

# Impact of health education on rural adolescent girls of Haryana

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■ **ABSTRACT** : Adolescence is a period of rapid physical and biological changes and prime time for health promotion and to encourage adolescents to establish healthy patterns of behaviour that will influence their development and health in later years. In this context a health education programme was structured and charts, posters and other education material were prepared. A pre-test post-test experimental design was employed and the study was a cross-sectional study. From two stratified areas of Rohtak and Bhiwani districts of Haryana, a total sample of 300 adolescent girls in the age group of 13-19 years were selected by random sampling from two villages each Kanni and Shangi and Mehraa and Badeshra from each district, respectively. Assessment was done by self-structured knowledge inventory. Knowledge towards health education was divided into seven major sub-aspects *i.e.* personal hygiene, nutrition and health, family planning, maternal and child care, HIV/ AIDS and physical and emotional health. Pre and post testing performances of experimental and control group respondents were compared using t- test. The messages through prepared charts, posters, leaflets and pamphlets were found most appropriate according to the title/slogan, clarity of picture, colour combination, attractiveness, usefulness, self-explanation, relevance of graphic/text of the topic and general get up. A significant positive impact ( $P < 0.01$ ) of educational programme on the knowledge of experimental group respondents was observed. Improvement has been noted in the respondents from low and moderate categories to high level at post testing stage of imparting health education.

■ **KEY WORDS**: Adolescents, Health education, Rural girls

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Adolescence in India represents over one fifth of the population. WHO defines adolescence as the period of life between 10-19 years. This is the period of rapid change and maturation when the child grows into the adult. It is one of the most enjoyable stages of one's life and it has to be experienced with joy and friendship paving the way for building a healthy society with good social relationships. It is considered twilight between the child and the youth, an overlapping of childlike tendencies and rebellious attitude of a robust youngster. On the psychological side, there is acute self-consciousness, rebelliousness and idealism.

It is the critical period when girls are at a greater risk of many events with irreversible negative consequences – such as child marriage, early pregnancy, or school leaving – that not only impact girls themselves but also the next generation.

Girls face specific adversities that make them even more vulnerable than women or boys. The commonly observed health problems are vaginal discharge, hair lice, headache, painful menstruation, irregular and excessive bleeding, dental problems and short sight. Silent urinary tract infection, poor menstrual hygiene are some other additional problems reported in various studies. Psychological problems also arise at this stage like emotional disturbances, depression, low self-esteem, anxiety over inadequate or excessive secondary sexual development etc.

Although girls are half the youth population of the developing world, little attention has been given to the specific challenges facing adolescent girls as they develop into adult members of families, the workforce, and society. Many of the 600 million girls who live in the developing world do not have

the opportunity to become fully functioning members of the society. Approximately one quarter of girls in developing countries are not in school (Lloyd, 2005) and one quarter to one half of girls in developing countries become mothers before age 18 (United Nations Population Fund, 2005). More than 14 million girls ages 15-19 give birth every year (United Nations Population Fund, 2005), which puts them at risk. While there is an overall trend of decreasing birth rates for girls, maternal causes kill more 15 to 19 year old girls than any other cause (Patton *et al.*, 2009). Adolescent pregnancy may affect future earnings through various channels. Maynard (1996) argues that adolescent pregnancy in the United States reduces young mothers' future productivity and earnings through higher school dropouts among other factors.

Female education is associated with increased nutritional status of children, improved health and survivorship, and increased education of children. Educated women enjoy better health, increased economic productivity, including agricultural outputs and earnings, resulting in overall social and economic benefits to the family (Summers, 1994; Odaga and Heneveld, 1995). In many countries, particularly developing countries, girls are at a disadvantage in terms of schooling compared to boys. Girls' disadvantage is reflected in rates of school enrolment, educational attainment, and performance (Bledsoe and Cohen, 1993; IBRD and World Bank, 1996, Odaga and Heneveld, 1995, Levine *et al.*, 2009).

The Indian girls because of their secondary status in the society may have low self-esteem and poor psychological and physical well-being. Also, the National Population Policy, 2000 identified adolescents as an underserved group for which health needs and within this reproductive and sexual health interventions are to be designed. The National Youth Policy, 2003 recognizes 13 to 19 years as a distinct age group which had to be covered by special programmes in all sectors including health. The National Curriculum Framework, 2005 for school education highlights the need for integrating adolescent reproductive and sexual health messages into school curriculum.

Thus, it becomes important to encourage adolescent girls and provide knowledge that can help them and play a substantial role in shaping-up the future village society. With this background, the present study was planned and executed.

### Objectives :

The broad objectives of the present study were:

- To develop and implement health education programme for promoting knowledge of adolescent girls between 13-19 years,
- To study the impact of educational programme on rural adolescent girls.

### RESEARCH METHODS

The study was carried out in Rohtak and Bhiwani district

of Haryana state randomly selecting a total sample of 300 adolescent girls in the age group of 13-19 years (Fig. A). Two villages from each district *i.e.* Mehraa and Badeshra from Bhiwani and Kanni and Shangi villages from Rohtak district were selected randomly. From each village, 75 girls were selected randomly. At pre-testing stage, one village of each district was taken as control village and another as experimental village. Badeshra village of Bhiwani district was control group where as Mehraa village was selected as experimental group. In the same way, Sanghi village of Rohtak district was taken as control village and Kanni village as experimental village. After calculating the scores of the respondents at pre-testing stage, a village wise list of respondents was prepared in ascending order on the basis of pre-testing scores. From these lists of four groups, 30 respondents from each village were identified having low scores of knowledge on health. Assessment was done by self-structured knowledge inventory.

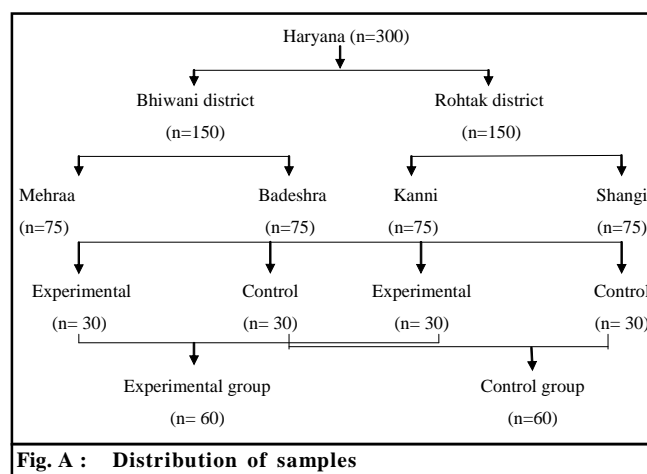


Fig. A : Distribution of samples

Knowledge towards health education was divided into seven major sub aspects *i.e.* personal hygiene, nutrition and health, family planning, maternal and child care, HIV/ AIDS and physical and emotional health. For assessing knowledge in sub-aspects, three levels (*i.e.* low, moderate and high) were formed on the basis of achievable scores. The data were collected through personal visits. Rapport was established with the respondents before conducting the interview. The collected data were classified and tabulated in accordance with the requirement of the objectives to arrive at meaningful and relevant inferences. The data were analyzed using the various statistical tools.

### RESEARCH FINDINGS AND DISCUSSION

The findings of the present study as well as relevant discussion have been presented under following heads :

#### Development and implementation of education programme for promoting knowledge of adolescent girls :

The programme involved designing, testing and refining

the message professionally before its widespread use. No task in the world today can be accomplished successfully and adequately without media support. Therefore, an active role of media in development of human being in national, regional or international spheres has to be endowed and fully acknowledged. The media is playing an important role in passing on meaningful information at fast rate to the large number of adolescent girls in our country. Therefore, the present study was planned to develop the relevant media package to strengthen and sensitize adolescent girls for better family life. The total programme was divided into different lessons. For imparting information related to each topic, complete pre-planning was done regarding the method to be used, inviting experts from related field and type of teaching aid to be used with each topic. On the basis of review of theoretical concepts and discussion with the experts from the related field, the following components were included in the programme: personal hygiene, nutrition and health, family planning, maternal and child care, HIV/ AIDS and physical

and emotional health (Table 1). Visual materials were prepared for achieving the purpose. Prepared manual on selected aspects was given to judges and they were asked to give their views about appropriateness of the material. The results given by the judges was computed on 3 point rating scale *i.e.* most appropriate, somewhat appropriate and not appropriate. In order to find out the consistency in judgement, co-efficient of variation was computed. Few messages were selected to prepare the charts, posters, leaflets and pamphlets based on the importance of these topics.

The results of co-efficient of variation (Table 1) revealed that the entire messages were with co-efficient of variation less than 25 per cent. All the messages were found suitable according to the understanding of the title, free from grammatical mistakes, spelling and other typographical errors, repetition of information, clarity of printing and size, appropriateness of language, coverage. Write up of all the messages was clearly stated and self-explanatory. Material was managed in logical sequence and grouping, layout of the

**Table 1 : Effectiveness of manual as assessed by judges through visual literacy check list**

Messages	Mean	CV (%)
Personal hygiene	164.15 ± 29.77	18.14
Nutrition and health	178.05 ± 19.58	11.00
Family Planning	178.90 ± 30.47	17.03
Maternal and child care	169.80 ± 15.27	14.05
HIV/ AIDS	156.75 ± 22.03	9.00
Physical and emotional health	153.90 ± 27.29	17.73

**Table 2 : Impact of health education programme on knowledge of selected subjects**

Aspect of knowledge		Experimental group (n=60)		Control group (n=60)	
		Pre- testing	Post-testing	Pre-testing	Post-testing
Personal hygiene	Low (12-20)	38 (63.33)	9 (15.00)	24 (40.00)	20 (33.33)
	Moderate (21-28)	12 (20.00)	16 (26.67)	21 (35.00)	18 (30.00)
	High (29-36)	10 (16.67)	35 (58.33)	15 (25.00)	22 (36.67)
Nutrition and health	Low (13-21)	30 (50.00)	13 (21.67)	29 (48.33)	26 (43.33)
	Moderate (22-30)	21 (35.00)	17 (28.33)	21 (35.00)	21 (35.00)
	High (31-39)	9 (15.00)	30 (50.00)	10 (16.67)	13 (21.67)
Family planning	Low (9-15)	35 (58.33)	9 (15.00)	30 (50.00)	28 (46.67)
	Moderate (16-21)	19 (31.67)	12 (20.00)	17 (28.33)	19 (31.67)
	High (22-27)	6 (10.00)	39 (65.00)	13 (21.67)	13 (21.66)
Maternal and child care	Low (23-38)	41 (68.33)	12 (20.00)	26 (43.33)	21 (35.00)
	Moderate (39-54)	14 (23.33)	15 (25.00)	19 (31.69)	19 (31.67)
	High (55-69)	5 (8.33)	33 (55.00)	15 (25.00)	20 (33.33)
HIV/AIDS	Low (8-13)	45 (75.00)	10 (16.67)	34 (56.67)	30 (50.00)
	Moderate (14-19)	9 (15.00)	22 (36.67)	16 (26.67)	18 (30.00)
	High (20-24)	6 (10.00)	28 (46.67)	10 (16.66)	12 (20.00)
Physical and emotional health	Low (8-13)	39 (65.00)	7 (11.67)	26 (43.33)	24 (40.00)
	Moderate (14-19)	16 (26.67)	23 (38.33)	21 (35.00)	22 (36.67)
	High (20-24)	5 (8.33)	30 (50.00)	13 (21.67)	14 (23.33)

Figures in parentheses indicate percentage

pictures/illustrations/graphics was appropriate and all the messages were different from each other. The messages in charts, posters, leaflets and pamphlets were found most appropriate according to the title/slogan, clarity of picture, colour combination, attractiveness, usefulness, self-explanation, relevance of graphic/text of the topic and general get up. According to responses of the experts as suggested by the co-efficient of variation, not much variation was found in their responses. Therefore, these messages were termed as crucial for dissemination to the respondents for enhancing their knowledge regarding their health.

#### Impact of programme on knowledge of respondents :

The impact of programme on knowledge of respondents was assessed. Table 2 gives the comparison of respondents of experimental and control groups for their level of knowledge on different aspects at pre-post stage. The table shows that at pre-exposure stage, majority of experimental group respondents were in low category of knowledge on personal hygiene (63.33%), nutrition and health (50.00%), family planning (58.33%), maternal and child care (68.33%), HIV/AIDS (75.00%) and physical and emotional health (65.00%) whereas at post-testing stage, the respondents from low category shifted to moderate and high categories of knowledge on all aspects.

The data showed that on all aspects of knowledge except HIV/AIDS more than fifty per cent respondents shifted to high category of knowledge. Further the table gives, the comparison of control group at pre and post-testing stage. There has been slight improvement observed in the knowledge of respondents of control group in moderate and high level categories at post testing stage. The improvement found in the control group respondents may be attributed to the exposure by campaign, advertisement on T.V. and exposure through books in the schools.

Pre-post testing performances of experimental and control group respondents were compared using paired 't' test. Mean differences and paired t-values for both the groups are presented in Table 3.

Table 3 gives the comparison of experimental group at pre and post-test exposure with mean differences. Highly

significant differences in knowledge of respondents were reported for personal hygiene ( $t=4.51$ ), nutrition and health ( $t=4.67$ ), family planning ( $t=2.83$ ), maternal and child care ( $t=3.41$ ), HIV/AIDS ( $t=3.17$ ), physical and emotional health ( $t=8.84$ ) at one per cent level of significant. The mean scores of respondents of all aspects at post-testing were relatively higher than pre-testing which indicated the positive impact of educational programme on the knowledge of experimental group respondents.

Table further describes the pre-post mean differences in knowledge of the control group respondents on family life education. Differences on pre-post knowledge were found to be non-significant on all aspects. On various aspects, though the differences at pre-post exposure were non-significant but comparison of mean scores revealed that there was slight improvement in the knowledge of control group respondents at post-testing as the mean scores on different aspects were slightly higher against pre-testing mean scores.

#### Conclusion :

- The messages have been found as crucial for dissemination to the respondents and these will definitely enhance their knowledge regarding their health when used properly.
- There has been improvement in the respondents from low and moderate categories to high level at post testing stage. The improvement found in the subjects can be attributed to the exposure given by the researchers, media and published material.
- A very positive impact of educational programme on the knowledge of experimental group respondents was observed. This indicated that education imparted through clear, understandable messages were well received by population of all age groups and can bring a positive change in the health of society.

#### Suggestion :

There is need for a service for providing counselling for adolescents within the district hospital and the CHC. In primary

**Table 3 : Impact of education programme on knowledge of respondents on family life education**

Groups aspects of knowledge	Experimental group (n=60)			Control group (n=60)		
	Pre-testing	Post-testing	't' value	Pre-testing	Post-testing	't' value
Personal hygiene	6.70 ± 1.28	7.40 ± 1.14	4.51*	4.60 ± 0.77	4.79 ± 0.66	1.78
Nutrition and health	4.65 ± 1.15	5.34 ± 1.13	4.67*	4.69 ± 0.82	4.70 ± 0.58	1.85
Family planning	4.57 ± 1.22	5.08 ± 1.16	2.83*	4.99 ± 0.84	5.00 ± 0.69	1.33
Maternal and child care	6.90 ± 1.20	7.51 ± 1.26	3.41*	7.90 ± 0.90	8.09 ± 0.61	1.49
HIV/AIDS	4.81 ± 1.09	5.36 ± 1.23	3.17*	4.51 ± 0.61	4.70 ± 0.77	1.85
Physical and emotional health	7.61 ± 0.89	9.13 ± 1.70	8.84*	6.55 ± 0.88	6.85 ± 1.25	1.83

\* indicate significance of value at P=0.01

health centres and sub-centres the skills to provide counselling both to adolescents and also to newlyweds must be available. Peer educator network is also one of the key strategies to meet adolescents especially in marginalized groups like migrants, rag pickers and certain occupational categories, street children and even larger socially under privileged groups like the urban slums or in tribal areas. Help lines and internet are some of the other ways through which educated adolescent can access information and bring a change in their lives and society at large.

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