

# Effectiveness of Intervention on Knowledge of Reproductive Health among Adolescent Girls in Selected School, Rohtak, Haryana

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## ABSTRACT

**Introduction:** Reproductive health has been defined by the WHO as the state of physical, mental and social well being and not merely the absence of disease or infirmity in all matters relating to reproductive system and to its functions and processes.

**Aim:** To assess the level of knowledge of adolescent girls regarding reproductive health. To compare pre-test and post-test knowledge regarding reproductive health among adolescent girls. To find out association between post-test knowledge with selected demographic variables.

**Material and Method:** A quantitative approach and pre-experimental research design was used for the study. The study was conducted among 60 adolescent girls in selected school of Rohtak. The subjects were selected by Non-probability convenient sampling method.

**Results:** The data was analysed using descriptive and inferential statistics. Result revealed that pre-test mean score 22.08 with SD of 5.69 whereas post-test mean knowledge score 29.17 found higher with SD of 4.315. The mean difference between pre-test and post-test score was 7.09. The obtained t-value 12.194 is greater than tabulated 't-value' at 0.05 level of significance. So intervention was found to be effective. The study findings show that, there was association between the pre-test knowledge score and education (4.077), education of mother (8.064), and source of information regarding menstruation (10.300).

**Conclusion:** The study after analyzing the post-test knowledge shows that there is a mean gain

significant increase in the knowledge ( $p < 0.05$ ) in all the areas of reproductive health.

**Keywords:** Adolescent girls, reproductive health, knowledge, intervention.

## INTRODUCTION

Adolescence is a transition period from childhood to adulthood and characterized by a spurt in physical, emotional and mental growth with a change from complete dependence to relative independence. Worldwide more than 1.2 billion are adolescents: this indicates that roughly one in every six persons is an adolescent. <sup>[1]</sup> About 21% of Indian population is adolescents (about 243 million). <sup>[2]</sup>

Reproductive health has been defined by the WHO as the state of physical, mental and social well being and not merely the absence of disease or infirmity in all matters relating to reproductive system and to its functions and processes. <sup>[3]</sup> Many adolescent girls do not have a clear understanding of ovulation, fertilization pregnancy and birth. The event of menarche may be associated with taboos and myths existing in our traditional society which has a negative implication for women's health, particularly their menstrual hygiene. <sup>[4]</sup>

There are over 355 million menstruating women and girls in India, 4

but millions of women across the country still face significant barriers to a comfortable and dignified experience with menstrual hygiene management (MHM). [5]

There are 49,000 adolescent males and 46,000 adolescent females with HIV positive in India. The adolescents need to know how to protect themselves from HIV/STI/RTI and should have means to access the adolescent friendly health services. Around 35% adolescent males and 19% adolescent females have comprehensive knowledge of HIV. [6]

Anemia is defined by World Health Organization (WHO) as low blood hemoglobin concentration, and has been regarded as public health problem in both developed and developing countries. [7] Sadly, a large proportion of India's adolescents are anaemic: 56 per cent of girls and 30 per cent of boys. [8]

The National Curriculum Framework 2005 for School Education explicitly highlights the need for integrating age appropriate adolescent reproductive and sexual health, including HIV/AIDS messages into the school curriculum. This framework is translated into the National Adolescence Education Programme, which proposes 100 per cent coverage of all secondary and higher secondary schools with HIV/AIDS prevention and adolescent reproductive and sexual health (ARSH) messages. [9]

## MATERIALS AND METHODS

Quantitative Research Approach was used for the study. A total of 60 samples that fulfilled the inclusive criteria were selected by Non probability convenient sampling technique from Government Girls Senior Secondary School Rohtak, Haryana. Target population was Adolescent girls aged 14-18 years. Tool used contain 2 sections one section consists of demographic variables and other section consists of Structured knowledge questionnaire of 40 items including menstruation/menstrual hygiene, STI/RTI, HIV/AIDS, anemia. Inclusion criteria for the study were

Adolescent school girls within the age group of 14-18 years, Students who were available at the time of data collection and Students who were willing to participate in the study. Students those who were not available at the time of data collection, those who were not willing to participate in the research study and those who were not in age group of 14-18 years were the exclusion criteria of study. Data collection was done after taking permission from the authorities by using tool. Pilot study was conducted from 11-16 February 2019. Final data collection was done from 22 February to 30 March 2019. Data analysis was done by descriptive and inferential statistics.

## RESULTS

### Part 1. Description of demographic variables.

Table 1 shows the distribution of demographic data of adolescent girls participated in the study. Table 1 shows the following findings:

#### Age:

Out of 60 participants, the highest 21 (35%) selected adolescent girls were in the age group of 16 years. 20 (33.3%) were in the age group of 17 years, 14 (23.30%) were in the age group of 18 years, 3 (5%) were in the age group of 15 years, 2 (3.3%) were in the age group of 14 years.

#### Education:

Out of 60 participants 32 (53.30%) of adolescent girls were in 11<sup>th</sup> class, 28(46.70%) adolescent girls were in 12<sup>th</sup> class.

#### Type of family:

Out of 60 participants, 41 (68.30 %) of the selected adolescent girls were from nuclear family and 19 (31.70%) were from joint family.

#### Family income:

Out of 60 participants, 23 (38.30 %) of the selected adolescent girls were having family income of Rs 1001-5000, 26

(43.30%) were having family income of Rs 5001-10000, and 11 (18.30%) were having family income of Rs 10001 and above.

**Table 1: Frequency and percentage distribution of adolescent girls according to demographic variables. N=60**

Demographic variable	Category	Frequency (n=60)	Percentage (%)
Age (in years)	a) 14	2	3.3
	b) 15	3	5.0
	c) 16	21	35.0
	d) 17	20	33.3
	e) 18	14	23.3
Education	a) 11	32	53.3
	b) 12	28	46.7
Type of family	a) Nuclear	41	68.3
	b) Joint	19	31.7
Family income	a) 1001-5000	23	38.3
	b) 5001-10000	26	43.3
	c) 10001 and above	11	18.3
Education of mother	a) Illiterate	13	21.7
	b) Primary	28	45.7
	c) Secondary	17	28.3
	d) Graduate or above	2	3.3
Occupation of mother	a) Housewife	52	86.7
	b) Government job	2	3.3
	c) Private job	6	10
	d) Any other specify	0	0
Age of First menstruation (in years)	a) 12 years	12	20
	b) 13 years	17	28.3
	c) 14 years	24	40
	d) 15 years	5	8.3
	e) 16 years	2	3.3
Duration since first menstruation	a) 1-2 years	20	33.3
	b) 3-4 years	30	50
	c) 5-6 years	10	16.7
Source of information regarding menstruation	a) Friend	7	11.7
	b) Family	49	81.7
	c) Health worker	4	6.7
	d) Mass media	0	0

#### **Education qualification of mothers:**

Out of 60 mother of participants, 13 (21.70%) of the selected adolescent girls' mother were illiterate, 28 (45.70%) were educated up to primary level, 17 (28.30%) were educated up to secondary level and 2 (3.30%) were graduate or above.

#### **Occupation of mother:**

Out of 60 mother of participants, 52 (86.70%) of the selected adolescent girls' mother were housewife, 2 (3.30%) were in government job, 6 (10%) were in private job and 0 (0%) were in other occupation.

#### **Age of first menstruation:**

Out of 60 participants, 12 (20%) of the selected adolescent girls had their first menstruation at 12 years, 17 (28.30%) at 13 years, 24 (40%) at 14 years, 5 (3.30%) at 15 years and 2 (3.30%) at 16 years of age.

#### **Duration since first menstruation:**

Out of 60 participants, 20 (33.30%) of the selected adolescent girls' duration since first menstruation is 1-2 years, 30 (50%) duration since first menstruation is 3-4 years, 10 (16.70%) duration since first menstruation is 5-6 years.

#### **Source of information regarding menstruation:**

Out of 60 participants, 7 (11.70%) of the selected adolescent girls source of information was friend, for 49 (81.70%) was family, 4 (6.7%) was health worker and for 0 (0%) was mass media.

#### **Part 2**

This part deals with the description of adolescent girls' knowledge regarding reproductive health.

**Table 2: Frequency and percentage of Pre-test and post-test knowledge scores, N=60**

S. no.	Criteria	Pre- test		Post-test	
		Frequency	Percentage	Frequency	Percentage
1	Poor knowledge	26	43.33%	1	1.66%
2	Average knowledge	25	41.67%	19	31.67%
3	Good knowledge	7	11.67%	31	51.67%
4	Excellent knowledge	2	3.33%	9	15%

This table shows that 43.33% (26) of adolescent girls had poor knowledge, 41.67% (25) had average knowledge, 11.67% (7) had good knowledge and only 3.33% (2) girls had excellent knowledge regarding reproductive health in pretest. Whereas in post-test only 1.66% (1) had poor knowledge, 31.67% (19) had average

knowledge, 51.67% (31) had good knowledge and 15% (9) had excellent knowledge regarding reproductive health.

### Part 3

This part deals with evaluation of the effectiveness of intervention regarding reproductive health.

**Table 3: Assessment of pre-test & post-test mean knowledge score, SD, t-test, N=60**

Knowledge score	Mean	Mean difference	S.D.	Paired 't' test value	df	p value
Pre-test	22.08	7.09	5.691	12.194*	59	<0.05
Post-test	29.17		4.315			

\*significant

This table shows that , post-test mean knowledge score 29.17 found higher with SD of 4.315 when compared with pre-test mean knowledge score value which was 22.08 with SD of 5.69. The mean difference between pre-test and post-test score was 7.09. The obtained t-value 12.194 is greater than tabulated t-value at 0.05 level of significance. So intervention was found to be effective.

### Part 4

It deals to find out association between selected demographic variables with the study findings. There was association between the pre-test knowledge score and education (4.077), education of mother (8.064), and source of information regarding menstruation (10.300). There was no significant association between pre-test knowledge score and age (2.220), occupation of mother (3.743) age of menarche (2.232) and duration since menarche (0.882).

Demographic variables	Assessment of knowledge of reproductive health			
	Chi-square value (calculated)	Chi-square value (tabulated)	df	Significance
Age in years	2.220	9.49	4	Not significant
Education	4.077	3.84	1	Significant
Education of mother	8.064	7.81	3	Significant
Occupation of mother	3.743	5.99	2	Not significant
Age of menarche	2.232	5.99	2	Not significant
Duration since menarche	0.882	5.99	2	Not significant
Source of information regarding menstruation	10.300	5.99	2	Significant

## DISCUSSION

The study findings revealed that 43.33% (26) of adolescent girls had poor knowledge, 41.67% (25) had average knowledge, 11.67% (7) had good knowledge and 3.33% (2) girls have excellent knowledge regarding reproductive health in pretest. Whereas in post-test only 1.66% (1) had poor knowledge, 31.67%

(19) had average knowledge, 51.67% (31) had good knowledge and 15% (9) had excellent knowledge regarding reproductive health.

The study findings are consistent with study conducted at Bhavnagar, Gujarat among 60 adolescent girls of selected schools. The study findings revealed that in Pre-Test level of knowledge 80.0% were

having Average knowledge and 16.7% Poor and 3.3 % participants were having good knowledge. While post test level of knowledge 81.0% participants was having good knowledge and 18.3 % had Average knowledge and none had poor knowledge. [10]

In the present study, post test mean knowledge score value 29.17 found higher with SD of 4.315 when compared with pre-test mean knowledge score value which was 22.08 with SD of 5.69. The mean difference between pre-test and post-test score was 7.09. The obtained t-value 12.194 is greater than tabulated 't-value' at 0.05 level of significance. So intervention was found to be effective.

The study findings are concurrent with the study conducted among 656 rural adolescent girls in Kuppam Mandal, Andhra Pradesh. The study findings revealed that reproductive health Knowledge score improved significantly after intervention. A significant increase in overall knowledge regarding menstrual cycle, ovulation, fertilization & pregnancy by 44.5% was noted; knowledge regarding contraception improved remarkably from 33.7% to 97.4% ( $P < 0.0001$ ); A significant improvement in the knowledge about trans-mission & prevention of STDs was noted after intervention ( $P < 0.0001$ ). [11]

## CONCLUSION

The study after analyzing the post-test knowledge shows that there is a mean gain significant increase in the knowledge ( $p < 0.05$ ) in all the areas of reproductive health. The study reveals that the intervention was very effective in increasing the knowledge of the adolescent girls regarding reproductive health. The present study shows that, there is association between pre-test knowledge and educational qualification, education of mother and source of information regarding menstruation. There was no association between age, occupation of mother, age of first menstruation and duration since first menstruation with pre-test knowledge score.

Hence intervention can be given to adolescent girls to improve their knowledge and reduce diseases.

## REFERENCES

1. Progress for Children: A report card on adolescents. Socio-demographic profile of adolescents: Number 10 April 2012 UNICEF. Figure: 2.1 Page 6 [Internet]. Available from: [http://www.unicef.org/publications/files/Progress\\_for\\_Children](http://www.unicef.org/publications/files/Progress_for_Children)
2. Strategy Handbook. Rashtriya Kishor Sishya Karyakram. Adolescent Health Division Ministry of Health and Family Welfare Government of India. January 2014 [Internet]. [cited 2014 September 8]. Available from: <https://www.dropbox.com/s/Ooj4p422y7st4ku/RKSK%20Strategy%20Handbook.pdf>.
3. "WHO: Reproductive health". Available from [https://en.wikipedia.org/wiki/Reproductive\\_health#cite\\_note-1](https://en.wikipedia.org/wiki/Reproductive_health#cite_note-1)
4. R. Marlow, Babara A. Redding, Text book of Pediatric Nursing, sixth edition, Sanders publication, Page-1122.
5. Dasra, Kiawah Trust. Spot On! Improving Menstrual Health and Hygiene in India Report [Internet]. USAID, 2014. Available from <http://menstrualhygieneday.org/wp-content/uploads/2017/03/Spot-On.pdf>
6. United Nations Children's Fund. Progress for children: a report card on adolescents. New York: UNICEF; April 2012. Available at [http://www.unicef.org/media/files/PFC2012\\_A\\_report\\_card\\_on\\_adolescents.pdf](http://www.unicef.org/media/files/PFC2012_A_report_card_on_adolescents.pdf)
7. WHO (2015). The global prevalence of anaemia in 2011.
8. UNICEF. Adolescents nutrition [Internet]. Available from <http://unicef.in/Whatwedo/33/Adolescents-Nutrition>
9. National Rural Health Mission. Implementation Guide Final RCH 2 Adolescent Reproductive Health Strategy [Internet]. New Delhi. Ministry of Health and Family Welfare Government of India. 13<sup>th</sup> April 2006. Available from [http://india.unfpa.org/drive/Implementation\\_GuideFinal-RCH2ARSH.pdf](http://india.unfpa.org/drive/Implementation_GuideFinal-RCH2ARSH.pdf)
10. Chaudhari P, Koshy S, Ravindra. Study to Assess the Effectiveness of Structured

K. Jyoti et.al. Effectiveness of intervention on knowledge of reproductive health among adolescent girls in Selected School, Rohtak, Haryana.

Teaching Program on Knowledge Regarding Reproductive Health Among Adolescent Girls in Selected Schools. Ind. J of research. May 2015;4(5). Available from [https://www.worldwidejournals.com/paripex/recent\\_issues\\_pdf/2015/May/May\\_2015\\_14329736519.pdf](https://www.worldwidejournals.com/paripex/recent_issues_pdf/2015/May/May_2015_14329736519.pdf)

11. Malleshappa K, Shivaram Krishna NC. Knowledge and attitude about reproductive health among rural adolescent girls in Kuppam mandal: An intervention study.2011;22(3): 305-310. Available from

<http://www.alliedacademies.org/articles/knowledge-and-attitude-about-reproductive-health-among-rural-adolescent-girls-in-kuppam-mandal-an-intervention-study.html>

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