

Knowledge on HIV/AIDS among the Adolescents

A Felicia Chitra¹, S. Kalavathi² and Manjubala Dash^{3*}

¹Professor and Head Department of Medical Surgical Nursing, Mother Theresa Post Graduate and Research Institute of Health Sciences, Puducherry, India

²Professor and Head Department of Obstetrics and Gynecology Nursing, Anamalai University, India

³Professor and Head of Obstetrics and Gynecology Nursing, Mother Theresa Post Graduate and Research Institute of Health Sciences, Puducherry, India

***Corresponding Author:** Manjubala Dash, Professor and Head of Obstetrics and Gynecology Nursing, Mother Theresa Post Graduate and Research Institute of Health Sciences, Puducherry, India.

Received: January 31, 2018; **Published:** February 23, 2018

Abstract

Acquired Immunodeficiency Syndrome (AIDS), caused by Human Immuno Deficiency Virus (HIV), is posing itself to be one of the most serious challenges to the global public health. As we enter the fourth decade of AIDS epidemic, the evidence of its impact is undeniable. According to WHO global HIV statistics, an estimated 36.9 million people were living with HIV, with a global HIV prevalence of 0.8%, towards the end of 2014.

Objective: To assess the level of knowledge on HIV/AIDS among the adolescents.

Methodology: A descriptive cross-sectional survey was adopted, among the adolescents. A total of 1000 college students those were studying in the selected colleges in Puducherry, were selected by convenient sampling technique. The tool for data collection was constructed by the researcher and it was pretested and validated by the several experts.

Result and Findings: The result shows the in relation to the socio-demographic variables of the adolescents most (54.9%) of the college students were in the age group of 19 to 20 years, most (56.2%) of the college students were females, majority (96.3%) of the college students were single, half (50.2%) of the college students were from the rural area, majority (83.4%) of them were Hindus. overall level of knowledge regarding HIV/AIDS among the adolescents. Out of 1000 students, 511 (51.1%) had poor level of knowledge, 466 (46.6%) had average knowledge and only 23 (2.3%) had adequate knowledge. There was statistically significant association between the knowledge regarding HIV/AIDS with the gender shows that the male students had higher knowledge than the female students.

Conclusions: The investigator concluded that the knowledge regarding HIV/AIDS among the adolescents is not adequate

Keywords: Knowledge; Adolescents; HIV/AIDS

Introduction

Acquired Immunodeficiency Syndrome (AIDS), caused by Human Immuno Deficiency Virus (HIV), is posing itself to be one of the most serious challenges to the global public health. As we enter the fourth decade of AIDS epidemic, the evidence of its impact is undeniable. Billions and trillions of dollars have been spent in research and there is not a single claim of reliable vaccine or cure in the near sight. Though the saga of the global menace causing disease is too short, its repercussions are voluminous since 2000, as around 38.1 million people have become tested HIV positive and 25.3 million people have died of AIDS related diseases [1,2].

According to WHO global HIV statistics, an estimated 36.9 million people were living with HIV, with a global HIV prevalence of 0.8%, towards the end of 2014. In the same year, there were roughly 2 million new HIV infections identified, of which over 220,000 were children < 15 years of age and 1.2 million people died of AIDS related diseases [3-5]. The HIV infection may be transmitted from one person to another via exchange of body fluids from an infected person, such as blood, semen, vaginal secretions and breast milk [6,7].

World Health Organization (1986) defines "adolescence" as age spanning from 10 to 19 years; "youth" refers to those in the age group of 15 - 24 years; the "young people" represent 10 to 24 years age group [8,9]. Around the world, there are more than 1.7 billion young people aged 10 to 24 years making every fifth person as adolescent in the World's population [10]. Of the 1,210 million Indian population, 30.9% are in the age group of 10 - 24 years making very third person belonging to this category [11]. Adolescents comprise 22% of India's population and they are the fulcrum of Indian society [12]. The youth are the valuable resources of India who have the capacity to change the fate of India in all dimensions, particularly health. Unfortunately, because of the nature of this phase of life, which involves experimentation and risk taking, they tend to become vulnerable to health hazards and the chief being HIV/AIDS [13].

The signs and symptoms may develop as the disease progresses and may vary depending on the stage of infection. Though, initially the individual do not experience any symptoms, they develop signs and symptoms like weight loss, fever, prolonged diarrhea, swollen lymph nodes the results gradual weakening of the immune system [14].

Lack of knowledge about HIV/AIDS, inaccessibility to health services, lack of education and life skills and early marriage, all have increased the vulnerability of HIV/AIDS [15-20].

Researchers conducted study among the students to assess the knowledge on HIV/AIDS highlights results as follows:

Tung, Cook, Lu and Ding (2015) conducted a study on comparison of HIV knowledge, attitude and source of STI information between the female and male college students in Taiwan reported moderate level of knowledge and attitude among the participants. Dubey, Sonker and Chaudhary (2014) had conducted a cross-sectional study on "knowledge, attitude and beliefs of young, blood donors among college students about HIV showed that the comprehensive knowledge regarding HIV prevention and transmission was less than expected. Madiba and Mokgatle (2014) conducted a survey to assess the high school learners' HIV knowledge and attitude towards learners infected with HIV in North West and Gauteng provinces, South Africa, showed that 87% had HIV related knowledge, 98.6% had knowledge on the mode of transmission and 73% had knowledge of prevention. Abiodun, Sotunsa, Ani and Jaiyesimi (2014) conducted a cross sectional study on undergraduate students of a privately owned university in Nigeria to assess the level of HIV/AIDS knowledge showed very high among 97.1% of the participants with a significant difference in knowledge of HIV/AIDS by gender where the males had better knowledge than the females. Tung, Cook, Lu and Yang (2013) conducted a study on HIV knowledge and behavior among Chinese college students in China and the United States. The result showed that more Chinese students in the US scored higher on knowledge scores, but the overall score in both groups revealed incomplete knowledge. Asante and Oti-Boadi (2013) conducted a cross-sectional study to evaluate the HIV/AIDS knowledge among the undergraduate university students' and how it can be used in HIV prevention strategies in Accra, Ghana showed that there was an inconsistent level of AIDS knowledge with significant gender difference. The students could identify the modes of transmission and measures to prevent, but were found less knowledgeable about the causative agent of AIDS [15-20].

The above result stimulated the present researcher to undertake this study to assess the level of knowledge among the adolescents in the Puducherry, India.

Objectives

- To assess the level of knowledge on HIV/AIDS among the adolescents.
- To associate the level of knowledge with the selected demographic variables.

Methodology

A descriptive cross-sectional survey was adopted to assess the existing knowledge level, towards HIV/AIDS, among the adolescents and their association with the variables like age, gender, marital status, family status, place of residence, educational status and HIV/AIDS awareness program.

Five - stage cluster sampling technique was used for this study. Out of all the colleges affiliated to Pondicherry University, the colleges were clustered region wise (Puducherry, Karaikal, MAHE and Yanam) at the first stage. Out of the 4 regions, Puducherry was selected by convenience sampling technique. In the second stage, the colleges in Puducherry, were clustered discipline wise (Arts and Science, Engineering, B.Ed, Law, Agriculture, Poly technique etc.) and Arts and Science, Engineering, B.Ed colleges were selected. At the third stage, from the clusters (68) of Arts and Science, Engineering, B.Ed. colleges, 10 colleges were randomly selected using lottery method. In the fourth stage, 2 disciplines were selected randomly from each college. In the fifth stage, from each of the selected discipline 50 students were selected using systematic sampling method.

A total of 1000 college students studying in the selected colleges in Puducherry selected by convenient sampling technique as per the inclusion criteria. The Inclusion criteria were College students:

- a. Both male and female
- b. Both UG and PG (Under Graduate and Post Graduate)
- c. Both married and unmarried
- d. Of arts, science, engineering or B.Ed colleges (Bachelor of Education)
- e. Who would willingly participate in the study
- f. Who can read and write English or Tamil

The tool for data collection was constructed by the researcher and it was pretested and validated by the several experts. The tool consists of 2 sections. The first section is about the socio-demographic variables like age, gender, marital status, family status, place of residence, religion, educational status and HIV/AIDS awareness program etc. has 8 structured-questions. The second part of the tool was a structured questionnaire on knowledge about HIV/AIDS with 53 items distributed under various sub-items like:

- General information: 5 items
- Transmission: 21 items
- Signs and symptoms: 10 items
- Diagnosis and treatment: 7 items
- Prevention: 5 items
- At risk of contracting HIV/AIDS: 5 items

Scoring Pattern: For each item score of 1 was awarded when there is right answer and the wrong answers were given a score of 0. The total score was 53. The level of knowledge of the college students were classified as below:

Score	Percentage (%)	Level of knowledge
40 - 53	> 75	Adequate
27 - 40	50 - 74	Average
0 - 27	< 50	Poor

Content Validity of the Tool

Six experts from the field of medicine, nursing and statistician scrutinized the tool. The suggestions and the corrections given by the experts were incorporated and necessary modifications were made in the final tool like questions were clubbed together modification in objectives, technical terms in the questionnaire were removed.

Reliability of the Tool

The reliability of the tool was established by using Cronbach’s alpha method. The r value for Knowledge of HIV/AIDS - 0.883.

Prior to the data collection, written permission was obtained from the college authorities. Ethical clearance was obtained from the Institutional Human Ethical Clearance Committee. Informed consent was obtained from each of the participants, prior to the data collection. Total 10 colleges were selected randomly. In each college a separate hall, preferably, exam hall was prepared and the participants were seated comfortably. The investigator introduced herself and the students were explained the purpose of the study and instructions were given not to discuss during the sessions while answering the questions. The tool self-administered questionnaire was distributed to the students and were asked to fill in. It took around 40 - 45 minutes to fill in the questionnaire. The collected data were organized, tabulated and analyzed using descriptive statistics such as frequency, percentage, mean and standard deviation to describe the knowledge of the adolescents. The inferential statistics like “F” test and “t” test is used to find out association between the level of knowledge and with the demographic variables [22].

Result and Findings

The result shows the in relation to the socio-demographic variables of the adolescents most (54.9%) of the college students were in the age group of 19 to 20 years, most (56.2%) of the college students were females, majority (96.3%) of the college students were single, half (50.2%) of the college students were from the rural area, majority (83.4%) of them were Hindus. In relation to family status, most (66.5%) of the college students were from nuclear family. majority (84.3%) of the college students were undergraduates and regarding HIV/AIDS awareness session, most (69.8%) of the students had not attended any awareness program.

Table 1 and figure 1 shows the overall level of knowledge regarding HIV/AIDS among the adolescents. Out of 1000 students, 511 (51.1%) had poor level of knowledge, 466 (46.6%) had average knowledge and only 23 (2.3%) had adequate knowledge.

(N = 1000)		
Level of Knowledge	No.	%
Adequate (> 75%)	23	2.3
Average (50 - 75%)	466	46.6
Poor (< 50%)	511	51.1

Table 1: Overall Knowledge Regarding HIV/AIDS Among the adolescents.

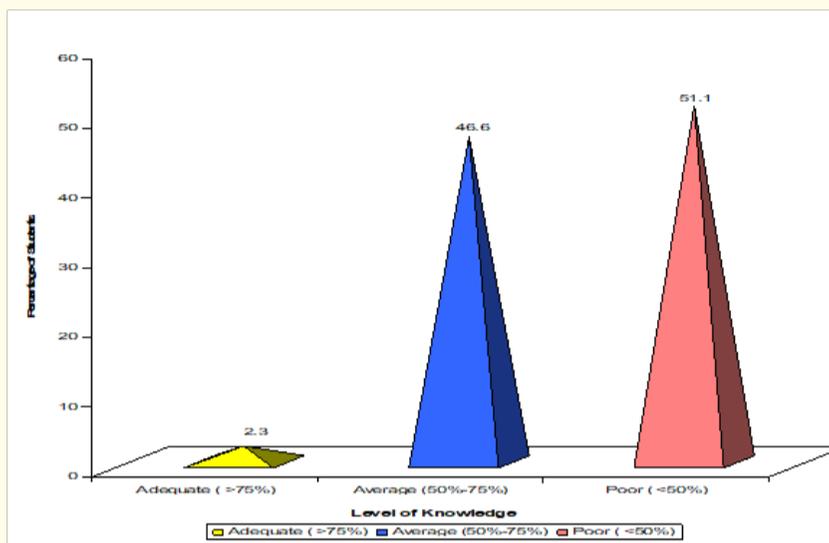


Figure 1: Overall Knowledge Regarding HIV/AIDS Among the College Students.

The above table 2 highlights that regarding general information, majority 607 (60.7%) of the college students had poor knowledge, 237 (23.7%) had average knowledge and only 156 (15.6%) had adequate knowledge. In relation to transmission of HIV/AIDS, 499 (49.5%) of the students had average knowledge, 295 (29.5%) had poor knowledge and only 206 (20.6%) of them had adequate knowledge. Regarding signs and symptoms of HIV/AIDS, majority 565 (56.5%) of the students were not aware of signs and symptoms and had only poor knowledge, whereas 380 (38%) and 55 (5.5%) of them had average and adequate knowledge, respectively.

Items	(N = 1000)					
	Level of Knowledge					
	Adequate		Average		Poor	
	No.	%	No.	%	No.	%
General information	156	15.6	237	23.7	607	60.7
Transmission	206	20.6	499	49.9	295	29.5
Signs and symptoms	55	5.5	380	38	565	56.5
Treatment	114	11.4	476	47.6	410	41
Prevention	65	6.5	311	31.1	624	62.4
Risk	321	32.1	214	21.4	465	46.5

Table 2: Item wise distributions of Level of Knowledge on HIV/AIDS among the Adolescents.

Regarding treatment of HIV/AIDS, majority 476 (47.6%) of the college students had average knowledge 41% and 11.4% of them had poor and adequate knowledge, respectively.

In relation to prevention, most 624 (62.4%) of the college student had poor knowledge, 31.1% had average knowledge and 6.5% had adequate knowledge.

Regarding risk of contracting HIV/AIDS, totally 465 (46.5%) of the college students had poor knowledge and only 32.1% of them had adequate knowledge.

Table 3 shows the association between the knowledge regarding HIV/AIDS with the selected demographic variables of the college students.

Variable	Sub-variable	No.	Mean	S.D	F ratio/'t' test	(N = 1000)
						p value
Age (in years)	17-18	227	0.49	0.12	8.651*	0.000 (S)
	19-20	549	0.48	0.14		
	21-22	156	0.52	0.13		
	22-23	68	0.55	0.13		
Gender	Male	438	0.51	0.13	3.32**	0.001 (S)
	Female	562	0.48	0.13		
Marital status	Single	963	0.49	0.14	0.25	0.796 (NS)
	Married	37	0.50	0.14		
Place of residence	Rural	502	0.48	0.14	2.36	0.018 (S)
	Urban	498	0.50	0.13		
Family status	Joint	335	0.46	0.13	4.55	0.000 (S)
	Nuclear	665	0.50	0.14		
Educational status	Under graduate	843	0.49	0.13	2.81	0.005 (S)
	Post graduate	157	0.52	0.13		
HIV/AIDS awareness session	Attended	302	0.53	0.13	6.15	0.000 (S)
	Not attended	698	0.47	0.13		

Table 3: Association Between Knowledge Regarding HIV/AIDS with Selected Demographic Variables of College Students.

*F ratio; *t' test Minimum Score = 0; Maximum Score = 1

S: Significant at 0.05 level; NS: Non-Significant

The F value revealed that there was statistically significant association between knowledge on HIV with age of the adolescents that is, the age group of 22 - 23 years had highest knowledge. The significant p value revealed that there was statistically significant association between the knowledge regarding HIV/AIDS with the gender shows that the male students had higher knowledge than the female students.

The non-significant p value revealed that there was no significant associated between the knowledge regarding HIV/AIDS with the marital status of the college students. Both the married and single students had similar knowledge regarding HIV/AIDS.

The 't' test value 2.36 at significant p value 0.018, revealed that there was statistically significant association between the knowledge regarding HIV/AIDS with the place of residence. The college students from the urban had higher knowledge regarding HIV/AIDS than rural students.

Regarding the family status of college students, who were from the nuclear family, had higher knowledge score than those student from joint family. The 't' test value 4.55 showed that there was a statistically significant association between the knowledge regarding HIV/AIDS with their family status. The significant p value indicated that there was a statistically significantly association between the knowledge regarding HIV/AIDS with the educational status of the college students. The PG students had higher knowledge regarding HIV/AIDS than the UG students.

There was a significant association between the knowledge regarding HIV/AIDS with the college students participation in the HIV awareness session which was revealed by the 't' test value and the significant p value. The knowledge on HIV/AIDS was higher in those students who participated in the HIV/AIDS awareness programme than those who did not.

Discussion

The result of the present study revealed that 51.1% of the students overall knowledge regarding HIV/AIDS was at a poor level of with the knowledge score of < 50%, while 46.6% had an average level with a score of 50% to 75% and only 2.3% had adequate level of knowledge with > 75% score of knowledge. The findings are in contrast to the findings of Thanavanh., *et al.* (2013) in which he was reported that 46.3% had high level of knowledge regarding HIV/AIDS. This inconsistency may be because the study had been conducted in a foreign country where the culture and exposure to students differ from the Indian set up.

Of the 1000 students, 47.6% of them had an average knowledge while 41.0% of them had poor and 11.4% of the college students had an adequate level of knowledge regarding treatment of HIV/AIDS. In relation to prevention, more than half (62.4%) the number of the students had poor knowledge, 31.1% had an average level of knowledge and only 6.5% had adequate knowledge. Regarding risk of contracting HIV/AIDS, totally (46.5%) of the college students had poor knowledge and only 32.1% of them had adequate knowledge. The present study finding is consistent with the findings of Asante., *et al.* (2013) who reported that there was an inconsistent level of AIDS knowledge with significant gender difference. The students could identify the modes of transmission and measures to prevent, but were found less knowledgeable about the causative agent of AIDS. Further Mahat and Pradhan (2012) conducted a study on "HIV/AIDS knowledge and self-efficacy among the late adolescents in Nepal" showed that Nepalese youth had moderate HIV/AIDS knowledge and a moderate level of self efficacy. However, they lacked knowledge in certain aspects of HIV transmission, and a study conducted by Tung, Cook, Lu and Ding (2015) on comparison of HIV knowledge, attitude and source of STI information between the female and male college students in Taiwan reported moderate level of knowledge and attitude among the participants [15,21,22].

The present study result inconsistent with the study conducted by Madiba and Mokgatie (2014) to assess the high school learners' HIV knowledge and attitude towards learners infected with HIV in North West and Gauteng provinces, South Africa, showed that 87% had HIV related knowledge, 98.6% had knowledge on the mode of transmission and 73% had knowledge of prevention. The females had higher knowledge score than the males and the younger age group had higher level of knowledge than the older age group. the above findings may be due to the region where conducted the study that is Africa.. may be due to high prevalence of HIV, the Govt had organized more awareness programmes even to the school children's, so due to exposure the result on knowledge is high [17].

The above findings of the present study, regarding the knowledge on prevention of HIV/AIDS of the college students, gives us an alarming note that prevention is the key strategy to control the HIV/AIDS epidemic (NACO) among the college students who come under the risk group.

Limitations

The limitations recognized in the present study were:

- The data collected was based only on the response of the college students and not cross verified.
- The tool used for data collection was not a standardized tool but constructed by the researcher.

Conclusion

The investigator concluded that the knowledge regarding HIV/AIDS among the adolescents is not adequate and it is recommended that education programmes need to be conducted at college level to create awareness among the students.

Bibliography

1. UNAIDS, Gap report (2014).
2. UNAIDS, How AIDS changed everything (2015).
3. India Fact sheet, Young People and HIV/AIDS (2006).
4. WHO, Increasing Access to HIV testing and counselling (2002).
5. NACO, Fact Sheet 2013-2014.
6. UNAIDS, Fact Sheet 2014.
7. UNICEF, Adolescents and young people (2015).
8. Kurapati S., *et al.* "Adolescents Living with HIV: An Indian Profile". *AIDS Research and Treatment* (2012).
9. National Health Profile. Demographic Indicators (2011).
10. NRHM, Strategy Handbook (2014).
11. Times of New India, Four states in south make up 50% HIV cases (2014).
12. Baveja K and Rewari BB. "Diagnosis and Management of HIV/AIDS- A Clinician's Perspective". BI Publications Pvt Ltd (2006).
13. www.pondicherry.net.in
14. Kebebew T. "Does distributing pamphlet make a difference in knowledge and attitude towards VCT among high school students" (2007).
15. Tung WC., *et al.* "HIV/AIDS Knowledge and attitude among Chinese College Students in the US". *Journal of Immigrant and Minority Health* 15.4 (2013): 788-795.
16. Dubey A., *et al.* "Knowledge, attitude, and beliefs of young, college student blood donors about Human immunodeficiency virus". *Asian Journal of Transfusion Science* 8.1 (2014): 39-42.
17. Madiba S and Mokgatle MM. "HIV and AIDS related knowledge and attitude towards learners infected with HIV: Survey among high school learners in Gauteng and North West provinces in South Africa". *PeerJ Preprints* (2014).
18. Tung WC., *et al.* "HIV Knowledge and Behavior among Chinese College Students in China and the United States". *Western Journal of Nursing Research* 35.9 (2013): 1171-1183.
19. Abiodun O., *et al.* "Knowledge of HIV/AIDS and predictors of uptake of HIV counseling and testing among undergraduate students of a privately owned university in Nigeria". *BMC Research Notes* 7.1 (2014): 639.
20. Asante KO. "HIV/AIDS knowledge and uptake of HIV counselling and testing among undergraduate private university students in Accra, Ghana". *Reproductive Health* 10.1 (2013): 17.
21. Asante KO and Oti-Boadi M. "HIV/AIDS knowledge among undergraduate university students: implications for health education programs in Ghana". *African Health Sciences* 13.2 (2013): 270-277.
22. Mahat G and Pradhan G. "HIV/AIDS knowledge and self-efficacy among late adolescents in Nepal". *Research Theory and Nursing Practice* 26.3 (2012): 205-215.

Volume 7 Issue 3 March 2018

©All rights reserved by Manjubala Dash., *et al.*