



KNOWLEDGE ABOUT REPRODUCTIVE HEALTH AND REPRODUCTIVE TRACT INFECTIONS (RTIS) AMONG ADOLESCENT STUDYING IN RANCHI WOMEN'S COLLEGE OF TRIBAL STATE, JHARKHAND

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ABSTRACT

Background: Adolescence is a crucial stage of life with unique health needs. The silence over reproductive health needs make adolescents particularly girls vulnerable to easily preventable life-threatening conditions. **Objectives:** To assess the knowledge level of girls of intermediates and comparison of the same among the three streams (arts, science & commerce). **Methods:** A cross sectional study was conducted for a period of six weeks among 150 students. A pre-tested semi-structured questionnaire was used to collect the data. Scoring was done to assess the knowledge level. The statistical test used was ANOVA and post hoc test. **Results:** More than half of subjects had correct knowledge regarding menstruation normal interval, normal duration and source of bleeding. Still 4.7% thought menstruation to be a curse. Also 66% of study subjects had no idea of the time when the risk of pregnancy was highest. Only 11.3% knew that pregnancy can be confirmed at home itself. The most common consequence of teenage pregnancy known was low birth weight baby. In context of RTI more than half of subjects gave no response. Unprotected sexual intercourse was the most common cause of HIV known but the mode of prevention was known to few. OCP was commonly known contraceptive with the most common purpose to be to prevent pregnancy. Abortion was found to be another neglected portion of reproductive health. **Conclusions:** Overall knowledge level was low in all the three streams with significant difference between science and commerce students.

KEYWORDS : Adolescent, Menstruation, RTI, Abortion

INTRODUCTION

A good health in adolescent girls leads to healthy reproductive lives which ensure safe pregnancy and consequently a healthy child. It is well recognized that adolescents have particular health needs that differ in important ways from those of adults, and gender equity is an essential component of efforts to meet those needs. This study was conducted to assess the knowledge level of intermediate (+2) girl students of various streams (art, science and commerce) about reproductive health and RTIs.

MATERIAL AND METHODS

A cross sectional study was conducted among adolescent girls who were intermediate students in Women's College. The duration of study was six weeks. Study subjects were chosen from all three streams of intermediate students. Due to time constrain and lack of resources the sample size set was 150. In order to obtain the sample, random sampling and Probability Proportional to Size (PPS) sampling were used. For this, list of all students from each stream were taken. Then PPS was used to determine the number of students from each stream. Finally simple random sampling method was used by random number table to draw the desired number of students from each stream. Thus, 58 students of art stream, 47 of science stream and 45 of commerce stream were selected. The tool used for data collection was a pre-tested structured questionnaire. For each question, the correct answers were given score 1 while score was 0 for incorrect response as well as for no response. Hence, maximum score was eighty five with minimum score zero. The score was further categorized into four knowledge levels as follows.

Score 0-33 (<40%): Low knowledge level
Score 34-51 (40-60%): Average knowledge level
Score 52-68 (61-80%): Satisfactory knowledge level
Score >69 (>80%): High knowledge level

Analysis of variance and post hoc test was done to test the difference in knowledge score. The p value of <0.05 was

considered to be significant.

Ethical approval was obtained from Institutional Ethics Committee.

RESULTS

Most of the students were of age 16 years (52%) with mean age being 16.58(0.68). Majority of them were Hindu (74.7%) followed by Muslim (10.7%) and were non-tribal (78.7%). More than half came from rural area (53.3%) and belonged to nuclear family (59.3%). Though highest number of both mother and father had attained secondary education, most of the mothers were homemakers while most of the fathers were self-employed. According to modified BG Prasad classification 2017, socio-economic status of most of the students was that of class 4.

Regarding knowledge about menstruation, though majority knew that this was a normal process still 4.7% thought it to be a curse. Most of the students didn't know the cause of menstruation but the fact that source of bleeding was uterus was known to more than half of them. Nearly equal number of students had correct knowledge about menstruation duration and interval. Majority didn't know the normal amount of blood loss during menstruation. Also 66% of students had no idea of the time when the risk of pregnancy was highest. Missed periods was the most common symptom of pregnancy known. Only 11.3% knew that pregnancy can be confirmed at home itself. The correct knowledge about egg formation, sperm formation and meaning of fertilization was found in 51.3%, 38.7% and 28.7% of students respectively. Except four of students, all knew that hug don't cause pregnancy. Low birth weight baby and anaemia in mothers were most common consequences of teenage pregnancy known. The fact that Reproductive Tract Infection (RTI) is actually a condition where micro-organism infects the genitalia was known to only 16% of students while another 16% thought it to be caused in girls practicing sexual intercourse. Very few had knowledge about the symptoms of RTI. Sixty two percent of students had

no idea whether RTI can be treated or not. Also 93.3% of them not even knew the name of any RTI. Majority (85.3%) didn't know the cause of RTI as well as its long term consequences. Five percent of students still thought that kissing cause HIV infection. The correct modes of prevention of HIV infection was known to approximately 20% of students only. OCP was the most common contraceptive method known. Though nearly 50% knew that contraceptives prevent pregnancy, only 2.7% knew its importance in preventing STD too. Nineteen students believed that contraceptives cause weakness. More than half of the students had no knowledge about emergency contraceptives. Regarding abortion only five students knew the correct time period for legal abortion while nearly 60% had no idea of indications as well as place where legal abortion can be done. (Table 1)

Table 1: Knowledge about reproductive health and RTI (n = 150)

Variables	Number (%)	
Knowledge about Menstruation		
Menstruation	Normal process	116 (77.3)
	Pathological	2 (1.3)
	Curse	7 (4.7)
	Don't know	25 (16.7)
Cause of menstruation	Hormones	67 (44.7)
	Curse	8 (5.3)
	Don't know	75 (50.0)
Source of menstrual blood	Uterus	82 (54.7)
	Bladder	14 (9.3)
	Abdomen	2 (1.3)
	Don't know	52 (34.7)
Normal duration	1-3 days	54 (36.0)
	3-5 days	63 (42.0)
	5-7 days	26 (17.3)
	7-10 days	7 (4.7)
Normal interval	<21 days	55 (36.7)
	21-35 days	64 (42.7)
	>35 days	3 (2.0)
	Don't know	28 (18.7)
Normal blood loss	<20 ml	14 (9.3)
	20-80 ml	12 (8.0)
	>80 ml	8 (5.3)
	Don't know	116 (77.3)
Maximum risk of pregnancy	During periods	28 (18.7)
	Mid-cycle	3 (2.0)
	Just before periods	20 (13.3)
	Don't know	99 (66.0)
Knowledge about Pregnancy		
Symptoms of pregnancy	Missed periods	96 (64.0)
	Pain	14 (9.3)
	Bleeding	3 (2.0)
	Vomiting	69 (46.0)
	Abdomen fullness	4 (2.7)
	Don't know	39 (26.0)
Confirmation of pregnancy at home	Yes	17 (11.3)
	No	133 (88.7)
Hug and kissing cause pregnancy	Yes	4 (2.7)

	No	146 (97.3)	
Vagina is passage of delivery	Yes	72 (48.0)	
	No	78 (52.0)	
Consequences of teenage pregnancy*	Anemia in mother	73 (48.7)	
	Low birth weight baby	83 (55.3)	
	Healthy mother	2 (1.3)	
	Pre-term labor	52 (34.7)	
	Increase maternal/neonatal death	23 (15.3)	
	Don't know	36 (24.0)	
Knowledge about RTIs			
What do you know about RTIs?	Disease in womb	16 (10.7)	
	Affect only girls practicing intercourse	24 (16.0)	
	Micro-organism infects the genitalia	24 (16.0)	
	No response	86 (57.3)	
RTI symptoms*	Discharge	6 (4.0)	
	Burning micturition	18 (12.0)	
	Itching	17 (11.3)	
	Backache	6 (4.0)	
	Genital rashes	3 (2.0)	
	Others#	23 (15.3)	
	No response	108 (72)	
Is treatment for RTIs available?	Yes	53(35.3)	
	No	4 (2.7)	
	No response	93 (62.0)	
Know name of any RTI	Yes	10 (6.7)	
	No	140 (93.3)	
Causes of RTIs*	Poor hygiene	16 (10.7)	
	Infection	11 (7.3)	
	Sex during menstruation	9 (6.0)	
	Allergy	7 (4.7)	
	Tight garments	2 (1.3)	
	Running	1 (.7)	
	Unprotected sexual intercourse	7 (4.7)	
	Unsafe delivery	2 (1.3)	
	Hereditary	5 (3.3)	
	Don't know	128 (85.3)	
Long term problems*	Infertility	10 (6.7)	
	Repeated abortion	3 (2.0)	
	Pre-term labor	4 (2.7)	
	Ectopic pregnancy	3 (2.0)	
	Cancer	4 (2.7)	
	Blindness	3 (2.0)	
	Death	12 (8.0)	
		Don't know	128 (85.3)

Knowledge about HIV		
Causes of HIV*	Unprotected sexual intercourse	57 (38.0)
	Kissing	8 (5.3)
	Infected blood transfusion	49 (32.7)
	Sharing needles	38 (25.3)
	Mother to child transmission	31(20.7)
	Breast feeding	21(14.0)
	Others##	7(4.7)
	Don't know	64 (42.7)
Availability of drugs for HIV/AIDS treatment	Yes	17(11.3)
	No	78(52.0)
	Don't know	55(36.7)
Prevention of HIV	Use of condom	30(20.0)
	Avoid multiple sexual partners	35(23.3)
	Safe blood transfusion	31(20.7)
	Use of OCP	7(4.7)
	Break all relations with HIV infected patients	9(6.0)
	Prayers	1(.7)
	Don't know	92(61.3)
Knowledge about Contraceptives		
Various contraceptive methods*	Oral Contraceptive Pills	65 (43.3)
	Condom	57 (38.0)
	Hysterectomy	22 (14.7)
	Cu-T	59 (39.3)
	DMPA	4 (2.7)
	Vasectomy	40 (26.7)
	Tube ligation	2 (1.3)
	Lactation	1 (.7)
	Don't know	31 (20.7)
Effect of contraceptive uses*	Cause weakness	19 (12.7)
	Interfere with sexual pleasure	9 (6.0)
	Prevent pregnancy	74 (49.3)
	Protect from STD	4 (2.7)
	Birth spacing	24 (16.0)
	Don't know	59 (39.3)
	Availability of contraceptives*	Government hospital
Private hospital		35 (23.3)
Family planning clinics		27 (18.0)
Pharmacy		60 (40.0)
Don't know		51 (34.0)

Users of contraceptives	Females only	75 (50.0)
	Males only	2 (1.3)
	Both	52 (34.7)
	Don't know	21 (14.0)
Emergency contraceptives*	Morning after pills	33 (22.0)
	Cu-T	19 (12.7)
	Condom	25 (16.7)
	DMPA	4 (2.7)
	Don't know	88 (58.7)
Knowledge about Abortion		
Indications for Legal abortion*	Contraceptive failure	11 (7.3)
	Rape	39 (26.0)
	Boyfriend don't want baby	15 (10.0)
	Child risk	14 (9.3)
	Mother don't want baby	18 (12)
	Mother risk	39 (26.0)
	Don't know	90 (60.0)
Time period for legal abortion	Up to 6 weeks	21 (14.0)
	Up to 12 weeks	5 (3.3)
	Up to 20 weeks	5 (3.3)
	Up to 24 weeks	8 (5.3)
	Anytime	4 (2.7)
	Don't know	107 (71.3)
Place of performing abortion	Any private clinic	26 (17.3)
	Home	3 (2.0)
	Government approved hospitals/health facility	80 (53.3)
	Don't know	41 (27.3)

*Multiple response, #Weakness, Fever, Swelling and Bleeding, ##others include mosquito bite and sight of AIDS patient.

The overall knowledge level was found to be low in all the three streams of intermediate. (Fig 1)

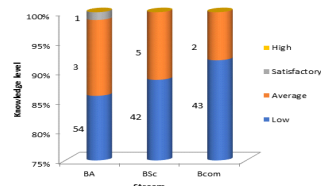


Figure 1: Knowledge level of students of three streams

Using ANOVA test a significant difference was found in mean knowledge score of the three streams with highest knowledge score mean of science stream students (Table 2).

TABLE 2: Comparison of mean knowledge score about reproductive health and RTIs among study subjects (n = 150)

Stream	Knowledge score (mean± SD)	P value (F ratio)
Commerce	14.75±10.78	0.002 (6.354)
Arts	18.63±11.14	
Science	22.68±9.90	

Further using post hoc test, a significant difference (.001) in mean knowledge score was found between Science and Commerce students.

DISCUSSION

In the present study, 77.3% of students knew that menstruation was a normal process somewhat similar to finding of a study by Yasmin S et al. in West Bengal.¹ However, one study conducted by Khanna et al reported that nearly 70% girls believed menstruation not to be a physiological process.² The misconception of menstruation being the curse of God was found in 3.3% of students in present study while in a study conducted by Thakre et al this was found in only 1.03% of girls.³ Out of the total 150 students only approximately 50% of them had correct knowledge about normal duration and normal interval of menstrual cycle while a study in Madhya Pradesh reported correct knowledge in 64.32% of girls.⁴ It was observed that more than half of total girls (54.66%) were aware of the source of menstrual blood. Similar observation was made by Mokhasi et al in their study.⁵ Most important source of information of all aspects of menstruation was mother (95.6%) and this was evident in a meta-analysis too.⁶ These findings highlights the role of mother in imparting knowledge about reproductive health to their daughters.

A study on reproductive health by Kushwah et al⁴ found knowledge about birth canal higher (65.8%) than that found in present study (48%). Low level of knowledge about fertility period and effect of teenage pregnancy among participants of present study is a matter of concern. These findings demand the more focussed approach of adolescent health programs especially for girls.

This study showed poor knowledge about RTI among late adolescent girls which was consistent with the findings from underprivileged area of Bangalore.⁷ More than three quarter of students in the present study lack complete knowledge about RTI symptoms, causes and complications. The knowledge was comparatively higher in the study conducted in North East States of India (45.4%).⁸ The findings regarding the route of transmission of HIV were comparable to the observations made by Lal et al.⁹ Only 11.3% of students in the current study were aware about the availability of drug for HIV/AIDS while a slightly higher number of school students in Mumbai (34%) knew about the availability of antiretroviral drugs.¹⁰ This study revealed no source of information about RTIs in 67.3% of subjects, affirming existence of orthodox society where talking about RTIs is still considered shameful. In current study, 79.3% of students knew about contraceptive methods while in a study by Kotecha et al in urban Vadodara only 42% of adolescents were aware of contraceptive methods.¹¹ The results about knowledge of contraceptives differ from the study conducted in Sikkim¹² which concluded that 86% of students had heard about contraceptive methods. This increment in knowledge could be due to media spreading awareness about contraceptive among adolescent. The adolescent may be more sexually active in this study place. The findings regarding knowledge about abortion were consistent with the observations made by Mittal et al in Haryana.¹³

Main limitations of our study is that it was conducted in a single college of Ranchi district with small sample size. For this reason generalizability of results is difficult.

We conclude that though, overall knowledge level of adolescents girls is low there still exist difference in knowledge level among the three streams with highest knowledge among science students. This difference could be attributed to inclusion of some aspects of reproductive system in the science course.

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Conflict of Interest : none