A Comparative Study of Reproductive Health and Awareness Level of Students in Different Faculties

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ABSTRACT
World Health Organization (WHO) defines adolescence as the period of life between 10 and 19 years of age. The adolescent experiences changes in various dimensions which includes not only physical but also emotional, psychological, social, and mental change and growth. Physiological changes lead to sexual maturity and usually occur during the first several years of this period. Majority of adolescents still do not have access to information and education on sexuality, reproduction, and sexual and reproductive health and rights, nor do they have access to preventive and curative service. Due to lack of adequate knowledge they are subject to many problems which pose threat to their healthy life. Pregnancy during adolescence is very serious problem in our country. This study aims to find the level of reproductive health and awareness among girls. Also aims to find whether there is any relationship between the faculty in which they study and their awareness level. Primary data was collected from college going girls in the first year of under graduate programme of all three basic faculties.

Key words: Awareness, reproductive health, adolescence, faculty, education.

INTRODUCTION
After infancy, the intensity of growth is the maximum in adolescence. The speed between the ages of 11-14 years in girls and 13-16 years in boys is the most accurate. At this stage, the signs of childhood start disappearing from them and the maturity begins. Sexual changes begin. Maturity occurs in girls earlier than boys. After completing 14 years of age, the girl becomes a young woman.

During adolescence the physical, mental and emotional traits of childhood disappears and new traits appear in that place. Hence adolescence is the most important period of life. Apart from physical changes other transformations are also seen in mental, emotional, social and cognitive developments. Due to all these personality changes are seen. Adolescence is the period between childhood and adulthood. They are neither able to give up childhood tantrums nor live like adults.

In India due to lack of awareness child marriage is very common. This leads to many health problems among adolescents. This is the period of heavy nutritional demand in the body. When the condition of pregnancy is added to it the problem become multi folded. This leads to increase in maternal mortality, neo natal mortality and malnutrition among children.

In the Constitution of the World Health Organization, health is defined as a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity. This definition, idealistic as it may look, is nowhere as relevant and applicable as in the area of reproductive health. A woman in the distress of carrying an unwanted pregnancy cannot be considered healthy simply because her blood pressure is not elevated and the fetus is showing a normal biophysical profile. In the context of this positive definition, reproductive health is a condition in which the reproductive process is accomplished in a state of complete physical, mental and social well-being and is not merely the absence of disease or disorders of the reproductive process.[1]

Reproductive health implies that, apart from the absence of disease or infirmity, people have the ability to reproduce, to regulate their fertility and to practice and enjoy sexual relationships. It further implies that reproduction is carried to a successful outcome through infant and child survival, growth and healthy development. It finally implies that women can go safely through pregnancy and childbirth, that fertility regulation can be achieved without health hazards and that people are safe in having sex. (Fathalla, 1988).[2]

This study aims at finding out the level of knowledge of reproductive health and awareness among adolescents. This will help to improve awareness and thus promote better reproductive health. Increase in awareness will lead to better reproductive health and this will help to develop healthy nation. Lack of awareness is the main cause of deteriorating health of future generation. Increasing awareness to promote health is the need of the hour in the wider interest of the nation.

Objectives
1. To study the level of reproductive health of adolescences
2. To find out the awareness of adolescences regarding reproductive health
3. To know the level of awareness among adolescence about family welfare services
4. To compare the knowledge of reproductive health among students studying in Arts, Science and Commerce faculties

METHODOLOGY
Scientific method was used to conduct the study. Primary data was collected using questionnaire. 150 samples were selected consisting of 50 from each of the faculty Science, arts and Commerce. All were college going girls studying in first year of under graduate programme.

Limitation
Only girls in the age group of 16-18 years are taken for this study. Reproductive health is very important at this age and generally girls lack knowledge in this filed and this leads to many ill effects in their body.

REVIEW OF LITERATURE
Premenstrual symptoms occur in 95% of all women of reproductive age; severe, debilitating symptoms occur in about 5% of those women. *(O'Brien PM.)* [3]

The cause of premenstrual symptom is unknown but hormonal and other factors (possibly neuroendocrine) probably contribute. *(Rapkin AJ)* [4]

Punia R.K. *(1986*) **[5]** conducted a study on "Knowledge and opinion about family planning among unmarried college going girls". It was found that there was lack of knowledge about birth control methods Urban and educated girls have better knowledge than rural and less educated girls. The sources of information about birth control methods are friends, radio, cinema and advertisement. Better living standards and better health of mothers are the reasons for adopting birth control techniques.

Ahuja A and Tiwari S (1995) **[6]** conducted a study on 'Adolescences is the period of awareness about pivotal changes in girls" and found that among school going girls' mothers' are the sources of knowledge about reproductive health and in non-school going girls it was elder sister or sister in law.

Sharma A and Sharma V (1996) [7] found from their study on "Knowledge and practice of sexual knowledge among college going girls in India" found that knowledge about human sexuality, reproduction and contraception are universally poor among first year college going girls of science stream. The researcher also studied the effects of socio economic and socio cultural factors. It was found that girls residing with parents had better knowledge about reproductive health than those living in hostel.

From the findings of various studies it can be inferred that lack of knowledge is the cause of poor level of reproductive health in India. Hence it is essential to take effective steps to increase the level of awareness.

Table 1: Age of Menstruation

Age	Frequency (N=90)	%
11	7	7.77
12	20	22.22
13	49	**54.44**
14	11	12.22
15	3	3.33

The above table shows that 54.44% of students stated menstruation at the age of 13 which is the average age in case of all girls. 22.22% of girls started menstrual cycle at the age of twelve which is also the average age as per many studies. In general, between the ages of 12 and 13 girls attain puberty. More than 80% of the sample is found to be in the average age of puberty. Only a very few are in the extremes like as early as 11 years of age and as late as 15 years of age.

Table 2 Percentage of premenstrual Symptoms

S. No	Symptom	%	Rank order
1	**Lower abdominal pain**	**65.55**	**I**
2	Leg pain	58.88	II
3	Restlessness	17.77	IV
4	Breast pain	6.66	VI
5	Giddiness	3.33	VIII
6	Head ache	14.44	V
7	Nausea/vomiting	5.55	VII
8	Body pain	36.66	III
9	Fever	1.00	IX

It is found that 65.55% of girls suffer from lower abdominal pain before menstruation. Next common symptom is leg pain indicated by 58.88% of samples. All other symptoms are not very common. Less than 10% of girls expressed complaint of fever, nausea, breast pain and giddiness. Restlessness and headache are found in 17.77 and 14.44 percent respectively. Body pain is also a common premenstrual symptom as expressed by 36.66 percent of girls.

Table 3 Percentage of reproductive health problems

S. No	Problems	%	Rank order
1	Back pain	76.66	I
2	Leg pain	64.44	II
3	White discharge	20	III
4	Breast pain	10	V
5	Spotting menstruation	6.66	XI
6	Heavy menstruation	10	V
7	White discharge with foul smell	10	V
8	Itching Vulva	10	V
9	Burning sensation	7.77	IX
10	Swelling of breast	7.77	IX
11	Vaginal ache	3.33	XII
12	Swelling of vagina	1.11	XIII
13	Foul smell during menstruation	17.77	IV

Back pain is the most common heath problem (76.66%) among the adolescent girls, followed by leg pain (64.44). These two are very common among adolescent girls during menstruation and also during other days. White discharge (20%) and foul smell during menstruation (17.77%) are also seen among some girls. Heavy menstruation, White discharge with foul smell, Itching Vulva and Breast pain are the complaints expressed by only ten percent of samples. Breast pain, burning sensation, swelling of breast, vaginal ache and swelling of vagina are the health problems faced by very few adolescent girls. All these are the problems faced by less than ten per cent girls.

Table 4 Knowledge on Reproductive Health Problems: Faculty wise

% of marks obtained	Science N=50	Arts N=50	Commerce N=50	Total
Below 40	3	3	17	23
40-50	**20**	8	**22**	50
50-60	17	**30**	8	55
Above 60	10	9	3	22
Total	**50**	**50**	**50**	**150**

It is surprising to note that highest frequency (30) is seen among Arts students for score between 50-60. Above 60% score is obtained by 10 Science students. Science students' highest frequency (20) is seen in the score range 40-50. Among Commerce students also the highest frequency (22) is in the score range 40-50. Below 40% score is obtained by only three of Arts and Science students. While it is very high 17 in case of Commerce students. Above 60% score is obtained by nine Arts Students and only three of Commerce students.

It is observed that knowledge of reproductive health problem is poor among commerce students.

Table 5 Knowledge on Family Welfare Services: Faculty wise

% of marks obtained	Science N=50	Arts N=50	Commerce N=50	Total
Below 40	28	43	43	114
40-50	22	7	7	36
50-60	0	0	0	0
Above 60	0	0	0	0
Total	**50**	**50**	**50**	**150**

Regarding knowledge on Family Welfare Services it is observed that none of the students have secured above 50%. This shows that the adolescent girls are less aware of these services which is very essential for their reproductive health. Among Arts and Commerce students a very high number of girls (43/50) have secured less than 40 score. The data is slightly different for Science girls. 22/50 have secured score between 40-50 and 28 out of fifty students have scored below 40.

Table 6 Knowledge on Programmes available for adolescent girls: Faculty wise

S. No	Name of the Programmes	Science	Arts	Commerce	Total	%	Rank order
1	Kishore Shakti Yojana	8	25	25	58	38.66	IV
2	Balika Samridhi yojana	5	20	28	53	35.33	VI
3	Nehru Yuva Kendra	0	10	8	18	12.00	VIII
4	Mahila Samakhya Program	18	18	20	56	37.33	V
5	School AIDS education	25	25	**33**	83	55.33	II
6	University Talks AIDS	23	23	18	64	43.66	III
7	Training of Rural Youth for self employment	13	13	22	48	32.00	VII
8	Reproductive and Child Health Program	**39**	**39**	32	110	73.33	I

Knowledge about various programmes available to adolescent girls is found out. All three faculties together the knowledge of "Reproductive and Child Health Program" is very high (73.33%). The next programme which is known to many girls is "School AIDS education" as seen in the chart as 55.33%. Many are aware of the programme "School AIDS education". "Kishore Shakti Yojana" is known to 38.66% of the samples. "Mahila Samakhya Program" is known to 37.33% of adolescents. 35.33% of adolescents know about "Balika Samridhi yojana". There is very poor knowledge about "Nehru Yuva Kendra" as only 12% have expressed knowledge about this.

All three faculty students are more aware of "Reproductive and Child Health Program" and least aware of "Nehru Yuva Kendra".

Table 7 Knowledge on Temporary and Permanent Family Planning methods

S. No	Method	Permanent Methods		Temporary Methods	
		f	%	f	%
1	Vasectomy	33	3.66		
2	Tubectomy	32	**35.55**		
3	Condom			77	**80.55**
4	loop			19	21.11
5	Copper T			35	38.88
6	Tablets			51	56.66
7	Jelly			21	23.30
8	Pill			45	50.00
9	Living separately			23	25.55

The adolescents are more aware of Tubectomy than Vasectomy among permanent methods of family planning. Our society is male dominated and it is very common that female is forced to undergo operation for family planning. Men are not commonly in favour of undergoing Vasectomy. Hence the observed result is in line with social practice seen in Indian society.

Among temporary methods adolescents are more popular with condom (80.55%). This is followed by Tablets (56.66%) and Pill (50%). Copper T is known to 38.88% of samples. Less familiar are Loop (21.11%) and Jelly (23.30%). Living separately is known to only one fourth of the samples.

Table 8 Knowledge on Temporary and Permanent Family Planning methods: Sex Wise

S. No	Method	Men		Women	
		f	%	f	%
1	Vasectomy	24	26.66		
2	Tubectomy			30	33.33
3	Condom	85	94.44		
4	loop			6	6.66
5	Copper T			53	58.88
6	Jelly	13	14.44		
7	Pill			51	56.66
		f		%	
8	Living separately	30		33.33	

Questions were asked about family planning methods -gender wise. Again, in line with the previous table only condom (94.44%) is familiar to girls as male family planning method. Vasectomy (26.66%) and Jelly (14.44) are less familiar family methods among male family planning methods.

Girls are aware of Copper T as a female family planning method as observed from the data 58.88%. Pill (56.66%) is the next most familiar female family planning method. There is very poor knowledge of loop (6.66%). Nearly one third of the samples are aware of Tubectomy (33.33%).

Table 9 Knowledge on Reproductive Health Problem and association with Faculty of students

% of marks obtained	Faculty				Chi Square Value	P value
	Science	Arts	Commerce	Total		
<50	23	11	39	73	31.59	.001*
	15.3%	7.5%	26.0%	48.7%		
>50	27	39	11	77		
	18.0%	26.0%	7.3%	51.3%		
Total	50	50	50	150		
	33.33%	33.33%	33.33%	100%		

H_0 There is no significant difference between students in different faculties and marks obtained for Knowledge on Reproductive Health Problem
No cases in 40-50 and 50-60
*Here P<.05, there is statistically significant association

P value less than .05 shows that there is significant difference among students studying in different faculties, in their score for knowledge on reproductive health problems. Students gain some basic knowledge from their school curriculum. As curriculum is different for all three faculties it is likely that their level of knowledge is also different.

Table 10 Knowledge on Family Welfare Services and association with Faculty of students

% of marks obtained	Faculty				Chi Square Value	P value
	Science	Arts	Commerce	Total		
Below 40	28	43	43	114	16.44	.001*
	18.7%	28.7%	28.7%	76.0%		
40-50	22	7	7	36		
	14.7%	4.7%	4.7%	24.0%		
Total	50	50	50	150		
	33.33%	33.33%	33.33%	100%		

H_0 There is no significant difference between students in different faculties and marks obtained for Knowledge on Family Welfare Services
No case in 50-60 & above60
*Here P<.05, there is statistically significant association

Students' level of knowledge about family welfare services is significantly associated with the faculty in which they study. This is observed in the statistical test and the resultant P value being less than .05. The area of interest of students studying different subjects vary widely. As a result, their knowledge about family welfare services is also different

Table 11 Knowledge on Programmes available for adolescent girls and association with faculty of students

	Faculty				Chi Square Value	P value
	Science	**Arts**	**Commerce**	**Total**		
Kishore Shakti Yojana	5	15	15	35	20.03	**0.129**
	1.7%	5.1%	5.1%	11.9%		
Balika Samridhi yojana	3	12	17	32		
	1.0%	4.1%	5.8%	10.8%		
Nehru Yuva Kendra	0	6	5	11		
	0%	2.0%	1.7%	3.7%		
Mahila Samakhya Program	11	11	12	34		
	3.7%	3.7%	4.1%	11.5%		
School AIDS education	15	15	20	20		
	5.1%	5.1%	6.8%	16.9%		
University Talks AIDS	14	14	11	39		
	4.7%	4.7%	3.7%	13.2%		
Training of Rural Youth for self-employment	8	8	13	29		
	2.7%	2.7%	4.4%	9.8%		
Reproductive and Child Health Program	23	23	19	65		
	7.8%	7.8%	6.4%	22.0%		
	79	104	112	295		
	26.8%	35.3%	38.0%	100%		

H_0 There is no significant difference between students in different faculties regarding Knowledge on Programmes available for adolescent girls

$P > .05$, No statistically significant association

From the above table the chi square it can be inferred that there is no statistically significant association between faculty in which an adolescent is studying and knowledge about various services and programmes available to adolescent girls. These programmes are not very common among students and adolescent girls. There is not much publicity about these programmes which aim to give benefit to adolescents for good reproductive health. Only those who need services approach the required programme and get benefit. Many do not make use of these programmes due to ignorance. For the overall benefit of adolescent population wide publicity of these programmes are required. Irrespective of the course of study students lack interest in knowing about programmes implemented for their better reproductive health.

INFERENCE
1. Between the ages of 12 and 13 girls attain puberty.
2. It is found that lower abdominal pain is the most common health problem before menstruation.
3. Back pain is the most common heath problem (76.66%) among the adolescent girls, followed by leg pain (64.44%).
4. Highest percentage (60%) is seen among Arts students for score between 50-60.

5. This shows that the adolescent girls are less aware of family welfare services which is very essential for their reproductive health.
6. All three faculty students are more aware of "Reproductive and Child Health Program" and least aware of "Nehru Yuva Kendra".
7. The adolescents are more aware of Tubectomy than Vasectomy among permanent methods of family planning.
8. Condom is familiar to girls as male family planning method.
9. Girls are aware of Copper T as a female family planning method.
10. There is significant association between faculty of the students and knowledge of reproductive health.
11. There is significant association between faculty of the students and knowledge of family welfare services.
12. There is no significant association between faculty of the students and knowledge about programmes available to students.

RECOMMENDATIONS

Many welfare programmes aimed at adolescent health are not known to them and as a result they fall prey to many health problems. Adequate knowledge about reproductive health issues and means of overcoming these should be given to all adolescents through their school curriculum. This should be a compulsory paper to all students irrespective of the faculty in which they are enrolled. For a healthy country healthy individual are to be produced through maintenance of adequately good health by preventing many health problems through awareness. This is more important in case of girls because producing healthy children and avoiding infant malnutrition and other health problems lies in their hands. Healthy mother leads to healthy children which makes the nation healthy and wealthy.

Acknowledgement

References
1. https://www.un.org/womenwatch/daw/csw/issues.htm

2. Fathalla MF. 1988. Research needs in human reproduction In: Research in Human Reproduction: Biennial Report (1986-1987). Edited by E. Diczfalusy, P.D. Griffin & J. Khanna. World Health Organization, Geneva. p.341

3. O'Brien PM. Premenstrual syndrome. London: Blackwell Science, 1987.

4. Rapkin AJ, Morgan M, Goldman L, et al. Progesterone metabolite allopregnanolone in women with premenstrual syndrome. Obstet Gynecol 1997; 90:709–714. [PubMed]

5. Punia and R.K(1986) "Knowledge and opinion of unmarried college girls about family planning". Indian Journal of Public health, xxx (2) 107-112

6. Ahuja and Tewari (1995) "Awareness of Pubertal changes among adolescent girls". The Journal of family welfare, 4(1), 46-50.

7. Sharma A & Sharma V (1996) Sexual Knowledge and practices of college girls in rural Gujrat, India. The Journal of family welfare 42(3), 19-26.