

## **Awareness & Knowledge on HIV/AIDS among Unmarried Women aged 15-24 years in Karnataka and Odisha States of India - A Comparative study**

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### **ABSTRACT**

*Acquired Immune Deficiency Syndrome (AIDS) is the final and most serious stage of HIV disease, which caused severe damage to the immune system. Human Immunodeficiency Virus (HIV) causes AIDS. The virus attacks the immune system and leaves the body vulnerable to a variety of life-threatening infections and cancers. The virus can be transmitted through a) sexual contact, b) through blood and c) from mother to child. India has a huge population (1.2 Billion) and 2.1 million people are living with HIV. It is important to create awareness among the women particularly in young age group on safe sex and to reduce the chance of acquiring or spreading HIV and other sexually transmitted diseases. Unmarried women in the age group of 15-24 are the most vulnerable groups whose tastes and preferences, attitude and behaviors always involve certain amount of risk.*

*The study involves comparison of awareness, knowledge and misconception of unmarried women in the age group of 15-24 years of Karnataka and Odisha states. The HIV/AIDS epidemic has also challenged traditional cultural boundaries. The information included awareness, knowledge, misconception and Family Life Education. Karnataka and Odisha states in India were having different parameters have compared and analyzed in this study. It is of general opinion that female are found to be more vulnerable to infect HIV/AIDS than males, because they have a lack of awareness than the male. Education is the main source of awareness and knowledge which is lacking in both rural and urban areas of Odisha. It is observed that there is better correlation between education and awareness level in the state of Karnataka than Odisha.*

**Keywords:** *AIDS, HIV, Women, misconception, unmarried, awareness, Family Life Education, misconception & Knowledge*

**Introduction**

Acquired Immune Deficiency Syndrome (AIDS) is the final and most serious stage of HIV disease, which caused severe damage to the immune system. Human Immunodeficiency Virus (HIV) causes AIDS. The virus attacks the immune system and leaves the body vulnerable to a variety of life-threatening infections and cancers. The virus can be transmitted through a) sexual contact, b) through blood and c) from mother to child. India has a huge population (1.2 Billion) and 5.2 million people living with HIV. The HIV epidemic in India is driven by Heterosexual, Sex workers, Men sex with Men (MSM), injecting drugs, transgender, Migrant workers and truck drivers. Increasing awareness among the general population and key affected groups about HIV prevention is a central focus of India. Over 35% of all reported AIDS cases in the country occur among those in the age group of 15-24 years indicating that young people are not only at high risk of contracting HIV infection but already constitute a significant percentage of people living with HIV/AIDS. (India resolves to defeat HIV/AIDS, New Delhi: National AIDS control organization, Ministry of Health and family welfare 2005). HIV has spread beyond the “at risk” groups to the general population and from urban to rural areas.

**Awareness of RTI/STI and HIV/AIDS**

One of the important components of the Reproductive and Child Health (RCH) programme is to lead a healthy sexual life without any fear of contracting disease. RCH programmes focus much emphasis on promoting and encouraging healthy sexual behavior through Information, Education and Communication (IEC) activities. HIV/AIDS finds its victims in both rich and poor countries, but the hardest hit countries are between the developing and underdeveloped nations. Two decades into the epidemic and there is still no vaccine and no “cure” for AIDS (Vinod K.Sharma, 2003). The HIV/AIDS epidemic has also challenged traditional cultural boundaries. Approximately 5.2 million people are living with HIV/AIDS in India today. In the absence of curative and preventive therapy, even after more than two decades of clinical detection of the HIV/AIDS virus that causes AIDS, creating people awareness and knowledge regarding HIV/AIDS is the only cost effecting strategy of primary prevention especially in the developing countries like India (World Bank 1997). It is found that, due to lack of knowledge and awareness about RTI/STIs and HIV/AIDS women are not in the position even to share the problem with their family members.

### **Review of Literature**

UNAIDS and Indian non-governmental organizations have expressed concern over the increasing incidence of HIV infections in four previously low-prevalence states that could potentially create a pandemic like situation because anti-AIDS efforts are not focused on those states. Odisha is one among the state. According to the Union and state governments six so-called “High Prevalence” states Karnataka is among the one. HIV and AIDS transmitted mainly through unprotected sex in the south and injecting drug use in the north-east of the country. As many as 111 districts are considered as high prevalence areas with HIV prevalence more than 1% in antenatal women and/or more than 5 percent in high risk behavior groups.

The problem seems to stem from the fact that HIV is often sexually transmitted, or is transmitted via drug use. Young sex workers constitute one of the most vulnerable groups for HIV infection and transmission. Of the estimated two million women involved in sex work in India, 25-30 percent is minors. HIV surveillance of 2005 reveals that around 18.0 percent of female sex workers infected with HIV. Over the years there are growing evidences that with increasing number of targeted interventions in different sub population level of knowledge about STI/HIV transmission is increasing, at the same time its misconceptions of HIV/AIDS have been increased. In the past two decades good number of studies were carried out on Reproductive health, Reproductive morbidity including STD, RTI and HIV/AIDS, Men women with some RTI s are at a greater risk of acquiring and transmitting HIV infection. There is a need to strengthen the RTI/STI control programme particularly in tribal areas. Sexually Transmitted Infection (STI) is an increasing concern among young people. In India it is estimated that 2.3 million people are currently living with HIV/AIDS.

Youth aged between 15-24 years are the fastest growing segment in the newly infected population. 91 percent of men and 88 percent of women between the ages of 15-24 years heard of HIV/AIDS. Out of which 45 percent men 28 percent women had comprehensive knowledge of HIV/AIDS (IIPS and Population Council 2010). As such, STDs form an enormous public health burden and responsible for a large number of undocumented complications. Keeping these factors in mind governments of many developed and developing countries are trying to control STDs. Therefore, managing STDs and altering the behaviour that lead to it are the essential elements of any HIV

/AIDS prevention and control programme (Olasode, 2007). In one of the study conducted by NACO in 2002 states that STD and HIV infection are no longer restricted to the high risk groups, but have spilled over to affect the general population as well.

United Nations (2005) reveals that pre-marital sex appears to be increasing among youth and HIV/AIDS is the first cause of mortality of youth in the world. Adolescents are more vulnerable than adults to unplanned pregnancies, sexually transmitted diseases and HIV/AIDS. It has been observed that when adolescents become sexually active, they tend to have multiple partners and use condoms and other contraceptives inconsistently (Ashford 2001).

### **Objective of the Study**

1. Assess the level of awareness about STI and HIV/AIDS by unmarried women aged between 15-24 years in the states of Karnataka and Odisha
2. Assess the level of knowledge about STI and HIV/AIDS by unmarried women aged between 15-24 years in the states of Karnataka and Odisha
3. To assess the level of misconception about HIV/AIDS among the young unmarried women aged between 15-24 years in the states of Karnataka and Odisha
4. To assess the knowledge of Family Life Education (FLE).

### **Methodology**

The awareness and understanding level of the unmarried women aged between 15 and 24 of Karnataka & Odisha states were considered for the study. The information included awareness, knowledge, misconception and Family Life Education. The study samples were drawn from District Level Household Survey-3 (DLHS-III). The field work of DLHS-3 was carried out during December 2007-December 2008. A multistage stratified systematic sampling design was adopted for DLHS-III. Several questions were asked to unmarried women aged between 15 and 24 years and first time in DLHS-III, awareness, knowledge of RTI/STI and HIV/AIDS by source of information collected from unmarried women of this age group.

According to Census India 2001 54% of the women population in the age group of 15-24 were unmarried. Karnataka and Odisha states in India were having different parameters have compared and analyzed in this study.

**Table 1**  
**Total No of unmarried women as state wise in the age group of 15-24**

Karnataka				Orissa		
Number of villages (965)				Number of villages (1298)		
Unmarried women	Total	Rural	Urban	Total	Rural	Urban
15-24 Years of age	6452	4343	2109	7257	6233	1024

The above table represents that the number of villages in Karnataka and Odisha were 965 and 1298 respectively. The total number of unmarried women of 15-24 years in the study area as 6452 in Karnataka with 4343 rural residents and 2109 urban residents respectively. Comparatively the total number of unmarried women in this age group in Odisha is 7257 out of which 6233 was from rural and 1024 belongs to urban population.

**Table 2**  
**Indicator**

Karnataka				Orissa		
Unmarried women	Total	Rural	Urban	Total	Rural	Urban
Non-literate	0.1	0.1	0.1	14.0	15.6	3.7
10 or more years of schooling	53.7	47.6	66.3	29.7	25.3	56.2

Non literate of unmarried women in Odisha is comparatively high as 14.0 percent when compare to Karnataka's non literate women of 0.1 percent. Odisha's non literate rural and urban percentage indicates 15.6 and 3.7 respectively. However in total 10 or more years of schooling education shows high in rural with 47.6 which is high when compare to 25.3 percentage of Odisha's rural population. Overall the schooling level of the unmarried women in Karnataka shows 53.7 percent which is fairly better than Odisha's 29.7 percent.

**Table 3**  
**Awareness of RTI/STI & HIV/AIDS**

Karnataka				Orissa		
Unmarried women	Total	Rural	Urban	Total	Rural	Urban
Who have heard of RTI/STI	42.8	42.2	44.2	19.2	18.4	23.8
Who have heard of HIV/AIDS	92.1	90.9	94.7	68.6	67.0	78.4
Place for testing HIV/AIDS	80.2	78.3	84.1	54.7	54.3	66.4
Underwent test for detecting HIV/AIDS	8.2	8.1	8.4	0.4	0.3	0.9

The above table indicates that awareness level of RTI/STI of unmarried women in Karnataka shows 42.8 percent which is better when compare to Odisha with 19.2 percent. The awareness level in Karnataka state in urban and

rural unmarried women is more or less equal. In Odisha, urban women awareness level is better than rural unmarried women in the study area and the overall percentage is less than Karnataka. Awareness of HIV/AIDS among unmarried women in Karnataka is 92.1 percent which is remarkable and this level is 68.6 percent in Orissa which is also not poor. It is very significant that in Karnataka, rural unmarried women awareness level shows 90.9 percent which is more than 3/4<sup>th</sup> of the rural women population. When compare to Karnataka rural women, the Odisha rural women who have heard of HIV/AIDS is 67.0 percent which is comparatively less. Since urban unmarried women in both states shows better awareness level due to better education facility. Place for testing of HIV/AIDS knowledge among unmarried women in Odisha is comparatively lower as 54.7 percent when compare to Karnataka state of 80.2 percent. In both states rural and urban level shows better awareness level, however Karnataka has better percentage in terms of both rural and urban. In Odisha state urban women have reasonably better awareness, but less than Karnataka.

Regarding underwent test for detecting HIV/AIDS, 8.1 percent of Karnataka women have underwent test and unmarried women in Odisha state underwent test found less than one percent which seems to be less awareness of test. It was observed from the above table, that Karnataka unmarried women were having better awareness on RTI/STI & HIV/AIDS than Odisha in both urban and rural areas of the state.

**Table 4**  
**Awareness of Contraceptive methods**

Karnataka				Orissa		
Unmarried women	Total	Rural	Urban	Total	Rural	Urban
Women knows about condom	53.3	50.7	58.5	68.9	66.5	83.4
Know about pills	72.8	71.6	75.1	80.7	79.5	88.3
Emergency contraceptive pills	45.2	43.2	49.4	25.8	24.0	37.1
Whoever discussed about contraception with anyone	21.8	20.6	24.1	20.4	20.0	22.9

The awareness of contraceptive methods among the unmarried women who knows about condom found to be high as 68.9 percent in Odisha with urban and rural statistics shows 83.4 and 66.5 percent respectively whereas unmarried women knows about condom in Karnataka is 53.3 percent with rural and urban awareness level indicates 50.7 & 58.5 percent respectively. It

appears that condom awareness level among Odisha unmarried women is fairly better than Karnataka unmarried women. In Karnataka 72.8 percent unmarried women know about pills and 45.2 percent were aware of emergency contraceptive pills. However the awareness level of Odisha's unmarried women shows 80.7 and 25.8 percent respectively. Odisha women having about the knowledge of pills was slightly higher than Karnataka women. Generally Pills awareness among urban unmarried women population not a surprising factor whereas this awareness level is a surprising in rural unmarried women population in Odisha as 79.5 percent. The emergency contraceptive pill awareness among the unmarried women in rural area of Karnataka indicates in the table as 43.2 percent.

Whoever discussed about contraception with anyone is almost same and there was no big change in both the states and indicates as 21.8 and 20.4.

**Table 5**  
**Knowledge of HIV/AIDS by sources**

Unmarried women	Karnataka	Orissa
Number of Women	6452	7257
Ever heard of HIV/AIDS	5944 (92.1%)	4978 (68.6%)
<b>Source of Information</b>		
Radio	39.9	30.9
Television	75.1	80.3
Cinema	26.2	4.6
Print Media	51.6	31.0
Health Personnel	25.2	7.3
Adult Education programme	1.5	0.5

It is from the above table that unmarried women ever heard of HIV/AIDS shows very high in Karnataka as 92.1 and Odisha as 68.6 percent respectively. According to source of information Television dominates in both the states as 75.1 percent in Karnataka and 80.3 percent in Odisha followed by print media with 51.6 percent in Karnataka and 31.0 percent in Odisha. Radio is one of the major sources of information in both states as 39.9 and 30.9 percent respectively. The role of cinema and health personnel was dominating in the state of Karnataka as 26.2 and 25.2 whereas the same source of information in Odisha indicates very less percent. Adult education programme found to be the least source of information in both the states. Undoubtedly television creates wide range of source of knowledge in HIV/AIDS by sources. It covers most of the rural population and especially in Odisha it takes the unmarried women to the greater heights as one of the source of information. Print media

is also the one of the major source to create knowledge among the unmarried women. Cinema and health personnel in Odisha are not helping to create knowledge of HIV/AIDS as a source of information. Generally cinema is the one of the attracting source of information to create knowledge to the rural unmarried women. Implementation of any other modern methods will be useful to create the knowledge of the HIV/AIDS.

**Table 6**  
**Knowledge of HIV Transmission/AIDS**

Unmarried women	Karnataka	Orissa
Number of Women	6452	7257
Ever heard of HIV/AIDS	5944	4978
Unsafe sex with Homo sex	14.5	6.0
Unsafe sex with persons who have many sex partners	75.2	72.2
Unsafe sex with sex workers	29.9	17.8
Unprotected sex with HIV/AIDS infected person	35.7	20.6
Infected mother to child	40.2	25.6
Blood Transfusion	49.6	44.7
Others	59.7	32.7

As for the knowledge of HIV transmission, unmarried women have knowledge in both the states and especially unsafe sex with persons who have many sex partners having knowledge level stands as 75.2 and 72.2 percent respectively in the states of Karnataka and Odisha. Blood transfusion is one of the important causes for HIV transmission.

This knowledge among the unmarried women in both states fairly better, but it is less than fifty percent in Odisha as 44.7 percent. Unmarried women in Karnataka have better knowledge level as 35.7 percent than Odisha women knowledge of 20.6 percent on unprotect sex with HIV/AIDS infected person. Knowledge of HIV transmission on other mode 59.7 percent in Karnataka and in Odisha the respondent level shows as 32.7 percent. Infected mother to child transmission knowledge observed from the table as 40.2 and 25.6 percent in the states of Karnataka and Odisha respectively.

Knowledge of HIV transmission through unsafe sex with homosexuals among unmarried women in Karnataka with 14.5 percent and the respondent's knowledge level in Odisha recorded as 6.0 percent. Unsafe with sex workers knowledge level reasonably better among Karnataka respondents as 29.9 percent where as the knowledge level among Odisha respondents stand as 17.8 percent.



**Table 7**  
**Knowledge about How to avoid or reduce the chances of infecting HIV /AIDS**

Unmarried women	Karnataka	Orissa
Number of Women	6452	7257
Ever heard of HIV/AIDS	5944	4978
Abstain from sex	40.1	31.7
Using Condom correctly during each sexual intercourse	20.5	36.1
Limit number of sexual partner and avoid sex with sex workers	60.8	51.5
Avoid sex with person who inject drugs	75.6	49.3
Avoid pregnancy when having HIV/AIDS	24.2	13.0
Other	5.6	5.1

Respondents have different level of knowledge about how to avoid or reduce the chances of infecting HIV/AIDS in both the states. Out of this limit number of sexual partner and avoid sex with sex workers knowledge level is fairly better in both states as 60.8 in Karnataka and 51.5 percent in Orissa respectively. Unmarried women have avoid sex with person who inject drugs is high as 75.6 percent in Karnataka and the knowledge level in Odisha is 49.3 percent which is low when compare to Karnataka. In Odisha respondents in the study area is having better knowledge by using condom correctly during each sexual intercourse with 36.1 percent which is high when compared unmarried women of Karnataka with 20.5 percent. Knowledge level of abstain from sex in both states shows less than fifty percent and Karnataka respondents having knowledge of 40.1 percent and Odisha stands with 31.7 percent respectively.

**Table 8**  
**Knowledge regarding where to get tested for HIV/AIDS sources**

Unmarried women	Karnataka	Orissa
Number of Women	6452	7257
Ever heard of HIV/AIDS	5944	4978
Where to get tested	80.2	54.7
<b>Government</b>		
Hospital	82.9	80.4
CHC/PHC/Sub Centre	26.2	22.4
RTI/STI Clinic, VCT/ICTC	7.5	1.3
Other Public/NGO Hospitals	6.2	0.9
<b>Private</b>		
Hospital	44.4	10.5
RTI/STI Clinic, VCT/ICTC	6.9	0.7
Other Private Hospitals	4.8	1.2

It is one of the important source of knowledge among the unmarried women population that where to get tested for HIV/AIDS. It appears that more than eighty percent have very good knowledge of where to get tested. This is comparatively better with Odisha's unmarried women respondents who have got 54.7 percent.

Government hospital is the main source of testing for HIV/AIDS in both the states with more than eighty percent. This knowledge level among respondent is slightly higher in Karnataka having 82.9 percent and the knowledge in Odisha is 80.4 percent. Followed by source of knowledge of testing among unmarried women in private hospital in Karnataka is 44.4 percent whereas for the same source in Odisha 10.5 percent respondents seek private hospitals. Testing at RTI/STI clinic, VCT/ICTC in government and private Karnataka respondent's knowledge shows 7.5 percent and 6.9 percent, whereas the same source of Odisha respondent level is 1.3 and 0.7 percent. Source of knowledge among unmarried women of other public/NGO hospitals in Karnataka and Odisha shows 6.2 and 1.2 percent respectively.

**Table 9**  
**Misconception of HIV /AIDS Transmission**

Unmarried women	Karnataka	Orissa
Number of Women	6452	7257
Ever heard of HIV/AIDS	5944	4978
Shaking Hands	9.6	7.1
Hugging	11.6	7.2
Kissing	14.2	9.3
Sharing Clothes	12.4	10.6
Sharing Food	14.6	10.8
Stepping on urine stool of someone who has AIDS	15.0	16.5
Mosquitoes/Flies or Bedbugs bites	33.9	23.3

These misconception levels generally happen to be higher among rural unmarried women population rather than urban areas. Misconceptions of HIV/AIDS have been increasing with the increase in knowledge. The only answer of increasing misconceptions could be that people relate new knowledge with their pre-existing knowledge and most of the awareness programs have not tried enough to focus on what people think of HIV/AIDS. Therefore with increase in knowledge more and more misconception can be established. It is encouraging to know that younger women are more knowledgeable about HIV/AIDS than married. It is very surprising that,

misconception of HIV/AIDS transmission level through mosquitoes/fly or bedbug bites in Karnataka and Odisha shows from the above table is 33.9 and 23.3 percent respectively. Followed by stepping on urine stool of someone who has AIDS is more or less same in both the states as 15.0 and 16.5 percent.

**Table 3**  
**Family Life Education**

Karnataka				Orissa		
Unmarried women	Total	Rural	Urban	Total	Rural	Urban
Women Opined FLE/SE Important	87.8	87.0	89.3	82.4	81.2	89.8
Ever Received FLE/SE	66.5	64.7	70.3	43.6	42.1	52.8
Aware of legal minimum age for girls in India	91.5	90.1	94.5	84.1	82.6	93.2

Family life education (FLE) is the one of the indicator for RTI/STI & HIV/AIDS among unmarried women in the study area. More than 80 percent of the respondents in both the states have aware of legal minimum age for girls in India. Unmarried women in both states have opined that FLE/Sex Education (SE) important. In both states more than 80 percent of rural women respondent opined FLE/SE is important. Karnataka respondents have better knowledge for ever received FLE/SE with 66.5 percent where as 43.6 percent Odisha respondents. This is one of the key indicators for RTI/STI and HIV/AIDS awareness.

### Summary & Conclusion

It is of general opinion that female are found to be more vulnerable to infect HIV/AIDS than males, because they have a lack of awareness than the male. The two states in the study area have different geographical area, population and same number of districts (30). According to 2011 census female population of Karnataka was high (30,128,640) when compared with Odisha (20,762,082). Although the Odisha state is having more number of villages than Karnataka, the overall literacy rate is 76.68 percent which is appreciable level than Karnataka's 75.36 percent. However in the study area respondents with ten or more years of schooling knowledge was high with 53.7 percent is one of the important factors for good awareness; knowledge and misconception level of HIV/AIDS in Karnataka whereas Odisha's respondent with ten or more year schooling was 29.7 percent. Education is the main source of awareness and knowledge which is lacking in both rural and urban areas of Odisha. It is observed that there is better correlation between education and awareness level in the state of Karnataka than Odisha.

Interestingly misconception level among Odisha's unmarried women was found to be less than Karnataka respondents. It is a fact that women who received family life education had better knowledge and awareness on reproductive health issues than counterparts.

### **Suggestions**

1. It is necessary to strengthen the RTI/STI control program particularly in the tribal areas.
2. Appropriate policy regarding FLE so as to address the unmet need for scientific learning/training on matter of family/sexual life among unmarried women and adolescent.
3. Awareness programmes to increase sensitivity about needs of unmarried women.
4. Trained male and female counselors should be recruited at all schools, Primary Health Centre's (PHCs) and Community Health Centre's (CHCs) and more effective school based HIV/AIDS education is needed in India.
5. Like China, parents in India also should get involved in their children's HIV/AIDS prevention education.
6. Efforts to create more awareness through media
7. Mobilizing and supporting other sectors such as education, NGOs, youth, criminal-justice, media, labour and armed forces to contribute to HIV prevention and care.

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