Introduction: In the HIV era, homeless adolescents have attracted the attention of public health advocates because of their high rate of sexual risk-taking behavior. This problem is more prominent in India, with the highest number of homeless adolescents in the world. Reliable data on risk behavior of these adolescents are scarce. Most of the risk behavior surveys on adolescents collect data from adolescents who are living in a household or attending school/college. However, representative data on homeless adolescents are more difficult to obtain because their lifestyle excludes them from sampling frames usually used to obtain probability samples (Anderson, 1994). A random sample of street youth in Russia shows that every third street youth (37.4%) were infected by HIV (Kissin, et.al., 2007). Studies on homeless adolescents conducted in different countries have revealed that homeless adolescents often organize into groups as they negotiate survival, perform odd jobs, indulge in usage of narcotics and alcohol, engage in unprotected sex, and other risky behavior such as self mutilation etc. (Anderson, 1994; Goodwin et.al, 2004; Olley, 2006; Towe et.al., 2009; Kissin, et.al., 2007; Mehta, 2002; Pagare et.al 2004; Tyler, et.al., 2003). Such a lifestyle puts them at risk of many adverse health outcomes, including HIV/AIDS (Aral, et.al, 2005; Tyler, et.al., 2000; Cates, 1991; Sonenstein, 1989). There is limited empirical information available about the nature of this complex and "hidden" population or the distribution of risk behaviors within it. Hence, there is lack of empirical basis for the development of critical prevention strategies and policies. Therefore in this article we aim to examine the prevalence risky sexual behavior; self reported symptoms of RTI/STI and correlates of condom use in this population. It also explores the efficacy of different forms of communication programs for educating homeless adolescents on HIV/AIDS. The data may be used in planning interventions to provide more effective support services and reduce risky behavior among homeless adolescents.

Methodology

There is no precise estimate of homeless adolescents in Kolkata. Most of the available information about this population is derived from quasi-institutional samples recruited in homeless shelters, foster care and drug treatment programs (Yates et al, 1988; Rotheram-Borus and Koopman, 1991; Clatts and Davis, 1999). The inferences that can be drawn from such data are limited. Many of the homeless adolescents do not utilize such shelter and treatment services and, therefore it does not ensure representativeness. Moreover adolescents in all of these institutional settings often conceal their involvement in high risk behaviors because of fear of stigma and of being denied services. Only a few studies on this issue have collected random data for this target population. We did not find any literature in Indian context where sexual behavior of homeless adolescents has been studied taking a random sample of the target population. The present study was conducted in Kolkata Metropolitan Development Authority (KMDA) area (India), during January 2007 to April 2007. To bring the representativeness in data a total number of 408 homeless adolescents (311 males and 97 females) aged between 13-19 years were interviewed from 43 Time Location Clusters (TLCs), using quantitative and qualitative techniques. TLCs are noting but natural settings in which homeless adolescent are known to

congregate in the course of their participation in the street economy. Eligibility criteria included, adolescents aged between 13 -19 years found at a street venue and one of the following:

1. Living alone / with friends in street, or in shelters of street children/adolescents run by NGOs.
2. A member of street families (adolescent who are living on street with one or both of their parents).

Exclusion criteria entailed previous participation in the same study, unable to get consent from the caregivers (for minors) and assent from the respondent. The response rate was 96%. Ethical clearance for this study was taken from the appropriate authority. The interviewers read the consent statement to the adolescent and explained the study procedures. Respondents were informed that they could refuse their participation, refuse single questions or stop participating in the interview at any time. Local NGOs who are working with street children / adolescents have been found to be a great help to develop the sampling frame and to reach out the target group. Relevant information on socio-demographic characteristics, substance use, sexual behavior, symptoms of RTI/STI, knowledge of different route of transmission of HIV and ways of prevention, sources of knowledge on HIV/AIDS etc. was collected in a pre-designed and pre tested interview schedule. Data analysis was performed using SPSS 15 version. Descriptive statistics were generated by a frequency analysis. Bivariate statistical significance was determined using chi-square test of significance. We conducted a multivariate analysis of condom use among respondents by using multiple logistic regression analysis with stepwise methods to reduce the models; only variables significant at the $p<.05$ level are included in the final models.

Measures

Few composite indices have been developed in this analysis to bring the clarity in interpretation. These indices are as follows;

Substance Use Scale (SUS) was measured using 6 items in which adolescents were asked about frequency of use of different substances by the specified route of administration like; chewing of tobacco, smoking of tobacco, drinking of alcoholic beverage, smoking of marijuana, sniffing/inhaling of glue or paint thinner and oral consumption of medicinal drugs like sleeping pills etc. No injected drug users have been found in this survey. The variables were given a scores ranging between '0' to '6' according to the intensity in a seven-point scale and then are summed up to get the total value of the index. Adolescents obtaining '0' have been considered as non user of substances, while a higher score indicates higher user of substance. After that, the composite index has been divided into three sub-groups according to the intensity of substance use as, 'low', 'medium' and 'high'. Cronbach's alpha for substance Use Scale was 0.70 in this sample.

The Peer-Pressure Index (PPI) on adolescents behavior has been constructed by considering responses to five questions viz. 'do your friends pressurize you for doing any activity with them?'; 'do friends group pressurize you for doing such activities which you don't like?'; 'do your friends laugh at you if you deny doing something with them?'; 'how frequently your friends insist you to take alcohol/ Ganja/Cannabis with them?' and 'how frequently your friends insist you to watch blue film with them?' The responses were categorized as: Never/Sometimes/Always. Based on responses each variable were given scores ranging between '0' to '2' according to the intensity in a three-point scale and then are summed up to get the total

value of the index. Cronbach's alpha coefficient for these items was 0.69. The variable PPI was obtained by summing of all 5 responses, which yielded a lowest possible score of '0' and a highest possible score of '10'. After obtaining the composite score it has been divided into three equal quarters and named as, 'less risk', 'moderate risk' and 'high risk'.

The overall *knowledge of HIV/AIDS* among adolescents is measured based on 11 questions on knowledge about ways of transmission and methods of prevention of HIV/AIDS. The responses were Yes/No/Don't know. Each positive answer was assigned '2', each negative answer was assigned '0' whereas for each response of 'Don't say' were assigned '1'. So, overall knowledge on HIV/AIDS was obtained by summing of all responses. A higher score indicates higher accuracy of knowledge. The overall score was divided into three equal quarters to obtain three categories namely poor, moderate and good knowledge. Cronbach's alpha coefficient for these items was 0.67.

Results

Nearly three-quarters (76 percent) of the sample were male and one-quarter was female (24 percent). Girls in this study were younger than the boys: About three-quarters (73.2%) of the girls and little more than half (52%) of the boys were aged between 13-15 years. The median age for boys and girls were 15 and 14 years respectively with an overall median of 15 years. Educational attainment among adolescents was very poor, only a quarter completed grade 4-6. On an average, the boys had been living in the streets longer than the girls; 33% of boys and 21% of girls had been living in the streets (in the widest sense of the term, including unoccupied dwellings, footpath, railway platform, under flyover, wasteland, etc.) for more than four years prior to the survey. Majority of the respondents (85%) were living in street with their parents, friends or alone. Only 15 percent of the respondents were living in NGO run night shelters. In the present survey it is seen that homeless adolescents were engaged in as many as 24 different occupations within the street economy. Median income of the sample population was Rs. 25 per day and this was same both for boys and girls. Majority of the adolescents (40%) were in the higher peer risk category. Boys had higher level of accuracy of knowledge about HIV than girls. As seen in table 1, higher proportion of boy (42%) was in the 'high level of knowledge' category than their female counterpart (12%).

The reported frequency of risk factors for HIV and other STDs was high. As Table 2 shows, nearly half of the boys and two-fifth of the girls had sexual intercourse. The mean age of heterosexual intercourse for boys and girls were 15 and 13.2 years respectively. Boys, who reported experiencing homosexual intercourse, have become victims of anal sex (sodomy). Similarly, among girls who reported experiencing heterosexual intercourse, 85% of them were raped. In most of the cases the perpetrators of sexual abuse (both for boys and girls) were the persons known by the victims.

Nearly half of the adolescent interviewed reported to suffer from any symptoms of RTI/STI during last three months preceding the survey. Table 3 shows, among different symptoms, 'scrotal swelling' and 'burning sensation during urination' was found to be the most common symptom among boys (20% both), followed by, 'involuntary passing of semen' (17%) and 'genital ulcer' (11%). The most commonly reported symptom by girls was 'vaginal discharge' (36%). It was followed by 'involuntary urination while sneezing or others' (14%), 'lower abdominal pain' (13%) and 'genital ulcer' (7%).

All homeless adolescents were asked whether they had ever heard of HIV/AIDS. If they had heard about it, they were further questioned about different modes of transmission and methods of prevention of HIV. Eighty-two percent of boys and 92% of girls reported to heard about HIV/AIDS. Table 4 shows that among adolescents who reported to have heard about HIV/AIDS, almost cent percent (96% boys and 100% girls) of them said 'unsafe hetero sexual intercourse' as one of the principle mode of transmission of HIV/AIDS followed by 'unsafe needle exchange' (79% and 49%) and 'sex with multiple partners' (68% and 55%). Knowledge of HIV/AIDS transmission from 'HIV infected mother to child' was considerablely low particularly among adolescent boys (9%) than their female counterpart (32%). On the other hand lesser proportion of girls (37%) reported to know of unprotected homosexual intercourse as one of the modes of transmission of HIV/AIDS than their male counterparts (62%). When asked about the methods of prevention, a higher proportion of adolescent said 'using condoms correctly during each sexual intercourse' (97%), followed by, 'using sterilized syringe and needle before injecting' (68%), 'sex with only one partner' (66%) and 'checking blood prior to transfusion' (44%). Only 16% of adolescents reported that the pregnancy should be avoided if the couple is infected by HIV/AIDS.

Although most of the respondents (96% boys and 100% girls) knew that use of a condom during each sexual intercourse can protect a person from the transmission of HIV but, only half of boys and two-fifth of girls reported using a condom at the last time they had sex. This was because there was a high rate of misconception about the modes of transmission and methods of prevention of HIV. As one of the boys who knew that use of a condom during each sexual intercourse can protect a person from the transmission of HIV have told,

> *"If you don't like to use a condom while having sex, then soon after having sex you should wash your penis with Dettol (antiseptic solution). Dettol will save you from any infection and you wouldn't have AIDS".*

The factors related to condom use differ for boys and girls. Bivariate distribution given in table 5 reveals that among boys who had higher level of accuracy of knowledge on HIV/AIDS and comparatively more educated were significantly more likely than other boys to report using condoms in their last sex. A negative relationship has been found between substance use and safer sex. Among boys who ranked 'low' in the substance use scale a higher proportion of them (57%) reported using a condom the last time they had had sex, compared to 47% of boys who ranked 'high' in the scale. Young boys (aged 13-15 years) were less likely (40%) to use condoms than boys in the age group 16-19 years (52%). However, among girls the picture was just opposite. The younger girls (aged 13-15) were more likely (43%) to use condoms than their older counter part (33%).

In qualitative study homeless adolescents cited many reasons for not using condom while having sex. A few of the boys said that now they always use them, but when they were younger, they were not knowledgeable or educated enough to use them. Another reason given for not using condoms included the fact that a girl could be allergic to them. Some other stated that they never use condoms because they have found skin-to-skin contact more enjoyable than the protected intercourse.

Out of 10 girls who reported to having sex during last 30 days prior to the survey only 4 of them had used a condom. Because of less sample size girls were excluded from the

multivariate analysis and carried out for boys only. Eighty four boys reported to having sex during last 30 days prior to the survey and half of them used condom. Results of the multiple logistic regression analysis (step wise), presented in Table 6 indicates which variables remained significantly related to condom use when all other factors were controlled. All variables listed are significant at the $p<.05$ level. It is seen that among the covariates, accuracy of knowledge about the transmission and prevention of HIV/AIDS and the educational attainment led to an increased odds of using condoms at last sex. For example boys who had moderate and high level of knowledge on HIV/AIDS they were 3.75 and 4.56 times more likely to use condom than who had poor knowledge. Similarly, even a little improvement in educational status among homeless boys were associated with greater condom use odds ratios. It is obvious from table 6 that adolescent boys who had studied up to 'grade 2-3' and 'grade 4 or more' were 3.3 and 6.7 times more likely to use condom than who were illiterate or studies up to grade one.

It is very important to know different sources from where homeless adolescents have received knowledge on HIV/AIDS. Adolescents who have heard about HIV/AIDS were further asked about the sources of information on HIV/AIDS. Table 7 presents sex wise distribution of adolescents by sources of knowledge on HIV/AIDS. Homeless adolescents named multiple sources from where they have gathered knowledge on HIV/AIDS. It is evident from the same table that broadcasting media like T.V. and Radio were the highest (50% and 52%) source of acquiring knowledge among adolescents. Forty five percent of adolescents have reported awareness campaigns by NGOs as their source of knowledge on HIV/AIDS. Another large chunk (48%) of adolescents has reported that they have gathered knowledge on HIV/AIDS from their friends. Comparatively lesser proportion of adolescents has reported print media like poster/banner/bill boards as a source of knowledge on HIV/AIDS (33%). The contribution of leaflets and books were the least, only 10% of adolescents have viewed them as a source of knowledge.

As from the logistic regression it is found that accuracy of knowledge about transmission and prevention of HIV/AIDS is a significant determinant of safer sex, hence, from the program point of view it is very essential to know the efficacy of different communication approaches in dispersing correct knowledge of transmission and prevention of HIV/AIDS among this high risk population. Therefore, an attempt was made to understand the relationship between the source of knowledge and the accuracy of knowledge about HIV/AIDS. As the sources of knowledge were multiple, therefore, in the study it was decided to compute both adjusted and unadjusted proportions to understand the efficiency of different sources on imparting accurate knowledge about HIV/AIDS (table 8). It is seen both from unadjusted and adjusted proportion that adolescents who have reported awareness campaigns of NGOs as their source of knowledge a higher proportion of them (50% and 41%) had good knowledge about HIV/AIDS. It was followed by poster/banner (42% and 39%).

Discussion

The principal findings of this study showed that a higher proportion of adolescents (49% of the boys and 40% of the girls) interviewed in this survey had had sex. The level of sexual experience reported by the respondents in this survey is much higher than the reporting of adolescents in the household based survey. In a recent household-based survey (NFHS-3, 2005-06) among unmarried Indian adolescents (15-19 year old) only 0.4% of girls and 5.1% of boys had sexual intercourse in the past 12 months. Condom use rate among the study population was very low. In the current study nearly all adolescent reported some substance use, but use of injecting drugs

was not found in this study. Another important finding of this study is that nearly half of the adolescents reported to suffer from any symptoms of RTI/STI during last three months preceding the survey. High prevalence of self reported symptoms of RTI/STI among this study population may because of their unhygienic living condition and high risk sexual behavior, which makes them vulnerable to be infected with HIV.

Based on the high proportion of adolescent engaging in risky behaviors associated with HIV/AIDS risk, such as unprotected sex and forceful sexual intercourse; early initiation of substance use, homeless adolescents of Kolkata (India) need to be educated about ways to protect themselves from STDs and HIV/AIDS. We expect the prevalence of high-risk behaviors among homeless adolescents to be similar across large Indian cities; therefore the national government should take up immediate measure to deal with this issue. The finding from the multivariate analysis shows, that accuracy of knowledge about the transmission and prevention of HIV/AIDS and the educational attainment increases the likelihood to use condom in sexual intercourse. Another important finding which has emerged from this study is that adolescent who have reported awareness campaigns of NGOs as their source of knowledge on HIV/AIDS, a higher proportion of them (57.4 percent) had good accuracy of knowledge on HIV/AIDS. Therefore NGO intervention should be scaled up for dispersing correct knowledge of transmission and prevention of HIV/AIDS among homeless adolescents.

The National AIDS Control Organization (NACO) under the Ministry of Health and Family Welfare, Government of India, is implementing Targeted Intervention (TI) programs for different high risk groups (like Female Sex Workers, Intravenous Drug Users and Men having Sex with Men) and bridge population (like clients of sex workers, truck drivers and migrants) through local NGOs. Similar kind of TI program for homeless adolescents should be formulated and implemented by NGOs focusing on encouraging adolescents to adopt healthy behavior. Such programs should also focused on addressing the underlying reasons for which homeless adolescents engage in risky behavior. Focus should be given on interpersonal communication so that misconception regarding transmission and prevention of HIV/AIDS can be reduced.

Although this study contributes to the understanding of homeless adolescents risk behavior related to HIV/AIDS, but several limitations must be acknowledged. First, although the overall sample size was adequate (N=408), only 42 boys and 4 girls reported to use condom in the last sex. As a result, when examining categorical variables with a few levels, cell sizes became small. For the same reason girls were excluded from the multivariate analysis. Secondly, since condom use rates are based on respondents' self reports, they are subject to reporting errors. Furthermore, asking more detailed questions would help to clarify more issues that put homeless adolescents at HIV risk, but due to the setting in which the interviews were conducted, longer survey was impractical.

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Table 1: Socio-Demographic characteristics of homeless adolescents by sex (n=408)

Background characteristics	Homeless Adolescents					
	Boys		Girls		Total	
	%	n	%	n	%	n
Age category						
13-15 Years	52.1	162	73.2	71	57.1	233
16-19 Years	47.9	149	26.8	26	42.9	175
Median Age (in Years)	**15**		**14**		**15**	
Number of years living in street						
Less than two and half years	34.7	108	42.3	41	36.5	149
2½ - 4 years	32.2	100	37.1	36	33.3	136
More than 4 years	33.1	103	20.6	20	30.1	123
Place of living during night						
NGO run night shelter	16.4	51	8.2	8	14.5	59
At home/with family	33.1	103	76.3	74	43.4	177
Street	50.5	157	15.5	15	42.2	172
Peer risk						
low risk	28.0	87	52.6	51	33.8	138
moderate risk	41.8	130	35.1	34	40.2	164
high risk	30.2	94	12.4	12	26.0	106
Educational status						
Illiterate or class one	35.4	110	48.5	47	38.5	157
class 2-3	35.4	110	39.2	38	36.3	148
class 4 or more	29.3	91	12.4	12	25.2	103
Average daily income (in Rupees)						
Rs.0-15	33.8	105	26.8	26	32.1	131
Rs.16-30	32.8	102	47.4	46	36.3	148
Rs.31& above	33.4	104	25.8	25	31.6	129
Median Income (in Rupees)	**25**		**25**		**25**	
Knowledge about HIV/AIDS						
Low level of knowledge	32.3	82	37.1	33	33.5	115
Medium knowledge	26.0	66	50.6	45	32.4	111
High level of knowledge	41.7	106	12.4	11	34.1	117
Rate of substance abuse						
Low	10.0	31	72.2	70	24.8	101
Medium	55.6	173	12.4	12	45.3	185
High	34.4	107	15.5	15	29.9	122
Total	100.0	311	100.0	97	100.0	408
Grand Total	**76.2**	**311**	**23.8**	**97**	**100.0**	**408**

Percentages are taken for Column;

Table 2: Sex wise distribution of adolescents with selected behavioral characteristics

Characteristics	Homeless Adolescents					
	Boys		Girls		Total	
	%	n	%	n	%	n
Ever engaged in penetrative sex	49.2	153	40.2	39	47.1	192
Ever engaged in hetero sexual activity[#]	77.8	119	100.0	39	82.3	158
Mean Age	*15 Year*		*13.2 Year*		*14.5 Year*	
Median Age	*14 Year*		*13 Year*		*14 Year*	
Consensual	100.0	119	15.4	6	79.1	125
Non consensual	0.0	0	84.6	33	20.9	33
Ever engaged in homo sexual activity[#]	40.5	62	NA	NA	32.3	62
Mean Age	*11.9 Year*		-		*11.9 Year*	
Median Age	*12 Year*		-		*12 Year*	
Consensual	0.0	0	NA	NA	0.0	0
Non consensual	100.0	62	NA	NA	100.0	62
Risky sexual behavior						
Had sex in last 30 days prior to survey	27.2	84	10.5	10	23.3	94
Used condom at last sex	50.0	42	40.0	4	48.9	46
# out of respondent who ever engaged in penetrative sex (n=192); **€** Responses are not mutually exclusive						

Table 3: Sex wise distribution of self-reported symptoms of RTI/STI among homeless adolescents during three months preceding the survey (n=408)

Symptoms	Any symptoms of RTI/STI					
	Male		Female		Total	
	%	n	%	n	%	n
Genital Ulcer	10.9	34	7.2	7	10.0	41
Lower abdominal pain	-	-	13.4	13	3.2	13
Scrotal Swelling	19.9	62	-	-	15.2	62
Burning sensation during urination	19.6	61	0.0	0	15.0	61
Involuntary urination while sneezing or others	0.0	0	14.4	14	3.6	14
Vaginal discharge	-	-	36.1	35	8.6	35
Involuntary passing of semen	17.0	53	-	-	13.0	53
No Problems	50.5	157	45.4	44	49.3	201
Others	1.3	4	0.0	0	1.0	4
Total	100.0	311	100.0	97	100.0	408
Percentages are taken for column. Responses are not mutually exclusive						

Table 4: Sex wise distribution of homeless adolescents according to the knowledge of mode of transmission and methods of prevention of HIV/AIDS (n=343)

Mode of transmissions and methods of prevention	Homeless Adolescents					
	Boys		Girls		Total	
	%	n	%	n	%	n
Mode of transmissions						
Unprotected hetero sexual intercourse	96.1	244	100.0	89	97.1	333
Unprotected homo sexual intercourse	62.2	158	37.1	33	55.7	191
Sex with multiple partners	68.1	173	55.1	49	64.7	222
Unsafe Blood Transfusion	46.1	117	48.3	43	46.6	160
HIV mother to child	9.1	23	31.5	28	14.9	51
Unsafe Needle exchange	78.7	200	49.4	44	71.1	244
Misconceptions						
Mosquito, flea bites	15.0	38	19.1	17	16.0	55
Sharing Cloths	2.8	7	2.2	2	2.6	9
Sharing food	11.0	28	7.9	7	10.2	35
Methods of prevention						
Using condoms correctly during each sexual intercourse	96.1	244	100.0	89	97.1	333
Sex with only one partner	68.1	173	58.4	52	65.6	225
Sterilize syringe and needle	72.8	185	53.9	48	67.9	233
Checking blood prior to transfusion	43.7	111	46.1	41	44.3	152
Avoiding pregnancy when having HIV/AIDS	9.4	24	33.7	30	15.7	54
Misconceptions						
Taking medicine in advance	40.6	103	29.2	26	37.6	129
Total	**100.0**	**254**	**100.0**	**89**	**100.0**	**343**

Percentages are taken for column. Responses are not mutually exclusive.

Table 5: Distribution of adolescents who reported to use a condom in their last hetero sexual intercourse by selected background characteristics (n=94)

Background characteristics	Used condom					
	Boys		Girls		Total	
	%	n	%	n	%	n
Age category			†			
13-15 Years	40.0	6	42.9	3	40.9	9
16-19 Years	52.2	36	33.3	1	51.4	37
Number of years living in street			†			
Less than two and half years	41.7	5	50.0	1	42.9	6
$2^{1}/_{2}$ - 4 years	53.6	15	66.7	2	54.8	17
More than 4 years	50.0	22	20.0	1	46.9	23
Place of living during night	†		†		†	
NGO run night shelter	80.0	4	100.0	1	83.3	5
At home/with family	38.9	7	33.3	1	38.1	8
Street	50.8	31	33.3	2	49.3	33
Peer risk	†		†		**	
low risk	44.4	4	50.0	1	45.5	5
moderate risk	34.4	11	40.0	2	35.1	13
high risk	62.8	27	33.3	1	60.9	28
Educational status	***		†		***	
Illiterate or class one	30.3	10	16.7	1	28.2	11
class 2-3	64.3	18	100.0	2	66.7	20
class 4 or more	60.9	14	50.0	1	60.0	15
Income category (in Rs.)	†		†		†	
Rs.0-15	33.3	1	-	-	33.3	1
Rs.16-30	50.0	8	50.0	1	50.0	9
Rs.31& above	50.8	33	37.5	3	49.3	36
Knowledge about HIV/AIDS	***		†		***	
Low level of knowledge	29.4	5	100.0	1	33.3	6
Medium knowledge	35.5	11	25.0	2	33.3	13
High level of knowledge	72.2	26	100.0	1	73.0	27
Rate of Substance abuse	†		†		†	
Low	57.1	4	50.0	1	55.6	5
Medium	53.6	15	33.3	1	51.6	16
High	46.9	23	40.0	2	46.3	25
Total	50.0	42	40.0	4	48.9	46

Percentages are taken for row; Significant levels for χ^2 test *p<0.10; **p<0.05; ***p<0.01; †Not calculated because at least one cell has expected count <5 observation

Table 6: Result of logistic regression (step wise) showing Odds ratio of using a condom at last sex by background characteristics

Variables	Coefficient	S.E.	Significance	Odds ratio
Knowledge about HIV/AIDS				
Low level of knowledge®				
Medium knowledge	1.32	0.99	0.054	3.75
High level of knowledge	1.52	0.88	0.045	4.56
Educational status				
Illiterate or class one®				
class 2-3	1.20	0.57	0.036	3.33
class 4 or more	1.90	0.88	0.031	6.70
Intercept	-2.43	0.94	0.010	0.09

Table 7: Sex wise distribution of homeless adolescents according to the source of knowledge regarding HIV/AIDS (n=343)

Source of Knowledge	Homeless Adolescents					
	Male		Female		Total	
	%	n	%	n	%	n
T.V	46.1	117	61.8	55	50.1	172
Radio	51.6	131	51.7	46	51.6	177
Poster/Banner	29.1	74	43.8	39	32.9	113
Leaflet or Books	11.4	29	5.6	5	9.9	34
Awareness campaigns by NGOs	43.3	110	50.6	45	45.2	155
Friends	51.6	131	39.3	35	48.4	166
Others	2.0	5	3.4	3	2.3	8
Total	100.0	254	100.0	89	100.0	343
Note: Column total may exceed 100% due to multiple responses.						

Table 8: Adjusted and Unadjusted proportion distribution of homeless adolescents by source and level of knowledge of HIV/AIDS (n=343)

Source of Knowledge	Respondents Availed the Source	Level of Knowledge of HIV/AIDS					
		Unadjusted proportion			Adjusted proportion		
		Low	Med	High	Low	Med	High
T.V	172	22.1	38.4	39.5	4.2	60.6	35.1
Radio	177	28.8	41.8	29.4	6.5	78.1	15.4
Poster/Banner/hoarding	113	26.5	31.9	41.6	21.0	40.3	38.7
Leaflet or Books (comic)	34	61.8	11.8	26.5	14.8	48.9	36.3
Awareness campaigns by NGOs	155	12.3	37.4	50.3	1.8	57.7	40.5
Friends	166	40.4	33.1	26.5	17.6	72.2	10.2
Note: Unadjusted proportions are taken for row; Responses are not mutually exclusive. The adjusted proportion of level of knowledge of HIV/AIDS for each back ground characteristics is estimated from multinomial logit regression coefficients by keeping all other variables at their respective mean values. Adjusted proportions are controlled for all background characteristics given in table 5.							