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A comparative study to assess the knowledge on HIV/AIDS and its prevention among adolescents in selected urban and rural higher secondary school of West District, Tripura

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Abstract
Background: HIV/AIDS is a disease of human immune system caused by HIV Virus. Adolescence is a phase of physical growth and development accompanied by sexual maturation, often leading to intimate relationships. Prevention of HIV infection primarily through safe sex and needle exchange programmes is a key strategy to control the spread of the disease.
Materials and Methods: A comparative study to assess the knowledge on HIV/AIDS and its prevention among adolescents in selected urban and rural higher secondary school of West District, Tripura with a view to develop health educational pamphlet". In this study the data were collected from 86 no. of adolescents (42 no. of adolescents in urban higher secondary school of Dukli and 44 no. of adolescents in rural higher secondary school of Suryamaninagar, West District, Tripura) by using consecutive sampling technique. Method: self-administered structure knowledge questionnaire on HIV/AIDS and its prevention was used to collect data. Collected data were analysed by using descriptive and inferential statistics.
Result: The mean knowledge score was 13.93, standard deviation was 2.81 among adolescents in urban higher secondary school and the mean knowledge score was 11.48, standard deviation was 2.85 among adolescents in rural higher secondary school. Mean difference was 2.45 and calculated unpaired 't' value was 4.02, which was found significant at 0.05 level, (tabulated 't' value =1.98 and df=84). The analysis of variance (ANOVA) "F" value shows there was significant association between the knowledge score with selected demographic variables in the aspects of father's educational status among adolescents in selected urban higher secondary school at 0.05 level of significance. Calculated "F" value = 2.79* (tabulated "F" value = 2.34, df between the group = 6, within the group = 35) and the analysis of variance (ANOVA) "F" value shows there was significant association between the knowledge score with selected demographic variables in the aspects of source of information among adolescents in selected rural higher secondary school at 0.05 level of significance. Calculated "F" value = 2.56* (tabulated "F" value = 2.34, df between the group = 6, within the group = 37).
Conclusion: It can be concluded that the knowledge was higher among the adolescents in urban higher secondary school than the adolescents in rural higher secondary school.

Keywords: Knowledge, HIV/AIDS and it's prevention, adolescents, higher secondary school, pamphlet

Introduction

"Live as if you were to die tomorrow. Learn as if you were to live forever."

- **Mahatma Gandhi**

Historically the assumption of an active sexual life was thought to be situated in heterosexual monogamous relationship between young adults. Today initiative of sexuality reflects wide acceptance of multiple kinds of intimate relationship beginning early to adolescence. This phenomenon relatively new societal norm creates a dangerous dilemma for many adolescents who are engaging unprotected sex. It brings pleasure, yet invites early child bearing as well as exposure to human immune deficiency virus (HIV) and other potentially emerging sexually transmitted diseases (STD).

In India according to the Health Ministry, National AIDS Control Organization (NACO) approximately 21 lakh people are living with HIV/AIDS globally. 1.8 million adolescents between the ages of 10 and 19 were living with HIV worldwide.

Methodology: Research methodology is a systematic way to solve the research problems.

Research approach: The research approach adopted for the present study is Non-experimental quantitative approach.

Research Design: Research design adopted descriptive comparative design.

Variables

Research variables: Knowledge regarding HIV/AIDS and its prevention among adolescents.

Demographic variables: Age, gender, religion, type of family, parent's education, place of residence, place of residence, stream of education, any habits, any prior information regarding HIV/AIDS and it's prevention-yes/no, if yes- state the source of information.

Setting of the study: The study was conducted in selected urban higher seconday school of Dukli and rural higher secondary school of Suryamaninagar, West District, Tripura.

Population: The target population was adolescents of urban and rural higher secondary school of West District, Tripura.

Sample: In this study sample was adolescents between the age group of 17 – 19 years.

Sampling technique: In this study the investigator used consecutive sampling technique for selecting the samples.

Inclusion criteria: Adolescents present during the time of data collection.

Exclusion criteria: Those who are below 17 years of age and above 19 years of age.

Analysis and Interpretation: In order to interpret the data in a logical order both the descriptive and inferential statistics were used.
Analysis and interpretation of data was done as per objectives of the study.

Objectives of the study

- To assess the knowledge on HIV/AIDS and its prevention among adolescents in selected urban and rural higher secondary school.
- To compare the knowledge on HIV/AIDS and its prevention among adolescents between selected urban and rural higher secondary school.
- To find out the association between the knowledge on HIV/AIDS and its prevention among adolescents in selected urban and rural higher secondary school with their selected demographic variables.
- To develop and distribute health educational pamphlet regarding HIV/AIDS and its prevention among adolescents in selected urban and rural higher secondary school.

The analysis is presented under the following headings:
Section-1: Findings related to socio-demographic data of adolescents in the urban and rural higher secondary school.

Section-2: Findings related to compare the level of knowledge on HIV/AIDS and its prevention among adolescents in selected urban and rural higher secondary school.

Section-3: Finding related to association between the knowledge score on HIV/AIDS and its prevention among adolescents in selected urban and rural higher secondary school with their selected demographic variables.

Section-1: Findings related to socio-demographic data of adolescents in the urban and rural higher secondary school

Table 1: Frequency and percentage distribution between adolescents of urban and rural higher secondary school n=86

Demographic Variables	Adolescents in Urban H.S. School		Adolescents in Rural H.S. School	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
1. Age				
a. 17 years	33	78.57%	22	50.00
b. 18 years	8	19.05%	16	36.36
c. 19 years	1	2.38%	6	13.64
2. Gender				
a. Male	16	38.10%	18	40.91
b. Female	26	61.90%	26	59.09
3. Religion				
a. Hindu	42	100%	43	97.73
b. Muslim	0	0%	1	2.27
c. Christian	0	0%	0	0
d. Others	0	0%	0	0
4. Type of Family				
a. Nuclear	25	59.52%	24	54.55
b. Joint	14	33.33%	20	45.45
c. Extended	3	7.15%	0	0
5. Father's Educational Status				
a. Illiterate	3	7.14%	2	4.55
b. Primary (I–V)	13	30.95%	12	27.27
c. Upper Primary (VI–VII)	7	16.68%	8	18.18
d. Secondary (IX–X)	9	21.43%	10	22.72
e. Higher Secondary (XI–XII)	5	11.90%	6	13.64
f. Graduate	3	7.14%	4	9.09
g. Post-graduate	2	4.76%	2	4.55
6. Mother's Educational Status				
a. Illiterate	5	11.90%	6	13.64
b. Primary (I–V)	12	28.58%	15	34.09
c. Upper Primary (VI–VII)	10	23.81%	8	18.18
d. Secondary (IX–X)	6	14.29%	12	27.27
e. Higher Secondary (XI–XII)	5	11.90%	2	4.55
f. Graduate	2	4.76%	1	2.27
g. Post-graduate	2	4.76%	0	0
7. Place of Residence				
a. Urban	42	100%	0	0
b. Rural	0	0%	44	100
8. Stream of Education				
a. Science	4	9.52%	9	20.45

b. Arts	38	90.48%	35	79.55
c. Commerce	0	0%	0	0
9. Any Habits Like				
a. Smoking	0	0%	0	0
b. Drinking	0	0%	0	0
c. Chewing tobacco / betel leaf / betel nut	0	0%	2	4.55
d. Others	0	0%	0	0
e. No bad habits	42	100%	42	95.45
10. Prior Information Regarding HIV/AIDS and its Prevention				
a. Yes	42	100%	44	100
b. No	0	0%	0	0
If Yes, Source of Information:				
a. Newspaper	4	9.53%	6	13.64
b. Internet	20	47.62%	12	27.27
c. Peer group	5	11.90%	8	18.18
d. Family members	2	4.76%	3	6.82
e. Health professionals	0	0%	1	2.27
f. Teachers	11	26.19%	14	31.82
g. Others	0	0%	0	0

Table-1 depicts that, majority of the sample 78.57% were the age group of 17 years, 61.90% were female, 100% were from Hindu religion, 59.52% were from nuclear type of family, Father's educational status were 30.95% from primary education, Mother's educational status were 28.58% from primary education, 100% were from urban residence, 90.48% were from arts stream of education, 100% were have no bad habits like smoking, drinking alcohol, chewing tobacco/betel leaf/ betel nut's or others, 100% of adolescents had prior information regarding HIV/AIDS and it's prevention, 47.62% of adolescents got information regarding HIV/AIDS and it's prevention from internet in urban higher secondary school whereas in rural higher secondary school majority of the sample 50% were the age group of 17 years, 59.09% were female, 97.73% were from Hindu religion, 54.55% were from nuclear type of family, Father's educational status were 27.27% from primary education, Mother's educational status were 34.09% from primary education, 100% were from rural residence, 79.55% were from arts stream of education, 95.45% were have no bad habits like smoking, drinking alcohol, chewing tobacco/betel leaf/ betel nut's or others, 100% of adolescents had prior information regarding HIV/AIDS and it's prevention, 31.82% of adolescents got information regarding HIV/AIDS and it's prevention from teachers.

Section-2: Findings related to compare the level of knowledge on HIV/AIDS and its prevention among adolescents in selected urban and rural higher secondary school

Table 2: Frequency and percentage distribution on level of knowledge on HIV/AIDS and it's prevention among adolescents in selected urban and rural higher secondary school *n*=86

Knowledge score	Adolescents in urban H.S. school		Adolescents in rural H.S. school	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Inadequate (1-7)	0	0%	0	0%
Moderately adequate (8-14)	22	52.38%	37	84.09%
Adequate (15-21)	20	47.62%	7	15.91%

Total items- 21, Maximum score - 21 and Minimum score – 1

Table-2 shows that 0% were having inadequate knowledge score, followed by 52.38% were having moderately adequate knowledge score and 47.62% were having adequate knowledge score among adolescents in urban higher secondary school and 0% were having inadequate knowledge score, followed by 84.09% were having moderately adequate knowledge score and 15.91% were having adequate knowledge score among adolescents in rural higher secondary school. The above data revealed that adolescents in urban higher secondary school have more knowledge than adolescents in rural higher secondary school.

Table 3: Mean, mean difference, SD and t-value of knowledge score on HIV/AIDS and its prevention among adolescents in selected urban and rural higher secondary school

N=86

Knowledge group	Mean	Mean difference	SD	"t"-value
Adolescents in urban H.S. school	13.93	2.45	2.81	4.02*
Adolescents in rural H.S. school	11.48		2.85	

*= significant at 0.05 level, (df=84, table value =1.98)

Data presented in the table-3 depicts that the mean knowledge score was 13.93, standard deviation was 2.81 among adolescents in urban higher secondary school and the mean knowledge score was 11.48, standard deviation was

2.85 among adolescents in rural higher secondary school. Mean difference was 2.45 and calculated unpaired 't' value was 4.02, which was found significant at 0.05 level, (tabulated 't' value =1.98 and df=84), which indicated that there was significant difference in knowledge score on HIV/AIDS and its prevention among adolescents in selected urban and rural higher secondary school. Therefore, the knowledge was higher among the adolescents in urban higher secondary school than the adolescents in rural higher secondary school.

Section-3: Finding related to association between the knowledge score on HIV/AIDS and its prevention among adolescents in selected urban and rural higher secondary school with their selected demographic variables.

Table 4: ANOVA (F value) on knowledge score on HIV/AIDS and it's prevention among adolescents in urban higher secondary school with their selected demographic N=42

Sl No.	Demographic variables	DF Between the group	DF Within the group	Mean of sum of square between the group	Mean of sum of square within the group	Tabulated 'F' value (at 0.05 level of significance)	Calculated 'F' value
1	Age	2	39	5.515	7.460	3.23	0.739 (NS)
2	Type of family	2	39	7.1	7.379	3.23	0.962 (NS)
3	Father's educational status	6	35	16.273	5.838	2.34	2.787*
4	Mother's educational status	6	35	4.941	7.781	2.34	0.635 (NS)
5	Source of information	6	35	3.603	8.010	2.34	0.449 (NS)

(*= Significant at 0.05 level, NS= Not significant)

Data presented in the table-4 analysis of variance (ANOVA) result showed that there was significant association between the knowledge score with selected demographic variables in the aspects of father's educational status among adolescents in selected urban higher secondary school at 0.05 level of significance. Calculated "F" value = 2.79* (tabulated "F" value = 2.34, df between the group = 6, within the group = 35), which indicated that the knowledge score on HIV/AIDS and its prevention among adolescents in urban higher secondary school was dependent with selected demographic variable of father's educational status.

Table 5: ANOVA (F value) on knowledge score on HIV/AIDS and it's prevention among adolescents in rural higher secondary school with their selected demographic variables N=44

Sl No.	Demographic variables	DF Between the group	DF Within the group	Mean of sum of square between the group	Mean of sum of square within the group	Tabulated 'F' value	Calculated 'F' value (at 0.05 level of significance)
1.	Age	2	41	3.651	7.379	3.15	0.494 (NS)
2.	Father's educational status	6	37	7.731	7.121	2.34	1.085 (NS)
3.	Mother's educational status	6	37	11.692	6.479	2.3	1.804 (NS)
4.	Source of information	6	37	15.169	5.915	2.34	2.564 *

(*= Significant at 0.05 level, NS= Not significant)

Data presented in the table-5 analysis of variance (ANOVA) result showed that there was significant association between the knowledge score with selected demographic variables in the aspects of source of information among adolescents in selected rural higher secondary school at 0.05 level of significance. Calculated "F" value = 2.56* (tabulated "F" value = 2.34, df between the group = 6, within the group = 37), which indicated that the knowledge score on HIV/AIDS and its prevention among adolescents in rural higher secondary school was dependent with selected demographic variable of source of information.

Discussion

This deals with major finding of the study. Majority of the sample 78.57% were the age group of 17 years, 61.90% were female, 100% were from Hindu religion, 59.52% were from nuclear type of family, Father's educational status were 30.95% from primary education, Mother's educational status were 28.58% from primary education, 100% were from urban residence, 90.48% were from arts stream of education, 100% were have no bad habits like smoking, drinking alcohol, chewing tobacco/betel leaf/ betel nut's or others, 100% of adolescents had prior information regarding HIV/AIDS and it's prevention, 47.62% of adolescents got information regarding HIV/AIDS and it's prevention from internet in urban higher secondary school whereas in rural higher secondary school majority of the sample 50% were the age group of 17 years, 59.09% were female, 97.73% were from Hindu religion, 54.55% were from nuclear type of family, Father's educational status were 27.27% from primary education, Mother's educational status were 34.09% from primary education, 100% were from rural residence, 79.55% were from arts stream of education, 95.45% were have no bad habits like smoking, drinking alcohol, chewing tobacco/betel leaf/ betel nut's or others, 100% of adolescents had prior information regarding HIV/AIDS and it's prevention, 31.82% of adolescents got information regarding HIV/AIDS and it's prevention from teachers.

The statistical findings of the present study revealed that adolescents in urban H.S. school had 0% inadequate, 52.38% moderately adequate and 47.62% adequate knowledge score and adolescents in rural H.S. school had 0% inadequate, 84.09% moderately adequate and 15.91% adequate knowledge score.

The mean knowledge score was 13.93, standard deviation was 2.81 among adolescents in urban higher secondary school and the mean knowledge score was 11.48, standard deviation was 2.85 among adolescents in rural higher secondary school. Mean difference was 2.45 and calculated unpaired 't' value was 4.02, which was found significant at

0.05 level, (tabulated 't' value =1.98 and df=84). Therefore, the knowledge was higher among the adolescents in urban higher secondary school than the adolescents in rural higher secondary school.

The analysis of variance (ANOVA) shows there was significant association between the knowledge score with selected demographic variables in the aspects of father's educational status among adolescents in selected urban higher secondary school at 0.05 level of significance. Calculated "F" value = 2.79* (tabulated "F" value = 2.34, df between the group = 6, within the group = 35) and the analysis of variance (ANOVA) shows there was significant association between the knowledge score with selected demographic variables in the aspects of source of information among adolescents in selected rural higher secondary school at 0.05 level of significance. Calculated "F" value = 2.56* (tabulated "F" value = 2.34, df between the group = 6, within the group = 37), which indicated that there was significant association between the knowledge score on HIV/AIDS and its prevention among adolescents in selected urban and rural higher secondary school with their selected demographic variables.

Conclusion

The study was undertaken to assess the knowledge on HIV/AIDS and its prevention among adolescents in selected urban and rural higher secondary school, West District, Tripura. The study involved descriptive comparative design, with consecutive sampling technique 86 subjects was selected based on inclusion and exclusion criteria where 42 nos were from urban higher secondary school and 44 nos were from rural higher secondary school. The data were collected by using structured knowledge questionnaire to assess the knowledge on HIV/AIDS and its prevention among adolescents and the results were described by using descriptive and inferential statistics. This study concluded that the knowledge was higher among the adolescents in urban higher secondary school than the adolescents in rural higher secondary school.

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