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A Study of Knowledge Assessment Regarding HIV/Aids in Urban and Rural Area of Ambala (Haryana)

Choudhary K1*, Mittal A2, Bhardwaj A3, Tiwari A4

¹Dept of Community Medicine, Santosh deemed to be University, Ghaziabad, UP ²Head, MMIMSR, Mullana ³AIMS, Mohali ⁴Teach for India Email ID: kshitijmaanas@yahoo.in

ABSTRACT

Creation of awareness and right knowledge is the best possible solution to the problem of AIDS, given the availability of no cure nor any vaccine as of yet. Therefore, the present study to assess the information of population in Ambala was undertaken so that vulnerable groups could be identified and infection could be prevented. A community based crosssectional study was carried out among the population residing in the urban and rural field practice area of department of Community Medicine, MMIMSR Mullana, Ambala from January 2015 to December 2015. Systemic randomization was done and a total of 1000 participants were interviewed and the data collected was analysed by SPSS version 20. 58.6% of the study subjects knew that the disease is caused by a virus and 81.6% had the knowledge that it could be prevented by having sex with a regular partner. Knowledge of condom usage for preventing HIV/AIDS was found to be significantly higher (p<.05) in Christian and Sikh subjects and with higher education and higher socio-economic status. Television, as the source of information was quoted by maximum of the participants (76%). Though the study subjects had satisfactory knowledge, still there were many lacunae which demand for extensive IEC activities. **KEY WORDS:** HIV, AIDS, Knowledge, Assessment.

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INTRODUCTION

AIDS, Acquired Immunodeficiency Syndrome, is a fatal illness caused by a retrovirus known as HIV (Human Immunodeficiency Virus) which breaks down the body's immune system, leaving the victim vulnerable to a host of life threatening opportunistic infections, neurological disorders, or unusual malignancies Discovered in 1980s, the disease is today found all over world and despite all the advances, people infected with HIV and those dyeing due to it are still high [1].

Correct, complete and consistent *knowledge* will help people to change their attitudes and adopt healthy practices. Since there is neither a cure nor any vaccine available for HIV as yet, the best option to control this scourge is prevention. Creation of awareness through IEC activities guided by behavioral assessment studies is the best possible solution to the problem of AIDS. Therefore, the present study was undertaken with the objectives to assess the knowledge regarding HIV/AIDS among the study participants and to study the influence of socio-demographic predictors on their knowledge.

MATERIAL AND METHODS

It was a community based, cross-sectional study conducted over a time span of one year from January 2015 to December 2015 in the urban and rural field practice area of the Department of Community Medicine, Maharishi Markandeshwar Institute of Medical Sciences and Research, Mullana, Ambala (Haryana). Participants less than fifteen years of age and those unwilling to participate were excluded from the study.

To calculate the sample size, a prevalence of 30% knowledge about HIV was taken, as concluded by Kaur [1]. 933 comes out to be the sample size (By applying the statistical formula for sample size: $n = 4pq/e^2 x$ 100) Rounding it off, the selected sample size for the study was taken as 1000. Out of this 500 were from urban and 500 from rural area. Systemic random sampling was used to select 1000 houses. In each house only one eligible person was interviewed [2]. If after three visits no family member was available then that house was excluded from the study.

The participants were assessed for their knowledge regarding HIV/AIDS using a self-designed, pre-tested and semi-structured questionnaire. The data collected during the study was converted into electronic format by entering into Microsoft Excel. Data was analysed by IBM SPSS (Statistical Package for Social Sciences) version 20 statistical software. Percentages were calculated and Chi-square test was used to determine statistical significance between the study subject's knowledge and their socio-demographic profiles. A p-value of less than 0.05 was considered significant at 95% confidence interval.

Permission was obtained from Institutional Ethics Committee before conduct of the study. No financial implications in form of any drug usage or conduction of any laboratory tests etc. was involved. Due consent was sought from all the participants, before getting the proforma filled. The consent form was both in Hindi as well as English. Those not willing were respectfully excluded from the study. Moreover, all the participants were assured of complete confidentiality.

RESULT AND DISCUSSION

994 (99.4%) of the respondents had heard about HIV/AIDS. When asked if HIV and AIDS were the same thing or not, 641 (64.1%) said yes. 364 (72.8%) urban participants and 222 (44.4%) rural participants knew that the disease is caused by a virus. Circa one-third of the total respondents (294; 29.4%) knew that "Red Ribbon" is the symbol for HIV/AIDS.

Questions asked		Urban	Rural	Total
		(N = 500)	(N = 500)	(N = 1000)
Is it acquired Heterosexually?	Yes	476 (95.2%)	404 (80.8%)	880 (88%)
	No	24 (4.8%)	96 (19.2%)	120 (12%)
Is it acquired Homosexually?	Yes	342 (68.4%)	164 (32.9%)	506 (50.7%)
	No	158 (31.6%)	334 (67.1%)	492 (49.3%)
Is acquired by Blood Transfusions?	Yes	325 (65%)	130 (26%)	455 (45.5%)
	No	175 (35%)	370 (74%)	545 (54.5%)
Is it acquired by sharing injecting needles?	Yes	371 (74.2%)	252 (50.4%)	623 (62.3%)
	No	129 (25.8%)	248 (49.6%)	377 (37.7%)
Is it acquired from mother to child?	Yes	254 (50.8%)	118 (23.6%)	372 (37.2%)
	No	246 (49.2%)	382 (76.4%)	628 (62.8%)

TABLE 1. KNOWLEDGE OF STUDY SUBJECTS REGARDING ACQUIRING HIV/AIDS

Table no.1 shows that 880 (88%) of the study subjects knew that HIV/AIDS is transmitted heterosexually. Half of the total respondents didn't know (49.3%; 492) that homosexuality could also be the route. Regarding blood transfusion being the route, 455 (45.5%) of the subjects were aware. A total of 623 (62.3%) also knew that another route was by sharing injecting needles. Finally, when asked if mother to child could be a route of spread, only 372 (37.2%) said yes.

374 (37.4%) of the total subjects had knowledge that a healthy looking person can transmit HIV/AIDS.When asked if a person could get infected by mosquito bite, only 14 (1.4%) said yes. A little more than half (54.8%; 548) of the subjects had knowledge regarding spread of the infection by tattooing, ear/nose piercing. Further 560 (56%) knew correctly that a person could get infected by sharing shaving blades/ barber's blade.

Television was the most quoted source of information regarding HIV/AIDS among the study participants (76%; 760), as is shown in figure number 1. A very close second source was "friends", with a total of 756 (75.6%) subjects quoting them. Newspaper was reported by 558 (55.8%) subjects. Also importantly, 560 (56%) of the participants said that they got the information regarding HIV/AIDS from magazines. Evidently, the participants quoted multiple sources of information.

Figure number 2 shows that 76 (7.6%) of the total respondents thought that there is a cure for HIV/AIDS. When asked if there is any vaccine for its prevention, among urban 28 (5.6%) said yes and 152 (30.4%) said they didn't know, while among the rural respondents 30 (6%) said yes and 334 (66.8%) said they didn't know. 784 (78.4%) of the study subjects knew that condom usage prevents HIV. Table no. 2 depicts that age group, education, socio-economic status and religion of study subjects were found to be significantly associated (p < .05) whereas sex was not (p > .05), with their knowledge if condom usage prevented HIV/AIDS. 816 (81.6%) participants knew that having sex with a regular partner prevents HIV spread. Regarding screening of blood as the method of prevention, 504 (50.4%) subjects said yes.

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Figure 1. Sources of study subjects' information regarding HIV/AIDS





TABLE 2. Knowledge of HIV/AIDS prevention among participants as per their sociodemographic profile

Sociodemographic variables		Does condom usage prevent HIV/AIDS?					
		Yes	No	Total	p - value		
				(1000)			
Age	18-30 years	406 (51.8%)	64 (29.6%)	470 (47%)	<.001		
	30-45 years	230 (29.3%)	68 (31.5%)	298 (29.8%)			
	45-60 years	136 (17.3%)	54 (25%)	190 (19%)			
	60 years & above	12 (1.5%)	30 (13.9%)	42 (4.2%)			
Sex	Male	460 (58.7%)	124 (57.4%)	584 (58.4%)	.738		
	Female	324 (41.3%)	92 (42.6%)	416 (41.6%)			
Education	Illiterate	20 (2.6%)	88 (40.7%)	108 (10.8%)	<.001		
	Primary	22 (2.8%)	42 (19.4%)	64 (6.4%)			
	Middle	30 (3.8%)	38 (17.6%)	68 (6.8%)			
	Matric	68 (8.7%)	24 (11.1%)	92 (9.2%)			
	Senior secondary	220 (28.1%)	16 (7.4%)	236 (23.6%)			
	Diploma	116 (14.8%)	6 (2.8%)	122 (12.2%)			
	Graduate	244 (31.1%)	2 (0.9%)	246 (24.6%)			
	Post-graduate	64 (8.2%)	0	64 (6.4%)			
Socio-economic class	I	746 (95.2%)	134 (62.4%)	880 (88%)	<.001		
	II	32 (4.1%)	64 (29.6%)	96 (9.6%)			
	III	4 (0.5%)	16 (7.4%)	20 (2%)			
	IV	2 (0.3%)	0	2 (0.2%)			
	V	0	2 (0.9%)	2 (0.2%)			
Religion	Hindu	614 (78.5%)	166 (76.9%)	780 (78%)	<.001		
	Sikh	78 (10%)	16 (7.4%)	94 (9.4%)			
	Muslim	50 (6.4%)	34 (15.7%)	84 (8.4%)			
	Christian	38 (4.9%)	0	38 (3.8%)			

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In the present study, 99.4% of the subjects had heard about HIV/AIDS. 92.8% of the participants had heard about it, in an urban field practice area of J.N. Medical College Belgaum, conducted by Parmar and Bellad [2].

In our study 60.6% subjects in urban and 67.6% in rural areas thought that HIV and AIDS are the same things, whereas Harpreet *et al* (2014) in their community based study among women in Punjab found that only around one-third of the subjects in both rural and urban areas knew the same. The increment in the knowledge levels could be attributed to the tireless IEC programs run by government and non-government organizations to spread awareness. 8.6% respondents in our study said that AIDS is caused by bacteria. In Mou and Bhuiya (2015) study of knowledge and perceptions of STD, HIV/AIDS and reproductive health among female students in Dhaka, 3% subjects said that bacteria transmits STDs [3].

29.4% of the total subjects in our study were aware that "Red Ribbon" is the symbol for HIV/AIDS, whereas as per Bola and Dudala study (2013) among senior secondary school students in Khammam, the positive responders were 76.85% [4]. The gap in the knowledge could be due to the fact that the later study was conducted among students who are usually today more aware because of focus on sex education etc.

In our study 50.7% subjects said it's the homosexual route which leads to the infection. On similar lines were the findings by Shivraj and Chandrashekar (2015) in their study on awareness about HIV/AIDS among first year medical students of Bangalore Medical College and research institute, where 50.5% said it's the homosexual route which leads to HIV/AIDS [5].

45.5% of our study subjects agreed that HIV is acquired through blood transfusion. The finding was consistent with Mou and Bhuiya (2015) report of 48%. In the present study, 62.3% of the participants said that HIV/AIDS is acquired by sharing injecting needles, mirroring the result of Kumar and Pore (2012) high school study of municipal corporation school in Pune where 61.76% students said the same [6]. Regarding the mother to child route of HIV transfer, 37.2% of our study subjects were aware. Narayani and Shakuntala (2013) in their study of effectiveness of teaching programe on knowledge, attitude, practice regarding HIV/AIDS among pregnant women in Lady Goshen Hospital, Mangalore, found that 45% of the women knew about the route [7]. Like 40% participants of the Hoque study (2015) among rural higher secondary school students in Bangladesh, 46% of the respondents in our study also said that a healthy looking person can't transmit AIDS [8]. Only 1.4% (14) of the total respondents in our study agreed to the disease's transmission by mosquito bite. Biswas and Adikari (2013) in their KAP study on graduate nursing students of a tertiary health care teaching hospital in rural West Bengal, found none of the subjects holding this misbelieve [9]. 54.8% of the participants in our study said that HIV/AIDS could be got by tattooing, ear/nose piercing. Tattooing was also said to be responsible for HIV by 43% of the respondents in the study conducted by Shivaraj and Chandrasekhar in Bangalore Medical College and Research Institute. 56% of the total study subjects knew that a person could get HIV/AIDS by sharing shaving blade/barber's blade. A similar result of 59.78% was got in the Hoque Bangladesh study.

The present study reveals that Tele-Vision was the most reported (76%) source of information regarding HIV/AIDS, 76.1% Tamil Nadu's young married women in the cross-sectional study by Ravi and Kulasekaran [10].

When asked if there is any cure for HIV/AIDS presently, 7.6% said yes. Similarly, 6.3% of the trainee teachers thought there is a cure in Agarwal and Chandrashekar (1999) study pertaining to knowledge and attitudes towards HIV/AIDS among senior secondary school students and trainee teachers in Udupi district [11]. Further, 45.6% of our study respondents rightly said that there is no vaccine to prevent HIV transmission.

78.4% of our study subjects were in affirmative when asked if condom usage prevents HIV/AIDS. 78.2% said the same in Cabezas and Fomosini's (2013) cross-sectional study to assess the knowledge about HIV/AIDS transmission and prevention measures in Ecuadorian company workers [12]. On asking if sex with regular partner prevents HIV/AIDS, 81.6% respondents said yes. A similar result of 88.74% was got by Reddenna and Raj (2015) in their study of assessment of knowledge regarding HIV/AIDS among young people of schools and colleges of madanpalli region of Chittoor [13].

CONCLUSION

It was found that overall knowledge of the study subjects regarding HIV/AIDS is appreciable, in both urban as well as rural areas, still empty voids remain. The policy makers must take note of them and use mass media, IEC activities accordingly to fight this scourge.

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