

Impact of Health Education on Knowledge of Reproductive and Sexual Health among Adolescent Girls. An interventional Study in Tural Area of Punjab

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Abstract

Introduction: Adolescence is an important period of development that follows the onset of puberty during which a young person develops from a child into an adult. Poor reproductive health knowledge in adolescence is associated with disease, abuse, unwanted pregnancy and death. Sexual activity in adolescent period is associated with ignorance about sex and sexuality that can lead to teenage pregnancies leading to illegal abortion, increased infant mortality rate and maternal mortality rate.

Aims and objectives: To assess the impact of health education on knowledge of reproductive and sexual health

Material and methods: This study was conducted in 13-17 year old adolescent girls in rural area of Amritsar .A total of 230 adolescent girls were participated .study was conducted in three phase ,pre-intervention, intervention and post intervention phase. Semi-structured preformed questionnaire in their vernacular was used for data collection.

Results: Before intervention only one fourth of the respondents (25.21%) heard about HIV/AIDs and after intervention almost 2/3rd (64.43%) heard about HIV/AIDS. Less than 1/4th (22.16%) knew that STDs can be prevented by avoiding multiple sexual partners, treating the infected partner, using condoms and after intervention more than 2/3rd (70%) had knowledge.

Conclusion: After health education session more number of adolescent girls attained knowledge regarding reproductive and sexual health, so regular information education communication sessions need to be held.

Key words: adolescent girls, rural area, reproductive and sexual health

Introduction

Adolescence is a crucial period of life having stress and storms. It is the important period of

development that follows the onset of puberty during which a young person develops from a child into an adult.¹ During this transitional stage that

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extends from 10-19 years, there occurs physical and psychological development that follows the period of puberty leading to adulthood. There is possibility that although many adolescents become productive and healthy adults, some don't achieve their full potential because adolescence period is loaded with many threats to health and wellbeing.² Poor reproductive health knowledge in adolescence is associated with disease, abuse, exploitation, unwanted pregnancy and death. Adolescents are the future parents, their reproductive and sexual health will affect the health and wellbeing of their family, community and country. Adolescents accounts for nearly one fifth of the world's population. They constitute 20% of the total population in India.³ There are approximately 253 million adolescents in India.⁴ Females comprise almost 47% and males 53% of the total adolescent population.⁵ In Punjab adolescents constitute 22.1% of total population and by the year 2025 the population of adolescents in developed and developing countries would be around 19% and 27% respectively.⁶ Because of inquisitiveness and desire for experimentation, the adolescents want to experience the effect of smoking, alcoholic drinks, drugs and even for sexual intercourse, without knowing the adverse effects and often become the victims.⁷ Sexual activity in adolescent period is associated with ignorance about sex and sexuality and also predisposed by family traditions of early marriage that can lead to teenage pregnancies leading to illegal abortion, increased infant mortality rate and Maternal mortality rate. Because of high risk behavior of sexual activity, predisposed by the effect of media like television, pornographic books, etc. the incidence of STIs and HIV is increasing among teenagers. Adolescent girls seek abortion for reasons such as fear of being rejected by society and their own family, shame and desperation. They are more likely to have abortions at a late stage and that too by quacks and untrained dais which further increase the health risks. Interventions related to reproductive and sexual health needs of the adolescents are limited in the country. They are having less access to information, services and resources, this leads to ignorance, misinformation and misconception about the issues related to reproductive health.⁸ Despite of all these efforts by the government of India, the knowledge regarding reproductive and sexual health is poor among the adolescent girls, especially among

rural adolescent girls and very few interventional studies was conducted in rural areas to assess the impact of health education on adolescent girls. That's why this interventional study was conducted among the rural adolescent girls regarding reproductive and sexual health.

Aims and objectives

1. To assess knowledge of reproductive and sexual health among adolescent girls
2. To impart education regarding reproductive and sexual health.
3. To assess the impact of health education

Material and Methods

The study was carried out in the rural field practice area of Department of Community Medicine, Government Medical College, Amritsar for a period of one year. After taking permission from the District Education Officer, two schools were selected by using simple random technique (Lottery Method). In these schools adolescent girls of the age group 13 to 17 years were included and out of school adolescent girls of the same age group who were residents of these two villages were also included in the study. In this research only girls were chosen as study participants because they are more likely to experience complication of teenage pregnancy and sexually transmitted diseases. The age limit of 13 years was fixed because the average age of menarche is 12.5 years.⁹ The upper age 17 years was fixed as nearly 17% of all the girls are married by the age of 18 years in India.¹⁰ The heads of these institutions and class in-charges were explained about the importance and the purpose of study to elicit their full co-operation. Schedule of the visits were made so as not to disturb their study schedule. List of out of school adolescent girls was obtained with the help of health workers and ASHAs of these areas.

The study was conducted in three phases. On the day of visit, the purpose of study was informed to the teacher in-charge and to the students. Those who were willing to participate were enrolled in the study and informed assent was taken from the class in-charge. Similarly with the help of ASHAs, eligible out of school adolescent girls were enrolled in pre-

intervention by giving prior information regarding date and time of the visit and were asked to assemble at anganwadi center and sub center near their homes for participation and informed assent was taken from elderly female in the family. The questionnaire was prepared in vernacular language by reviewing various literature on reproductive and sexual health, was explained to them and were asked to fill it. Privacy and confidentiality was maintained and it was also conveyed that information collected will be used for study purpose only. During intervention phase batches of 25 girls, who were enrolled in pre intervention phase were made. In each batch Information, education and communication sessions was conducted in vernacular language for 20-25 minutes about physical changes during adolescent period, normal menstrual pattern, menstrual hygiene practices and related problems for which flipbook on menstrual hygiene in their vernacular language that contain pictures was used for their easy understanding (Issued by Department Of Health And Family Welfare Punjab Under National Health Mission),¹¹ teenage pregnancy and its consequences,

importance of small family norms, contraceptive methods, modes of transmission and prevention of sexually transmitted diseases, health effects of illegal abortions. Queries related to the topic were also explained. After 3 months, re-evaluation of their awareness regarding reproductive health in the post-intervention phase was done by administering them same questionnaire to assess the impact of health education. There were 250 eligible adolescent girls in the pre intervention test (214 were in both the schools and 36 were out of school adolescent girls in both the villages) but subsequently 14 in school girls and 6 out of school adolescent girls were absent in either intervention sessions or in post intervention test, so they were not included in the study sample. The sample therefore consisted of 230 adolescent girls. The socio economic status was assessed by using modified Kuppuswamy Scale.¹² Information obtained from participants in pre and post intervention phase was compiled, analyzed and by using appropriate statistical method (chi-square test) valid conclusions were drawn.

Table 1: Distribution according to socio demographic parameters of participants

Parameters		N=230	%
Age group	10-13	54	23.47
	14-16	141	61.30
	17-19	35	15.21
Religion	Sikh	171	74.34
	Christian	43	18.69
	Hindu	12	5.21
	Muslim	1	0.43
	No response	3	1.30
Caste	Schedule caste	139	60.43
	Backward caste	75	32.60
	General caste	12	5.21
	No response	4	1.73
Socioeconomic status	Upper	0	0
	Upper middle	9	3.91
	Lower middle	55	23.91
	Upper lower	156	67.82
	Lower	10	4.34

Table 2: Distribution of participants (who have attained menarche) according to their awareness and practices during menstruation (n=187)

Variables		N=187	%
Awareness before menarche	Yes	55	29.41
	No	132	70.58
First reaction at menarche	Shocked	95	50.80
	Embarrassed	44	23.52
	No reaction	37	29.78
	Dirty feeling	11	5.88
Restrictions during menstruation	Not eating certain food items	94	50.26
	Not visiting religious places	28	14.97
	Not going to kitchen	12	6.41
	No restrictions	53	28.34
Absorbent use	Sanitary pads	97	51.8
	Cloth	14	7.4
	Both	76	40.6
Having dysmenorrhea	Yes	141	
	No	46	
If yes, then practices in dysmenorrhea N=141			
	Taking pain killer	77	54.60
	Drinking hot milk	20	14.18
	Using hot water bottle	12	8.51
	Visiting physician	16	11.34
	Not taking any treatment	16	11.34

Table 3: Distribution of participants according to their knowledge regarding Reproductive tract infections /Sexually transmitted infections

Variables		Before intervention N=230	After intervention N=230	χ^2 P value
Heard about HIV/ AIDS	Yes	58(25.21)	148(64.43)	71.21 0.00001
	No	172(74.78)	82(35.65)	
Modes of transmission (multiple responses)	Sexual relationship	7 (3.04)	95(41.30)	121.59 0.0001
	Infected blood transfusion	20 (8.69)	98(42.60)	
	Infected needles	33 (14.34)	112(48.69)	
	Sharing meals	3 (1.30)	0(0)	
	Shaking hands	2 (0.86)	0(0)	
	Don't know	170 (73.91)	18(7.8)	
Prevention by	Avoid multiple sexual partners	31(13.47)	42(18.26)	121.59 0.0001
	Taking medicines	13(5.65)	61(26.52)	
	Using condoms	7(3.04)	58(25.21)	
	Don't know	179(77.82)	69(30)	

(Figures in parenthesis are percentages), difference in knowledge regarding reproductive tract infections / sexually transmitted infections is statistically significant

Table 4: Distribution of participants according to their knowledge regarding pregnancy and abortion

Variables		Before intervention N=230	After intervention N=230	χ^2 P value
Missed period as first sign of pregnancy	Yes	73(31.73)	188(81.73)	117.12 0.00001
	No	157(68.26)	42(18.26)	
One time sexual relationship leads to pregnancy	Yes	27(11.7)	146(63.47)	151.55 0.00001
	No	100(43.47)	68(29.56)	
	Don't know	103(44.78)	16(6.95)	
Effects of teenage pregnancy	Social stigma	95 (41.30)	20(8.69)	201.50 0.00001
	Harmful to mother	26(11.30)	98(42.60)	
	Harmful to child	10(4.34)	87(37.82)	
	No harm	14(6.08)	10(4.34)	
	Don't know	85(36.95)	15(6.52)	
Safer place for abortion	Government hospital	20(8.69)	110(47.82)	34.02 0.00001
	Private hospital	12(5.21)	50(21.73)	
	Home	6(2.60)	1(0.43)	
	Don't know	192(83.47)	69(30)	
Person conducting abortion	Trained doctor	28(12.17)	163(70.86)	199.41 0.00001
	Untrained doctor	4(1.73)	1(0.43)	
	Staff nurse	9(3.91)	20(8.69)	
	Dai	32(13.91)	21(9.13)	
	Don't know	157(68.26)	25(10.86)	

(Figures in parenthesis are percentages)

Table no 5: Distribution of participants according to their sexual behavior

Variables		N=230	%
Having sexual relationship	Yes	10	4.34
	No	210	91.30
	No response	10	4.34
Sexually abused	Yes	6	2.60
	No	224	97.39
Preferred person for imparting sex education	Doctor	110	47.82
	School teacher	68	29.60
	Parents	52	22.60

Results

Out of total participants more than half of the adolescents (61.30%) were in age group 14-16, followed by (23.47%) in 10-13yrs and (15.21%) were in 17-19 yrs of age, majority of the participants were belonging to Sikh families (74.34%), followed by 18.69% Christians, 5.21% and 0.43 % were Hindus and Muslims respectively. More than half belonged to scheduled caste, followed by backward class

and only (5.21 %) belonged to general class. More than 2/3rd (67.82%) belonged to upper lower socio economic status. Regarding first reaction at menarche, out of total 187 participants more than half of the respondents (50.80%) were shocked and (23.52%) participants felt embarrassed, there were restrictions for eating certain food like curd, mangoes, pickles among half of the respondents (50.26%) during menstruation. 51.8% of participants were in practice of using only sanitary pads as menstrual

absorbent, 40.6% participants were using both cloth and sanitary pads. Before intervention only one fourth of the respondents (25.21%) heard about HIV/AIDS and after intervention almost 2/3rd (64.43%) heard about HIV/AIDS. The change observed was statistically significant at p value less than 0.05. Less than 1/4th (22.16%) knew that STDs can be prevented by avoiding multiple sexual partners, treating the infected partner, using condoms and after intervention more than 2/3rd (70%) had knowledge. The change observed was statistically significant at p value less than 0.05. Before intervention only (31.73%) participants knew that missed period is the first sign of pregnancy and after intervention more than 3/4th (81.73%) knew this. In pre intervention phase out of total participants only 13.9% respondents knew that hospitals (Government and private) are the safer places for conducting abortion and after intervention this percentage increased to 69.55%.

Discussion

More than half of the participants (50.80%) were shocked and (23.52%) felt embarrassed. A study by Deo and Gharttargi (2005) among rural adolescent girls on Ambajogai (Maharashtra) showed that 44.6% of the respondents were scared at the time of menarche, which is almost similar with present study.¹³ A study conducted by Tarannum et al (2017) among adolescents in Aligarh showed that 19% of respondents felt embarrassed, which is almost similar with present study. (29.41%) were aware about the menstruation before menarche. A study conducted by Kansal et al (2015) among rural adolescent girls in Varanasi showed that 29.4% were aware about menstruation before menarche, which is in concordance with present study.¹⁴ A study conducted by Nayak et al (2016) among the adolescent girls of Jabalpur (Madhya Pradesh) showed that 74.4% reported pain abdomen showing almost similar results.¹⁵ Out of total 141 respondents, more than half (54.60%) use pain killer in dysmenorrhea only 11.34% were used to visit physician. A study conducted by Mathew et al (2015) among school going adolescent girls of Mangalore showed that 67.6% were taking pain killer.¹⁶ The results are not similar, the reason might be that this study was conducted in government senior secondary schools and that study was conducted in English medium private schools. A

study conducted by Yadav et al (2011) among rural youth of Gujarat stated that 60% of the respondents heard about HIV/AIDS.¹⁷ In present study lesser number of adolescents heard about HIV/AIDS in pre intervention phase, probable reason of this difference could be that, this study was among 13-17 years adolescent girls and that study was among youth (15-24) years age group. A study conducted by Naidu et al (2014) among rural adolescent girls of Godavari district of Andhra Pradesh showed that 30% of the respondents knew the mode of spread of HIV/AIDS, which is in concordance with present study.¹⁸ In an interventional study conducted by Singh et al (2004) among adolescent girls of Amritsar, 12.13% of the respondents knew that teenage pregnancy is harmful to girl's health and after intervention this percentage increased to 43.11%, which is similar with present study. A study conducted by Mittal and Goel (2010) among urban adolescent girls of Haryana showed that 39.7% of the participants knew the place for conducting abortion is Government and Private hospital.¹⁹ The probable reason of lesser number of participants having knowledge in present study could be that, this study was conducted in rural area and other conducted study in urban area. Preference of almost half (47.82%) was doctor followed by school teacher and parents. The reason for preferring doctor for getting sex education was, most of the girls feel embarrassed and hesitate to discuss these topics with parents because their parents perception was that these topics need not to be discussed as discussing these topics will end up in early sexual indulgence. A study conducted by Kumar et al (2017) among adolescent girls of Ambala district (Haryana) showing similar results i.e. 46.7% of respondents preferred doctor.²⁰

Conclusion and Recommendations

Before intervention less number of adolescent girls had knowledge and after intervention more number of girls came to know about different aspects of reproductive and sexual health so, there is need to create awareness about reproductive and sexual health by information, education and communication activities and capacity building of health workers and Anganwadi workers. Reproductive and sexual health education should be mandatory for all the students, as a part of school curriculum. For

imparting reproductive and sexual health education, health care professional can be trained and used for this. Special attention should be given to vulnerable population of adolescent

Limitation of the study: The study was conducted in the rural area and in government schools only. Another limitation was information education and communication activities on reproductive was done only one time and after three months knowledge of adolescent girls regarding reproductive health was assessed. This study was conducted only among girls, in future similar studies focusing on sexual health can be done on boys also.

Ethical approval: The study was approved by institutional ethical committee, BFHUS/2K18p-TH/134 dated 4/1/19

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Conflict of interest: No

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