Factors Influencing HIV Awareness amongst Adolescent Women: A Study of Slums in Delhi

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Abstract

The spread of HIV/AIDS in India is a major health concern. Despite sustained efforts, both awareness and use of condoms have remained low in India especially with respect to poorer, rural and uneducated women. Data at slum level is very limited to account for the prevalence and knowledge among about HIV/AIDS adolescent girls. This paper highlights on awareness, prevalence, knowledge and modes of transmission of HIV/ AIDS amongst urban poor adolescent girls in the age group of 15 to 19 years of age. A cross-sectional slum based study was carried out in six slums of Delhi amongst 300 respondents out of which 40 percent of respondents reported to have heard about HIV/AIDS. Results showed that the most prominent source of awareness about HIV was television (83.2 percent). School teachers constitute the second most important source (77 percent of unmarried adolescents). 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). About 65.5 percent of adolescents who were aware of HIV reported that the use of condoms reduces the risk of transmission. The regression analysis showed the use of condom and other demographic and socio-economic factors associated have a greater likelihood of having knowledge about HIV/AIDS. Ever use of Condom is a significant predictor of awareness about HIV/AIDS. Women who have ever used condom are likely to be more aware about HIV than the women who have never used. 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. The result from the study highlights 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.

Introduction

Adolescence is the age of transition, with physical, mental, psychological, social and structural changes take place in this period. This period of the life is more prone to increased risk taking. Habits and behavioural changes picked up during adolescent age have lifelong affect. Adolescents are defined as individuals in the 10–19 year age group. In India different policies and programmes are oriented based upon different definition of adolescence. The United Nations considers those individuals who fall between the age group of 10–19 years as adolescents. WHO considers young people between the ages of 10 and 19 years, while Census 2011 has data regarding individuals who fall in the age category of 10 to 19 years as adolescents (with no bifurcations). Different programmes oriented for adolescents derive adolescent and young people age group differently, like National Family Health Survey (NFHS) and District Level Household Survey (DLHS) have a data category for the age group of 15 to 49 years, with no specific focus on adolescents. Kishori Shakti Yojana (GoI) marks adolescents as those who fall in the age group of 11 to 18 years, Rajiv Gandhi Scheme for Adolescent Girls (RGSAG) – SABLA aims at empowering those between the age of 11 to 18 years. The National Youth Policy defines adolescent's age group as 13–19 years.

Most of the adolescent's young age group becomes sexually active during adolescence. In the absence of right guidance and information at this age makes them prone to high risk behaviour like sex with multi-partner, unprotected sex, commercial sex, casual sex, sexual abuse and substance abuse which make them vulnerable to the deadly disease of HIV. Particularly, vulnerable adolescent population who are impoverished, unemployed, mobile/migrant and young are more high risk behaviour in their everyday life. While globally adolescents and young people represent a growing share of people living with HIV worldwide.

India has the third largest HIV epidemic in the world. In 2016, HIV prevalence in India was an estimated 0.3 percent, this figure is small compared to most other middle-income countries but because l India's huge population (1.324 billion) this equates to 2.1 million people living with HIV (UNAIDS, 2017). In the same year, an estimated 62,000 people died from AIDS-related illnesses. Overall, India's HIV epidemic is slowing down, with a 32 percent decline in new HIV infections (80,000 in 2016), and a 54 percent decline in AIDS-related deaths between 2007 and 2015 (NACO, 2015). The vulnerabilities that drive the epidemic are different in different parts of the country. The three states with the highest HIV prevalence (Manipur, Mizoram, and Nagaland) are in the east of the

country (NACO (2015) 'Narrative country progress report of India: Global AIDS Response Progress Reporting 2015). Some states in the north and northeast of the country have also reported rising HIV prevalence NACO (2017) Annual Report 2016-2017. In the year 2017, 590,000 young people between the ages of 15 to 24 were newly infected with HIV, out of which 250,000 were adolescents between the ages of 15 and 19 (UNICEF, 2018).

In India people in the age group of 15-29 years comprise almost 25 percent of the country's population and further out of which, 31 percent of AIDS burden is borne by them. So, there is a high risk of contracting HIV infection amongst young people (NACO). The adolescent age group is defined as a period from 10 to 19 years of age, where in India nearly 22.8 percent of the population fall in this age group.

While reviewing the literature from previous studies and reports, it is important to mention that adolescents with HIV/AIDS is a separate epidemic and needs to be handled and managed separately from adult HIV as not only they face problems in accepting their HIV status, need for lifelong treatment and other positive family members (Nawaz Simrati, 2011). HIV during adolescence not only affected for life of an individual but also have long lasting effects in the future affecting health, education, carrier and marriage. In India fifty per cent girls are married by 18 years according to National Family Health Survey (NFHS 2). Unmet need for contraception (15–19 years) is 27 percent NFHS-2 and NFHS-3 by more than 1 percent point per annum. Premarital sexual relations were increasing. Trafficking and prostitution has also increased over the years. Forty per cent of the adolescents start taking drugs and fall a victim of substance abuse between 15 and 20 years (UNODC, 2002). UNICEF estimates about 4 million HIV affected children in India, located mostly in the high HIV-burden states of south and northeast India (affected children include those living with HIV or those who are orphaned by AIDS and children whose parents are living with HIV).

While different studies reviewed adolescent with HIV and awareness, but very few studies reviewed the HIV prevalence at slum level. **Simms, V et al., (2017)** examined the community burden of undiagnosed HIV infection among adolescents in Zimbabwe. The aims of the study to investigate the change in community burden of undiagnosed HIV infection among older children and adolescents in Harare, Zimbabwe. The study concluded that facility-based approaches are inadequate in achieving universal coverage of HIV testing among older children and adolescents. The study reveals that alternative, community-based approaches are required to meet the Joint United Nations Programme on HIV/AIDS (UNAIDS) target of diagnosing 90 percent of those living with HIV by 2020 in this age group. **Simon & Ronel., (2016)** study with the main objective to explore HIV and AIDS awareness among adolescents living in a rural community in South Africa. The study found that schools and family members were the main sources of information regarding HIV and/or AIDS to the participants. The paper concluded that current campaigns and informative interventions have seemingly succeeded in ensuring HIV and/or AIDS awareness among adolescents.

Kurapati, S et al., (2012) examined the profile of adolescent population (living with HIV) in India. The study found that out 979, 84 tested HIV positive. Discrimination at multiple levels was observed and 10-14 years age group was 0.56 times more likely to be HIV positive than 15-19 year old. The study also found that HIV status was strongly associated with risk behaviour with heterosexual transmission being the most common. **Ghosh, J et al., (2009)** studied vulnerability to HIV/AIDS among women of reproductive age in the slums areas. The study was done in 2 different cities i.e. Delhi (Autram Lines and Birla Basti, both in Kamala nagar) and Hyderabad (Patrachar & Sanjay Basti in Timarpur area).The study found that various cultural and socioeconomic aspects i.e. lack of education, low empowerment in expressing and accessing information related to sexual matters, and poverty create an environment of vulnerability to HIV/AIDS adolescents. The study also found that there was generally a lack of empowerment among Indian women in the slums, since male or senior members of the household often impinged upon their freedom of communication and decision making.

Misconceptions about HIV/AIDS are widespread. A national study by NACO/UNICEF (National Behavioural Surveillance Survey, 2001) among young people (15–24 years) found that the level of awareness about HIV was higher in urban adolescents compared to their rural counterparts, more in males than females and that education increased the levels of awareness. About 83 percent respondents knew of at least two correct modes of transmission of HIV/AIDS. Nearly half of them report using condom in the last casual sex and consistent condom use is much lower. In the UNICEF

study (2003–2008), 37 percent males used condom at last higher-risk sex, while only 22 percent females had used condoms.

Most recently, around 1.8 million people worldwide became freshly infected with HIV in 2016 that equated to the other 5000 new infections per day, declining from 2.1 million new infections in 2015. About 70 percent of them were globally aware about their HIV standing. Remaining 30 percent would still like access to HIV services. Till June 2017, 20.9 million people living with HIV were accessing Anti-retroviral Treatment (ART), globally. Around 1 million people died from HIV in 2016. The majority of individuals, belongs to low and middle financial gain countries. The foremost affected regions are Eastern and Southern Africa that contains 19.4 million folks living with HIV, followed by 6.1 million in Western and Central African Republic, 5.1 million in Asia Pacific and 2.1 million in Western and Central Europe and North America.

Despite the grave consequences, not only the health of young people is affected by HIV epidemic, moreover their households, communities, as well as development and economic process of countries are also severely affected. Between 2010 and 2016, new infection among general population and adults declined by 16 percent and 11 percent, respectively. Whereas youngsters (10 to 24) and adolescents (10 to 19), particularly young girls and young key populations, still are disproportionately laid low with HIV. In 2016, 2.1 million individuals aged between 10 and 19 are living with HIV and 260,000 became recently infected with the virus all over the world. UNAIDS update (12 August, 2015): Active involvement of young people is essential for ending the AIDS epidemic by 2030 (UNICEF (2017) 'Statistical Tables'). Around 59 percent of new infections among young population aged 15-24, is more at risk. However, despite the advancement made across 69 nations, a drop in new infections is shown. According to UNAIDS, caution and progress in combating wide spread growth of this deadly epidemic is still not fast enough to reach global targets.

Figure 1.1 illustrates the number of new HIV infection from 2010 to 2016 around the world. Knowledge about sexual health and barriers for the prevention of HIV is low, especially amongst young population. Young people are more expected to make informed decisions regarding their sexuality and indulge in relationships with more responsibility and self-confidence if they have access to comprehensive sex education (CSE) before becoming sexually active. While CSE is expected to increase knowledge of adolescent girls regarding condom usage, increase in voluntary HIV testing and reduction in adolescent pregnancy. Especially when CSE will be linked with non-school-based, youth-friendly sexual and reproductive health and rights (SRHR) services, it will serve as a barrier towards HIV.
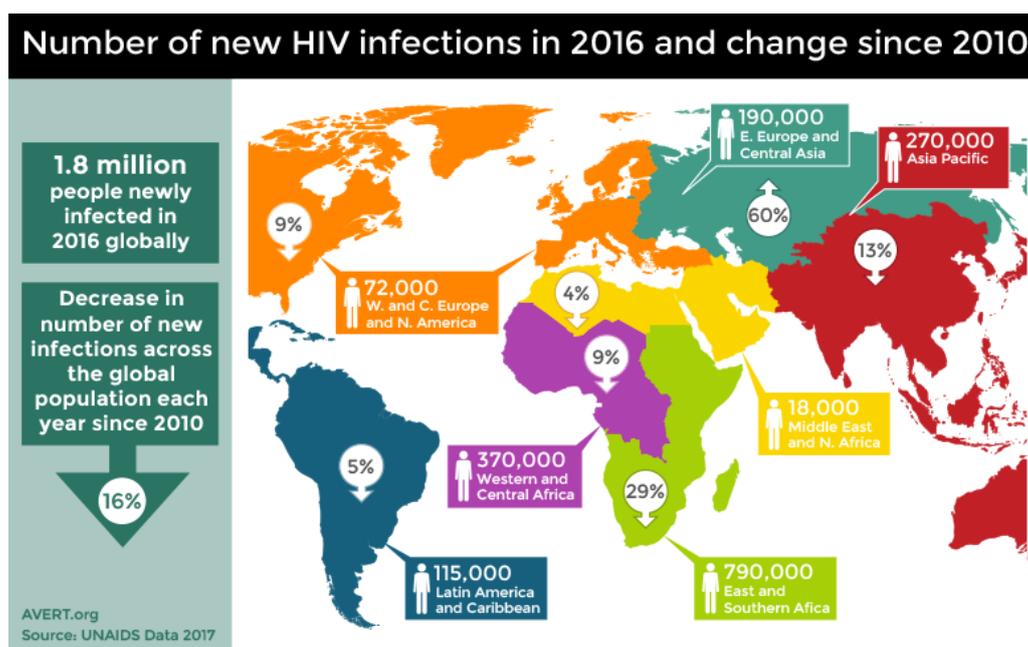
Figure: 1.1 Number of new HIV infection in 2016 and change since 2010

On the global platform, in 2016, HIV prevalence in India was estimated at 0.3 percent. This figure is small compared to most other middle-income countries but because of India's huge population (1.324 billion), this equates to 2.1 million people living with HIV (UNAIDS). In the same year, an estimated 62,000 people died from AIDS-related illnesses. Overall, India's HIV epidemic is slowing down, with a 32 percent decline in new HIV infections (80,000 in 2016), and a 54 percent decline in AIDS-related deaths between 2007 and 2015 (NACO (2015) report).

Adolescent women/ girls are biologically more vulnerable to HIV infection than young men/ boys as various socio economic factors pull them back in accessing the knowledge and education. Thereby, they lack access to information on HIV and even lesser power to exercise control over their sexual lives. Early marriage and early sexual debut also possess special risks to adolescent women / girls. In addition, the conservative Indian culture with its social restrictions and norms prevents free and open discussion about HIV/acquired immune deficiency syndrome (AIDS) within the family and denies the children and adolescents, even the basic information about it.

While various plans and programmes have been initiated to target prevention regarding HIV in almost every area, but progress for adolescents being prevented and educated are far behind for safe reproductive health. Adolescents are one of the critical population groups with distinct features and are the most neglected. 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 study will throw some light on awareness, prevalence, knowledge and modes of transmission.

Data Source and Methodology

This study is based on PhD research work, which states awareness, prevalence, knowledge and modes of transmission of HIV by adolescent women residing in slums of Delhi. The data collection was carried out by canvassing two detailed questionnaires, the household questionnaire and the women questionnaire, from the total sample size of 300 respondents.

The study universe includes areas characterized by slums located in the nine districts of Delhi. Selection of six slums or sampling units, viz. Jahangirpuri, Old Chandrawal, Moti Lal Nehru Camp, Rakhi Market, Seelampur, and Shalimar Bagh was based on various demographic characteristics like population, sex ratio, literacy, land owning agency, area of J.J. cluster in square metre, revenue district and children aged 0-6 years. The primary objective of this study is to provide in-depth socio-economic determinants HIV awareness mmisconceptions about Source of Infection for HIV/AIDS, mode of transmission, prevention from HIV amongst adolescent girls and their knowledge about reproductive health and utilization of ANC services.

It has often been contended that in context of duality, mortality, morbidity and fertility conditions in such metropolitan areas, we have populations in posh localities with all sorts of amenities as compared to slum settlements which are plagued with all kinds of miseries. The strong interconnections between socio-economic, cultural and demographic conditions have often been highlighted in theoretical and empirical literature both in India and abroad. Thus, it was considered rewarding to study the socio-economic and demographic profiles of households in selected slums of the NCT of Delhi, particularly with regards to HIV awareness and prevention. The logistic regression technique is used to analyse the impact of HIV awareness and condom use among adolescent girls, amongst both married and unmarried adolescent.

Awareness about HIV/AIDS amongst adolescent girls residing in Slums

About 40 percent of respondents out of the total sample size of 300 reported to have heard about HIV/AIDS. Table 1.1 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 constituted 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 the doctors.

Table 1.1: 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, out 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 1.2 shows the same.
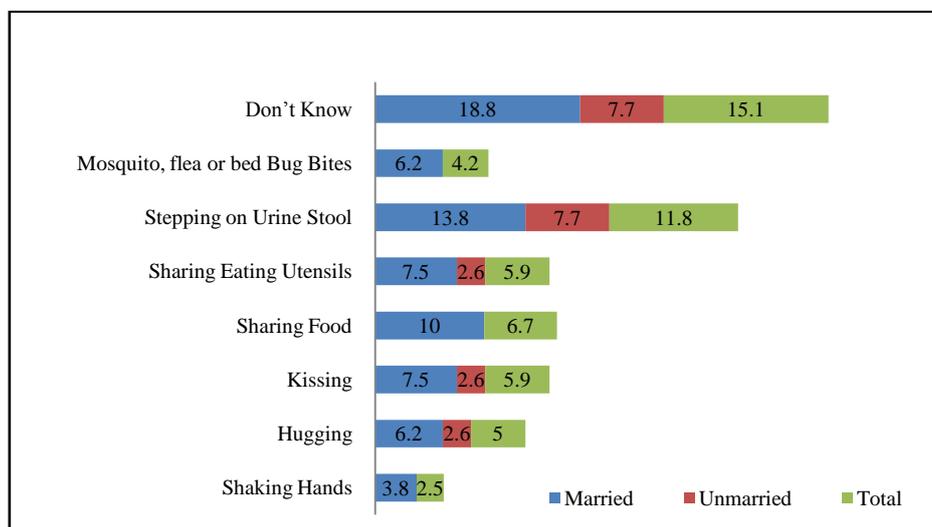
Figure 1.2: Misconceptions about Source of Infection for HIV/AIDS

The data reveals that 2.5 percent of respondents 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 (and 6.2 percent of married) felt that it could be transmitted through mosquito, flies or bed bug bites.
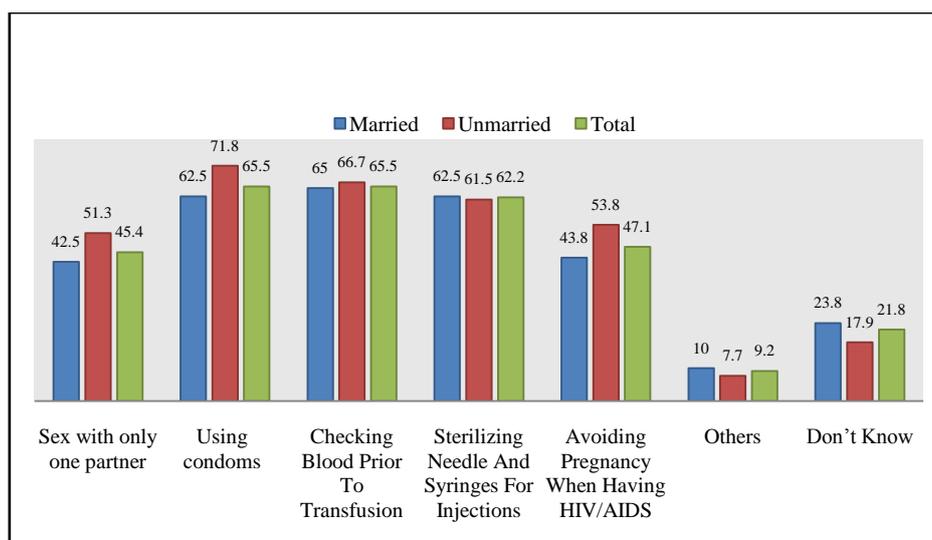
Figure 1.3: Percentage Distribution of Adolescents' Perception on Prevention of HIV/AIDS

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 and it also reduces the probability of a person from getting infected to 1 percent, if an unaffected person is continuously having sexual relation with an

infected partner (Das D 2014). Figure 1.3 shows that 65.5 percent of adolescents who are aware of HIV reported that the use of condom 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. Regarding the methods of prevention, 45.4 percent reported having 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 methods to avoid HIV. About 47.1 percent felt one should avoid pregnancy if having HIV/AIDS. Figure 8.2 shows percentage of 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 science have improved the life of people affected with HIV. According to the data, adolescents when asked about the curability of HIV/AIDS, 42 percent women (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 a curable disease. They have misconceptions about it due to lack of proper knowledge.

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 hypothesis in this chapter, propose that the use of condom and other demographic and socio-economic factors are 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:

$$P = \text{Probability}(Y = 1 | X_1 = x_1, X_2 = x_2 \dots) = \log[\pi/(1-\pi)]$$
$$= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \cdots + \beta_p X_p$$

Where,

Y is a binary response variable,

$X = (X_1, X_2, \dots, X_p)$ 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 about 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 poor, 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, 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.

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 categorized into two groups consisting of those adolescent females who are aware about HIV and those who are not aware about HIV. We included other independent

variables that can influence the awareness about HIV. Table 1.2 presents the descriptive statistics of the variables used in the estimation of the logit model.

Table 1.2 :Descriptive Statistics of Variable used in HIV

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

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 regards 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: Father, Mother and Husband – Education attained by the respondents parents and husband greatly affect the knowledge, seeking behaviour of the adolescent female. As parents education status will promote their daughter's level of literacy then she would be better aware about the disease and preventing 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 about 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 as 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). The surveyed households are in a poor, urban area but since the standard of living affects the lifestyle 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 against HIV infection. The respondents were asked if they and their partner have 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 of 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 such as private source, chemist source and others with don't know as a reference category.

Table 1.3 :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 /Non-Hindu)	-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.

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 it is 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 a 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 odd ratio of 4.589 (p-value=0.002) in comparison to those who availed from the private, chemist, other and don't know sources of getting a condom.

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 poor, rural and uneducated women. Preventive policies should, therefore, be targeted at adolescent groups by increasing their awareness about 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 changes through communication programmes specially 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.

As the burden of HIV among girls have come to light and emerged as an alarming issue, there is an urgent need for understanding and drawing a comprehensive plan to deal with this issue, profound the response must be. A social transformation to address the needs of girls at risk is needed including, a stop towards human rights violations and harmful social norms that needs to be ended. Delayed sexual debut, reduced numbers of sexual partners, condom use, knowledge of HIV status and use of voluntary counselling and testing by those who are at highest risk are some of the key issues to be addressed in order to save them from such deadly disease.

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