CHAPTER 8

AWARENESS ABOUT RTI/STI, HIV/AIDS AND TOBACCO USAGE AMONG ADOLESCENTS

8.1 Introduction: RTI/STI

Reproductive Tract Infection is being increasingly recognized as a serious global health problem with impact on individual women and men, their family and community (Orji and Muoebolam 2014). Reproductive Tract Infections (RTIs) and Sexually Transmitted Infections (STIs), which have worldwide presence, affect all sections of people, mainly the young and healthy people. The most vulnerable section is adolescent girls, especially adolescent married girls. Several crucial issues affect the adolescents in India, mainly the consequence of early sexual initiation, lack of proper understanding of sexual and reproductive health and the spread of sexually transmitted diseases including HIV/AIDS. RTIs are caused by organisms normally present in the reproductive tract, or introduced from outside during sexual contact or medical procedures (WHO 2005 Integrating STI/RTI Care for Reproductive Health). WHO estimates that two-thirds of all STIs worldwide occur in young people-teenagers and those in their early twenties (Diwakar Das 2014). RTIs/STIs are among the most important causes of maternal morbidity, mortality and increased risk of HIV/AIDS (Warriner and Shah 2006).

The morbidity associated with RTIs/STIs also affects the economic productivity and quality of life of adolescent women. The International Conference on Population and Development (ICPD), Cairo 1994 and the fourth World Conference on Women, Beijing 1995, confirmed the sexual and reproductive rights of the adolescents. Adolescents' problem mainly constitutes a bulk of morbidities that are generally left unattended and uncared further adding to the burden of disease. A teenage pregnancy with complications, unsafe abortions, etc. considerably adds to it. Moreover, the complex psycho-social morbidities and high risk behaviour of adolescents have been recognized as a threat to survival, growth and development (Jain and Garg 2009).

Acquired Immunodeficiency Syndrome (AIDS) caused by HIV is posing a serious challenge to the conceptual foundations and the practice of developing planning worldwide. Nearly half of the new HIV infections are occurring in young people (SRS 2005). HIV/AIDS is retarding economic growth by destroying human capital by mainly affecting the young adults in the age group of 15-24 years, the most productive age in life. India having a large population with low literacy level leading to a low level of awareness of HIV/AIDS, the diseases is posing an alarming threat to the public health scenario. At the same time, discussing sex has been a taboo in the Indian societal set up. The age of adolescence is shrouded in myths and misconceptions about sexual health and sexuality. Unprotected sexual practices among young adults can cause serious consequences, particularly in adolescent girls through unwanted pregnancy, maternal mortality due to early pregnancy and abortions. Moreover, immature reproductive tracts of young people make them more susceptible to HIV /AIDS. With the influence of media and the breakdown of traditional family structures, and in the absence of organized institutions for imparting sex education, they tend to learn about sexual and reproductive health from unreliable sources, resulting in the perpetuation of myths regarding safe sex and reproductive health.

Keeping these views in mind, the Indian government initiated Reproductive and Child Health programme in 1997 to strengthen adolescent reproductive and sexual health needs. Over the years, provision of RTI/STI care services were also made available to prevent HIV transmission and promote sexual and reproductive health. National AIDS Control Programme (NACP) and Reproductive and Child Health (RCH) programme of the National Rural Health Mission (NRHM) were developed as a joint implementation plan to take forward the activities for RTI/STI convergence at national, state and district levels.

The Government of India has also positioned adolescent reproductive and sexual health (ARSH). In India, 45.9 percent of girls are married before the age of 18 years (NFHS-3). With relative lack of focus on a large segment of married adolescent girls residing in the urban poor localities, their needs are not legitimately met in terms of services as compared to adult women. Adolescent women are more vulnerable to reproductive problems and complications as they are young and their bodies are not fully developed

for reproductive functioning. Few community-based studies conducted in India on the gynaecological morbidity showed that there exists a high prevalence of reproductive health problem (Bang and Bang 1989; Zurayk et al. 1995; Bhatia et al. 1995). One of the important reasons for the rapid spread of HIV in India is believed to be the high levels of untreated STIs.

As RTI is a global health problem and an important concern, it poses risk for HIV transmission and youth is at target. This chapter covers the awareness about RTI/STI and symptoms associated with it among the adolescents living in slums of Delhi.

Table 8.1: Percentage of Adolescent with Awareness about RTI and STI Symptoms	
Have Suffered these Problems in last 6 months	**Percentage**
Itching over vulva	5.7
Boils ulcers warts around vulva	4.7
Excessive vaginal discharge	4.0
Lower backache	4.3
Lower abdominal pain	6.3
Frequent urination	8.3
Burning during urination	11.7
Painful intercourse	3.7
Bleeding after intercourse	1.7
Swelling lump in breasts	3.3
None of the above	80.7
Ever heard of RTI/STI	
Yes	3.0
No	97

According to the results from the survey, Table 8.1 shows the percentage of adolescents with respect to awareness about RTI/STI problems faced by adolescents residing in slums. It was found that most of the women had suffered from one of the symptoms of RTI/STI since past six months. Women were separately asked about every symptom of RTI/STI. In totality 19.3 percent of adolescents reported silently suffering from one of the symptoms of RTI/STI problem and they were unaware that if left untreated, these problems can lead to deadly diseases. Around 12 percent of adolescent women had

suffered and reported burning during urination, while 8.3 reported frequent urination problem. Nearly 6.3 and 6 percent had suffered from lower abdominal pain and itching over vulva respectively. About 4 percent adolescent respondents had painful intercourse and 3.3 percent had felt swelling or lump in breasts. Apart from these problems, bleeding after intercourse, boils /ulcers /warts around vulva, excessive vaginal discharge, lower backache were faced by adolescent girls /women aged 15 to 19 years in last six months. About 97 percent of the women/girls residing in six slums of Delhi accounted for complete ignorance and had never heard about the RTI/STI problems. Only 3 percent of adolescents had ever heard of RTI/STI problems.

8.2 Awareness about HIV/AIDS

According to WHO estimates, half of the world's HIV infection are found among young people aged 15-24 years. This is partly because a large part of world population, i.e. about one-fifth (22-23 percent) is adolescents (UNFPA 1997). Young women are sixteen times more likely to be living with HIV than young men (Sawhney and Kaul 2012). While data at slum level is very limited to account for the prevalence and knowledge among about HIV/AIDS adolescent girls, however, this chapter will throw some light on awareness, prevalence, knowledge and modes of transmission.

About 40 percent of respondents out of the total sample size of 300 reported to have heard about HIV/AIDS. Table 8.2 highlights the level of awareness among adolescents by their marital status. Awareness of HIV/AIDS is relatively more among unmarried adolescents (49 percent) than the married ones (36.4 percent). As the source of information plays an important role, multiple responses were taken into account about every possible source of information about HIV/AIDS. The most prominent source was television (83.2 percent). School teachers constitute the second most important source of information on HIV/AIDS (77 percent of unmarried adolescents). The radio, newspapers, doctors and health workers also played a significant role, but very few reported community meetings or friends/relatives as a source of information. The doctor was the source of information for 37.5 percent of married women and 10 percent for unmarried women. Married women were more aware probably due to test during pregnancy or due to use of condom, which must have been advised by doctors.

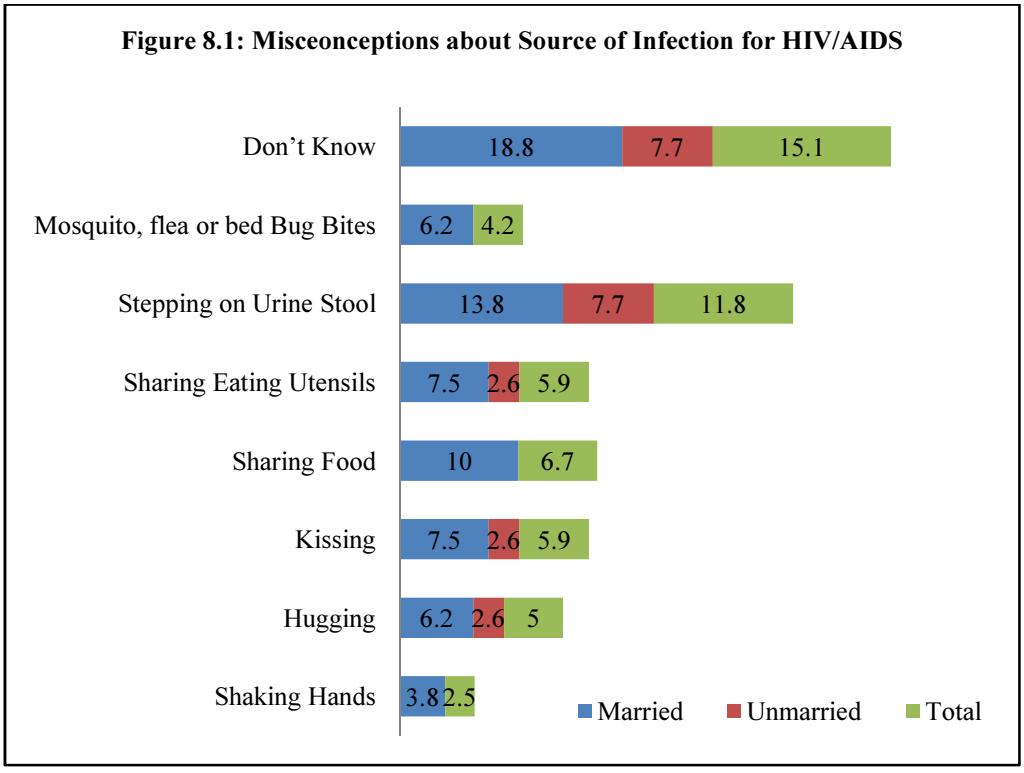
Table 8.2: HIV/AIDS Awareness among Adolescent Women by their Marital Status			
Adolescents with HIV Awareness	**Married**	**Unmarried**	**Total**
Heard about HIV/AIDS	36.4	48.8	39.7
Source of Information			
Radio	18.8	12.8	16.8
TV	80.0	89.7	83.2
Newspaper/Pamphlets/Posters	18.8	46.2	27.7
Slogans/Pamphlets/Poster wall	32.5	46.2	37.0
Doctor	37.5	10.3	28.6
Health workers	23.8	20.5	22.7
School Teacher	30.0	76.9	45.4
Community Meeting	7.5	5.1	6.7
Relatives/Friends	35.0	33.3	34.5
Others	5.0	.0	3.4
HIV is Transmitted through			
Homosexual intercourse	26.2	17.9	23.5
Heterosexual intercourse	66.2	64.1	65.5
Needles/Blades/Skin puncture	66.2	69.2	67.2
Mother to child	62.5	66.7	63.9
Transfusion of infected blood	63.8	66.7	64.7
Others	15.0	7.7	12.6
Do not know	12.5	12.8	12.6
HIV Spreads through			
Shaking hands	3.8	-	2.5
Hugging	6.2	2.6	5.0
Kissing	7.5	2.6	5.9
Sharing food	10.0	.0	6.7
Sharing eating utensils	7.5	2.6	5.9
Stepping on urine stool	13.8	7.7	11.8
Mosquito, flea or bed bug bites	6.2	-	4.2
Do not know	18.8	7.7	15.1
Prevention for HIV/AIDS			
Sex with only one partner	42.5	51.3	45.4
Using condoms correctly during each sexual intercourse	62.5	71.8	65.5
Checking blood prior to transfusion	65.0	66.7	65.5
Sterilizing needle and syringes for injections and transfusion	62.5	61.5	62.2
Avoiding pregnancy when having HIV/AIDS	43.8	53.8	47.1
Others	10.0	7.7	9.2
Do you think HIV/AIDS is Curable Disease			
Yes	31.2	30.8	31.1
No	37.5	51.3	42.0

Note: Percentages add up to more than 100 due to multiple responses.

While seeking their knowledge about the modes of transmission of HIV/AIDS, 60-67 percent of adolescents reported that HIV/AIDS is transmitted through heterosexual intercourse, needles, blades, skin puncture, from mother to child, and also through transfusion of infected blood and the percentage ranges are nearly same for married and unmarried women. The knowledge about mode of transmission through needles /blades /skin puncture was reported by 67.2 percent (69.2 percent unmarried and 66.2 percent married), while 23.5 percent reported HIV to be transmitted through homosexual intercourse, among whom 26.2 percent were married and 18 percent unmarried adolescent girl/women. About 12.6 percent reported some other modes of transmission of HIV of which 15 percent were married and 7.7 percent are unmarried.

HIV infected people have to suffer more due to the behaviour of people surrounding them. They face a lot of discrimination and rejection from the society and HIV has become a commonly misunderstood disease. There are several misconceptions about HIV/AIDS, especially among illiterate population. Figure 8.1 shows the same.

Figure 8.1: Misceonceptions about Source of Infection for HIV/AIDS

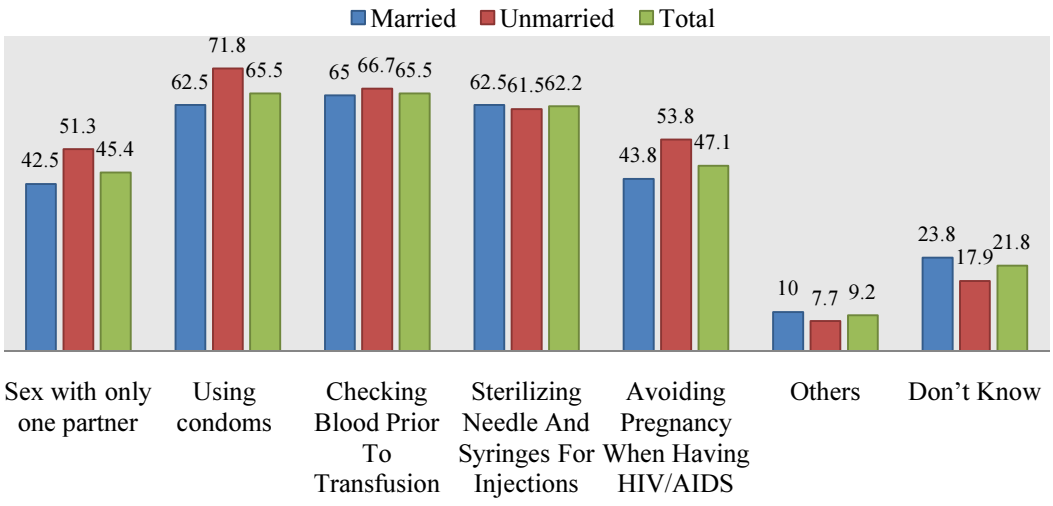


The data reveals that 2.5 percent of respondent think that they could be affected by the disease by shaking hands with an infected person, 7 percent think that it spreads

through sharing food with someone who is HIV positive, 6 percent believe that it spreads by kissing and sharing eating utensils and the larger percentage of women, 11.8 percent, reported that it could be transmitted by stepping on urine and stools. While 4.2 percent of women who are informed about HIV/AIDS (or 6.2 percent of married) felt that it could be transmitted through mosquito, flies or bed bug bites.

According to the WHO Studies, Condom Facts and Figures (2006), use of condom reduces the risk of transmission of the virus by nearly 80 percent[1] and it also reduces the probability of person from being infected, to below 1 percent, if continuously having sexual relation with an infected partner (Das D 2014). Table 8.2 shows that 65.5 percent of adolescents who are aware of HIV reported, that the use of condoms reduces the risk of transmission of AIDS virus from infected to uninfected sexual partner, out of which 71.8 percent are unmarried and 62.5 percent are married, which implies that unmarried adolescents are more aware. As regards the methods of prevention, 45.4 percent reported sex with only one partner, 65.5 percent reported checking blood prior to transfusion and 62.2 percent said sterilizing of needle and syringes for injections and transfusion are the preventive method to avoid HIV. About 47.1 percent felt one should avoid pregnancy if having HIV/AIDS. Figure 8.2 shows percentage distribution of adolescents' perception on prevention of HIV/AIDS.

Figure 8.2: Percentage Distribution of Adolescents' Perception on Prevention of HIV/AIDS



At present there is no treatment that can eradicate AIDS from an infected person's body. But several advances in medical sciences have improved the life of people with HIV. According to the data, adolescents when asked about the curability of HIV/AIDS, 42 percent (37.5 percent married and 51.3 percent unmarried) reported that HIV is not a curable disease and 31.2 percent women (31.2 percent married and 30.8 percent unmarried) who reported that HIV is curable have misconceptions about it.

8.3 HIV/AIDS Awareness and Condom Use: Relation Explained by Logit Regression Model

To study effective measures that diminish HIV prevalence, it is important to study the knowledge of mechanisms of HIV awareness and condom use among adolescents. Only 40 percent of respondents out of the total 300 sample size had heard about HIV/AIDS. This along with the dearth of information on condom use makes it important to study the impact of HIV awareness and condom use among adolescent girls, both married and unmarried. A logistic regression model was fitted to a binary outcome, coded as 1 if the woman is aware of HIV and 0 if not aware.

Logistic regression models using SPSS (Version 16) have been used for this study. Binomial logistic regression is a form of regression used when the dependent variable is dichotomous and the independent variables are of any type. Logistic regression applies maximum likelihood estimation after transforming the dependent variable into a logit (the natural log of the odds of the dependent variable occurring or not). The main objective of this logistic exercise is to test the hypothesis. The hypotheses in this chapter propose that the use of condom and other demographic and socio-economic factors associated with a greater likelihood of having knowledge about HIV/AIDS.

The hypothesis proposed below reflects the same:

Hypothesis: Use of condom and other demographic and socio-economic factors have association with having knowledge about HIV/AIDS.

A brief presentation of the functional form of the logit model for the present study follows.

The binary logistic model used in this study is:

$$P = \text{Probability}\,(Y=1 \mid X_1 = x_1, X_2 = x_2 \ldots\ldots) = \ln[\pi/(1-\pi)]$$
$$= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \_\_\_ + \beta_p X_p$$

Where

Y is a binary response variable

$X = (X_1, X_2, ..., X_p)$ is a set of explanatory variables which can be discrete, continuous, or a combination. x_i is the observed value of the explanatory variables for observation i.

Literature suggests that awareness of HIV/AIDS and condom use could possibly be influenced by a number of socio-demographic factors. A similar exercise was carried out by Ruchi Sogarwal and Damodar Bachani (2009) to examine the relative importance of awareness level of STDs, HIV/AIDS and condom use with socio-economic variables in India. Socio- economic characteristics such as domicile, education and wealth index of household are found to be significantly associated with the level of HIV awareness and condom use at the last sexual intercourse, especially among poorer, rural and uneducated women. Findings suggest that the basic demographic predictors such as age, education and wealth index of households are the most significant indicators of STD and HIV awareness and use of condoms in India. Similar findings have been found from other countries in Sub-Saharan Africa. On similar ground, the following exercise includes the socio-economic variable which influences the dependent variable.

8.3.1. Outcome (Dependent) Variable Definitions

The key dependent variable is 'heard about HIV' which refers to having awareness about HIV. The variable for HIV awareness is categorised into two groups consisting of those adolescent females who are aware about HIV and those who are not aware of HIV. We included other independent variables that can influence the awareness about HIV. Table 8.3 present the descriptive statistics of the variables used in the estimation of the logit model.

Table 8.3:Descriptive Statistics of Variable used in HIV Logit Regression Model				
Variables	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Age (15 to 19 Years)	15	19	18.10	1.229
Caste SC=1 Others=0	.00	1.00	.5067	.50079
Literacy Literate=1 Illiterate=0	.00	1.00	.7367	.44118
Migration status Migrant=1 Non-migrant=0	.00	1.00	.5733	.49542
Literacy of father Literate= 1 Illiterate= 0	.00	1.00	.5709	.49580
Literacy of mother Literate= 1 Illiterate=0	.00	1.00	.8068	.39550
Literacy of husband Literate= 1 Illiterate= 0	.00	1.00	.2009	.40160
Ever use of Condom Ever use=1 Never used= 0	.00	1.00	.1357	.34330
Awareness of HIV Aware=1 Not aware= 0	.00	1.00	.3967	.49002
Public source of getting a Condom Public=1 Private, Chemists, Others and Don't know= 0	.00	1.00	.2928	.45632
Private source of getting a Condom Private=1 Public, Chemist, Others and Don't know = 0	.00	1.00	.4088	.49298
Chemist as a source of getting a Condom Chemist=1 Public, Private, Others and Don't know= 0	.00	1.00	.7845	.41229
Other sources of getting a Condom Others=1 Public, Private, Chemists and Don't know = 0	.00	1.00	.0389	.19387
Don't know about the source of getting a Condom = 1 Public, Private, Chemists and Others= 0	.00	1.00	.0111	.10511
Religion Hindu=1 Non-Hindu=0	.00	1.00	.8733	.33315
Standard of living index Low, medium and high	1.00	3.00	1.9733	.76676

8.3.2. Explanatory (Independent) Variables

Age – Age refers to the age of the respondent at the time of the survey. It varied between 15 and 19 years. The age of the respondent plays a vital role with regard to the awareness about HIV. As HIV is a wide spread epidemic and a global concern, hence it is widely publicized among the poor who are the most affected.

Literacy – It refers to the level of education attained by the adolescent and categorized as literate or illiterate. The value 1 is assigned to literate respondents, i.e., those who can read and write and 0 for illiterate. Literacy increases the probability of awareness; hence they are more likely to be aware about HIV.

Literacy of the Respondent, Mother and Husband – Education attained by the respondents parents and husband greatly affects the knowledge seeking behaviour of the adolescent female. As parents education status will promote their daughter's level of literacy and she would be better aware of disease and prevention for avoiding HIV infection. Similarly, if the partner is well educated, he will also promote awareness to his spouse regarding HIV. Based on the level of education attained, literacy variables for father, mother and husband take a value of 1 if literate and 0 otherwise.

Migration Status – Migrants were given the value of 1 and non migrants 0. Migrant population from rural to urban area is likely to be relatively poorer than the non-migrants. Lack of exposure to awareness and medium to low literacy further increases the probability of migrant adolescents being less aware of HIV.

Religion – Prevalence of differences in beliefs and practices of different religions might influence the level of awareness about HIV. Thus to see the effect of religion on HIV awareness, variable for religion has also been used in the model. A value of 1 was assigned if the respondent was Hindu and 0 if non-Hindu.

Caste – The living standards, literacy and subsequent awareness level might vary with caste. The sample consisted of five categories of caste – General, OBC, SC, ST and others. Of the total 300 respondents, almost 50 percent of respondents belonged to SC

category. The caste variable takes the value of 1 if SC and 0 if belonging to general, OBC, ST and others.

Standard of Living Index (Wealth Index) – An index of the economic status of the households called the SLI (wealth index) was used. It is an indicator of the level of wealth that is consistent with expenditure and income measures. Standard of living Index represents the economic well being of the household. This has been assessed by calculating score for each respondent house based on the points assigned (points varied with amenities that a household possessed) for the response given with respect to the use of different household amenities (see chapter 2). As the surveyed households are in a poor urban area but the standard of living affects the life style of an individual, therefore a standard of living index variable was calculated and it ranged from 1 - 3, with 1 representing low SLI, 2 representing medium SLI and 3 representing high SLI.

Ever use of Condom- Condom is used as a preventive measure against unwanted pregnancy as well as HIV infection. The respondents were asked if they and their partner had ever used condom during sexual intercourse. The aim of the question was to see if the use of condom has any effect on HIV awareness of the respondent. It is likely that an adolescent female who reported not using a condom ever during sexual intercourse was unaware of HIV, in comparison to women using a condom.

Source of Getting a Condom – Awareness about the different sources of getting condom represents the awareness of the respondents about the use of condom. It is likely that the respondents who are aware about the source will also be aware about HIV. Respondents were asked to choose the source of getting condom from either of the following sources - public source, private source, chemist, other sources and don't know. Dummy variables have been created for each of the source- 1 for public source and 0 for private, chemist and other sources. Similar exercise was followed for creating dummies for variables private source, chemist source and others with don't know as a reference category.

Table 8.4: Logistic Regression Analyses: HIV/AIDS Awareness and Condom Use by Selected Socio-Demographic and Economic Variables				
Predictor variables	**B**	**Exp(B) (Odd Ratio)**	**S.E.**	**Sig. (p-value)**
Age	.572	1.772	.297	.054**
Religion (Hindu /NonHindu)	-1.234	.291	.651	.058**
Caste (SC /Others)	-.744	.475	.429	.083**
SLI	.303	1.355	.287	0.290
Migration status	-.813	.444	.436	.062**
Literacy of respondent	1.095	2.989	.517	.034**
Literacy of mother	1.188	3.280	.559	.033**
Literacy of husband	.457	1.580	.553	0.409
Ever use of condom	1.948	7.018	.658	.003***
Public source of getting a condom	1.524	4.589	.483	.002***
Private source of getting a condom	.456	1.578	.489	0.351
Chemist as a source of getting a condom	-.688	.503	.481	0.153
Other source of getting a condom	.405	1.500	1.322	0.759

'*', '**', '***' denotes 1%, 5% and 10% level of significance respectively.

8.3.3. Results of the Logistic Regression

Result of the logistic regression model presented in Table 8.4 examines the relationship between awareness about HIV/AIDS and condom use and other demographic and socio-economic variables amongst adolescent girls residing in slums of Delhi. Through the logistic regression analysis using SPSS (version 16), it was observed that there was a positive association between age of the adolescent girls and awareness of HIV. Age of the respondents varied between 15 and 19 years and was positively associated with awareness of HIV (odd ratio=1.77, p-value=0.054). As the age increases, probability of HIV awareness also increases. Both the religion and caste variables come out to be significant and negative, indicating that the level of HIV awareness is high among non-Hindu and non-SC respondents as compared to respondents belonging to Hindu religion

and scheduled castes. Status of migration also plays a significant role in HIV awareness. Migrant women are less aware about HIV than non-migrants, indicated by a significant p-value=0.062 and negative coefficient (-.813). This is mainly due to women belonging to rural background with lower economic status, lower literacy level and lack of exposure to awareness media. Literacy plays a very crucial role in increasing the awareness level of the adolescent female and positively associated with odd ratio of 2.98 and significant at 5 percent level. Literate mothers are more likely to ensure that their daughters attain education and be more aware about HIV. Literacy of the husband is not having any significant impact on the awareness level of the adolescent female.

The variable `Ever use of Condom' is a significant predictor of awareness about HIV/AIDS. Correct and consistence condom use is an integral and essential strategy of the comprehensive prevention and care programmes which reduce the risks of HIV transmission. Consistent condom use is an important tool in the fight to curtail the spread of HIV/AIDS (NACO, 2005). The likelihood ratio of HIV awareness and condom use has been found to be positively associated with the adolescent girls residing in six slums of Delhi. Women who have ever used condom are likely to be more aware about HIV than the women who have never used (OR=7.018; p-value=0.003). This indicates that those using condoms are well aware about the fact that condoms are not just used as contraceptive to prevent pregnancy but are also used to prevent HIV infection. Moreover, adolescent girls who were aware of obtaining a condom from public sources like government hospital, government dispensaries etc. had an estimated odds ratio of 4.589 (p-value=0.002) in comparison to those who availed private, chemist, other and don't know sources of getting for condom.

8.3.4. Conclusion

The spread of STDs and HIV/AIDS in India is a major health concern. Apart from being an effective contraceptive, condom is a good tool for protection against STDs and HIV/AIDS. Promotion of condom use has been an integral part of the National Family Planning Programme for decades. However, in spite of high level of awareness about

STDs and of HIV/AIDS, condom use is still low as a means of protection against such infections. Despite sustained efforts, both awareness and use of condoms have remained low in India especially with respect to poorer, rural and uneducated women. Preventive policies should, therefore, be targeted at adolescent groups by increasing their awareness of STDs, HIV /AIDS and condom use through effective media and interpersonal communication. In addition, there is a need to implement policies that support women's education, especially in rural areas, for behavioural change through communication programmes especially designed for targeting rural, illiterate and poor sections of the society. The current study also highlights the need for integrated prevention programmes that focus on the use of condoms for prevention of HIV as well as STDs. The results from the study highlight the need for integrated prevention programmes which would promote the use of condom for HIV prevention as well as STDs. There is also a concern to understand the reasons for the low use of condoms amongst young girls.

8.4. Prevalence of Tobacco Consumption among Adolescent Girls

Tobacco consumption is indeed common in India and its usage generally starts in the pre-teen years of an individual. Our target group was adolescent girls aged 15 to 19 years in which risk taking is common. Since they are slum based, poor and mostly marginalized, it is in this age in which they are likely to adopt habits like tobacco consumption which gets carried into adulthood. It not only affects the direct consumer but also the people exposed to "second hand smoke" or "environmental tobacco smoke". Its negative effects include: low birth weight in infants exposed passively, bronchial asthma, upper respiratory infections, reduced lung functions, lung cancer. This part of the chapter focuses on tobacco consumption pattern of female adolescents, their introductory agent and its hazardous effects. A study of women in Mumbai found that one-third used tobacco while pregnant, and their babies had double the incidence of low birth weight, compared to women who did not use tobacco (Gupta and Sreevidya 2004).

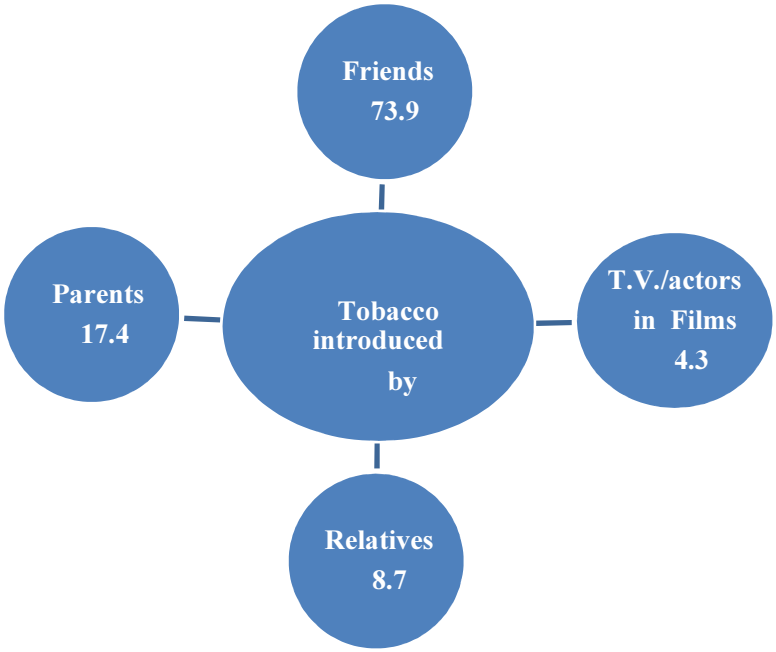
Table 8.5: Percentage of Adolescent Women with Tobacco Usage	
Background	**Percentage**
Tobacco users	**7.7**
Type of Tobacco Consumed	
Bidi	17.4
Pan masala	21.7
Gutkha	21.7
Cigarettes	56.5
Reasons for taking Tobacco	
For fun	52.2
For accompanying peers	17.4
Relaxes the body	4.3
Because parents use it	8.7
Awareness	
Aware that its injurious to health	87.0
Aware of the consequences	82.6
Introductory source to tobacco products	
Friends	73.9
Relatives	8.7
Parents	17.4
TV/Actors in films	4.3
Intention to give up	
Yes	69.6
No	21.7
Inadvertent	8.7
Alcohol users	**0.7**

8.4.1 Tobacco Use and Cigarette-Smoking among Adolescents

Information was elicited on the nature of tobacco habits, the age when started to use tobacco, and the possible influence of peers and family members. Table 8.6 shows the percentage of adolescent women /girls with tobacco usage. In totality, about 7.7 percent of the surveyed female adolescents had tried tobacco. Almost 74 percent of them smoke cigarettes and Bidi; tobacco usage in a smokeless variety was reported among nearly 43.4 percent (gutkha and pan masala), indicating the emerging trend of new smokeless tobacco products. To obtain baseline information about the causes that

attracted the surveyed adolescents towards tobacco usage, questions were also asked to state their respective reasons for the "addiction disguised as attraction". More than 50 percent of the females said that they do it for enjoyment sake. While 17.4 percent said they take it in order to give company to peers, 4.3 percent consume it as a tool for relaxation. Almost 87 percent of the females were aware about the harmful effects of tobacco and 82.6 were aware about its consequences.

Figure 8.3: Percentage of Adolescent Women/Girls by Sources of Introduction to Tobacco

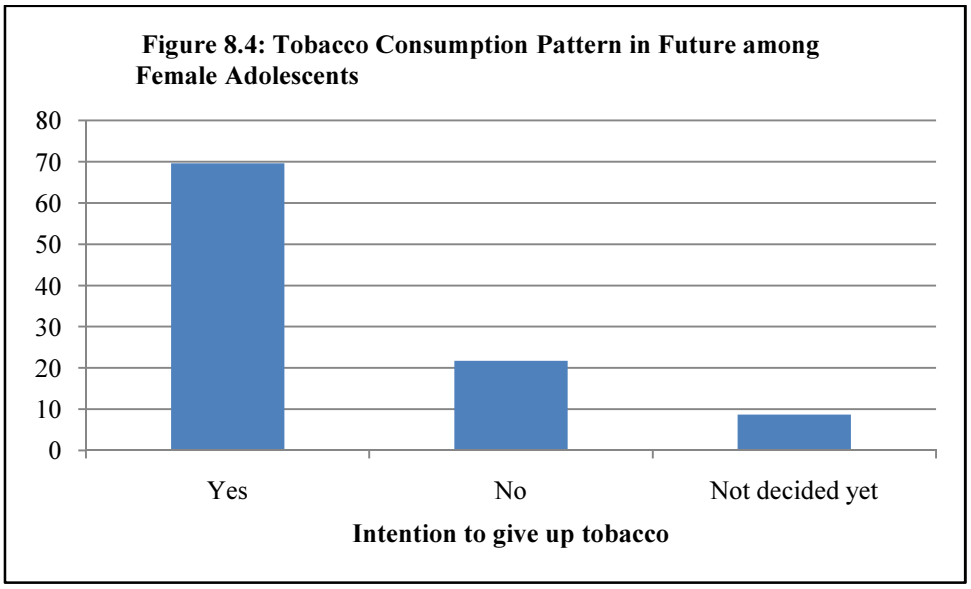


In adolescence years, when peer pressure is a significant influence, almost 73.9 percent of the girls mentioned their friends as the introductory agent to tobacco, followed by parents in case of 17.4 percent girls, relatives (8.7 percent) and TV/ Actors (4.3 percent). Figure 8.6 shows the different sources of tobacco to adolescent girls.

8.4.2 Cessation of Tobacco Consumption

The literature review indicates that education expands individuals' knowledge about the harmful effects of tobacco consumption and the propensity to consume it is much lower in school-going/literate adolescents as compared to those who have never had any access to education. Also, once the individuals are made aware about the harmful

effects, they start showing positive responses in order to curb that habit. The likelihood that young girls who smoke cigarette reported they will quit in near future was about 69.6 percent, 21.7 percent said a strict no to giving up and 8.7 percent had still not planned (Figure 8.7). Another common addiction among adolescents is that of alcohol.



It was also witnessed in our sample survey that among adolescents aged 15-19, 0.7 percent of the girls reported to be consuming alcohol. This small proportion of percentage does make a difference to acknowledge the existence of alcohol consumption among adolescent girls residing in six slums of Delhi.

CHAPTER 9

SUMMARY AND POLICY IMPERATIVES

9.1 Introduction

This chapter summarizes the findings of the study along with policy imperatives which are needed for reproductive health care for adolescent girls. The discussion on various issues reported and raised in the study is based on a review of the earlier studies, results derived from them and findings of the present study. This chapter is divided into two sections: First section (9.2) deals with the summary or findings based on the objectives framed in the chapter on research methodology. Both quantitative and qualitative findings of the data are presented in this section. Second section (9.3) gives the recommendations along with suggested gaps to be filled in future to improve the reproductive health of adolescents residing in slums of Delhi.

9.2 Summary

Adolescence is a decisive period for girls. For many girls in rural and urban poor areas, the mere onset of puberty marks a time of vulnerability which includes leaving school, child marriage, early child bearing, lack of knowledge about HIV, sexual exploitation, coercion and violence of different forms. Adolescent girls are less knowledgeable than older women in terms of access to sexual and reproductive health care, including the use of modern contraception and skilled assistance during pregnancy and childbirth. Girls living in rural and urban slums are poorer, have little control over household income and have limited knowledge about sexual and reproductive health issues. As it has been already discussed that adolescent girl' reproductive health needs must be recognized keeping in mind the physical, economic and social factors. This is an important issue since the degree of autonomy in decision making is considerably low for girls from low and even high income households. Only by carrying out well-designed studies can adequate information be gained that will enable the delivery of appropriate preventive and therapeutic services to this population group. For adolescents in India, we lack understanding about their particular needs, specifically of

adolescent girls. The Indian context calls for a focus on adolescent girls due to their general vulnerability, inaccessibility to basic health care and education, unmet sexual and reproductive health needs and rights, and age old traditions and misconceptions that have seen this cohort marginalized.

There is an immediate need to study the special needs of adolescents for the betterment of their health. It calls for a focus on the adolescents, aged between 15 and 19 years, residing in slums of Delhi, with limited means of living and amenities. The study universe included areas which are characterized by slums in the nine districts of Delhi as the adolescents living in slums constituted the primary sample of this study. Selection of six slums or sampling units, viz. Jahangirpuri, Old Chandrawal, Moti Lal Nehru Camp (JNU), Rakhi Market, Seelampur and Shalimar Bagh was based on various demographic characteristics, like population, sex composition, literacy and children aged 0-5 years. The data on the present study was obtained through a close-ended questionnaire. A part of the questionnaire catered to the socio-economic characteristics, while the other covered information on women. Using SPSS, descriptive statistics, cross tabulation and logit analysis, the study was carried out in order to analyse the prevalence of ANC, contraceptive awareness, menstrual problems, to identify the effect of different independent variables on dependent variable, logistic regressions was done separately. Some of the major findings which came out in this study are as follows:

9.2.1. Major Findings

The socio-economic and demographic profile of the 300 sampled adolescents with their household backgrounds from the six selected slums comprised of population size, sex composition, migration status and reasons extended for migration to Delhi by the head of the household and similar pattern for the adolescent women/girls. Thereafter, amenities enjoyed by the sampled adolescent women, ownership of land, type of housing, sources of drinking water, availability of electricity, provision of separate kitchen and toilet facility etc. were ascertained. Finally the number of BPL card holders and views about settling in Delhi was also covered. The households of the 300 sampled adolescent women and girls had a population of 1708 persons with 852 males and 856

females and about 60 percent of head of the households were migrants. Out of total migrants, about 48.9 percent were from U.P, followed by about 23.3 percent migrants from Bihar. Summing up together, migrants from U.P, Bihar and Madhya Pradesh constitute about 83.3 percent of the migrant population in six slums of Delhi. Slum wise, Shalimar Bagh slum reported 78 percent of the heads of households who were migrant, followed by Moti Lal Nehru Camp (76 percent) and Rakhi Market (74 percent). The migratory status of adolescent girls was questioned separately. Out of 300 women in six slums of Delhi, 172 turned out to be migrants, i.e., 57.3 percent, while 42.7 percent were non-migrants, i.e., they were born and brought up in Delhi. Along with it, Seelampur slum had 72 percent of the women who were migrants which was the highest amongst other slums. It was observed that most slum dwelling adolescent girls were migrants as they came from rural areas for marriage purpose and also to improve their standard of living. Religion and caste composition showed that 87.3 percent were Hindu, about 10.3 percent were Muslim and nearly 1.7 percent of the total were Christian. The highest percentage (50.7 percent) of the adolescent women belonged to SCs and 20.7 percent belonged to OBCs. It is interesting to report that nearly 74 percent of the adolescent women/girls reported to be literate with literacy ranging from minimum primary level to studying at graduation level. Women/Girls residing in Shalimar Bagh were most literate with nearly 86 percent who had completed their basic education.

Literacy of the parents showed a gender bias as fathers of the adolescent respondents were more educated than the mothers. Mothers of around 81 percent of the surveyed adolescents were illiterate and 43 percent of the fathers were literate. The standard of living index (SLI) constructed showed that although living in slums, the households had amenities to live a better life, as around 41.3 had medium standard of living and 28.3 had high standard of living in comparison to 31 percent of the women in totality with low standard of living.

Marital pattern in slums showed that girls got married early as 69 percent of the girls were currently married during the time of survey and only 27 percent were unmarried. Literacy level of respondent's spouse showed that nearly 80 percent of adolescents' husbands were literate. Adolescent women living in slums of Delhi are not the decision

makers as only 3 percent of the women reported to have a say regarding their health care and needs. Majority of the decisions were reported to be taken by the husband and the mother-in-law. Living condition of adolescents in slum was reviewed and it was found that 80 percent houses of adolescents used public tap/standpipe as the main source of drinking water. Around 54 percent of adolescent women utilized public toilet facility and 30 percent of the households had their own private toilet facility. No toilet facility, use of railway lines/roadside and use of open fields were also reported by 5 to 9 percent adolescents. Sharing of toilet facility was also reported by 80 percent in Moti Lal Nehru Camp and 62 percent each in Old Chandrawal and Rakhi Market slums. Cooking medium has improved as 76 percent of the adolescent women reported the use of LPG stove as fuel for cooking in their kitchen. In Moti Lal Nehru Camp slum, 90 percent reported using gas stove as medium of cooking fuel. It was also found that 81 percent of the households did not have a separate kitchen, while 42 percent of households of respondents in Shalimar Bagh slum reported cooking outside their houses. About 50 percent of the adolescent women in slums were living in pucca houses, 29 percent in semi pucca houses and 17.3 percent in serviceable kutcha houses. Houses in slums enjoy governmental services provided to them as 96 percent of households of respondents reported the availability of electricity in their houses. Around 74 percent households were reported to be their own or inherited. Thus, it can be seen that as Delhi is urbanising, the amenities enjoyed by the slums dwellers are also improving.

Reviewing of reproductive health of adolescent women /girls was the foremost objective of this study. Reproductive health was studied on various aspects related to reproduction, like early pregnancy, care during pregnancy, use of ANC services, use of family planning method, menstruation hygiene and practices, etc. Burden of early pregnancy and child bearing at a very early stage of life was evident through results. The results showed that from the total sample size of 300 respondents and 220 married women, 49.7 percent of the adolescents had given birth by the time of the survey and 26.7 percent were pregnant. The care during pregnancy and facilities availed by young women in slums varied according to various socio-economic factors, as 90 per cent of the women who availed ANC services were Hindu; most of the women who had gone

for ANC checkups were literate (66.9 percent) in comparison to 33.1 percent illiterate women; and more SC women (55.4 percent) availed ANC check-ups than women from Scheduled Tribes, Other Backward Castes or the General category.

It has also been found from the study that around 76.9 percent of the women had at least one child. It is also evident from the data that there were women who reported having two children (21.5 percent) and even three children (1.5 percent) during 15 to 19 years of age. The situation is not different worldwide, about 16 million women 15–19 years old give birth each year, about 11 percent of all births worldwide (WHO, 2014). This burden of early pregnancy leads to reproductive health problems which include anaemia, malaria, HIV and other sexually transmitted infections, postpartum haemorrhage and mental disorders, such as depression.

Improved and better services have added a push for institutional deliveries. Services such as free medicines and free check-up are lucrative for women from low economic background, as almost 56.9 per cent of women utilised ANC services from government hospital and 33.1 percent from the government dispensary. Most of the deliveries were institutional deliveries which are safer than home deliveries and recognized as critical for reduction of maternal and neonatal mortality. Most women with ANC check-up reported for normal deliveries (89.8 percent) and all the six slums reported more than 80 percent normal delivery cases. Only 10.2 percent of the deliveries were caesarean. Awareness about skilled birth attendant was also reported as maximum deliveries were conducted by government doctors (47.7 percent). Deliveries by untrained dai were also prominent (18.8 percent) and some reported assistance for deliveries by ANM (17.2 percent). Slum-wise, around 75 percent from Shalimar Bagh slum had institutional deliveries which are the highest amongst other slums, followed by 53.3 per cent from Old Chandrawal and 52.9 percent from Seelampur. In Jahangir Puri slum, the proportion of ANM assistance for delivery was reported more than in other slums.

Awareness about family planning methods were high amongst adolescent girls as knowledge of modern methods like sterilization, pills and condoms is found to be relatively high among Hindu women as compared to non-Hindus. As the target population was from slum background, traditional and cost effective methods of

contraception were more known as 94.4 percent being aware of withdrawal method, 92 percent about the traditional methods and 82 percent about rhythm method. Married women were slightly more aware about contraception methods like pills, condoms, IUD, copper T, loop and pills. Current usage of contraception was found among girls of all the ages (15-19 years) especially condom usage. Use of condoms by girls aged 15 and more signifies their indulgence in early sexual activities. In the slums of Delhi, women reported to experience sex at very early stage with partners of different ages as 85 percent of the women had experienced sex when they were in the age group of 15 to 19 years. Almost 70 percent of women had their first sexual intercourse below 18 years of age. Maximum women reported their husband as the first sexual partner. Source of getting condom was well known to young girls as chemist shop was reported to be a main source (80 percent). This probably could be because of reasons like government sources are less reliable as sometimes government service providers charge for condoms which are supposed to be free, sometimes supplies are not available or condoms are of low quality. Women in slum were also asked about the most likely time of the month when women can get pregnant majority of the women respondents (47 percent) reported they were not aware.

The assessment of reproductive health results showed that young girls had higher fertility preferences, thereby implying more burden on family and it was reported by 94 percent each in Moti Lal Nehru Camp and Rakhi Market slum, 90 percent in Old Chandrawal and Seelampur and 98 percent in Jahangir Puri and Shalimar Bagh. Almost 81.9 percent of women reported to have at least two children. Menstrual hygiene practices assessed in this study reveal that almost 73.3 percent of the women were currently menstruating and nearly 26.7 per cent of women in totality were reported to be pregnant. Around 83.7 percent of adolescents stated to take bath during menstruation and about 87 percent changed their clothes daily during menstruation. Majority of girls reported the use of sanitary napkin during menstruation. About 27.7 percent girls reported suffering from menstruation related problems in last three months.

As regards knowledge about health issues and diseases only 40 percent of respondents reported to have heard about HIV/AIDS. Results also showed that only 3 percent of young girls were familiar with the RTI problems, which is a matter of concern as RTI is a global health problem and an important concern as it poses risk of contracting HIV.