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Knowledge of reproductive health among adolescent school girls of Jammu district

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Abstract:
Adolescence is the period in which foundations can be laid for a long and healthy life. It is a prime time for health promotion and for establishment of healthy behavior that will influence health in later years. It has been seen that adolescents have negative attitude towards balanced diet and are not aware of nutritional requirement, personal hygiene, menstrual hygiene, etc. These years have been recognized as a special period in the life cycle of adolescent girls as it requires specific and special attention. This transition phase makes them vulnerable to a number of problems, for example, psychosocial problems, general and reproductive health problems, and sexuality related problems. Hence the present study was conducted to assess the knowledge of adolescent girls regarding reproductive health. The study was conducted in government schools of Jammu city through predesigned multiple choice questionnaires. The knowledge test included questions relating to reproductive system, menstruation/ menarche/ pubertal changes, teenage pregnancy, unsafe abortion, RTIs, STDs and HIV/AIDS. The areas where they scored low were identification of reproductive health, knowledge about menstruation, RTIs, STDs and HIV/AIDS. The mean score revealed that the girls had just average knowledge about Reproductive Health. This is a matter of great concern. Thus Reproductive health problems should be discussed among adolescents, especially for girls through health clubs, seminars, lectures, counseling and intervention programmes at school level.

Key words: Knowledge, Adolescent Girls, Reproductive Health, Abortion, Pregnancy

Introduction

World Health Organization (WHO) defines adolescence as the period of life between 10-19 years [1]. It is a period of rapid physical and biological changes, which may lead to confusion, tension, frustration, and feeling of insecurity. Adolescence is said to be a period of stress and strain .It is the period in which foundations can be laid for a long and healthy life. Adolescence is a prime time for health

promotion and for establishment of healthy behavior that will influence health in later years. It has been seen that adolescents have negative attitude towards balanced diet and are not aware of nutritional requirement, personal hygiene, menstrual hygiene, etc. Since death rate in this age group is relatively low the adolescents are considered to be healthy, however it is a misleading measure of adolescent health. In spite of definite health problems they may have, it is a common observation that adolescents do not access the existing services, especially adolescent girls. In India there are only few designated services (which are really making an impact) for adolescent girls so far, leading to substantial unmet service needs. Absence of friendly staff, lack of family concern regarding their health, working hours that are inconvenient to adolescents and lack of privacy and confidentiality have been identified as important barriers in accessing health services by adolescents girls The health sector needs to respond by offering services to adolescents girls in a more friendly manner and in a non-threatening environment [2].

Various studies have been conducted to assess the knowledge level of adolescents towards reproductive system and organs and awareness regarding sex knowledge on adolescent girls (16- 20 years) the results revealed that awareness regarding HIV/AIDS among adolescent girls is very low, adolescent girls lack adequate knowledge about sexual matter and contraception which results in early pregnancy, increased risk of STD infections, maternal morbidity and mortality and unsafe abortions [3,4]. Adolescent pregnancies constitute 10-15% of total pregnancies in India. This is largely attributed to early marriage, a culture widely prevalent in the whole of the Indian sub-continent [5,6]. Among adolescents, girls are biologically more susceptible to sexually transmitted diseases (STDs), including HIV infection. Thus, in order to lead a healthy, responsible, fulfilling life and to have protection from reproductive health problems, adolescents need to have sound information about the physical, psychological and social changes that take place through childhood and adolescence [7,8].

The adolescent's health needs, behaviour and expectations are distinctive and routine health care services are not well geared to provide these services. Data indicate that this is the most vulnerable group with respect to HIV risk caused by unsafe sex. Most of them face these risks with too little factual information, too little guidance about sexual responsibility, and too little access to health care. Their educational and health status, their readiness to take on adult roles and responsibilities, and the support they receive from their families, communities and governments will determine their own future and the future of their countries [9,10].
Young people have the right to understand the changes they are going through and to develop skills of forming healthy and responsible relationship. Many diseases can occur by lack of awareness, myths; hence there is need for creating awareness about reproductive health among the vulnerable groups. As direct reproducers for future generations, the health of adolescent girls influences not only their own health, but also the health of future generation.

Hence the present study was conducted to assess the knowledge of adolescent girls regarding reproductive health.

Materials and Methods

The present study was carried out on adolescent girls (14-19 years) studying in government schools of Jammu city. Multistage sampling technique was used. Jammu city is divided into three zones as per the election commission (east, west and cantonment) one Government school from each zone was purposively selected for the study. From each school a sample of 50 adolescent girls from class 8^{th}, 9^{th} and 10^{th} were selected randomly. A Questionnaire was used to collect the required information regarding age, educational status, type and income of the family and to know the knowledge of the school girls regarding reproductive health. The knowledge test included questions relating to reproductive system, menstruation/ menarche/ pubertal changes, teenage pregnancy, unsafe abortion, RTIs STDs and HIV/AIDS. A formal permission was taken from the authorities of the respective schools. The date and time was fixed and each school was visited at least 2-3 times in connection with the research work. A rapport was build with the respondents and the purpose of study was explained to them. Consent was taken from the study participants. The students filled the questionnaire in presence of the researcher.

The classified data was coded, tabulated and analysed by using appropriate statistical test. The result were presented and discussed in the form of graphs and tables. Scoring was done to measure the result of knowledge test of the respondents. The questionnaires consisted of 50 questions and each question scored one mark. Knowledge test was invented and it was tested with the help of three experts and a scale was made where all the scores were categorised as Low, Average and Good. The total score between (0-17) were categorised as

'Low', (18-33) as 'Average' and above 33 were categorised as 'Good'.

Results

1. General information

The data was collected to obtain the background about the respondents regarding age, educational qualification, caste status, type of family, occupation of parents and their monthly income. Majority (67%) of girls were in the age group of 16-17 years and the rest were in the age group of 15-16 years. Majority (53%) of the girls were studying in 10^{th} class, (27%) were studying in 9^{th} class and the rest were from 8^{th} class. Most (46%) of girls belonged to schedule caste, (32%) girls belonged to backward and (22%) belonged to forward caste. Majority (58%) of girls belonged to nuclear families and the rest (42%) to joint families. The fathers of (38%) girls were in private jobs, (33%) were labourers, (19%) were in business and (10%) were in Government jobs. The monthly income of the families of (47%) of the girls ranged from Rs.1000 – Rs.3000, (36%) ranged from Rs.3000 – Rs.5000 and (16%) ranged from Rs.5000 – Rs.7000.

2. Knowledge of reproductive health

Table 1: Knowledge of reproductive system

N-150

	Identification of Reproductive System		Labeling of female Reproductive System										Total Score	Mean Score (n=6)
			Uterus		Ovary		Vagina		Fallopian tube		Cervix			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Responses	140	93.33	7	4.67	4	2.67	4	2.67	1	0.67	0	0	156	1.04±0.54

Table No.1 shows the knowledge of adolescent girls regarding reproductive system; it mainly focuses on [a] Identification of Reproductive System. [b] Labeling of different organs of Reproductive System. Majority (93.33%) could identify the diagram of female reproductive system but very few adolescent girls could Label the different organs of Reproductive System, (4.67%) girls identified 'Uterus', (2.67%) identified 'Ovaries', (2.67%) identified 'Vagina', (0.67%) identified 'Fallopian tube', but no one could identify 'Cervix'. The mean score for reproductive system was very low 1.04±0.54. A similar study was conducted in urban and rural areas of Varanasi, where majority of girls scored well in the identification of reproductive system while the areas where they scored low was female reproductive organs [4].

Table 2: Knowledge regarding puberty

N-150

	Pubertal changes are		Age of attaining Puberty		Difference between Puberty and Menarche		Total Score	Mean Score (n=3)
	No.	%	No.	%	No.	%		
Responses	122	81.33	118	78.67	42	28	282	1.88±0.73

Table No. 2 depicts the knowledge regarding puberty; it mainly focuses on [a] pubertal changes [b] age of attaining puberty [c] difference between puberty and menarche.

Majority (81.33%) of respondents had knowledge regarding pubertal changes. Majority (78.67%) of girls knew the age of attaining puberty. Only (28%) respondents knew the difference between puberty and menarche. The girls

scored average (1.88 ± 0.73) in knowledge regarding puberty. In a study carried out in Gazipur in East Delhi, it was found that only 33.4% of the girls were aware of all the pubertal changes [11].

Table 3: **Knowledge regarding menstruation**

N-150

	Meaning of Menstruation		**Meaning of Menarche**		**Average length of Menstruation cycle**		**Process of Menstrual cycle**		**Total Score**	**Mean Score (n=4)**
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**		
Responses	47	31.33	13	8.67	94	62.67	14	9.33	168	1.12±0.83

Table no. 3 depicts the knowledge regarding menstruation; it mainly focuses on [a] meaning of menarche [b] meaning of menstruation [c] average length of menstruation [d] process of menstrual cycle
Only (31.33%) knew the meaning of menstruation. Only (8.67%) respondents knew the meaning of menarche. The knowledge regarding average length of menstrual cycle was (62.67%). Only (9.33%) respondents knew the process of menstruation cycle. The students scored low (1.12 ± 0.83) in the knowledge regarding menstruation. Similar study conducted in urban slums of Bijapur revealed that adolescent girls had low knowledge about menstruation [12].

Table 4: **Knowledge regarding teenage pregnancy**

N-150

	Meaning		**Fertile period**		**Right age of pregnancy**		**Pregnancy prevention**		**Adverse effects of early pregnancy**				**Total Score**	**Mean Score (n=6)**
									Mother		**Child**			
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**		
Responses	125	88.33	34	22.67	127	84.67	69	46	99	66	118	78.67	572	3.81±1.33

Table No. 4 depicts knowledge regarding teenage pregnancy; it mainly focuses on [a] meaning of pregnancy [b] Fertile period [c] Right age of pregnancy [d] Pregnancy prevention [e] adverse effects of early pregnancy. Majority (88.33%) and (84.67%) of girls knew the meaning of pregnancy and right age of child bearing respectively. But the knowledge regarding fertility period among girls was very low (22.67%). About (46%) knew that pregnancy can be prevented by various contraceptives. Knowledge about adverse effects of early pregnancy on mother and child was (66%) and (78.67%) respectively. The mean score for knowledge of pregnancy was limited (3.81±1.33). NFHS survey conducted in India in 2009 found that the correct knowledge regarding fertile period was low among young women [13].

Table 5: **Knowledge regarding abortion**

N-150

	Meaning		**Legal**		**Illegal**		**Unsafe Abortion**		**Harmful effects**		**Total Score**	**Mean Score (n=6)**
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**		
Responses	129	86	121	80.67	122	81.33	46	30.67	114	76	532	3.55±1.16

Table No. 5 depicts the knowledge regarding abortion; it mainly focuses on [a] meaning of abortion [b] legal abortion [c] illegal abortion [d] unsafe abortion [e] harmful effects of abortion.

The students had adequate knowledge regarding abortion. Majority (86%) of the respondents had the knowledge about the meaning of abortion. Majority (80.67%) and (81.33%) had knowledge regarding legal abortion, and illegal abortion respectively. Only (30.67%) respondents had the knowledge about unsafe abortion while 76% girls knew the harmful effects of abortion. The mean score was average (3.55±1.16).

Table 6: Knowledge regarding RTIs.

N-150

	Full form of RTI		**Transmission**						**Symptoms**				**Total Score**	**Mean Score (n=6)**
			Use of dirty clothes		**Physical relation with infected partner**		**Unclean delivery place**		**Itching/boils in vulva**		**Lower abdominal pain**			
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**		
Responses	23	15.33	64	42.67	55	36.67	34	22.67	10	6.67	87	58	273	1.82±1.49

This table 6 reveals the knowledge of respondents about RTIs; it mainly focuses on [a] Full form of RTIs. [b] Mode of transmission of RTIs. [c] Symptoms of RTIs. Few respondents (15.33%) knew the full form of RTIs. (42.67%) girls knew that use of dirty clothes during menstruation was the most common mode of transmission of RTIs. Followed by physical relation with infected partner (36.67%) and Unclean delivery place (22.67%). Most (58%) girls were aware that lower abdominal pain was a symptom of RTIs. Only (6.67%) were aware that itching and boils in/over vulva were symptoms of RTIs. The girls scored low (1.82 ± 1.49) in knowledge regarding RTIs.

Table 7: **Knowledge regarding STDs**

N-150

	Full form of STDs		**Meaning**		**Full form of HIV**		**Meaning**		**Full form of AIDs**		**Meaning**		**Diseases related to STDs**								**Total Score**	**Mean Score n=10**
													Syphilis		**Gonorrhoea**		**Chlamydia**		**HIV/AIDs**			
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**		
Responses	73	48.6	59	39.3	46	30.67	53	35.33	55	36.6	82	54.6	38	25.3	35	23.3	15	10	120	80	576	3.84 ± 1.41

Table No. 7 reveals the knowledge of respondents about STDs; it mainly focuses on [a] Full form of the STDs. [b] Meaning of the term STDs. [c] full form of HIV. [d] Meaning of the term HIV. [e] Full form of AIDs. [f] Meaning of the term AIDs. [g] Diseases related to STDs

About (48.6%) respondents knew the full form of STDs and only (39.3%) respondents knew the meaning of STDs. Only (30.67%) respondents knew the full form of HIV and about (35.33%) knew its meaning. About (36.67%) respondents knew the full form of AIDs and (25.33%) knew its meaning. The findings of present study indicated that knowledge about STDs other than HIV/AIDS was very poor among adolescent girls.

Table 8: **Transmission and symptoms of HIV /AIDS**

N-150

	Transmission												**Symptoms**								**Total Score**	**Mean Score n=10**
	Homosexual Relationship		**Unprotected sex**		**Transfusion of Infected Blood.**		**Having Sex with multiple Partners**		**Infected needles**		**Mother to child**		**Fatigue /weakness**		**Fever**		**Rashes on body**		**Rapid weight loss**			
	No	%	No	%	No	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Responses	13	8.6	56	37.3	43	28.6	42	28	33	22	42	28	51	34	49	32.67	10	6.6	87	58	445	2.97± 1.77

This table 8 reveals the knowledge of respondents about transmission and symptoms of HIV/AIDS; it mainly focuses on [a] Symptoms of HIV/AIDS. [b] Transmission of HIV/AIDS.

Girls scored low in knowledge about the transmission of HIV/AIDS, only (8.6%), (37.5%), (28.6%), (28%) , (22%) and (28%) knew that HIV can be transmitted through homosexual relation, unprotected sex, transfusion of infected blood, having multiple sex partners, infected needles and from infected mother to her new born child respectively . Low levels of knowledge about general aspects and transmission of HIV/AIDS have also been observed amongst secondary school students in Kolkata [10]. Very few girls had knowledge regarding the symptoms of HIV/AIDS. Only (34%), (32.67%), (6.6%) and (58%) girls knew that the symptoms of HIV/AIDS include fatigue/ weakness, fever, rashes on the body and rapid weight loss. The mean score was very low 2.97±1.77. Similar study by Wong. L.P (2008) indicated that awareness regarding HIV/AIDS among adolescent girls was very low [14].

Table 9: Mean score of adolescent girls regarding reproductive health

N-150

	Reproductive System	**Puberty**	**Menstruation**	**Pregnancy**	**Abortion**	**AIDS**	**HIV**	**STD's.**	**Total Mean Score (n=50)**
Mean Score	1.04±0.54	1.88±0.73	1.12±0.83	3.81±1.33	3.55±1.16	3.84± 1.41	2.97±1.77	1.82±1.4	20.03±1.16

It is clear from the above table that according to the knowledge score invented the total mean score of the adolescent girls in government schools in Jammu city was 20.03 ±1. 16 out of 50, which means their knowledge was just average and not up to mark. The girls may face troubles due to lack of right kind of information regarding their physical and or sexual development. A study conducted by *Patanwar* (2013) also found that knowledge of sex and reproduction was limited among school going girls [15].

Conclusion

On the basis of the above results we can conclude that the knowledge of adolescent girls in government schools was low. Thus it becomes important to address the misconceptions regarding different aspects of reproductive health through health education. Reproductive health problems should be discussed among adolescents, especially for girls through health clubs, seminars and lectures at school level. To identify and solve their reproductive health problems counseling should be done with the help of specialists from time to time. Such educational intervention programs must be given due importance, which will help the adolescent girls to take care of their own health and protect themselves from the risk of Reproductive health problems.

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