Research Article

KAP study of reproductive health and sexually transmitted diseases among high school girls of Vadodara city

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Abstract

Background: Sexually transmitted diseases (STDs) are a major public health problem not only in India but all over the world. The World Health Organization (WHO) estimates that 150–300 million new cases of curable STDs occur annually worldwide.

Objective: To find the socio-demography of high school girls and to study their attitude, knowledge, and practice toward menstruation, reproduction, contraception, and STDs.

Materials and Methods: A cross-sectional study was conducted in the city of Vadodara during January 2010 to December 2010. The study included girls high school of standard 8th to 12th of Vadodara city. There were 11 girls high school in Vadodara city with sample size as 1122. From each of the school 110 girls, that is, 22 girls from each of 8th, 9th, 10th, 11th, and 12th were selected by simple random technique.

Result: Almost 41% participants said menstruation cleans the dirty blood of the body. Almost 8.3% participants did not know about organs of reproduction of female and 18.3% did not know about physical changes during puberty. Only 55% participants have heard about STD and only 69% have awareness regarding AIDS. Almost 66% participants did not know regarding features of STD and 19% did not know about mode of transmission of STD/AIDS.

Conclusion: Reproductive health is an important area of concern in adolescent health and is intimately connected with the issues such as RCH, population control, and HIV/AIDS prevention. It is also a sensitive area due to socio-cultural taboo of discussion about sexuality and reproduction in the Indian society.

KEY WORDS: Adolescent girl, menstruation, reproduction, sexually transmitted disease

Introduction

Half of world's population that is about 3 billion is under the age 25 years. Among the total population of adolescents, 1.3 billion are in developing countries and more than 500 million of them are adolescent females. However in India the second most populous country, the adolescent age group represents about one-fifth of the population.[1] In India, 10.3% female population belongs to the age group of 15–19 years and incidence of teenage pregnancy in the country varies from 3.2% to 18.6%.[2]

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The World Health Organization (WHO) estimates that 150–300 million new cases of curable sexually transmitted diseases (STDs) occur annually worldwide. Improvement of reproductive health education and the social status of women are now seen as necessary tool for further progress in fertility reduction.[3]

The National Family Health survey data revealed that over 50% of girls, many below the age of 18 years. Teenage pregnancies being high-risk pregnancies result in unsafe abortions, low birth rates, and high maternal morbidity and mortality. Among all, 40% HIV infection is centered on teenagers,[4] so the study was conducted with the objectives

to study the socio-demography of high school girls and to study their attitude; knowledge; and practice toward menstruation, reproduction, contraception, and sexually transmitted diseases.

Materials and Methods

A cross-sectional study was conducted among the adolescent girls enrolled in all the girls' high schools of Vadodara city during January and December 2010. The study included 11 girls high schools of standard 8th to 12th of Vadodara city. Prior permission was taken from the district education office for undertaking the study in high schools of Vadodara city. From each of the school 110 girls; that is, 22 girls from each of 8th, 9th, 10th, 11th, and 12th were selected by simple random technique with the help of their attendance register. Data were collected with prior permission of respected school principle and informed consent was taken from participants before the questionnaire was administered.

Statistical Analysis

A sample size of 1122 was obtained using the hypothesis testing method and based on following assumptions: 95% confidence intervals, considering maximum prevalence of 50% (KAP on reproduction, contraception, and STDs among high school girls) and 3% margin of error. The calculated minimum sample had been inflated by 10% to account for anticipated subject nonresponse. For continuous variables mean and median had been calculated, and for categorical variables proportion and percentage had been obtained.

Result

Table 1 shows that most of the participants (88%) belonged to the age group of 13–17 years. Almost 82% participants came from nuclear family. Almost 61% fathers and 41% mothers of participants were graduated. Almost 49% participant's fathers have business and 81% participant's mothers are house wives.

Table 2 shows that 18% participants said that menstruation is a abnormal process and 5.6% said it is a disease. Almost 41% participants said menstruation cleans the dirty blood of the body. Almost 8.3% participants did not know about organs of reproduction of female and 18.3% did not know about physical changes during puberty. Almost 54% participants have following ritual restrictions during menstruation. Only 29% participants have used sanitary pad during menstruation.

Table 3 shows that only 55% participants have heard about STD and only 69% have awareness regarding AIDS. Almost 66% participants did not know regarding features of STD and 19% did not know about the mode of transmission of STD/AIDS. Almost 61% participants share information on STD/AIDS with others. Almost 83% participants did not know

Table 1: Socio-demographic information of participants (*N* = 1122)

Variables		No. of participants (%)
Age (years)	11	5 (0.4)
	12	18 (1.4)
	13	98 (9.0)
	14	293 (26.2)
	15	243 (21.6)
	16	323 (28.8)
	17	125 (11.2)
	18	17 (1.4)
Type of family	Nuclear	918 (81.8)
	Joint	166 (14.8)
	Three generation	38 (3.4)
Mother's literacy status	Primary	85 (7.6)
	Secondary	492 (43.8)
	Graduate	459 (40.9)
	Post graduate	86 (7.7)
Mother's occupation	House wife	905 (80.7)
	Service	180 (16.0)
	Professional	31 (2.8)
	Business	6 (0.5)

Table 2: Distribution of adolescent girls according to their knowledge, attitude, and practice of menstruation

Characteristics	Number of participants (%)
What is menstruation	
Normal process	782 (69.7)
Abnormal process	199 (17.7)
Disease	63 (5.6)
Do not know	78 (7.0)
Why menstruation occurs	
Cleans body of dirty blood	456 (40.7)
Female becomes capable of child bearing	251 (22.4)
Sign of attaining physical maturity	149 (13.3)
Multiple response	141 (12.6)
Do not know	125 (11.0)
Organ of reproduction	
Vagina	116 (10.3)
Uterus	367 (32.7)
Ovaries	349 (31.1)
Multiple response	197 (17.6)
Do not know	93 (8.3)
Physical changes during puberty	
Breast budding	411 (27.7)
Growth of pubic hair	123 (11.0)
Voice changes	81 (7.2)
Hair in the armpit	245 (21.8)
Multiple response	156 (14.0)
Do not know	206 (18.3)
Following of ritual/restriction during menstruation	
No	518 (46.2)
Yes	604 (53.8)

Table 3: Distribution of adolescent girls according to their knowledge, attitude & practice of STD/AIDS

Variable	No. of participants (%)
Heard about STD	
No	506 (45.1)
Yes	616 (54.9)
Awareness regarding AIDS	
No	344 (30.7)
Yes	778 (69.3)
Features of STD	
Fever	35 (3.1)
Foul smelling discharge	13 (1.2)
Genital ulcer	15 (1.3)
Pain in the lower abdomen	39 (3.5)
Multiple response	283 (25.2)
Do not know	737 (65.7)
Mode of transmission of STD/AIDS	
Sex	349 (31.1)
Blood transfusion	20 (1.8)
Syringe	35 (3.1)
Vertical transmission	12 (1.1)
Multiple response	494 (44.0)
Do not know	212 (18.9)
Sharing information on STD/AIDS	
No	678 (60.4)
Yes	444 (39.6)
Updates on reproduction, contraception, and STD/AIDS	63 (6.0)
Mother	26 (2.4)
Books and magazines	12 (1.2)
Internet	31 (2.8)
Doctor	35 (3.1)
Media	24 (2.1)
Teacher	196 (16.4)
Multiple response	735 (66.0)
No update	
Preventive measures for AIDS	
Safe sex	201 (18.0)
Safe blood transfusion	19 (1.7)
Use of disposable syringe	24 (2.1)
Multiple response	90 (8.0)
Do not know	788 (70.2)

about preventive measures for STD and 70% did not know about preventive measures for AIDS.

Discussion

Reproductive health is an important area of concern in adolescent health and is intimately connected with the issues such as RCH, population control, and HIV/AIDS prevention. In this study, the mean age at menstruation was 10.7 years and the median age at menstruation was 12 years, which is matching with the study conducted by Deb and Mishra.[5] Mean age of menarche reported by other studies were; 13.48 years from rural Tamil Nadu,[6] 13.1 years from Rohtak,[7] 13.2 years from Rajasthan,[8] 13 years from Tirupati,[9] 12 years from West Bengal,[10] 10.8 years from Mumbai,[11] and 13.6 years from Punchkula, Haryana. The age of menarche is declining by 0.9 years per decade.[12–14]

A large number of girls 69.7% knew that menstruation is a normal process, 17.7% girls considered it as abnormal process, 5.6% as disease, and 7% girls did not know what menstruation is. Similar studies carried out in Rajasthan revealed that 70% girls thought it to be an unnatural process.[8] The study by Paul and Shan revealed that 70.6% girls did not know what menstruation is before they started menstruating.[15] However, Kamalam and Rajalakshmi reported that around one-third girls had no knowledge of what menstruation is, whereas 32% knew about menstruation.[16]

It was observed that only 17.6% girls who had given more than one correct answer for organs of reproduction and only 8.3% girls did not know about the organs of reproduction. Whereas study carried out in urban slums of Ahmedabad,[17] Andhra Pradesh[18] and Karachi, Pakistan[19] showed 44%, 51%, and 66%, respectively. This study found that mother was the main source of information regarding different aspects of menstruation with 62.8%. Friends, sister, teachers, and books and magazines are also individual sources with 7.4%, 5.3%, 5.7%, and 1.4%, respectively. In a study by Kamalam and Rajalakshmi, out of 24% who had knowledge, 13% learnt from their friends and 8% from their mother and sisters.[16] Another study carried out in Tirupati had finding that mother was the first source of information about menses for majority (61.2%) of the adolescent girls, followed by peers (14.7%) of the adolescents.[20] Therefore it can be said that mother unanimously is the main source of information on this important topic of menstruation.

This study enquired about the awareness on features of STD and observed that 65.7% did not know any feature of STD. These findings matched with those of the study conducted in New Delhi.[21] It was 34% found in study carried out at Kerala.[22]

Study found that most of girls (44%) had said about more than one mode of transmission of STD/AIDS. The Srinagar study[23] revealed that a little less than half of the adolescents (43.04%) had no idea about the possible mode of transmission. There were 70.2% girls who did not know anything about the ways to prevent AIDS, whereas 18% girls believed that safe sex is one of the mode for prevention of AIDS. Use of disposable syringe and safe blood transfusion were believed to be mode of prevention by 2.1% and 1.7% girls respectively. In a study at New Delhi, the findings showed that 77% girls were aware of the link between high-risk behavior such as multiple sex partner and HIV.[24]

Conclusion

Reproductive health is an important area of concern in adolescent health and is intimately connected with the issues such as RCH, population control, and HIV/AIDS prevention.

It is also a sensitive area due to socio-cultural taboo of discussion about sexuality and reproduction in the Indian society.

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