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A retrospective study on HIV/AIDS, STI and RTI awareness in Jharkhand State

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Abstract

The range of sexually transmitted diseases (STDs) and reproductive tract infections (RTIs) is clearly a significant factor in reproductive morbidity. Along with endogenous infections, sexually transmitted diseases, and lactogenic infections, STIs also include HIV infection and AIDS. According to the experts, India alone is home to one million AIDS cases and approximately five million HIV-positive people. The Rapid Household Survey (RHS) of the Reproductive and Child Health Survey (1998) and the Multi Indicator Survey (1997) provided the majority of the data used in this study. It is discovered that the least likely women in the State to be aware of AIDS are those who live in rural areas, have low levels of education, and are economically disadvantaged.

Introduction

Reproductive health is defined as total physical, mental, and social well-being, rather than simply the absence of disease or infirmity in all aspects of the reproductive system, its functions, and processes. It allows clients to make educated decisions, get screening, counseling, and education on reproductive and healthy sexuality, and have access to treatments for the prevention and management of reproductive morbidity. Reproductive tract infections (RTIs) and sexually transmitted diseases (STDs) are significant contributors to reproductive morbidity.

The HIV infection and AIDS also fall within the group of STIs. It includes three types of infections: a) Endogenous infections which are caused by overgrowth of organisms that may be present in the genital tract of normal women and men, such as bacterial vaginitis, vulvo vaginitis, candidacies, prostatitis and epididymitis, b) Sexually transmitted diseases (STDs) such as gonorrhea, syphilis, trichomoniasis, genital herpes, genital warts and those due to chlamydia and human Immuno-deficiency virus (HIV) infection and c) Latroenic infections that are associated with medical procedures such as transfusion of infected blood or blood products and use of contaminated needles, syringes and scalpels. Many RTIs are sexually transmitted. Though most STIs are RTIs, some STIs such as syphilis, hepatitis B and AIDS are also systematic diseases. Many STIs also affect the mouth, rectum, and urinary tracts to women's lives throughout the world. RTIs include sexually transmitted infections (STIs); infections related to procedures such as unsafe deliveries and abortion. Men also experience RTIs, particularly STIs, but the prevalence and the consequences for women are much more severe.

AIDS (Acquired Immuno Deficiency Syndrome) was first reported in 1980s, but has now assumed pandemic proportions. India will soon become the HIV capital of Asia, if adequate measures are not taken to control HIV infections. AIDS is a major public health concern today. All states in India are affected by it. AIDS does not discriminate between classes, castes or communities. It is caused HIV, which is transmitted mainly through sexual intercourse. Until recently what seemed to be a distant problem, AIDS has very much arrived in Bihar and Jharkhand States. The most challenging task is how to prepare ourselves to be able to prevent the onslaught of HIV/AIDS. What are alarming are the rapidly changing epidemiological patterns. The spread of transmission from urban and metropolitan areas to rural areas is a matter of great concern. The infection has spread to the general population covering all segments of society. Poverty, unscreened blood supplies, the traditional low status of women and widespread commercial sex put millions of South Asian women- and ultimately their children at risk. It is revealed that rural, poorly educated women are least likely to be aware of AIDS and if aware, have the poorest understanding of the syndrome (Balk, D and Lahiri, S: 1997). It is essential to evaluate the awareness level of RTI, STI and HIV/AIDS in the group of population for further strategic steps to avoid dreaded disease. In the study, we have assessed the awareness of the RTIs, STIs and HIV/AIDS at district level of Jharkhand state.

Sources of data

The study is mainly based on the data available from the Multi Indicator Survey (1997) of the UNICEF, Patna and Rapid Households Survey (RHS) of the Reproductive and Child Health (RHS) of Population Research Centre, Patna. In the Multi Indicator Survey (MICS), 30 villages/clusters were covered in the untruncated Bihar. A sample of 4428 married women has been covered in the MICS study. The RHS-RCH study (Phase-I) 13 districts have been covered from the Jharkhand state. From each of the districts, 1000 women were covered on the RCH objectives. In all together 13000 married women were covered in the state.

Literature Review

In spite of great improvements in preventing and treating sexually transmitted diseases (STDs) and reproductive tract infections (RTIs), including HIV/AIDS, infections have been increasing significantly throughout the world. It is evident that there is correlation between sexually transmitted infections (STIs) and HIV infections and the development of AIDS. Reproductive health professionals in developing countries encounter considerable challenges concerning sexually transmitted diseases (STDs) among women. For example, many women in developing countries have vaginitis, cervicitis, and pelvic inflammatory disease (PID). Further since many women with a lower reproductive tract infection (RTI) are asymptomatic, there is not only considerable potential for transmission but also an increased tendency to develop PID. In fact, more than 5% of women had a lower RTI and, in some studies, the prevalence rates were as high as 40-50%. Besides the pain and disability of acute PID, it often contributes to infertility, ectopic pregnancy, recurrent infection, and chronic pain. These results often lead to marital discord and social ostracism, especially in developing countries. RTIs can also adversely affect child health and child survival. For example, they contribute to fetal wastage, low birth weight, and congenital infection such as ophthalmic neonatorum caused by gonococci. Further STDs also impact family planning programs. In some developing countries, for example, fertile women who live in communities with high infertility due to RTIs sometimes do not want to use family planning methods because they fear subsequent infertility. The human papilloma virus (HPV is associated with cervical cancer. A comprehensive reproductive health service including the Pap smear screening is thus needed in developing countries. Genital ulcer disease (syphilis, herpes, and chancroid) is a particularly serious condition since ulcers facilitate the transmission of HIV. Besides HIV positive mothers can pass HIV to their children. Family planning programs should be involved in developing community based STD/AIDS prevention efforts. In addition, reproductive health professionals must face the social dynamics that prevent existing programs from controlling STDs/AIDS (Elias,C:1991).STIs causing genital ulcers most significantly increase the chances of HIV acquisition per sexual act the most. Herpes simplex virus and ulcerative STIs, such as syphilis and chancroid, increase the risk of HIV transmission through direct contact with bodily fluids and presence of open sores and blisters/ulcers allowing greater access of the virus to the bloodstream. Bacterial vaginosis and inflammation-causing STIs, such as gonorrhea, chlamydia, and trichomoniasis, increase the risk of HIV infection through urethral and endocervical infections allowing for more efficient exchange of infectious particles. However, the relationship between HIV and other STIs

extends beyond the increased risk of HIV transmission, because an HIV-infected individual often suffers damage to the immune system, making him or her more susceptible to contracting other infections, including RTIs (Busza J; Hawkes S: 1999).

HIV and other sexually transmitted infections (STIs) may interact with each other through the effects of STIs on HIV or through the effects of HIV on STIs. It was demonstrated that certain STIs might facilitate the transmission of HIV, which increases the susceptibility of a seronegative individual to HIV infections. The increase in HIV shedding also leads to the infectivity of a seropositive individual. On the other hand, the effects of HIV on other STIs are due to the immunological abnormalities associated with those STIs. The actual effects include alterations in the clinical presentation and the natural history of STIs, the reliability of diagnostic tests, and the response to conventional treatment (Arya, OP: 1998).

The prevention and control of sexually transmitted infections (STIs) had not been earlier a priority for governments and international development agencies due to lack of awareness of the health and socioeconomic consequences of STIs. Due to the commonality of intervention strategies, control programs are now aiming more and more at HIV/AIDS and other STIs. These programs include intervention strategies aimed at decreasing the incidence and prevalence of STIs and support components that increase the effectiveness of the interventions. Major intervention strategies include primary prevention mainly through health promotion; adequate and comprehensive STI patient management, mainly through curative health services; early detection of STIs through screening and case finding; and partner referral and treatment. Since HIV/AIDS and other STIs are significant health problems in the developing world and their importance is still increasing, an expansion in program activities is required; however, it can only be possible if the programs deliver value for money through adequate program management (Meheus, A: 1998). Therefore, the planning and the implementation of HIV/AIDS/STI prevention and control programs should comprise a number of steps as part of a systematic approach.

The problem of STDs, RTIs, and HIV/AIDS among women aged 15-49 years is increasing at an alarming rate. Certain biological risk factors and cultural practices enhance the vulnerability of women of reproductive age. Among these biological risks are age, gender, blood transfusion during pregnancy and childbirth, and the development of asymptomatic STDs/RTIs. These are exacerbated by cultural practices like douching with pharmaceutical products, use of intravaginal substances, and the practice of anal sex. STDs, RTIs, and HIV/AIDS affect female reproductive health in certain ways: mother-to-child transmission, effects on pregnancy (spontaneous abortion, premature birth, stillbirth, low birth weight, ectopic pregnancy), infertility, cancer, and rise in AIDS-related mortality. On the other hand, society will experience an increase in orphans, destabilization of the family unit, and a reduction in family income. Considering the impact of these diseases on the reproductive health of women and the community, measures should be taken to prevent and control the epidemic (Nahar, A; Azad, AK: 1999).

The spread of reproductive tract infections (RTIs) and sexually transmitted diseases (STDs) including AIDS in India has been posing a major public health threat since more past 1 decade. According to India's National AIDS Control Organization (NACO), heterosexual contact is the main mode of HIV transmission in India; HIV is thought to be transmitted in most of the northeastern states largely through IV drug use. Many researchers have noted the existence of widespread awareness on the basic messages about AIDS, but there is often inadequate understanding of the disease. Even though people have been bombarded with basic information, they remain poorly informed. Wherever awareness about AIDS was high, the level of misconceptions about its transmission was also high. The nature of women's knowledge and misconceptions is described (Rangaiyan G and et al.:1998).

The role of parents in the prevention of HIV/AIDS among the youth in India is also studied (Thangathurai, S: 1996). About 1 million people were already diagnosed with HIV infection and 10,000 cases with AIDS. Since the trend of HIV infection is high among young women due to biological and social reasons, an AIDS awareness program is highlighted. The Universities Talk AIDS project, which was launched under the National Service Scheme, was established to educate young students to control the spread of the disease. Several strategies for controlling HIV/AIDS include the following: 1) information, education, and communication; 2) control of STDs; and 3) condom programming. Since 90% of HIV/AIDS is acquired through sexual intercourse, focus has to be on safer sex with the use of condoms. Condom programming is

vital for teenagers in controlling HIV/AIDS and everyone should provide every opportunity to spread the information about the prevention

HIV and AIDS prevalence in India have been on the rise for more than a decade and reached larding proportions in recent years. Though, HIV was reported in India much later than US and Africa but keeping in view it is a large population base the number of HIV infected persons is rapidly increasing. As reported in 1998, there were 3-5 million people living with HIV/AIDS in India but it is estimated that India would be the single largest country with HIV infected persons by the year 2000. The incidence of this risky behavior gets multiplied in case of less skilled, low educated and poorly paid laborers living in urban slum which in turn lead to high incidence of RTIs, STDs and HIVs in urban areas. Therefore, in this study an attempt is made to see the awareness and perception about curability of RTIs, sexually transmitted infections (STIs) and HIV/AIDS, among males and females in different major states in India. For example, in India awareness of HIV/AIDS among currently married women aged 15-44 is 41.1%, but for males aged 20-54 it is 57.4%. Among the major states in India, awareness of HIV/AIDS in Kerala is 97.4% and 91% for males and females, respectively, which is more compared to other states; in Bihar it is 38.9% for males and 13% for females, which is least compared to other states. RTIs and STIs of India and its states follow the same trend. A statistical analysis is also drawn, which shows the multiple relationships with their socioeconomic background characteristics by using multiple regression analysis. The data used for this analysis is from "Rapid House Hold Survey on Reproductive and Child Health, 1998- 99." (Krishnaiah, S and Murugesan, P: 2001).

Survey Results and findings

RHS-RCH Study (1998): For districts of Bihar and Jharkhand States, the Population Research Centre, Patna undertook the Rapid Household Survey (RHS) on the Reproductive and Child Health (RCH) objectives in the two phases in 1998 and 1999. In the first phase of study a total of 21 districts were covered from the untruncated Bihar and in the second phase of study the remaining districts were covered. In the first phase of study the districts namely; Deoghar, Dumka, Giridih, Hazaribagh, Palamu, Paschimi Singhbhum and Sahebganj were covered from Jharkhand States. Tables 1 and 2 present the result of awareness of RTI, STI, HIV/AIDS and symptoms of RTI among the males and females respectively based on the districts covered in Jharkhand State. There are wide district level variations in the knowledge of RTI and STI among men and women. The awareness of RTI and STI is high in Godda (66.8 percent) and Lohardaga (68.8 percent) districts respectively for men and Dumka (98.6 percent) and Ranchi (93.1 percent) districts respectively for women and low in Hazaribagh district for both in Jharkhand State. The level of awareness of HIV/AIDS varies from highest of 78.5 percent among men and 45.1 percent among women in Purbi Singhbhum district to the lowest of 15.3 percent among men in Gumla, and 5.9 percent among women in Sahebganj district. In every district, a very low percentage of men who have heard of HIV perceive that HIV/AIDS is curable which is ranging from 2.7 percent to 21.5 percent. However, the majority of women from Dumka (92.2 percent), who have heard of HIV/AIDS have pointed out that it is curable. With at least one symptoms of RTI is found to be highest of 28 percent among men in Palamu district and 49 percent among women in Deoghar district.

Table 1: Awareness of RTI, STI and HIV/AIDS among males* in districts of Jharkhand

Name of the district	Aware of RTI	Feel RTI is curable	Aware of STI	Feel STI is curable	Aware of HIV/ AIDS	Feel HIV/ AIDS is curable	With symptoms of RTI
Deoghar	58.7	74.5	47.3	80.1	18.0	21.5	26.0
Dhanbad	45.5	97.4	55.3	88.3	21.2	18.8	13.8
Dumka	50.3	96.1	63.1	97.2	40.5	5.4	23.8
Giridih	21.3	30.0	20.0	40.4	31.6	2.7	6.4
Godda	66.8	91.2	65.4	92.9	41.9	4.8	12.9
Gumla	43.1	93.6	57.5	90.7	15.3	7.3	17.9
Hazaribagh	9.6	70.0	9.9	64.5	43.7	5.1	20.2
Lohardaga	54.2	95.4	68.8	95.4	38.0	7.6	22.6
Palamu	9.2	90.0	19.2	78.3	43.2	9.0	28.0
Paschim Singhbhum	25.8	100.0	27.3	94.8	34.7	8.1	18.4

Purbi Singhbhum	82.2	96.1	60.8	96.9	78.5	5.5	7.8
Ranchi	50.0	97.1	64.1	83.7	52.2	4.5	17.6
Sahebganj	17.2	34.6	27.8	29.7	19.5	3.3	3.6
Jharkhand	41.1	82.0	45.1	79.4	36.8	7.9	16.8

*Males age 20-54 who are aware of RTI, STI and HIV/AIDS and who have reported at least one symptoms of RTI.

Table 2: Awareness of RTI, STI and HIV/AIDS among females* in districts of Jharkhand

Name of the district	Aware of RTI	Feel RTI is curable	Aware of STI	Feel STI is curable	Aware of HIV/ AIDS	Feel HIV/ AIDS is curable	With symptoms of RTI
Deoghar	79.9	87.0	59.0	82.4	12.6	64.1	49.1
Dhanbad	56.9	93.6	91.4	86.3	6.7	9.4	33.4
Dumka	98.6	99.5	62.6	96.3	14.5	92.2	35.8
Giridih	37.8	78.9	25.5	82.0	10.6	42.8	31.9
Godda	89.8	91.6	33.2	92.9	33.1	8.1	32.2
Gumla	66.6	90.4	71.1	56.5	12.2	7.8	39.0
Hazaribagh	10.8	76.0	8.9	54.0	16.6	22.1	14.3
Lohardaga	82.0	92.0	41.3	92.6	11.7	7.0	37.8
Palamu	18.7	64.5	23.0	51.2	7.2	39.2	23.0
Paschim Singhbhum	65.6	95.8	18.1	88.5	16.2	49.7	19.6
Purbi Singhbhum	94.6	98.0	41.5	98.6	45.1	9.4	23.1
Ranchi	58.8	95.1	93.1	56.1	20.2	14.6	25.5
Sahebganj	58.6	93.2	40.9	91.4	5.9	77.2	46.2
Jharkhand	62.9	88.9	46.8	79.1	16.3	34.1	31.6

* Currently married women age 15-44 who are aware of RTI, STI and HIV/AIDS and who have reported at least one symptoms of RTI in districts of Jharkhand.

MICS-I study (1997-98): In the Multi Indicator Cluster Survey-I (MICS-I) the married women were interviewed in the untruncated Bihar with aims to improve the health, family welfare, nutrition and educational status of women and children in collaboration with the other agencies. The knowledge of AIDS in villages and slums was assessed through large sample size representing Bihar and Jharkhand States. About 14 and 20 percents of the women respectively in slums and in the villages of the States heard of AIDS. In the villages, about 28 percent of the women reported sexual intercourse as the major source of transmission of AIDS. The situation in the slum areas was also not satisfactory. Among them, only 10.4 percent reported that the sexual intercourse as the major source of transmission of AIDS while only a marginal proportion (0.3 percent) reported the heterosexual intercourse as the cause of AIDS. However, in India the data for age at first intercourse/level of premarital sex and number of individuals with sexual partners are not available (Kumar, Dilip: 1999). In general it was found that blood transfusion has the 90 percent efficiency per single exposure with 3 to 5 percent of HIV infection risk whereas sexual intercourse has about one percent of efficiency of single exposure but having the HIV infection risk factors of about 80 to 90 percent (Table 4). It was found that most of them (84 percent) had no knowledge of AIDS-transmission. A small proportion of the women in the slum areas had reported about how to avoid AIDS by using condoms during each intercourse (2.6 percent),sterilizing needles and syringes for injection (2.6 percent) and checking blood prior to transfusion (2.9 percent). The current use of condoms was reported to be about one percent (NFHS-2: 2001), which is of great scope for the enhancement of the use of condoms for the birth spacing and protection from AIDS. Here even most of the women (91 percent) had no knowledge about how to avoid AIDS in the slum areas.

Table 3: Knowledge of AIDS

Knowledge of AIDS	Rural clusters	Slum clusters
Heard of AIDS	20.3	13.9

Transmission happens through		
- Sexual intercourse	28.0	10.4
- Homosexual intercourse	2.6	2.8
- Heterosexual intercourse	0.8	0.3
- Needle/blades/skin puncture	0.6	2.9
- Mother to child	0.2	0.3
- Transfusion of infected blood	0.2	1.1
- Others	6.7	10.2
- Don't know	81.2	83.7
How to avoid AIDS		
- Using condoms during each intercourse	12.6	2.6
- Safe sex	2.7	2.9
- Checking blood prior to transfusion	0.8	0.5
- Sterilizing needle and syringes for injection	0.1	2.6
- Avoiding pregnancy when having AIDS virus	-	0.3
- Others	0.6	0.1
- Don't know	83.2	91.0
Total number of respondent	1739	2689

Table 4: Type of exposure with efficiency and number of HIV infected

Type of exposure	Efficiency per single exposure	Total No. of HIV infected
Blood transfusion	90%	3%-5%
Mother to child	15%-45%	0.1%
Injecting drug use	0.5%-1%	5%-10%
Sexual intercourse	0.1%-1%	80%-90%

Conclusion

It is evident that there is correlation between sexually transmitted infections (STIs) and HIV infections and the development of AIDS. HIV and other sexually transmitted infections (STIs) may interact with each other through the effects of STIs on HIV or through the effects of HIV on STIs. The problem of STDs, RTIs, and HIV/AIDS among women aged 15-49 years is increasing at an alarming rate. In India awareness of HIV/AIDS among currently married women aged 15-44 is 41.1%, but for males aged 20-54 it is 57.4%. The level of awareness of HIV/AIDS varies from highest of 78.5 percent among men and 45.1 percent among women in Purbi Singhbhum district to the lowest of 15.3 percent among men in Gumla, and 5.9 percent among women in Sahebganj district. The majority of women from Dumka (92.2 percent), who have heard of HIV/AIDS have pointed out that it is curable. In the villages, about 28 percent of the women reported sexual intercourse as the major source of transmission of AIDS. In general it was found that blood transfusion has the 90 percent efficiency per single exposure with 3 to 5 percent of HIV infection risk whereas sexual intercourse has about one percent of efficiency of single exposure but having the HIV infection risk factors of about 80 to 90 percent. It was found that most of them (84 percent) had no knowledge of AIDS-transmission. Here even most of the women (91 percent) had no knowledge about how to avoid AIDS in the slum areas.

Policy implications

1. Awareness of the potential risks and more open discussion is necessary, both publicly and privately.

2. The health-seeking behavior of women for FP/MCH services must provide an opportunity to address their RTI/STI problems.

3. The basic components of RTI/STI services must exist in the system and providers need to be more proactive to utilize these opportunities.

4. Existing training programs can be used to help providers adopt a holistic concept of reproductive health; and providers need support and competency-based supervision.

5. To assess and improve the effectiveness of the syndromic approach toward diagnosing and managing RTI/STI in the maternal-child health/family-planning program of government health centers.

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