

## Original article

# **Knowledge of HIV /AIDS, STI and condom use among the Injecting Drug Users (IDUs) of Ahmedabad city, Gujarat, India**

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### **Abstract:**

**Background:** IDUs are vulnerable of acquiring HIV/STI due their injecting practices and high risk behaviour.

**Objectives:** To assess the knowledge of IDUs about HIV/AIDS and STI.

**Methods:** It was a cross sectional study done in Ahmedabad Municipal Corporation in 2010. 10% (40) of registered IDUs (400) were included by systematic sampling.

**Results:** All IDUs were males and median age was 34.5 years. Almost half had no formal education. Median age for initiating drug injection practices was 25 years. All IDUs had knowledge of HIV/AIDS and knew that it was infectious. 80% IDUs believed that it was curable and 25% IDUs believed that there is a vaccine for it. All IDUs were tested for HIV once in life time. Sexual route was known to 70%, vertical transmission to 65% and infected needle- syringe route to 60%. Hand shake, sharing bathroom and sharing clothes does not spread HIV was known to 70%, 57.5% and 50% respectively. Knowledge of modes of prevention showed that abstinence was known to maximum. 62.5% IDUs had correct knowledge of STI and 22.5% had visited STI clinic once in life time. 67.5% IDUs mentioned Vesicles and 62.5% Urethral discharge as STI symptoms. All IDUs knew about condom and 25% IDUs had sexual exposure without condom in last 1 year.

**Conclusion:** Knowledge of HIV/ AIDS is good but testing for HIV is poor. Using sterile needle and syringe protect against HIV is poorly known to IDUs. Overall knowledge of STI symptoms is also poor.

**Key words:** IDU, HIV/AIDS, STI

### **Introduction:**

As per the UNAIDS 2000 report , it is estimated that between 5 and 10 per cent of HIV infections have resulted from injecting drug use globally, and in central Asia more than 80% of new infection of HIV are related to IDU (injecting drug user). An estimated 12.5 million people inject drugs across the globe, most being between the ages of 15 and 30<sup>1</sup>. As per NACO about 2.2 % of all HIV cases in the country are transmitted through injection drug use. In the Punjab city of Ludhiana, HIV prevalence among IDUs is about 21% and many IDUs are not aware that they are at risk of contracting HIV<sup>[3]</sup>. Thus the present baseline study was done to understand the level of knowledge about HIV/AIDS and STI among the IDUs (Injecting drug users) of Ahmedabad city

### **Material and methods:**

A Cross sectional study was carried out in Ahmedabad Municipal Corporation area during April –May, 2010. The only NGO working for targeted interventions amongst IDUs in Ahmedabad city was National Medicos organization (NMO). In the present study 10% (40) of registered IDUs (400) were included by systematic sampling. A pre-designed & pre-tested proforma was used for collection of data. The proforma was first prepared and then field tested. After that the final version of the proforma was prepared and used. The data collectors were trained and information was collected by personal interview after obtaining the written consent of IDUs. Data so collected were analysed with Epi info version 3.5.1

### **Results:**

All the IDUs were males. About 27% (11) IDUs belonged to 35 to 39 years

age group .Median age of IDUs was 34.5 years. Almost half of IDUs had no formal education and about 33% (13) were educated up to primary level. Majority of IDUs were married and one third was unmarried. Majority earn their livelihood by working as house servant. Majority of them initiated drug injection practices in 25 to 29 years age group with median age of 25 years and almost 23% were into this practice in 15 to 19 years age group.

All the IDUs had heard the word HIV and AIDS and all of them could correctly explain the meaning of HIV positive and AIDS. All the IDUs knew that HIV /AIDS were infectious. 32(80%) IDUs believed that HIV/AIDS was curable and 10(25%) IDUs believed that there is a vaccine for HIV/AIDS whereas 6(15%) IDUs believed that there is no vaccine for HIV/AIDS and rest did not know. All the IDUs were tested for HIV once in life time, whereas 37 (92.5%) of them were tested in last 6 months.

Knowledge of HIV/AIDS was assessed among the IDUs and they were asked questions about routes of spread and multiple options were provided and it was found that sexual route was known to 28(70%), followed by vertical transmission 26(65%), infected needle and syringe route 24(60%) (Table-1) When asked about how the disease does not spread, responses obtained showed that by hand shake (28), by sharing bathroom (23) and by sharing clothes (20) HIV/AIDS does not spread was known to 70%, 57.5% and 50% respectively. HIV does not spread by mosquito bite was known to only 8(20%) IDUs. (Table-2) As regard to prevention of disease the knowledge of abstinence was highest, followed by consistent condom use, and refraining from unsafe sex. Using sterile needle and syringes prevent HIV/AIDS was known to only one third IDUs. (Table-1) Knowledge of HIV/AIDS among IDUs was associated with their age. Those less than or equal to 25 years were taken as young and above 25 years as adults. It was found that adult

IDUs were more aware about all the routes as compared to young IDUs, particularly vertical transmission and sexual route. However, association between the knowledge of vertical route and age of IDUs was significant (Odds ratio 0.15, p value < 0.05) (Table-1). Same way hand shake, sharing bathroom, staying and eating together does not spread HIV was also better known to them. Mosquito bite does not spread HIV was known to 8 adult IDUs and none of the young IDUs were aware of it. Abstinence and consistent condom use prevents HIV/AIDS was better known to adult IDUs. Strikingly knowledge about using sterile needle syringe prevents HIV was poorly known to IDUs.

Knowledge of HIV/AIDS was associated with regard to their duration of drug injection practice. Overall knowledge about transmission was more than 50% among IDUs and all these route were better known to IDUs with  $\leq 10$  years addiction as compared to  $>10$  years addiction. It was found that 78% of IDUs with  $\leq 10$  years addiction knew infected needle syringe route for HIV transmission in contrast to 45% IDUs having more than 10 years addiction and this association was significant (OR 0.2 and p value 0.03) (Table-2). Considering other route by which transmission does not occur, handshake was better known among all others. Also adult IDUs were more aware as compared to young IDUs and those with short term addiction were also more aware except for myths related to sharing clothes and casual touch. Abstinence and consistent condom use are some of the way to prevent HIV/AIDS was known better to IDUs among all other measures. Adult IDUs had better knowledge about modes of prevention as compared to young IDUs. Those IDUs with long term addiction had good knowledge about preventive measure except for being faithful to partner. (Table-3)

28(70%) of IDUs were aware about STI, but only 25 (62.5%) could correctly

explain the term. All the IDUs knew that their partners should also take treatment when they have STI. 39 (97.5 %) IDUs used condom when they had infection or their partners had infection. 9(22.5%) had visited STI clinic once in their life time and only 4(11%) IDUs had visited STI clinic in last 6 months. On enquiring about the symptoms of STI, 27(67.5%) IDUs mentioned vesicles, 25(62.5%) urethral discharge and 20 (50%) genital swelling. A Least responses were received by lower abdominal pain which is a common symptom of STI in females. (Table- 4). As far as the age of IDUs were concerned awareness of symptoms was better in adult IDU .When duration of injection practice among IDUs were compared for awareness about the STI symptoms it was revealed that overall awareness was higher among IDUs with  $\leq 10$  yrs addiction and in that also awareness about urethral discharge was highest , followed by vesicles, genital swelling and genital ulcer .However pruritis as symptom was better known to IDUs with  $\leq 10$  yrs addiction as compared to  $> 10$  yrs addiction and this relationship was significant (OR 0.1, p  $<0.05$ ) (Table-4).

All IDUs knew about condom and all of them were having condom at the time of interview. 10(25%) IDUs gave history of sexual exposure without the use of condom in last 1 year, thus exposing them to the risk of HIV/STI. Out of these 25%, 3(30%) did not use condom as they were under the effect of drug. Rest gave reason of interference in pleasure and partner's opposition as reason for non-use. 28(70%) IDUs perceived the possibility of contracting HIV/AIDS. 39(97.5%) IDU said that they discussed HIV/AIDS with their partners. Among IDUs, adult IDUs were more knowledgeable about routes of transmission, how HIV does not spreads and about modes of prevention and awareness of symptoms of STIs .Knowledge of all above things except for modes of prevention was also observed

higher among IDUs with short term addiction.

#### **Discussion:**

Our study found that all IDUs were males and 27% belonged to 35 to 39 years age group and their median age was 34.5 years. As per population council update majority of IDUs were males in both cities (Delhi and Imphal) with median age of 30 years<sup>4</sup> .Median age was 29 years in another study by Neilone Bertoni et al<sup>5</sup> and a study in Georgia quoted 35 years as median age in IDUs.<sup>6</sup> Chavan LB et al quoted median age of 33 years in IDUs<sup>7</sup>. Almost 50% of IDUs had no formal education similar to our study<sup>4</sup>. Majority were married and one third were unmarried and about half were married as per one study<sup>6</sup> but contrary to this, one study reported that most IDU's were single (56.8%)<sup>5</sup>. Majority of them started drug injection practices at median age of 25 years, while in one study, for injecting drugs, the median age at first use was 19 years.<sup>6</sup> All the IDUs were tested for HIV once in life time, while less than one third were ever tested for HIV as per another study<sup>6</sup> and 37% were tested in Delhi and 98% were tested in Imphal<sup>4</sup>. All IDUs had heard about HIV/AIDS similar to our study<sup>6</sup> and in Imphal 98% had heard of HIV/AIDS and around 75% in Delhi<sup>4</sup> As per Chavan LB et al 97.7% of respondents knew that HIV could be transmitted by sharing needles and injecting equipment while our study observed that knowledge about this route for transmission of HIV among IDU was 60% while in contrast to these 99.4% IDUs knew needle sharing increases risk of HIV as per one study<sup>6</sup>

Neilane Bertoli et al reported that majority of IDUs believed that HIV transmission may not occur through mosquito bite while in our study only 20 % IDU shared the same feeling. Similarly to their finding 57.5 % IDUs in our study believed sharing bathroom with a person with HIV/AIDS had no risk of acquiring HIV infection<sup>5</sup>

Being faithful to one partner reduces the risk of HIV was known to 45% IDUs in our study whereas this knowledge was almost 93% in another study<sup>6</sup>. Using condom makes one safe was known to 62.5% IDUs in our study and this knowledge was higher in other study<sup>6</sup>

Chavan LB et al reported that 69% IDU had never used condom, whereas our study found 25% IDU had not used condom in last 1 year<sup>7</sup>. 30% IDUs of those not using condom admitted that they did not use it under the effect of drug and in a study by Ividity it was reported 9.0%<sup>6</sup>. We observed that 70% IDUs were aware about STI, but only 62.5% could correctly explain the term, in contrast to this NCASC and ASHA project in Kathmandu reported knowledge of STI among IDUs almost universal (98%). Most commonly cited genital symptoms of STIs were vesicles around genital (62.5%). Genital

ulcer was known to 45% in our study was known to 63% IDUs in our study whereas the project reported around 25%. Itching was known to around one fourth IDUs in that project and in our study it was slightly higher. This project reported that white discharge was known to 15% IDUs and it was 28% in our study. Swelling around genitals was known to about half of IDU in our study and it was around 20% in the project. Abdominal pain as a symptom was poorly known.<sup>8</sup>

**Conclusion:**

Knowledge about HIV/ AIDS is good but same is not reflected in testing for HIV. IDU though at increased risk of HIV due to needle sharing practices, the knowledge of the same is poor. Myths surrounding the HIV transmission are also prevalent. Using sterile needle and syringe protect against HIV is poorly known. Knowledge of STI symptoms is poor.

**Table 1: Association of knowledge of routes of spread with age and duration of drug injection practices**

Knowledge of routes of spread	Duration(years)		Age(years)	
	≤10 (n= 18)	>10 (n=22)	≤25 (n=15)	>25 (n=25)
1 Sexual route-28(70) OR(CI) (p value)	14 (77.8) 0.5(0.13-2.3) 0.3	14 (63.6) 2.72(0.28-25.7) 0.34	6 (40)	22 (88)
2 Blood route-23 (57.5) OR(CI) (p value)	9 (50) 1.75(0.49-6.2) 0.29	14 (63.6) 0.48(0.09-2.54) 0.32	3 (20)	20 (80)
3 Vertical transmission-26(65) OR (CI) (p value)	12 (66.7) 0.87(0.23-3.24) 0.5	14 (63.6) 0.15(0.02-0.91) 0.03	2 (13.3)	24 (96)
4 Infected needle & syringes-24 (60) OR (CI) (p value)	14 (77.7) 0.2(0.05-0.95) 0.03	10 (45.5) 1.84(0.31-10.91) 0.40	5 (33.3)	19 (76)

**Table 2: Association of knowledge of how HIV/AIDS does not spread with age and duration of drug injection practices**

Knowledge (%)	Duration(years)		Age(years)		
	≤10 (n=18)	>10 (n=22)	≤25 (n=15)	>25 (n=25)	
1 Hand shake-28 (70) OR (CI) (p value)	13(72.2) 0.82(0.21-3.23) 0.5	15(68.2) 1.08(0.17-6.57) 0.65	5(33.3)	23(92)	
2 Staying/eating together-17(42.5) OR (CI) (p value)	8(44.4) 0.86(0.24-3.04) 0.5	9(40.9) 2.051(0.39-10.70) 0.32	4(26.7)	13(52)	
3 Sharing clothes-20(50) OR (CI) (p value)	8(44.4) 1.5(0.42-5.24) 0.3	12(54.5) 0.70(0.13-3.65) 0.5	3(20)	17(68)	
4 Sharing bathroom-23(57.5) OR (CI) (p value)	10(55.6) 1.15(0.32-4.07) 0.5	13(55.1) 2.08(0.35-12.32) 0.35	5(33.3)	18(72)	
5 Swimming pool-9(22.5) OR (CI) (p value)	6(33.3) 0.31(0.06-1.50) 0.13	3(13.6) 0.52(0.05-5) 0.4	1(6.7)	8(32)	
6 Casual touch-11(27.5) OR (CI) (p value)	4(22.2) 1.63(0.39-6.81) 0.37	7(31.8) 0.38(0.04- 3.61) 0.3	1(6.7)	10(40)	
7 Mosquito bite-8(20) OR (CI) (p value)	5(27.8) 0.40(0.08-2.02) 0.23	3(13.6)	0	8(32)	

**Table 3: Association of knowledge of modes of HIV/AIDS prevention**

Knowledge about modes of prevention (%)	Duration(years)		Age(years)	
	≤10 (n=18)	>10 (n=22)	≤25 (n=15)	>25 (n=25)
<b>Abstinence-27 (67.5)</b>	11 (61.1)	16 (72.7)	4 (26.7)	23 (92)
OR	1.69	0.57		
(CI)	(0.44-6.43)	(0.10-3.08)		
(p value)	(0.3)	(0.4)		
<b>Consistent condom use-25 (62.5)</b>	11 (61.1)	14 (63.6)	4 (26.7)	21 (84)
OR	1.11	0.76		
(CI)	(0.30-4.02)	(0.14- 3.99)		
(p value)	(0.5)	(0.5)		
<b>Faithful partner-18(45)</b>	11 (61.1)	7 (31.8)	5 (33.3)	13 (52)
OR	0.29	3.8		
(CI)	(0.08-1.09)	(0.64-22.86)		
(p value)	( 0.06)	(0.1)		
<b>Avoid unsafe sex-20(50)</b>	8 (44.4)	12 (54.5)	3 (20)	17 (68)
OR	1.50	0.70		
(CI)	(0.42-5.24)	(0.13- 3.65)		
(p value)	(0.3)	(0.5)		
<b>Accept HIV tested blood-15 (37.5)</b>	6 (33.3)	9 (40.9)	3 (20)	12 (48)
OR	1.38	1.31		
(CI)	(0.37-5.06)	(0.25-6.87)		
(p value)	(0.4)	(0.5)		
<b>Use of Sterile needles&amp; syringes 13(32.5)</b>	6 (33.3)	7 (31.8)	1 (6.7)	12 (48)
OR	0.93	0.29		
(CI)	(0.24-3.52)	(0.031-2.71)		
(p value)	(0.5)	(0.2)		

**Table 4: Association of knowledge of STI with age, duration of injecting practice.**

Symptoms of STI (%)	Age(years)		Duration(years)	
	≤25 (n=18)	>25 (n=22)	≤10 (n=15)	>10 (n=25)
1 <b>Genital ulcer (18) (45%)</b>	3 (16.7)	15 (68.2)	10 (66.7)	8 (32)
OR	0.90		0.45	
(CI)	(0.17-4.66)		(0.12-1.63)	
(p value)	(0.6)		(0.18)	
2 <b>Genital swelling (20) (50%)</b>	3 (16.7)	17 (77.3)	10 (66.7)	10 (66.7)
OR	0.70		0.66	
(CI)	(0.13-3.65)		(0.19-2.33)	
(p value)	(0.5)		(0.2)	
3 <b>Urethral discharge (25)(62.5%)</b>	6 (33.3)	19 (86.4)	12 (80)	13 (52)
OR	4.105		0.81	
(CI)	(0.44-38.23)		(0.21-3.03)	
(p value)	(0.19)		(0.5)	
4 <b>Pruritis (11) (27.5%)</b>	4 (22.2)	7 (31.8)	9 (60)	2 (8)
OR	4.95		0.10	
(CI)	(0.89-27.48)		(0.01-0.55)	
(p value)	(0.07)		(0.005)	
5 <b>Lower abdominal Pain (2) (5%)</b>	0	2 (9)	0	2 (8)
OR(CI)				
(p value)				
6 <b>White discharge (11) (27.5%)</b>	1 (5.5)	10 (45.5)	5 (33.3)	6 (24)
OR	0.38		0.97	
(CI)	(0.04-3.61)		(0.24-3.93)	
(p value)	(0.36)		(0.62)	
7 <b>Vesicles (27) (67.5%)</b>	6 (33.3)	21 (95.5)	10 (66.7)	17 (68)
OR	3.42		2.72	
(CI)	(0.36-3.19)		(0.69-10.63)	
(p value)			(0.13)	

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