stated that they did not know. Among the small proportion that did give an answer, no-one identified the correct phase of the cycle (Table 7.16). It is not possible to know whether those responses were simply a guess or the indication of incorrect understanding.

Table 7.16: Distribution of respondents according to their knowledge on fertility period

Knowledge on fertility period	No	%
7 days before a girls menstruation starts	109	5.4
14 days before the next menstruation starts	0	0.0
During her menstruation	117	5.8
Do not know	1,794	88.8
Total	2,020	100.0

Table 7.17: Adolescents’ awareness of sexually transmitted infections(STI)

Knowledge on STI	Total N=2,020		Male N=521		Female N=1,499		x²	P
	No	%	No	%	No	%		
Have heard of Gonorrhoea	1,553	76.9	366	70.2	1,187	79.2	17.3	<0.001
Have heard of Syphilis	440	21.8	89	17.1	351	23.4	9.1	0.003
Have heard of AIDS	1,674	82.9	419	80.4	1,255	83.7	2.9	0.85
Have heard of Trichomoniasis	102	5.0	36	6.9	66	4.4	5.0	0.024

The second additional question sought to assess awareness levels of specific sexually transmitted infections. They were asked to state whether they had heard of four specific infections. Gonorrhoea and syphilis have been recognised for centuries as sexually transmitted infections and HIV/AIDS has a massive global profile. Additionally all three have been included to the school curriculum. Trichomoniasis is less well known and less common. This infection was included in the list to provide some indication of the accuracy of responses because it is unlikely that many of the adolescents would have heard of this infection (Table 7.17).

Overall, the findings indicate that the majority of the sample has some awareness of specific infections with the girls reporting higher levels of awareness for three of the four named infections. Unsurprisingly they were most likely to report awareness of AIDS. It is of some concern to note that nearly one in five of the adolescents reported that they had not heard of AIDS although this may be due in part to the fact that HIV was not included in the question. Asking about awareness of HIV/AIDS may have produced a higher response rate. The small proportion who stated that they had heard of Trichomoniasis is unsurprising and provides some indication that the questions were answered truthfully. It is worthy of note however that a slightly higher proportion of boys than girls indicated that they had heard of Trichomoniasis in contrast to the trend for all the other responses.

7.3. DESCRIBING THE SEXUALLY ACTIVE SCHOOL ADOLESCENTS.

In this section, I turn my attention to the 69 sexually active school adolescents and compare them to those who are not sexually active. Within this subsection of the sample, analysis is conducted by gender and by sexual activity;

Sexually active boys vs. Non-sexually active boys

Sexually active girls vs. Non-sexually active girls

Table 7.18: Distribution of the sexually active adolescents by current age

Current age in years	Total		Male		Female	
	No	%	No	%	No	%
16	36	52.2	27	58.7	9	39.2
17	22	31.9	14	30.4	8	34.8
18	10	14.5	5	10.9	5	21.7
19	1	1.4	0	0.0	1	4.3
Total	69	100.0	46	100.0	23	100.0

†Fishers exact test

The 69 sexually active adolescents comprised 46 boys and 23 girls. All of them were Sinhalese by ethnicity.

The age at first sexual experience (initiation of sex) ranged from 12 to 19 for the girls (mean 16.36 and SD 1.74) and from 10 years to 17 years for the boys (means 15.28 and SD 1.8). As illustrated in table 7.19, a greater proportion of boys than girls reported sexual activity below the age of consent. Among the group, 23 (50%) boys and 5 (22%) girls reported that they were sexually active before 16 years of age (Table 7.19). The lower mean age of first intercourse, and the greater proportion of boys who reported first intercourse before 16 years indicate more boys became sexually active at a younger age.

Table 7.19: Distribution of school adolescents by age at first sexual experience

Variable	Total		Male		Female		P
	N=69		N=46		N=23		
<16 years	28	40.6	23	50.0	5	21.7	0.03[†]
≥16 years	41	59.4	23	50.0	18	78.3	

[†]Fishers exact test

As the numbers were small the Fishers exact test was used for the cross tabulation.

Table 7.20: Distribution of adolescents by experience on the first sexual experience according to attitude at first sexual experience by gender

Variable	Total		Male		Female		x ²	P
	N=69		N=46		N=23			
	No.	%	No.	%	No.	%		
<i>Whether adolescent wanted the first sexual experience</i>								
Wanted to happen	37	53.7	28	60.8	9	39.1	5.00	0.01
Was not sure	16	23.1	8	17.4	8	34.8		
Did not want	4	5.8	3	6.5	1	4.3		
Happened forcefully	12	17.4	7	15.3	5	21.7		
<i>Adolescents' reflecting how they felt after their first sexual experience</i>								
Glad it happened	35	50.7	26	56.6	9	39.1	4.32	0.03
Was not sure	18	26.1	10	21.7	8	34.8		
Regret	16	23.2	10	21.7	6	26.1		

Chi square tests were performed on the cross-tabulation of the binary categorised variables 'wanted it to happen/'not sure versus 'did not want/happened forcefully' and 'glad it happened/'not sure versus /regret' and 'too young' versus 'about right/other' against male and female

In relation to the question about whether first sexual experience was consensual, the responses 'did not want' and 'happened forcefully' were taken as indications of non-consensual sexual activity. As table 7.20 shows, in the majority of cases it was consensual although a significant minority 23% reported non consent.

Table 7.21: Distribution of school adolescents by age at first intimate sexual experience

Variable	Total N=35		Male N=30		Female N=5		P
	No.	%	No.	%	No.	%	
<i>Age at first intimate sexual relationship</i>							
<16 years	19	0.9	16	3.1	3	0.2	<0.001 [†]
≥16 years	16	0.7	14	2.7	2	0.1	
Total	35	1.7	30	5.8	5	0.3	

[†]Fishers exact test

Turning now to the smaller proportion of individuals 30 (6%) boys and 5 (0.3%) girls who had engaged in sexual intercourse. The age at which this had first occurred for girls ranged from 12 to 17 years (mean 15.2 and SD 2.05) and for boys from 13 to 17 years (mean 15.45 and SD 1.05). 16 (3%) boys and 3 (0.2%) girls experienced their first intimate sexual experience before 16 years of age (Table 7.21).

Table 7.22: Distribution of adolescents who had an intimate sexual experience according to attitude at first intimate sexual relationship (intercourse) by gender

Variable	Total N=35		Male N=30		Female N=5		p
	No.	%	No.	%	No.	%	
<i>Whether adolescents' wanted the first intimate sexual relationship</i>							
Wanted it to happen	16	45.7	16	53.3	0	0.0	0.03[†]
Was not sure	7	20.0	5	16.7	2	40.0	
Did not want	8	22.9	6	20.0	2	40.0	
Happened forcefully	4	11.4	3	10.0	1	20.0	
<i>Adolescents reflecting how they felt after her first intimate sexual relationship</i>							
Glad it happened	20	57.1	19	63.3	1	20.0	0.09[†]
Was not sure	7	20.0	4	13.3	3	60.0	
Regret	8	22.9	7	23.4	1	20.0	
<i>Adolescents' reflecting how they feel about their age at first intimate sexual relationship</i>							
Too young	13	37.1	8	26.7	5	100	0.003[†]
About right	18	51.4	18	60.0	0	0.0	
Other	04	11.4	04	13.3	0	0.0	

Chi square tests were performed on the cross-tabulation of the binary categorised variables wanted it to happen versus 'not sure/ did not want/happened forcefully' and 'glad it happened versus' 'not sure /regret' and 'too young' versus 'about right/other' against male and female

[†]Fishers exact test

As the numbers were small the Fishers exact test was used for the cross tabulation.

A series of questions sought to examine further the circumstances within which the intimate sexual relationship had occurred and the feelings of the adolescents towards the experience. These findings offer several valuable insights although the small numbers involved in each of the groups necessarily limits the degree of interpretation that is possible. A little over half of the boys had wanted sexual intercourse to happen whereas none of the girls had. Nine of the boys (30%) and three girls (60%) reported non-consensual sex. In terms of their feelings after it had happened, the majority of the boys were glad whereas the majority of girls were ambivalent. A proportion of both boys and girls reported regret whereas the majority of the boys felt that it had occurred at about the right age for them, all the girls considered that they had been too young (Table 7.22).

Table 7.23: Distribution of adolescents who had an intimate sexual experience according to use of contraceptive by gender

Use of contraceptive method	Total N=35		Male N=30		Female N=5	
	No	%	No	%	No	%
Used a contraceptive method on the first sexual intercourse	20	57.1	17	56.7	3	60
Had ever used a method of prevention	22	62.9	17	56.7	5	100

It is encouraging to note that 20 (57%) respondents had used contraception on the first intimate sexual relationship. The boys reported that they had used condoms and the girls reported use of the contraceptive pill. As reported in table 7.23, thirteen males have not used protective methods. Reason given by these 13 (37%) were that sex was unplanned and other reason was attributed to sex being without consent.

Now I explore the difference between the sexually active and non-sexually active separately by gender.

7.3.1. Exploring possible predictors of sexual activity in school boys

There were 521 school boys in the school adolescent sample. Forty six (9%) accepted sexual relationships. Therefore more in depth understanding of the factors which lead this group of boys to be sexually active is needed. Therein now I turn to explore possible predictors of sexually activity among those sexually active. Here I have analysed and presented the variables which showed a statistically significant difference, after exploring all the other variables.

Table 7.24 shows that the mother not being in Sri Lanka shows a statistical significant association with school boys to be sexually active. Though a majority of the sexually active male adolescents family financial situation were breakeven or surplus, there was a statistically significant difference ($p=.031$) with the non-sexually active adolescents. While only 15% non-sexually active adolescents reported deficit of economy, 28% sexually active had a deficit economy.

Table 7.24: Distribution of sexually active and non-active school male adolescents by the place of living of parents and the state of his family economy

	Total		Sexually active		Not sexually active		x ²	P
	N=521		N=46		N=475			
	No	%	No	%	No	%		
Place of living of parents								
Mother								
In Sri Lanka	514	98.7	43	93.5	471	99.2	0.018 *	
Abroad	7	1.3	3	6.5	4	0.8		
Father								
In Sri Lanka	518	99.4	45	97.8	473	99.6	0.243†	
Abroad	3	0.6	1	2.2	2	0.4		
Economy								
Deficit	82	15.7	13	28.3	69	14.5	6.95	0.031
Breakeven	290	55.7	19	41.3	271	57.1		
Surplus	149	28.6	14	30.4	135	28.4		

Table 7.25: Distribution of male adolescents by the attitude of accepting relationships and sexual relationships by sexually active and non-sexually active

	Total		Sexually active		Not sexually active		x ²	P
	N=521		N=46		N=475			
	No	%	No	%	No	%		
Accept relationships								
Yes	203	39.0	28	60.9	175	36.8	10.1	<0.001
No	318	61.0	18	39.1	300	63.2		
Accept sexual relationships								
Yes	107	20.5	26	56.5	87	18.3	16.2	<0.001
No	414	79.5	20	43.5	388	81.7		

As reported in table 7.25 a significantly greater proportion of the sexually active male adolescents (61%) considered it was acceptable for someone of their age to have close relationships (more than a friendship).

A greater proportion of the sexually active than the non-sexually active adolescents also found it acceptable for someone of their own age to have sexual relationships.

The fact that over two fifth of the sexually active adolescents considered it was not acceptable for someone of their age to have a sexual relationship raises questions about the circumstances under which they themselves became involved in such relationships.

Table 7.26: Distribution of the male adolescents' practices on risky behaviours by sexually active and non-active

Risky behaviour	Total		Sexually active		Not sexually active		x ²	P
	N=521		N=46		N=475			
	No	%	No	%	No	%		
Smoked								
Yes	140	26.9	20	43.5	120	25.3	7.08	0.008
Taken intoxicating substances								
Yes	181	34.7	26	56.5	155	32.6	10.5	<0.001

While only 25% of the non-sexually active have ever smoked, the figure was 44% for the sexually active adolescents. The difference was statistically significant ($p=0.008$).

The majority of sexually active (56%) reported they had ever taken intoxicating substances (alcohol, drugs etc.) when it was reported less by the non-sexually active adolescents (33%). The difference was statistically significant.

More than 60% of the non-sexually active school boys have neither smoked nor taken intoxicating substances (Table 7.26).

I will be exploring more of the factors related to adolescent's sexual activity by logistic regression.

7.3.2. Exploring possible predictors of sexual activity in school girls

Table 7.27: Distribution of adolescent girls' sexually active and non-sexually active school girls according to their relationship and communication with parents

Variable	Total		Sexually active		Not sexually active		x ²	P
	N=1,499		N=23		N=1,476			
	No	%	No	%	No	%		
Relationship								
Mother								
Very close	1,325	88.4	18	78.3	1,307	88.6	2.337	0.126
Not very close	174	11.6	5	21.7	169	11.4		
Father								
Very close	1,003	66.9	11	47.8	992	67.2	3.843	0.05
Not very close	496	33.1	12	52.2	484	32.8		

There were 1499 school girls in the school adolescent sample. Just twenty three (1.5%) reported having sexual relationships. More in depth understanding of the determinants which lead to a group of girls to be sexually active is needed. Therefore I turn now to explore possible predictors of sexual activity among those who are sexual active. Here I have presented the variables which showed a statistically significant difference.

The majority (88%) of the school girls had a very close relationship with their mother. Although more none sexually active than sexually active girls were more likely to not have a close relationship with their mother, this was not statistically significant. There were differences however in the relationships that the girls had with their fathers. Majority (67%) of the girls did report close father-daughter relationships. There was a significant difference between the sexually active girls and non-sexually active girls in their relationship with their father. Non-sexually active girls were more likely to report being very close to their father compared to the sexually active (Table 7.27).

Table 7.28: Distribution of adolescents girls' sexually active and non-sexually active according to the place of parents living, siblings and home environment.

Variable	Total		Sexually active		Not sexually active		p
	N=1,499		N=23		N=1,476		
	No	%	No	%	No	%	
Place of living of parents							
Mother							
In Sri Lanka	1,481	98.8	22	95.7	1,459	98.8	0.224†
Abroad	18	1.2	1	4.3	17	1.2	
Father							
In Sri Lanka	1,482	98.9	21	91.3	1,461	99.0	0.027†
Abroad	17	1.1	2	8.7	15	1.0	
Siblings with children							
Yes	28	1.9	3	13.0	25	1.7	<0.001†
No	1,471	98.1	20	87.0	1,451	98.3	
Home environment							
Peaceful	1,376	91.8	20	87.0	1,356	91.9	<0.001†
Not peaceful	123	8.2	3	13.0	120	8.1	

Table 7.28 shows that there is a statistically significant association between a teenage girl being sexually active and her having a father who is living abroad, siblings with children and living in a home environment that was not peaceful.

Table 7.29: Comparing sexually active girls and non-sexually active school girls selected attitudes on sexuality

Attitude	Total		Sexually active		Not sexually active		x ²	P
	N=1,499		N=23		N=1,476			
	No	%	No	%	No	%		
<i>Accept relationships</i>								
Yes	363	24.2	14	60.9	349	23.6	17.1	<0.001
No	1,136	75.8	9	39.1	1,127	76.4		
<i>Accept sexual relationships</i>								
Yes	120	8.0	6	26.1	114	7.7	10.3	<0.001
No	1,379	92.0	17	73.9	1,362	92.3		
<i>Agree that people should be responsible for their health*</i>								
Yes	1,168	77.9	13	56.5	1,155	78.3	6.2	0.013
No	331	22.1	10	43.5	321	21.7		
<i>Agree that health is what is most important in life*</i>								
Yes	1,132	75.5	10	43.5	1,122	76.0	12.9	<0.001
No	367	24.5	13	56.5	354	24.0		

*strongly agree and agree categorised as 'yes'; disagree and strongly disagree as 'No'

The majority (61%) of sexually active girls accept relationships, It is interesting to note that majority of them do not accept sexual relationships (only 26% accept sexual relationships) though they themselves have acted differently (Table 7.29). Anyhow there is a statistically significant difference ($p < 0.001$) between the girls who are sexually active and those who are not sexually active in these opinions.

However, the majority (57%) of the sexually active had an attitude that one should be responsible for their own health. Though more non-sexually active adolescents 'strongly agreed' and 'agreed' (76%) that people should be responsible for their own health as compared to the sexually active (51%) the difference was statistically significant.

That the majority of school girls (76%) believe that 'health is what is most important in life' may be in keeping with the Buddhist religious upbringing, 'health is wealth' (Arogya paramalaba). The majority of sexually active do not have this attitude (57%) while with the non-sexually active it was (76%). There is a statistically significant difference between the groups in the proportion reporting that health is the most important thing in life.

7.4. EXPLORING POSSIBLE PREDICTORS OF ADOLESCENT SEXUAL ACTIVITY BY LOGISTIC REGRESSION

Further analysis will be done by binominal regression models to explore the factors that distinguish between the two genders outcomes,

1. Sexually active school boys
2. Sexually active school girls

Variables were selected by looking at the unadjusted odds ratio and if $p < 0.25$ those variables were included in the model. Unadjusted and adjusted tables are given as annexure 5_D and 5_E.

7.4.1. Exploring possible predictors of sexual activity in male school adolescents

There were 475 (91%) male school adolescents who were not sexually active and 46 (9%) male school adolescents who were sexually active. The logistic regression model was useful to identify the presence of determinants of sexually active male school adolescent behaviour or absence of a characteristic or outcome (non-sexually active school adolescent) based on values of a set of predictor variables. The logistic regression coefficients were used to estimate odds ratios for each of the independent variables in the model. The logistic regression analysis presented as table 7.30 was conducted to identify the determinants of early sexual activity related to the school adolescents' boys (N=521). Variables with an unadjusted odds ratio and $p < 0.25$ (Annexure 5_D) were entered to the model. Economy, perceived performance, ambition, mother's education, father's education, relationship with father, place of living of mother, smoking, taking intoxicants, attitude towards relationships and towards sexual relationship and attitude towards responsibility of health were variables included into the Forward step-wise (L.R.) model as the $p < 0.25$.

Table 7.30: Forward stepwise model on factors related to dependent variable sexually active male adolescent

		B	S.E.	Sig.	OR	95.0% C.I. for OR	
						Lower	Upper
Step 1 ^a	Accept sexual relationship	1.334	.327	.000	3.797	2.00	7.21
	Constant	-2.708	.211	.000	.067		
Step 2 ^b	Mother abroad	2.543	.796	.001	12.714	2.67	60.52
	Accept sexual relationship	1.457	.336	.000	4.292	2.22	8.29
	Constant	-2.830	.225	.000	.059		
Step 3 ^c	Mother abroad	2.836	.819	.001	17.040	3.42	84.87
	Accept sexual relationship	1.391	.341	.000	4.020	2.06	7.85
	Taken intoxicants	.989	.337	.003	2.688	1.39	5.20
	Constant	-3.266	.292	.000	.038		

a. Variable(s) entered on step 1: Accept sexual activity

Base line: Not accepting sexual activity

b. Variable(s) entered on step 2: Mother abroad

Baseline: Mother in Sri Lanka

c. Variable(s) entered on step 3: Taken intoxicants

Base line: Not taken intoxicants

The step-wise model against a constant only model shows a statistically significant difference. This indicates that the determinants as a set distinguished between those who were sexually active and who were not sexually active (Chi square = 32.160, $p < .001$ with $df = 3$). Hosmer and Lemeshow test (H-L goodness-of-fit) ($p=0.959$) shows that it is an adequately fitting model.

Nagelkerke's R^2 of .141 indicates a weak relationship between determinants and outcome. i.e. only 14% of the differences in outcomes can be accounted for by these determinants.

Anyhow, the Wald criterion demonstrated that the adolescent's mother been abroad ($p= 0.001$), attitude of accepting sexual activity ($p=.001$) and taking intoxicating substances ($p=.003$) are statistically significant determinants. Perceived performance, ambition, mother's education, father's education, relationship with fathers, accepting relationships and accepting responsibility of health shows no evidence of determinants. Odds Ratio (OR) value indicates that: Boys whose mothers are abroad had 17 times odds of being sexually active compared to those boys whose mothers were in Sri Lanka. Note the wide confidence interval associated with this OR, this is due to the small numbers. The boys who had taken intoxicating substances had twice the odds of becoming sexually active compared to those boys who did not take intoxicating substances. The boys who accept sexual relationships at their age was four times at

odds of becoming sexually active themselves compared to those boys who did not accept sexual relationships in their school going age (Table 7.30).

7.4.2. Exploring possible predictors of sexual activity in school adolescent girls

There were 1476 (98 %) school adolescent girls who were not sexually active and 23 (1.5%) school adolescent girls who were sexually active. The logistic regression model was useful to identify the presence of determinants of sexually active school adolescent girls or absence of a characteristic or outcome (non-sexually active school adolescent) based on values of a set of predictor variables. The logistic regression coefficients were used to estimate odds ratios for each of the independent variables in the model. The logistic regression analysis presented as table 7.31 was conducted to identify the determinants of early sexual activity related to the school girls (N=1499). Variables with an unadjusted odds ratio and $p < 0.25$ (Annexure 5_E) were entered to the model. Relationship with father, place of living of father, siblings having children, home environment, attitudes towards relationships, towards sexual activity, responsibility on health, importance of health were variables included into the Forward step-wise (L.R.) model as the $p < 0.25$.

Table 7.31: Forward stepwise model on factors related to dependent variable sexually active female adolescent

		B	S.E.	Sig.	OR	95.0% C.I. for OR	
						Lower	Upper
Step 1 ^a	Accepting relationships	1.614	.432	.000	5.023	2.16	11.76
	Constant	-4.830	.335	.000	.008		
Step 2 ^b	Accepting relationships	1.774	.449	.000	5.893	2.44	14.19
	Siblings with children	2.610	.692	.000	13.601	3.50	52.84
	Constant	-5.059	.367	.000	.006		
Step 3 ^c	Accepting relationships	1.766	.454	.000	5.846	2.40	14.23
	Siblings with children	2.507	.707	.000	12.271	3.07	49.05
	Disagree that health is the most important	1.355	.432	.002	3.876	1.66	9.04
	Constant	-5.586	.441	.000	.000	.01	

a. Variable(s) entered on step 1: Accepting relationships
Base line: Not accepting relationships

b. Variable(s) entered on step 2: Sibling with children
Base line: No siblings with children.

c. Variable(s) entered on step 3: Health is not the most important
Base line: Health is the most important.

The step-wise model against a constant-only model shows a statistically significant difference. Indicating that the determinants as a set distinguished between who were sexually active and who were not sexually active (Chi square = 32.961, $p < .001$ with $df = 3$). Hosmer and Lemeshow test (H-L goodness-of-fit) ($p = 0.771$) shows that it is an adequately fitting model.

Nagelkerke's R^2 of .148 indicates a weak relationship between determinants and outcome. i.e. only 15% of the differences in outcomes can be accounted for by these determinants. Anyhow the Wald criterion demonstrated that the adolescent's attitude of accepting relationships ($p < .001$), siblings having children ($p < .001$), attitude towards health is not the most important ($p = .002$) are statistically significant determinants for a school adolescent girl to be sexually active. Variables such as relationship with father, place of living of father, home environment, attitudes towards sexual activity and attitude towards responsibility on health were not significant in the presence of these three. OR value indicates that: Girls who accepts relationships had six times the odds of becoming sexually active compared to girls who did not accept relationship, girls with siblings having children had twelve times the odds of becoming sexually active herself compared to girls who did not have siblings with children and girls who had an attitude that health is not the most important in life had four times the odds of becoming sexually active compared to girls who thought health is what is most important in life. Note the wide confidence intervals due to small numbers.

Box 7.1: Summary of overall findings and the difference between sub groups

Predictor areas	Overall findings	Difference between Boys and girls	Differences between sexually active and not sexually active	
			Boys	Girls
a) Relationship (More than a friendship)	21% had had a relationship.	Almost 38% of boys had a relationship compared to 15% of girls with a statistical significant difference in bivariate analysis.	76% of the sexually active and 34% of non- sexually active ever had a relationship. The difference is statistically significant in bivariate analysis.	83% of the sexually active and 14% of non- sexually active ever had a relationship. The difference is statistically significant in bivariate analysis.
b) Sexual relationship	Almost 3% of the adolescents had sexual relationships.	A significantly greater proportion of boys than girls had had a sexual relationship (9% vs. 2%)	N/A	N/A
	The majority (54%) had wanted it to happen.	22% of boys and 26% of girls had non –consensual sexual experience Difference is statistically significant in bivariate analysis.	N/A	N/A
	51% was glad about the experience.	A significantly greater proportion of boys were glad (57% vs. 39%).	N/A	N/A
c) Intimate sexual relationship	Almost 2% (35) had had an intimate sexual relationship.	A significantly greater proportion of boys than girls had had an intimate sexual relationship (6% vs. 1%).	Skipped question by non-sexually active.	Skipped question by non-sexually active.
	46% (16) had wanted the experience.	None of the girls and just over half of the boys had wanted it to happen.	N/A	N/A
	36% was glad about the experience	61% of boys and 20% of girls were glad about the experience. The difference was statistically significant in bivariate analysis.	N/A	N/A

Predictor areas	Overall findings	Difference between	Differences between sexually active and not sexually active	
		Boys and girls	Boys	Girls
d) Education	Majority (61%) reported their school performance above average.	A greater proportion of boys than girls reported excellent school performance (24% vs. 18%). Significant difference in the bivariate analysis.	No statistical significant difference.	No statistical significant difference.
e) Sports	Only 28% had participated in sports.	More boys (54%) than girls (12%) reported participating in sports with a statistical significant difference in the bivariate analysis.	No statistical significant difference.	No statistical significant difference.
f) Ambition	Majority (96%) had a career ambition.	More girls than boys reported having an ambition (97% vs. 93%) with a statistical significant difference in the bivariate analysis.	No statistical significant difference.	No statistical significant difference.
g) Mother living at home	The majority (99%) lived with their mother.	No difference.	Sexually active boys more likely to have a mother living abroad (7% vs. 1%) Statistical significant difference in the bivariate analysis Boys with a mother living abroad had had 17 times the odds of being sexually active.	No statistical significant difference.

	Predictor areas	Overall findings	Difference between Boys and girls	Differences between sexually active and not sexually active Boys Girls	
h)	Father living at home	The majority of adolescents (99%) lived with their father.	No difference.	No statistical significant difference.	9% of sexually active girls and 1% of non-sexually active girls' fathers were abroad. This difference was statistically significant in the bivariate analysis
i)	Parents' educational level	Majority (> 78%) were educated above secondary level secondary level.	No difference.	No statistical significant difference.	No statistical significant difference.
j)	Age at marriage of parents	The majority (>60%) reported married over 18 years.	No difference.	No statistical significant difference.	No statistical significant difference.
k)	Siblings with children	A small proportion (2%) of adolescents had siblings with children.	More boys (4%) than girls had siblings with children (4% vs. 2%)	No statistical significant difference.	13% of sexually active girls and 2% of non-sexually active girls had siblings with children. The difference is statistically significant in bivariate analysis. Girls whose siblings had children had twelve times the odds of being sexually active compared to girls without siblings with children.

	Predictor areas	Overall findings	Difference between Boys and girls	Differences between sexually active and not sexually active	
				Boys	Girls
l)	Home environment	Majority (91%) lived in a peaceful home environment.	No difference.	No statistical significant difference.	87% of sexually active and 92% non-sexually active adolescents had a peaceful home environment The difference was statistically significant in the bivariate analysis.
m)	Economic situation	The majority reported their economy as breakeven (52%) or surplus (32%).	No difference.	28% Sexually active boys were significantly more likely to report deficit economy (28% vs. 15%).	No statistical significant difference
n)	Mother adolescent relationship	The majority (88%) reported very close relationship.	No statistical significant difference.	No statistical significant difference.	No statistical significant difference.
o)	Father adolescent relationship	The majority (68%) reported very close relationships.	Boys were significantly more likely to report a very close relationship with father (70% vs. 67%)	No statistical significant difference.	Sexually active girls were significantly less likely to report a very close relationship with father (48% vs. 67%)
p)	Mother discussion	Majority (61%) found it very easy to communicate with the mother.	A significantly greater proportion of girls found it very easy to communicate with mother (69% vs. 37%).	No statistical significant difference.	No statistical significant difference.
q)	Father discussion	Only 32% found very easy to communicate with the father.	A significantly greater proportion of boys said it was not easy at all to communicate with father (15% vs. 13%).	No statistical significant difference	No statistical significant difference

	Predictor areas	Overall findings	Difference between Boys and girls	Differences between sexually active and not sexually active	
				Boys	Girls
r)	Attitude on health	Majority said health was important and an individual responsibility.	A smaller proportion of boys said that health was important and an individual responsibility.	No statistical significant difference.	A significantly smaller proportion of sexually active girls than non-sexually active girls said that health was important and an individual responsibility. Girls who do not agree that health is the most important thing in life have four times of odds being sexually active than the girls who agree health is the most important in life in the multivariate analysis.
s)	Importance of religion	Religion is important to the majority.	Religion is important to more girls than boys (94% vs. 91%)	No statistical significant difference.	No statistical significant difference.
t)	Attitude on virginity at marriage	Majority (75%) believed that girls should be virgin at marriage	A significantly greater proportion of girls felt that girls should be virgins at marriage (83% vs. 54%)	No statistical significant difference.	No statistical significant difference.
		The majority (61%) believed that boys should be virgins at marriage.	A significantly greater proportion of girls felt that boys should be virgins at marriage (66% vs. 44%).	No statistical significant difference.	No statistical significant difference.
u)	Attitude on relationship	28% accepted relationships in people of their age	Acceptable to significantly more boys than girls (39% vs. 24%)	More acceptable to sexually active than non-sexually active (61% vs. 37%)	More acceptable to sexually active than non-sexually active (61% vs. 24%)

	Predictor areas	Overall findings	Difference between Boys and girls	Differences between sexually active and not sexually active	
				Boys	Girls
v)	Attitude on sexual relationship	11% accepted sexual relationships in their age.	Significantly more acceptable to boys than girls (21%vs 8%).	Significantly more acceptable among those who are sexually active (57% vs. 18%) Boys who accepted sexual relationships at their age had been at four times the odds of being sexually active.	Significantly more acceptable among those who are sexually active (26%vs 8%).
W)	Knowledge on RH	Only 18% were aware that pregnancy can occur at first intercourse	Significantly more boys than girls were aware (22% vs. 17%)	No significant difference.	No significant difference.
	Contraceptive knowledge	Only 11% named a contraceptive method correctly	No statistical significant difference.	No statistical significant difference.	No statistical significant difference.
	Fertility period	None knew correctly.	N/A	N/A	N/A
	Knowledge on STI	77% heard of gonorrhoea.	Significantly more girls than boys were aware (79% vs. 70%)	No statistical significant difference.	No statistical significant difference.
		22% heard of syphilis.	Significantly more girls than boys were aware (23% vs. 17%)	No statistical significant difference.	No statistical significant difference.
83% heard of AIDS.		No statistical significant difference.	No statistical significant difference	No statistical significant difference.	
5% heard of Trichomoniasis.		Significantly more boys than girls were aware (7% vs. 4%)	No statistical significant difference.	No statistical significant difference.	
23% knew possibility of sexually transmitted disease at the very first intimate sexual contact.		No statistical significant difference.	No statistical significant difference.	No statistical significant difference.	

		6% named correctly a method of prevention of STI. Only 8%.	No statistical significant difference.	No statistical significant difference.	No statistical significant difference.
	Overall satisfactory knowledge		No statistical significant difference.	No statistical significant difference.	No statistical significant difference.
x)	Smoked	Less than one tenth (9%) had ever smoked.	Significantly more boys than girls have ever smoked (27% vs. 3%).	Boys who were sexually active were more likely to have smoked (44% vs. 25%).	No statistical significant difference.
y)	Taken intoxicating substances.	Almost 13% of the adolescents had ever taken intoxicants.	Significantly more boys than girls had taken intoxicants (35% vs. 5%)	Boys who were sexually active were more likely to have taken intoxicants (57% vs. 33%) The boy who had taken intoxicating substances had two times of odds of becoming sexually active compared to a boy who had not taken intoxicating substances.	Girls who were sexually active were more likely to have taken intoxicants.

SECTION - 03

CHAPTER 8 - DISCUSSION PART 1

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CHAPTER 8

DISCUSSION PART 1 METHODOLOGICAL ASPECTS AND INTEGRATION OF DATA

8.1. INTRODUCTION

The intention of this chapter is to: discuss the methodological aspects, the limitations of the study, to integrate, compare and discuss the findings across the three components, and to provide further insight and understanding in relation to the research objectives.

This population based study focused on understanding the context and patterns of adolescent pregnancy and sexual behaviour in a district in Sri Lanka. The supplementary objective was to identify factors that are associated with early and unwanted adolescent pregnancy.

The study employed three-components of data collection: Component I- Pregnant adolescents, Component II- Partners of pregnant adolescents, and Component III- School adolescents. The previous three chapters have reported on the findings from these components individually.

In this study, a sample of 450 pregnant adolescents (Component I), a sample of 150, partners of adolescents (Component II) and 2020 school adolescents (Component III) have been the focus. Therefore, this study can be seen as a cross sectional descriptive study. Studies done by Oxley and Weekes, (1997) and Burton, (1990) on adolescent pregnancy are descriptive studies.

As this present study has the characteristics of describing and comparing, the study type can be called exploratory. This study intends to firstly provide plausible assumptions about the causes and, subsequently, to stabilise sufficient explanations. Nolin and Peterson, (1992) study on gender differences in parent child communication about sexuality and George's, (1997) research themed, 'Sexual Negotiation and Sexual Decision-making among Poor Women and Men in Mumbai' are exploratory studies.

Exploratory studies gain in explanatory value if we approach the problem from different perspectives simultaneously. This is called triangulation (Varkevisser *et al.*, 1991).

As described in the methodology chapter, a quantitative survey approach was adopted rather than a smaller-scale qualitative methodology because of the current paucity of

existing evidence on the subject of adolescent pregnancy in Sri Lanka and the desire to generate quantitative data on the prevalence of particular issues that might have an “influential” impact by raising the profile of ARH (Adolescent Reproductive Health) issues on the national policy stage. The sensitiveness of the subject area studied is another reason for opting towards a total quantitative approach. Preliminary interactions with adolescents in the field area suggested that they would be reticent to engage in lengthy conversations and it was felt that a structured quantitative approach would place less demand on respondents to talk about sensitive topics.

An extensive period of familiarization and contextualization was undertaken in order to design appropriate survey tools and also to support the interpretation of the survey findings. The three questionnaires employed in this study were designed together and interrelated, with the intention that there could be some degree of comparison across the samples. Jayathilaka, (1999) and Gunawardana, (1999) used similar data collecting methods and instruments in their studies.

However, practical considerations dictated that the method of data collection differed across the components. There were advantages of using an interviewer-administered questionnaire in Components I and II as the study population included respondents from different ethnic groups and with different levels of literacy. Face-to-face interviews were conducted by trained and experienced female and male staff to pregnant adolescents and partners of pregnant adolescents respectively. The fact that data collectors were able to speak to the respondents in their first language helped to ensure that the respondents felt comfortable in the interviews and there was a high level of cooperation. In contrast, a self-administered questionnaire was appropriate for Component III - the school adolescents - due to the nature of anonymity/confidentiality that could be maintained by the instrument. Despite these differences, the comparison across the samples is potentially very informative. The UNICEF country study (2004) also used a self-administered questionnaire to collect data from school adolescents in Sri Lanka.

One cannot ignore the possibility of socially desirable responses (Green *et al.* 2001, Newcomer and Udry 1988) given in self-reporting on sensitive topics (premarital sexual behavior /adolescence sexual behavior/ sexual activity with more than one/support to their pregnant adolescent). Therefore in this survey when there were

questions with “*judgment call*”, wherever it was appropriate the answers were rechecked for accuracy. Examples include: How did you feel about this experience at the time? Did you want to do this? How did you feel about this experience after it had happened? Thinking about the first time you had sexual intercourse willingly, what do you think of the age at which you did this? In your opinion is it acceptable to have sexual intercourse before marriage?

As discussed in the methodology chapter, the design and operationalisation of the study was necessarily shaped by resource and logistical constraints. As such, each component can be seen to have strengths and weaknesses in relation to addressing the study's research objectives, and in combination the three components offer greater insight than any one component alone.

Component I: pregnant adolescents

This component gathered data from a representative sample of 450 pregnant adolescents across the district. The sample was representative not only of urban-rural and plantation sectors, but of ethnicity too. As such, this component provides an ideal opportunity to describe the characteristics and circumstances of pregnant adolescents in the district, and, as shown in Chapter 5, gives a wealth of insight into the context of adolescent pregnancy. However, in order to address the question of what factors may predispose adolescent girls to become pregnant (and particularly to have an underage and/ or unwanted pregnancy) this was not the ideal study design. Resource and logistical constraints precluded the use of a comprehensive population based survey, case-control or longitudinal study design. While some suggestive findings were presented in Chapter 5 by comparing the characteristics of sub-groups of the sample (under 18 versus 18+, and unplanned versus planned), in the present chapter we explore whether any additional insights can be added by comparing the adolescent pregnant sample with adolescent girls who were still in school.

Since the school adolescent sample was predominantly of Sinhalese ethnicity, these comparisons were performed between the Sinhalese pregnant adolescents and the Sinhalese school adolescent girls.

Component II: Partners of pregnant adolescents

There is very little research examining the male partners of pregnant adolescents in Sri Lanka or elsewhere. To date, no study in Sri Lanka has directly collected information from the male partners of pregnant adolescents. As such, Chapter 6 presented important new insights regarding the characteristics of the men who are responsible for adolescent pregnancy, as well as their attitudes towards the pregnancy.

The data collected from the partner questionnaire largely mirrored that gathered from the pregnant adolescents (though the partner questionnaire was shorter). Bringing the findings from these two questionnaires together below allows us to gain a more complete picture of the context of adolescent pregnancy.

Importantly, however, the finding that the majority of the male partners of the pregnant adolescents were not adolescents themselves, but rather older men, indicates that comparisons with the school-going male adolescent sample are of limited value.

Component III: School adolescents

A majority of adolescents are in the school system in Sri Lanka, making a school-based sampling approach appropriate for capturing a representative sample of male and female adolescents in this setting. As noted in the earlier chapters, in practice the sample included just 521 boys compared to 1499 girls. It might have been preferable to include some kind of stratification by sex and to introduce additional measures to ensure that boys were better represented in the sample. Nevertheless, the investigation did not suggest that the included boys differed systematically from those not included, and the quality of the completed questionnaires was high.

The lack of ethnic diversity in the sample was more of an issue in relation to our objective of describing the patterns and context of adolescent sexuality in Sri Lanka. The school-based sample was dominated by Sinhalese with very few Tamil or Moor respondents. Therefore, Chapter 7 was able to describe in some detail the patterns and context of adolescent sexuality, including gender differences, among the Sinhalese majority, but was clearly unable to do the same for the minority populations. Findings of this component together with those of component I presented in Chapter 5, clearly

indicate important differences between the groups in relation to adolescent pregnancy and therefore alert us to the dangers of generalising findings from the majority group.

In the sections below, I bring the data collected from the three samples together to make descriptive comparisons and to draw cautious conclusions, recognising the limitations of each component of the study and the variations between them in data collection method. The chapter is organised into four sections. Firstly, the patterns and context of adolescent sexuality are described, by drawing on data on selected variables across the samples. Next, I turn to describe what we have learnt about the context and patterns of adolescent pregnancy, including variations between the ethnic groups. I then draw on the information across the samples to discuss the emerging findings in relation to the factors that may predispose some adolescent girls to become pregnant and particularly to experience early age and/or unwanted pregnancy. Finally, I draw on a selection of information across the samples to highlight issues of vulnerability that appear to relate to a small, but important, sub-section of the population.

8.2. ADOLESCENT SEXUALITY: KNOWLEDGE, ATTITUDES AND BEHAVIOUR

8.2.1. Sexual behaviour

Looking at the findings from the three components, the impression we get is of a population within which adolescent sexual activity is rare. Further, for those who have engaged in sexual activity, it is largely restricted to monogamous relationships. In the school-going sample, just 1.5% of the girls and 8.8% of the boys reported that they had experienced a 'sexual relationship', and just 0.3% of girls and 5.7% of boys that they had experienced 'an intimate sexual relationship'.

All the pregnant adolescents, reported that they had only ever had sexual intercourse with one partner. That said, there is some evidence of a gender difference, with the school-going adolescent boys being more likely than the girls to report sexual activity, and the partners of pregnant adolescents (who were of course older) being more likely to report having had more than one sexual partner (13%). While socially desirable responses (Green *et al.* 2001, Newcomer and Udry 1988) in self reporting could not be

ignored the same gender difference in sexual activity is reported in the UNICEF (2004) study.

As noted below, a majority of the pregnant adolescents were in relationships with older men, with around 5% partnered with adolescent boys. The reports of higher levels of sexual activity among the school going adolescent boys than girls also suggest that heterosexual sexual activity among adolescent couples is not very common. Clearly this raises the question of who adolescent boys are engaging in sexual activity with, a question that could not be addressed in the present study.

Among those respondents who had engaged in sexual activity during adolescence, a small number had had their first sexual experience below the age of consent (16 years). This was true of both males and females and was found across all three components of the study.

8.2.2. Attitudes towards adolescent sexuality

The findings relating to attitudes towards adolescent sexuality also suggest a socio-cultural milieu in which adolescent sexuality is proscribed at least when this implies premarital sexual behaviour. In the pregnant adolescent sample, overall 97% said that they did not think sexual intercourse before marriage was acceptable, with the proportions being very similar in both the younger (98%) and the older (97%) sub-groups. Similarly, the large majority of school-going adolescents were of the opinion that sexual relationships were not acceptable for people of their age. Here again, however, there was some evidence of gender differences. School-going adolescent boys were more likely than girls to say that they thought sexual relationships were acceptable for people of their age (21% versus 8%), and were less likely than girls to agree with the statements that 'girls should be virgin' until marriage (53% versus 82%) and 'boys should be virgins' till marriage (44% versus 66%). Clearly also, both the adolescent boys and the girls were more likely to say that girls should be a virgin until marriage than they were to say that boys should be.

Interestingly, there was evidence of ambivalence among a large proportion of the adolescents who had experienced sexual activity across the components, particularly among females, again suggesting a wider socio-cultural context that does not condone such behaviour. Indeed, among the pregnant adolescent sample, as many as 68%

reported that they now felt they had been 'too young' at the time of their first sexual experience, even though over 90% reported that they had wanted it to happen at the time. Similarly, among the small number of school-going adolescents who reported some kind of sexual experience, over 40% of boys and 60% of girls reported that they regretted or were 'not sure' about their first sexual experience. There is also evidence of a small, but important, sub-group of girls whose sexual activity reflects a particularly vulnerable status (This is discussed further below).

The findings from component I reflect that few pregnant adolescents cited their friends as a source of information or someone with whom to discuss issues related to puberty, and from component III that few school-going adolescents feel they would prefer to get information about sexual issues from their friends/peers (citing most often instead of the health professionals), again suggest that premarital sexual activity is not an accepted part of adolescent life in this context. That said, it is important to note that among the pregnant adolescent sample, among the 47% who had engaged in sexual intercourse prior to marriage, the majority were currently married to or living with their first sexual partner, and felt well supported in their pregnancy by both family and partner. This suggests that premarital sex among adolescent girls often occurs within the context of a stable relationship and that the resultant pregnancy is generally accepted and accommodated by the family.

8.2.3. Reproductive health knowledge

The study findings suggest very low levels of reproductive health knowledge among adolescents. Table 8.1 presents some comparable variables used to assess knowledge across the three components. As discussed in Chapter 5 and Chapter 6, the assessment of reproductive health knowledge among the pregnant adolescents and their partners at the time of the survey did not accurately represent their levels of knowledge at the time of conception, since they had been exposed to significant interaction with healthcare professionals since that time. It is not therefore possible to assess whether or not those girls who became pregnant had poorer levels of knowledge than the wider population of adolescent girls. Nevertheless, the findings from the school-going sample indicate low knowledge levels among both boys and girls.

Table 8.1: Distribution of the samples according to knowledge regarding reproductive health practices

<i>Knowledge regarding reproductive health practices</i>	Pregnant adolescent		Partner of pregnant adolescent		School adolescent Male		School adolescent Female	
	N-409		N=150		N=521		N=1499	
	No.	%	No.	%	No.	%	No.	%
1 Know that one can get pregnant after sexual intercourse	189	46.2	97	64.7	116	22.3	249	16.6
2 Satisfactorily know one method of contraceptive now (pregnant adolescents and partners) / able to name correctly a 'method of prevention of pregnancy' (school adolescents)	351	85.8	120	80.0	51	9.8	176	11.7
3 Know the fertility period	71	17.4	32	21.3	0	0.0	0	0.0

8.2.4. Contraceptive use

Findings across components I and II suggest that contraceptive use was rare at the time of first sexual intercourse, both among those adolescents who had become pregnant and their partners. This in part reflects the fact that a proportion of these respondents were married at the time of their first intercourse and wanted to conceive. However, there was also clear evidence of some female adolescents and their partners not using contraception despite not wanting to get pregnant. Among the pregnant adolescents this represented around 15% of the sample. Though the numbers are small, it appears that those school-going adolescents who were sexually active were more likely to report use of contraception at first sexual intercourse, though this was not universal (Table 8.2) meaning that some were clearly exposing themselves to risk of unwanted pregnancy. Importantly also, findings from component I and component II point to inadequate knowledge about or poor practice in relation to contraceptive use since almost 23% of the pregnant adolescents and 29% of the partners revealed that they had used contraception but had failed to prevent the current pregnancy. The informal feedback from the data collectors revealed that it was more a user failure than a method failure.

Table 8.2: Distribution of different categories of respondents by the use of contraceptives

Use of contraceptive method	First time pregnant adolescents N=409		Partners' of pregnant adolescents' N=150		School adolescent Females N=5		School adolescent Male N=30	
	No	%	No	%	No	%	No	%
	Used on the first sexual intercourse	57	13.9	22	14.7	3	60	17	56.7
Had ever used a method	210	51.3	100	66.7	5	100	17	56.7

8.3. PATTERNS AND CONTEXT OF ADOLESCENT PREGNANCY

Chapters 5 and 6 presented findings from the pregnant adolescents and the partners of pregnant adolescents separately. Here we pull some of these findings together to present a more complete picture of the patterns and context of adolescent pregnancy in the study district.

8.3.1. Prevalence of adolescent pregnancy and ethnic differentials

Data from the Badulla District Maternal and Child Health returns provide details about the district reproductive health statistics. Based on the district statistics, MOH annually provides an estimate of the adolescent pregnancy rate for the districts in the country. Table 8.3 provides the adolescent population in the study district and the adolescent pregnancy rate in year 2009 to 2011. Birth rates and pregnancy rates are counted per 1000 of a specific population (WHO 2004).

Table 8.3: Population 10-19 years, pregnancies under 20 years and adolescent pregnancy rate in Badulla district

Year	Population 10 to 19 years	Pregnancies <20 years	Adolescent pregnancy rate/1000
2009	168,980	1,121	6.6
2010	170,055	1,207	7.1
2011	172,156	1,141	6.6

Source: Regional Director of Health, Maternal and Child Health Badulla

As expected, given the Muslim legal provision for girls' marriage at age 12 years and over, our representative sample of pregnant adolescents included a disproportionate number of Moor respondents. Tamils were also over-represented. Furthermore, both the Moors and Tamils were particularly over-represented among the younger age-group of pregnant adolescents. The findings from the partners' questionnaire also suggested that Moor men were more likely than the other groups to be partners of younger adolescents. At the same time, however, Moor respondents were more likely to report that the adolescent pregnancy was planned, suggesting that early marriage and childbearing is more socially acceptable among this minority religio-ethnic group than among the majority Sinhalese.

8.3.2. Family circumstances and responses to pregnancy

Overall, 64% of the pregnant adolescents stated that their current pregnancy was planned and intentional, with 8% reporting that the pregnancy was 'neither planned nor unplanned' and 28% stating that it was unplanned. Similarly, 67% of partners reported that the current pregnancy was planned, with 13% reporting uncertainty and 20% stating that it was unplanned. Findings from both the pregnant adolescents and the partners' questionnaire suggest that, even in the case of the pregnancies that were reported to be unplanned, the majority were taking place within stable, supportive relationships.

In the pregnant adolescent sample, all but five reported that they were married or living with their male partner at the time of the survey. The legal age of marriage in Sri Lanka is 18 years other than for girls of Muslim faith. Among the pregnant adolescents in the study, 87% said that they were currently legally married while only 71% were 18 and

over. Since not all of the under 18s were Moor, we can assume there had been some falsification of age for the purpose of registering their marriage; a situation previously reported by Waidyaratne, (2001). Clearly this suggests a socio-cultural setting within which these adolescent pregnancies were accommodated, and where older adult actors were presumably complicit in bending the law to establish the marriage of these young couples as legitimate.

Looking across the pregnant adolescent and the partners' findings, the great majority in both samples reported that they had welcomed news of the pregnancy. Further, a large proportion of the pregnant adolescents reported being happy in their pregnancy and felt well supported by their partners and parents, and a large proportion of the partners felt that they were being supportive towards their pregnant spouse/ partner.

In summary then, the dominant picture is one where adolescent pregnancies are either planned or if not planned, welcomed, and where adolescent pregnant girls are living within stable and supportive family environments. That said, there was evidence of a smaller proportion of adolescent pregnancies that were not welcomed by the girl, her partner or her family. We return below to this important issue and the evidence of vulnerability among some adolescents.

8.3.3. Age difference between pregnant adolescents and their partners

A further aspect of the context of adolescent pregnancy that is worth noting is the large age gap that was common between partners. Over 50% of the pregnant adolescents reported that their partner was six years or more older than them, with just 8% reporting that they were of the same age. Similarly, among the partners, over 50% reported that they were six years or more older than their adolescent female partners. Perhaps not surprisingly, the younger pregnant adolescents were more likely to have partners who were a lot older than them than the older ones.

8.4. IDENTIFYING THE PREDICTORS OF EARLY AND UNPLANNED ADOLESCENT PREGNANCY

Although a majority of adolescent pregnancies were welcomed, a sizeable proportion of the pregnancies had occurred in the population of young girls and/or was reported to be unplanned. As discussed further in the section below, unplanned and unwanted pregnancies may both reflect and perpetuate vulnerability for the mother and the child. Furthermore, from a policy perspective even those adolescent pregnancies that are planned and welcomed might be considered better postponed if they result in poor maternal and child outcomes. The potential adverse effects of an adolescent pregnancy such as the: physical risks in adolescent pregnancy (preterm birth, low birth weight of infant, cephalo-pelvic disproportion of mother, iron deficiency anaemia, pre-eclampsia); psychological risks (interruption of the developmental tasks of adolescence if the pregnancy was abnormal/unwanted, but perhaps not if it was expected and welcomed i.e. as adolescence is a socio-cultural construct and not an absolute), as well as the sociological risks (such as possibility of domestic violence) cannot be ignored. It was therefore important to investigate possible predictors of early and unplanned pregnancy using the available data. Chapter 5 described the characteristics of the overall sample of pregnant adolescents and also reported on analyses that compared the characteristics of sub-groups of girls within the pregnant adolescent sample. Here I combine these findings with data from the school-going adolescents, focusing just on the Sinhalese sample, to seek further insights into factors that might increase the risk of early or unplanned adolescent pregnancy. I also highlight some factors that appear not to be relevant in this context, despite their focus in prior research elsewhere.

I have already highlighted above the role of low levels of knowledge about the use of contraception among both adolescent girls and their partners which undoubtedly contributes to early and unwanted pregnancy. Here I consider some of the more distal factors that may shape the likelihood of early and/or unwanted adolescent pregnancy.

8.4.1. Socio-economic and demographic factors

As noted already, evidence from the pregnant adolescents and the partners suggested that both planned and early age (<18 years) adolescent pregnancies were more common among Moors than among the other ethnic groups. This finding is consistent with the

younger legal age of marriage for this Muslim group. No further insight into ethnic differences could be provided by the school-based sample.

Though many studies around the world have linked economic deprivation with early sexual activity and adolescent pregnancy (WHO, 2007; Kirby, 2001; Singh *et al.*, 2001; Buhiya, *et al.*, 2000 and Linganathan, 2006), the present study could provide little concrete evidence on this issue. Respondents in the pregnant adolescent and partners' questionnaire were asked to rank the economic status of their household (deficit/breakeven/surplus) and no association was found between this variable and the likelihood that the pregnancy was either (i) below 18 years of age or (ii) unplanned. Comparisons between the Sinhalese pregnant adolescents and the school-going Sinhalese girls did not suggest any noticeable difference in reported economic situation. The bivariate analysis of the school-going boys' data indicated that those who were sexually active were more likely to report a 'deficit' family economic situation than those who were not sexually active, but this did not retain significance in the multivariate analysis and, as noted above, adolescent boys were not often the sexual partners of pregnant adolescent girls. In the absence of stronger measures of economic status and larger sample sizes, it is difficult to draw any firm conclusions, but it seems unlikely that economic circumstances would be irrelevant to patterns of adolescent sexuality and pregnancy given close association with educational achievement and career ambitions.

8.4.2. Educational aspirations and attainment

Education is a frequently examined variable in the international literature on adolescent pregnancy. The analysis presented in Chapter 5 tended to suggest that the majority of pregnant adolescents had had positive school experiences. For instance, around 90% of respondents were found to be able to read easily, over 80% of respondents reported that they liked school 'very much' and over 40% felt that their school performance was 'excellent' or 'above average' in the last class attended. Nevertheless, there was some evidence that poorer educational experiences were associated with risk of early pregnancy. The bivariate analyses suggested that the younger pregnant adolescents were less likely to report having liked school and less likely to be able to read easily than the older pregnant adolescents, and the association between not being able to read and pregnancy under 18 years retained significance in the multivariate models, even having controlled for other variables. Comparing the pregnant Sinhalese and Sinhalese

school-going girls requires caution since the school-going girls were younger (80% being under 18 years, compared to 26%). There is also the question of direction of causality, since becoming pregnant will interrupt education and curtail achievement even among those that were performing well and having positive educational experiences. Nevertheless, a comparison of selected variables between the two groups does suggest that poorer educational experiences may be associated with adolescent pregnancy. Table 8.3 shows that while 38% of the school-going girls considered their performance average or below average, this figure was 54% among the pregnant adolescent girls, and while 97% of the school girls reported that they had an ambition, only 71% of the pregnant girls reported same.

Table 8.4: Comparing school related variables among the pregnant Sinhalese adolescents and the Sinhalese school girls

Characteristics	Pregnant Sinhalese		School girls Sinhalese	
	N=313		N=1455	
	N	%	N	%
Educational level				
No formal education	2	0.6		
1 to 5	1	0.3		
6 to 10	99	31.6		
G.C,E O/L	198	63.3	307	21.1
GCE (A/L) / equivalent	13	4.2	1,148	78.9
Performance in her last class				
Excellent	33	10.5	254	17.5
Above average	110	35.1	656	45.0
Average/below average	168	53.8	545	37.5
Did not attend school	2	0.6	0	0.0
Ambition	223	71.2	1,405	96.6
Sports	229	73.3	737	50.7
Extracurricular activities	288	92.0	661	45.4

Linganathan, (2006) hospital based study in Sri Lanka also found an association between educational attainment and adolescent pregnancy, and numerous studies in South Asia have documented that education of women contributes to later age at marriage, to better maternal care and higher survival of children (Chatterjee *et al.*, 2009; Acharya *et al.*, 2010).

Interestingly, reports of involvement in sports and extracurricular activities while at school were higher among the pregnant adolescents than the school-going girls. The reasons behind sporting and extracurricular participation were not investigated in the

current study and findings from other cultural contexts offer little useful insight to help explain this apparent difference. Further investigation is needed to establish whether there is causal relationship, but clearly in this context such factors cannot be considered 'protective'.

The study also revealed an association between education of the partner of pregnant adolescents and planning of the pregnancy. Partners who had only a primary education had higher odds of reporting the pregnancy as unplanned pregnancy compared to those partners who had an advanced level of education in this study.

Understanding exactly how educational aspirations, experiences and attainment are linked to adolescent pregnancy - and particularly unplanned adolescent pregnancy - requires a more in-depth study. Clearly, the pathways of causation may operate in both directions, and an individual girl's experience and performance in school will be shaped by the wider socio-cultural context of her family and social group and the aspirations held for female educational achievement as opposed to other life-course trajectories. The Sri Lankan government has taken many steps to ensure that adolescent education is not interrupted by poverty. The Department of education provides school books and school uniforms free of charge. In addition, a free school meal as well as a glass of milk is provided in selected schools in low income areas. These interventions have enabled many adolescents to gain a secondary education. University education is also given free of charge (Personal communication-Provincial Director of Education). Nevertheless, it is worth noting that to be eligible for higher education in Sri Lanka, adolescents have to attain a school performance level of 'excellent' or 'above average'. Adolescents who are not excelling extremely well in their studies do not have the option for continuing their education. This may be a factor leading to early sexual activity and adolescent pregnancy (though as discussed above such pregnancy may not be unplanned). At the same time, familial and social norms and values will shape girls' ambitions, as will their experiences within the school system and the expectations that teachers have of them, such that educational performance may also be influenced by expectations regarding age of marriage and childbearing. I found that the parents of school adolescents were better educated compared to the parents of pregnant adolescents and that, compared to the national averages, the educational attainments of the pregnant adolescents' parents, were quite low (DHS, 2006/2007). The relationship of parents' education with adolescent pregnancy is documented in other settings by Resnick, (2000) and Bernat and Resnick, (2006). Fergusson, (2000) argues that the more years of

education completed by parents the less likely their adolescents are to be sexually active early. The delay in sexual activity and pregnancy among the learned parents' children may be due to more set goals for their children through a higher value on achievement of work and greater guidance and supervision. The present study found that pregnant adolescents those reported a deficit economy were less likely to report having an ambition than better off respondents, and the Moor and Tamil respondents were less likely to report an ambition than the Sinhalese. Many reviews have shown that adolescents having an ambition is related to delaying adolescent pregnancy (Harden *et al.*, 2009; Robin *et al.*, 2004; Supametaporn *et al.*, 2010) and it would be helpful to understand more about how these factors inter-relate with the broader socio-cultural context within which different groups of Sri Lankan female adolescents are growing up.

8.4.3. Family environment and parent-child relationships

As Miller and Olson, (1988) argued, many aspects of the family could affect a girl becoming pregnant as an adolescent, whether intentionally or not. These included parents' characteristics, family structure or configuration, family relationships and interactions, attitudes, values, and familial norms.

Considering initially family norms and values (which have already been touched on above when we considered educational expectations and career ambitions), I explored whether there was any evidence that early age of marriage and childbearing was related to a familial pattern. Comparing the Sinhalese pregnant adolescents with the school-going adolescents, there was a stark difference. While 2% of the school-going girls reported that their mother had been married at under 18 years of age, 35% of the pregnant adolescents reported same. Similarly, while just 2% of the school-going girls reported having siblings who had children, this figure was 48% for the pregnant adolescents. Although the small numbers warrant caution, it is also worth noting that in the logistic regression of sexual experience among school-going girls, those who reported having siblings with children had higher odds of being sexually active compared to the girls who did not have siblings with children. Miller and Moore, (1990) reviewing adolescent studies in 1980s and Kirby, (2001) showed that having older sexually active siblings or pregnant/parenting teenage sisters increases the risk of adolescent pregnancy. The findings of the present study therefore suggest that patterns of adolescent sexual activity and pregnancy are clustered within families.

I turn now to consider the findings regarding parent-child relationships and communication. Communication between adolescents and their parents and guardians is recognised as a crucial factor in providing adolescents with the skills to support their process of growing up (Miller, 1999; WHO, 2007). Research in other contexts has suggested that, overall, closeness between parents and their children, shared activities, parental presence in the home, and parental caring and concern are all associated with a reduced risk of early sex (Rinehart, 1998). Looking first at variables indicating the adolescent girl's relationship with her mother, the patterns were very similar for both the pregnant and school-going girls, with a large majority reporting close relationships and easy communication. That said, there was evidence within the pregnant adolescent sample that the younger group was more likely to report not being close to their mother than the older group; a significant association even in the multivariate models. Bivariate analysis performed between planned and unplanned pregnancy also showed a significant difference in reported mother-daughter discussion between the two groups, with the 'planned' group being more likely to report 'very easy' discussion with their mothers.

While the majority of the pregnant adolescents in the current study sample said it was very easy to discuss matters of importance with their mother, communication with their father was much less likely to be reported as easy. There was also evidence of important differences in this dimension between the Sinhalese pregnant adolescents and the school-going adolescents. School-going adolescents were more likely to report having a good relationship with their fathers and finding it easy to speak with their father compared to the pregnant girls. Furthermore, the bivariate analysis of the school-going sample hinted at a difference between those who were sexually active and those who were not in terms of their relationships with their fathers, though again it is important to remember the limitations of the small sample size. Further qualitative work would be helpful in understanding whether this apparent association is a reflection of particular socio-cultural contexts (such that some girls are being brought up in families where gendered norms and expectations support both distant daughter-father relationships and early age at pregnancy), and/ or whether there is a more direct causal pathway through which close father-daughter relationships act to shape girls' behaviour away from sexual activity, perhaps because of a strong endorsement of female educational and career aspirations and/ or empowerment of these girls in their relationships with other men.

A small proportion of respondents in components I and III reported that either their father or mother was living abroad, a situation reflecting the fact that Sri Lanka exports labour, particularly to the Middle East. This situation was more common among the pregnant Sinhalese than the school-going sample. Furthermore, in the study school-going boys had higher odds of being sexually active when they reported their mother was abroad compared to the boys whose mothers were in Sri Lanka. Generally, families that send mothers or fathers abroad to work are likely to be in the lower socio-economic strata and it is not possible to say whether the apparent association with adolescent sexual activity among both boys and girls is a function of parental absence (and perhaps therefore less communication and supervision) or rather a reflection of the broader socio-cultural context of these families.

As well as questions relating to parent-child relationships and discussions, component I and III included some questions designed to ascertain the happiness of the adolescents. The pregnant girls were asked "Thinking about your teenage years, how happy would you say you have been at home before meeting your partner?" and they were to say 'Very happy', 'Somewhat happy' or 'Not happy at all'. The school students were asked 'How would you categorise your home environment?' The possible answers were, 'peaceful', 'with quarrels', 'bad', 'very bad' and 'any other' (specify). Students were advised to mark the most appropriate. Next an open ended question was put to the students to explain the answer given to the home environment question. Although the questions were worded differently, both were likely to reflect aspects of the home environment. 78% of the pregnant adolescents said they were 'very happy' as teens, and only 6% reported that they were 'not happy'. However, in the bivariate analyses not being happy was more common among both the younger age group and the unplanned group, and the latter association remained significant in the logistic regression. Over 90% of the female school adolescents perceived they are living in a peaceful home environment. Not living in a peaceful home environment was significantly associated with girls being sexually active in the bivariate analysis, though numbers were of course small.

The findings do, therefore, provide some evidence to suggest that the nature of the family environment and the quality of parent-child relationships are a relevant set of factors for understanding risk of early and unplanned pregnancy in this context.

8.4.4. Peers

Also of interest in the current study was to explore whether peers were predictors of adolescent pregnancy. In the current study, more than half of the pregnant adolescents reported that their close friends were having intimate sexual relationships as well as having children, suggesting that these girls were not unusual in being pregnant within their local community. However, whether this reflects the social influence of peers on adolescent sexual behaviour, as has been argued in work in other contexts (Wight *et al.* 2002), is less clear. Only a small percentage of the pregnant adolescents in this survey reported having discussed sexual relationships or how girls become pregnant with their friends. Furthermore, only a small proportion of the sexually active school-going adolescents reported discussing sexuality with their friends, whereas more reported discussing other personal problems with their peers. These findings suggest that sexuality, particularly premarital sexuality, is not a topic that is openly acknowledged among adolescents, even among friends, a situation that has also been mentioned in the document 'Using Human Rights To Advance Sexual and Reproductive Health of Youth and Adolescents In Sri Lanka' (WHO, 2008). The present study does not therefore suggest a strong role for peer influence on adolescent sexuality and pregnancy, but more in-depth investigation would be valuable to understand how social norms and expectations are inculcated in adolescents and the role of different actors in these processes.

8.4.5. Partner

The role of males in adolescent pregnancy cannot be ignored. In the present study it was seen that the majority of the male partners were much older than the adolescents. As noted above, these male partners appeared to be supportive of the adolescents. It is important to note, however, that some characteristics of the male partner did appear to be associated with whether or not the pregnancy was planned.

According to the pregnant adolescents' reports of their partners' age, there were 19 males who were 19 years or younger and the majority of those adolescents whose partners were in this age group have become pregnant though the girls were not planning for pregnancies. In addition, almost 32% were not happy at all at the time of data collection. A further 44% reported that they used contraception before this

conception but it failed. The same is reflected in the adolescents who were with partners over 30 years of age with a lesser effect. There were 28 pregnant adolescents who reported their partner's age as 30 and over. Only 57% of them said they had planned their pregnancies and a further 11% reported that they are not happy at all. Among them almost 46% of these adolescents said they used a contraceptive. These figures show that for the majority of adolescent girls who were with partners of extreme ages, contraceptive failure was significant, resulting in unplanned pregnancies and a considerable proportion of respondents saying they were not happy at all. According to the pregnant adolescents, a majority of them had planned their pregnancies when they are with partners 20 to 24 years (62%) and 25 to 29 years (73%). The difference in planning of pregnancy across the partner age category is statistically significant in bivariate analysis.

Meanwhile, the partner questionnaire reveals that the partners older than 30 years planned the pregnancy more frequently than the younger age partners, which is statistically significant in the bivariate analysis. The multivariate analysis of the partners' findings showed that when partners with an age gap of 10 years or more were significantly protected from an unplanned pregnancy as viewed by the partner. Adolescent girls in a relationship with a male partner over 30 years appear to be more vulnerable to becoming pregnant before they would choose to become pregnant themselves as the older partner is planning a pregnancy.

8.5. VULNERABILITY: UNWANTED SEX AND UNWANTED PREGNANCY

The above section has highlighted some of the factors that appear to be associated with adolescent pregnancy and, where possible, with unplanned pregnancy. Despite the overarching picture of planned and welcomed adolescent pregnancy among my study samples, the findings across the three components also alert us to a proportion of males and females whose experiences of sexual behaviour and pregnancy are not positive and who therefore appear to be vulnerable.

8.5.1. Unwanted pregnancy

Out of one hundred and forty six (36%) adolescents who said they did not plan their pregnancy, 37 (9%) were not happy at all in their pregnancy and 23 (6%) had wanted to get rid of the pregnancy. The majority of these adolescents were younger than 18 years of age.

8.5.2. Unwanted sex

There was evidence across all three components that a proportion of boys and girls had not wanted their first sexual experience to occur. Table 8.4 shows that the experience of initiation of sex is non-consensual (either did not want or were forced) in almost a quarter (6/23) of the sexually active school girls and one fifth of the sexually active school boys (10/46). Almost 1% of pregnant adolescents and partners have disclosed their first sexual experience was forced, and further respondents reported that they had not wanted their first sex. This is an area of concern. Clearly, there needs to be more understanding about the circumstances of these first sexual experiences and how these may vary between the genders. The steps that may need to be taken to protect these vulnerable adolescents are discussed in the following chapter.

Table 8.5: Degree of 'wantedness' of first sexual experience of males and females across the three components

First sexual experience	Pregnant adolescent N=409		Sexually active School girl N=23	Partner N=150		Sexually active School boy N=46
	N	%.	N	N	%.	N
Wanted	385	94.1	9	136	90.7	28
Was not sure	12	2.9	8	0	0.0	8
Did not want	9	2.2	1	12	8.0	3
Happened forcefully	3	0.8	5	2	1.3	7

Did not want and happened forcefully taken as non-consensual sex

As shown in table 8.6, nine (2%) pregnant adolescents, one school girl, and 6 school boys said they had not wanted their first intercourse/intimate sexual relationship. Five pregnant adolescents, one school girl, two partners and three school boys reported that their first sexual intercourse/intimate sexual experience was forced upon them. Tables

8.5 and 8.6 shows that non-consensual sex is reported by few male and female respondents across the samples.

Table 8.6: Degree of 'wantedness' of first intercourse/ intimate sexual relationship across the three components

First sexual experience	Pregnant adolescent N=409		Sexually active School girl N=5	Partner N=150		Sexually active School boy N=46
	No.	%	No.	No.	%.	No.
Wanted	379	92.7	0	124	82.7	16
Was not sure	16	3.9	2	24	16.0	5
Did not want	9	2.2	1	0	0.0	6
Happened forcefully	5	1.2	1	2	1.3	3

Underage pregnant adolescent had three times higher odds of having had non-consensual first intercourse compared to the older group. Moreover, adolescents who said their pregnancies were not planned had three times higher odds of having had non-consensual first intercourse as compared to the group who planned. Bivariate analysis showed that male partners whose attitude towards their sexual experiences was uncertain (n=24) or forced (n=2) were more likely to report the pregnancy as unplanned. Data shows that being underage renders one more vulnerable to non-consensual intercourse. These adolescents may then have an unwanted pregnancy, be unhappy and have the risk of going for illegal abortions or even, in the extreme circumstances, of taking their own lives as shown in WHO, 2008 report.

8.5.3. Identifying vulnerable adolescent girls

By combining the variables relating to whether or not first sex was wanted, and whether or not the current pregnancy was planned we are able to explore the different circumstances of the adolescent pregnant girls further (Table 8.7). Given that 100% of the pregnant adolescents reported just one sexual partner, their reports relating to first sex must relate to the father of their unborn child. As such, these two combined variables combined give us a picture of the girl's degree of vulnerability within this intimate relationship. I identify four main categories, which can further be divided by age category, i.e. under 18 years and 18 years and over. In addition, those categories who did not want the current pregnancy have been further divided into those who used contraception and those who did not (Table 8.7).

Table 8.7: Categories of first time pregnant adolescent according to unwanted sex, unplanned pregnancy and by contraceptive use

Category	Under 18 years (No 121)		18 and over (No 288)		Total (N=409)	
Wanted 1 st Sex and planned for pregnancy	58(48%)		205(71%)		263(64%)	
Wanted 1 st sex but not the pregnancy	51(42%)		80(28%)		131(32%)	
	Used Contraceptive 33 (65 %)	Not used contraceptive 18(35%)	Used Contraceptive 56(70%)	Not used contraceptive 24(30%)	Used Contraceptive 89(68%)	Not used contraceptive 42 (32 %)
Did not want sex but wanted the pregnancy	0(0%)		1(0.3%)		1(0.2%)	
	Used Contraceptive 00	Not used contraceptive 00	Used Contraceptive 00	Not used contraceptive 01(100%)	Not used contraceptive 00	Not used contraceptive 01(100%)
Neither wanted sex nor a pregnancy	12(10%)		2(0.7)		14 (3.4%)	
	Used contraceptive 5(42%)	Not used contraceptive 7(58%)	Used contraceptive 1(50%)	Not used contraceptive 1(50%)	Used contraceptive 6(43%)	Not used contraceptive 8(57%)

(a) Adolescents who wanted sex and planned their pregnancy:

For those adolescents who were at the legal age of marriage (18 and over) and who had wanted their pregnancy (71%), being pregnant at this age may not be a problem to the individual or the society at large if the girl is mentally and physically fit for motherhood, as well as having the qualities to face the challenges and demands of being caring and a loving mother. Pregnancy can bring status for married adolescents in cultures where motherhood is a core aspect of a woman's identity (Singh, 2003). Many of these pregnant adolescents may have grown up with some degree of poverty or disadvantage and have little in the way of future aspirations, career prospects or the educational ability to pursue any further education. It therefore could be argued that whether or not they wait until they are in their twenties before having children would have not made a significant difference to their life trajectories.

Consideration of those adolescents who were under 18 years of age and who reported that they both wanted first sex and planned for their pregnancy (48%) raises some additional issues. There is a discrepancy in the age of consent for sexual intercourse and age of marriage in Sri Lanka, the former being 16 years of age and the latter 18 years. Though the adolescent girl gives consent to have intercourse with her partner she cannot legally marry him as she is not 18 years. This discrepancy may have negative consequences. Nevertheless, in the present study, as described above, there was evidence that girls who had become pregnant prior to the legal age of marriage were by-and-large now in stable relationships or married, indicating that their behaviour had been accommodated and had not led to vulnerability. It seems plausible that in some of these cases parents were complicit in facilitating underage marriage and the first sex occurred within the marital union, and in others they may have given consent to marriage following the pregnancy even though they may not have consented to the marriage otherwise (Goldmine has reported this situation, 2008). It may be so that the young adolescent who consented to sexual intercourse was taking advantage of the 'turning-point' offered by pregnancy, in terms of planning for the future as shown by Phoenix in a different social context (1991). The adolescents who had an education less than grade five, who had a low literacy, who did not enjoy schooling may have had no other life options and may have welcomed motherhood; pregnancy may not necessarily have an adverse impact upon these adolescents' economic prospects as argued by McCauley and Salter, (1995) and WHO, (2007).

(b) Adolescents who wanted sex but not the pregnancy:

Almost 42% of the adolescents younger than 18 years and 28% of those adolescents 18 and over did not plan for a pregnancy but reported that they had wanted sex. Some adolescents in our study who did not know the consequences of sexual activity (10% of the pregnant adolescent in the study did not know the possibility of pregnancy as a result of first intercourse) and adolescents who mistimed sex or experienced failure of contraceptive use (68%), are in this group. Some of them later welcomed the pregnancy and most were happy at the time of data collection.

For some of these girls, becoming pregnant will have had significant consequences. When discovered, a pregnant girl will be expelled outright from the Sri Lankan school system and never be accepted back. Pregnant school adolescents' career aspirations are thus abandoned as shown in WHO, (2007) leading to restriction in skilled employment opportunities.

Knowledge about reproduction and contraception were significantly less in the adolescents younger than 18 years therefore almost 35% had not used contraceptive even though they did not plan for a pregnancy. Of this group, though they have not used contraception properly; 65% of the adolescents under 18 years of age and 70% of the adolescents 18 and over who did not want a pregnancy did report having used contraceptives. If these adolescents had correct knowledge about contraception and knew how to practice correctly these adolescent pregnancies could have been prevented. This knowledge gap of the adolescent in using contraceptives needs to be seriously noted and addressed.

(c) Adolescents who did not want first sex but wanted the current pregnancy:

There was one girl over 18 years in this category who did not want the first sex but perhaps later adjusted to the situation and accepted that having a child would be beneficial to her and her family.

(d) Adolescent who wanted neither first sex nor the pregnancy:

Among the pregnant adolescents aged under 18 years, 10% reported that they had not wanted sex or the current pregnancy, and among the older age-group this proportion was less than 1%. This category seems to be particularly vulnerable. Pregnant adolescents who were under 18 years had odds of reporting that their first intercourse was unwanted three times higher than adolescents in the older group. Also, among adolescents who said their pregnancies were not planned, odds of reporting first intercourse as non-consensual were three times higher compared to adolescents who said they had planned their pregnancies.

Sexual relationships with boyfriends for 'proof of love' have to be interpreted carefully in Sri Lankan adolescents. In the Sri Lankan society, being a patriarchal society, male superiority is cultivated from childhood in many families. This may be perceived by males as the right to expect a sexual relationship. The adolescent pregnant girls in the current study may have let the partner who is much older than her and with experience "have his own way". A sexual abuse forum, (2007) in Sri Lanka has also shown that there are adolescents who say they have had sex to prove her love etc. There is a need to draw attention to this issue and to understand it further, as it may have resulted in coercion or even intercourse with physical force, which then becomes sexual assault or rape. Therefore it is likely that young adolescents are particularly vulnerable to becoming victims of abuse rather than actively participating in the sexual act (Edirisinghe *et al.*, 2008). As Jejeebhoy *et al.*, (1998) have disclosed the fear of losing her partner or incurring his anger appears as reasons given by adolescents for their first sex. The facts remain true to the current study as many pregnant adolescents may have wanted a relationship but not sex or its consequences. These adolescents are inhibited from exercising choice and the timing of sexual activity or negotiating the use of condoms or other contraceptives. As Promina, (1997) argues, adolescent girls should realise that her lover/boyfriend has no mutual respect if he is pressuring her, threatening to break up with her for not engaging in sexual activity. The girls need to empower themselves, have self-assurance and confidence to reject such relationships.

Among the adolescent who wanted neither first sex nor the pregnancy is likely to include some girls who had been partnered with older men. Other than three adolescents, the partners age gap with the rest were 6 years or more three having an age gap 10 years or more. Two were Moor (2/49) and rest were Sinhalese (12/313) by ethnicity. As Berglund *et al.*, (1997) have disclosed, culturally sanctioned female subordination to machismo values will leave very few options for a poor woman other than the physical and material protection of a man as a last resort. This description may be relevant to some of the adolescents who were having partners with an age gap more than five years. Further it was shown that partners who were more than thirty years of age planned for pregnancy.

The majority of the adolescents in the study are normal active children who are enjoying their adolescence in a home environment conducive to leading a happy life. The majority of sexual activity had taken place in stable relationships and sexual

activity was rarely reported among school adolescents, though there are gender differences. The present study further shows that the majority of the respondents who are sexually active had consensual sexual activity. Moor girls were more vulnerable to becoming pregnant in early adolescence, but early marriage and childbearing are encouraged in some societies (WHO, 2007) and there are community norms and factors built around supporting it. There is a vulnerable population who is encountering non-consensual sex while reproductive and sexual health knowledge across the samples was not adequate and needs attention.

8.6 CLAIMS OF REPRESENTATIVENESS OF THE SAMPLE IN RELATION TO UNDERLYING POPULATION

The question of representativeness can be considered at two levels:

Firstly, there is a need to consider whether the sampling procedure produced a representative sample of an immediate population to which I was seeking to generalise results (i.e. all pregnant girls in Badulla; all mainstream school going kids in Badulla). Reliable sampling frames and, random selection of the samples had been followed. Response rate in pregnant adolescent was 100% due to the prevailed legal situation and negative environment the non response rate of the partners of pregnant adolescent increased to 24% and was addressed by selecting other pregnant adolescent partners according to the number identified from each area. Completion of the self-administered questionnaire by school adolescents were 85%. Secondly, it is relevant to consider whether findings from Badulla are likely to be informative in relation to other parts of Sri Lanka, i.e. the wider generalisability of findings and their relevance to national policy. In designing the study, I considered whether Badulla has any particular characteristics that would suggest patterns of sexual behaviour and pregnancy might be different from other areas. As indicated earlier Demographic and Health Survey (DHS, 2006/2007) the socio economic factors of Badulla are comparable with the other parts of the country suggesting that the study findings may have some generalizability to the other parts of the country. School adolescents' parents' data on age at marriage and education is comparable with the DHS data 2006/2007. Literacy and education level of the pregnant adolescents and partners of pregnant adolescents are comparable with the DHS data. The present study findings are comparable with the UNICEF, 2004 and the ADIC, (2003) studies other than the alcohol consumption which is reported low in the current study. Annexure 6, compares present study with other studies.

8.7 THEORETICAL PERSPECTIVES

I undertook a thorough literature review including a review of various theoretical perspectives on understanding adolescence, from Freud (Freud 1969) to the “problem behaviour theory” (Jessor and Jessor 1977). Theory alerted me to potential areas for investigation, which helped me to identify the issues to be included in the questionnaires. For example, the social cognitive theory of Bandura (Bandura 1991), the psychosocial views of Eriksen (Eriksen 1968) ’s and broader ecological theories were helpful in that they suggested areas for investigation relating to aspects of the adolescents’ home and wider environment that were important to investigate. However, I did not build my research based on any one particular theory as I did not want to look through a single lens but rather to be open to the possibility of varied influences and to get a bigger picture of adolescence sexuality in Sri Lanka which currently is largely a hidden and an unspoken subject in this context. Empirical research and my own experience suggested that the issues and nuances would be different from the western world. Therefore, establishing my research on any particular theory – most of which have been spelled out in the western world - was not appropriate. My findings confirmed the very different context of adolescent sexual behaviour in Sri Lanka to the western world and suggested that my pragmatic approach to theory use was appropriate. As a health administrator, my main objective was to generate findings that would be of practical benefit to policy and programme development, and my future thoughts will be to learn from what I have gathered, share the findings at all levels and contribute to a comprehensive ARH package to the adolescents in Sri Lanka. That said, it is clear that further theoretical work to adapt existing conceptual models to the Sri Lankan (or wider South Asian) context would be useful, and I hope that my empirical findings may assist others to undertake this development.

In this chapter I discussed the methodological aspects of the study, integration of data across the samples and the representativeness of the sample taken and the theoretical perspectives of my study. In the next chapter I will be discussing the policy implications and the way forward.

CHAPTER 9

DISCUSSION PART 2

IMPLICATIONS FOR POLICY, PRACTICE AND FUTURE RESEARCH

9.1. INTRODUCTION

While adolescent sexual behaviour, on the one hand is a highly personal responsibility it is, on the other hand, also a major public health concern. As such, it is the collective responsibility of the individual, the family, the community, policy makers as well as the government to protect and promote responsible sexual health in adolescents with the ultimate goal of preparing adolescents for responsible citizenship. Policy and practice should be based on the best available evidence while recognising the importance of the local contextual factors that shape the feasibility and acceptability of different interventional strategies. The present study aimed to generate significant new insight that could inform a culturally appropriate and effective response to adolescent reproductive health needs in Sri Lanka.

The previous chapter integrated the data across the study components to draw out the key findings from the study. I turn now to consider the implications of these findings for policy, practice and future research. Drawing on the study findings, my own extensive experience of working within the health system of Badulla District, Sri Lanka, and also research evidence from other relevant studies, I consider four interrelated areas of intervention that deserve consideration in this context:

1. Preparing the general adolescent population for sexual and reproductive life
2. Addressing the needs of pregnant adolescent girls
3. Identifying and supporting vulnerable adolescents
4. Shifting age at first childbearing among marginalised sections of the population

I then raise a number of legal issues that are highlighted by the study and, finally, I suggest some avenues for future research that would help to further guide policy and practice in the area of adolescent sexual and reproductive health in Sri Lanka.

9.2. PREPARING THE GENERAL ADOLESCENT POPULATION FOR SEXUAL AND REPRODUCTIVE LIFE

9.2.1. *Increasing levels of reproductive health knowledge through stronger educational provision*

The study findings across all three components confirmed that levels of knowledge regarding sexual and reproductive health matters were shockingly low among both male and female adolescents. Our intention is not to promote sexual activity among adolescents but to promote reproductive health knowledge. Providing adolescents with age-appropriate sexual and reproductive health information empowers them to make responsible decisions regarding sexuality, thereby reducing the number of unintended pregnancies and the incidence of sexually transmitting infections (STI).

Increasing awareness of responsible sexual health and minimising the ill effects of early and pre-marital sexual behaviour (Examples include: unintended pregnancy and sexually transmitting diseases) is a pressing need. Conveying the importance of responsible sexual behaviour and delaying sexual activity should be the main objective in responding to the reproductive health care of adolescents.

The main objective of the school health program in Sri Lanka that is implemented by the Department of Education with the Ministry of Health is to empower school children to act as change agents to improve the health of their families and communities. The program is expected to strengthen the partnership between the health and education sectors while promoting the health of school children.

Early attempts to provide reproductive health education in Sri Lankan schools dates back to 1973 funded by the UNFPA. Subsequently, a book 'Dawning of the Adolescence' ('Udau Yauwanaya') was introduced by the Ministry of Health in the mid-90s to answer adolescent questions regarding puberty and sexuality. With all this history, the reproductive and sexual knowledge of school children was found to be inadequate by the present study as well as the UNICEF, (2004) study. The school curricula need to address reproductive health issues and teachers should be well trained to deliver these lessons and to understand the adolescence. To foresee a positive outcome in the area of reproductive health, policy discussion should take place to

address programmatic implications such as having components of sex education to be included as part of competitive exam papers or else students will not learn it and teachers will be negligent in teaching it. G6rger *et al.*, (1993) shows that teachers imparting sex education, whether they are professional teachers or health personnel, should participate in an appropriate training programme, so that they are well informed about the growing needs of the adolescence, adolescents sexuality and birth control. Teachers should be able to communicate with adolescents in a confidential manner without taking a moralizing attitude. The main focus should be on promoting awareness, reproductive wellbeing and responsible sexual health.

Until the teachers are empowered to address sexual and reproductive health effectively, the departments of health and education should liaise to impart reproductive health knowledge to students. When the students who were in school were asked from whom they would like to learn about sexual issues, the majority stated a preference for health personnel. Sending school children in batches to the nearest health centres or to hospitals or inviting health workers to address reproductive and sexual health knowledge are interventions which could be tried. The rationale for strengthening links between sexual and reproductive health and school programmes is well recognized but ineffectively co-ordinated. Other sectors, such as the Department of Social Welfare and youth, have important contributions to make in complementing the health sector's response to the sexual and reproductive health of adolescents.

Another issue is the re-orientation of service providers on reproductive health awareness to be given to adolescents. Sri Lanka should have uniform and structured sexual health educational materials which could be used by everyone who is providing reproductive health education to adolescents. This would ensure that there is a set norm in reproductive health awareness and eliminate contradictory and ambiguous messages that would be given to adolescents. Bearing in mind the inadequate health personnel resources in the country, selected and suitable people who work for other non- health departments (such as child care, probation, social welfare etc. and appropriate NGOs) could be mobilized to provide training for trainers (TOT) and, subsequently, these personnel could replicate this reproductive health awareness model to adolescents in schools, outside of school and in the adolescent resource centres which this study propose.

Teaching reproductive health should not be lesson based; rather it should be made more interactive. I have tried a few such practical interventions and it has proven fruitful. Many of them were based on getting the adolescents to come out with their own knowledge and experience around reproductive/sexual health and then guiding them to acquire correct pathways. One method was to set these adolescents to role play different characters depicting adolescent pregnancy holding pictures of known characters in front of them. Another method was to give them a short event/ analogy on reproductive health from a selected newspaper and ask them to re-invent the event differently with different outcomes. Once I gave the same story to five groups in the same class and they gave five different outcomes. Using dramas, adolescents role played hypothetical situations of a girl who got pregnant and subsequently committed suicide and a girl who faced life by avoiding sexual advances and becoming a biology teacher was played by the same class mates. Sexual education could also be offered outside of school settings in ‘adolescent resource centre’/ ‘wellbeing centres’ which is detailed in this study under the adolescent development program.

9.2.2. Enhancing the provision of reproductive health knowledge at community level

While educational attainment is high for both boys and girls in Sri Lanka compared to other countries in South Asia, there is nevertheless a need to ensure that reproductive health knowledge is available to adolescents who drop out of the school system prematurely.

A number of interventions are already in place at community level to provide information to girls about puberty and reproductive health. For instance, interventions have been initiated by health workers that are directed to girls at the time they attain menarche. Giving a calendar to mark and a diary to record her menstruation and her feelings, explaining the importance of the menstrual cycle and preparing her to attend school after menarche are some steps taken by female health workers to get close to adolescent girls. Many dialogues are held with the adolescent alone and also, whenever it is appropriate, in the presence of the mother or a relative who is at home so that they could encourage and help the adolescents follow advice given. Programmes to encourage the parents to understand adolescent changes and to give the correct messages are also held with the help of the education department.

The “field midwife” concept in the Sri Lankan public health service is basically built upon maternal and child health care. Today the field midwives are named as family health workers as they are providing not only maternal and child care but also holistic family care. Their services are widened to integrate reproductive health concepts. The findings of the present study suggest, however, that there are still major gaps in knowledge among adolescent boys and girls and it suggests the need to enhance this provision at community level to ensure that it reaches both girls and boys. Increasing the cadre of field midwives one per village headmen area (‘gramanildari division’) may be the answer in delivering sustainable family health care at a grass root level.

9.2.3. Avoiding unwanted pregnancy among sexually active adolescents: access to contraception

The study revealed low levels of sexual activity among school-going adolescents, with just 1.5% of the girls and 8.8% of the boys reporting that they had experienced a 'sexual relationship', and only 0.3% of girls and 5.7% of boys reporting that they had experienced 'an intimate sexual relationship'. Figures reported by UNICEF, (2004) National Survey on Emerging Issues among Adolescents in Sri Lanka show sexual behaviour at 14% for male and 2% female, suggesting that rates may be higher among the non-school going population. Clearly, a proportion of adolescents is sexually active and are at risk of pregnancy. There is a need to find acceptable strategies for providing these adolescents with information and access to contraceptive services.

Currently, the Sri Lankan school education system neither addresses the issues of contraception nor allows the medical personnel who go to schools for health education to address this issue. Some educationalists are of the view that if contraception is taught in schools, children will become sexually active, though this has been disproven by many studies worldwide (Wight and Abraham, 2000). However, our study suggests that there is a need for some type of school-based service to address the needs of the minority of students who are sexually active. In addition to variations in the levels and patterns of contraceptive method use among those who had tried to avoid becoming pregnant, there were differences in effectiveness of the method used. User-failure rates for temporary (reversible methods) contraception are shown to be high for adolescents and their partners in studies worldwide and this was substantiated in this study. Trying

to address the problem of promoting the use of contraception while taking care not to promote sexual activity will be a challenge for school based programmes.

Access to contraception for unmarried adolescents is difficult in many countries and it is likely that both in-school and community-based initiatives are needed in Sri Lanka to accommodate the needs of different groups of adolescents.

Since the current research began in 2008 in my district, all health workers providing services to adolescents and young couples were made aware of the need to discuss the desirability of delaying first birth. The field midwives acted on this need and devised strategies to speak on a one-to-one basis about responsible sexual behaviour with sexually active adolescents who were identified by different methodologies. Confidentiality of service provision was ensured. The use and availability of contraception was discussed, and contraceptives were distributed free of charge for the sexually active through Public Health Midwives and Public Health Inspectors.

However, effective contraceptive use requires planning and preparation prior to having sexual intercourse. This is often a problem for adolescents because young people usually report that their first sexual intercourse "just happened" and that they were not planning to have sex at the time. Consequently, condoms, which require the least amount of advance planning, are used more than any other method of contraception at first sexual intercourse, but majority (over 75% in present study) of first sexual intercourse experiences take place without the use of any contraception. Pharmacy providers reach adolescents to give the correct message on condoms for HIV prevention in Sri Lanka (De Silva *et al.*, 2003). The same mechanism could be used and enhanced by appropriately training pharmacists to reach the adolescents who may not come to service provided by the government. Pharmacists should be provided with the necessary training to deal with adolescents seeking sexual and reproductive health services. Confidentiality and non-judgmental attitudes must be guaranteed.

In cases where adolescent marriage is promoted by the wider family and community, childbearing soon after marriage may well be desired, and a shift in this expectation may require more widespread societal change, as discussed more below.

9.2.4. Recognizing gender differences in sexual behaviour

As noted above, the findings from the present study confirm those of earlier work in the region that suggest important gender differences in sexual behaviour among adolescents. Gender differences in sexual behaviour were seen in the present study with more boys reporting sexual activity than girls. The UNICEF, (2004) National Survey on “Emerging Issues among Adolescents in Sri Lanka” also reported higher levels of sexual activity for boys than girls. The difference in the sexual activity in boys and girls has been observed in the Indian adolescent studies by Jejeebhoy, (1998). Jejeebhoy, reviewing evidence from India on adolescent sexual and reproductive behaviour, has disclosed sexual activity of male adolescents with sex workers. This was speculated in the UNICEF, (2004) study in Sri Lanka too, and the current study has highlighted the fact that the partners of adolescent girls are not often adolescent boys and, as such the sexual partnering patterns of adolescent boys needs to be further researched. Boys may be more exposed to unhealthy reproductive health behaviours putting them at risk of sexually transmitted diseases. Any programs and policies that would address unhealthy sexual behaviour in adolescents should take this gender difference into account.

9.3. ADDRESSING THE NEEDS OF PREGNANT ADOLESCENT GIRLS

This study shows that, rather than viewing adolescent pregnancy as a ‘problem’, the majority of pregnant adolescents and their partners welcomed the pregnancy. Even where pregnancies were unplanned, most seemed to have adapted to the situation and felt well supported. There was no widespread ambivalence about marriage or especially about the importance of marriage. Furthermore, access to maternal health services among pregnant adolescents was found to be generally good in the district. Therefore, aside from the small group of pregnant adolescents who appeared to be vulnerable (discussed more below); the study did not suggest major concerns regarding the wellbeing of these girls or their unborn children.

Nevertheless, the study did highlight a number of areas where improvements in care could be made. In particular, out of the 450 pregnant adolescent girls, 41 were in their second pregnancy. This alerted us to the need for better spacing between pregnancies as well as increased awareness of contraceptive options. Therefore, in the study district there has been greater promotion and awareness of the use of long acting hormonal contraception along with other awareness raising programs. In addition, the study alerted fieldworkers to the importance of ensuring the following elements of service are operating well for adolescents as well as for older pregnant women:

- 1) Early identification and registration in the eligible couple register and the antenatal register. (80% of the pregnant women were registered before 8 weeks of pregnancy in 2011 in the study district);
- 2) Early referral to the obstetrician for identification of any risk factors, making the birth plan, ensuring a healthy normal weight baby and safe motherhood;
- 3) Planning routine field visits and clinic visits of the adolescents;

Whenever it is possible, the presence of the partner/husband in the clinic is also solicited, since awareness of parenting skills should be imparted to the couple together. Partner support and family support to the pregnant adolescents is promoted.

A further area of service development has been around the importance of ensuring positive attitudes among staff towards adolescents who are pregnant. The field midwives deliver equal care whether a couple is married or not. However, there are two subdivisions among the adolescents who are 18 years and older and wanted to be pregnant, those who are already married and those who are not married. Out of wedlock births are not well received by the community at large. Although marriage is possible, many of the adolescents wait to proceed until they receive the blessing of their parents. In the study area, whenever adolescents requested our field staff to support them in convincing the parents, the requests were conceded. Not only were the marriages registered but sometimes wedding ceremonies were also held. For those who are younger than 18 years, special plans are needed. We have introduced additional, frequent planned field visits by the midwives since these adolescents are likely to be more vulnerable than older girls.

The study has therefore had the effect of raising awareness among fieldworkers and managers of the need to respond supportively to adolescents who find themselves pregnant regardless of their marital situation. It may be valuable to share these experiences with other parts of the country where there has, to-date, been less consideration of these issues.

9.4. IDENTIFYING AND SUPPORTING VULNERABLE ADOLESCENTS

9.4.1. *Unwanted pregnancy*

While the study suggests that the rate of unwanted adolescent pregnancy remains low in Sri Lanka, there is nevertheless a concern that some pregnant adolescents are very vulnerable, particularly those whose wider socio-cultural milieu does not accommodate this situation.

Given the social restrictions on adolescent sexuality and the cultural unacceptability of premarital pregnancy, many young women resort to abortion, rather than carry an unwanted pregnancy to term, facing legal barriers, health risks and social stigma (WHO, 2008). In Sri Lanka, induced abortion is unlawful, so adolescents run the highest risk of serious complications from unsafe abortion. In the current study, 6% of pregnant adolescents said that they had thought of an abortion while 2% of pregnant adolescents had tried to secure an abortion but failed. Data on unwanted pregnancies and abortions are not properly reported in Sri Lanka. It is unfortunate to note in the current study that from the school adolescents who thought they know of a method of prevention of pregnancy, 11% of the school boys and 25% of school girls named abortion as a method of prevention, implying a significant gap in reproductive health knowledge. Providing help through the Public Health Midwife for girls who do not want to be pregnant as well as addressing negative attitudes among the majority of population require serious consideration.

In addition to the risk of illegal abortion or even suicide, interruption of education is a major negative implication of adolescent pregnancy in Sri Lanka. Currently, any girl who becomes pregnant is immediately expelled from the school system. Therefore, there is a need to explore options for the possibility of continuing education outside the government school system, and the provision of support in balancing studies while being a good parent. Giving the adolescent future choices in life so that she does not have to feel that the future has ended for her should be the focus. This maybe an area where the Resource Centres (mentioned below) could help. Special programmes that bring young mothers together to continue their education needs to be considered in the long run.

There is more work to be done to recognise feasible approaches to identifying girls that are at risk of unwanted pregnancy, both within and outside the school system.

9.4.2. Unwanted sex

Perhaps not surprisingly, the study's findings indicated across all the components that a proportion of adolescent boys and girls had experienced unwanted sexual encounters. In some cases, there appears to be ambivalence on the part of the adolescent that probably relates to low levels of knowledge and few opportunities for discussing sexual matters within this population. These issues might well be overcome if the provision of information and services were enhanced at school and community level as discussed above. Many life skill programmes are held by MOH areas for adolescents. Protecting oneself from sexual advances and being assertive are the main areas addressed in these programmes. The study's findings confirm the relevance of these interventions, though they also warrant more rigorous evaluation.

The importance of engaging parents in efforts to empower young people is increasingly recognised in Sri Lanka. For instance, a programme named "Helping hand of the parents to secure the world of children" (in Sinhalese, "Lama lowata mapiya sawiya") has been launched in many Medical Officer of Health (MOH) areas in the district with the help of the Ministry of Probation and Child Care. In this programme directed at parents, issues of sexuality and adolescent behaviour are addressed; how to communicate with the adolescent and how to be a friend to your children. Another family-based intervention is also underway in Badulla district - "Health promotion through Happy Villages" - which focuses on the whole family and aims to improve health and empower family members. This intervention also addresses the importance of communication and supportive relationships between adolescents and parents. Such interventions are in their infancy and will require careful evaluation, but they appear very relevant given the findings of the present study confirming the important role of parent-child relationships.

The study also suggests a number of areas that requires further investigation. First, there was some evidence that having parents living abroad may be associated with early sexual activity. Thus, children living in households where parental supervision is absent may represent a vulnerable group that would warrant additional support. While migration for work is clearly an important economic strategy for large numbers of households, there may be a need for schools and other public services to be more alert to the potential negative consequences for children. Second, the association between smoking and alcohol use among adolescents and sexual activity requires further investigation. The present study showed that 44% of sexually active boys have ever smoked while 25% of the non-sexually active have ever smoked. 57% of sexually active boys and 33% of non-sexually active boys had ever taken intoxicating substances. According to UNICEF, (2004) the prevalence of ever smoking in the 17–19 years in Sri Lanka was 32% for boys and 6% for girls. A study carried out by ADIC, (2003) reported 42% of males and of 2.3% of females had ever smoked. In the present study the figures were 26% and 3% for boys and girls respectively. The present study reports almost the same figure for the boys as the UNICEF study. Similarly, the findings of the ADIC, (2003) for girls who had ever smoked corresponds with the present study. Nearly a quarter (24%) of adolescent boys and 10% of adolescent girls had ever used alcohol in the UNICEF, (2004) study. 35% of boys and 5% of girls in the present study had taken alcohol and other intoxicating substances. It appears that ‘risky’ behaviours may cluster among certain adolescents and this could form an important basis for targeted preventive intervention.

However, in addition to adolescents who engage in sexual behaviour with some ambivalence and/or regret, there is a core of vulnerable adolescents for whom additional measures are needed to increase levels of protection and reduce exposure to harmful sexual experiences. Several national surveys carried out in Sri Lanka have reported sexual abuse. UNICEF, (2004) reported 10% of adolescents being the subject of sexual abuse. Thalagala, (2003) reported sexual abuse in 5.1 % children aged 8-14 years. Basnayake, (1996) reported 7% of adolescents have been sexually molested.

9.5. SHIFTING AGE AT FIRST CHILDBEARING AMONG MARGINALISED SECTIONS OF THE POPULATION

Demographic Health Surveys (DHS) in Sri Lanka over the years show that there has been a steady increase in the age at first birth. The median age at first birth which was 18.1 years in 1991, rose to 23.2 years in 2000, and the latest DHS in 2006/2007 reports the age at first birth as 25.1 years. However, as shown by the findings above, adolescent pregnancy continues to be accepted by some sections of the population. DHS gives age at first birth by urban/rural, and by district. I found strong evidence of ethnic differences, Examples include: the Muslim Moors are more likely than the Sinhalese majority to become pregnant below 18 years of age.

Furthermore, the findings suggest inter-generational patterns of early childbearing, since there was an association between early adolescent pregnancy and family variables such as parents' age at marriage and siblings' early pregnancy. While socioeconomic factors were not strong predictors in this study (due probably to inadequate measures being employed), there was evidence that educational attainment and aspirations were relevant, and that parental educational status was also a predictor of early childbearing.

The findings of this study therefore suggest that early pregnancy may be a subculture or a norm for some families and communities, as argued by WHO, (2007), and that a range of cultural and structural factors may encourage this behavioural pattern. Given the potential negative implications for mother and child health, and the inter-generational transmission of low socioeconomic status, it may be desirable to explore avenues by which these sub-sections of the population can be supported to delay childbearing. Educationalists, health workers, researchers and policy makers need to work more with these subcultures to understand them better. We must provide them with constructive alternatives to early childbearing. Structured activities, especially those organized through the community or civic organizations should be permitted. Exploring life opportunities as an alternative to early marriage should be on the policy agenda. It is necessary to involve the community, its network and organizations to expand life options to the adolescents to avoid early sexual activity. Promoting culture specific activities is a necessity.

9.5.1. Educational opportunities and aspirations

In common with research in many other settings (Kirby, 2001; Lloyd and Mensch, 1999), I found evidence that poor performance on educational indices is associated with higher risk of pregnancy and childbearing. It was observed that Sinhalese pregnant adolescent girls have a low attainment at school compared to same age Sinhalese school adolescents. Also, the performance of pregnant adolescents was found to be relatively lower than that of the school adolescents of the same age and ethnicity. Further, the current study shows in the multivariate analysis that the partners of pregnant adolescent who have only a primary education are 6 times more likely to have an unplanned pregnancy as those with an advanced level education.

While the direction of causality is difficult to unpack, it is clear that school performance and adolescent pregnancy are associated. Furthermore, during the course of the study, a number of issues came to light that suggest embedded processes operating within the educational system disadvantage more marginalised pupils and families, and that these may well contribute to lower expectations of educational attainment and encourage other options, including early marriage and childbearing. For instance, one adolescent had dropped out of school due to not having a birth certificate as she was not permitted to sit for the Ordinary Level examination, and another frequent answer given for dropping out of school was failure in O/L mathematics. A simple Pass in mathematics is compulsory to qualify for G.C.E. Advanced Level, but not having competent teachers in rural schools to teach mathematics was a common complaint and suggests the need to improve provision. In addition to addressing educational inequalities, there is a need to strengthen economic opportunities through improving job skills, hands on practice for work for both girls and boys who do not pursue tertiary education, so that there are viable alternatives to early childbearing.

9.5.2. Enhancing life skills and life options

As well as providing improved reproductive health information and services for adolescents and addressing inequitable educational opportunities, there may be significant value in interventions that seek to enhance life skills and provide life options for girls from more marginalised sections of the population.

Contraceptive availability and awareness itself may not make a difference if the adolescent lacks motivation or concern to protect herself from becoming pregnant. A girl's motivation may be linked to her opportunities such as cost of education, job opportunities as well as acceptability by her family and community about adolescent childbearing. Work experience opportunities, volunteering, and out of school activities to foster success and ambition may be worth advocating.

In the district of study, we are currently promoting 'Adolescent Wellbeing Centres'/'Adolescent Resource Centres' in the Medical Officer of Health areas, which will be a step towards strengthening preventive services. Resource centres for adolescents at community level could be established. This could be beneficial not only to the school adolescents but also to the out of school adolescents, harder-to-reach teens and teens at higher risk. Such resource centres should be a place for recreation, knowledge provision, counselling and referral for the needy. IT facilities should be available at these resource centres. The intention would be that such resource centres could equip adolescents with the knowledge and skills to deal with pressure to engage in risky adolescent behaviour (smoking, drinking, early sexual activity); enable them to enjoy positive and caring relationships and promote abstinence to refrain from premarital sexual relations for pre-teens and teens etc. The resource centres could also be places to acquire correct reproductive health knowledge in a non-judgmental and supportive environment.

Given the current shortfall in resources within the MOH, such resource centres might be run by NGOs, and a policy discussion would help to identify a sustainable model for developing such well-developed resource centres staffed by trained personnel in adolescent issues. A pilot scheme with appropriate monitoring and evaluation would be a good first step in implementing this initiative.

9.5.3 Delaying first birth among married adolescents

In Sri Lanka, as in other Asian countries, families continue to desire a child soon after a couple marries. Moreover, couples have little space, time, and opportunity to discuss the first pregnancy, and they appear to be least autonomous in their decisions and dialogue. The use of contraception is rare and thereby they are unable to delay the first birth. Less than 15% had used a contraceptive at the time of their first sexual encounter in this study. Most disadvantaged women still tend to have children earlier while the most advantaged tend to delay childbearing.

It seems likely that attempts to delay the first pregnancy after marriage will require engagement with the partner, the parents and family members beyond the adolescent herself. The present study could not investigate this area in detail, and further research is warranted.

9.6. LEGAL ISSUES

The age of consent for sexual activity in Sri Lanka is 16, while the minimum age of marriage in Sri Lanka is 18 (except for those living under Muslim family law). Any sexual encounter with a girl under the age of 16 is currently considered as a rape in Sri Lanka. The present gap between age of consent and age of marriage may influence risk-taking behaviour among adolescents. The difficulties of working with adolescents on issues of sexual and reproductive health are made even more complex by these discrepancies in the legal system. The country is not yet ready to take a step forward in the area of RH as there are no systematic and comprehensive approaches to health awareness in general and reproductive health awareness in particular to empower people to make informed choices.

One might superpose that lowering the legal age for marriage to 16 (to be on par with the age of consent) would be the answer. However, from a different perspective, an adolescent girl who is in a family that places a low value on education and that thinks that giving a girl in early marriage is a way of giving her a good future would be vulnerable to being forced into an early marriage, thus depriving her of an education and a care free adolescence that she may enjoy at least until 18 years with the present

legal age of marriage. Lowering the age of marriage is not accepted by gender advocates or most health professionals who argue that responses should be focused on increasing community and adolescent awareness of responsible sexual behaviour and access to contraception. It is the access to education and the facilities for birth registration that reduced and almost eliminated child marriage in some communities in Sri Lanka. Further information on the legal requirements of registration of marriage, the age at marriage as 18 years should receive continuing publicity (WHO, 2008).

Increasing the age of consent to 18 years as in some countries and making the people aware of the law could be another avenue to be explored (Edirinsingha *et al.*, 2008).

In the study district, early registration of the pregnant adolescents is the strategy we have undertaken to avoid abortions. In the study district registration below eight weeks of pregnancy was 68.7% in 2009; 70.1% in 2010 and 71.8% in 2011 (Data from Maternal and Child Health unit Badulla). Every effort is taken to give awareness and to encourage the field midwives to befriend the adolescents. However, heavy work load of the midwives and the terrain they have to cover to reach people's homes are barriers to delivering these novel interventions.

At present when sexual activity of adolescents under 16 years of age is brought to the notice of the law enforcement authorities, if it is proven, the couple is brought to courts. Usually the girl is placed under probation while the partners are remanded. The government is concerned at the increasing number of young men detained in remand prisons as a result of sexual encounters with their girlfriends. "Many girls are requesting to release their partners saying the encounter happened with their consent" (Personal communication: Attorney at Law).

The majority of girls in the study who had had sex at 16 years of age had wanted to get married but the law does not permit this, thereby increasing out of wedlock births. However, under special circumstances, with parental consent, consent from the clergy and based on assessment by a medical practitioner, they could be permitted to marry. However, policy debate is needed around girls who are over 16 years of age who have legal right to consent, who are pregnant and want to get married but having to wait till 18 years to do so.

In the current study, four Moor girls in the ages of 15 and 16 years were married to heads of the mosques. Legal provision for Moor girls is that a girl must be 12 years of age or have a Quazis permission before contracting into marriage. This legal provision for the Moor girls' marriageable age as 12 years under Muslim law in Sri Lanka should be discussed at policy level in order to be on par with the other adolescents in the country. This warrants debate, and action of the rights of women in the context of respecting religious norms should be considered.

9.7. AREAS TO BE FURTHER RESEARCHED

The study findings alert us to a number of areas that deserve closer attention by researchers:

- Further research is needed to enhance our understanding of key antecedents of the timing of first sexual experience and intercourse, among both boys and girls. Given the obvious gendered differences in early sexual behaviour, and the fact that this remains a rare event, qualitative studies will be appropriate to explore in more depth the context and experiences.

- The reason for school dropout is an area to be researched, as the study shows there is an association between longer time in school and sexual activity, whether there is a causal relationship between participation of extracurricular activities and adolescent risky behaviour, how educational aspirations, experiences and attainment are linked to sexuality, how ambition of adolescents inter-relate with the broader socio-cultural context of sexual behaviour, but there are complex two-way causality that needs to be better understood. It is likely that research that explores institutional structures and practices within the educational system, as well as individual and family norms and behaviours, would be helpful. Again, qualitative or mixed methods designs may be needed to unpack these complex processes.

- Role of father-daughter relationship in preventing adolescent pregnancy, how social norms and expectations are linked with adolescent pregnancy, whether there is a link with parents living abroad and adolescent taking alcohol and smoking linked with adolescent sexuality. A qualitative or mixed methods designs may be more suitable to understand the multifaceted issues.

- Whether the engagement with the partner, the parents and family members could delay the first pregnancy is another area to be explored, focus group discussions would be a good method to use for exploratory work, followed perhaps by interventional studies.

In addition, a number of other issues that are related to adolescent sexuality and pregnancy but fell outside the current study are worthy of future investigation:

- The context in which adolescents form their ideas, and the reward or punishment adolescents receive for their behaviour is portrayed by the media. Media messages about adolescent sexual behaviour are pervasive whereas a focus on reproductive health or contraception is rare. Both types of media messages are potentially influential. Media effects on teens' sexual behaviour are poorly understood, partly because research has not been conducted on this topic. This would be an interesting field of future study, necessitating inter-disciplinary collaboration.
- The pattern and size of variations across the country in adolescents' sexual behaviour and contraceptive use; adolescents' use of effective contraception- Examples include: are the contraceptive failures method failures or user failures; needs and experiences of special population groups with early sexual activity and pregnancy, abortion and gender based violence, focus group discussions designed on a well designed sample would give an in depth insight. and could be combined with national surveys'.

The above discussion has suggested many potential avenues for intervention. To-date, there has been little by the way of formal evaluation of any of the emerging interventions that are being tried. In order to identify those interventions that are effective and cost effective and those that manage to reach the most vulnerable, there is a need for rigorous evaluation to be undertaken including health economics analysis..

CHAPTER 10

CONCLUSIONS AND RECOMMENDATIONS

TOWARDS A NATIONAL FRAMEWORK FOR POLICY, PRACTICE AND RESEARCH IN ADOLESCENT REPRODUCTIVE AND SEXUAL HEALTH FOR SRI LANKA

INTRODUCTION

The key findings from the study can be summarized as follows. Pre-marital adolescent sexual activity was not generally condoned and remains rare. Relationships are predominantly monogamous. Gender difference in sexual activity exists. Reproductive health knowledge was very low across the samples. Happy home environment, connectedness to the parents, having an ambition of a career, not dropping off from school may delay initiation of sexual activity. There is a vulnerability of some adolescents who need attention. Majority of pregnancies were planned and welcomed and showed an association with familial characteristics. Ethnic variation in adolescent pregnancy is seen. Given the inter-generational consequences of early childbearing, policy makers must find ways to tackle the structural and cultural factors that hamper a shift towards later childbearing among certain sections of the population.

The present study has gone some way to filling important gaps in our understanding in sexual and reproductive health needs of adolescents, and future work will aim to translate these findings into concrete action at policy and practice levels. However, addressing the needs of adolescents, reducing adolescent pregnancy, and protection of vulnerable groups is not likely to occur without more systematic, sustained, and coordinated approaches to programme design and implementation.

Evidence is growing that this neglect can seriously jeopardize the health and future well-being of young people. Various government sectors – health, education, social welfare, justice, etc. need to work together to address the needs and problems of adolescents. The Ministry of Health has a central role in making this happen. They should be instrumental in charting out appropriate evidence-based policies to guide the work of the health and other sectors.

Concerned stakeholders, including policy makers, parents, schools and health providers, should identify programmes that could bring about large reductions in unintended adolescent pregnancy and parenthood. There are several points at which

prevention programmes can be targeted. Interventions can be attempted firstly to avoid non-consensual sex, to delay the initiation of sexual activity, to improve contraceptive use among sexually active adolescents, to (in some cases) influence pregnancy resolution decisions among those who become pregnant and to reduce or delay subsequent births.

Some programmes are less direct, focusing on issues like life skills and life options. It is likely that adolescents (and their family members) who perceive better educational, occupational, and economic opportunities for themselves will seek to postpone parenthood. Prevention programmes should be school-based because students are an accessible and somewhat captive audience. However, programmes could also be based in clinics and community-based resource centres to reach those adolescents who are out-of-school. Rather than piecemeal approaches, a holistic adolescent development approach should be targeted.

Policy debate on the age gap of consent and marriage needs to be taken forward. To bridge this gap without adding hindrance to what already exists will be a challenge. From the standpoint of early sexual activity and unwanted adolescent pregnancy, more attention of the policy makers is needed to this predisposing factor. The integration of services for adolescents with the present school based programmes and through the primary health care system can meet the needs of a population group that has not had adequate access to such care to-date. However, this group should include the school dropouts, whose needs can be addressed through MCH/FP services in the primary health care system. Targeting these populations with the help of Non-governmental organizations may be more appropriate.

Policy-makers should pay attention towards bringing different powerful parties like the Ministry of Education, the Ministry of Health and the Ministry of Child Protection to a common purpose to develop a culturally acceptable and adolescent friendly reproductive and sexual health programme that goes far beyond the present school health programme.

The findings of the present study go some way to providing important new insight upon which such a comprehensive approach can be based. The following specific recommendations are proposed at the present time, with the intention of prompting debate and dialogue among policy makers, practitioners, adolescents, parents and other stakeholders.

FAMILY-LEVEL

- Harness religious values, positive attitudes and beliefs within family through adult role models.
- Promote happy home environments with good communication and close relationship between the parents and children.
- Encourage greater parental involvement in primary and secondary school to encourage children to have ambitions.
- Ensure that supportive environments are promoted for all pregnant adolescents, even for those whom the pregnancy was not planned and may not be accepted by the wider socio-cultural group.

SCHOOL-LEVEL

- Schools to address school drop-outs and to promote an adolescent friendly school environment.
- Work experience opportunities, volunteering, and out of school activities to foster success and ambition.
- Systematically address reproductive and sexual health knowledge through the school curricula from early adolescence. Emphasize the importance of respectful relationships and the advantages of abstinence, yet allow flexibility within the curriculum to address the consequences of poor decision making which may include disease transmission and pregnancy alternatives and prevention. Interactive process to be used to impart reproductive and sexual health knowledge. Questions on the reproductive system and sexual health to be included in competitive exams.

- Empower children to be protected from sexual abuse by providing them with appropriate skills from preschool age.
- Strengthen economic opportunities for adolescents before they drop out of schools by giving job skills, practical exposure and hands-on experiences in particular trade areas.
- School teachers need to be well trained on reproductive and sexual health through participation in appropriate training programmes, so that they are well informed about sex and birth control and are able to communicate with adolescents in a confidential manner, and without being judgmental.
- Education department to liaise with the health department to provide reproductive and sexual health knowledge and counselling to the adolescents until the teachers are well trained in these subjects.

HEALTH DEPARTMENT

- A package of reproductive and sexual health information to be produced, backed by proper training of health and non-health personnel and a wide reaching social marketing campaign.
- More attention at the household level to adolescents whose mother or father gone abroad or adolescents without mother or father.
- One to one guidance for children whose parents are at a low education level, who have had early marriages or when siblings are pregnant or having children. This focus will assist to avoid vicious cycles of adolescent pregnancies in particular subcultures.
- Create an environment where the adolescents could reach their full potential by being assertive and saying 'no' to risky behaviours.
- Provide correct information to adolescents on reproductive and sexual health; give awareness in an interactive manner.
- While discouraging sexual activity before marriage, help the adolescents who want to embark on the sexual journey be equipped with knowledge on the

prevention of pregnancy and sexually transmitted diseases. Make the adolescent realize that similar to a driving license which is mandatory to drive a vehicle to protect the one who is driving as well as the population at large, the implicit and explicit cultural norms and reproductive and sexual health knowledge/ education are the rules and regulations for a sexual journey to avoid the ill reproductive health (unwanted pregnancies and sexually transmitting diseases).

- Family health workers and the Public Health Inspector to be empowered to deliver reproductive health care information to the adolescents. Appropriate non-governmental support to reproductive health education at the village level.
- Ensure accessibility of the adolescent to ‘Well Being Centres’. Social marketing to be initiated once coverage is established.
- Education on contraceptives to be linked to the accessibility and availability of contraceptives.
- Involve the community, its networks and organizations to expand life options to the adolescents to avoid early sexual activity. Provide structured activities, especially those organized through the community or civic organizations as constructive alternatives to adolescents’ sexuality.
- Work through the pharmacy network to provide information to adolescents.

COMMUNITY-LEVEL ACTION

- “Happy Village Concept” to be taken forward at the level of family health worker. Community empowerment to provide a happy secure environment to children at the household level, community level and at the society at large.
- Provide life skill and adolescent development programs to increasing the motivation for adolescents to avoid a pregnancy.
- Adolescent Well Being Centres to cater to adolescents' needs through a focus on information and skills development. The centres need to have skilled human resource geared to addressing the adolescents issues realistically, providing a critical appraisal of the systemic barriers to success, and support the adolescents in their efforts to confront and change the conditions that limit their achievement. Trained

non-governmental person to support the sustainability of the adolescent Well Being Centres.

- Trained counsellors at the village level to provide services to adolescents.
- Improve pre-marital counselling and counselling to young couples and adolescents at the community level. Those adolescents or young couples who are to get married should be provided with adequate counselling services that involve issues such as family planning and responsible sexual behaviour.

POLICY, PRACTICE AND RESEARCH

- Interventions to be rigorously evaluated. Cost effectiveness to be included so that future investments can be prioritized appropriately.
- Policy debate and advocacy on the gap on age of consent and marriage.
- Effective legislative action in minimizing risk-taking behaviour among adolescents.
- Combination of public policy, that is multi-sectorial in nature, and legislation to improve and support adolescent reproductive and sexual health.
- Capitalize on the political support for reaching adolescents and get their involvement in ARH.
- Collaboration with NGOs to reach the out of school adolescents.
- Identify key knowledge gaps and conduct rigorous research on sexual behaviour of adolescents with specifically designed and culturally relevant tools.

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Annexure 1A

Ethical Approval



SLMA SRI LANKA MEDICAL ASSOCIATION
6, WIJERAMA MAWATHA, COLOMBO 7, SRI LANKA T:phone: 2693324 Fax: 2693508

8th April 2008

Dr N S R Hewageegana,
No 1, Waldon Gardens,
Welimada Road,
Bambalawela

Dear Dr Hewageegana,

ERC/08 – 001
In-depth perspective on unwanted adolescent pregnancies in Sri Lanka

Thank you for your letter indicating the clarifications and other modifications made to your study protocol. We have also received the Sinhala and Tamil translations of the questionnaires and informed consent forms.

The Ethical Review Committee which met on 29th February 2008 gave approval for your amended study protocol.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Anoja Fernando'.

Prof Anoja Fernando
Chairperson
Ethical Review Committee
Sri Lanka Medical Association



*Sheffield
Hallam University*

**Faculty of Health and Wellbeing Research Ethics Committee
Health & Social Care Research Ethics Review Group
Report Form**

*Centre for Health and
Social Care Research*

Title: Formulating an evidence base adolescent pregnant prevention program

Principal Investigator: Dr Neelamani Hewageegana

Recommendation:

Acceptable:

✓

Not acceptable, see comments:

Acceptable, but see comments:

Comments:

This research has now received ethical approval and you are free to proceed.

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*Executive Dean of Faculty
Professor Rhiannon Billingsley*

Signature : Peter Almark Date: 15/1/08

Peter Almark,
Chair
HSC Research Ethics Review Group

Please remember that an up-to-date project file must be maintained for the duration of the project and afterwards. The project file might be inspected at any time.

Note: Approval applies until the anticipated date of completion unless there are changes to the procedures, in which case another application should be made.

Comments from the Ethics Committee have been addressed.

Signature of Tutor / Director of Studies / Supervisor :

..... Date:

Name of Tutor / Director of Studies / Supervisor :

Annexure 2_A

QUESTIONNAIRE – (Q₁) Pregnant Adolescents

Survey Form Number ____

An in-depth exploration of adolescent sexuality and pregnancy in Sri Lanka

Principal Investigator : - Dr. N.S.R. Hewageegana

Name of the adolescent mother : -

Address of the adolescent mother: -

.....

.....

Q1. Name of interviewer :- _____

Q2. Date of Interview :- 1st Visit Date :-Yr. _____ Mt _____ Day _____
2nd Visit Date :-Yr. _____ Mt _____ Day _____

Q3. MOH Areas :-

1. Badulla	2. Bandarawella
3. Ella	4. Giradurukotte
5. Haldumulla	6. Haliella
7. Haputhale	8. Kandakatiya
9. Mahiyangana	10. Meegahakiula
11. Passara	12. Ridimalliyadha
13. Soranathota	14. Uva Paranagama
15. Welimada	

Q4. Midwife area/Estate :- _____

Q5.1. Consent has been read out to participant Yes 1 / No 2
If No, read consent

2. Written Consent has been obtained Yes 1 / No 2
If No, End

1. Respondent socio-demographic information:

We want to know a few basic details regarding you

			Code
1.1	How old are you? (age on last birthday, years completed)	[____]	
1.2	What is your date of birth?	Yr. ____ Mt ____ Day ____ 2.Do not know	
1.3	What is your ethnicity?	1.Sinhalese 2.Sri Lankan Tamil 3.Indian Tamil 4.Sri Lankan Moor 5.Burgher 6.Malay 7.Other (specify)	1 2 3 4 5 6 7
1.4	What is your religion?	1. Buddhist 2. Hindu 3. Catholic/Christian 4. Muslim 5. No religion 6. Other-specify	1 2 3 4 5 6
1.5	What is your current marital status?	1. Currently married 2. Not married but living together 3. Never married, single 4. Other	1 2 3 4
1.6	Can you read a letter or newspaper? <i>Please can you read this to me</i>	1. Reads easily 2. Reads with difficulty 3. Cannot read at all	1 2 3
		<i>Interviewer: ask respondent to read from the sample card and record appropriate code opposite</i>	
1.7.1	How would you describe your household's financial situation currently?	1. Deficit. 2. Break even. 3. Surplus, able to save.	1 2 3
1.7.2	How would you describe your household's financial situation at the time you found your husband/partner?	1. Deficit. 2. Break even. 3. Surplus, able to save	1 2 3

1.8 Your household structure and other household members:

Now I would like to know about your family, other people who lived with you at the time you found the partner/husband. Please start with the person you consider to be the household head. 1.8.6 to 1.8.10 to be filled only for parents/guardians /siblings/husband or partner:

1.8.1	1.8.2	1.8.3	1.8.4	1.8.5	1.8.6	1.8.7	1.8.8	1.8.9	1.8.10
Household member	Relationship to HH head (List in page 6)	Relationship to respondent (List in page 6)	Current age (completed years)	Marital status (List in page 6)	If ever married, age at first marriage	Ever had a child? 1=yes, 2=no	If yes, Age when the first child was born?	Occupation	Highest level of schooling (List in page 6)
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

1.9 If biological father is not listed above:

1.9.1	1.9.2	1.10.3	1.10.4	1.10.5	1.10.6	1.10.7	1.10.8
Alive? 1=yes, 2=no	Where living? (List in page 6)	Current age (completed years)	Marital status (List in page 6)	Age at first marriage	Age at which his first child was born?	Current occupation	Highest level of schooling (List in page 6)

1.10 If biological mother is not listed above:

1.10.1	1.10.2	1.10.3	1.10.4	1.10.5	1.10.6	1.10.7	1.10.8
Alive? 1=yes, 2=no	Where living? (List in page 6)	Current age (completed years)	Marital status (List in page 6)	Age at first marriage	Age at which his first child was born?	Current occupation	Highest level of schooling (List in page 6)

1.11 If the father of the respondent's unborn child (i.e. her husband, partner, or past partner) is not listed above:

1.11.1	1.11.2	1.11.3	1.11.4	1.11.5	1.11.6	1.11.7	1.11.8
Alive? 1=yes, 2=no	Where living? (List in page 6)	Current age (completed years)	Marital status (List in page 6)	Age at first marriage	Age at which his first child was born?	Current occupation	Highest level of schooling (List in page 6)

1.12	Have you moved out of your house since you became pregnant/got married/ living with the partner :	1.Yes 2. No	<i>If no skip to Q2</i>
------	---	--------------------	--------------------------------

Household's structure and other household members with whom you are staying now:
Now I would like to know with whom you are staying now. Please start with the person you consider to be the household head.

1.13.1	1.13.2	1.13.3	1.13.4	1.11.5 Occupation
Household member	Male/female	Relationship to HH head (List in page 6)	Relationship to respondent (List in page 6)	
01				
02				
33				
04				
05				
06				
07				
08				
09				
10				

List

<p>Relationship to house hold head</p>	<p>01. Wife 02. Father 03. Mother 04. Spouse's mother 05. Spouse's father 06. Son 07. Daughter 08. Daughter-in-law 09. Son-in-law 10. Niece or nephew</p>
<p>Relationship to respondent</p>	<p>01. Partner/Husband 02. Father 03. Mother 04. Husband's mother 05. Husband's father 06. Sister-in-law 07. Brother-in-law 08. Elder Sister 09. Elder Brother 10. Younger Sister 11. Younger Brother 12. Grand Mother 13. Grand Father 14. Son/Daughter</p>
<p>Where living?</p>	<p>01. Living in Sri Lanka 02. Out of the country</p>
<p>Marital status?</p>	<p>01. Married 02. Separated 03. Divorced 04. Never married, single 05. Widowed 06. Divorced and Remarried 07. Other 08. Not married/living together</p>
<p>Highest level of schooling?</p>	<p>01. Never attended school 02. 1-5 years (primary) 03. 6-11 years (secondary) 04. Passed GCE (O/L) or equivalent 05. Passed GCE(A/L) or equivalent 06. Post graduate 07. Any other specify 08. Do not know</p>

2. School environment.*Now I would like to ask you some questions about your school life and experiences.*

2.1	Have you ever attended school?	1. Yes 2. No <i>If no skip to Q2.12</i>	1 2
2.2	Have you attended more than one school If attended more than one school 2.3 and 2.4 questions are related to her last school	1. Yes 2. No	1 2
2.3	What type of a school did you go to?	1. Government school 2. Estate school 3. Private school 4. Other	1 2 3 4
2.4	Was this school for boys and girls or girls only?	1. Boys and girls (mixed) 2. Girls only	1 2
2.5	What is your highest school attainment?	1. 1-5 years (primary) 2. 6-11 years (secondary) 3. Passed GCE (O/L) or equivalent 4. Passed GCE(A/L) 5. Any other (specify)	1 2 3 4 5
2.6	What is your opinion about your school life?	1. Like very much 2. Enjoy to some extent 3. Neither like nor dislike 4. Dislike 5. Strongly dislike	1 2 3 4 5
2.7	If did not like school reason	..... .....
2.8	Which of the following activities have you taken part in your last year at school?		
1	Sports events	1. Yes 2. No 3. Not available	1 2 3
2	Drama, singing, artistic events	1. Yes 2. No 3. Not available	1 2 3
3	Leadership roles (monitor, prefect)	1. Yes 2. No 3. Not available	1 2 3
4	Societies	1. Yes 2. No 3. Not available	1 2 3
5	Other extra-curricular activity specify	..... .....

2.9	How do you categories your performance in the last class that you attended?	1. Excellent 2. Above average 3. Average 4. Below average 5. Other	1 2 3 4 5
2.10	When did you last attend school?	1. One to three months ago 2. Four to six months ago 3. Seven to one year ago 4. More than one year ago	1 2 3 4
2.11	Reason for leaving school	..... .....
2.12	Have you ever held any ambitions regarding having a career or working?	1. Yes 2. No <i>If no skip to Q3</i>	1 2
2.13	If yes, what career did you most want to pursue?	1. Teacher 2. Doctor 3. Nurse/midwife 4. Business person 5. Engineer 6. Actor/singer 7. Armed forces 8. Any other specify...	1 2 3 4 5 6 7 8
2.14	Have your ambition changed?	1. Yes 2. No <i>If no skip to Q3</i>	1 2
2.15	If yes, in what way?	----- ----	

3. Family setting

In this section we would like to know about your relationship and communication with your family members and your home environment.

Interviewer: check back the household table to see if father and mother still alive or not and adjust questions appropriately

3.1	Thinking about your teenage years, how would you describe your relationship with your mother/guardian?	1. Very close 2. Somewhat close 3. Not close, distant 4 Other	1 2 3 4
3.2	Thinking about your teenage years, how would you describe your relationship with your father?	1. Very close 2. Somewhat close 3. Not close, distant 4. Other	1 2 3 4
3.3	Thinking about your teenage years how easy has it been to discuss with your mother/guardian matters of importance to you?	1. Very easy. 2. Somewhat easy 3. Not easy at all, difficult. 4. Other	1 2 3 4
3.4	Thinking about your teenage years how easy has it been to discuss with your father matters of importance to you?	1. Very easy 2. Somewhat easy. 3. Not easy at all, difficult. 4. Other	1 2 3 4
3.5	Thinking about your teenage years, how happy would you say you have been at home?	1. Very happy. 2. Somewhat happy. 3. Not happy at all.	1 2 3
3.6	(Refer back to earlier question on religion 1.6) How important would you say your religion is to you?	1. Very important 2. Somewhat important. 3. Not important	1 2 3
3.7	How important would you say religion is to your mother?	1. Very important 2. Somewhat important. 3. Not important	1 2 3
3.8	How important would you say religion is to your father?	1. Very important 2. Somewhat important. 3. Not important	1 2 3

4. Puberty experiences

In this section I want to know about your attending age (age at first menses) and any concerns you had at that time.

4.1	How old were you when you attended age?		
4.2	At that time, did you know what was happening to you?	1. Yes 2. No <i>If No, skip to Q4.4</i>	1 2
4.3	If yes, from who / where had you learnt about attending age? <i>Interviewer: record all that are mentioned</i>		
1	At school	1. Yes 2. No	1 2
2	From books	1. Yes 2. No	1 2
3	Told by mother	1. Yes 2. No	1 2
4	Told by father	1. Yes 2. No	1 2
5	Told by sister	1. Yes 2. No	1 2
6	Told by friend	1. Yes 2. No	1 2
7	Told by other relative	1. Yes 2. No	1 2
8	Other, specify		
4.4	Did you have any concerns or problems relating to growing up and starting menstruation?	1. Yes 2. No <i>If No skip to Q5</i>	1 2
4.5	If yes, were you able to discuss these concerns or problems with anyone? <i>Interviewer: record all that are mentioned</i>		
	with teachers at school	1. Yes 2. No	1 2
	With mother	1. Yes 2. No	1 2
	With father	1. Yes 2. No	1 2
	With sister	1. Yes 2. No	1 2
	With friends	1. Yes 2. No	1 2
	With other relatives	1. Yes 2. No	1 2
	With another person, specify	_____	1 2

5. Sexual Exposure

In this section I have to ask from you some intimate questions .Hope you will help me to fill this section. I assure you once again the information you divulge will be confidential

Interviewer:

This is a sensitive area if you feel that you have a good rapport with the adolescent go in to this area now, if not take another appointment

5.1	How old were you when you first had a sexual experience with another person? (Kissing, cuddling, petting etc.)	_____	
5.2	Who did you have this experience with?	.....
5.2.1	Sex of partner	1. Male 2. Female	1 2
5.2.2	Age of partner compared to you	1. Same/similar age 2. A little older than you (2-5 years) 3. More than 5 years older 4. More than 10 years older 5. Younger than you 6. Any other 7. Do not know	1 2 3 4 5 6 7
5.2.3	Who the person was	1. Husband 2. Boyfriend 3. Relative 4. Stranger 5. Any other specify.....	1 2 3 4 5
5.3	How did you feel about this experience at the time? Did you want to do this?	1. I wanted it to happen. 2. I was not sure whether I wanted it or not 3. I did not want it to happen 4. Happened forcefully	1 2 3 4
5.4	How did you feel about this experience after it had happened?	1. I was glad that it had happened 2. I was unsure/confused about it 3. I wished it had not happened.	1 2 3
5.5	How old were you when you first had sexual intercourse with opposite sex? (By sexual intercourse I mean penetrative sex)	_____	

Describing the first sexual intercourse			
5.5.1	Age of partner	1. Same/similar age 2. A little older than you (2-5 years) 3. More than 5 years older 4. More than 10 years older 5. Younger than you 6. Any other _____ 7. Do not know	1 2 3 4 5 6 7
5.5.2	Who the person was	1. Husband 2. Boyfriend 3. Relative 4. Stranger 5. Any other specify.....	1 2 3 4 5
5.6	How did you feel about this experience at the time? Did you want to do this?	1. I wanted it to happen 2. I was not sure whether I wanted it or not 3. I did not want it to happen 4. Happened forcefully	1 2 3 4
5.7	How did you feel about this experience after it had happened?	1. I was glad that it had happened. 2. I was unsure/ confused about it. 3. I wished it had not happened.	1 2 3
5.8	How many sexual partners have you had?	1. One 2. Two 3. Three 4. More than three	1 2 3 4
5.9	Have you ever had sexual intercourse where you were sure that you wanted to do this? (you were fully consenting)	1. Yes 2. No <i>If No, skip to section Q6</i>	1 2
5.10	So, thinking about the first time you had sexual intercourse willingly, what motivated you to want to have sexual intercourse that first time?	_____	
5.11	And, thinking about the first time you had sexual intercourse willingly, what do you think of the age at which you did this?	1. Too young. 2. About right. 3. Other, specify	1 2 3

6 KAP on reproductive health

6.1	In your opinion is it acceptable to have sexual intercourse before marriage?	1. Yes 2. No	1 2
6.2	Before you became pregnant yourself, did you know that you could become pregnant if you had sexual intercourse with a man?	1. Yes 2. No	1 2
6.3	What do you think, can a girl get pregnant the very first time she has sexual intercourse?	1. Yes 2. No 3. Do not know	1 2 3
6.4	Given that a woman is having sexual intercourse when during her monthly menstrual cycle do you think pregnancy is most likely to occur?	1. 7 days before her period starts 2. During her period 3. 7 days after her period starts 4. 14 days before the next period 5. Don't know	1 2 3 4 5
<i>Interviewer: Read out the answers given for 6.4 and let her select her response.</i>			
6.5	Have you heard of any method or any way of prevention of pregnancy?	1. Yes 2. No <i>If No skip to Q 6.7</i>	1 2
6.6	If yes, please tell me the methods or ways that you know about	(Record Yes or No on the table below, column 6.6.to 6.6.9)	
6.7	OK, now I will list some methods that you have not yet mentioned, please tell me which you have heard of.	(Read out each of the methods not yet mentioned, and record Yes or No on the table below, column 6.7.1 to 6.7.9)	
6.8	OK, now for the methods that you have heard of, please tell me for each of these whether you know <u>how to use</u> the method.	(Read out each of the methods mentioned in 6.8.1 to 6. 8.9 and record Yes or No on the table below)	

6.9	OK, now for the methods that you have heard of, please tell me for each of these whether you know <u>where</u> the method is available	(Read out each of the methods mentioned in 6.9 or 6.9.9 and record Yes or No on the table below)	
6.10	OK, now for the methods that you have heard of, please tell me for each of these whether you would be <u>able to get hold of this method</u> if you needed to.	(Read out each of the methods mentioned in 6.10.1 and 6.10.2 and record Yes or No on the table below)	

	6.6 Spontaneous knowledge 1=Yes, 2=No	6.7 Known after probing 1=Yes 2=No <input type="checkbox"/> skip to next method on list	6.8 Knows how to use the method 1=Yes, 2=No	6.9 Knows where to get the method 1=Yes, 2=No	6.10 Could get the method if needed 1=Yes, 2=No
1. Condom					
2. Oral pill					
3. Emergency contraceptive pill					
4. IUD					
5. Injection					
6. Implant					
7. Withdrawal					
8. Periodic abstinence					
9. Other					

6.11	Have you or your partner ever used any method of contraception?	1. Yes 2. No 3. Don't know <i>If No, or DK skip to Q 6.14</i>	1 2 3
6.12	Now, thinking back to the first time you had sexual intercourse did you or your partner use any contraceptive method that first time?	1. Yes 2. No 3. Don't know <i>If No or DK skip to Q 6.14</i>	1 2 3
6.13	If yes, what method did you use?	1. Condom 2. Oral pill 3. Emergency contraceptive pill 4. IUD 5. Injection 6. Implant 7. Withdrawal 8. Periodic abstinence 9. Other 10. Don't know	1 2 3 4 5 6 7 8 9 10
6.14	If no, why did you not use a method of contraception?	1. Sex was unplanned 2. Bad for health 3. Did not know any method 4. Did not think would get pregnant 5. Did not want to use a method (self) 6. Partner objected 7. Too shameful to mention to partner 8. Wanted to get pregnant 9. Any other, specify	1 2 3 4 5 6 7 8 9
6.15	And now, thinking about when you became pregnant were you or your partner using any contraceptive method at the time?	1. Yes 2. No 3. Don't know <i>If no or DK, skip to Q6.18</i>	1 2 3

6.16	If yes, what method were you using?	1. Condom 2. Oral pill 3. Emergency contraceptive pill 4. IUD 5. Injection 6. Implant 7. Withdrawal 8. Periodic abstinence 9. Other 10. Don't know	1 2 3 4 5 6 7 8 9 10
6.17	If a contraceptive method was used the reason for the failure <i>Interviewer-probe and get the answer</i>	.....
6.18	So, thinking about when you became pregnant, why did you not use a method of contraception?	.....
6.19	If you knew and were able to use a contraceptive method correctly do you think you would have prevented this pregnancy?	1. Yes 2. No 3. Don't know	1 2 3

7 Information related to pregnancy

Interviewer: We will find out about her pregnancy now. This is a sensitive area. If the adolescent is reluctant to answer any question do not pressurize her. Do not prompt answers. Let her tell it.

7.1	How many weeks pregnant are you currently?	___ weeks	
7.2	Would you say that this pregnancy was planned by you?	1. Yes, planned 2. Neither planned nor unplanned 3. No, unplanned/unintended	1 2 3
7.3	Would you say that you welcomed the news of pregnancy?	1. Yes, I was pleased. 2. I was uncertain, I had mixed feelings. 3. No, I was not pleased.	1 2 3
7.4	Have you or any one at any time during the pregnancy felt that you would/should get rid of the pregnancy?	1. Yes 2. No <i>If No skip to Q7.7</i>	1 2 3
7.4.1	If yes explain	.....
7.5	If yes, did you do anything to	1. Yes	1

	try to get rid of the pregnancy?	2. No <i>If No skip to Q7.7</i>	2
7.6	If yes, what did you do?	_____	
7.7	Since you have been pregnant, how well supported do you feel?	1. Very well supported 2. Somewhat supported 3. Not well supported at all	1 2 3
7.8	Since you have been pregnant, how happy have you been feeling?	1. Very happy 2. Somewhat happy 3. Not happy at all	1 2 3
7.9	Which people, if any, have been important sources of support to you?	Record yes or no for each	
	Teachers at school	1. Yes 2. No	1 2
	Mother	1. Yes 2. No	1 2
	Father	1. Yes 2. No	1 2
	Sister	1. Yes 2. No	1 2
	Friends	1. Yes 2. No	1 2
	Husband/Partner	1. Yes 2. No	1 2
	Other	specify _____	
7.10	Since you became pregnant, which people, if any, have been important sources of stress or worry for you?	Record 'yes' or 'no' for each	
	Teachers at school	1. Yes 2. No	1 2
	Mother	1. Yes 2. No	1 2
	Father	1. Yes 2. No	1 2
	Sister	1. Yes 2. No	1 2
	Friends	1. Yes 2. No	1 2
	Husband/partner	1. Yes 2. No	1 2
	Other	Specify _____	

8. Regarding the partner

Interviewer: Go back to the household membership table (question 1.11) and check whether the partner's details have been completed or not.

8.1.	Current age (completed years)	-----	
8.2	Current occupation	.....
8.3	Highest level of schooling (List in page 5)		
9	Regarding peers <i>We would like to know about your friends now</i>		
9.1	Before you became pregnant did you have close friends who had intimate relationships with boyfriends? ('close' means with whom you could discuss your personal issues)	1. None 2. One 3. 2 to 5 4. More than five	1 2 3 4
9.2	Did you have any friend/friends pregnant or having children?	1. None 2. One 3 Two 4 More than two 5 Do not know	1 2 3 4 5
9.3	Before you became pregnant have you discussed sexual relationship with your friends?	1 Yes 2.No 3 Do not answer	1 2 3
9.4	Before you became pregnant have you discussed with your friends how girls become pregnant	1.Yes 2.No 3 Do not answer	1 2 3
10	Antenatal History		
10.a	Is this your first pregnancy?	1. Yes 2. No	1 2
10.b	Do you have a pregnancy card now?	1. Yes 2. No	1 2
10.2	How old were you when you first became pregnant? (Age in completed years) <i>Interviewer: crosscheck with the pregnancy record</i>	_____ Years	
10.3	Have you received any kind of healthcare or check-up for your pregnancy?	1. Yes 2. No	1 2
10.4	How many months pregnant were you when you first had a check-up? (check card if available to confirm)	_____ weeks,	
11.	Is there anything else you want to tell me about?		

Annexure 2_B

QUESTIONNAIRE – (Q₂) Questionnaire to partners of pregnant adolescents

Survey Form Number ____

An in-depth exploration of adolescent sexuality and pregnancy in Sri Lanka

Principal investigator

Name of the Partner : -,

Address of the Partner : -,

: -,

Q1. Name of interviewer :- _____,

Q2. Date of Interview :- 1st Visit Date: Yr. ____ Mth ____ Day ____

2nd Visit Date: Yr. ____ Mth ____ Day ____

Q3 MOH Area : :- 1. Badulla

- | | |
|--------------------|------------------|
| 2. Bandarawella | 4. Giradurukotte |
| 3. Ella | |
| 5. Haldumulla | |
| 6. Haliella | |
| 7. Haputhale | |
| 8. Kandakatiya | |
| 9. Mahiyangana | |
| 10. Meegahakiula | |
| 11. Passara | |
| 12. Ridimalliyadha | |
| 13. Soranathota | |
| 14. Uva Paranagama | |
| 15. Welimada | |

Q4 Midwife area/Estate:- _____

Q5. 1. Consent has been read out to participant

Yes 1 No 2

If NO, read consent

2. Written Consent has been obtained

Yes 1 No 2

If NO, END

1. Respondent socio-demographic information:

We want to know a few basic details regarding you

			Code
1.1	How old are you? (age on last birthday, years completed)	[____]	
1.2	What is your date of birth?	Yr. ____ Mth ____ Day ____ 2 Do not know	
1.3	What is your ethnicity?	1. Sinhalese 2. Sri Lankan Tamil 3. Indian Tamil 4. Sri Lanka Moor 5. Burgher 6. Malay 7. Other (specify)	1 2 3 4 5 6 7
1.4	What is your religion?	1. Buddhist 2. Hindu 3. Catholic/Christian 4. Muslim 5. No religion 6. Other-specify	1 2 3 4 5 6
1.5.1	What is your current marital status?	1. Currently married 2. Not married but living together 3. Never married, single 4. Other	1 2 3 4
1.5.2	Age of the partner	.....years	
1.6	Can you read a letter or newspaper? <i>Please can you read this to me</i>	1. Reads easily 2. Reads with difficulty 3. Cannot read at all	1 2 3
	<i>Interviewer: ask respondent to read from the sample card and record appropriate code opposite</i>		
1.7	How would you describe your household's financial situation currently?	1. Deficit. 2. Break even. 3. Surplus, able to save.	1 2 3

2. School environment.

Now I would like to ask you some questions about your school life and experiences.

2.1	Have you ever attended school?	1. Yes 2. No <i>If no skip to Q2.5</i>	1 2
2.2	What is your highest school attainment?	1. 1-5 years (primary) 2. 6-11 years (secondary) 3. Passed GCE (O/L) or equivalent 4. Passed GCE(A/L) 5. Any other (specify)	1 2 3 4 5
2.3	What is your opinion about your school life?	1. Like very much 2. Enjoy to some extent 3. Neither like nor dislike 4. Dislike 5. Strongly dislike	1 2 3 4 5
2.4	If you did not like school, the reason for not liking school?	.....
2.5	Are you currently employed?	1. Yes 2. No <i>If no go to Q3.1</i>	
2.6	What is your employment?	.....

3 Sexual Exposure

In this section I have to ask you some intimate questions, I hope you will help me to fill this section. I assure you once again the information you divulge will be confidential

3.1	How old were you when you first had a sexual experience with another person? (Kissing, cuddling, petting etc.)	____	
3.2	Who did you have this experience with?	1. Girl friend 2. Wife 3. Relative 4. Stranger 5. Any other specify.....	1 2 3 4 5
3.2.1	Sex of partner	1. Male 2. Female	1 2
3.2.2	Age of partner compared to you	1. Same/similar age 2. A little older than you (2-5 years) 3. More than 5 years older 4. More than 10 years older 5. A little younger than you (2-5 years) 6. More than 5 years younger 7. More than 10 years younger 8. Any other	1 2 3 4 5 6 7 8 9
3.3	How old were you when you first had sexual intercourse? (By sexual intercourse I mean penetrative sex)	____	
3.3.1	With whom did you have this experience with?	____	
3.3.2	Age of partner	1. Same/similar age 2. A little older than you (2-5 years) 3. More than 5 years older 4. More than 10 years older 5. A little younger than you (2-5 years) 6. More than 5 years younger 7. More than 10 years younger 8. Any other	1 2 3 4 5 6 7 8 9
3.3.3	Sex of the person	1. Male 2. Female.....	1 2
3.4	How did you feel about this experience at that time? Did you want to do this?	1. I wanted it to happen 2. I was not sure whether I wanted it to	1 2

		happen or not	3
		3.I did not want it to happen	4
		4. Happened forcefully	
3.5	How many sexual partners have you had since then?	1. One	1
		2. Two	2
		3. Three	3
		4. More than three	4
3.6	And, thinking about the first time you had sexual intercourse with your consent= (willingly), what do you think of the age at which you did this?	1. Too young.	1
		2. About right.	2
		3. Too old	3
		4. Other, specify	4
3.7	Thinking about the first time you had sexual intercourse; did you use any method of prevention?	1.Yes	1
		2.No	2

4 KAP on reproductive health

4.1	In your opinion is it acceptable to have sexual intercourse before marriage?	1. Yes 2. No	1 2
4.2	What do you think, can a girl get pregnant the very first time she has sexual intercourse?	1. Yes 2. No	1 2
4.3	Given that a woman is having sexual intercourse when during her monthly menstrual cycle when do you think pregnancy is most likely to occur? <i>Interviewer: Read out the answers given for 6.4 and let her select her response.</i>	1. 7 days before her period starts 2. During her period 3. 7 days after her period starts 4. 14 days before the next period 5. Don't know	1 2 3 4 5
5	Have you heard of any method or any way of prevention of pregnancy?	1. Yes 2. No <i>If No skip to Q7.2</i>	1 2
5.1	If yes, please tell me all the methods or ways that you know about	(Record Yes or No on the table below, column 6.1)	
5.2	OK, now I will list some methods that you have not yet mentioned, please tell me which you have heard of.	(Read out each of the methods not yet mentioned, and record Yes or No on the table below, column 6.2)	
5.3	OK, now for the methods that you have heard of, please tell me for each of these whether you know <u>how to use</u> the method.	(Read out each of the methods mentioned in 6 and record Yes or No on the table below 6.3)	
5.4	OK, now for the methods that you have heard of, please tell me for each of these whether you know <u>where</u> the method is available	(Read out each of the methods mentioned in 6 and record Yes or No on the table below 6.4)	
5.5	OK, now for the methods that you have heard of, please tell me for each of these whether you would be <u>able to get hold of this method</u> if you needed to.	(Read out each of the methods mentioned in 6 and record Yes or No on the table below 6.5)	

6	6.1 Spontaneous knowledge 1=Yes, 2=No	6.2 Known after probing 1=Yes 2=No→ skip to next method on list	6.3 Knows how to use the method 1=Yes, 2=No	6.4 Knows where to get the method 1=Yes, 2=No	6.5 Could get the method if needed 1=Yes, 2=No
1. Condom	6.1.1				
2. Oral pill	6.1.2				
3. Emergency contraceptive pill					
4. IUD					
5. Injection					
6. Implant					
7. Withdrawal					
8. Periodic abstinence					
9. Other					

7.1	Have you or your partner ever used any method of contraception?	1. Yes 2. No 9. Don't know If Yes skip to Q7.3	1 2 9
7.2	If not used a method of contraception, why have you never used a method of contraception?	1. Sex was unplanned 2. Bad for health 3. Did not know any method 4. Did not think would get pregnant 5. Did not want to use a method (self) 6. Partner objected 7. Too shameful to mention to partner 8. Wanted the partner to get pregnant 9. Any other, specify.....	1 2 3 4 5 6 7 8 9
7.3	If yes, what methods have you or your partner ever used? Mark all relevant Multiple answers possible	1. Condom 1. Yes 2. No 2. Oral pill 1. Yes 2. No 3. Emergency contraceptive pill 1. Yes 2. No 4. IUD 1. Yes 2. No 5. Injection 1. Yes 2. No 6. Implant 1. Yes 2. No 7. Withdrawal 1. Yes 2. No 8. Periodic abstinence 1. Yes 2. No 9. Other If methods not used skip to 7.7	1 2 3 4 5 6 7 8 9
7.4	And now, thinking about when your partner became pregnant were you or your partner using any contraceptive method at the time?	1. Yes 2. No 3. Don't know If No, or DK, skip to 7.7	1 2 3
7.5	If yes, what method were you or your partner using? Multiple answers possible	1. Condom 1. Yes 2. No 2. Oral pill 1. Yes 2. No 3. Emergency contraceptive pill 1. Yes 2. No 4. IUD 1. Yes 2. No 5. Injection 1. Yes 2. No 6. Implant 1. Yes 2. No 7. Withdrawal 1. Yes 2. No 8. Periodic abstinence 1. Yes 2. No 9. Other	1 2 3 4 5 6 7 8 9
7.6	If a contraceptive method was used, what was the reason for the failure? <i>Interviewer-probe and get the</i>	.....

	<i>answer</i>		
7.7	So, thinking about when your partner became pregnant, why did you not use a method of contraception?	.....

8 Information related to partners pregnancy

8.1	How many weeks pregnant is your partner?	___ ___ weeks	
8.2	Would you say that this pregnancy was planned by you?	1. Yes, planned 2. Neither planned nor unplanned 3.No,unplanned/unintended	1 2 3
8.3	Would you say that you welcomed the news of your partner's pregnancy?	1. Yes, I was pleased. 2. I was uncertain, I had mixed feelings. 3. No, I was not pleased.	1 2 3
8.4	Since your partner became pregnant, how supportive have you been to her?	1. Very supportive 2. Somewhat supportive 3. Not supportive	1 2 3
8.5	Since your partner became pregnant, how supportive have others been to you?	1. Very supportive 2. Somewhat supportive 3. Not supportive	1 2 3

9 Is there anything else that you would like to tell me about?

.....
.....
.....

Annexure 2c

QUESTIONNAIRE – (Q₃): Questionnaire to school adolescents

Survey form No ----

To be answered only by the students who got the parents/guardians consent and after completing the participants consent form

SELF ADMINISTERED QUESTIONNAIRE TO TEENAGERS

An in-depth exploration of adolescent sexuality and pregnancy in Sri Lanka

If any question is not related to you please skip to the number given.

No	Question		Code
1	General, schooling etc.		
1.1	How old are you? Age in completed years	-----	
1.2	Are you male or female? Circle only one answer	1.Male 2.Female	1 2
1.3	What is your ethnicity? Circle only one answer	1. Sinhalese 2.Sri Lankan Tamil 3.Indian Tamil 4.Moore	1 2 3 4
1.4	What grade are you in/? Circle only one answer	1.Grade 11 2.Grade 11 revision 3.Grade 12 4.Grade 13 5. Grade 13 revision 6. Any other specify.....	1 2 3 4 5 6
1.5	How would you categories your school? Circle only one answer	1.Gov: National 2.Gov: Madhyamaha 3.Gov: Maha Vidyalaya 4.Gov: Navodya 5.Private 6. Any other Specify.....	1 2 3 4 5 6
1.6	Type of your school	1.Boys 2.Girls 3.Mix	1 2 3
1.7	How do you categories your performance in class? Circle only one answer	1.Excellent 2.Above average 3Average 4.Below average	1 2 3 4
1.8	Do you/ have you taken part in competitive sports?	1.Yes 2. No If no go to Q1.10	1 2
1.9	If yes, what are the sport activities	..... .....
1.10	Do you/have you taken part in extracurricular activities?	1.Yes 2.No If no go to Q1.12	1 2
1.11	If Yes Name the activity(s)	..... .....

1.12	Have you got a hobby?	1.Yes 2.No <i>If no go to Q1.14</i>	1 2
1.13	If yes Name your favourite hobby	..... .....
1.14	Have you got any ambitions regarding having a career or working?	1.Yes 2. No <i>If no go to Q2.1</i>	1 2
1.15	If yes, what career do you most want to pursue?	..... .....

2.1	Whom are you living with?	1.Both parents 2.With mother 3.With father 4.Anyother Specify.....	1 2 3 4
2.2	Is your father living?	1.Yes 2.No <i>If no go to Q 2.5</i>	1 2
2.3	If yes where is he living?	1.At your home 2.In another home 3.Working far away from Sri Lanka 4Abroad	1 2 3 4
2.4	How would you describe your relationship with your father?	1. Very close 2. Somewhat close 3. Not close, distant 4.Other	1 2 3 4
2.5	Is your mother living?	1.Yes 2.No <i>If no go to Q2.8</i>	1 2
2.6	If yes where is she living?	1.At home 2.In a another home 3.Working far away from Sri Lanka 4.Abroad	1 2 3 4
2.7	How would you describe your relationship with your mother?	1. Very close 2. Somewhat close 3. Not close, distant 4. Any other	1 2 3 4
2.8. 1	What is your mother's highest schooling?	1. No schooling 2. 1-5. 3. 6-10 4. Ordinary Level 5. Advance level 6. Vocational 7. University 8. Do not know	1 2 3 4 5 6 7 8
2.8.2	What is your father's highest level of schooling?	1. No schooling 2. 1-5. 3. 6-10 4. Ordinary Level 5. Advance level 6. Vocational 7. University 8. Do not know	1 2 3 4 5 6 7 8

2.9.1	At what age was your mother married?	1. Below 18 years 2. Above 18 years 3. Do not know 4. Any other Specify	1 2 3 4
2.9.2	At what age was your father married?	1. Below 18 years 2. Above 18 years 3. Do not know 4. Any other Specify	1 2 3 4
2.10	Do you have any brothers or sisters who had a child when he/she was below 18 years old?	1. Yes 2. No 3. Any other Specify	1 2 3
2.11	How would you categorise your home environment? (Can be more than one answer)	1. Peaceful 2. With quarrels 3. Bad 4. Very Bad	1 2 3 4
2.12	Explain the answer given to 2.11	..... ....
2.13	What is the economic standard of your family?	1. Deficit. 2. Break even. 3. Surplus, able to save.	1 2 3
3	Religious Bonding		
3.1	What is your religion?	1. Buddhist 2. Hindu 3. Catholic 4. Muslim 5. Any other.....	1 2 3 4 5
3.2	How important would you say religion or religious beliefs are to you? Circle one answer	1. Very important 2. Fairly important 3. Very important 4. Not important at all 5. Don't Know	1 2 3 4 5
3.3	How often do you go to a religious place? Circle one answer	1. Once a week or more 2. About once in two weeks 3. About once a month 4. About twice a year 5. About once a year 6. Less than once a year 7. Never	1 2 3 4 5 6 7
3.4.1	How important would you say religion or religious beliefs are to your mother? Circle only one answer	1. Very important 2. Fairly important 3. Not very important 4. Not important at all 5. Don't Know	1 2 3 4 5
3.4.2	How important would you say religion or religious beliefs are to your father? Circle only one answer	1. Very important 2. Fairly important 3. Not very important 4. Not important at all 5. Don't Know	1 2 3 4 5
4	Risk behavior		
4.1	Have you ever smoked?	1. Yes 2. No <i>If No, skip to 4.4</i>	1 2
4.2	During the past week how many cigarettes have you	1. None	1

	smoked?	2.1-19 3.20-59 4. Over 60.....	2 3 4
4.3	Why did you start smoking?	1.My choice 2.Pressure from someone else 3.Any other	1 2 3
4.4	Have you ever taken any intoxicating substance?	1.Yes 2.No <i>If No, skip to 4.8</i>	1 2
4.5	If yes name them	_____	
4.6	During the past week how many times have you taken intoxicating substances?	1.None 2.Once 3.Two –four times 4.More than four times	1 2 3 4
4.7	Why did you start to take intoxication substance?	1..My choice 2.Pressure from someone else 3.Any other	1 2 3
4.8	Are there facilities to obtain intoxicating substance near your school?	1.Yes 2.No 3.Do not know	1 2 3
5	Peers and relationships		
5.1	Thinking of your best friend what does he/she do?	1.In school 2.Not in school and not employed 3.Not in school and employed	1 2 3
5.2	Do you think it is acceptable for girls and boys of your age to have a relationship that is more than just a friendship?	1.Yes 2.No	1 2
5.3	Have you ever had a relationship that is more than a friendship?	1.Yes 2.No	1 2
5.4	How do you name this relationship?	1.Girlfriend 2.Boyfriend 3. Any other.....	1 2 3
5.5	At what age did you have that relationship?	.....Years	
6.1	Do you think it is acceptable for girls and boys of your age to have a Sexual relationship?	1.Yes 2.No	1 2
6.2	Have you ever had any experience of a “Sexual” relationship?	1.Yes 2.No <i>If No, skip to 8.1</i>	1 2
6.3	If yes can you please name it	.....
6.4	How old were you when you first had a sexual experience with another person?	___ ___Years	
6.5	Who did you have this experience with?	.....
6.6	Sex of partner	1. Male 2. Female	1 2
6.7	Age of partner compared to you	1. Same/similar age 2. A little older than you (2-5 years)	1 2 3

		3. More than 5 years older 4. More than 10 years older 5. Younger than you 6. Any other	4 5 6 7
6.8	How did you feel about this experience at the time? Did you want to do this?	1. I wanted it to happen. 2. I was not sure whether I wanted it or not 3. I did not want it to happen 4. Happened forcefully	1 2 3 4
6.9	How did you feel about this experience after it had happened?	1. I was glad that it had happened. 2. I was unsure/confused about it 3. I wished it had not happened.	1 2 3
6.10.1	Have you had an intimate sexual relationship	1. Yes 2. No	1 2
6.10.2	How old were you when you first had an intimate sexual experience with someone of the opposite sex?	___ ___ years	
6.11	Who did you have this experience with?		
6.12	Age of partner	1. Same/similar age 2. A little older than you (2-5 years) 3. More than 5 years older 4. More than 10 years older 5. Younger than you 6. Any other _____ 7 Do not know	1 2 3 4 5 6 7
6.13	Who was the person?	1.. Boyfriend 2. Girlfriend 3. Relative 4.. Stranger 5. Any other specify	1 2 3 4 5
6.14	How did you feel about this intimate sexual experience at the time? Did you want to do this?	1. I wanted it to happen 2. I was not sure whether I wanted it or not 3. I did not want it to happen 4. Happened forcefully	1 2 3 4
6.15	How did you feel about this intimate sexual experience after it had happened?	1. I was glad that it had happened. 2. I was unsure/ confused about it. 3. I wished it had not happened.	1 2 3
6.16	How many sexual partners have you had?	1. One 2. Two 3. Three More than three	1 2 3 4
6.17	Have you ever had an intimate sexual experience that you wanted it to happen? (you were fully consenting)	1. Yes 2. No →	1 2

		<i>No go to Q 7.1</i>	
6.18	So, thinking about the first time you had an intimate sexual experience willingly, what made you to want to have it that first time?	_____ _____ —	
6.19	And, thinking about the first time you had an intimate sexual experience willingly, what do you think of the age at which you did this?	1. Too young. 2. About right. Other, specify	1 2 3
7.1	Have you or your partner ever used any method of contraception?	1. Yes 2. No → <i>skip to Q 7.4</i> Don't know → <i>skip to Q</i>	1 2 3
7.2	Now, thinking back to the first time you had intimate sexual relationship did you or your partner use any contraceptive method that first time?	1. Yes 2. No → <i>skip to Q 7.4</i> Don't know → <i>skip to Q</i>	1 2 3
7.3	If yes, what method did you use?		
7.4	If no, why did you not use a method of contraception?	1. Sex was unplanned 2. Bad for health 3. Did not know any method 4. Did not think would get pregnant 5. Did not want to use a method (self) 6. Partner objected 7. Too shameful to mention to partner 8. Wanted to get pregnant Any other, specify	1 2 3 4 5 6 7 8 9

8 Knowledge and attitude on reproductive health

To be answered by all. Please answer the questions relevant to you or use the skips as noted

8.1	In your opinion is it acceptable to have sexual intercourse before marriage?	1. Yes 2. No	1 2
8.2	What do you think, can a girl get pregnant the very first time she has sexual intercourse?	1. Yes 2. No 3. Do not know	1 2 3
8.3	What do you think can a girl or boy get sexually transmitted diseases the very first time he/she has sexual intercourse?	1. Yes 2. No 3. Do not know	1 2 3
8.4	Given that a woman is having sexual intercourse, when during her monthly menstrual cycle do you think pregnancy is most likely to occur? Circle one answer only	1. 7 days before her period starts 2. During her period 3. 7 days after her period starts 4. 14 days before the next period 5. Don't know	1 2 3 4 5
8.5	Have you heard of any method or any way of prevention of	1. Yes 2. No →	1 2

	pregnancy?	<i>If No skip to 8.7</i>	
8.6	If yes, name the methods you know	_____	
8.7	Have you heard of any method of prevention of Sexually transmitting diseases?	1. Yes 2. No → <i>If No skip to 9</i>	1 2
8.8	If yes, name the methods you know		
9. To be answered by all teenagers			
9.1	People should be responsible for their good health. Mark only one	1.Strongly agree 2.Agree 3.Disagree 4.Strongly disagree 5.No opinion	1 2 3 4 5
9.2	To have good health is the most important thing in life. Mark only one	1.Strongly agree 2.Agree 3.Disagree 4.Strongly disagree 5.No opinion	1 2 3 4 5
9.3	Which of the following sexually transmitted diseases have you heard of? Circle all you know	1.Gonorrhoea 1.Yes 2.No 2.Syphilis 1.Yes 2.No 3.AIDS 1.Yes 2.No 4.Trichomoniasis 1.Yes 2.No 5.Any Other specify 1.Yes 2.No	1 2 3 4 5
9.4	Girls should be virgins until marriage	1.Strongly agree 2.Agree 3.Disagree 4.Strongly disagree 5.Don't know	1 2 3 4 5
9.5	Boys should be virgins until marriage	1.Strongly agree 2.Agree 3.Disagree 4.Strongly disagree 5.Don't know	1 2 3 4 5
9.6	Have you ever watched pornographic films?	Yes No <i>If no go to Q10</i>	1 2
9.7	If you have watched pornography where did you watch it?	1. At home..... 2. At a friend's place 3. Internet café 4. Fromm mobile phone 5. Other specify.....	1 2 3 4 5
10.1	How easy has it been to discuss with your mother matters of importance to you?	1. Very easy. 2.Somewhat easy 3. Not easy at all, difficult. 4.Other	1 2 3 4
10.2	How easy has it been to discuss with your father matters of importance to you?	1. Very easy. 2.Somewhat easy 3. Not easy at all, difficult. 4.Other	1 2 3 4
10.3	If you have a problem, who would you find it easiest to discuss it with? Circle only one answer	1.Father 2.Mother 3.Brother 4.Sister	1 2 3 4

		5.Friend 6.Teacher 7.Any Other (Specify)	5 6 7
10.4	Who do you discuss sexual issues with? Circle only one answer	1. Doctor..... 2.Teacher 3.Father 4.Mother 5.Sibling 6.Friend 7.Nobody 8.Any Other	1 2 3 4 5 6 7 8
10.5	From whom or where would you most like to learn about sexual issues? Circle all that apply	1.Friend 2.Teacher 3.Parents 4.TV/Radio 5.Book/Journal 6.Siblings 7.Health personal 8.Doctor 9. Any Other.....	1 2 3 4 5 6 7 8 9

Thank you for participating in the survey.



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INFORMED CONSENT FORM FOR PREGNANT WOMEN 18 YEARS AND ABOVE-(SURVEY)

(This Informed Consent Form is for pregnant women 18 years and over in Badulla District in Sri Lanka who we are inviting to participate in research on adolescent pregnancy. The title of our research project is: An in-depth exploration of adolescent sexuality and pregnancy in Sri Lanka)

Name of Principal Investigator : Dr N.S.R. Hewageegana
 Name of Organization : Regional Directorate of Health
 Name of Proposal : An in-depth exploration of adolescent sexuality and pregnancy in Sri Lanka

- This Informed Consent Form has two parts:**
- **Information Sheet (to share information about the research with you)**
 - **Certificate of Consent (for signatures if you agree to take part)**

You will be given a copy of the full Informed Consent Form

PART I: Information Sheet

INTRODUCTION

Dr Neelamani Hewageegana, Regional Director of Health Badulla, is conducting a research on adolescent pregnancy in this district. I am working as a member of her research staff. On her behalf, I would like to invite you to participate in this research. I would like you to understand how and why this research is being done before you decide to participate. Please take time to read the following information and discuss with others including your parent and partner if you wish. If there is anything unclear to you, you are requested to ask me and get it clarified. Your participation is completely voluntary; take time and decide whether you wish or not to participate.

There may be some words you don't understand or things that you want me to explain more about because you are interested or concerned. Please ask me to stop at any time and I will take time to explain.

Thank you for taking your valuable time to read this.

Why this study?

The main aim of this study is to understand what factors contribute to girls in this district being pregnant before they are 20 years old. The findings from this study may help develop policies and programs that are effective and appropriate to address the needs and challenges faced by adolescent pregnant girls in this district.

Why have you been chosen?

You are selected to participate in the study because you are currently pregnant and are in the age group that this research is focusing. We would like you to take part in this study so that we can understand you, your experience leading to pregnancy and being a pregnant mother from your point of view.

Your participation in this study is voluntary and you have the right to refuse to participate or answer any of the questions that you feel uncomfortable with. If you change your mind about participating during the course of the study, you have the right to withdraw at any time. If there is anything that is unclear or you need further information, we shall be delighted to provide it.

Whether you choose to participate in the study or not, all the services you receive for the Health Department will continue and nothing will change

I have checked with the pregnant adolescent and she understand that participation is voluntary

Signature of volunteer:

Date _____
Day/month/year

What will happen to you if you agree to take part?

If you agree to participate in this study, there is no direct benefit to you personally. However, the study will help the Ministry of Health to better understand the context in which pregnancy to adolescent girls is occurring so more effective programs can be designed and implemented.

You are being requested to participate in completing an interviewer administered questionnaire

This will take around 30 minutes. I will ask you questions about you, your family and friends, and your pregnancy, and knowledge about reproductive health. If you find some questions too personal or sensitive and do not like to answer, you do not have to answer and you may skip those.

Benefits of the Study

There are no direct personal benefits to you. However, by participating in the study, you could help increase our understanding of preventing pregnancy in adolescents and we hope that the results of the study will contribute to develop a culturally sensitive adolescent pregnancy prevention programme. If you wish, you will have the chance of hearing the results of the study. In discussing the study results, your name or address will not be identified. The responses will not be linked to your name or place.

For all participants:

You may find some topics/questions sensitive. If so, please do not hesitate to say so and do not feel under any pressure that you must answer. I will not ask you to discuss anything that makes you feel distressed or uncomfortable. You may at any time refuse to answer any question.

Confidentiality of your participation and information

Your participation and the information will be treated with the strictest confidentiality. Only the research team will know the information you have provided. Neither your name nor any identifying information will appear in any written documents produced.

What will happen to the results of the research?

The results of the study will be prepared in a report form. And, key findings will be presented at a number of small meetings in Badulla, Uva and in Colombo. A summary of the results will be made in your languages and you will receive a copy if you wish to.

The summary of key findings with recommendations will be prepared and distributed to policy-makers in the health, education and social welfare sectors. This report will be completed by the end of 2012.

Who has given this research ethical approval?

This study has been approved by Ethics Committees of Sri Lanka Medical Association and Sheffield Hallam University.

What if you have a problem or question about the study?

If you have any problem regarding the study you can feel free to contact the Principal investigator whose name and address is given below.

Dr N.S.R.Hewageegana, Regional Director of Health, Mahiyanganaya Road, Badulla
Phone 055 22 22430

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DEPARTMENT OF HEALTH SERVICES - UVA PROVINCE

අංක 301, ආර්.ඒ. ගුණවර්ධන මාවත, බදුල්ල. # 301, R.H. Gunawardana Mawatha, Badulla.



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My No.

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Your No.

දිනය

Date

Print name of researcher :- _____

Date :- _____

INFORMED CONSENT FORM FOR PREGNANT GIRLS UNDER 18 YEARS (SURVEY)

(This Informed Consent Form is for pregnant women under 18 years in Badulla District in Sri Lanka whom we are inviting to participate in a research on adolescent pregnancy.

The title of our research project is

An in-depth exploration of adolescent sexuality and pregnancy in Sri Lanka)

Name of Principal Investigator : Dr N.S.R.Hewageegana

Name of Organization : Regional Directorate of Health

Title of Proposal : An in-depth exploration of adolescent sexuality
and pregnancy in Sri Lanka

This Informed Consent Form has two parts:

- Information Sheet (to share information about the research with you)
- Certificate of Consent (for signatures if you agree to take part)

You will be given a copy of the full Informed Consent Form

PART I: Information Sheet

INTRODUCTION

Dr. Neelamani Hewageegana, Regional Director of Health Badulla, is conducting a research on adolescent pregnancy in this district. I am working as a member of her research staff. On her behalf, I would like to invite you to participate in this research. I would like you to understand how and why this research is being done before you decide to participate. Please take time to read the following information and discuss with others including your parent and partner if you wish. If there is anything not clear to you, you are requested to ask me and get it clarified. Your participation is completely voluntary; take time and decide whether you wish or not to participate.

Because you are under 18 years, I would also like to inform you that if you are going to participate in this research, we will have to obtain consent from your parent(s)/guardian/partner. But if you do not wish to take part in the research, you do not have to, even if your parent(s)/guardian/partner may consent.

There may be some words you don't understand or things that you want me to explain more about because you are interested or concerned. Please ask me to stop at any time and I will take time to explain

Thank you for taking your valuable time to read this.

Why this study?

The main aim of this study is to understand what factors contribute to girls in this district being pregnant before they are under 20 years old. The findings from this study may help develop policies and programs that are effective and appropriate to address the needs and challenges faced by adolescent pregnant girls in this district.

Why have you been chosen?

You are selected to participate in the study because you are currently pregnant and are in the age group that this research is focusing.

Have you got to take part?

We would like you to take part in this study so that we can understand you better, your experience leading to pregnancy, being a pregnant adolescent, from your point of view.

Your participation in this study is voluntary and you have the right to refuse to participate or answer any of the questions that you feel uncomfortable with. If you change your mind about participating during the course of the study, you have the right to withdraw at any time. If there is anything that is unclear or you need further information, we shall be delighted to provide it.

Whether you choose to participate in the study or not, all the services you receive for the Health Department will continue and nothing will change

I have checked with the adolescent and she understand that participation is voluntary

Signature of volunteer:

Date _____
Day/month/year

What will happen to you if you agree to take part?

If you agree to participate in this study, there is no direct benefit to you personally. However, the study will help the Ministry of Health better understand the context in which pregnancy to adolescent girls is occurring so more effective programs can be designed and implemented.

If you are being asked to participate in completing an interviewer administered questionnaire

This will take around 40 minutes. I will ask you questions about you, your family and friends, and your pregnancy, knowledge about reproductive health. If you find some questions too personal or sensitive and do not like to answer, you do not have to and you may skip those.

Benefits of the Study

There are no direct personal benefits to you. However, by participating in the study, you could help increase our understanding of preventing pregnancy in adolescents and we hope that the results of the study will contribute to develop a culturally sensitive adolescent pregnancy prevention programme. If you wish, you will have the chance of hearing the results of the study. In discussing the study results, your name or address will not be identified. The responses will not be linked to your name or place.

For all participants:

You may find some topics/questions sensitive. If so, please do not hesitate to say so and do not feel under any pressure that you must answer. I will not ask you to discuss anything that makes you feel distressed or uncomfortable. You may at any time refuse to answer any question.

Confidentiality of your participation and information

Your participation and the information will be treated with the strictest confidentiality. Only the research team will know the information you have provided. Neither your name nor any identifying information will appear in any written documents produced.

What will happen to the results of the research?

The results of the study will be prepared in a report form. And, key findings will be presented at a number of small meetings in Badulla, Uva and in Colombo. A summary of the results will be made in your languages and you will receive a copy if you wish to.

The summary of key findings with recommendations will be prepared and distributed to policy-makers in the health, education and social welfare sectors. This report will be completed by end of 2012.

Who has given this research ethical approval?

This study has been approved by Ethics Committees of Sri Lanka Medical Association and Sheffield Hallam University.

What if you have a problem or question about the study?

If you have any problem regarding the study you can feel free to contact the Principal investigator whose name and address is given below.

Dr N.S.R.Hewageegana Regional Director of Health, Mahiyanganaya Road, Badulla
Phone 055 22 22430

[Interviewer asks if the respondent has any questions and provide the necessary clarification].



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 My No.

ඔබේ අංකය } -----
 Your No.

දිනය } -----
 Date

INFORMED CONSENT FORM FOR PARTNER/SPOUSE OF ADOLESCENT PREGNANT

(This Informed Consent Form is for Partner/spouse of Adolescent Mother in Badulla district in Sri Lanka who we are inviting to participate in research on adolescent pregnancy. The title of our research project is an in-depth exploration of adolescent sexuality and pregnancy in Sri Lanka)

Name of Principal Investigator : Dr N.S.R.Hewageegana
Name of Organization : Regional Directorate of Health

- Pregnancy in Sri Lanka This Informed Consent Form has two parts:**
- Information Sheet (to share information about the research with you)
 - Certificate of Consent (for signatures if you agree to take part)

You will be given a copy of the full Informed Consent Form

PART I: Information Sheet

Introduction

Dr Neelamani Hewageegana, Regional Director of Health Badulla, is conducting a research on adolescent pregnancy in this district. I am working as her research staff. On her behalf, I would like to invite you to participate in this research.

Thank you for taking your valuable time to read this.

Why is this study done?

The aims of the study are to examine the knowledge, attitudes and practices relating to sexuality and reproduction of teenage girls and boys and to identify factors associated with unwanted adolescent pregnancy leading to drawing up a culturally sensitive and sustainable unwanted adolescent pregnancy prevention program.

What type of Research Intervention?

This research will involve you answering a questionnaire read to you by an interviewer.

Why have you been chosen?

To understand adolescent pregnancies we are reaching a sample of partners/spouse of adolescent mothers in Badulla district from urban, rural and estate areas. You are one of them whose experience will valuably contribute to the research.

Have you got to take part?

We would like you to take part in this study so that we can understand you better, your experience leading to pregnancy, being a partner/husband of a pregnant mother, from your point of view.

Anyhow your participation in this study is voluntary and you have the right to refuse to participate or answer any of the questions that you feel uncomfortable with. If you change your mind about participating during the course of the study, you have the right to withdraw at any time. If there is anything that is unclear or you need further information, we shall be delighted to provide it.

It is your choice whether to participate or not. Whether you choose to participate or not, all the services you receive for the health department will continue and nothing will change

What will happen to you if you agree to take part?

If you are happy to participate we would like you to participate today or at another time convenient to you.

You are being asked to participate in completing an interviewer administered questionnaire

This will take around 45 minutes. Another person will ask you questions from questionnaire, in your language. We would like to know about you, about your family, friends, and your knowledge about reproductive health. There may be some sensitive areas if you do not want to answer any question you can skip them. Mostly we would like to know from you your experience as a partner/spouse of a pregnant mother whether the pregnancy was planned, whether it was your choice and whether you knew about contraceptive methods.

Benefits of the Study

There are no direct benefits to you. However, we hope that you will enjoy the experience in participating in this research.

By participating in the study and answering our questions, you will help to increase our understanding of preventing unwanted pregnancy in adolescents and we hope that the results of the study will contribute to develop a culturally sensitive unwanted adolescent pregnancy prevention programme. If you wish you will have the chance of hearing the results of the study.

For all participants:

May be some topics discuss is sensitive or upsets you. If so, please do not hesitate, do not feel under any pressure to tell us how your feeling. We will not want to discuss anything that makes you feel distressed or uncomfortable. You may any time refuse to answer any question.

Confidentiality of your participation and information

Your participation and the information will be treated with the strictest confidentiality. Only the research team will know the information you have provided. Neither your name nor any identifying information will appear in any written documents produced.

What will happen to the results of the research?

The findings will be presented at a number of small meetings in Badulla, Uva and in Colombo and in Sheffield Hallam University in U.K. A summary of the results will be made in your languages and you will receive a copy if you wish to.

The findings will be written as a report and distributed to policy-makers in the health, education and social welfare sectors. This report will be completed by the end of 2012.

Who has given this research ethical approval?

This study has been approved by Ethics Committee Sri Lanka Medical Association and Sheffield Hallam University in U.K

What if you have a problem or question about the study?

If you have any problem regarding the study you can feel free to contact the Principal investigator whose name and address is given below.

Dr N.S.R.Hewageegana, Regional Director of Health, Mahiyanganaya Road, Badulla
Phone 055 22 22430

[Interviewer asks if the respondent has any questions and provide the necessary clarification].

PART II: Certificate of Consent

Declaration of the Volunteer:

I have understood that the purpose of the study is to examine the factors leading to adolescent pregnancies. I realise that I might be contacted again in a more detailed way. I have read the above information/ it has been read to me. I have had the opportunity to ask questions about it and questions that I have asked have been answered to my satisfaction. I consent voluntarily to participate as a subject in this study and understand that I have the right to withdraw from the study at any time without in any way affecting me.

.....
Signature of volunteer:

Date _____
Date/month/year

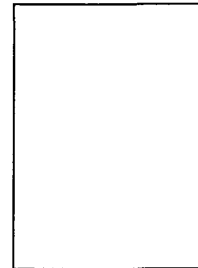
If illiterate:

I have witnessed the accurate reading of the assent form to the adolescent pregnant mother, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Print name of witness _____ AND Thumb print of participant

Signature of witness _____

Date _____
Date/month/year



A copy of this ICF has been provided to the participant.

I have accurately read or witnessed the accurate reading of the assent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given assent freely.

Print name of researcher : - _____

Date : - _____



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INFORMED CONSENT FORM FOR SCHOOL ADOLESCENT

*(This Informed Consent Form is for school adolescent in Badulla district in Sri Lanka who we are inviting to participate in research on adolescent pregnancy. The title of our research project is **an in-depth exploration of adolescent sexuality and pregnancy in Sri Lanka**)*

Name of Principal Investigator : Dr N.S.R.Hewageegana
Name of Organization : Provincial Directorate of Health
Name of Proposal : An in-depth exploration of adolescent sexuality and pregnancy in Sri Lanka

This Informed Consent Form has two parts:

- **Information Sheet (to share information about the research with you)**
- **Certificate of Consent (for signatures if you agree to take part)**

You will be given a copy of the full Informed Consent Form

PART I: Information Sheet

Introduction

I, Dr. Neelamani Hewageegana, am the Provincial Director of Health, Uva and I am doing a research study for a PhD on adolescent pregnancy which is seen as a public health problem in our district. I like to invite you to participate in this research. I would like you to understand how and why this research is done before you decide to participate. Please take time to read the following information and discuss with others including your parents. If there is anything not clear to you, you are requested to ask me and get it clarified. Participation is voluntary, take time and decide whether you wish or not to participate.

I have invited you to be part of a research study. You can choose whether or not you want to participate. We have informed this research to your parent(s)/guardian through your principal and they know that we are also asking you for your agreement. If you are going to participate in the research, your parent(s)/guardian also have to

agree. But if you do not wish to take part in the research, you do not have to, even if your parents/guardian has agreed.

There may be some words you don't understand or things that you want me to explain more about because you are interested or concerned. Please ask at any time and we will take time to explain

Thank you for taking your valuable time to read this.

Why is this study done?

The aims of the study are to examine the knowledge, attitudes and practices relating to sexuality and reproduction of teenage girls and boys and to identify factors associated with unwanted adolescent pregnancy leading to drawing up a culturally sensitive and sustainable unwanted adolescent pregnancy prevention program.

What type of Research Intervention?

This research will involve you answering a questionnaire.

Why have you been chosen?

To understand adolescents we are reaching a sample of adolescents under twenty years of age in Badulla district including all school zones. You are one of them whose ideas will valuably contribute to the research.

Have you got to take part?

We would like you to take part in this study so that we can understand you better, your experience as a teenager, and your views of reproductive health and adolescent pregnancy.

Anyhow your participation in this study is voluntary and you have the right to refuse to participate or answer any of the questions that you feel uncomfortable with. If you change your mind about participating during the course of the study, you have the right to withdraw at any time. If there is anything that is unclear or you need further information, we shall be delighted to provide it.

It is your choice whether to participate or not. Whether you choose to participate or not, all the services you receive for the health department will continue and nothing will change.

I have checked with the adolescent and he/she understand that participation is voluntary

Signature of investigator: Date:

What will happen to you if you agree to take part?

If you are happy to participate we would like you to participate on the day of the survey in your school. You are being requested to complete a self-administered questionnaire as an adolescent

This will take around 45 minutes. We would like to know about you, about your family, friends, and your knowledge about reproductive health. There may be some sensitive areas and if there are any questions irrelevant to you, you can skip them. Mostly we would like to know from you whether you think adolescent sexual health problems should be addressed, if we are to address them from whom and how would you and others of your age will like to receive it. The information that you provide during the study will be kept confidential.

Benefits of the Study

There are no direct benefits to you. However, we hope that you will enjoy the experience in participating in this research.

By participating in the study and answering our questions, you will help to increase our understanding of preventing unwanted pregnancy in adolescents and we hope that the results of the study will contribute to develop a culturally sensitive unwanted adolescent pregnancy prevention programme. If you wish you will have the chance of hearing the results of the study.

For all participants:

Maybe some topics will be sensitive or upsetting you. If so, please skip those questions. Do not feel under any pressure. You may any time refuse to answer any question.

Confidentiality of your participation and information

Your participation and the information will be treated with the strictest confidentiality. Only the research team will know the information you have provided. Neither your name nor any identifying information will appear in any written documents produced.

What will happen to the results of the research?

The findings will be presented at a number of small meetings in Badulla, Uva and in Colombo and in Sheffield Hallam University in U.K a summary of the results will be made in your languages and your school will receive a copy

The findings will be written as a report and distributed to policy-makers in the health, education and social welfare sectors. This report will be completed by the end of 2012.

Who has given this research ethical approval?

This study has been approved by Ethics Committee Sri Lanka Medical Association and Sheffield Hallam University in U.K

What if you have a problem or question about the study?

If you have any problem regarding the study you can feel free to contact the Principal investigator whose name and address is given below.

Dr N.S.R.Hewageegana. Provincial Director of Health Services, #305, R H Gunawardana Road, Badulla
Phone 055 22 22823

[Interviewer asks if the respondent has any questions and provide the necessary clarification].

PART II: Certificate of Consent

Declaration of the Volunteer:

I have understood that the purpose of the study is to examine the factors leading to adolescent pregnancies. I have read the above information/ it has been read to me. I have had the opportunity to ask questions about it and questions that I have asked have been answered to my satisfaction. I consent voluntarily to participate as a subject in this study and understand that I have the right to withdraw from the study at any time without in any way affecting me.

.....

Signature of volunteer: _____ Date _____
Date/month/year

A copy of this ICF has been provided to the participant.

I have accurately read or witnessed the accurate reading of the assent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given assent freely.

Print name of researcher : - _____

Date : - _____

Telephone Numbers : - _____

3

My No. FHB/SH/2010-04

Yr Ref.No.:

P.O.Box : 589

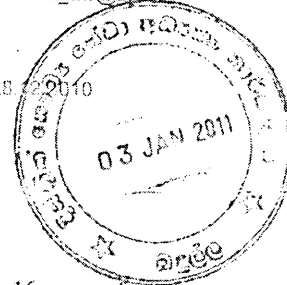


FAMILY HEALTH BUREAU
MINISTRY OF HEALTH

Telephones
Director : 696508
General : 696677, 699332

Fax : 696508
E-mail : fhb_dir@sl.lk

Date 28/12/2010



All Provincial Directors of Health Services,

Provision of Reproductive Health Care Services to children under 16 years of age.
Requirement to inform Child Protection Authority by telephone No 1929

A meeting was held on the 13th December 2010 regarding provision of Reproductive Health Care Services to children less than 16 years of age. This meeting was chaired by Dr. Ravindra Ruberu, Secretary, Ministry of Health.

At this meeting it was decided that all health personal should inform the Child Protection Authority in provision of Reproductive Health Care Services to children under 16 years of age through their hotline 1929.

Please be kind enough to ensure implementation of this decision by all health personal in your area.

Director MCH

Copy Regional Directors of Health Services.
Medical Officers of Maternal and Child Health.

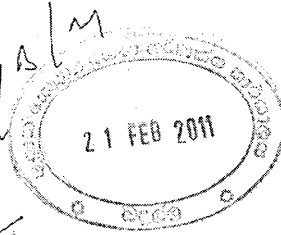
Mamoru
4/1/2011
Tom...
...

TO :
FROM :

Gen. Dir.

CR2/02/2011

Mo - Plaintiff
Sent to R.D.H.P. 11



7th February, 2011

Inspector General of Police,
Police Headquarters,
Colombo 1.

It has been brought to the notice of the Attorney General, by the Secretary to the Ministry of Health that Medical Officers and others serving in the Health Sector such as Midwives, have been questioned and arrested by the Police for not reporting cases of teenage pregnancy. As a result, it is stated that such personnel have expressed concern and fear to perform their duties as Medical Personnel.

Therefore, please bring the following matters to the notice of all Police Stations very early.

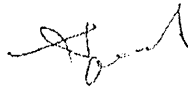
1. No Medical Officers or any member of the Health Sector should be arrested for failure to report a teenage pregnancy to the police as there is no such legal duty cast on them.
2. No member of the Health Sector should be arrested for providing medical advice to a teenager who is pregnant, as medical ethics make it imperative for them to give such advice.
3. No person should be arrested where it is disclosed that such person is the husband of a teenage mother, if the parties are living together as husband and wife when this matter is disclosed at the time of delivery.

[REDACTED]

However, the statement should be recorded from the father of the new born infant and submitted to me for necessary advice.

It has been brought to my notice that several young persons have been arrested and remanded at the time the wife was admitted for delivery notwithstanding the fact that they were living together as husband and wife, on the basis that it is a case of teenage pregnancy. This has caused concern to the Health authorities as it affects the mental condition of the patient admitted for child delivery.

Please take very early action in respect of this matter.



Palltha Fernando P.C.
Additional Solicitor General
for Attorney General

Annexure 5_A

Dependent variable under aged pregnancy of adolescent

Model	Unadjusted		Adjusted	
	Sig.	Odds Ratio	Sig.	Odds Ratio
<u>Socio demographic</u>				
<i>Ethnicity</i>				
Tamil	.014		.022	
Moors	.025	2.046	.084	1.801
	.025	2.046	.016	2.214
<i>Economy</i>				
Break even	.322		.723	
Deficit	.931	.980	.468	.822
	.176	1.518	.968	1.015
<i>Literacy</i>				
Not literate (cannot or difficult to read)	.002	2.970	.041	2.146
<u>Education and schooling</u>				
<i>Level of education</i>				
Secondary education	.294		.060	
Primary education	.120	3.262	.038	5.811
	.249	3.750	.639	1.847
<i>Opinion on schooling</i>				
Did not like school	.004	2.199	.122	1.700
<i>Perceived performance</i>				
School performance average or below average	.082	.556	.022	.383
<i>Ambition of a career</i>				
Not having an ambition	.021	1.667	.354	1.299
Relationship with mother	.004	2.392	.009	2.301
Discussion with mother	.009	2.017	.636	1.248
Teen happiness	.012	1.855	.36	1.026
<u>Attitude</u>				
Initiation of sex not wanted	.028	2.532	.197	.384
First Intercourse not wanted	.000	4.019	.003	3.345
<u>Knowledge and practice</u>				
knowledge on possibility of pregnancy in first intercourse	.032	1.608	.775	1.077
Biological: Age at menarche	.013	2.045	.042	1.914
<u>Partner</u>				
Partner age	.202		.845	
30 and over	.572	.776	1.000	.000
Under 19	.097	2.194	.562	1.389
Partner age gap				
Gap 6 to 9	.652	.214	1.000	
More than 10 years	.096	2.203	1.000	2.721
		r²		
1. Initiation of sex and First intercourse		.728		
2. Mother's relationship and Discussion with mother		.777		
3. Mother's relationship and teen happiness		.458		
4. Literate and opinion of schooling		.458		

Model had picked: Not literate vs opinion of schooling, intercourse not wanted vs initiation of sex, mother's relationship not very close vs not very easy to discuss with mother

Dependent variable unplanned pregnancy of adolescent

	Unadjusted		Adjusted	
	Sig.	Exp(B)	Sig.	Exp(B)
<i>Socio demographic</i>				
Ethnicity	.009	.605		
Tamil	.878	.952	.508	.80
Moor	.002	.271	.002	.27
Economy	.990	.998	.752	1.326
<i>Literacy</i>	.118	1.709	.873	3.345
<i>Education and schooling</i>				
Opinion of schooling	.101	1.548	.918	2.611
School performance	.250	.681	.355	1.309
<i>Attitude</i>				
Initiation of sex wanted	.002	3.923	1.636	9.407
Intercourse not wanted	.002	3.427	.002	3.52
<i>Partner</i>				
Partner age	.072	1.455	.967	2.191
Partner age gap	.268	1.133	.909	1.412
<i>Biological</i>				
Age at Menarche	.183	1.459	.837	2.545
<i>Relationship and Home</i>				
Pregnant adolescents relationship with mother	.016	2.063	1.142	3.726
Adolescent discussing with mother	.002	2.292	1.372	3.829
Happy as a teen	.000	2.383	.001	2.27

r²

1. Initiation of sex and First intercourse .728
2. Mother's relationship and Discussion with mother .777
3. Mother's relationship and teen happiness .458
4. Literate and opinion of schooling .458

Model has picked

Intercourse not wanted vs Initiation of sex not wanted

Not happy as a teen vs not discussing with mother and not very close to mother

Annexure 5c

Dependent variable unplanned pregnancy of partners' of pregnant adolescent

		Unadjusted		Adjusted	
		Sig.	Exp(B)	Sig.	Exp(B)
1	Married*				
	Marital status	.062	2.528	.666	1.337
2	Education	.032		.042	
	Advance Level*				
	Secondary	.691	1.248	.964	1.026
	Primary	.019	7.467	.039	6.271
3	Opinion of schooling				
	Like school very much/to some extent*				
	Neither like or dislike	.142	2.190	.382	1.847
4	First intercourse wanted*				
	First intercourse not wanted	.017	2.852	.021	3.142
5	Know at least one method of contraception*				
	Do not know at least one method	.075	2.158	.019	3.099
6	Did not use contraceptives*				
	Used contraceptive	.001	6.093	.002	6.248
7	Age 18 and over*				
	whether the pregnant adolescent was 18 years or younger	.008	2.724	.006	2.995
8	Age gap	.044		.302	
	5 years or less*				
	6 to 9 years	.064	.488	.065	.466
	10 years or more	.034	.310	.024	.259
9	Age of partner	.078		.677	
	Age 20to 29*				
	More than 30	.067	.145	.457	.379
	19 or less	.218	2.358	.622	1.519

*Base Line

Annexure 5_D

Dependent variable sexually active school boys				
Factors related to sexual activity	Unadjusted		Adjusted	
	Sig.	Exp(B)	Sig.	Exp(B)
Economy	.246	.761	.552	.864
<i>Family</i>				
place of living of mother	.001	.475	.001	17.040
<i>Schooling</i>				
Having an ambition	.141	.498	.065	.378
<i>Risky behaviours an attitudes</i>				
Smoked	.009	.439	.829	.918
Using intoxicating Substances	.002	.373	.003	2.688
<i>Attitudes</i>				
towards relationship	.002	.375	.051	.504
towards sexual relationship	.003	.291	.000	4.020

r²

Smoking and using intoxicating substances .485

Model has picked using intoxicant due to lower p value than smoking

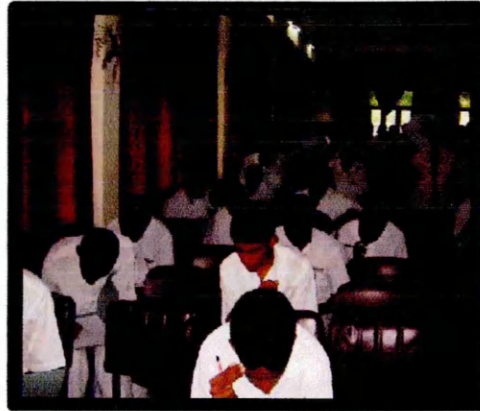
Annexure 5_E

Dependent variable sexually active school girl				
Factors related to sexual activity	Unadjusted		Adjusted	
	Sig.	Exp(B)	Sig.	Exp(B)
<i>Family and home</i>				
Siblings having children	.001	8.706	.000	12.271
Relationship with father	.056	2.236	.038	.394
father living abroad	.005	9.276	.061	.164
Home environment	.017	.411	.309	2.158
<i>Attitudes</i>				
towards relationships	.000	5.023	.000	.191
towards sexual relationship	.003	4.217	.000	5.846
towards importance of health	.001	4.120	.002	3.876
towards responsibility on health,	.017	2.768	.149	.508

Annexure 6: Comparing present study with other studies in Sri Lanka

Area	Present study				study	Finding
Marital status	Pregnant adolescent	Partners of pregnant adolescent	Parents of pregnant adolescents		DHS 2006/2007 15-49 years	
Married	87.8	87.3	98.8			92.6
Living together	11.8	12.7	0.0			1.0
Divorced/separated	-	-	0.8			2.7
Widowed	-	-	0.4			3.7
Education	Pregnant adolescent		ool adolescent		DHS 2006/2007 15-49 years	
	ther	Father	ther	Father		
No education	15.6	13.1	1.7	1.1		4.0
Primary	26.7	18.7	5.3	4.2		15.0
Secondary	31.9	38.1	12.7	7.4		48.7
Passed G.C.E (O/L) and her	16.7	15.6	76.6	81.5		32.3
Ethnic Group	Pregnant adolescents	Pregnant adolescents <18 years	Partners			
Sinhalese	76.6	66.9	83%			77.7
Tamil	11.7	15.7	5%			11.3
Sri Lanka Moor	11.7	17.4	12%			10.4
Burgher	-	-				0.3
Malay	-	-				0.3
Other	-	-				0.1
Smoking	Boys 9% girls 1%				UNICEF(2004)	Boys 6% to 18% girls 1% -6%
					ADIC (2003)	Boys 9% Girls 0.7%
Alcohol	Boys 11% girls 0.3%				UNICEF(2004)	Boys 24% girls 10%
Knowledge attitude and reproductive health	Very low				UNICEF (2004); Ratnayake (1999); Silva et al. (1997)	Very low
Sexually active	Boys 9% girls 2%				UNICEF (2004)	Boys 14% girls 2%
					Basnayake(1996)	3.1% (15 to 17 years)
Sexual abuse	Male(partners adolescent) 3%	9%	Girls (pregnant)		UNICEF (2004)	Boys 14% girls 8%
					Thalagala (2003)	5.1 % (8 to 14 years)
Approving premarital sex	Males (partners adolescent) 3%	23%	Girls (pregnant)		Basnayake 1989	Males 15 % females 6%)

Data Collection from School adolescents



Data collection from pregnant adolescents

Supervisor cross checking data



Innovative approach ARE

