

## Adolescent sexual practices and contraceptive usage

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## Abstract

**Introduction:** Adolescence is a critical period of development, as adoption of unhealthy risk behaviours such as unprotected sex, smoking and drug abuse, avoiding contraceptive methods will lead to long standing health and socioeconomic consequences. Therefore information is needed about the sexual practices and contraceptive usage of adolescents and young adults to develop interventions in the community.

This study was undertaken to describe and compare the sexual practices, knowledge and usage of contraceptives by adolescents and young adults in selected urban and rural settings.

**Method:** This cross sectional descriptive study was conducted among young adults aged less than 21 years at the time of interview in three settings in both rural and urban areas. The study subjects were students from universities, technical colleges and garment factory workers representing both rural and urban areas.

The data was collected using a pretested self administered questionnaire during June 2007 to August 2007. Information collected included marital status, gender and the level of education, first sexual relationship (age, partner, contraception used), current contraceptive practices and knowledge about contraceptive methods. The data was analysed using SPSS 10.1 statistical package. Informed consent was obtained from all participants.

**Results :** There were a total of 1258 subjects who had returned the completed questionnaires. Out of them there were 290 garment factory employees, 480 technical college students, and 488 university students. The percentage of females was 58.9%. The mean ages of the males and the females of the total population were 20.75(SD 1.13) years and 20.55(SD 1.63) and it was similar in the three settings. The level of education was highest among the undergraduates lowest among garment factory workers.

Out of the population 303 (24.1%) were sexually active. It was significantly higher among males (33.5% than females (17.0%). Both among male and females this trend was significantly more common among garment factory workers.

Sexual activity of the unmarried and the premarital sexual practices of married subjects are shown in the table. 6. 17% of females and 33.5% of males were sexually active before marriage. 90% male garment factory workers were sexually active. In contrast the proportion



of male Technical college and University students who were sexually active prior to marriage were 30.8% and 22.5%. The differences were statistically significant.

It was found that 42.6% of female garment factory workers had premarital sexual relationships, while the proportion in universities and technical colleges were 3.5% and 6% respectively.

The overall mean age of sexual debut was 18.4 years. Females and males had sexual debut at 19.4 years and 17.7 years respectively.

The knowledge about prevention of HIV and other sexually transmitted infections was found to be unsatisfactory. A majority of the technical college students knew that male condoms can be used to prevent STIs. Most of the population knew that sterilisation procedures could not prevent HIV. 21.7% of the garment factory workers believed that IUCD could prevent sexually transmitted infection.

When compared to the knowledge on contraceptive methods of minimising the risk of STI, males are found to have better level of knowledge as compared to their female counterparts in every institute. University males had the best level of knowledge (77.5%) while the university females had the worst (18.0%). The differences of knowledge noted between the different institutions were statistically significant.

If they were given the opportunity of selecting source for sexual education 32.8% would have selected schools, and 12.8% would have preferred to learn from their friends.

**Conclusions:** Out of school teenage and young adult males have their first sexual relationship at an earlier age than their female counterparts.

A significant proportion of males of the age group had their first relationship with commercial sex workers. This is prominent among garment factory workers.

A larger proportion of garment factory employees are sexually active compared to students of technical colleges and universities. A majority of them have heterosexual relationships.

The knowledge about different contraceptive methods among this population is inadequate. Males have better awareness than females about methods of preventing the HIV infection and STIs.



## Introduction

Adolescence is a critical period of development, as important behaviour patterns are learned during this period of life, and these patterns can have long-term consequences for the entire lifetime in terms of health and welfare. In particular, adoption of unhealthy risk behaviours such as unprotected sex, smoking and drug abuse, avoiding contraceptive methods will lead to long standing health and socioeconomic consequences. Therefore information is needed about sexual practices and contraceptive usage of adolescents and young adults to develop interventions in the community.

Teenage pregnancy is universal in all known societies past and present. One in four girls in the world becomes a mother before the age of 19 years<sup>1</sup>. Every year, in excess of 14 million teenage girls, mostly living in non-industrialized countries give birth to a child<sup>1</sup>. In 1996, in Sri Lanka there were 139 births to mothers between the ages of 10 to 14 years and 28,271 births to those between the ages 15 to 19 years<sup>2</sup>. This accounted for 8.3% of all births that year<sup>2</sup>. Alarming 22.2% of maternal deaths due to illegal abortions were in this age group<sup>2</sup>. In 2001, of the pregnant women who received antenatal care from public health midwives, 7.8% were teenagers<sup>3</sup>. This urges attention to implement strategies to increase the contraceptive uptake by teenagers. Therefore reasons for non-usage of contraceptive methods, by sexually active adolescents and young adults need to be evaluated.

Most of the studies done in Sri Lanka about contraception usage by adolescents and young adults were in pregnant women of this age group attending antenatal clinics. In their study on teenage pregnant mothers Gunarathna et al reported that 62.7% of teenage pregnant mothers were ignorant about using contraception<sup>1</sup>. Further they showed a marked reduction in usage of contraception between teenage pregnant mothers and adults<sup>4</sup>. In addition, Goonewardene et al demonstrated that 48.4% of teenagers between 13 and 16 years would have delayed the pregnancy if they had been counselled<sup>2</sup>. Further, he found that only 51% of teenagers aged between 13 and 16 years had thought about future contraception<sup>5</sup>. Linganathan in 2006 demonstrated that only 24.3% of teenage mothers are aware of contraception compared to 46.3 in the control group<sup>3</sup>. Thus further investigation into the knowledge and the sources of information accessible to the adolescents is needed.

The median age for first sexual intercourse in the United Kingdom dropped during the early 1990s and is now stable at around 16 years for both men and women<sup>1</sup>. Quite surprisingly the



mean age of sexual debut in Sri Lankan schooling adolescents has been reported as 15.3 years for males and 14.4 for females<sup>2</sup>. Further the same study showed a significant difference in the prevalence of heterosexual experience among different sexes of adolescents (14% among boys Vs 2% among girls)<sup>8</sup>. This raises the possibility of males being exposed to high-risk sources such as commercial sex workers. Thus the situation demands further evaluation of sexual practices of our adolescents.

Traditionally adolescence has been defined as the period of life extending from the age 10 to 19 years. But we have included young adults of less than 21 years as the behaviors that we are collecting information about are largely behaviors that began in the past, so participants are reporting on behaviors over prior (adolescent) years.

This study was undertaken to describe and compare the sexual practices, knowledge and usage of contraceptives by the adolescents and young adults in selected urban and rural settings.

## **Method**

**Study design:** The study was a cross sectional descriptive study, done in six groups.

**Study location:**

The study was conducted in the Universities of Kelaniya(UNK) and Rajarata(UNR), Technical collages at Kurunegala and Colombo, Garment factories at Ja Ela and Kurunegala.

**Study population:**

Two hundred first year students each from the University of Kelaniya and the University of Rajarata.

Two hundred first year students each from the Colombo Technical College and the Kurunegala Technical College.

Four hundred garment factory workers, two hundred each from Ja Ela and Kurunegala.



**Inclusion criteria:**

Subjects less than 21 completed years.( borne in 1988 or later)

**Study period:**

June 2007 to August 2007

**Variables:**

Age in completed years was calculated using date of birth. Personal information was collected regarding the marital status, gender and the level of education. Information about the first sexual relationship was also gathered (age, partner, contraception used). The subject's current contraceptive practices and their knowledge about these methods were assessed.

**Data collection:**

Methods of data collection:

A self administered pretested questionnaire was used to collect the data.

In order to ensure the reliability and the validity of the collected data the questionnaire was developed in English and translated into Sinhalese. This was pre tested in a comparable group

**Data analysis:**

The data was analysed using SPSS 10.1 statistical package.

**Ethical consideration:**

The questionnaire was administered to consenting subjects. The purpose of the study and the subject's right to refuse to participate in the study was explained to the prospective participants. Confidentiality of the information obtained from the subject was maintained. Data through which individuals could be identified was not collected. Raw data was only accessible to the principal investigator. Ethical clearance was taken from the Ethical Review committee, Faculty of Medicine, University of Kelaniya.



## Results

### 4.1 Socio demographic data

The study was conducted in six institutions.

- Faculty of Management Studies and Faculty of Social Sciences of the University of Kelaniya (UnK)
- Faculties of Management Studies and Social Sciences of the University of Rajarata, (UnR)
- A Garment factory from the Katunayake Free Trade Zone
- A Garment factory from Kurunegala
- Technical college of Kurunegala
- Technical college of Maradana.

There were a total of 1258 subjects who had returned the completed questionnaires. Out of them there were 290 garment factory employees, 480 technical college students, and 488 university students (table 1)

A majority of the study population were females (58.9%). This pattern was evident in both garment factories and the universities, while in technical colleges the majority were males (57.9%)(Table 2).



**Table 1. Distribution of the population among different institutions**

	Garment	Technical	University	Total
Garment factory Katunayake	136 (10.8%)			136 (10.8%)
Garment factory Kurunegala	156(12.2%)			156(12.2%)
Technical - Maradana		249(19.8%)		249(19.8%)
Technical - Kurunegala		231(18.4%)		231(18.4%)
University- Kelaniya			285 (27.7%)	285 (27.7%)
University- Rajarata			203 (11.1%)	203 (11.1%)
<b>Total (percentage out of the total population)</b>	<b>290 (23.1%)</b>	<b>480(38.2%)</b>	<b>488(38.8 %)</b>	<b>1258(100%)</b>

**Table 2. Sex distribution of the population**

			SETTING			
			Garment	Technical	University	Total
sex	female	Count % within SETTING	235 82.5%	201 42.1%	300 61.6%	736 58.9%
	male	Count % within SETTING	50 17.5%	276 57.9%	187 38.4%	513 41.1%
Total		Count % within SETTING	285 100.0%	477 100.0%	487 100.0%	1249 100.0%



The population contained subjects aged between 15 and 23 years. The mean ages of the males and the females of the total population were 20.75(SD 1.13) years and 20.55(SD 1.63) years respectively. The mean ages of the Garment factory employees, technical college students and university students were 20.58 years (SD 1.38), 20.43 years(SD 1.66) and 20.95 years (SD .88). (Table 4)

Setting	Mean	N	SD
Female - (Total)	20.75	736	1.13
Male - (Total)	20.55	513	1.62
Garment employees	20.58	285	1.38
Technical college students	20.43	477	1.66
University students	20.95	487	.88
<b>Total</b>	<b>20.67</b>	<b>1249</b>	<b>1.36</b>

Highest level of education	Garment employees	Technical College students	University Students
GCE O/L	57.9%	15.3%	
A/L	21.4%	46.1%	
Beyond A/L	1%	36%	100%

As shown in table 5, Garment factory employees had a poor level of education compared to the other settings.

#### **4.2 Sexual relationships**

Out of the population 303 (24.1%) were sexually active prior to marriage, and of them 297 of whose details were available were analyzed.

Sexual activity of the unmarried and the premarital sexual practices of married subjects are shown in the table. 6. 17% of the females and 33.5% of males were sexually active before marriage. 90% male garment factory workers were sexually active. In contrast the proportion of male Technical college and University students who were sexually active prior to marriage were 30.8% and 22.5%. The differences were statistically significant (P <.000). (Table 6)



It was found that 42.6% of female garment factory workers had premarital sexual relationships, while the proportion in universities and technical colleges were 3.5% and 6% respectively.

The overall mean age of sexual debut was 18.4 years. Females and males had sexual debut at 19.4 years and 17.7 years respectively. When considering the age of sexual debut within different sexes it is evident that males have sexual debut earlier than the females. On the other hand the age of sexual debut is lowest among technical college students.(Table 7)

<b>Table 6. Presence of sexual relationships of the study population</b>					
		<b>Setting</b>			
<b>Sex</b>		<b>GF</b>	<b>TC</b>	<b>University</b>	<b>Total</b>
<b>female</b>	No relationships	135 54.7%	194 96.5%	282 94%	611 83%
	Previous sexual relationships	100 42.6%	7 3.5%	18 6%	125 17%
	<b>Total of females</b>	<b>235</b> <b>100%</b>	<b>201</b> <b>100%</b>	<b>300</b> <b>100%</b>	<b>736</b> <b>100%</b>
<b>male</b>	No sexual relationships	5 10%	191 69.2%	145 77.5%	341 66.5%
	Previous sexual relationships	45 90%	85 30.8%	42 22.5%	172 33.5%
	<b>Total of males</b>	<b>50</b> <b>100%</b>	<b>276</b> <b>100%</b>	<b>187</b> <b>100%</b>	<b>513</b> <b>100%</b>
<b>(P&lt;.000)</b>					



<b>Table 7. The age of sexual debut in different institutions</b>				
<b>Sex</b>	<b>Setting</b>	<b>Mean Age</b>	<b>N</b>	<b>SD</b>
<b>Female</b>	Garment	19.18	65	1.78
	TC	19.00	5	1.00
	University	20.53	17	1.62
	<b>Total</b>	<b>19.44</b>	<b>87</b>	<b>1.79</b>
<b>Male</b>	Garment	17.83	23	2.59
	TC	17.76	66	2.72
	University	17.35	37	3.83
	<b>Total</b>	<b>17.65</b>	<b>126</b>	<b>2.98</b>
<b>Total</b>	Garment	18.83	88	2.10
	TC	17.85	71	2.65
	University	18.35	54	3.46
(p<.001)	<b>Total</b>	<b>18.38</b>	<b>213</b>	<b>2.75</b>

We described the type of sexual relationship during sexual debut. The total number of subjects who had a homosexual partnership during their sexual debut is 10.2%. But once analysed according to the institution it is apparent that 20.0% of university students had a homosexual relationship in their first relationship (Figure 1).

Table 8 shows the partner for the first sexual relationship. 40% of male garment factory workers have had their first sexual relationship with commercial sex workers.

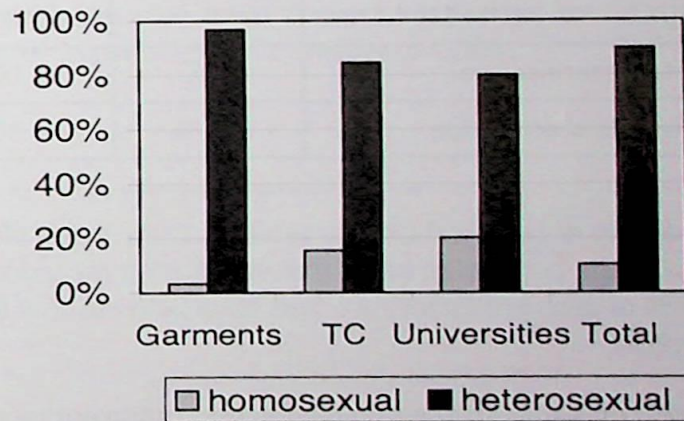


		Setting		
		GF	TC	University
Males (p .003)				
	Girl friend	42.3%	54.9%	53.9%
	friend	6.7%	17.1%	20.5%
	relative	11.1%	14.6%	17.9%
	Commercial sex worker	40%	13.4%	7.7%
	Total	100%	100%	100%

#### 4.3 Knowledge and Contraceptive usage

172 (64%) subjects, who had heterosexual relationships, have not used modern methods of contraception. Out of the 172 people who have not used modern contraceptives during heterosexual relationships, 32% has used natural family planning and another 30.3% did not think it was needed.

The knowledge about prevention of HIV and other sexually transmitted infections was assessed by asking to name the appropriate contraceptive methods which provide dual protection. There were 1249 subjects who had responded, and either the usage of the male condom or female condom was taken as the correct answer.



**Figure 1. Type of the first sexual relationship**



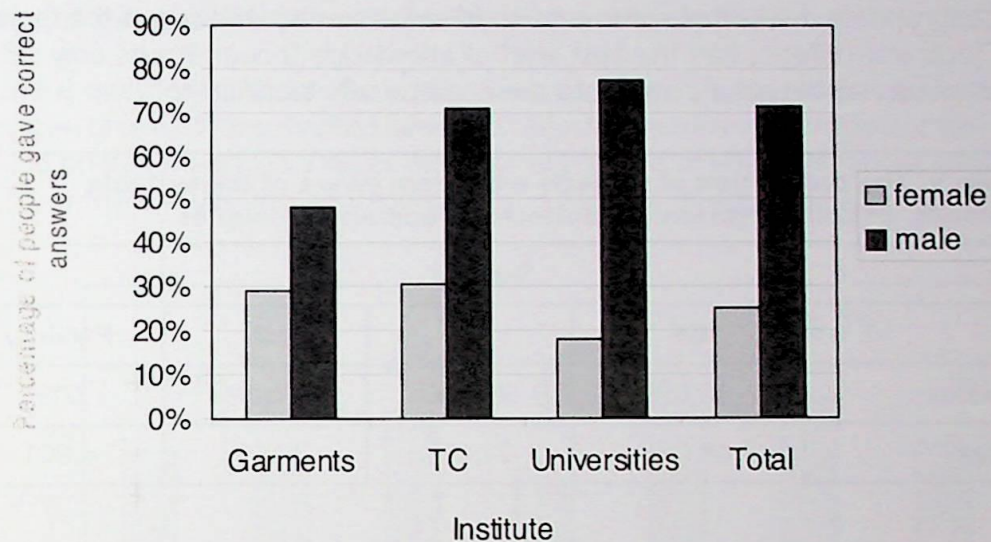
<b>Table 8. Proportion of subjects who believed that each contraceptive method would prevent them from contacting STI</b>				
	<b>Setting</b>			
<b>Contraceptive method</b>	<b>GF</b>	<b>TC</b>	<b>University</b>	<b>P value</b>
Male condom	26.6%	52.3%	40.8%	<.001
COCP	6.9 %	3.5 %	2.9 %	.017
Female condom	10%	11%	4%	<.001
DMPA	6.5 %	2.9 %	1.5 %	<.001
Implants	2.4%	1%	.4%	.085
Em contraceptive pill	2.8%	1.4%	.4%	.022
IUCD	21.7 %	3.4 %	3.9 %	<.001
Male sterilisation	1 %	.4 %	0 %	.084
Female sterilisation	2.4 %	.8 %	.4 %	<.001

A majority of technical college students knew that male condoms can be used to prevent STIs. Most of the population knew that sterilisation procedures could not prevent HIV. Interestingly 21.7% of garment factory workers have believed that IUCD could prevent sexually transmitted infection.

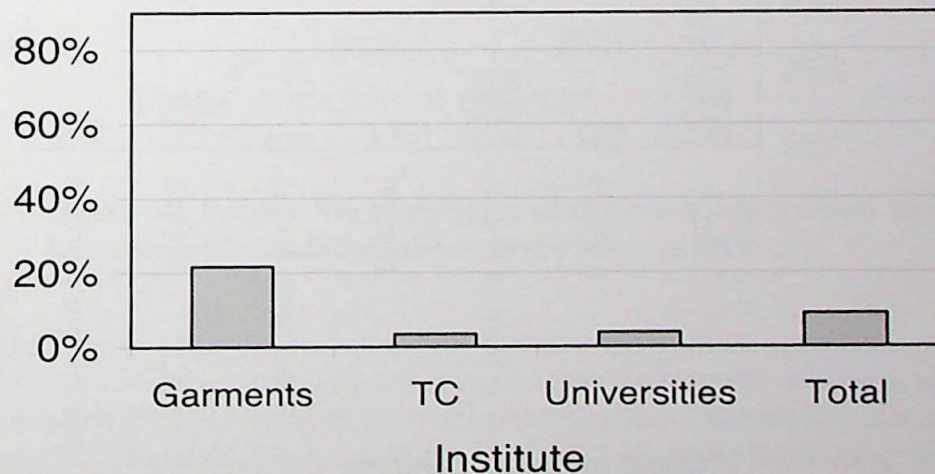
When compared to the knowledge on contraceptive methods of minimising the risk of STIs, males are found to have better level of knowledge compared to their female counterparts in every institute. University males had the best level of knowledge (77.5%) while the university females had the worst (18.0%). The differences of knowledge noted in the different institutions were statistically significant.

Subject's knowledge about contraceptive methods suitable for adolescents and unmarried couples were asked. The responses had four correct answers. If they had marked one correct answer it was taken as a correct response. Most of the male University students (79.1%)





**Figure 2. Percentage of subjects who gave correct responses to the question on methods of preventing HIV (Males  $p < .001$ , females  $p .002$ )**



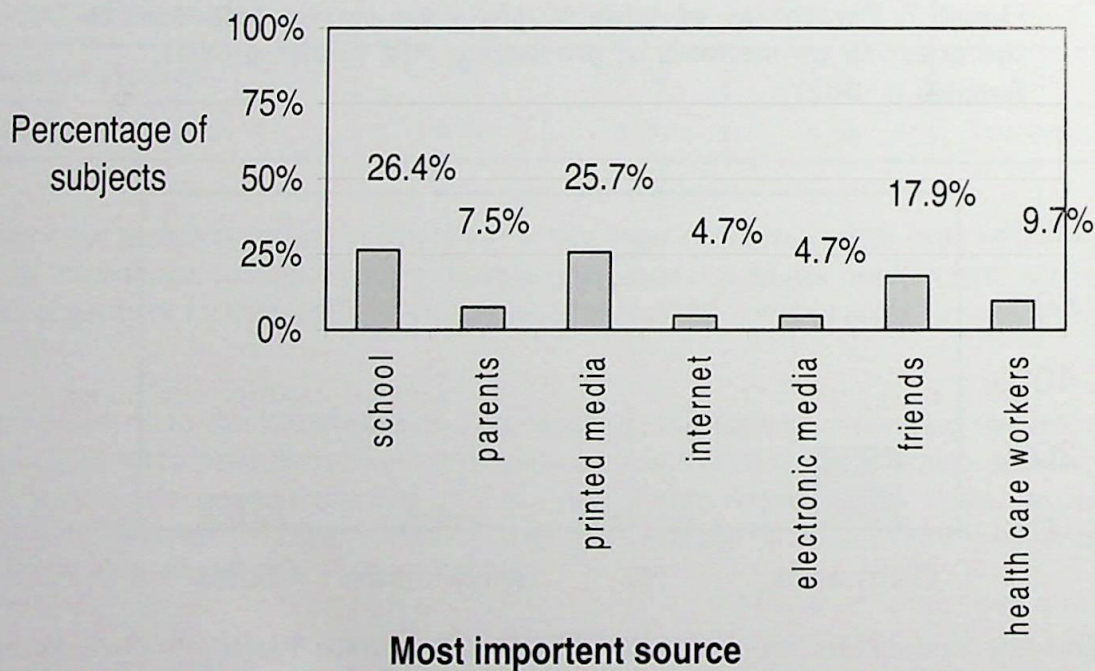
**Figure 3 The proportion of subjects who believed the IUCD can be used to prevent transmission of HIV (  $P < .001$  )**



knew the appropriate method of contraception for adolescents while out of the females those from the Technical colleges had the best level of knowledge though it was only 38.8%. The differences observed between institutions were statistically significant.

**Table 9. The proportion of subjects who were aware of the suitable methods of contraception of adolescents/unmarried couples**

	Setting			P value
	GF	TC	UN	
<b>females</b>	30.6%	38.8%	27.0%	.019
<b>males</b>	48.0%	71.4%	79.1%	<.001

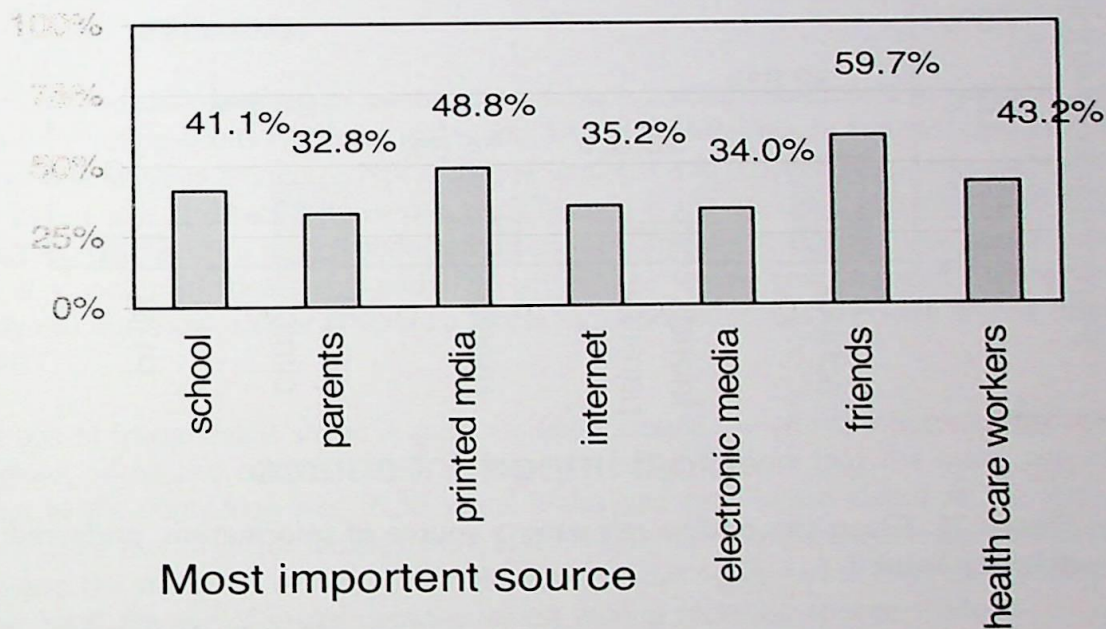


**Figure 9**



#### 4.4 Source of information about sexuality and contraception.

Subjects were questioned about the primary source of knowledge about the contraception and prevention of sexually transmitted infections. Most of them have identified school education (26.4%) and printed media (25.7%) as their primary source of education about contraception. Learning from friends was also an important form (17.9%) of acquiring knowledge

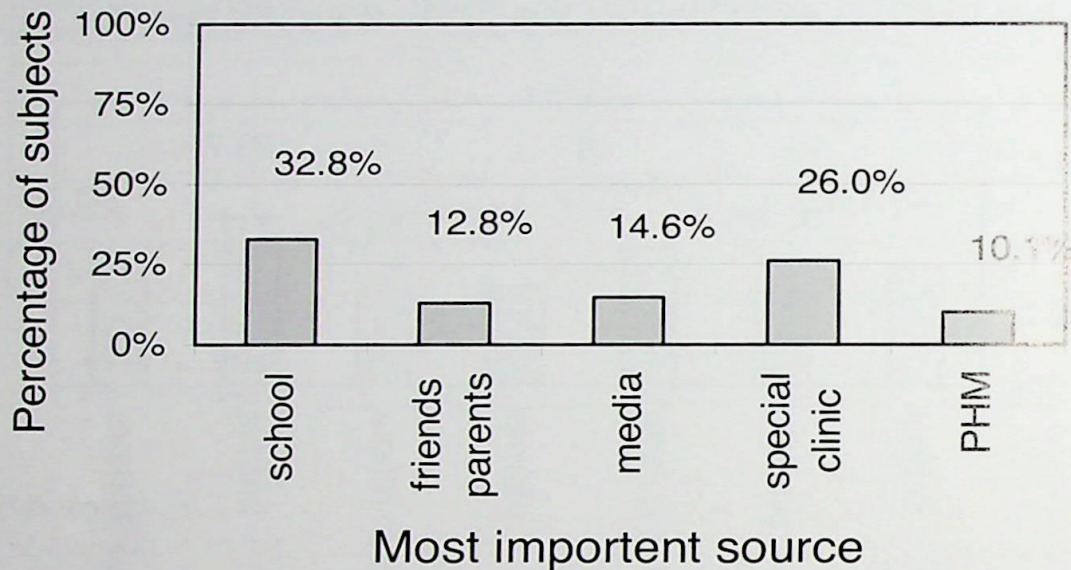


**Figure 10. Proportion of subjects of the main information source who had correct knowledge about prevention of HIV**

The correct knowledge on prevention of sexually transmitted infections with the primary source of information was compared. It revealed that the subjects who have identified learning from friends and printed media has the best knowledge about prevention of sexually transmitted infections (59.7% and 48.8% respectively). Only 41.1 % of the subjects who identified school education as their primary source of information about contraception knew the proper method of prevention of sexually transmissions.



The study participants were asked about their preferred methods of information source about sexuality and contraception. A majority of them (32.8%) would have preferred to learn about these from school, while another 26.0% would have preferred to learn from special clinics in a health care setting.



**Figure 11. Given the option selecting a source of information, preferred primary source**

## Discussion

Adolescents' fertility regulation and pregnancy prevention are among the major health care challenges of the 21st century in developing and developed countries<sup>1</sup>. Unintended pregnancies and sexually transmitted infections (STIs) are the main

consequences of adolescent sexual risk behaviour. Early sexual activity, with casual partners, particularly when associated with inadequate use of contraception, has serious short and



long-term health-compromising consequences especially when such risks happens before young people are developmentally equipped to handle the consequences.

This study was designed to examine the differences in sexual practices, knowledge on contraception among out of school adolescents coming from three different educational backgrounds, universities, technical colleges and garment factory workers.

### **5.1 Sexual relationships**

Premarital sexual relationships were quite common among adolescents in Garment Factories especially young adults (90% for males and 42.6% for females). In contrast the prevalence of sexual relationships among technical college students and university students were quite low. The differences observed may be due to difference in the educational background of the two populations. In 2004 a study conducted by UNICEF revealed that 28% have sexual experience out of school male adolescents and 17% out of their female counterparts<sup>8</sup>. Further the same study did not show a clear difference in the incidence of sexual exposure to the educational level<sup>8</sup>.

The age of sexual debut shows a great variation around the world, influenced greatly by the religious, social and cultural beliefs. It was interesting to note that the mean age of sexual debut in the population was 18.38 years. Males had early sexual debut at the age of 17.65 years while the mean for females were at 19.44. When considering the age of sexual debut between the sexes it is evident that males have sexual debut earlier than the females. On the other hand the age of sexual debut is lowest among technical college students.

### **5. 2. Knowledge on contraception**

The usage of contraception by the sexually active adolescents and young adults in Sri Lanka is inadequate. A study in Galle among teenage pregnant mothers show only 9% of contraception usage while in Peradeniya it was 26%<sup>4,1</sup>. These studies showed a lack of awareness as the main reason for the nonusage of contraception.

The study analyzed the knowledge of different contraceptive methods of our participants in two aspects: about the methods of preventing STIs, and the methods for young adults and unmarried people. The demonstrated level of knowledge on various contraceptive methods



in preventing STIs varied greatly between different contraceptive methods and different intuitions. A majority from the universities and technical colleges did not know that male condoms can prevent STIs. Female condoms being very rare in this country, its effect as a barrier method was known only by a minority. But a significant proportion of garment factory workers believed the IUCD (intrauterine contraceptive device) could also prevent STIs. Moreover when compared to the proportion of subjects who gave correct responses to this question, males had a superior level of knowledge. These findings were on par with the study of Gunarathna KA et al<sup>4</sup>. This study revealed a better level of knowledge about condoms and COCP (combine oral contraceptive pill) and a poor level of knowledge about IUCD among teenage mothers. In addition this particular study demonstrated a better understanding about contraception among their older counterparts.

Knowledge about contraceptives suitable for the young adults and unmarried people was assessed in a similar manner. Knowledge of one method was acceptable. Males always showed a clear predominance in the level of knowledge within each institution. Male university students as expected had a better level of understanding about the suitable contraception method for this group. Female university students have a poor knowledge in contrast to the literature where most may have a better contraceptive use concomitant to higher educational and socio-economic circumstances<sup>2,3,4</sup>. The reasons for the higher level of knowledge among technical college students needs to be further probed behind the better knowledge shown by the technical college staff needs to be evaluated.

### **5.3 Source of information about sexuality and contraception.**

The subject's perceived view of their primary source of knowledge was assessed. Most identified school curricula as their primary source of information, as expected. Though the electronic media produces many programs on sexuality and contraception, only very few have perceived of it as an important information source.

The study compared the accuracy of the knowledge of the subjects with the primary information source. Surprisingly, only 41% of subjects who mentioned schools as their primary information source had a reasonable knowledge on contraceptive methods to prevent HIV. Moreover more than 50 % of the subjects who identified friends as their primary source of information knew about proper methods of HIV prevention. This opens the discussion about the best possible methods of dissemination of information about sexuality and contraception to the



adolescents and young adults. It will be better if the education programs are directed through peers to reach the target population as it seems to be more effective.

If adolescents and young people were given the opportunity for selecting an institution for sexual education 32.8% would have selected schools. Only 12.8% would have preferred for such information from friends. This contradicts the previous finding that most of them had learned about sexuality from friends and the quality of the information received is fairly accurate.

## Conclusions

- Out of school teenage and young adult males have their first sexual relationship at an earlier age than their female counterparts.
- A significant proportion of males of the age group had their first relationship with commercial sex workers. This is prominent among garment factory workers.
- A larger proportion of garment factory employees are sexually active compared to students of technical colleges and universities. A majority of them have heterosexual relationships.
- The knowledge about different contraceptive methods among this population is inadequate. Males have a better awareness than females about methods of preventing HIV infections.
- The poorer understanding of contraceptives by the university females about contraceptives need to be further evaluated. Mechanisms to improve the level of understanding about contraceptives should be implemented.
- The retained accurate information given through school curricula seems to be inadequate.
- Though we have a well established primary health care system, it has been utilized minimally by the young adults and adolescents to gain information about contraception.



- The knowledge gathered from peers is an important source for adolescents and young adults

## **Recommendations**

- More emphasis should be given to the preferred media by the adolescents and young adults in educating them on contraceptive methods.
- As the sexual debut in adolescents is during schooling age, school **curricula** should have more emphasis on sex education and contraception
- Strategies should be developed to maintain the accuracy of the **information** given through electronic and printed media.
- Special clinics may be helpful to address the sexual health issues of adolescents



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