



A Study On Knowledge & Perspectives Of Reproductive And Sexual Health, Addiction & Other Problems Among School-Going Adolescents In Districts Of Western Gujarat

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Abstract

Background: The reproductive and sexual health needs of adolescents differ from those of adults. According to the WHO, Adolescent age group is a second chance for the second decade.

Objectives: to find out knowledge, attitude, and current practices regarding various aspects of reproductive and sexual health problems, including menstrual hygiene, tobacco addiction and anemia among adolescent boys and girls and correcting the same on site by means of health education.

Methods: The cross sectional study carried out on 384 school going adolescent girls and boys of 9 to 12th standards of secondary and higher secondary classes of selected schools of 6 Taluka of Jamnagar district from June 2018 to December 2018. From each standard 8(4 males and 4 females) students were selected. Data were collected by semi-structured questionnaire and data were entered in Microsoft Excel version 2007. Ethical clearance was taken from Institutional ethical committee before commencement of the study.

Results: 45% were unknown to the problems of the adolescent age group. Common problems of menstruation were irregular menses, abdominal pain during menses & very negligible proportion had discussion or consultation with doctor or teachers. 4.4 % had some form of addiction. Awareness about HIV was variable.

Keywords: Adolescent, Knowledge, Reproductive & Sexual Health, Life skill education, HIV-AIDS

Introduction:

Adolescence is a critical time of life when people become independent individuals, forge new relationships, develop social skills and learn behaviors that will last the rest of their lives. It can be one of the most challenging periods. ^[1]Adolescence is a critical time of formative growth to achieve human potential—a fascinating period of profound physical, psychological, and emotional change. It is a life stage marked by both vulnerability and opportunity. The decisions they make, and habits they form, can determine their health and wellbeing for a lifetime. ^[2]

Adolescent make up 22% of our population and are a heterogeneous group of people. ^[3]The reproductive and sexual health needs of adolescents differ from those of adults. ^[4]In addition, adolescents are more likely to engage in risk-taking behaviors than either younger children or adults. ^[5]These significant factors underline the importance of meeting the reproductive and sexual health needs of this age group.

According to the WHO, Adolescent age group is a second chance for the second decade. ^[6]It offers a state-of-the-art overview of four core areas for health sector action, by providing health services, collecting and using the data needed to plan and monitor health sector interventions, developing and implementing health-

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promoting and health-protecting policies and mobilizing and supporting other sectors.^[7]

Most villages are remote and lagging in development. Hence, their social development indices are poor. There are no mechanisms to reach out to youth with correct information regarding sexual and reproductive health. The Adolescent Reproductive Sexual Health (ARSH) program has evolved keeping these needs in mind. It plans to increase the health seeking behavior in the adolescent age group and provide them with the right knowledge about various aspects of their growing life.^[3] Keeping in a view of above stated concerns, present study was attempted in effort to find out the gaps in knowledge, attitude, and current practices regarding various aspects of reproductive and sexual health problems, including menstrual hygiene, tobacco addiction and anemia among adolescent boys and girls and correcting the same on site by means of health education.

Methods:

The present study was a cross sectional study carried out on school going adolescent girls and boys of selected schools of Jamnagar district from June 2018 to December 2018.

Sample size: For estimating a population proportion with specified relation precision, formula= $Z^2_{1-\alpha/2} (1-P) P/\varepsilon^2$ was used where n=Sample size, $1-\alpha$ = confidence level, $Z_{1-\alpha/2}$ = Represent the number of standard errors from the mean, function of confidence level, P= anticipated population proportion, ε = Relating precision.⁸ Since P value from previous studies on the topic of present study is not available an anticipated Value of prevalent knowledge regarding ARSH is taken as (50%).^[8] At $p= 0.50$ (50%) & $\varepsilon = 10\%$, a sample size of 384 would be needed. **Sampling method & Selection of participants:** Jamnagar district having 6 Taluka's. So for equal representation, the sample was divided in 6 Taluka, thus from each Taluka 64 school going adolescents were selected. From each Taluka 2 schools were selected by simple random sampling method. From each selected school 32 adolescents; 16 boys & 16 girls were enrolled for the study. 9 to 12th standards of secondary and higher secondary classes were included. From each standard 8(4 males and 4 females) students were selected for inclusion of whole adolescent age group. From the school register, enlisted students for each division & class,

with the help of random numbers, 16 girls & 16 boys were selected. From each school, 4 from 9th, 4 from 10th & remaining respectively. If school have 2 division then 2 from each division. It was anticipated that by doing so it would further lead Peer education from the selected participants.

Data Collection and Analysis: Data were collected by semi-structured pretested questionnaire and data were entered in Microsoft Excel version 2007. Data was collected by self-administered questionnaire with question guide, in front of investigator. For Tobacco addiction, Daily is every day, sometimes considered when it's once a week to once a month & frequently is 3 times a week.

Health Education: After data collection, the formal health education about their problems & prevention of health problems was given to all the participants with the help of Power point presentation followed by group discussion. All the queries of school students were addressed. **Ethical Clearance:** Ethical clearance was taken from Institutional ethical committee before commencement of the study. School authorities were informed in the prior & permissions were taken for the enrolment of the participants. Participants were ensured for the confidentiality of the data.

Results:

Table no.1 depicts the prevalence of addiction in the form of Mava, Pan & pan- masala was 4.4%, with majority had frequency of it's about 2-3 times a week/ sometimes. Main reason for starting addiction was friends (41.18%), followed by one in family had addiction (23.53%). 5.88% had started for experimental purpose, whereas about one third reported other reasons.

Greater no. of the participants (45%) was unknown to the problems of the adolescent age group. While about 16% said menstruation related problems among girls & night fall among boys can be the problems of adolescents. About 16% participants correctly said about all the problems of adolescent age group among boys & girls i.e. STIs/STDs(5.5%), Problems of personal hygiene of private parts (7.29%), Adolescent pregnancy (4.4%), Anemia (2.08%), Illegal abortion (0.26%), various addictions(5.5%) as shown in table no.2.

Table: 3 describe problems of adolescent boys & girls. 33% boys' participants denied responding about masturbation & according to 28% participants it was a normal phenomenon while 10% considered it as abnormal as Disease. Problem of Nightfall among adolescent boys is a common problem & may mislead them. 48% said its normal phenomenon but 11% stated that it is as abnormal as a disease. 25% refused to respond for that question. The same was corrected by means of health education after completion of an interview. Common problems of menstruation were irregular menses, abdominal pain during menses. About 10% did not respond to this question. Majority of them were discussing menstruation related problems to parents & friends, while surprisingly, very few discussed the problems with doctors & teachers. 43 % were using sanitary napkins & 39% were using cloth whereas 17.19% were using other materials like sponge etc. On asking their attitude and practices regarding porn materials, 58% participants said that they have watched pornographic material from mobile phones (45.78%), Porn book (19.11%), Television/Disc Video Drive (19.56%) & others. Though half of the respondents (58%) were aware about the various contraceptive methods like condom, Coper-T, Mala-D and Tubal ligation; only 5% of them were aware about emergency contraceptive pills (e-pills). Detailed knowledge of HIV/AIDS was evaluated by various questions & statement as per table no.4. About one third students (36%) believed that HIV/AIDS is completely curable where as one third (36%) said it non-curable sizable (27%) of them didn't know the course of disease. About half of them knew that Person with HIV/AIDS may look apparently healthy, whereas about one fifth said they didn't know anything with respect to this phenomenon. Routine blood examination can test HIV/AIDS, was stated as true by 20%, & false by about 63%. Formal touch or hugs don't transmit HIV/AIDS. But one third students believed that it's true. Only 20 percent people said that though a person is harboring HIV/AIDS, looks totally healthy. Only 15% knew that condom use protects from HIV/AIDS, whereas 61% stated that condom can't be used as contraceptives. About 56% believed that same condom can be used repeatedly which is incorrect & 32% didn't know anything with respect to this matter.

Only about 10% students could utter the correct signs/symptoms of anemia. While 40% said that they didn't know any signs/symptoms of anemia. For correction of anemia, 39% said that high iron diet is required but about half of the participants said that they didn't know, the way of prevention of anemia. About 56% school students were receiving Weekly Iron Folic acid Supplementation (WIFS) programme tablets but of which about 44% school students said it was not given regularly in their school (Table-5).

Discussion

The most susceptible time for initiation of tobacco use in India is during adolescence and early adulthood i.e., in the age group of 15-24 year.^[9] In present study, prevalence of addiction in the form of Mava, Pan & pan- masala was 4.4%, while the Global Youth Tobacco Survey (GYTS) (2000-2004), the first national survey of tobacco use among adolescents in India^[10], reported it to be 14.6 % in the age group of 13-15 year.^[10] Similarly other study among students in Goa reported 13.5% ever tobacco use prevalence.^[11] So, there may be possibility of underreporting of addiction by the students. Mangesh S Pednekar & Prakash C Gupta in their study at Goa found significant influence of tobacco use by parents and close friends on current tobacco use of students.^[12] This finding also observed in the current study. Only 16% of participant said menstruation related problems among girls & night fall among boys can be the problems of adolescents, while in a study by SS Kushwahhalf 45.73% of the girls were unaware about the menstrual cycle.¹² About 50% of the participant were not aware about various health problem that could occur during adolescent period, very few of them (5-6%) were reported STIs/STDs and various addiction as problems of adolescent. Mehta V et al, in a cross sectional study among rural school adolescents in Maharashtra, awareness regarding ill effects of tobacco addiction and STIs /STDs was 85.29% and 98.04% respectively.^[13] Level of knowledge about various health problems during adolescent is very poor in the present study.

Data from study shows that in rural Madhya Pradesh, 58.19% of boys believed that masturbation was harmless and it was natural process, while in our study only 28% believed in this fact.¹² This reflects a gap in sexual health education. In the later study 53.31% of adolescent boys perceived that night

emission was a natural process, similarly in our study 48% perceived this fact.¹² Prevalence of irregular menstrual cycle and dysmenorrhoea among participant girls was 19% and 33% respectively, while 37% of girls had normal menstrual cycle. In a study by BeenaSachan in north India, one forth (25%) of school going adolescent girl had irregular menstrual cycle and 73% had dysmenorrhea.^[14] Similarly prevalence of dysmenorrhoea reported by Agarwal et al and Beevi NP et al were 79.6% in Gwalior and 33% in Thiruvananthapuram district, respectively.^[15,16]

In the present study fewer than half (43%) girls were using sanitary napkin, while others were using clothes or sponges (57%) during menstrual period. 89% of out-of school adolescent girls were using clean clothes during menstruation in a study by Kushwah SS et al in rural Madhya Pradesh.^[12] This explains effect of schooling on menstrual hygiene. Sizable respondents (58%) have watched porn material by using various electronic devices. Prevalence rates of intentional exposure to pornography also varied greatly.^[17] While Ybarra and Mitchell in 2005 found it only 7% among 10-17-year-olds in United States, Chen et al in 2013 reported that 59% of Taiwanese 10-12th standard students had intentionally used Internet pornography in the past year.^[17] The study by M. A. Al Mamun et al found that 72% of students consumed pornography at least once within their entire life.^[18] 58% of our study adolescents were aware about various modern methods of contraceptive, but only fewer than 5% knew about emergency contraceptive pills (E-pills). Knowledge of condom and E-pills was 73% and 50% respectively, among adolescent in a similar study by Kushwah et al.^[12] So, Gujarat is lacking behind in adolescent knowledge about contraception. Three forth (80%) of the respondents have heard about HIV/AIDS with various conceptions about its transmission, diagnosis, manifestation, treatment and prevention. Similarly >62% of rural youth of Jamnagar district have had heard about HIV/ AIDS in a study by Yadav et al.^[19] Sizable participants (14% to 61%) were unaware about true concepts or had mis-conception about HIV/AIDS. Similar Misconceptions (17% to 26%) regarding the transmission of HIV were noted in later study.^[19] Very few among the respondents were able to correctly identify various symptoms of

anemia (10%) and its treatment/prevention (39%), while Chaluvraj TSI et al reported 18-66% symptomatic knowledge and 31-75% preventive knowledge of anemia among high school girls in rural Bangalore.²⁰ 57% Coverage of WIFS programme was observed in present study, while later study reported 94% coverage of WIFS programme.^[20]

Conclusion: Almost half of the participants were unaware about problems of adolescent phase. Only 16% participants correctly said about all the problems of adolescent age group among boys & girls like, STIs/STDs (5.5%), Problems of personal hygiene of private parts 7.29% & other problems. Problem of Nightfall among adolescent boys is a common problem & may mislead them. Common problems of menstruation were irregular menses, abdominal pain during menses & very negligible proportion had discussion or consultation with doctor or teachers. More than one third girls were using cloth during menstruation. The knowledge about contraceptives, HIV-AIDS, STIs was very poor. 4.4 % adolescents were found to be addicted with Mava, Pan-masala. It was influenced by friends & family members. Half of the participating school had irregularly run WIFS programme & awareness about anemia among them was quit less.

Recommendations: Adolescent reproductive & sexual health content should be included in the routine education syllabus. Periodic seminars & guidance about the problem solution can be arranged locally by school teachers & other staff members. Help from nearby primary or secondary health care facility for health education or screening can be considered.

Limitations: Though study was attempted to cover entire district but because of Financial & time constraint, larger sample was not studied. Multicenter such studies may add on in generalizability of the study findings.

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Tables:

Table: 1 Distribution of study participants according to addiction

Addiction (n=384)	Frequency (%)
Yes	17 (4.4)
No	367 (95.6)
Type of addiction(n=17)	
Mava	6 (35.3)
Pan	3 (17.65)
Pan-masala	8 (47.05)
Frequency of tobacco use (Addiction)(n=17)	
Daily	1 (5.88)
Sometimes	15 (88.23)
Frequently	1 (5.88)
Reason for starting addiction(n=17)	
Friends (Peers)	7 (41.18)
For experimental purpose	1 (5.88)
One in family had addiction	4 (23.53)
Other reasons	5(29.41)

Table-2 Awareness of participant toward various problems of adolescents

Problems of adolescents*	Frequency (%)
	(n=384)
Menstruation/Night fall problem	61 (15.89)

STIs/STDs	21 (5.5)
Problem of Personal Hygiene (Private parts)	28 (7.29)
Adolescent Pregnancy	17 (4.4)
Anemia	8 (2.08)
Illegal abortion	1 (0.26)
Various addictions	21 (5.5)
All of the above	62 (16.15)
None of the above	30 (7.81)
Don't know	172 (44.79)

*=Multiple responses, STI/STDs= Sexually Transmitted Infections/Diseases

Table-3: Responses of adolescents to various aspects of Reproductive & Sexual Health

Aspects of Reproductive & Sexual Health	Frequency (%)
1. Thinking about masturbation (n=192 male)	
Normal Phenomenon	54 (28.12)
Abnormal as disease	19 (9.9)
Shameful	16 (8.3)
Don't know	40 (20.83)
Don't want to answer	63 (32.81)
2. Belief about night fall among boys* (n=192 male)	
Normal Phenomenon	92 (47.92)
Abnormal as disease	22 (11.46)
Don't know/Inconclusive	31 (8.0)
Don't want to respond	61 (24.48)
3. Problems during menstruation (n=192 female)*	
Irregular menses	36 (18.75)
Abdominal pain during menses	64 (33.33)

Scanty periods	9 (4.69)
Heavy menses	20 (10.42)
None of the above	71 (36.98)
Don't want to respond	20 (10.42)
4. What do you use during menstruation? * (n=192 female)	
Cloth	75 (39.06)
Sanitary napkins	83 (43.23)
Others	33 (17.19)
5. Practice & attitude of watching porn material. (n=384)	
Yes	225 (58.6)
No	128 (33.3)
Don't want to respond	31 (8.1)
6. Knowledge of Contraceptives(n=384)	224 (58.33)
7. Knowledge about e-pills (n=224)	11 (4.91)

*=Multiple responses

Table-4 Concepts regarding HIV/AIDS among those who have heard about it

Conception about HIV/AIDS (n=307)	True	False	Don't know
1. HIV/AIDS is completely curable.	112 (36.48)	112 (36.48)	83 (27.04)
2. Person with HIV/AIDS always looks thin or suffering from any illness?	45 (14.66)	190 (61.89)	72 (23.45)
3. Routine blood investigations can test HIV/AIDS.	62 (20.20)	194 (63.19)	51 (16.61)
4. Hugging each other can transmit HIV/AIDS.	130 (42.35)	137 (44.63)	40 (13.02)
5. A healthy looking person may have HIV/AIDS.	63 (20.52)	187 (60.91)	57 (18.57)

6. Condom use during sexual intercourse protects from HIV/AIDS.	46 (14.98)	157 (51.14)	104 (33.88)
7. Condom can be used as contraceptives.	38 (12.38)	189 (61.56)	80 (26.06)
8. Same condom can be used repeatedly.	173 (56.35)	34 (11.07)	100 (32.58)

Table-5 Distribution of study participants according to the Knowledge about the signs/symptoms of Anemia & its prevention:

Signs/symptoms of Anemia*	Frequency (%)
Easily fatigued	44 (11.46)
Getting breathless while walking	20 (5.20)
Pale body	22 (5.73)
Lack of concentration	14 (3.65)
Decreased appetite	14 (3.65)
All of the above	40 (10.41)
None of the above	5 (1.30)
Don't know	151 (39.32)
What should be done to prevent anemia?*	
. High fat diet	26 (6.77)
High iron diet	150 (39.0)
High sugar diet	11 (2.86)
Spicy diet	5 (1.30)
Don't know	203 (52.86)
In your school are you given IFA tablet every Wednesday?	
Yes	217 (56.5)
No	167 (43.5)

*Multiple responses

References:

1. Coming of age: adolescent health. Available at <https://www.who.int/health-topics/adolescents/coming-of-age-adolescent-health>. Accessed on June 5th 2020.
2. Launch: A Lancet Commission on adolescent health and wellbeing. Available at <https://www.who.int/life-course/news/events/adolescent-health-lancet-papers/en/>. Accessed on June 5th 2020.
3. Adolescent Reproductive & Sexual Health Programme available at <http://www.nrhmhp.gov.in/content/adolescent-reproductive-sexual-health-programme> Accessed on June 5th 2020.
4. Fact sheet. Susan Wile Schwarz. Adolescent Reproductive and Sexual Health Facts for Policymakers. April 2010. Available at http://www.nccp.org/publications/pdf/text_931.pdf. Accessed on June 5th 2020.
5. Steinberg, L., Dahl, R., Keating, D., Kupfer, D. J., Masten, A. S., & Pine, D. S. (2006). The study of developmental psychopathology in adolescence: Integrating affective neuroscience with the study of context. In D. Cicchetti & D. J. Cohen (Eds.), *Developmental psychopathology: Developmental neuroscience* (p. 710–741). John Wiley & Sons Inc.
6. Health for world's adolescent report. A second chance in the second decade. Available at <https://apps.who.int/adolescent/second-decade/> Accessed on June 5th 2020.
7. Health for world's adolescent. Improving health for adolescents available at https://www.who.int/maternal_child_adolescent/topics/adolescence/second-decade/en/ Accessed on June 5th 2020.
8. S.K. Lwanga and S. Lemeshow. Sample size determination in health studies-A practical manual. Geneva: World Health organization; 1991.p1-27.
9. Reddy KS and Gupta PC, editors. Report of tobacco control in India. New Delhi:
10. Ministry of Health and Family Welfare, Government of India; 2004.
11. Gajalakshmi V and Kanimozhi CV. A survey of 24,000 students aged 13-15 years in India: Global Youth Tobacco Survey 2006 and 2009. *Tob Use Insights*. 2010; 3:23–31.
12. Mangesh S Pednekar and Prakash C Gupta. Tobacco use among school students in Goa, India. *Indian J Public Health*. 2004; 48(3): 147-152.
13. SS Kushwah and Anuj Mittal. Perceptions and Practice with Regard to Reproductive Health among Out-of-School Adolescents. *Indian Journal of Community Medicine*. 2007 April; 32(2): 141-143.
14. Varshil Mehta and Anusha Bhat. Health awareness and behavior among adolescent students in a rural school: a cross sectional observational study. *Int J Res Med Sci*. 2015 Dec; 3(12):3499-3502.
15. Beena Sachan, Mohammad Zafar Idris, Sativa Jain et al. Age at Menarche and Menstrual Problems among School-Going Adolescent Girls of a North Indian District. *Journal of Basic and Clinical Reproductive Sciences*. 2012 Dec; 1(1&2): 56-59.
16. Agarwal A, Agarwal AK. A Study of Dysmenorrhea among Adolescent Girls (15-20 years). *Indian J Prev Soc Med*. 2008; 39: 45-48.
17. Nazeema Beevi P. Manju L., Anil Bindu S. et al. *Int J Community Med Public Health*. 2017 Aug; 4(8):2995-2998.
18. Jochen Peter & Patti M. Valkenburg. Adolescents and Pornography: A Review of 20 Years of Research. *The Journal of Sex Research*. 2016; 53(4-5): 509-531.
19. M. A. Al Mamun, S. M. Yasir Arafat, Mst. Ambiatunnahar, et al. Attitudes and Risk Factors of Pornography Consumption Among Bangladeshi University Students: An Exploratory Study. *International Journal of Mental Health and Addiction*. 2019; 17:323-335.
20. Sudha B. Yadav, Naresh R. Makwana, and Bhavin N. Vadera, et al. Awareness of HIV/AIDS among rural youth in India: A community based cross-sectional study. *J Infect Dev Ctries* 2011; 5(10): 711-716.
21. Chaluvaraj TSI, Satyanarayana PT. Change in Knowledge, Attitude and Practice Regarding Anemia among High School Girls in Rural Bangalore: A Health Educational Interventional Study. *Natl J Community Med* 2018; 9(5): 358-362.