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### **Full Length Review Article**

## **KNOWLEDGE, ATTITUDE AND PRACTICE ON HIV/AIDS AMONG RICKSHAW PULLERS IN CHITTAGONG CITY**

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#### **ABSTRACT**

HIV/AIDS is a serious public health and alarming burden disease in Bangladesh. The aim of the present study was to identify HIV related knowledge, attitude and practice of rickshaw pullers are utmost needed to know and preventive measures of HIV/AIDS. This descriptive type of cross sectional study was conducted to assess the level of knowledge, attitude and practice of rickshaw pullers on HIV/AIDS in Chittagong city. Regarding knowledge on HIV/AIDS 97% of the respondents were heard regarding HIV/AIDS. Only 3% of the respondents were found high knowledge, 42% of the respondent's knowledge were medium and 48% of the respondent's knowledge were low. On contrary, preventive knowledge was mostly related to avoiding sex with female sex workers (FSWs). 80% said avoiding sexual intercourse with commercial sex workers (CSWs), 40% said not to share needle uses by other person, 27% respondents were mentioned avoiding sexual intercourse with HIV infected person and 20% were mentioned about using condom at every sex. The study revealed that 90% of the respondents think that HIV positive person is a bad man and 83% of the respondents were denied maintaining relationship due to fear of being infected. Out of all the respondents, only 7% were found to use any male contraceptives method. However, this percentage was lower among those who involved in extra marital sex. Only 3% of the respondents were found to use contraceptive during 1st sexual intercourse. The percentage of condom user among those who involved in extramarital sex was 2% only

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#### **INTRODUCTION**

Developing countries like Asia, Bangladesh still has a low prevalence of HIV case, where as the adult prevalence of HIV infection was estimated to be below 0.1% (Anonymous, 2008). However, the overall prevalence of HIV infection among most at-risk populations is increasing with each subsequent round of national HIV serological and behavioral surveillance (from 0.2% in the 2<sup>nd</sup> round of surveillance to 0.9% in the 7<sup>th</sup> round of surveillance), mostly due to increased HIV prevalence among injecting drug users (IDUs). According to the results from the recent round of surveillance, the HIV epidemic appears to have reached to a concentrated level (7%) among IDUs in Dhaka city, the capital of Bangladesh (Anonymous, 2008; Anonymous, 2009; Chan *et al.*, 2007; Anonymous, 2004; Anonymous. 2003; Anonymous. 2002).

In order to explore the future course of the HIV epidemic and to develop the most appropriate preventive measures, it is important to monitor the prevalence of HIV-related risk behaviors among high risk groups, the behavior networks within and between the high risk groups and their changes over time, which is the role of behavioral surveillance. In 1998, Bangladesh adopted one of the world's most comprehensive behavioral surveillance systems. Updated surveillance has revealed the presence of close sexual networks of IDUs with other high risk groups, especially female sex workers (FSWs) (Anonymous, 2009; Anonymous, 2004; Anonymous. 2003; Anonymous. 2002). FSWs were, on the other hand, shown to have close sexual links with multiple male client groups, not restricted to IDUs. According to recent rounds of behavioral surveillance, rickshaw pullers in Dhaka city are among the client groups of street and brothel based FSWs. The study showed that around as 50% to 72.8% of the rickshaw pullers having sex with FSWs in the last month and 12 months, respectively, without consistently using a condom

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(Anonymous, 2004). As more than 2 million rickshaws are estimated to be operating nationwide (Anonymous, 2001) and with 0.3 million in Dhaka city (pulled by more than 0.5 million rickshaw pullers) (Anonymous, 2006), the HIV-related risk behaviors' of the rickshaw pullers may have a substantial impact on the future course of the HIV epidemic in Bangladesh. However, one study conducted by Population Council in 6 areas of Dhaka division including 2 areas of Dhaka city demonstrated only 2.69% of married pullers having sex with FSWs in the last 3 months (Anonymous, 2006 A). In addition, in spite of such a potential importance of this population in the context of the HIV epidemic in Bangladesh, there is little intervention activities toward this population; even the correlates of the HIV-related risk behaviors which are critical for a focused intervention program have never been identified.

As per BSS 7th round survey it was found that 0.9 percent vulnerable population have infected with HIV. Among them 7 percent of the IDUs were found infected with HIV. Rickshaw puller is one of the most at risk group population. Knowledge attitude and practice of rickshaw puller need to know how to combat HIV/AIDS. Among the vulnerable groups of HIV/AIDS is mostly limited to IDUs and FSWs. Recent rounds of behavioral surveillance, rickshaw pullers in Dhaka city are among the client groups of street and brothel based FSWs. 72.8% of the rickshaw pullers having sex with FSWs in the last 12 months, mostly without consistently using a condom (Anonymous, 2004). As more than 2 million rickshaws are estimated to be operating nationwide (Anonymous, 2001) and with .3 million in Dhaka city (pulled by more than .05 million rickshaw pullers (Anonymous, 2006). The HIV-related risk behaviors of the rickshaw pullers may have a substantial impact on the future course of the HIV epidemic in Bangladesh. HIV/AIDS is a serious concern in Bangladesh. Most at risk group are CSW, MSM, IDU, rickshaw puller, truckers/helpers, hijra and youth. We therefore decided to conduct a cross-sectional study on the HIV-related risk behavior of rickshaw pullers of Chittagong city in a specified geographical area to accurately describe the HIV-related risk behavior profile of this population and its correlates using probability samples.

## MATERIALS AND METHODS

The study design was a descriptive cross-sectional study. Sample population of this study was rickshaw puller in Chittagong city. Study Area was Andorkilla & Pahartoli in Chittagong city. The study periods were Jan 2011 to Apr 2011. The study universe was the rickshaw pullers of Chittagong City. The age of rickshaw pullers were 15-50 and who was willing to participate in the study were included in the study. Sample size of this dissertation proposal was calculated with 95% significance level. P is considered 50% since the data or similar finding of the population that were not available [ $n = (z^2 p * q / d^2) * DE$ ]. Multi stage random sampling procedure was used. In the first stage, two Thana were selected and mapping was creating to identify the rickshaw garage. Then a list of rickshaw garage was made from the select Thana in order making a sampling frame. After making the sampling frame 44 rickshaw garages were selected. From each garage 10-12 rickshaw pullers were selected. A total of

449 rickshaw pullers were selected randomly and interviewed using PPS method. The selected rickshaw garages were considered as cluster in this study. Structured questionnaire were developed for face to face interview. However, for FGD a checklist was prepared and use. Survey tool were pre-tested in order to see any inconsistency, language, checking the skipping instruction, time required and any other issues related to the survey and finalize. Data of this study were managed and analyzed through SPSS version 16 and Stata 8.0 version. Data management and analysis was included entry and entry verification, cleaning and processing of data, coding and code transfer, development of analysis plan, analysis program development & program running and report generation. Ethical clearance was taken from the ethical review committee of BMRC and North South University to conduct the study.

## RESULTS

A total of 449 rickshaw pullers were interviewed. Mean age of the respondent was 31. Most of the respondents were in the age group of 26-30 years. One-fifth (20%) of the respondents were in the age group of 21-25 years, 16% in the age group 31-35 and 15% in the age group of 36-40 years. A little over one in ten respondent were in the age group of 40 years and above. However, small proportions of respondents (7%) were in the age group 20 years and or below.

### **Education of the respondent**

Table 2 shows that more than half (57%) of the respondents were illiterate. Among those who had 1 to 12 years of education was shown in the Table 3. Among those who were literate 61% of them had 1 to 5 years of education. More than one-thirds (35%) of the respondent had 6 to 9 years of education. However, 3% of the respondents had 10-12 years of education.

### **Religion of the respondent**

99 percent of the respondents were Muslim and only one percent of the respondents was Hindu.

### **Marital status of the respondent**

86% respondents were married and 14% were unmarried. Forty eight percent (48%) of the respondents got marriage at the age 18-21 years while 47% of them got marriage at the age of 22-25 years. A very small percentage of the respondents (3%) got marriage after the age of 25 years. However, the mean age of marriage (21%) which matched with national age of marriage for boy. The study also inquired the age of wife of the respondent and the findings revealed that 50% of the wives of the respondents were in the age of below 18 years.

### **Income of the respondent**

The study investigated the monthly income of the respondents. More than three-fifths of the respondents (64%) were earned Tk. 4001-6000 in a month. While 11% of the respondents' monthly income was Tk.6001-8000, 6% of the respondents' monthly income was Tk.8001-10000 and 7% of them had more than Tk.10000. However, 13% of the respondents' monthly income was less than Tk.4000.

## Knowledge about HIV/AIDS

Ninety seven percent of the respondents heard about HIV/AIDS. In response to a question how a person can get HIV/AIDS? 90 percent of the respondent said through sexual contact with CSW. 47% of the respondents said sexual contact with HIV/AIDS infected person. Sharing needle/syringe can cause HIV/AIDS was mentioned by 42 percent of the respondents. 18% of the respondent mentioned that a man can get HIV/AIDS, if he received blood from HIV infected person. However, another 12% of the respondent mentioned that HIV can spread through receiving blood from other people. Mother to child transmission was reported by 7% of the respondents which was being followed by polygamy (3%). A special analysis was done considering the valid response of getting HIV/AIDS and the respondents were categorized in 3 categories-high, medium and low. Our finding showed that only 3% of the respondent had high knowledge, 42% of the respondents' knowledge was medium and 48% of the respondents' knowledge was low. There was an association between knowledge level and education ( $p=.03$ ) of the respondents.

**Table 1. % Distribution of respondents by knowledge of ways to get HIV/AIDS**

Ways to get HIV/AIDS	%
Through sexual intercourse with CSW	89.6
Through sexual intercourse with AIDS patient	46.8
Through sharing needle/ syringe	42.2
Receiving blood from HIV infected person	17.5
Through receiving blood from others people	11.5
From mother to child	6.9
Through sexual intercourse with multiple partners	3.2
N=	434

Other than the spread of HIV/AIDS respondents were asked, how can prevent HIV/AIDS? Table 2 showed that 86% of the respondent said people can prevent HIV through avoiding sexual intercourse with CSW. About 40% of the respondent said not to share needle uses by other person. Likewise, 27% of the respondent mentioned that a person can protect himself from HIV/AIDS through avoiding sexual intercourse with HIV infected person. One-fifth of the respondent (20%) mentioned that using condom at every sex is most reliable means of preventing HIV/AIDS which was being followed by a remarkable response that is to receive blood after screening HIV status. However, 12% of the respondent didn't know how to prevent HIV/AIDS?

## Sexual activity

Almost all of the respondents heard about the different sexual activities such as hugging, kissing, holding hand and sexual intercourse. More than 90% of the respondents had experience of these sexual activities irrespective of marital status. All the married respondents had experience of sexual intercourse. However among the unmarried respondents 10% (n=62) of them had experience of sexual intercourse. Pre and extra marital sex is strictly prohibited in Bangladeshi society. The study revealed that among the married respondents 52% of them had experience of pre-marital sex. This proportion among the unmarried respondents was 19%.

**Table 2. Percentage distribution of respondents by knowledge of ways to prevent HIV/AIDS**

Ways to prevent HIV/AIDS	%
Avoiding sexual intercourse with CSW	85.7
Not to share needle	38.0
Avoiding sexual intercourse with HIV infected person	27.4
Using condom at every sex	19.6
Receive blood after testing HIV	15.2
Don't know /can't say	11.5
be faithful to sexual partner	2.3
Avoiding sex with MSM	2.1
Don't having sex other than wife	0.7
N=	434

## Age at first sex/ Partner

Regarding the question of age at 1<sup>st</sup> sexual intercourse the study revealed that the mean age at 1<sup>st</sup> sex was 19 among the respondents. One-fourths of the respondents have had 1<sup>st</sup> sex at the age of 15 or below. One-thirds of the respondents having 1st sex at the age of 16-18 years, 21% at the age 18-21 years and 24 percent at the age of 21 years and above. In response to a question of sexual partner of first sex, 37% of the unmarried respondents said about girl friend, 53% mentioned about relative and 11% of them mentioned about commercial sex workers. However, among the married respondents 48% had 1<sup>st</sup> sex with his wife, 27% with girl friends, 21% with relatives and 3% with sex worker. This finding suggests that 52% of the married rickshaw pullers had pre-marital sex.

## DISCUSSION

Bangladesh is a high risk but low prevalence of HIV/AIDS. A total 1495 reported HIV positive case was detected in Bangladesh. The current estimates suggest that HIV prevalence rate of <1% among the most -at-risk population groups (Bhuiya *et al.*, 2007). Rickshaw puller is one of the vulnerable groups to carry HIV/AIDS. Though the prevalence and vulnerability is high among the IDUs in Bangladesh but there is a great chance of spreading HIV/AIDS to other vulnerable groups like rickshaw puller, CSW and MSM. IDUs and rickshaw pullers both are the customers of commercial sex workers. Misconception about HIV/AIDS and low condom use leads to increase vulnerability to get HIV/AIDS. A qualitative study was conducted in 2003 to explore the patterns of condom-use among a sample of hotel-based female sex workers and their male clients who claimed to have used a condom during the last commercial sex act (Jenkins *et al.*, 2001). Three specific patterns of condom-use were identified. Some clients started intercourse without a condom, but put one on before ejaculation, some started intercourse with a condom, but took it off after a few minutes or just before ejaculation, and others started intercourse with a condom and continued until the end. These findings question whether simply promoting condoms will effectively prevent the transmission of HIV. Several separate surveys on STIs have been conducted with different groups of female sex workers. All showed high levels of different STIs, many of which were asymptomatic ((Khan *et al.*, 2003; Chowdhury, 2005; Nessa *et al.*, 2005; Nessa *et al.*, 2004). Group sex was reportedly common. Condoms were almost never used during sex. A large proportion of MSM had female sex partners or was married. A qualitative study attempted to understand the nature of the

relations of MSM with women (Johnston *et al.*, 2007). It was found that these men feel societal pressure to marry, become husbands, or become fathers; these men were engaging in risky practices, their females were also high risk at HIV/AIDS and STIs (Azim *et al.*, 2004). Low condom-use by men remains one of the largest barriers to prevention of HIV in Bangladesh. Of the studies presented above, two on adult males showed a positive association between knowledge about prevention of HIV and condom use (Gazi *et al.*, 2008; Chowdhury *et al.*, 2006). However, there are other more complex factors that need to be better understood for developing effective prevention programmes.

Qualitative studies among men revealed some deep-rooted issues that can act as barriers to condom use (Khanam *et al.*, 2006). They revealed that direct penile-vaginal contact and ejaculation inside the vagina is the way men express their emotion and trust as they consider this to be a 'pure' and 'natural' sex act. This is exemplified by the quote: "Initially I began to use condoms, and both of us found that sexual interactions with condoms did not match our emotional intimacy. We don't have any barrier in our emotions and love, why should we place a 'barricade' in our sexual actions and emotions?" However, high risk behaviors for HIV/STIs have been recorded in the surveillance and other special studies for truckers (Jenkins, 1998), rickshaw-pullers and more recently in boatmen working in Teknaf (Gibney *et al.*, 2003). The latter study was conducted with boatmen who were aged >18 years living in Teknaf and working on boat-sailing from Teknaf in the last six months for trade, fishing or carrying goods or passengers. Consistent condom use among truckers and rickshaw pullers in the last month with different partner types ranged from 1% to 11%. For boat-men, this was assessed over the last month, and it ranged from 0% to 4.7%.

The study findings revealed that most of the rickshaw pullers had low knowledge of spreading HIV/AIDS. Among all the respondents only 3% of them had high knowledge about how to get HIV/AIDS. 42% of the respondents' knowledge was medium and 48% of the respondent had low knowledge about the spreading about HIV. It is worth to mention here that 90% of the respondents reported that HIV can spread through sexual contact with CSW, 47% of the respondents mentioned about the sexual contact with AIDS and 42% of them mentioned about the sharing needle /Syringe. Although HIV doesn't spread only sexual contact with CSW yet it's a good indication that most of the rickshaw pullers were aware of it as a means of getting HIV/AIDS. Knowledge about STIs is very important to prevent HIV since the person who has STI, has more chance to get HIV. Compared to AIDS the awareness of STI was found very low among the respondent. Thirty nine percent of the respondent reported that they have heard of STIs. Extramarital sex or having sex with multiple partners is one of the reasons to get STI. The study revealed that 52% of the married respondents had pre-marital sex while this percentage was 19% among the unmarried respondents. Use of condom among those who exposed to extramarital sex was found very low. Only 3% of the respondents use contraceptive and 2% of the respondents used condom while 1<sup>st</sup> sex. However, in the last sex 6% of the respondents had extramarital sex. Among them 32% were found to use condom during last sex. However, in the question of consistent use of

condom, the study revealed that overall 1% of the respondent were using condom consistently. Moreover, those who had extramarital sex during last sex; consistent use of condom was 5%.

Mass media play an important role to create awareness about HIV/AIDS. Thirty seven percent of the respondents had access to radio, 90% of the respondent had access to television and 76% of the respondents had access to outdoor media. However, negligible percentage of respondent ever participated in discussion on HIV/AIDS. In the light of above discussion following recommendation can be made: The knowledge about the spreading of HIV/AIDS is mostly limited to casual sexual contact with sex worker, sharing needle/syringe and sexual intercourse with HIV/AIDS person. Other reasons like mother to child transmission, use condom at every sex, receive blood without HIV test also should need to be informed. Consistent condom use among the extramarital respondents was very low. Only 5% of them are using condom consistently. More awareness creation program should launch to increase the use of condom. Qualitative findings revealed that there is misconception regarding the spread of HIV/AIDS. Most of the rickshaw pullers think that HIV is contagious disease. They think that sharing clothes and utensils can spread HIV/AIDS. More IPC and court yard meeting need to be conducted with rickshaw pullers to provide the correct ways of getting HIV/AIDS. Very negligible percentage of the rickshaw pullers found to participate in HIV related program. The organization those who are working with this target group should arrange workshop/ discussion meeting with this target group to increase the knowledge. Moreover, further study with large sample size need to be conducted to investigate the knowledge on HIV/AIDS and sexual behavior as well as use of condom.

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