

## Knowledge, Attitudes and Behaviours related to Sexually Transmitted Infections and HIV/AIDS among factory workers in Seethawaka Export Processing Zone, Avissawella, Sri Lanka

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### Abstract

**Introduction:** Factory workers in Export Processing Zones (EPZs) have been identified as a group with vulnerable behaviour for acquiring Sexually Transmitted Infections (STIs) including HIV due to many social and environmental risk factors. This study was done to assess the knowledge, attitudes and behaviours related to STI and HIV/AIDS among male and female factory workers in Seethawaka EPZ.

**Method:** A descriptive cross sectional study was carried out among 430 factory workers in Seethawaka EPZ, using self-administered questionnaire. Statistical analysis was done using SPSS 16.0.

**Results:** Majority (85%) had satisfactory level of knowledge on HIV. Age ( $p=0.0001$ ), education level ( $p=0.031$ ) and working category ( $p=0.0001$ ) were significantly associated with knowledge. Only 7.6% tested for HIV though 83.2% knew about testing. Knowledge on STIs was fairly good (>75%) except for awareness on asymptomatic nature of STIs (24.4%). Many (56.7%) showed poor level of attitudes towards people living with HIV (PLHIV). Education level ( $P=0.0001$ ), working category ( $p=0.003$ ) and HIV related knowledge ( $P=0.0001$ ) had a significant association with attitudes. Sex with non-regular partners (NRP) during the past 12 months was reported by 36.2% males and 27.4% females but only 64% of men and 48.4% women had used a condom with their last NRP. Male to male sex was prevalent in 14.6% of males and only 30% of them had used condoms at last anal sex.

**Conclusions:** Knowledge of factory workers on HIV and STIs was satisfactory but there were some areas those need further strengthening which would improve workers' attitudes towards PLHIV. Furthermore, behaviour change communication and condom promotion programmes are highly recommended to promote safe sex.

**Key words:** HIV, STI, Export processing zones, Seethawaka

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**Acknowledgement:** Prof. S. Sivayogan, Head of the Department of Community Medicine, Faculty of Medicine, University of Sri Jayewardenepura , Mr Athula Jayasinghe, Director (Zone) –SEPZ, All the participants of study at Seethawaka EPZ,

**Conflict of interest:** No conflict of interest

**Funding:** No funding support for this study

**Originality:** This is an original work not published anywhere, presented at 21<sup>st</sup> Annual Scientific Sessions of Sri Lanka College of Sexual Health and HIV Medicine 2016.

Submitted: 19.11.2016, Accepted: 28.11.2016

### Full article

#### Introduction

Sexually transmitted infections (STIs) and HIV are considered as major health problem

because of their harmful effects on individuals as well as society. STIs account for a major public health burden in Sri Lanka too. Young sexually active people from age 15-49 years comprise major proportion of STI clinic attendees (1). HIV prevalence is low in Sri

Lanka (<0.1%) over the years, yet there had been steady increase in the new diagnosis of HIV over the last years (1).

Since HIV commonly infects people who are in their productive ages, it has a huge socioeconomic impact that threatens economy in many countries (2). Certain behaviours like having unprotected sex with an unknown partner and having multiple sexual partners are known to create, enhance, and perpetuate the risk of acquiring STIs /HIV. In addition some people become vulnerable for the STI/HIV due to factors like the lack of knowledge and skills necessary to protect themselves, factors relating to the quality and coverage of services and societal factors such as social and cultural norms, practices and beliefs.

Rapid expansion of Export Processing Zones (EPZs) throughout the world is seen as a prominent feature of globalization. As a result of introduction of open economy to Sri Lanka, EPZ were also established in Sri Lanka and currently there are 12 EPZ locations administered by Board of Investment (BOI) of Sri Lanka (3).

Factory workers in these zones have been identified as a social stratum and an occupational group with vulnerable behaviour for acquiring STIs and HIV due to many social and environmental risk factors. These include weakening of parental control due to separation from family and traditional cultural background, reinforcement of high risk behaviour by peer groups and lack of access to accurate information. Thus, their knowledge on STIs and HIV transmission and methods of prevention is crucial to avoid them getting these infections.

The results of the first round BSS (4) in Sri Lanka done in 2006-2007 identified surprisingly poor knowledge about STI/HIV despite higher level of education among factory workers. Furthermore misunderstandings about the modes of transmission of STI/HIV, extremely stigmatizing attitudes towards PLHIV and unsafe sexual practices with low condom use also had been identified. There was no recent study done to assess new trends in those

areas of knowledge, attitude and behaviours. Therefore this study was carried out to assess the knowledge, attitudes and behaviours related to STI and HIV/AIDS among male and female factory workers in Seethawaka EPZ which is one of the largest processing zones in Sri Lanka.

### Method

A descriptive cross sectional study was done among male and female factory workers working at Seethawaka EPZ who fulfilled the inclusion criteria. The study was carried out from 01/06/2013 to 31/07/2013. Probability proportionate to size (PPS) sampling method was used in the study to minimize the probability of getting large number of sample from large scale enterprises and to include individuals from factories of all scales in the study. After selection of 20 clusters in 12 factories, required sample size of 440 was selected by systematic sampling. Out of 440, 430 who did not meet the exclusion criteria and gave consent participated in the study. Well-structured self-administered questionnaire in Sinhala and Tamil languages was used as the study instrument. Questionnaire included the questions on HIV/STI related knowledge, attitude towards PLHIV and sexual behaviours. Principal Investigator (PI) or Research Assistant (RA) doctors were available at the site for any clarifications. Data were analyzed using a personal computer by the PI. SPSS.16 software was used for analysis.

### Results

The study sample was predominantly young age, ranging from 17 to 45 years. Mean age was 26.87(20.8 -32.9) years. The greater proportion was female (58.8%). More than 85.4% of this group were educated up to Ordinary Level (O/L) or above. Majority (63.5%) were skilled workers while 18.6% were still on training. Around 51% were single, while 39.1% were married. Considerable percentage (5.8%) was living together with a sexual partner.

### Knowledge about HIV/STI

About 98% of study sample had heard of HIV/AIDS from a wide range of sources. Their knowledge on all modes of transmission of HIV was satisfactory (above 79%) except for transmission through breast milk (59.4%) (Table1).

**Table 1: Frequency distribution of knowledge on different modes of HIV transmission (n=423)**

Knowledge on transmission mode	Frequency (N)	Percentage (%)
Can HIV be transmitted from an infected person to their uninfected partner during unprotected sexual intercourse?		
Yes	347	83.4
No	33	8
Don't know	36	8.6
<b>Total</b>	<b>416<sup>1</sup></b>	<b>100</b>
Can a person get HIV from a transfusion of HIV infected blood/blood products?		
Yes	373	88.8
No	11	2.6
Don't know	36	8.6
<b>Total</b>	<b>420<sup>2</sup></b>	<b>100</b>
Can a person get HIV by getting injections with a needle that was already used by a person who is infected with HIV?		
Yes	364	86.9
No	16	3.8
Don't know	39	9.3
<b>Total</b>	<b>419<sup>3</sup></b>	<b>100</b>
Can a pregnant woman infected with HIV transmit the virus to her unborn child?		
Yes	334	79.6
No	30	7.1
Don't know	56	13.3
<b>Total</b>	<b>420<sup>2</sup></b>	<b>100</b>
Can HIV infected mother transmit HIV to baby by breast feeding?		
Yes	249	59.4
No	72	17.2
Don't know	98	23.4
<b>Total</b>	<b>419<sup>3</sup></b>	<b>100</b>

<sup>1</sup> missing values (N=7), <sup>2</sup> missing values (N = 3), <sup>3</sup> missing values (N = 4)

*Denominator – factory workers who heard about HIV/AIDS*

About 83.4% knew that HIV transmission risk can be reduced by having sex with single uninfected partner. Only 60.6 % knew that they could protect themselves from HIV by consistent use of a condom. Mosquito bites were identified incorrectly as mode of HIV transmission by 19.7% of workers while 14% and 9.5% thought that it can be contracted through sharing food or clothes respectively. There was a statistically significant association of knowledge on HIV with age (p= 0.0001), level of education (p=0.031) and working category (p= 0.0001).

Testing for HIV was very low (7.6%) despite their good knowledge on availability of testing facilities (83.2%) in Sri Lanka.

Knowledge on STI transmission was fairly good (>75%) except for transmission through non penetrative genital contact (14.8%). Asymptomatic nature of STI was also not known by many (24.4%). There was a statistically significant association of knowledge on STI with age (p= 0.0001), level of education (p=0.013) and working category (p= 0.0001). Strikingly low number (2%) who had STI symptoms visited the government Sexually Transmitted Disease (STD) clinics.

### Attitudes towards others with HIV/AIDS

The study identified existence of stigmatizing attitudes towards PLHIV. About 68% of respondents were neither willing work with a staff member who is HIV positive nor do they like to care for a sick HIV infected relative. More than 75% of respondents were not willing to live in the same house with a person infected with HIV. Only 58% would like to share a meal with a person with HIV. About 72% felt that PLHIV should not have equal rights as other people while 64.7% agreed that they should not be allowed to do jobs. The highest level of negative attitude was towards the sexual and reproductive rights of

PLHIV as nearly 84% said that they should not be allowed to marry and have children. Level of education ( $P=0.0001$ ), working category ( $p=0.003$ ) and level of HIV related knowledge ( $P=0.0001$ ) had a statistically significant association with their attitudes towards PLHIV.

### Behaviours related to HIV/AIDS and STI

Out of workers who were sexually active during previous 12 months, 36% males and 27.4% females had vaginal sex with non-regular partner (NRP). Sixty four percent of males used condoms with NRPs while 48.4% females did so with their NRPs at last sex. A considerable number of males (13%) engaged in sex with commercial partners (CP) in previous year and 83% of them used condoms with CPs at last sex. Only 2 females were engaged in commercial sex during previous 12 months and both used condoms with clients when they last sell sex.

Around 27.1% male factory workers who ever had sex reported having anal sex with another man ever in their life while 14.6% of them had this behaviour during previous 12 month. Only 30% reported using condoms when they last had anal sex with a man.

A statistically significant association found between unsafe sex and civil status ( $p<0.0001$ ) and persons at living arrangement ( $p<0.0001$ ) where workers who were single showing more unsafe sex and who were living with regular partners showing more safe sex. There was no significant association between workers knowledge on HIV and their unsafe sexual behaviour.

### Discussion

The study identified factory workers employed in EPZ as young group with satisfactory level of education. It revealed that considerable percentage (5.8%) of workers was cohabiting with a sexual partner without being married.

Factory workers knowledge on transmission modes of HIV were at satisfactory level except for transmission through breast milk. Though the National BSS (4) demonstrated similar pattern the knowledge, level in BSS were higher than the current study. Their knowledge of condom as a protective measure for HIV was not that satisfactory (60.6 %).

The present study confirmed that misconceptions on HIV transmission now exists to a lesser extent; as majority disagreed with common misconceptions related to HIV transmission.

Despite the good knowledge on testing facilities (83.2%) only a minority (7.6%) had done a test for HIV and received results in the previous year. Not knowing where to go for testing may have contributed to this. Very few workers (17.5%) were aware of the availability of drugs to treat HIV. Lack of knowledge on availability of effective medication for HIV in the country may also have act as hindrance to testing.

Level of knowledge was high among workers aged 25 and more compared to workers who were less than 25 years, suggesting knowledge increases with increasing age. Poor level of knowledge was less seen among more educated group. Skilled workers had a significantly higher knowledge.

Overall knowledge on STI transmission was fairly good. Similar to results in HIV, there was a statistically significant association of knowledge on STI with age ( $p= 0.0001$ ), level of education ( $p=0.013$ ) and working category ( $p= 0.0001$ ). It was noted in the study that strikingly low number (2%) visited the government STD clinic or STD specialist for treatment of STI related symptoms. Non availability of STD service in a nearby hospital may have influenced this.

It was evident from the present study that attitudes of people in Sri Lanka towards PLHIV are still not at an acceptable level. Favourable

attitudes associated with level of education ( $p=0.013$ ) and level of HIV related knowledge ( $P=0.0001$ ). This necessitates the importance of further increasing the knowledge among this group to reduce their negative attitudes towards PLHIV.

Considerable number of sexually active workers had sex with heterosexual NRPs and condom use with them was not satisfactory. In contrast they used condoms more when engaged in commercial sex. This emphasizes the further need of educating the workers on risk of getting HIV/STI through NRPs in future awareness programmes.

Considerable number had unsafe male to male sex which was much higher than the findings in first round BSS among factory workers. Such dramatic rise in this behaviour within few years is likely to reflect the increasing trends in homosexual behaviour among men. There are factories in the EPZ which only have male workers. Unavailability of females in the working place may also be contributing to the increase trend of this behaviour. This issue needs to be addressed in the future interventions for the workers and condoms should be promoted for homosexual activities stressing the high risk of HIV transmission through anal sex.

Majority (83.4%) of workers identified unprotected sex as a mode of HIV transmission and even higher percentage (94.6%) recognized it as a mode of transmitting STIs; still there was a considerable gap found between the knowledge and practices.

Workers who were single had more unsafe sex while who were living with regular partners showed the highest safe sex which was statistically significant. Interestingly no significant association of unsafe sex was observed with age, level of education and working category even though those variables had significant association with their knowledge on HIV. This reflects that irrespective of the gender, age or educational

achievements, people engage in high risk behaviour.

An interesting finding was that there was no statistically significant association between workers knowledge on HIV and their unsafe behaviour even though it has a significant association with attitude. This clearly demonstrate that correct knowledge can improve the negative attitudes but mere increase in knowledge can't improve safe behaviour as it depends on many factors other than knowledge. This further challenges us on the traditional awareness programmes those targeted only in increasing knowledge. The important and urgent need of new strategies and methods to increase safe sexual behaviour among youth is highlighted from the study.

### Conclusions and Recommendations

The study identified satisfactory knowledge of factory workers on HIV and STIs but there were some areas those need further strengthening. Thus the study recommends strengthening the HIV/STI awareness programmes catering specially on correct transmission modes, symptomatology, condom as a main preventive method, availability of testing centres and effective treatment for HIV. Improving knowledge would have a positive effect on workers' attitudes towards PLHIV.

Very low attendance to STI clinics was also found in the study. Therefore another timely step would be to establish a STD clinic in the nearby Base Hospital, where workers can be benefitted both on preventive and treatment aspects.

High level of heterosexual as well as homosexual unprotected sex was noticed in the study.

Therefore the study highly recommends changing the traditional methods of awareness to more focussed methods of behaviour change communication (BCC) strategies highlighting the gap found in

knowledge and behaviour in the study. Implementation of condom promotion programme ensuring availability of condoms with confidential supply is also recommended.

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