

## Assessment of knowledge and attitude of Rural Population about HIV/AIDS in Raigad District, India

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**Abstract: Objective:** To assess the knowledge and attitude of rural population about HIV/AIDS in Raigad district. **Material and Methods:** A descriptive epidemiological study was conducted during January 2009 to April 2009 at Mahad Taluka of Raigad District, India. Total of 724 individuals were selected by using stratified random sampling. The information was gathered by personal interview using semi-structured proforma. **Results:** Total 724 individuals were interviewed with 202 (27.9%) males and 522 (72.1%) females. Overall awareness about symptoms of HIV/AIDS, its transmission routes and preventive measures was very poor. 383(52.9%) individual knew correct routes of transmission while only 289 (39.9%) individuals knew how to prevent HIV infection transmission. 317 (43.8%) individual never heard about condom and 117 (17.2%) population knew correct purpose of condom. Composite scores of Knowledge and attitude were low (below 50%) specifically in females, unmarried and illiterate individuals. **Conclusion:** Thus the knowledge of rural people about HIV / AIDS, its transmission and prevention should be improved with help of vigorous campaigning, training workshops, HIV / AIDS education sessions with special focus on migrant workers and their families.

**Keywords:** AIDS, Attitude, HIV, Knowledge, Rural

### I. Introduction

When AIDS first emerged, no one could have predicted how the epidemic would spread across the world and how many millions of lives it would change. There was no real idea what caused it and consequently no real idea how to protect against it. Now we know from bitter experience that AIDS is caused by the HIV virus, and that it can devastate families, communities and whole continents. We have seen the epidemic knock decades off countries' national development, widen the gulf between rich and poor nations and push already stigmatized groups closer to the margins of society. We are living in an 'international' society, and HIV has become the first truly 'international' epidemic, easily crossing oceans and borders. It has been noted that a country with a very high HIV prevalence rate will often see this rate eventually stabilize, and even decline. It is disappointing that the global numbers of people infected with HIV continue to increase, despite the fact that effective prevention strategies already exist. Number of people living with HIV in 2008 was 33.4 million. Of these 33.4 million 2.7 million were newly infected patients in 2008 and AIDS related deaths were 2 million.<sup>(1)</sup>

The Government of India estimates that in 2007, about 2.31 million Indians were living with HIV (1.8 – 2.9 million) with an adult prevalence of 0.34 percent.<sup>(2)</sup> Demographically the second largest country in the world, India has also the third largest number of people living with HIV/AIDS. HIV estimates derived using globally comparable methods and findings from the independent Impact Assessment Study shows that the National AIDS Control Programme is progressing steadily towards the objective of halting and reversing the HIV epidemic in India over the period 2007- 2012. Available evidence on HIV prevalence and future statistical projections shows signs of stabilization of HIV epidemic in India at national level. Provisional estimates show that there are 22.7 lakh People living with HIV/AIDS in India by the end of 2008 with an estimated adult HIV prevalence of 0.29 percent.<sup>(3)</sup>

Maharashtra has the highest rate of urbanization i.e. 42%, major national highways pass through the state, it has a high rate of migrant and floating population, and there exists a well established sex industry in the state and industrialization leading to availability of cash money in the hands of industrial workers. The bed occupancy in many hospitals due to HIV positive persons has been as high as 25% to 30%, the ANC (Antenatal cases) HIV prevalence is around 1% and the HIV prevalence in STD clinics is 10.4%. There are 216748 registered HIV positive persons in the state today and an estimated figure of 8, 51,420 people living with HIV / AIDS. The total number of AIDS cases is 47,386 and those who have died are 2958.<sup>(4)</sup>

Maharashtra ranks first nationally in the proportion of total migrants. Maharashtra is India's leading industrial state and attracts male from almost all states of India. Census data suggest a predominance of inter-state migration to districts of Thane, Mumbai suburban, Nashik and Pune. A considerable volume of inter-state

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in-migrants come from some of the high prevalence districts of Karnataka and Andhra Pradesh. When comparing Maharashtra to Andhra Pradesh (Verma et.al. 2007) and Karnataka (Saggurti et.al. 2008) the relationship between migration and HIV is strong.<sup>(5)</sup>

Thane, Pune, Nashik, Mumbai (urban), Mumbai (suburban) and Nagpur districts received more than half of male migrants during 1991-2001. These districts also have recorded a high HIV prevalence among pregnant women attending ANC clinics. In addition, the primary out-migration districts such as Sangli, Satara, Solapur, Jalgaon and Bid have recorded a high HIV prevalence. Thus, both the origin and destination districts demonstrate a link to HIV.<sup>(5)</sup>

These facts indicate the transmission of HIV from urban to rural areas and from high risk to low risk behaviour groups. If left unattended, this problem may spread like a fire and all the gains of the project activities so far, are likely to get major setback. Hence it is necessary at this stage to plan and operationalize the appropriate preventive and control measures against HIV/AIDS to control the transmission especially from the migrants.

### **II. Materials And Methodology**

The present study was a community based descriptive epidemiological study carried out during January 2009 to April 2009 in Mahad Taluka in Raigad District of Konkan region of Western Maharashtra. District has sex ratio of 975 females per 1000 males and literacy rate of 60.4%. Almost 41% of the population lies below poverty line.

For the purpose of present study, it was decided to include members from the important stakeholders as well as beneficiaries of PRIDE-India, who are also the influential members in the community, in the 40 villages covered by PRIDE-India. They are as follows:

Self help groups members	3000
Sponsored children	1500
Adolescent boys	400
Adolescent girls	400
No. of families where at least 1 member has migrated to Mumbai	1000
Panchayat Raj Institutes members (Male)	200
Anganwadi workers	150
High school Teachers	60
Preschool Teachers	35
Total	6745

It was proposed to include at least, 10% i.e. 700 individuals from these groups for the purpose of survey for assessment of knowledge and attitude. Sampling technique was Stratified random sampling. Stratification was done according to the categories mentioned above. 724 individuals were selected by keeping Inclusion and exclusion criteria in mind.

After finalizing the study design, it was thoroughly discussed and administrative approval was taken from PRIDE-India officials at Mahad. Permission for the present study was taken from the Dean and Head of the Department of Preventive and Social Medicine TN Medical College, Mumbai. Ethics committee clearance for the present study was taken after submitting the study protocol.

Basic information about study area, study population and NGO activities was collected from PRIDE-India NGO by studying previous records. Data collection tools were prepared: consent forms and preformed, pretested, semi-structured, open-ended questionnaire, all in the local language of communication i.e. Marathi.

#### **2.1 Knowledge**

Knowledge was assessed by using the composite scale giving scores to different attributes of knowledge regarding STIs and HIV/AIDS presented in interview schedule.

Sr.	Questions	Answer / Score
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No.		Yes	No / Don't know	
1	Heard of STIs?	1	0	
2	Are STIs curable?	1	0	
3	Have you heard of HIV/AIDS?	1	0	
4	Is there any difference between HIV & AIDS?	1	0	
5	Is there any relation between HIV/AIDS & STIs?	1	0	
6	Is HIV/AIDS completely curable?	0	No=1 / Don't know=0	
7	Availability of HIV testing facilities?	1	0	
8	Availability of HIV treatment facilities?	1	0	
9	Desire more information on HIV?	1	0	
10	Have you heard of condom?	1	0	
11	Do you discuss health and sex issues?	1	0	
12	Necessity of HIV testing in pregnant women?	1	0	
13	Undergone HIV testing?	1	0	
		Correct	Partially correct	Wrong / Don't know
14	Meaning of STIs?	2	1	0
15	Ways of transmission of STIs?	2	1	0
16	Preventive measures for STIs?	2	1	0
17	Symptoms of HIV?	2	1	0
18	Symptoms of AIDS?	2	1	0
19	Transmission of HIV/AIDS?	2	1	0
20	Preventive measures for HIV/AIDS?	2	1	0
21	Purpose of condom use?	2	1	0

Maximum obtainable score was 29.

Score of 0-13 considered as poor score; Scores of 14 – 29 considered as Good Score

## 2.2 Attitude

Attitude was assessed by using the composite scale giving scores to different attributes of attitude regarding STIs and HIV / AIDS presented in the interview schedule.

Sr. No.	Statements	Answer / Score		
		Yes	No	Don't know
1	STIs can be cured by having sex relation with young unmarried woman?	0	1	0
2	It is mandatory to subjects both the partners for HIV testing before marriage?	0	1	0
3	It is dangerous to keep HIV infected individual at home?	0	1	0
4	Complete elimination of prostitution is necessary to prevent HIV transmission?	0	1	0
5	HIV infected females should never get conceived?	0	1	0
6	Those who are confirmed HIV negative after testing, have no risk of becoming HIV infected any time in the life?	0	1	0
7	It is possible to identify HIV infected individual easily?	0	1	0
8	STIs & HIV/AIDS are transmitted by only females?	0	1	0
9	It is necessary to test each individual for HIV infection?	0	1	0
10	It is dangerous to provide health care to HIV infected individual?	0	1	0

Maximum obtainable score was 10.

Score of 0 – 5 is considered as poor score and 6-10 is good score.

### **2.3 Planning Of Survey**

The survey was planned in first week of January 2009. With the help of PRIDE-India officials the study population of 40 villages was divided into 4 Zones, namely, Pachad zone, Vinhere zone, Jui zone, Mahad zone.

#### **2.3.1 Identification Of Surveyors And The Supervisors**

Total 40 surveyors were identified which were Community Organizers (COs) and Balsevikas. 20 pairs were formed, preferably one male and one female in each pair. 4 Assistant Zonal officers (AZOs) were identified, one for each of the four zones. Each AZO was supposed to supervise activity of 5 (or 6) pairs of the surveyors and help them in case of difficulties.

#### **2.3.2 Training Of Surveyors And Supervisors**

All the 40 surveyors (20 Community Organizers and 20 Balsevikas) and the 4 Supervisors i.e. Assistant Zonal Officers were given 1 day training about how to ask the questions for interview schedule. This was done to have uniformity in questionnaire filling and avoid subjective errors. Their queries about some questions were solved on the spot. They were trained how to develop rapport with the respondents and how to get answers to certain embarrassing questions.

#### **2.3.3 Allotment Of Survey Areas**

The 40 surveyors were divided into 20 pairs, preferably one male and one female in each pair. Each pair was allotted 2 villages in such a way that surveyors were from different villages of residence than the ones allotted to them. This was done to avoid any bias on the part of the surveyors. The surveyors were also intimated about the route and mode of transport for reaching their allotted villages. The surveyors were also informed to be in contact with the respective supervisors i.e. Assistant Zonal Officers (AZOs) in case of any difficulties

#### **2.3.4 Field Survey**

Field survey was carried out over a period of 2 days. 20 villages were covered on day one and remaining 20 on the second day. Each pair covered one village on each day and completed interviews of the allotted participants. The surveyors introduced themselves to the participants, developed rapport, took their consent and then interviewed the participants. Interviews were taken in local language i.e. Marathi. It was made sure that each question was properly understood by the participants

Proper privacy was provided to all the participants. Care was taken that female participants were interviewed by the female surveyor and male participant by the male surveyor. An attempt was made to interview the spouse of the migrant, wherever applicable.

High school teachers and preschool teachers were requested to fill the forms, instead of taking their interview. This was mainly because the teachers would not be very comfortable to get interviewed by the community organisers and it is also more likely that they would express in a better fashion if given an opportunity to respond independently. Only those who have not undergone any training on HIV/AIDS were included in this exercise.

The four supervisors i.e. Assistant Zonal Officers (AZOs) supervised the work in their respective zones. AZOs also helped the surveyors in case of any difficulties. It was made sure that all interviews in that village are completed on the same day and not kept pending. Efforts were made on the part of the surveyors as well as the supervisors to minimize the mistakes in filling up the questionnaires.

#### **2.3.5 Statistical Analysis**

The data was checked for completeness. The data was coded and entered in Microsoft Office Excel. The data was filtered, processed and edited. The data was thoroughly analysed using SPSS 15.0 and Graph Pad Prism v5.01 statistical analysis software. Appropriate tests like Chi-square were applied.

### **III. Results**

TABLE 1 describes, total number of 724 individuals were interviewed with 202 (27.9%) males and 522 (72.1%) females. Most of them 615 (84.94%) were in the age group of 15 - 40 years, Hindu by religion (710, 98.06%), backward class (294, 40.60%), married (408, 56.35%), educated up to secondary school level (480, 66.29%), occupied as unskilled labourer (374/479, 78.8%) and socio-economic class IV (458, 63.26%). Also, 547 (75.55%) of participants have also reported various forms of addictions among their family members mainly tobacco consumption (504, 92.13%) in various forms. Only 99 (49.0%) males and 83 (15.90%) females mentioned that they were the decision makers on their health problems, while, only 87 (43.07%) males and 288 (55.17%) females said that they discuss health and sexual issues with family members. TABLES 2, 3 show that males, married population, individuals having higher education level, self employed individuals and individuals

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having higher per capita income had more awareness about the symptoms of HIV and AIDS. Similarly TABLES 4 and 5 show awareness about transmission of HIV and Prevention of HIV infection was significantly more in people having higher education, self employed people, people having more per capita income and married population. TABLE 6 reveals although 383(52.9%) individual knew about various routes of transmission, only 289 (75.6%) of these 383 individuals knew how to prevent HIV infection transmission. TABLE 7 shows, 317 (43.8%) individual never heard about condom. Only 117 (17.2%) population knew correct purpose of condom. Significant relationship was seen between correct purpose of condom and population having higher education, males, married population, high per capita income and employed population. TABLES 8,9,10 show only 106 (14.6%) individuals had good knowledge (Composite knowledge score  $\geq 14$ ) about HIV/AIDS and 165 (22.8%) individuals had right attitude (Composite score 6 to 10) towards HIV/AIDS. Good knowledge and right attitude was significantly more in males, married population, individuals with higher education, population with high per capita income.

**TABLE 1: Demographic Profile of Study Population (n – 724)**

Socio-demographic Profile		Frequency
Sex	Male	202 (27.9%)
	Female	522 (72.1%)
Age in years	< 20	258 (35.6%)
	20 - 29	153 (21.1%)
	30 – 39	204 (28.2%)
	40 – 49	73 (10.1%)
	50 & above	36 (5%)
Education	Illiterate	41 (5.7%)
	Primary	112 (15.5%)
	Secondary	468 (64.6%)
	Higher Secondary	94 (13%)
	Graduation and above	9 (1.2%)
Occupation	Self employed	29 (4%)
	Public Private sector employee	59 (8.2%)
	Unskilled laborer	374 (51.7%)
	Unemployed	262 (36.6%)
Religion	Hindi	710 (98.06%)
	Muslim	7 (0.97%)
	Others	7 (0.97 %)
Caste	Backward Class	294 (40.6%)
	Others	430 (59.4%)
Marital Status	Married	408 (56.4%)
	Unmarried	298 (41.2%)
	Divorced and Others	18 (2.4%)
Per Capita income per month	Class I	29 (4.01%)
	Class II	56 (7.73%)
	Class III	181 (25 %)
	Class IV	458 (63.26%)

**TABLE 2: Ever heard of HIV/ AIDS (n-724)**

Category		Yes	No	Chi-square test
Sex	Male	194 (96.04%)	8 (3.96%)	$\chi^2 - 21.9$ ; p-value < 0.01; Significant Association
	Female	432 (82.8%)	90 (17.2%)	
Age Group in years	< 20	200 (77.5%)	58 (22.5%)	$\chi^2 - 36.7$ ; p value < 0.01; Significant Association
	20 – 29	140 (91.5%)	13 (8.5%)	
	30 – 39	195 (95.6%)	9 (4.4%)	
	40 -49	62 (84.9%)	11 (15.1%)	
	50 & above	29 (80.6%)	7 (19.4%)	
Education	Illiterate	21 (51.2%)	20 (48.8%)	$\chi^2 - 55.9$ ; p value < 0.01; Significant Association
	Primary	90 (80.4%)	22 (19.6%)	
	Secondary	418 (89.3%)	50 (10.7%)	
	Higher Secondary	88 (93.6%)	6 (6.4%)	

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Occupation	Graduate & above	9 (100%)	0 (0%)	$\chi^2 - 15.8$ ; p value < 0.01; Significant Association
	Self employed	26 (89.7%)	3 (10.3%)	
	Public-private sector employee	54 (91.5%)	5 (8.5%)	
	Unskilled laborer	337 (90.1%)	37 (9.9%)	
Religion	Unemployed	209 (79.7%)	53 (20.2%)	$\chi^2 - 43.3$ ; p value < 0.01; Significant Association
	Hindu	622 (87.8%)	88 (12.2%)	
	Muslim	3 (42.9%)	4 (57.1%)	
Caste	Others	1(14.3%)	6 (85.7%)	$\chi^2 - 14.5$ ; p value < 0.01; Significant Association
	Backward Class	237 (80.6%)	57 (19.4%)	
Marital Status	Others	389 (90.5%)	41 (9.5%)	$\chi^2 - 19.8$ ; p value < 0.01; Significant Association
	Married	373 (91.4%)	35 (8.6%)	
	Unmarried	238 (79.9%)	60 (20.1%)	
Per capita Income per month	Divorced & others	15 (83.3%)	3 (16.7%)	$\chi^2 - 7.7$ ; p value - 0.052; Non-Significant Association
	Class I	27 (93.1%)	2 (6.9%)	
	Class II	52 (92.9%)	4 (7.1%)	
	Class III	163 (90.1)	18 (9.9%)	
	Class IV	384 (83.8%)	74 (16.2%)	

**TABLE 3: Awareness about the symptoms of HIV/AIDS (n- 724)**

Category		Yes	No	Wrong	Don't know	Chi-square test
Sex	Male	2(1%)	64(31.7%)	36(17.8%)	100(49.5%)	$\chi^2 - 2.1$ ; p-value < 0.054; Non-Significant Association
	Female	12(2.3%)	156(29.9%)	81(15.5%)	273(52.3%)	
Age Groups in years	< 20	1(0.4%)	58(22.5%)	53(20.5%)	146(56.6%)	$\chi^2 - 29.6$ ; p-value < 0.01; Significant Association
	20 – 29	2(1.3%)	45(29.4%)	23(15%)	83(54.3%)	
	30 – 39	6(2.9%)	77(37.8%)	28(13.7%)	93(45.6%)	
	40 -49	4(5.5%)	29(39.7%)	8 (11%)	32 (43.8%)	
	50 & above	1 (2.8%)	11(30.6%)	5(13.9%)	19(52.8%)	
Education	Illiterate	0(0%)	8(19.5%)	9 (22%)	24(58.5%)	$\chi^2 - 32.9$ ; p value < 0.01; Significant Association
	Primary	1(0.9%)	30(26.8%)	21(18.8%)	60(53.6%)	
	Secondary	8(1.7%)	142(30.3%)	72(15.4%)	246(52.6%)	
	Higher Secondary	3(3.2%)	35(37.2%)	14(14.9%)	42(44.7%)	
	Graduate & above	2(22.2%)	5(55.6%)	1 (11.1%)	1(11.1%)	
Occupation	Self employed	2(6.9%)	22(75.9%)	2 (6.9%)	3 (10.3%)	$\chi^2 - 59.5$ ; p-value < 0.01; Significant Association
	Public-private sector employee	2(3.3%)	27(45.8%)	7(11.9%)	23(39%)	
	Unskilled laborer	8(2.1%)	119(31.8%)	58(15.5%)	189(50.5%)	
	Unemployed	2(0.8%)	52(19.9%)	50(19.1%)	158(60.3%)	
Religion	Hindu	14 (2%)	217(30.6%)	115(16.2%)	364(51.3%)	$\chi^2 - 1.5$ ; p value- 0.8; Nonsignificant Association
	Muslim	0 (0%)	1 (14.3%)	1(14.3)	5(71.4%)	
	Others	0 (0%)	2 (28.6%)	1(14.3%)	4(57.1%)	
Caste	Backward Class	3(1%)	77(26.2%)	50(17%)	164(55.8%)	$\chi^2 - 16$ ; p value < 0.01; Significant Association
	Others	11(2.6%)	143(33.3%)	67(15.6%)	209(48.5%)	
Marital Status	Married	12(2.9%)	160(39.2%)	54(13.2%)	182(44.6%)	$\chi^2 - 43.2$ ; p-value < 0.01; Significant Association
	Unmarried	2 (0.7%)	55(18.5%)	60(20.1%)	181(60.7%)	
	Divorced & others	0(0%)	5(27.8%)	3(16.7%)	10(55.5%)	

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Per capita Income per month	Class I	3(10.3%)	17(58.6%)	2(6.9%)	7(24.1%)	$\chi^2 - 46.9$ ; p value < 0.01; Significant Association
	Class II	4(7.1%)	25(44.6%)	5(8.9%)	22(39.3%)	
	Class III	4(2.2%)	56(30.9%)	29(16%)	92(50.8%)	
	Class IV	3(0.7%)	122(26.6%)	81(17.7%)	252(55%)	

**TABLE 4: Awareness about transmission of HIV/AIDS (n-724)**

Category		Correct	Partially correct	Wrong	Don't know	Chi-square test
Sex	Male	22(10.9%)	84(41.6%)	32(15.8)	64(31.7%)	$\chi^2 - 3.1$ ; p -0.4; Non-Significant Association
	Female	38(7.3%)	239(45.8%)	75(14.4%)	170(32.6%)	
Age Groups	< 20 years	11(4.3%)	92(35.7%)	51(19.8%)	104(40.3%)	$\chi^2 - 48.8$ ; p-value < 0.01; Significant Association
	20 – 29 years	11(7.2%)	65(42.5%)	20(13.1%)	57(37.2%)	
	30 – 39 years	23(11.3%)	109(53.4%)	25(12.3%)	47(23%)	
	40 -49 years	11(15.1%)	43(58.9%)	7(9.6%)	12(16.4%)	
	50 & above	4(11.1%)	14(38.9%)	4(11.1%)	14(38.9%)	
Education	Illiterate	1(2.4%)	9(22%)	12(29.3%)	19 (46.3%)	$\chi^2 - 33.9$ ; p value < 0.01; Significant Association
	Primary	7(6.3%)	44(39.3%)	20(17.9%)	41(36.6%)	
	Secondary	37(7.9%)	217(46.3%)	63(13.5%)	151(32.3%)	
	Higher Secondary	12(12.8%)	48(51.1%)	11(11.7%)	23(24.4%)	
	Graduate & above	3(33.3%)	5(55.6%)	1(11.1%)	0(0%)	
Occupation	Self employed	5 (17.2%)	17(58.6%)	2 (6.9%)	5(17.2%)	$\chi^2 - 28.3$ ; p-value < 0.01; Significant Association
	Public-private sector employee	7(11.9%)	32(54.2%)	7(11.9%)	13(22%)	
	Unskilled laborer	36(9.6%)	175(46.8%)	55(14.7%)	108(28.9%)	
	Unemployed	12(4.6%)	99(37.8%)	43(16.4%)	108(41.2%)	
Religion	Hindu	59 (8.3%)	318(44.8%)	104(14.6%)	229(32.3%)	$\chi^2 - 11.8$ ; p value < 0.01; Significant Association
	Muslim	0(0%)	2(28.6%)	2(28.5%)	3(42.9%)	
	Others	1(14.3%)	3 (42.9%)	1(14.3%)	2(28.5%)	
Caste	Backward Class	22(7.5%)	111(37.8%)	51(17.4%)	110(37.4%)	$\chi^2 - 11.8$ ; p value < 0.01; Significant Association
	Others	38(8.8%)	212(49.3%)	56(13%)	124(28.8%)	
Marital Status	Married	45(11%)	260(63.7%)	33(8.1%)	70(17.2%)	$\chi^2 - 185$ ; p-value < 0.01; Significant Association
	Unmarried	14(4.7%)	55(18.5%)	71(23.8%)	158(53%)	
	Divorced & others	1(5.6%)	8(44.4%)	3(16.7%)	6(33.3%)	
Per capita Income per month	Class I	6(20.7%)	18(62.1%)	2(6.9%)	3(10.3%)	$\chi^2 - 40.5$ ; p value < 0.01; Significant Association
	Class II	9(16.1%)	33(58.9%)	6(10.7%)	8(14.3%)	
	Class III	18(9.9%)	89(49.2%)	27(14.9%)	47(26%)	
	Class IV	27(5.9%)	183(40%)	72(15.7%)	176(38.4%)	

**TABLE 5: Awareness about prevention of HIV Infection (n-724)**

Category		Correct	Partially correct	Wrong	Don't know	Chi-square test
Sex	Male	11(5.4%)	84(41.6%)	47(23.3%)	60(29.7%)	$\chi^2 - 6.5$ ; p -0.09; Non-Significant Association
	Female	19(3.6%)	175(33.5%)	155(29.7%)	173(33.1%)	
Age Groups In years	< 20	2(0.8%)	55(21.3%)	91(35.3%)	110(42.6%)	$\chi^2 - 77$ ; p-value < 0.01; Significant Association
	20 – 29	4(2.6%)	55(35.9%)	47(30.7%)	47(30.7%)	
	30 – 39	15(7.4%)	98(48%)	47(23%)	44(21.6%)	
	40 -49	7 (9.6%)	37(50.7%)	11(15.1%)	18(24.7%)	

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	50 & above	2 (5.5%)	14(38.9%)	6(16.6%)	14(38.9%)	
Education	Illiterate	0(0%)	6(14.6%)	15(36.6%)	20(48.8%)	$\chi^2$ -87.8; p value < 0.01; Significant Association
	Primary	1(0.9%)	22(19.6%)	37(33%)	52(46.4%)	
	Secondary	15(3.2%)	187(39.9%)	127(27.1%)	139(29.7%)	
	Higher Secondary	10(10.6%)	40(42.5%)	22(23.4%)	22(23.4%)	
	Graduate & above	4(44.4%)	4(44.4%)	1(11.1%)	0(0%)	
Occupation	Self employed	5 (17.2%)	14(48.3%)	4(13.8%)	6(20.7%)	$\chi^2$ - 32.4; p-value < 0.01; Significant Association
	Public-private sector employee	6(10.2%)	25(42.4%)	9(15.3%)	19(32.2%)	
	Unskilled laborer	15(4%)	133(35.6%)	105(28.1)	121(32.3%)	
	Unemployed	4(1.5%)	87(33.2%)	84(32.1%)	87(33.2%)	
Religion	Hindu	29(4.1%)	256(36.1%)	197(27.7%)	228(32.1%)	$\chi^2$ - 3.9; p value < 0.4; Non-Significant Association
	Muslim	0(0%)	1(14.3%)	3(42.9%)	3(42.8%)	
	Others	1(14.3%)	2(28.6%)	2(28.6%)	2(28.6%)	
Caste	Backward Class	11(3.7%)	99(33.7%)	89(30.3%)	95(32.3%)	$\chi^2$ - 18; p value < 0.61; Non-Significant Association
	Others	19(4.4%)	160(37.2%)	113(26.3%)	138(32.1%)	
Marital Status	Married	20(4.9%)	204(40.2%)	83(25.2%)	101(29.7%)	$\chi^2$ - 92; p-value < 0.01; Significant Association
	Unmarried	9(3%)	49(29.9%)	114(31.5%)	126(35.6%)	
	Divorced & others	1(5.6%)	6(33.3%)	5(27.8%)	6(33.3%)	
Per capita Income per month	Class I	8(27.6%)	16(55.2%)	2(6.9%)	3(10.3%)	$\chi^2$ - 85.8; p value < 0.01; Significant Association
	Class II	9(16.1%)	25(44.6%)	10(17.8%)	12(21.4%)	
	Class III	6(3.3%)	66(36.5%)	49(27.1%)	60(33.1%)	
	Class IV	7(1.5%)	152(33.2%)	141(30.8%)	158(34.5%)	

**TABLE 6: Association between awareness of transmission and awareness of prevention (n-383)**

Category		Correct	Partially correct	Wrong	Don't know	Chi-square test
Sex	Male	11(10.4%)	84(79.2%)	4(3.8%)	7(6.7%)	$\chi^2$ -16.1; p < 0.01; Significant Association
	Female	19(6.9%)	175(63.2%)	32(11.6%)	51(18.4%)	
Age Groups In years	< 20	2(19%)	55(53.4%)	20(19.4%)	26(25.2%)	$\chi^2$ -40.1; p-value < 0.01; Significant Association
	20 - 29	4(5.3%)	55(72.4%)	6(7.9%)	11(14.5%)	
	30 - 39	15(11.4%)	98(74.2%)	6(4.6%)	13(9.8%)	
	40 -49	7 (13%)	37(68.5%)	3(5.6%)	7(12.9%)	
	50 & above	2 (11.1%)	14(77.8%)	1(5.6%)	1(5.6%)	
Education	Illiterate	0(0%)	6(60%)	1(10%)	3(30%)	$\chi^2$ -63; p value < 0.01; Significant Association
	Primary	1(2%)	22(43.1%)	12(23.5%)	16(31.4%)	
	Secondary	15(5.9%)	187(73.6%)	17(6.7%)	35(13.8%)	
	Higher Secondary	10(16.7%)	40(66.7%)	6(10%)	4(6.7%)	
	Graduate & above	4(50%)	4(50%)	0(0%)	0(0%)	
Occupation	Self employed	5 (22.7%)	14(63.6%)	2(9.1%)	1(4.6%)	$\chi^2$ - 21.2; p-value < 0.01; Significant Association
	Public-private sector employee	6(15.4%)	25(64.1%)	3(7.7%)	5(12.8%)	
	Unskilled laborer	15(7.1%)	133(63%)	25(11.9%)	38(18%)	
	Unemployed	4(3.6%)	87(78.4%)	6(5.4%)	14(12.6%)	

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Religion	Hindu	29(7.7%)	256(67.9%)	35(9.3%)	57(15.1%)	$\chi^2 - 5.4$ ; p value < 0.25; Non-Significant Association
	Muslim	0(0%)	1(50%)	0(0%)	1(50.0%)	
	Others	1(25%)	2(50%)	1(25%)	0(0%)	
Caste	Backward Class	11(8.3%)	99(74.4%)	10(7.5%)	13(9.8%)	$\chi^2 - 6.1$ ; p value < 0.11; Non-Significant Association
	Others	19(7.6%)	160(64%)	26(10.4%)	45(18%)	
Marital Status	Married	20(6.6%)	204(66.9%)	32(10.5%)	49(16%)	$\chi^2 - 6.4$ ; p-value < 0.4; Non-Significant Association
	Unmarried	9(13%)	49(71%)	3(4.4%)	8(11.5%)	
	Divorced & others	1(11.1%)	6(66.7%)	1(11.1%)	1(11.1%)	
Per capita Income per month	Class I	8(33.3%)	16(66.7%)	0(0%)	0(0%)	$\chi^2 - 48.7$ ; p value < 0.01; Significant Association
	Class II	9(21.4%)	25(59.5%)	5(11.9%)	3(7.1%)	
	Class III	6(5.6%)	66(61.7%)	13(12.2%)	22(20.5%)	
	Class IV	7(3.3%)	152(72.4%)	18(8.6%)	33(15.7%)	

**TABLE 7: Awareness about the purpose of condom use (n-724)**

Category		Correct	Partially correct	Wrong	Don't know	Chi-square test
Sex	Male	49(24.3%)	78(18.2%)	15(12.4%)	60(44.5%)	$\chi^2 - 41.6$ ; p value < 0.01; Significant Association
	Female	68(13%)	123(31.2%)	54(8.4%)	277(47.3%)	
Age Groups	< 20 years	21(8.1%)	55(21.3%)	40(15.5%)	142(55.1%)	$\chi^2 - 55.8$ ; p-value < 0.01; Significant Association
	20 – 29 years	27(17.7%)	39(25.5%)	14(9.1%)	73(47.7%)	
	30 – 39 years	46(22.6%)	71(34.8%)	9(4.4%)	78(38.2%)	
	40 -49 years	18(24.7%)	26(35.6%)	2(2.7%)	27(37%)	
	50 & above	5(13.9%)	10(27.8%)	4(11.1%)	17(47.2%)	
Education	Illiterate	1(2.4%)	5(12.2%)	10(24.4%)	25(61%)	$\chi^2 - 76.6$ ; p value < 0.01; Significant Association
	Primary	11(9.8%)	21(18.8%)	22(19.6%)	58(51.8%)	
	Secondary	73(15.6%)	136(29.1%)	30(6.4%)	229(48.9%)	
	Higher Secondary	28(29.8%)	35(37.2%)	6(6.4%)	25(26.6%)	
	Graduate & above	4(44.4%)	4(44.4%)	1(11.1%)	0(0%)	
Occupation	Self employed	9 (31%)	13(44.8%)	1(3.5%)	6(20.7%)	$\chi^2 - 36.1$ ; p-value < 0.01; Significant Association
	Public-private sector employee	13(22%)	21(35.6%)	4(6.8%)	21(35.6%)	
	Unskilled laborer	69(18.5%)	109(29.1%)	30(8)	166(44.4%)	
	Unemployed	26(9.9%)	58(22.1%)	34(13%)	144(55%)	
Religion	Hindu	115(16.2%)	198(27.9%)	67(9.4%)	330(46.5%)	$\chi^2 - 1$ ; p value < 0.9; Non-Significant Association
	Muslim	1(14.3%)	1(14.3%)	1(14.3%)	4(57.1%)	
	Others	1(14.3%)	2(28.6%)	1(14.3%)	3(42.8%)	
Caste	Backward Class	39(13.3%)	69(23.5%)	33(11.2%)	153(52%)	$\chi^2 - 10.1$ ; p value < 0.01; Significant Association
	Others	78(18.1%)	132(30.7%)	36(8.4%)	184(42.8%)	
Marital Status	Married	81(19.9%)	130(31.9%)	24(5.9%)	173(42.4%)	$\chi^2 - 32$ ; p-value < 0.01; Significant Association
	Unmarried	33(11.1%)	66(22.2%)	44(14.8%)	155(52%)	
	Divorced &	3(16.7%)	5(27.8%)	1(5.6%)	9(50%)	

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Per capita Income per month	others					$\chi^2 - 35.8$ ; p value < 0.01; Significant Association
	Class I	12(41.4%)	12(41.4%)	2(6.9%)	3(10.3%)	
	Class II	14(25%)	19(33.9%)	4(7.2%)	19(33.9%)	
	Class III	33(18.2%)	53(29.3%)	14(7.7%)	81(44.8%)	
	Class IV	58(12.7%)	117(25.6%)	49(10.7%)	234(51.1%)	

**TABLE 8: Composite score of knowledge(n -724)**

Questions	Max marks	Score	Average score	%
Heard of STI?	1	327	0.45	45.17
Are STIs curable?	1	87	0.12	12.02
Have you heard of HIV/AIDS?	1	626	0.86	86.46
Is there any difference between HIV & AIDS?	1	178	0.25	24.59
Is there any relation between HIV/AIDS & STIs?	1	198	0.27	27.35
Is HIV/AIDS completely curable?	1	414	0.57	57.18
Availability of HIV testing facilities?	1	195	0.27	26.93
Availability of HIV treatment facilities?	1	222	0.31	30.66
Desire more information on HIV?	1	637	0.88	87.98
Have you heard of condom?	1	397	0.55	54.83
Do you discuss health and sex issues?	1	404	0.56	55.80
Necessity of HIV testing in pregnant women?	1	325	0.45	44.89
Undergone HIV testing?	1	95	0.13	13.12
Meaning of STIs?	2	110	0.15	15.19
Ways of transmission of STIs?	2	166	0.23	22.93
Preventive measures for STIs?	2	160	0.22	22.10
Symptoms of HIV?	2	208	0.29	28.73
Symptoms of AIDS?	2	248	0.34	34.25
Transmission of HIV/AIDS?	2	443	0.61	61.19
Preventive measures for HIV/AIDS?	2	319	0.44	44.06
Purpose of condom use?	2	435	0.60	60.08
Total	29	6194	0.30	29.50

**TABLE 9: Composite score of attitude (n-724)**

Statements	Score	Average score	Percent
STIs can be cured by having sex relation with young unmarried woman?	542	0.75	74.86
It is mandatory to subjects both the partners for HIV testing before marriage?	28	0.04	3.87
It is dangerous to keep HIV infected individual at home?	304	0.42	41.99
Complete elimination of prostitution is necessary to prevent HIV transmission?	81	0.11	11.19
HIV infected females should never get conceived?	269	0.37	37.15
Those who are confirmed HIV negative after testing, have no risk of becoming HIV infected any time in the life?	384	0.53	53.04
It is possible to identify HIV infected individual easily?	391	0.54	54.01

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STIs, & HIV/AIDS are transmitted by only females ?	427	0.59	58.98
It is necessary to test each individual for HIV infection?	31	0.04	4.28
It is dangerous to provide health care to HIV infected individual?	306	0.42	42.27
Total	2763	0.38	38.16

**TABLE 10: Association of average score of attitude and knowledge with awareness of HIV/AIDS (n-724)**

Category		Knowledge		Chi-square test	Attitude		Chi-square test
		Poor(0-13)	Good(14-29)		Poor(0-5)	Good(6-10)	
Sex	Male	155	47	P < 0.01; Significant	146	56	P – 0.049; significant
	Female	463	59		413	109	
Age group in years	< 20	232	26	P-0.09; Non-significant	220	38	P < 0.01; significant
	20 – 29	130	23		118	35	
	30 – 39	168	36		146	58	
	40 -49	58	15		47	26	
	50 & above	30	6		28	8	
Education	Illiterate	41	0	P < 0.01; Significant	37	4	P < 0.01; significant
	Primary	109	3		94	18	
	Secondary	413	55		371	97	
	Higher Secondary	55	39		57	37	
	Graduate & above	0	9		0	9	
Occupation	Self employed	12	17	P < 0.01; significant	16	13	P < 0.01; significant
	Public-private sector employee	43	16		40	19	
	Unskilled laborer	318	56		295	79	
	Unemployed	245	17		208	54	
Religion	Hindu	607	103	P – 1.1; Non-significant	549	161	P-0.8; non-significant
	Muslim	6	1		5	2	
	Others	5	2		5	2	
Caste	Backward Class	255	39	P – 0.4; Non-significant	235	59	p-2.1; non-significant
	Others	363	67		324	106	
Marital Status	Married	338	70	p- 0.07; Non-significant	304	104	p-0.14; Non-significant
	Unmarried	265	33		241	57	
	Divorced & others	15	3		14	4	
Per capita income per month	Class I	14	15	P < 0.01; Significant	18	11	P -0.23; non-significant
	Class II	39	17		42	14	
	Class III	159	22		140	41	
	Class IV	406	52		359	99	

**IV. Discussion**

A community based descriptive epidemiological study was carried out in 40 villages adopted by PRIDE-India NGO in Mahad Taluka of Raigad District. The study period was January 2009 to April 2009.

Total 724 individuals was interviewed with 202 (27.9%) males and 522 (72.1%) females. Most of them 615 (84.94%) were in the age group of 15 - 40 years, Hindu by religion (710, 98.06%), backward class (294,

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40.60%), married (408, 56.35%), educated up to secondary school level (480, 66.29%), occupied as unskilled labourer (374/479, 78.8%) and socio-economic class IV (458, 63.26%). Also, 547 (75.55%) of participants have also reported various forms of addictions among their family members mainly tobacco consumption (504, 92.13%) in various forms. Only 99 (49.0%) males and 83 (15.90%) females mentioned that they were the decision makers on their health problems, while, only 87 (43.07%) males and 288 (55.17%) females said that they discuss health and sexual issues with family members.

In the present study, 626 (86.46%) participants had heard of HIV / AIDS. In National Behavioural Surveillance Survey, 2006 carried out by NACO, it was observed that percentage of respondents who had ever heard of HIV / AIDS in rural Maharashtra was 94.5%.<sup>(6)</sup> The results from BBC World Service Trust's HIV knowledge attitudes and practices in India, baseline survey done in 2005 with help of World Bank showed that 82% of the rural Indian population had heard of AIDS and 64% had heard of HIV, while 63% had heard of both HIV and AIDS.<sup>(7)</sup>

In this study level of awareness was significantly lower in females, individuals aged less than 20 years, illiterate, unemplyed backward caste and unmarried population. Level of awareness about HIV / AIDS in males was 96.04% and in females 82.76%. Low level of awareness among females may be attributed to the fact that rural women have a barrier of shyness between them and the information providers and also they have less access to information and media in a male dominated society. The social values and customs also restrain the people from knowing and discussing about HIV/AIDS since it is mainly Sexually Transmitted Disease (STD).

In National Family Health Survey 3, 2005-06, coordinated by the International Institute for Population Sciences (IIPS) under the aegis of the Government of India, it was observed that 92.5% males and 81.6% females in Maharashtra had heard of HIV / AIDS.<sup>(8)</sup>

In National Behavioural Surveillance Survey, 2006 carried out by NACO, it was observed that percentage of respondents who had ever heard of HIV / AIDS in rural Maharashtra was 96.5% in males and 92.4% in females.<sup>(6)</sup> In a study done by T. Subramanian, et al. in Tamil Nadu, it was seen that only 72% rural women had heard of AIDS.<sup>(9)</sup> Similarly in a study done by D. Balk, S. Lahiri in 13 states of India, low rates of knowledge and awareness were reported more among rural women.<sup>(10)</sup> In another study done by Tillich M. and Nilsson A. amongst pregnant women of rural Maharashtra, in 2002, it was observed that only 81% rural women had ever heard of HIV / AIDS.<sup>(11)</sup>

In the present study Level of awareness was significantly lower in individuals younger than 20 years (200, 77.52%) as compared to those older than 20 years (426, 91.42%). This may be attributed to the fact that adolescent boys and girls are less open with the adults to talk about the issue of HIV / AIDS, and this might be the reason behind some of them avoiding to answer the questions about HIV / AIDS. Similarly, in another study done by D. Balk, S. Lahiri in 13 states of India it was seen that AIDS knowledge was more among those older than 20 years.<sup>(12)</sup> In National Behavioural Surveillance Survey, 2006 carried out by NACO, level of awareness of HIV / AIDS in age group of 15 to 24 years was found to be 88.5% and of 25 to 39 years was 84.7%.<sup>(6)</sup>

In the present study level of awareness was significantly lower in illiterate (21, 51.22%) as compared to literates (683, 88.58%). As the education level increases the awareness about HIV / AIDS increases, which is because of the fact that illiterate people are less exposed to informative material than educated and the level of understanding of the information increases with education. Similarly in a study conducted on AIDS awareness and knowledge of Indian women, done by D. Balk, S. Lahiri in 13 states of India, low rates of knowledge and awareness were reported more among rural and illiterate women. Multivariate analysis found rural, poorly educated and poor women to be the least likely to be AIDS-aware and, if aware, to be having the poorest understanding of AIDS.<sup>(10)</sup> In National Behavioural Surveillance Survey, 2006 carried out by NACO, it was seen that level of awareness about HIV / AIDS was lower in illiterates (45.8%) as compared to primary (77.7%), middle (91.6%), secondary and higher secondary (98.2%) and graduate and above (99.8%).<sup>(6)</sup>

In the present study level of awareness was significantly lower in unmarried (238, 79.87%) as compared to married (373, 91.42%) and divorced (15, 83.33%). This may be attributed to the fact that most of the individuals in this study who are unmarried are adolescents and young adults, who are less open with adults to talk about HIV / AIDS and thus may have avoided answering to the questions about HIV / AIDS. In National Behavioural Surveillance Survey, 2006 carried out by NACO, it was seen that the level of awareness of HIV / AIDS in currently married 81.4%, unmarried 92.3% and formerly married 71.4%.<sup>(6)</sup>

In this study, mass media i.e. television, radio, etc was major source of information of HIV / AIDS, as it contributed for 316 (74.18%) of participants, while, peer group i.e. friends and colleagues contributed for 198 (46.48%) of participants and hospitals and doctors contributed for only 51 (11.97%) of participants. In a study done by D. Balk, S. Lahiri in 13 states of India, it was seen that AIDS knowledge was more among those who had greater exposure to mass media. Television was the greatest source of AIDS information.<sup>(12)</sup> Similarly in another study done by T. Subramanian et al.in Tamil Nadu, television, radio and friends were reported as the main sources of information on AIDS.<sup>(9)</sup> In National Behavioural Surveillance Survey, 2006 carried out by NACO, it was seen that mass media i.e. television, radio, etc was major source of information (86.6%) about

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HIV / AIDS in Maharashtra.<sup>(6)</sup> In another study done by V. Bhatia et al. in Chandigarh, it was seen that major source of information about AIDS was mass media followed by friends.<sup>(13)</sup>

In the present study 285 (39.36%) individuals were aware about HIV treatment, 195 (26.93%) individuals were aware about availability of HIV testing facilities and 172 (23.76%) individuals were aware about availability of treatment facilities. This study indicated that participants were willing to gain more knowledge, as 637 (87.98%) said that they desire more information about HIV / AIDS. Most of the participants were not aware about sexually transmitted infections other than HIV / AIDS (327, 45.16%).

In the present study most of the individuals were not aware of difference between HIV and AIDS, as only 178 (24.59%) knew correct difference between HIV and AIDS. There was lot of confusion between understanding of terms HIV and AIDS. Participants were also not able to distinguish between symptoms of HIV and AIDS. This can be attributed to low levels of access and exposure to information on HIV / AIDS as well as shyness to discuss this issue with anyone, as majority of the participants of the present study are females. In a study done by Tillich M. and Nilsson A. amongst pregnant women of rural Maharashtra, in 2002, it was observed that rural women were not able to distinguish between HIV and AIDS.<sup>(11)</sup> Similar were the findings in another study done by Andersson C et al. among teenagers in Solapur district of Maharashtra, in 2004, where only 25% of the students in the village were aware of difference between HIV and AIDS.<sup>(14)</sup>

In the present study most of the individuals were not aware of relation between HIV / AIDS and STIs, as only 198 (27.35%) knew correct relation. This can be attributed to low levels of access and exposure to information on HIV / AIDS as well as low level of awareness about different STIs. In the present study only 327 (45.17%) had ever heard of STIs and very less individuals knew correct (3, 0.41%) and partially correct (104, 14.36%) meaning of STIs.

In the present study most of the individuals were not aware about correct symptoms of HIV/AIDS, as only 14 (1.93%) participants had correct knowledge and 220 (30.39%) had partially correct knowledge about symptoms of AIDS. This can be attributed to low levels of access and exposure to information on HIV / AIDS as well as shyness to discuss this issue with anyone, as majority of the participants of the present study are females. Twenty different symptoms were mentioned for AIDS, which included fever (198, 27.35%), weight loss (201, 27.76%), weakness (165, 22.79%), cough (129, 17.82%), diarrhoea (108, 14.92%), Tuberculosis (104, 14.36%), decreased appetite (87, 12.02%), cachexia (65, 8.98%), cancer (64, 8.84%), vomiting (51, 7.18%), Herpes rash (49, 6.77%), malaise (42, 5.80%), blindness (41, 5.66%), giddiness (35, 4.83%), fungal infections (32, 4.42%), per vaginal white discharge (29, 4.01%) and a few weird responses, like worms (22, 3.04%), blackening of skin (19, 2.62%), hair fall (1.38%), increased libido (8, 1.10%). Similarly in a study done by Subramanian T et al. in Tamil Nadu, it was observed that when asked symptoms of AIDS, 28% mentioned of fever and 39% about weight loss and correct responses were more from literates.<sup>(9)</sup>

In the present study most of the individuals were not aware about correct ways of transmission of HIV / AIDS, as only 60 (8.29%) participants had correct knowledge and 323 (44.61%) had partially correct knowledge about ways of transmission of HIV / AIDS. This can be attributed to low levels of access and exposure to information on HIV / AIDS as well as the social values and customs which restrain the people from knowing and discussing about HIV/AIDS.

In this study, level of awareness about transmission of HIV was significantly lower in illiterates (10, 24.39%) as compared to literates (373, 54.61%). As the education level increases the awareness about HIV / AIDS increases, which is because of the fact that illiterate people are less exposed to informative material than educated and the level of understanding of the information increases with education. In another study done by Subramanian T et al. in Tamil Nadu, it was seen that there was no significant difference in awareness about HIV transmission among the literates and illiterates ( $P > 0.05$ ). While 13.2% of the illiterates and 26.9% of the literates said 'through infected blood,' 'infected mother to child' was reported by 0.6% in total, who were all literates. Correct responses were more from literates.<sup>(9)</sup>

In the present study, HIV/AIDS transmits by sexual relations was known to only 292 (44.33%) individuals, while HIV transmits by infected blood and infected needles was known to 135 (18.65%) and 111 (15.33%) individuals respectively. Mother to child transmission of HIV was known to only 144 (19.89%) and only 103 (14.23%) say that it is necessary to HIV testing of all pregnant females. In National Behavioural Surveillance Survey, 2006 done by National AIDS Control Organization, it was observed that in rural Maharashtra, 86.8% males and 83.1% females knew that HIV can be transmitted through sexual contacts, 91.5% males and 81.1% females knew infected blood transfusion, 86.0% males and 80.5% females knew about infected needle sharing and 75.1% males and 73.6% females knew about mother to child transmission of HIV.<sup>(6)</sup> In another study done by Subramanian T et al. in Tamil Nadu, 52.5% of the women mentioned that spread of HIV was through unprotected sexual contact.<sup>(9)</sup>

The present study brought up many misconceptions of people about HIV transmission, as a few individuals even mentioned mosquito bite (29, 4.01%), kissing (27, 3.73%), sharing food (22, 3.04%) and clothes (16, 2.21%), coughing (11, 1.52%), through urine (8, 1.10%), through water (2, 0.28%), attending

funeral of person who died due to AIDS (2, 0.28%), familial or hereditary (2, 0.28%) as ways of transmission of HIV / AIDS. Though the percentages of the misconceptions were low, these issues need to be addressed as they increase the fear and stigma of HIV / AIDS in the community. Many times people taking care of HIV infected persons are also stigmatised. In many villages the HIV infected persons as well as their families are out casted. All this results in neglect of the HIV infected individuals and increase in social difference. In National Behavioural Surveillance Survey, 2006 it was observed that in rural Maharashtra, 23.4% males and 23.9% females mentioned mosquito bite as mode of transmission of HIV.<sup>(6)</sup>

In another study done by Andersson C et al. among teenagers in Solapur district of Maharashtra, in 2004, it was observed that, 36.9% of the students thought that kissing is one of the main ways that HIV is spread by. 7.1% of the female students and 2.1% of the male students in the village felt HIV is spread when eating or drinking from the same plates and cups.<sup>(14)</sup>

In the present study most of the individuals were not aware about correct measures of prevention of HIV / AIDS, as only 30 (4.14%) participants had correct knowledge and 259 (35.77%) had partially correct knowledge about measures of prevention of HIV / AIDS. This can be attributed to low levels of access and exposure to information on HIV / AIDS as well as the social values and customs which restrain the people from knowing and discussing about HIV/AIDS. This study indicated that, level of awareness (correct plus partially correct responses) was significantly lower in individuals aged less than 20 years (57, 22.09%), illiterate (6, 14.63%), unemployed (91, 34.73%) and socio-economic class IV (159, 34.72%). HIV/AIDS can be prevented by using condom every time was known to only 233 (32.18%) individuals, while abstinence from sex was mentioned by 154 (21.27%), while using new needles / syringes was known to only 122 (16.85%), using HIV tested blood was known to 98 (13.54%) individuals and only 103 (14.23%) say that it is necessary to do HIV testing of all pregnant females. In another study done by Subramanian T et al. in Tamil Nadu, in rural India it was observed that, 45% mentioned of avoiding unprotected sexual contacts; nearly one-fifth of the women reported of the use of disposable/ sterilized needles and syringes. In this aspect, correct response was more (24.2%) from literates. In all, use of condom was mentioned by only 2.5% of the women.<sup>(9)</sup>

Many misconceptions of people about HIV prevention were seen during this study, as few individuals even mentioned mosquito nets (22, 3.04%), avoiding people who are HIV positive (38, 5.25%), not sharing food (19, 2.62%) and clothes (11, 1.52%), do not attend funeral of person who died due to AIDS (2, 0.28%) and use of clean drinking water (2, 0.28%) as ways of prevention of HIV / AIDS.

The present study reveal that even those people who knew about ways of transmission of HIV, were less aware about preventive measures for HIV, as 30 (7.83%) had correct knowledge and 259 (67.62%) had partially correct knowledge about preventive measures for HIV. This may be partly due to lack of ability or motivation among individuals to improve their awareness status from 'know about transmission' to 'know about prevention' and also due to lack of facilities and resources to improve their knowledge and skills.

Only 397 (54.83%) were aware about condoms in this study. This may be attributed to low level of exposure to information about condoms and shyness to talk about this issue, as majority of the participants were females. Many of the participants avoided answering questions about condoms. In this study level of awareness about condoms was significantly lower in females (219, 41.95%) as compared to males 178 (88.12%). This may be due to shyness of rural women to talk openly about issue of condoms as well as lack of facilities and resources to gain knowledge about the same in the rural community. It was also observed that, mass media i.e. television and radio (278, 70.02%) and peer group i.e. friends and colleagues (183, 46.10%) were the major sources of information about condom.

In the present study it was observed that many people are not aware about purpose of condom use correctly. 117 (16.16%) had correct knowledge and 201 (27.76%) had partially correct knowledge about purpose of condom use. This may be due to lack of exposure to information about condoms as well as shyness amongst participants. In a study done by Sunder Lal et al. on Evaluation of Intensive Information, Education and Communication Campaign on HIV/AIDS in rural areas, it was found that effective knowledge of safe sex by use of condom was endorsed by only one third of individuals only.<sup>(15)</sup> In National Behavioural Surveillance Survey, 2006 it was found that 69.7% of males and 63.3% of females in rural Maharashtra knew about purpose of condom use for HIV / AIDS prevention.<sup>(6)</sup> In national Family Health Survey 3, it was found that 69.4% males and 31.4% females in rural Maharashtra knew that consistent condom use can reduce the chances of getting HIV/AIDS.<sup>(16)</sup> In the present study only 233 (32.18%) individuals mentioned that correct and consistent use of condom can prevent HIV / AIDS, while 123 (16.99%) mentioned prevention of other STIs also. Condom as a contraceptive device was known to 286 (39.50%) individuals. Some (109, 15.06%) of the participants mentioned use of condom for safe sex. A few (58, 8.01%) individuals also mentioned use of condom for 'cleanliness of genital organs' and a few (49, 6.77%) even mentioned use of condom 'to keep extramarital and premarital affairs'.

Maximum obtainable score from knowledge questionnaire was 29, which none of the participants achieved. Maximum score achieved by participant was 24 and minimum score was 2 and average score per

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person was 8.56. Composite score for knowledge was only 29.50%. This means, overall knowledge of all the individuals about HIV / AIDS is very poor.

In the present study it was observed that majority 618 (85.36%) individuals had poor score on knowledge scale and only 106 (14.64%) could score more than 13 on knowledge composite score scale.

Maximum obtainable score from attitude questionnaire was 10, which none of the participants achieved. Maximum score achieved by participant was 8 and minimum score was 1 and average score per person was 3.81. Average composite score for attitude was 38.16%. 165 (22.8%) individuals had right attitude (Composite score 6 to 10) towards HIV/AIDS. Attitude of the participants towards HIV / AIDS was poor which may be attributed to lack of awareness about the disease.

Composite score for attitude was significantly lower in females, individuals aged less than 20 years, illiterate and unemployed individuals as only 109 (20.88%) females, 38 (14.73%) individuals aged less than 20, 4 (9.76%) illiterate and 54 (20.61%) unemployed individuals could score more than 5 on attitude scale. This reflects poor attitude and lack of acceptability of individuals towards HIV / AIDS. This can be attributed to various factors such as low levels of awareness, lack of access to information, low literacy and various misconceptions about HIV / AIDS.

### **V. Conclusion**

It was evident from the study that there was lack of awareness about HIV / AIDS, different STIs as well as condoms, especially among females, adolescents, illiterates, unemployed and poor; indicating need for awareness programmes in these groups.

Thus the knowledge of rural people about HIV / AIDS, its transmission and prevention should be improved with help of vigorous campaigning, training workshops, HIV / AIDS education sessions with special focus on migrant workers and their families.

HIV / AIDS awareness campaigns should be increased at the time of religious festivals and fairs, as migrant workers tend to visit their native place during this period. Proper counselling and testing facilities should be made available to those who are willing for HIV testing.

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