

HIV/AIDS AWARENESS AMONG TRIBAL SCHOOL STUDENTS

PROF.KALAM NARREN, Assistant Professor, Department of Education, MLSM PG College,
Sundernagar, District Mandi (H.P.)

Abstract

In this study an attempt has been made to study HIV/AIDS awareness among tribal school student of Himachal Pradesh. The secondary school students are at risk of acquiring infection due to their changing behaviour patterns. More than one third of reported cases of HIV/AIDS in India are among adolescent age. In this study a sample of 190 students from tribal area schools of Chamba district of Himachal Pradesh was selected randomly. To collect the data, self-made "HIV/AIDS Awareness Test" was used. The data was analyzed on the basis of percentage. Results indicated that majority of school students (both boys & girls) had heard and have general awareness about HIV virus. Further most of students are also aware about different modes of transmission/causes, methods of prevention and know the initial symptoms/signs related to HIV/AIDS.

Keywords: *Awareness, School Students, Tribal Area, Mode of Transmission and Disposable Syringes.*

Introduction

India has the third largest HIV epidemic in the world. It is also reported that HIV prevalence among adults (aged 15-49) was an estimated 0.2%. This figure is small compared to most other middle-income countries but because of India's huge population (1.3 billion people) this equates to 2.1 million people living with HIV (UNAIDS and World Bank 2019). UNAIDS (2018) reported that in 2017, 88,000 people in India were newly infected with HIV. The majority were men, who accounted for 50,000 new infections. There were 34,000 new infections among women and around 3,700 among children (aged 0-14 years). However, as of 2017, only 22% of young women (aged 15-24) and 32% of young men knew how to prevent HIV (UNAIDS 2019). A number of innovative awareness programmes are being implemented and in 2018, NACO ran a multimedia HIV campaign to increase HIV testing among young people. NACO also broadcasts phone-in and panel discussions on issues relating to HIV on regional radio networks. Shows relating to HIV are also performed by folk troupes in remote villages to reach people in places with no television or radio (NACO 2019). Around 12,600 Red Ribbon Clubs also operate in India. These are linked to schools and universities and are driven by young

ambassadors and peer educators who help other young people access HIV information and also serve to reduce HIV-related stigma (NACO 2019). It has become the serious problem amongst the people in India and of them adolescents is the highest risk group. Thus in view of the rapid progressive epidemic of HIV/AIDS, it is imperative to convergent the focus on school health including awareness programme regarding HIV/AIDS. Secondary school students are in the adolescents' age; this is the time they began to be interested in sexual relationships. The youth are at a stage when they may want to experiment with sex without giving much consideration to the implication of their present behaviour. School children of today are exposed to the risk of being victims of HIV/AIDS which was quite unknown to their predecessors of few decades ago. If they are not guided properly at this stage the future may become a very big question mark. It is mostly and rightly said that prevention is better than cure. So what is more disturbing is that the most infected and affected victims of HIV/AIDS are the youths. Hence, school education has been described as a "social vaccine" and it can serve as a powerful preventive tool.

Review of Related Literature

The literature review allows examining the past researches and to identify gaps in the literature. The review of related literature in also explored in this study. Friedland (1991) reported high knowledge about AIDS; although misconceptions about transmission of the virus were prevalent. Aggarwal and Kumar (1996) found that 85% of students had heard of AIDS; 56% cited sex with an infected partner as a means of HIV transmission. 38% students considered it to be a treatable disease. Rangaiyan (1996) observed that majority of male (86%) and female (92%) had correct knowledge regarding the mode of HIV/AIDS transmission. Baggaleys et al. (1997) found that students were quite knowledgeable about transmission of HIV through blood and vaginal fluid. Lal et al. (2000) found that all the students had heard about AIDS and only 45% knew that AIDS was not curable at present. Maswanya and Aoyagi (2000) found good knowledge among female students and only 4.5% of students had considerable misconceptions. Chatterjee et al. (2001) found that girls had higher knowledge than boys. Kumari and Jayadevan (2004) observed that more than 80% of the students knew the modes of transmission of HIV/AIDS. Gurung (2004) found that teenagers (57.8) have heard about AIDS. However, significant number of respondents had misconception that one could contract HIV through mosquito bites and kissing. Gupta et al. (2004) observed that adolescents' ages 10-19 years, only 35% of the girls were aware of the existence of AIDS. Jaiswal (2005) found that 45.8% respondents had prior knowledge of HIV,

65.2% knew that virus could be transmitted by sharing same needle and 41.7% knew that STI is curable. Girl's knowledge about HIV was low 43.2% as compared to boys 48 %, boys knowledge about transmission of HIV/AIDS from pregnant mother to the child was low, 89.7% as compared to girls knowledge 94.2%. Koksai et al. (2005) revealed that 95 % of students were aware of AIDS by its definition and causation. Yoo, Lee and Kim (2005) found that the level of HIV/AIDS knowledge among Korean adolescents was moderate. Khan (2008) observed that 90% students knew that it is sexually transmitted and 88% students knew about the spread of HIV by the use of contaminated needles. Albrektsson et al. (2009) found that 99% of the students had heard of HIV/AIDS. The female students were more knowledgeable about the routes of transmission than the male students. Danjin (2010) found that almost all the students 8.4% ever heard of HIV/AIDS before and majority 88.9% has heard of condom. Kumar and Kumar (2011) found that female tribal school going adolescents are more aware than male adolescents. Both male and female adolescents have moderate HIV/AIDS awareness level and possess more or less the same knowledge and information regarding HIV and AIDS. Gao et al. (2012) observed that approximately 10% to 40% of students had negative attitudes about HIV/AIDS before the intervention. Sharma et al. (2013) found that all the students heard about HIV/AIDS. Kumar et al. (2015) observed that basic knowledge about HIV was better. The knowledge on mode of transmission (62.36%) and prevention and treatment (53.55%) was fairly good. Jain and Mittal (2015) revealed that the selected boys and girls were having awareness and knowledge about HIV/AIDS regarding general issues, mode of transmission, preventive measures and source of knowledge. Shinde et al. (2016) observed that awareness regarding mode of transmission of HIV/AIDS was satisfactory among students. Nwatu et al. (2017) revealed that students have high level of awareness about HIV (97.8%) while 74.3% students had correct knowledge of modes of transmission. Balbeesi et al. (2017) reported that knowledge and misconceptions of Saudi women about sexually transmitted infections is poor. Chowdary et al. (2018) found that maximum students (97.2%) indicated they know about HIV/AIDS. 66.5% of individuals agreed that there is no cure for HIV/AIDS. El-Tholoth et al. (2019) found that youth have poor knowledge about sexually transmitted diseases. Alhasawi et al. (2019) revealed that students were knowledgeable regarding the mode of transmission of HIV virus. Aldhaleei & Bhagavathula (2020) reported that overall knowledge about HIV/AIDS was found to be satisfactory.

Rationale of the Study

HIV/AIDS is a major epidemic which poses severe threats to mankind on a global scale. This epidemic can only be wiped out through proper promotion of responsible behaviour among school students. This is the right age, when right type of behaviour can be inculcated. Although, in India under the guidelines of the National AIDS Control Programme (NACO), various media (traditional, print, electronic media and outdoor media) are being used in disseminating various aspects related with HIV/AIDS to the masses from time to time. The study of review of related literature also pointed out that still people are not properly aware about this deadly disease and its causes. In Himachal Pradesh very few studies has been conducted in this area. Therefore, the present study is a humble attempt to assess the HIV/AIDS awareness of secondary school students of tribal area of Chamba. Keeping in view the importance of HIV/AIDS awareness among school children, this study is very much needed and relevant in the current scenario.

Objectives of the Study

The followings objectives were framed in this study:

- To study the awareness regarding HIV/AIDS among secondary school boys of tribal area of Chamba, Himachal Pradesh.
- To study the awareness regarding HIV/AIDS among secondary school girls of tribal area of Chamba, Himachal Pradesh.

Methodology

In the present study survey method under descriptive method of research was used. In this study both primary and secondary sources were used to gather information. The primary data has been collected through self-made awareness test and secondary information collected from published, unpublished reports & records, books and journals. In this study data regarding the awareness about HIV/AIDS was gathered from tribal area school students (studying in 9th & 10th Class) of district Chamba, Himachal Pradesh. Therefore, all the secondary school students of tribal area schools of district Chamba of Himachal Pradesh constituted the population of the study. A sample of 190 secondary school students was taken from 9th and 10th classes through random sampling technique. To collect the data, HIV/AIDS Awareness Test developed by investigator herself was used. The awareness test comprises of basic questions and experts' opinions were taken to frame questions. From the available resources a questionnaire containing total 22 questions was prepared. This questionnaire is divided into four Components i.e. General

Awareness (5 Questions), Mode of Transmission/Causes (6 Questions), Methods of Prevention (7 Questions) and Symptoms/Sign (4 Questions) related to HIV/AIDS. All the 22 questions of the test are having “Yes” or “No” type answer. Each respondent has to give only one response. One (1) mark is given for the ‘Yes’ response and zero (0) mark for ‘No’ response on each question. In this way, ‘Yes’ & ‘No’ response on each item was calculated. To collect the related data, investigator personally visited the schools. For the analysis of data percentage analysis was used.

Analysis and Interpretation of Data

In the analysis of data, total 190 student’s responses were tabulated. The research data was analysed by using percentage (%) analysis. The analysis is presented in the following paragraphs.

1. Profile of Respondents: Total 190 respondents (Boys - 95 (50%) & Female - 95 (50%)) were taken for data analysis. All the respondents were taken from 9th & 10th classes of tribal area schools.

2. Analysis Based on HIV/AIDS Awareness Test: Table - 1 shows the response of all the students on questionnaire related to their awareness toward HIV/AIDS. All responses are shown as “N” means total number of responses on particular question and “%” means its equivalent percentage. The analysis of Table - 1, 2, 3, & 4 is described in Findings.

Table 1: Percentage of “Yes” and “No” Responses on each Item of Component 1 - “General Awareness”

Sr.	Component 1 - General Awareness	Male (95)				Female (95)			
		Yes		No		Yes		No	
		N	%	N	%	N	%	N	%
1.	Heard about HIV/AIDS	80	84.21	15	15.79	78	82.10	17	17.90
2.	Mosquito bite from HIV/AIDS infected person will not transmit HIV virus	60	63.15	35	36.85	62	65.26	33	34.74
3.	Is HIV/AIDS hereditary?	33	34.74	62	65.26	34	35.79	61	64.21
4.	Hugging, kissing & handshakes with HIV/AIDS infected person transmits HIV virus	30	31.57	65	68.42	31	32.64	64	67.36

5.	HIV usually transmitted through Sexually Transmitted Diseases (STD)	61	64.21	34	35.79	63	66.31	32	33.68
----	---	----	--------------	----	-------	----	--------------	----	-------

Table 1 reveals that most of school students [boys (84.21%) & girls (82.10)] had heard about HIV/AIDS. Boys (63.15%) & Girls (65.26) were also aware that mosquito bite from HIV/AIDS infected person will not transmit HIV virus. Majority of students [boys (65.26%) & girls (64.21)] knows that HIV/AIDS is not hereditary. Most of boys (68.42%) & girls (67.36) participants had knowledge that hugging, kissing & handshakes with HIV/AIDS infected person will not transmit HIV virus. Majority of tribal area school students [boys (64.21%) & girls (66.31)] knew that HIV usually transmitted through Sexually Transmitted Diseases (STD).

Table 2: Percentage of “Yes” and “No” Responses on each Item of Component 2 - “Mode of Transmission/Causes”

Sr.	Component 2 - Mode of Transmission/Causes	Male (95)				Female (95)			
		Yes		No		Yes		No	
		N	%	N	%	N	%	N	%
1.	Unprotected sexual intercourse	78	82.10	17	17.90	74	77.89	21	22.11
2.	Infected blood transfusion	66	69.47	29	30.53	65	68.42	30	31.58
3.	Sharing injections/blades	67	70.52	28	29.48	63	66.31	32	33.69
4.	HIV infected mother to baby	61	64.21	34	35.79	66	69.47	29	30.53
5.	HIV/AIDS can be spread through barber and hair salon.	58	61.05	37	38.95	60	63.15	35	36.85
6.	The spread of HIV began with homosexual populations	64	67.36	31	32.64	62	65.26	33	34.74

Table 2 reveals that most of school students [boys (82.10%) & girls (77.89)] had knowledge that HIV/AIDS spreads through unprotected sex. Most of students [boys (69.47%) & girls (68.42)] were aware that Infected blood transfusion is the also one of the cause of spread of HIV virus. Boys (70.52%) & girls (66.31) responded that sharing injections/blades spreads HIV virus. Further most of boys (64.21) & girls (69.47) had knowledge that HIV virus spreads through infected mother to baby. Most of boys (61.05) & girls (63.15) were aware that HIV/AIDS can be

spread through barber and hair salon. It is also found that boys (67.36) & girls (65.26) of tribal area schools were aware that spread of HIV began with homosexual populations.

Table 3: Percentage of “Yes” and “No” Responses on each Item of Component 3 - “Methods of Prevention”

Sr.	Component 3 - Methods of Prevention	Male (95)				Female (95)			
		Yes		No		Yes		No	
		N	%	N	%	N	%	N	%
1.	Use of condom	72	75.79	23	24.21	70	73.69	25	26.31
2.	Use of safe blood	70	73.69	25	26.31	67	70.52	28	29.48
3.	Use of disposable syringes	71	74.73	24	25.27	69	72.63	26	27.37
4.	Boiled syringe can prevent HIV	71	74.73	24	25.27	70	73.69	25	26.31
5.	Not sharing injections/ blades	68	71.57	27	28.43	70	73.69	25	26.31
6.	Availability of treatment for HIV/AIDS	65	68.42	30	31.58	68	71.57	27	28.43
7.	HIV can be cure through Vaccine	73	76.84	22	23.16	71	74.73	24	25.27

Table 3 reveals that majority of students (boys & girls) were aware that use of condom, use of safe blood, use of disposable syringes, boiled syringe and not sharing injections/blades are the best methods of prevention against HIV. Further majority of students (boys & girls) had knowledge that treatment to cure HIV/AIDS is available and can be cured through vaccine.

Table 4: Percentage of “Yes” and “No” Responses on each Item of Component 4 - “Symptoms/Signs”

Sr.	Component 4 - Symptoms/Signs	Male (95)				Female (95)			
		Yes		No		Yes		No	
		N	%	N	%	N	%	N	%
1.	HIV/AIDS positive person can be affected with TB, skin diseases and pneumonia	68	71.58	27	28.42	65	68.43	30	31.57
2.	Are weight loss and fatigue signs of AIDS?	60	63.15	35	36.85	59	62.11	36	37.89
3.	Are constant fevers and cough	57	60.00	38	40.00	59	62.10	36	37.90

	signs of HIV/AIDS?								
4.	Are dry mouths and tooth decay signs of HIV/AIDS?	61	64.21	34	35.79	58	61.06	37	38.94

Table 4 reveals that majority of students (boys & girls) were aware about the entire initial symptoms/signs list under the “Component 4 – Symptoms/Signs” regarding HIV.

Findings of the Study

The findings are as under:

- Most of school students [boys (84.21%) & girls (82.10)] had heard about HIV/AIDS. Boys (63.15%) & Girls (65.26) were also aware that mosquito bite from HIV/AIDS infected person will not transmit HIV virus. Majority of students [boys (65.26%) & girls (64.21)] knows that HIV/AIDS is not hereditary. Most of boys (68.42%) & girls (67.36) participants had knowledge that hugging, kissing & handshakes with HIV/AIDS infected person will not transmit HIV virus. Majority of tribal area school students [boys (64.21%) & girls (66.31)] knew that HIV usually transmitted through Sexually Transmitted Diseases (STD).
- Majority of school students [boys (82.10%) & girls (77.89)] had knowledge that HIV/AIDS spreads through unprotected sex. Most of students [boys (69.47%) & girls (68.42)] were aware that Infected blood transfusion is the also one of the cause of spread of HIV virus. Boys (70.52%) & girls (66.31) responded that sharing injections/blades spreads HIV virus. Further most of boys (64.21) & girls (69.47) had knowledge that HIV virus spreads through infected mother to baby. Most of boys (61.05) & girls (63.15) were aware that HIV/AIDS can be spread through barber and hair salon. It is also found that boys (67.36) & girls (65.26) of tribal area schools were aware that spread of HIV began with homosexual populations.
- Majority of students (boys & girls) were aware that use of condom, use of safe blood, use of disposable syringes, boiled syringe and not sharing injections/blades are the best methods of prevention against HIV. Further majority of students (boys & girls) had knowledge that treatment to cure HIV/AIDS is available and can be cured through vaccine.

- Most of students (boys & girls) were aware about the entire initial symptoms/signs list under the “Component 4 - Symptoms/Signs” regarding HIV.

Educational Implications

The one finding of this paper is that majority of school students (both boys & girls) had heard and have general awareness about HIV/AIDS. This finding is in line with the findings of Bhende (1995), Aggarwal and Kumar (1996), Unikrishnan (2010), Friedland(1991) ,Oladepo and Brieger (1994), Zulkifli and Wong (2002), Anderson and Westergren (2004), Deb,Mukherjee and Acharya (2004), Mahat and Scoloveno (2006), Koksai et al. (2005), Abdeyazdan and Sadeghi (2008). However Chatterjee et al. (2001), Jaiswal (2005), Maswanya and Ayogi (2000), Basir et al. (2008) found that girls were more aware than boys. In another finding of this paper is that majority of boys and girls are aware about different modes of transmission/causes of HIV. This finding of the study is also in line with the findings of the study conducted by Okeke and Fortune (1992), Rangaiyan (1996), Baggaleys et al. (1997), Lal et al. (2000), Kumar and Jayadevan (2004), Singh et al. (2004), Dias et al. (2006), Abdeyazdan and Sadeghi (2008) Mureed and Tasanapradit (2009). However, Jaiswal (2005) found that male students were less aware about the transmission of virus from pregnant mother to her child. In another finding of paper it was found that majority of boys and girls are aware about different methods of prevention of HIV. The studies conducted by Rangaiyan (1996), Puri et al. (2003), Singh et al. (2005), Lal et al. (2008), Kumari and Jayadevan (2004), Yoo et al. (2005), Ocran and Danso (2009), Danjin (2010) Bhosale et al. (2010), Rikka et al. (1999), Koksai et al. (2005) also found same results. However, Chakrovarty et al. (2007) found that both male and female adolescents have poor knowledge of prevention of HIV/AIDS. In another finding most of students (boys & girls) were aware about the entire initial symptoms/signs related to HIV. Singh et al. (2007) also found same results that adolescents showed a satisfactory knowledge regarding common symptoms of HIV/AIDS. Whereas Lal et al. (2000), McManus et.al. (2008) found opposite results that majority of respondents were least aware about the symptoms of STDs and AIDS. The educational implications related to present results showed that the efforts should be made to build on the existing avenues of awareness, by expanding the scope. To conclude, this study point out that educational endeavour should be broadened to increase the level of awareness on the widespread knowledge related to HIV/AIDS among school students.

References

- Aggarwal, A.K., Kumar, R. (1996). Awareness of AIDS among School Children in Haryana. *Indian Journal of Public Health, Vol. 40(2)*, 38-45.
- Albrektsson, M., Alm, L., Tan, X. and Andersson, R. (2009). HIV/AIDS Awareness, Attitudes and Risk Behaviour among University Students in Whan, China. *Open AIDS Journal, Vol. 3*, 55-62.
- Aldhaleei W. A., Bhagavathula A. S. (2020). HIV/AIDS-knowledge and attitudes in the Arabian Peninsula: A systematic review and meta-analysis. *Journal of Infect Public Health*, <https://doi.org/10.1016/j.jiph.2020.04.002>
- Alhasawi, A., Grover, S. B., Sadek, A., Ashoor, I., Alkhabbaz, I., & Almasri, S. (2019). Assessing HIV/AIDS Knowledge, Awareness, and Attitudes among Senior High School Students in Kuwait. *Medical Principles and Practice: International Journal of the Kuwait University, Health Science Centre, 28(5)*, 470–476. <https://doi.org/10.1159/000500307>
- Baggaley, R., Drobniewski, F., Poznaik, A. Chipanta, D., Tembo, M. and Godfrey-Fausett, P. (1997). Knowledge and Attitudes of HIV/AIDS and Sexual Practices among Students of Lusaka. Zambia and London, England: They so Different? *Journal of the Royal Society of Health, Vol.117*, 88-94.
- Balbeesi A, Mohizea S. (2017). Knowledge and misconceptions of Saudi women about sexually transmitted infections. *Journal of the Egyptian Public Health Association Poor Knowledge; 92(4):235–9*.
- Chatterjee, C., Baur, B., Ram, N., Dhar, L., Sandhukhan, M., Dan, P. (2001). A Study on Awareness of AIDS Among School Students and Teacher of Higher Secondary Schools in North Calcutta. Department of Community Medicine, Calcutta National Medical College. *Indian Journal of Public Health, Vol. 45(1)*, 27-30.
- Chowdary S. D., Dasari N., Chitipothu D. M., Chitturi R. T., Chandra K. L., Reddy B. V. (2018). Knowledge, awareness, and behaviour study on HIV/AIDS among engineering students in and around Guntur, South India. *Journal of NTR University Health Sciences; 7:26-30*.
- Danjin, M. (2010). HIV/AIDS Risk Behavioural Tendencies among Secondary School Students in Gome, Nigeria. *Journal of Health, Vol. 11(1)*, 5.

- El-Tholoth H. S., Alqahtani F. D., Aljabri A. A., Alfaryan K. H., Alharbi F, Alhowaimil A. A., et al. (2019). Knowledge and attitude about sexually transmitted diseases among youth in Saudi Arabia. *Urology Annals; 10(2):198*.
- Friedland, R.H. (1991). Perceptions and Knowledge about the Acquired Immunodeficiency Syndrome among Students in University Residences. *South African Medical Journal, Vol. 793, 149-154*.
- Gao X, Wu Y, Zhang Y, Zhang N, Tang J, Qiu J, et al. (2012) Effectiveness of School-based Education on HIV/AIDS Knowledge, Attitude, and Behaviour among Secondary School Students in Wuhan, China. *PLoS ONE 7(9): e44881*. <https://doi.org/10.1371/journal.pone.0044881>
- Gupta, N., Mathur, A.K., Singh, M.P., and Saxena, N.C. (2004). Reproductive Health Awareness of School going Unmarried Rural Adolescents. *The Journal of Paediatrics, Vol. 71 (9), 797-801*.
- Gurung, G. (2004). Knowledge and Attitude on HIV/AIDS and Sexual Behaviour of School Teenagers in Kathmandu Valley. *Journal of Nepal Health Research Council, Vol. 2 (2), 9-10*.
- Jain J. and Mittal H. (2016). Comparative study on awareness and knowledge of boys and girls about HIV/AIDS among students of senior secondary school. *International Journals of Medical Science and Education. Vol. 3 (1)*.
- Jaiswal (2005). HIV/AIDS and STI related Knowledge Attitude and Practice among High School Students in Kathmandu Valley. *Kathmandu University Medical Journal, Vol. 3 (9), 69-75*.
- Koksal, S. Vehid, S., Yurtsever, E. and Namal, N. (2005). Knowledge and Attitude towards HIV/AIDS among Turkish Students. Original article, Department of Public Health, Istanbul University, Turkey. 118-119.
- Kumar A.; Kumar, R. (2011). HIV/AIDS awareness among tribal school going adolescents in Himachal Pradesh. *International Journal of Education & Allied Sciences. Jul-Dec, Vol. 3 (2), p-95-100. 6p*.
- Kumar Senthil, Rao Viswanatha, Naveen, Vaishnavi N and Prema Sembulingam (2015). Evaluation of Knowledge, Attitude and Awareness of HIV/AIDS among School

- Children. *IOSR Journal of Dental and Medical Sciences*, Vol. 14(6), (Jun. 2015), PP-56-61, www.iosrjournals.org
- Kumari, J.M. and Jayadevan, S. (2004). HIV/AIDS Awareness among Adolescents. International Conference on AIDS (11-16 July, Bangkok, Thailand), Academy of Medical Sciences, Kannur, Kerala, India. Abstract no. C10846. Retrieved from <http://gateway.nlm.nih.gov>
- Lal, S.S., Vasan, R.S. and Thankappan (2000). Knowledge and Attitude of College Students in Kerala towards HIV/AIDS, Sexually Transmitted Diseases and Sexuality. *The National Medical Journal of India*, Vol. 13, 231-236.
- Maswanya, E. and Aoyagi, K. (2000). Knowledge and Attitudes towards AIDS among Female College Students in Nagasaki, Japan. *Health Education Research*, Vol. 15 (1), 5-11.
- Ministry of Health and Family Welfare (2019) 'Annual Report 2018-2019: National AIDS Control Organization (NACO)', p.50. [pdf]
- NACO 'Annual Report 2017-2018' [pdf]
- Nwatu C; Young, E; Adikaibe, B; Okafar, C and Onwuekwe, I. (2017). HIV and sexuality transmitted infections knowledge and practices: a survey of female secondary school students in Enugu, South East Nigeria. *The Journal of Medical Research*. Vol. 3(2).
- Rangaiyan, G. (1996). *Sexuality and Sexual Behaviour in the Age of AIDS: A Study among College Youth in Mumbai*. (Unpublished Ph.D.) Thesis, Mumbai: International Institute of Population Science.
- Sharma, P; Vyas, S; Davey, A; Shrivatsva, K. & Pant, B. (2013). Mounting aids awareness through educational intervention: how effective can it be? *National Journals of Medical Research*, Vol. 3 (2).
- Shinde, M; Trivedi, A; Shinde, A; Mishra, S. (2016). A study of awareness regarding HIV/AIDS among secondary school students. *International Journal of Community Medicine and Public Health*, Vol1 (3).
- UNAIDS (2018) 'AIDS Data 2018', p.140-141.[pdf]
- UNAIDS 'Overview: India' accessed November 2019)
- World Bank, 'Data: India' (accessed November 2019)
- Yoo, H., Lee, S.H., and Kim, S. (2005). HIV/AIDS Knowledge, Attitude, Related Behaviours, and Sources of Information among Korean Adolescents. *Journal of School Health*, Vol. 75 (10), 393-399.