An assessment of the awareness and practices regarding HIV/AIDS among married women of the reproductive age group in urban slums of Eastern Uttar Pradesh

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ABSTRACT
Background: HIV/AIDS is such a dreaded disease which can be prevented if the people are aware of the ways to do so. Urban slums share a specific position in the demographic profile of district because of the inequalities of health care system where the rural health care system is far to reach and the more flourished private health care system is unaffordable for most of the inhabitants. HIV/AIDS is not only a health-related problem but it also has socioeconomic, behavioral and cultural aspects.

Methods: Descriptive cross-sectional among currently married women in reproductive age group (15-49 years) residing in any of the selected urban slums of district Gorakhpur. Cluster sampling was used and clusters were chosen by probability proportional to size (PPS) method of cluster sampling from a list of urban slums obtained from District Urban Development Authority (DUDA), Gorakhpur. The final sample size was 600.

Results: 82% of women had ever heard about HIV/AIDS and 72% of women got the knowledge about HIV through television followed by 56% of woman who got knowledge by relatives and friends. 68% of woman believes that the mode of transmission of HIV is unsafe sex followed by 58% of women who believed that infected blood transfusion is the mode of transmission of HIV.

Conclusions: Awareness is crucial in the prevention and control of HIV/AIDS. Women should have more access to the knowledge resources and facilities for testing and prevention of HIV/AIDS.

Keywords: Slums, HIV/AIDS, KAP, Information sources

INTRODUCTION
Human immunodeficiency virus (HIV)/ acquired immunodeficiency syndrome (AIDS) is a major and one of the most serious public health challenges in today’s world. In a developing country like India where the health care services are not accessible to a large proportion of population any disease burden which is preventable must be tried to be prevented. People living in slum areas are at high risk of HIV infection/AIDS due to high population density, migrant population, and a higher prevalence of substance dependence. Prevention and control of HIV/AIDS depends on general knowledge and attitude towards HIV/AIDS. HIV/AIDS is such a dreaded disease which can be prevented if the people are aware about the ways to do so. Urban slums share a specific position in the demographic profile of district because of the inequalities of health care system where the rural health care system is far to reach and the more flourished private health care system is unaffordable for most of the inhabitants.
Many times the people who settle themselves in the outskirts of big cities in slum setting include those families in which the earning member alone or with family has migrated into that city from small towns or villages. Gorakhpur is a city which attracts migrants.

HIV/AIDS is not only a health related problem but it also has socioeconomic, behavioural and cultural aspects. Current study tried to assess the awareness and practices of currently married women living in the slums of Gorakhpur city.

**Objectives**

- To assess the knowledge among women about HIV/AIDS.
- To study the factors affecting knowledge among women about HIV/AIDS.
- To assess the gap between knowledge and practice towards prevention of HIV/AIDS.

**METHODS**

**Study design:** Descriptive cross-sectional.

**Study unit**

The study unit consisted of currently married woman in reproductive age group (15-49 years) residing in any of the selected urban slum of district Gorakhpur.

**Study place:** Urban slums of district Gorakhpur.

**Study period:** September 2013.

**Sample size**

The required sample size was calculated by the formula:

\[ n = \frac{z^2 \times P \times (1-P)}{d^2} \]

\( n = \) sample size, \( P = \) estimated prevalence of RTI, \( d = \) precision, \( Z = 1.96. \)

Prevalence was taken as 50%. (So as to yield the maximum sample size at a defined confidence interval and precision)

Taking precision \( d = 6\% \)

\[ n = (1.96)^2 \times 0.5 \times 0.5/(0.06)^2 = 267. \]

Since the subjects were chosen by cluster sampling method, a design effect due to complex sample design comes into picture. Taking into account the design effect of 2, the sample size was

\[ 2 \times 267 = 534. \]

So from each cluster 20 currently married females of reproductive age group were interviewed (taking 10% more from each cluster).

**Sampling technique**

Cluster sampling was done to select the representative population of the urban slums of district Gorakhpur. Clusters were chosen by probability proportional to size (PPS) method of cluster sampling from a list of urban slums obtained from District Urban Development Authority (DUDA), Gorakhpur.

**Inclusion criteria**

All currently married females who were permanent residents of that area (guests were excluded) of reproductive age group (15-49 years) of age who were agree for the interview.

**Exclusion criteria**

Exclusion criteria were currently married females who did not give consent to participate in the study.

**Study procedure**

A preformed pretested semi open ended interview schedule was used after taking informed consent from the study participants.

**Statistical software**

Data was entered and analysed using Microsoft Excel 2010.

**Ethical clearance**

Ethical clearance was taken before start of study from ethical committee of the institute.

**RESULTS**

Table 1 reveals the distribution of study participants on the basis of socio demographic factors. 69.2% participants were in the age group of 21-30 years, 245 (40.8%) were illiterate and 325 (54.2%) had consummated marriage before 18 years of age.

Table 2 depicts that 72% women got the knowledge about HIV through television followed by 56% of woman who got knowledge by relative and friends. As far as the knowledge about the place of getting tested for HIV, 54% women said they don’t have knowledge about the place for testing the HIV while 29% of woman said the test could be done in government as well as private hospitals.

When enquired about the mode of transmission, 68% of woman believes that the mode of transmission of HIV is
unsafe sex followed by 58% women who believed that infected blood transfusion is the mode of transmission of HIV. 61% of women have sufficient knowledge about the mode of transmission of HIV while 39% of women have poor knowledge.

Table 1: Sociodemographic profile of respondents.

| Age group (woman)         | No. | %   |
|---------------------------|-----|-----|
| Less than 20              | 28  | 4.7 |
| 21-30                     | 415 | 69.2|
| 31-40                     | 128 | 21.3|
| 41-50                     | 29  | 4.8 |
| Total                     | 600 | 100.0|
| Religion                  |     |     |
| Muslim                    | 148 | 24.7|
| Hindu                     | 452 | 75.3|
| Total                     | 600 | 100.0|
| Socioeconomic class       |     |     |
| Lower                     | 134 | 22.3|
| Lower/upper lower         | 411 | 68.5|
| Middle/lower middle       | 47  | 7.8 |
| Upper middle              | 8   | 1.3 |
| Total                     | 600 | 100.0|
| Educational status        |     |     |
| Illiterate                | 245 | 40.8|
| Primary                   | 126 | 21.0|
| Up to 8th std.            | 79  | 13.2|
| Up to 10                  | 77  | 12.8|
| 12th std.                 | 29  | 4.8 |
| Graduate and above        | 44  | 7.3 |
| Total                     | 600 | 100.0|

Table 2: Knowledge about HIV (multiple responses).

| Source of knowledge about HIV                              | No. | %   |
|-----------------------------------------------------------|-----|-----|
| Radio                                                     | 61  | 10  |
| Television                                               | 432 | 72  |
| Newspaper/magazine                                       | 142 | 24  |
| Slogans/posters/pamphlets/wall hoardings                 | 154 | 26  |
| Husband                                                  | 166 | 28  |
| Relative/friends                                         | 334 | 56  |
| Co-workers                                               | 11  | 2   |
| Doctor                                                   | 44  | 7   |
| Health workers                                           | 12  | 2   |
| School/others                                            | 9   | 2   |
| Any source of knowledge                                  | 494 | 82  |
| Where is that place                                      |     |     |
| Don't know                                               | 326 | 54  |
| Govt. Hospital                                           | 77  | 13  |
| Pvt. Hospital                                            | 2   | 0   |
| Both govt. and pvt. hospital                             | 175 | 29  |
| District hospital                                         | 4   | 1   |
| Medical college                                          | 16  | 3   |
| Total                                                    | 600 | 100 |

Continued.
**Mode of transmission of HIV (multiple response)**

| Mode of transmission                        | No.  | %  |
|--------------------------------------------|------|----|
| Unsafe sex                                 | 406  | 68 |
| Infected needle                            | 336  | 56 |
| Infected mother to foetus                  | 335  | 56 |
| Infected blood transfusion                 | 350  | 58 |
| Hugging and shaking hands with infected people | 102  | 17 |
| Mosquito bite                              | 194  | 32 |
| Unsafe sex with people having multiple sex partners | 406  | 68 |
| Doesn't have any knowledge                 | 189  | 32 |

**Level of knowledge about mode of transmission**

| Level of knowledge                        | No.  | %  |
|-------------------------------------------|------|----|
| No knowledge                               | 189  | 31 |
| Poor                                       | 47   | 8  |
| Moderate                                   | 199  | 33 |
| Good                                       | 165  | 28 |
| Total                                      | 600  | 100|

**Table 3: Association between level of knowledge about HIV and socio-demographic factors.**

| Association between level of knowledge about HIV and education | Poor | Moderate | Good | Total | P=0.00 |
|----------------------------------------------------------------|-----|----------|------|-------|--------|
| Illiterate                                                   | 27  | 42       | 47   | 116   |        |
| Up to 10th                                                   | 15  | 113      | 97   | 225   | Chi-square-28.85 |
| More than 10th                                               | 5   | 44       | 21   | 70    | df-4   |
| Total                                                        | 47  | 199      | 165  | 411   |        |

| Association between level of knowledge about HIV and age       | <20 | 1        | 10   | 6     | 17 | P=0.14 |
|----------------------------------------------------------------|----|---------|------|------|----|--------|
| 21-30                                                        | 29  | 144      | 117  | 290  | Chi-square-8.62 |
| 31-40                                                        | 17  | 38       | 35   | 90   | df-6 |
| 41-50                                                        | 0   | 7        | 7    | 14   |        |
| Total                                                        | 47  | 199      | 165  | 411  |        |

| Association between level of knowledge about HIV and socioeconomic class | Lower | 47 | 163 | 149 | 359 | P=0.00 |
|--------------------------------------------------------------------------|-------|----|-----|-----|------|--------|
| Middle                                                                   | 0     | 36 | 16  | 52  | Chi-square-19.43 |
| Total                                                                    | 47    | 199| 165 | 411 | df-2 |

**Table 4: Association between having knowledge about HIV and practices regarding HIV.**

| Association between having knowledge about HIV and they have been tested | Tested | Not tested | Don't know | Total | P=0.00 |
|--------------------------------------------------------------------------|--------|------------|------------|-------|--------|
| Yes                                                                      | 95     | 282        | 33         | 410   |        |
| No                                                                       | 5      | 150        | 35         | 190   | Chi-square-47.05 |
| Total                                                                    | 100    | 432        | 68         | 600   | df-2   |

| Association between having knowledge about test centre for HIV and they have been tested | Tested | Not tested | Don't know | Total | P=0.00 |
|--------------------------------------------------------------------------------------------|--------|------------|------------|-------|--------|
| Yes                                                                        | 84     | 172        | 18         | 274   | P=0.00 |
| No                                                                         | 16     | 260        | 50         | 326   | Chi-square-75.28 |
| Total                                                                      | 100    | 432        | 68         | 600   | df-2   |
Table 3 shows that there is association found between the level of knowledge about HIV and their education, the p value is highly significant (p<0.01). There is no association found between the level of knowledge about HIV and age, the p value is not significant. Statistically significant association was found between the level of knowledge about HIV and their socioeconomic class, (p<0.01).

There is no association found between the knowledge about HIV and years of consummation of marriage, the p value is not significant.

Table 4 shows that there is association between knowledge about HIV and having been tested, p value is found to be highly significant (i.e., <0.01). There is association between knowledge about HIV test centres and having been tested, p value is found to be highly significant (i.e., <0.01).

**DISCUSSION**

In our study out of 600 women, 494 (82%) women had ever heard the about HIV/AIDS. Biradar et al have reported that among their study population majority (77.5%) had heard about HIV/AIDS. In the study conducted by Chatterjee et al. Only 236 (67%) of the 350 women interviewed had heard of AIDS and Basu et al had reported that 633 (100%) of the study population had heard about HIV/AIDS. Ye et al 91.6% reported that they had ever heard of HIV/AIDS obtained from various sources. Similar to the results of the study conducted by Sylvia et al. Contrary to only 16% respondents who had ever heard of HIV in the study by Ranjan.

Majority of our study participants that is 432 (72%) got the knowledge about HIV through television followed by 56% of woman who got knowledge by relative and friends. The main source of knowledge about HIV/AIDS was television (55.3%), followed by magazine/newspaper (34.9%) in the study by Ye et al. In the study conducted by Biradar et al (45.6%) study participants had gained knowledge about HIV/AIDS through health worker, (29.3%) through media and (14.9%) through doctors.

When enquired about the mode of transmission, 68% of woman believes that the mode of transmission of HIV is unsafe sex followed by 334 (58%) women who believed that infected blood transfusion is the mode of transmission of HIV. Whereas only (19.3%) participants in the study by Sylvia et al did not mention about sexual route of HIV transmission. In our study 58% women believed that infected blood transfusion is the mode of transmission of HIV which was more than 90% in the study conducted by Basu et al. In the study conducted by Biradar et al 20.4% participants told that HIV/AIDS spreads through unprotected sex. 17.0% participants told that HIV/AIDS spreads through blood products and 6.3% participants told that HIV/AIDS spreads through mother to child. Nearly half of the study participants according to Juliet Sylvia et al had misconceptions regarding routes of transmission such as mosquito bites and sharing food similar to that found in our study where 49% study participants reported that HIV/AIDS can be transmitted by mosquito bite and hugging the infected person. As far as the knowledge about the place of getting tested for HIV, 54% women said they don’t have knowledge about the place for testing the HIV while 29% of woman said the test could be done in government as well as private hospitals. It was similar to the results as reported by Sylvia et al. 364 (61%) of women had sufficient knowledge about the mode of transmission of HIV while 236 (39%) of women had poor knowledge in our study.

There is association found between the level of knowledge about HIV and their education, the p value is highly significant (p<0.01). Statistically significant association was found between the level of knowledge about HIV and their socioeconomic class, (p<0.01) There is association between knowledge about HIV and they have been tested, p value is found to be highly significant (i.e., <0.01). There is association between knowledge about HIV test centres and they have been tested, p value is found to be highly significant (i.e., <0.01).

Except caste (subgroup within a religion), none of the demographic factors were found significantly associated with knowledge level about HIV/AIDS in the study conducted by Ranjan.

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**Conflict of interest: None declared**

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