

## Attitude Assessment Regarding HIV/AIDS among Attendees of Integrated Counselling and Testing Centre at SMS Medical College, Jaipur

Priyanka Kapoor<sup>1</sup>, Rajeev Yadav<sup>2</sup>, Ravindra Kumar Manohar<sup>3</sup>, Mohit Sharma<sup>4\*</sup>

<sup>1</sup>Senior Resident, <sup>2</sup>Associate Professor, <sup>3</sup>Professor and Head,  
Department of Community Medicine, S.M.S. Medical College, Jaipur, Rajasthan, India.

<sup>4\*</sup>Assistant Professor, Department of CTVS, S.M.S. Medical College, Jaipur, Rajasthan, India.

### ABSTRACT

**Introduction:** Social taboos related to sex issues contribute for the spread of HIV/AIDS. This study was carried out at ICTC at SMS Medical College, Jaipur 1) to determine the attitude of ICTC attendees and 2) to correlate the socio-demographic profile of attendees with their attitude about HIV/AIDS.

**Material and Method:** The Descriptive type of observational study was conducted at ICTC at SMS Medical College, Jaipur from May 2015 to October 2015 among 177 eligible attendees coming to ICTC during the study period. Data was collected through an anonymous pre designed semi structured questionnaire. Step wise Multiple Logistic Regression analysis was done to find out predictors of attitude. All statistical calculations were done by using Med Calc.12.2.1.0 software.

**Results:** Among studied 177 respondents, maximum were in age group 20-29 years (44.07%). Most of the respondents were married (57.63%), Hindu (92.09%), male (81%) and graduates (22.6%). Maximum respondents were referred by doctor (61.02%), belonged to joint family (66.67%), urban area (53.11%), OBC caste (36.72%) and socio-economic class I (31.07%). Positive attitude was found in 81.36% of respondents. Respondents who were female, Muslim, married, in age group 40-49 year, residing in urban area & in joint family, belonged to general caste, socio-economic class V, referred by doctor and middle literate were found more to have

negative attitude but only literacy status and caste status showed significant association with attitude ( $p < 0.05$ ). Literacy of respondents was found only significant predictor of attitude scores in stepwise multivariate regression analysis.

**Conclusion:** Literacy is an important tool to fight against stigma of AIDS. Government should strengthen IEC activities and ongoing HIV/ AIDS education and prevention programs to increase awareness.

**Key words:** AIDS, Attitude, ICTC, Socio-Demographic, Attendees.

### \*Correspondence to:

**Dr Mohit Sharma,**  
Assistant Professor,  
Department of CTVS,  
S.M.S. Medical College, Jaipur, Rajasthan, India.

### Article History:

**Received:** 28-02-2017, **Revised:** 17-03-2017, **Accepted:** 02-04-2017

Access this article online	
Website: <a href="http://www.ijmrp.com">www.ijmrp.com</a>	Quick Response code 
DOI: 10.21276/ijmrp.2017.3.3.023	

### INTRODUCTION

The first case of HIV (Human Immunodeficiency Virus) was diagnosed in India in 1986, and since then, HIV infection has been reported in all States and Union Territories.<sup>1</sup> At the end of 2013, more than 700 000 people were on antiretroviral therapy in INDIA, the second largest number of people on treatment in any single country.<sup>2</sup>

Social taboos related to sex issues contribute for the spread of HIV/AIDS.<sup>3</sup> The social and cultural environment can affect the use of HIV prevention practices such as condom use. Stigma and discrimination associated with HIV can be devastating. This may lead to poor access to HIV testing and treatment services which will further contribute to spread of the disease. Understanding of attitude of people towards HIV/AIDS will help us in formulating strategy for prevention of spread of disease.<sup>4</sup>

Integrated Counseling and Testing Centres (ICTC) is a place where a person is counseled and tested for HIV, of his own free will or as advised by a medical provider.<sup>5</sup> The population availing these services is mainly persons engaged in the high risk behavior, STI patients, TB patients and are more prone to acquire the HIV infection.<sup>6</sup>

Most of the such studies done so far is either in general population or in any specific high risk group (including care givers).<sup>7-10</sup> So, in this study we focused on the attitude towards HIV among attendees of ICTC associated with SMS medical college, Jaipur which included multiple types of high risk behavior people and also general population. The results of the study may throw light about the current status of their attitude regarding HIV and its prevention, which will help for measures to be taken for primary

prevention of HIV infection and will help us to modify IEC messages and strategies to enhance community participation in prevention, diagnostic and curative outcomes regarding HIV/AIDS.

**AIM AND OBJECTIVES**

This proposed study was carried out with following objectives:

1. To determine the attitude of ICTC attendees.
2. To correlate the socio-demographic profile of attendees with their attitude about HIV/AIDS.

**METHODOLOGY**

The Descriptive type of observational cross sectional study was conducted at ICTC at SMS Medical College, Jaipur from May 2015 to October 2015. Sample size was calculated at 95% confidence level assuming 50% positive attitude among ICTC attendees to take maximum variance. At the relative allowable error of 20%, minimum 100 attendees were required as sample size. However, best efforts was made to increase sample size as maximum as possible to enhance the precision. All eligible attendees coming to ICTC at SMS Medical College during the study period providing consent for the study were included in the study.

**Inclusion Criteria**

1. Age 18 or above and both sexes.
2. Attendees of ICTC at SMS Medical College, Jaipur.
3. First time visitors.
4. Who is able to read and write
5. Willing to participate in the study.

Participants were explained the type and purpose of study and they were ensured of their anonymity. After getting signed consent form, data was collected through an anonymous pre designed semi structured questionnaire in both Hindi and English language. They were strictly instructed about not writing their name or disclose their identity on questionnaire. Data thus collected was entered in Microsoft excel sheet to prepare master chart and further statistical analysis.

**Statistical Analysis**

Continuous variables were summarized as mean and standard deviation while nominal / categorical variables as proportion (%). Chi square test was used for analysis of Categorical variable. Step wise Multiple Logistic Regression analysis was done to find out predictors of knowledge, attitude and practice. All variables found significantly associated with knowledge, attitude and practice were entered in Regression model. Probability of independent variable in retaining Regression model was kept<0.05 while that of removal as >0.10. All statistical calculations were done by using Med Calc.12.2.1.0 software. P<0.05 was taken as significant.

**Methods of Scoring of Attitude as Positive and Negative**

There were 8 questions for attitude. Each reply of right attitude was scored 1 and wrong attitude or no response was scored 0. Thus minimum possible score was 0 and maximum possible score was 8. We categorized it in negative and positive attitude as follows:

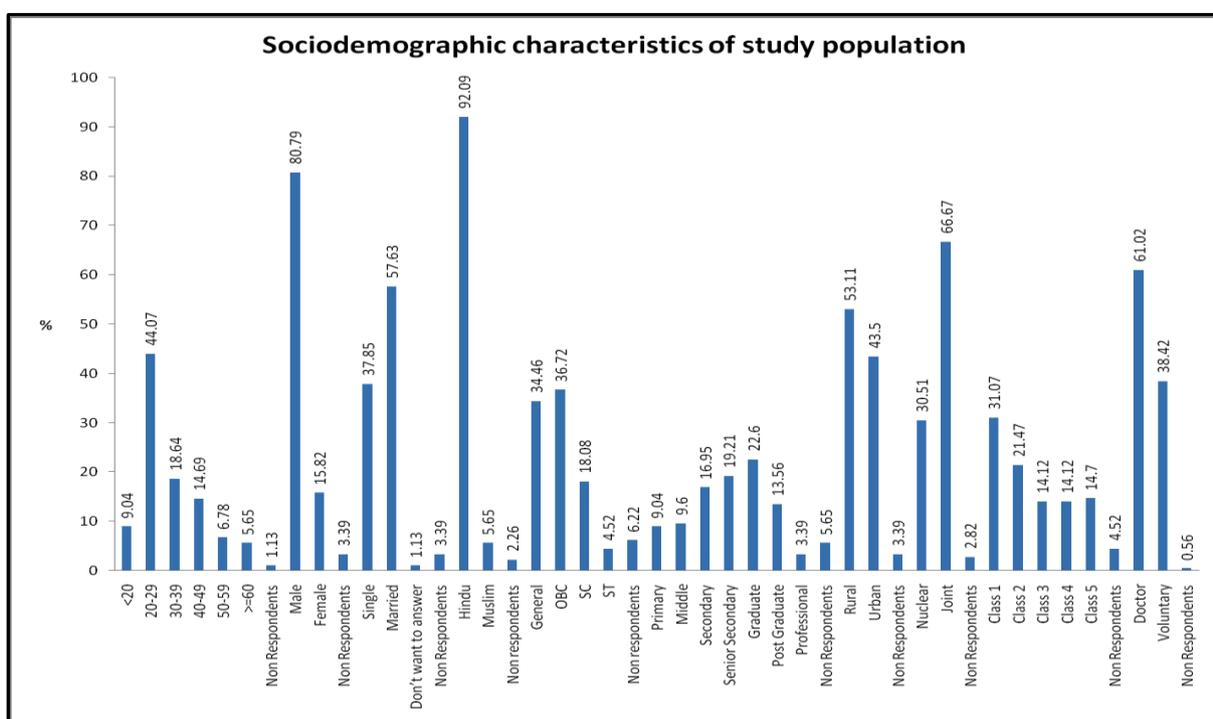
**Positive attitude:** 5-8

**Negative attitude:** 4 or less than 4

Socioeconomic Status was determined as per Latest B.G. Prasad classification of 2014.

**Table 1: Attitude in Study Population**

Attitude	No. of respondent	Percentage
Negative	33	18.64
Positive	144	81.36
Total	177	100.00



**Graph 1: Socio-demographic characteristics of study population**

Table 2: Distribution of study population with attitude and socio-demographic variables

Socio-demographic variables		N	Negative	Positive	P
		No.	No. (%)	No (%)	
Age groups (Years)	<20	16	4 (25)	12 (75)	0.079
	20-29	78	8 (10.26)	70 (89.74)	
	30-39	33	6 (18.18)	27 (81.82)	
	40-49	26	9 (34.62)	17 (65.38)	
	50-59	12	4 (33.33)	8 (66.67)	
	>=60	10	2 (20)	8 (80)	
	NR*	2	0 (0)	2 (100)	
Sex	Male	143	25 (17.48)	118 (82.52)	0.272
	Female	28	8 (28.57)	20 (71.43)	
	NR*	6	0 (0)	6 (100)	
Marital status	Single	67	11 (16.42)	56 (83.58)	0.556
	Married	102	22 (21.57)	80 (78.43)	
	Don't want to answer	2	0 (0)	2 (100)	
	NR*	6	0 (0)	6 (100)	
Religion	Hindu	163	29 (17.79)	134 (82.21)	0.804
	Muslims	10	2 (20)	8 (80)	
	NR*	4	2 (50)	2 (50)	
Residence	Rural	94	15 (15.96)	79 (84.04)	0.539
	Urban	77	16 (20.78)	61 (79.22)	
	NR*	6	2 (33.33)	4 (66.67)	
Type of family	Nuclear	54	10 (18.52)	44 (81.48)	0.848
	Joint	118	22 (18.64)	96 (81.36)	
	NR*	5	1 (20)	4 (80)	
Socio-economic class	Class 1	55	6 (10.91)	49 (89.09)	0.061
	Class 2	38	6 (15.79)	32 (84.21)	
	Class 3	25	7 (28)	18 (72)	
	Class 4	25	3 (12)	22 (88)	
	Class 5	26	9 (34.62)	17 (65.38)	
	NR*	8	2 (25)	6 (75)	
Referred by	Doctor	108	23 (21.3)	85 (78.7)	0.372
	Voluntary	68	10 (14.71)	58 (85.29)	
	NR*	1	0 (0)	1 (100)	
Caste	General	61	16 (26.23)	45 (73.77)	0.021
	OBC	65	4 (6.15)	61 (93.85)	
	SC	32	8 (25)	24 (75)	
	ST	8	2 (25)	6 (75)	
	NR*	11	3 (27.27)	8 (72.73)	
Literacy	Primary	16	6 (37.5)	10 (62.5)	0.009
	Middle	17	7 (41.18)	10 (58.82)	
	Secondary	30	6 (20)	24 (80)	
	Senior Secondary	34	6 (17.65)	28 (82.35)	
	Graduate	40	2 (5)	38 (95)	
	Post Graduate	24	2 (8.33)	22 (91.67)	
	Professional	6	2 (33.33)	4 (66.67)	
	NR*	10	2 (20)	8 (80)	
	Total	177	33 (18.64)	144 (81.36)	

\*NR= Non respondents

## RESULTS

Present study comprises 177 respondents attending ICTC, SMS Medical College, Jaipur. In our study, mean age of the participants were 32.97 +/- 14.24. As graph 1 shows, maximum respondents (44.07%) were in age group 20-29 year followed by 30-39 year (18.64%) and 40-49 year (14.69%) and <20 year age group (9.04%). 1.13% respondents did not mention their age. In the present study maximum participants (80.79%) were male. This

study found the most participants (57.63%) were married. In this study, most of the respondents were Hindu (92.09%) while only 5.65% were Muslims. Maximum respondents were from OBC caste (36.72%) followed by general (34.46%), SC (18.08%), and minimum were from ST caste (4.52%). Maximum respondents were graduate (22.6%), followed by senior secondary (19.21%) and secondary (16.95%) while professional were minimum

(3.39%). In the present study 53.11% respondents were from urban setting. Almost two third of respondents were having joint family (66.67%) while only 30.51% were having nuclear family. Maximum respondents were from socio-economic class 1 (31.07%) followed by class 2 (21.47%), 5(14.7%), and 3,4 (14.12%). Maximum respondents were referred by doctor (61.02%) while 38.42% came voluntarily. Approximately 19% respondents were having negative attitude while 81.36% were having positive attitude. (Table 1)

One should be faithful with his/her regular partner was agreed by 72.88% and 43.5% agreed that one should not avoid contact with people living with HIV /AIDS. Almost 79% thought that one should use condom while visiting to non-regular partner/ female sex worker.

Maximum negative attitude was found in age group 40-49 years (34.62%) followed by 50-59 year (33.33%), and less than 20 year age group (25.00%) while minimum negative attitude was found among 20-29 year age group (10.26%) (p=0.079). Negative attitude was more among females (28.57%) as compared to males (17.48%) (p=0.272). Negative attitude was more among married (21.57%) as compared to single (16.42%) (p=0.556). Negative attitude was more among Muslim (20%) as compared to Hindu (17.79%) (p=0.804). Negative attitude was more among those who resides in urban area (20.78%) as compared to those of rural residence (15.96%) (p=0.539). Maximum negative attitude was almost equal in those who belong to joint family (18.64%) and nuclear family (18.52%) (p=0.848). Negative attitude maximum was among socio-economic class 5 (34.62%) followed by class 3 (28%), 2 (15.79%), 4 (12%) and minimum was among class 1

respondents (10.91%) (p=0.061). Negative attitude maximum was having by those who were referred by doctor (21.3%) as compared to those who came voluntarily (14.71%) (p=0.372). (Table 2)

Negative attitude was maximum among general (26.23%) followed by SC (25%) and ST (25%) and minimum in OBC (6.15%). This association between attitude and caste was found significantly associated on applying chi- square test (p= 0.021) (Graph-2). Middle literate were having maximum negative attitude (41.18%) followed by primary (37.5%), professionals (33.33%), secondary literates (20%), senior secondary (17.65%) and post graduates (8.33%) while graduates showed minimum negative attitude (5%). By applying statistical test, literacy was found significantly associated with attitude (p=0.009) (Graph-3).

Stepwise multivariate regression analysis was done to find out predictors of attitude score. All variables, found significantly associated with attitude in bivariate analysis were entered in model. Criteria to retain in model was kept p< 0.05 and for removal p>0.1 was kept. Except for education, all variables were removed from the model. Fitness into model assessed by ANOVA was found significant (p<0.001). Coefficient and constant were mentioned in above table.

Regression equation is as follows-  $Y = a + bx$   
 Attitude score = 3.4395 + 0.5669 (Education)

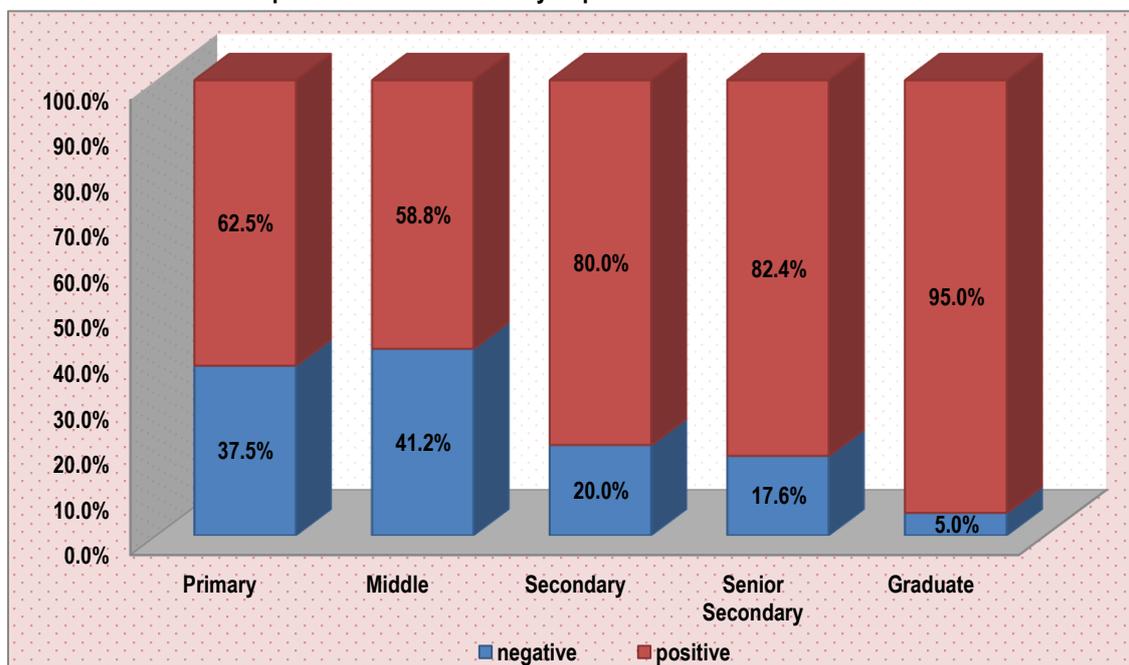
Female respondents of the present study were found having more negative attitude towards the disease but the difference was not statistically significant.

Regression analysis in the present study revealed education as a significant predictor of positive attitude. (Table-3)

**Table 3: Multiple Regression Analysis**

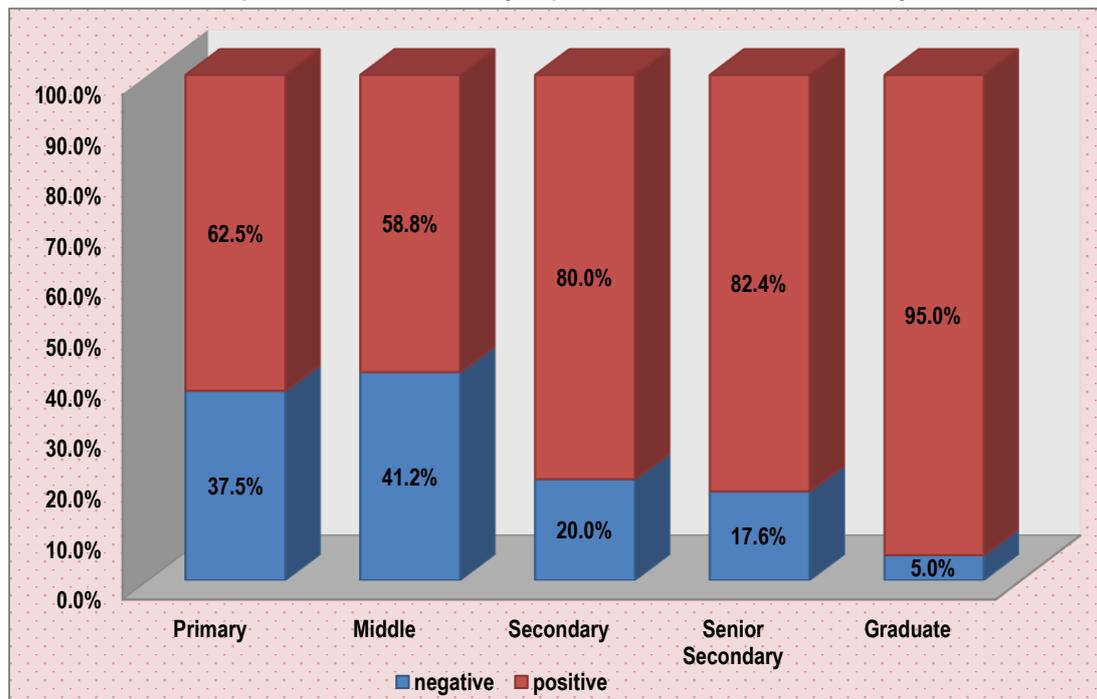
Multiple regression analysis: Attitude				
Independent variables	Coefficient	Std. Error	t	P
(Constant)	3.4395			
Education	0.5669	0.1053	5.382	<0.0001

**Graph 2: Distribution of Study Population with Attitude and Caste**



Chi-square = 10.274 with 3 degrees of freedom; P = 0.021

Graph 3: Distribution of Study Population with Attitude and Literacy



Chi-square = 17.001 with 6 degrees of freedom; P = 0.009

## DISCUSSION

In our study, mean age of the participants were 32.97 +/- 14.24 years which is similar to the study of Mansoor AB et al<sup>11</sup> where average age was 20.1 +/- 2 years. Shivraj BM et al<sup>12</sup> found mean age of study population 18 +/- 1 years. In the present study maximum participants (80.79%) were male similar to the study of Mansoor AB et al<sup>11</sup> (72.1%) and Shivraj BM et al<sup>12</sup> (64%). This study found the most participants (57.63%) were married however, it was quite higher than study of Mansoor AB et al<sup>11</sup> (6.6%). This may be because the study group of Mansoor AB et al<sup>11</sup> was freshmen in Afghan universities whereas in this study respondents were representing general adult population. In the present study 53.11% respondents were from urban setting which is almost similar to study of Shivraj BM<sup>12</sup> (67%).

In the present study, 43.5% respondents were having positive attitude towards PLWHA which is lower to the study of Dr M. N. Suman et al<sup>13</sup> who found 80% of respondents with positive attitude and study of Lalitha Hande et al<sup>14</sup> and Meundi et al<sup>15</sup> with positive attitude 73.3% and 66% respectively for PLWHA. 81.36% respondents of the present study were having positive attitude which is quite higher than study of NACO 200<sup>16</sup> (40.7%) and Mansoor AB et al<sup>11</sup> (35.6%). Increase in awareness and alleviation of myths after massive IEC campaign by government and mass media may probably have changed people's mind set towards the disease and patients. Besides, study population and study tool also have influence on the findings. Female respondents of the present study were found having more negative attitude towards the disease but the difference was not statistically significant. Similarly gender-wise difference in attitude was not found statistically significant in study of Arjun et al<sup>17</sup> and Mansoor AB et al.<sup>11</sup> Regression analysis in the present study revealed education as a significant predictor of positive attitude. Similarly, in study of Velhal G et al<sup>18</sup>, significant influence of age and education status was found on positive attitude.

## CONCLUSIONS AND RECOMMENDATIONS

Positive attitude was found in 81.36% of respondents. Respondents who were female, Muslim, married, in age group 40-49 year, residing in urban area & in joint family, belonged to general caste, socio-economic class V, referred by doctor and middle literate were found more to have negative attitude but only literacy status and caste status showed significant association with attitude ( $p < 0.05$ ).

Literacy of respondents was found only significant predictor of attitude scores in stepwise multivariate regression analysis with following regression equations:

**Attitude score = 3.4395 + 0.5669 (Education)**

Government should strengthen IEC activities and ongoing HIV/AIDS education and prevention programs to increase awareness. In curriculum of high school and college education program, chapters related with HIV/AIDS should be incorporated to increase awareness at appropriate age. Network of ICTC should be expanded to cover outreach areas.

## REFERENCES

1. NACO, Annual report 2013-14, department of AIDS control, Ministry of Health and Family Welfare, Government of India.
2. UNAIDS (September 2014). The Gap Report.
3. National AIDS Control Organization (NACO), Ministry of Health and Family Welfare, Govt. of India. National baseline General Population Behavioural Surveillance Survey. New Delhi; 2001.
4. LP Meena, SK Pandey, M Rai, Anju Bharti, Shyam Sunder (2013). Knowledge, Attitude, and Practices (kap) study on HIV/AIDS among HIV patients, care givers and general population in north-eastern part of India. International Journal of Medical Science and Public Health. 2013; 2(1): 36-42.
5. Integrated Counselling and Testing Centre. 2007 Available at: [http://www.nacoonline.org/National\\_AIDS\\_Control\\_Program/Services\\_for\\_Prevention/Integrated\\_Counselling\\_and\\_Testing\\_ICT/](http://www.nacoonline.org/National_AIDS_Control_Program/Services_for_Prevention/Integrated_Counselling_and_Testing_ICT/)

6. Statement Containing Brief Activities of the Department of AIDS Control in 2013, Department of AIDS Control, Ministry of Health & Family Welfare, Government of India;2013:02.
7. Negash Y, Gebre B, Benti D, Bejiga M. A community based study on knowledge, attitude and practice (KAP) on HIV/AIDS in Gambella town, Western Ethiopia. *Ethiopian Journal of Health Development.* 2003;17(3).
8. Mishra R. STDs and HIV / AIDS: a KAP study among drug operators. *Health For The Millions.* 1998; 24(5):11-3.
9. Kuruvila M; Venugopalan PP; Sridhar KS; Kumar P; Rao GS; Kotian S; Maria Kuruvila; Pramod Kumar; Gatha S Rao. KAP study on HIV/AIDS among first year MBBS students. Department of Skin and STD and Department of Community Medicine, K.M.C. Mangalore-1. *Indian Journal of Dermatology Venereology and Leprology.* 1997; 63(4): 225-8
10. Weiser SD, Heisler M, Leiter K, Percy-de Korte F, Tlou S, et al. Routine HIV Testing in Botswana: A Population-Based Study on Attitudes, Practices, and Human Rights Concerns. *PLoS Med* 2006;3(7): e261.
11. Mansoor AB, Fungladda W, Kaewkungwal J, Wongwit W. Gender differences in KAP related to HIV/AIDS among freshmen in Afghan universities. *Southeast Asian J Trop Med Public Health.* 2008;39(3):404-18.
12. Shivaraj B. M, Chandrashekar M, Ranganath T. S. A study on awareness about HIV/AIDS among first year medical students of Bangalore medical college and research institute. *Journal of evolution of medical and dental sciences.* 2015; 4(58):10023-10026
13. M. N. Sumana, Arnaw Kishore(2015). KAP of HIV/AIDS among IT Professionals in Indian Silicon Valley – A Pilot Study. *European Academic Research.* 2015; III (1):559.
14. Lalitha Hande, Sambajirao, and Sanjeev Badiger. An Intervention Study on Knowledge, Attitude and Practice among HIV Positive Individuals in Southern India. *J Clin Diagn Res.* 2014; 8(10):01–02.
15. Meundi, A. D., Amma, A., Rao, A., Shetty, S., & Shetty, A. K. (2008). Cross- Sectional Population- Based Study of Knowledge, Attitudes, and Practices Regarding HIV/AIDS in Dakshina Kannada District of Karnataka, India. *Journal of the International Association of Physicians in AIDS Care.*2008; (JIAPAC 2008; 7: 27 originally published online 6 June 2007 DOI: 10.1177/1545109707302088)
16. National AIDS Control Organization, New Delhi. Knowledge, attitudes and practices of young adults (15-24 years): disaggregated data from the National Behaviour Surveillance Survey 2001. New Delhi: NACO. 66 p. Research Abstracts on Health, 1998 – 2008.
17. Arun V Joshi, Kiran Nikam, Bhagyashri R Hungund, Rajagonda G Viveki, Shashikant V Nikam, AB Halappannavar, Halaki Sunanda. Knowledge about and attitude towards HIV/AIDS among first year medical students: A cross-sectional study. *J Sci Soc.* 2013;40(3):155-8.
18. Velhal G, Kambli TD, Suryawanshi SR. What do they know about HIV/AIDS – adolescents and young adults from slums in Mumbai, INDIA. *SAARC Journal of Tuberculosis, Lung Diseases & HIV/AIDS.*2012;IX(1): 26-34.

**Source of Support:** Nil.

**Conflict of Interest:** None Declared.

**Copyright:** © the author(s) and publisher. IJMRP is an official publication of Ibn Sina Academy of Medieval Medicine & Sciences, registered in 2001 under Indian Trusts Act, 1882.

This is an open access article distributed under the terms of the Creative Commons Attribution Non-commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

**Cite this article as:** Priyanka Kapoor, Rajeev Yadav, Ravindra Kumar Manohar, Mohit Sharma. Attitude Assessment Regarding HIV/AIDS among Attendees of Integrated Counselling and Testing Centre at SMS Medical College, Jaipur. *Int J Med Res Prof.* 2017; 3(3):108-13. DOI:10.21276/ijmrp.2017.3.3.023