# HIV RISK PRACTICES AND THEIR DETERMINANTS AMONG INJECTING DRUG USERS IN DELHI AND MANIPUR, INDIA



Suchita Lisam

A Thesis Submitted in Partial Fulfillment of the Requirements

for the Degree of Master of Public Health in Health Systems Development

College of Public Health

Chulalongkorn University

Academic Year 2003

ISBN 974-9599-44-6

Copyright of Chulalongkorn University

Thesis Title	: HIV Risk Practices and their Determinants Among Injecting Drug
	Users in Delhi and Manipur, India
Ву	: Suchitra Lisam
Program	: Health Systems Development
Thesis Advisor	: Robert Sedgwick Chapman M.D., M.P.H.
Accepted by	the College of Public Health, Chulalongkorn University, Bangkok
Thailand in Partial F	ulfillment of the Requirements for the Master 's Degree
25	T. 57
Triba	Tasaua praoct Acting Dean of the College of Public Health
	(Associate Professor Prida Tasanapradit, M.D.)
THESIS COMMITTE	EE
	Chairey Muchprays - Chairperson
	( Professor Chaivej Nuchprayoon, M.D., Ph.D.)
	Robert S. Chymnan Thesis Advisor
	(Dr. Robert Sedgwick Chapman, M.D., M.P.H.)
	Olaw le Member

 $(Associate\ Professor\ Narin\ Hiransuthikul,\ M.D.,\ M.P.H.)$ 

PH: 032392 : MAJOR HEALTH SYSTEMS DEVELOPMENT PROGRAMME KEY WORD : HIV RISK PRACTICES / INJECTING DRUG USERS

SUCHITA LISAM: HIV RISK PRACTICES AND THEIR DETERMINANTS AMONG INJECTING DRUG USERS IN DELHI AND MANIPUR, INDIA. THESIS ADVISOR: ROBERT SEDGWICK CHAPMAN, M.D.,M.P.H. 106pp. ISBN 974-9599-44-6

An analytical cross-sectional research approach with quantitative methods was used to assess HIV risk practices and their determinants among injecting drug users (IDUs) in urban areas of Manipur and Delhi, India, in February 2004. Manipur has a stronger policy to prevent and control HIV in IDUs than does Delhi. A total of 200 IDUs (100 IDUs in each place of study) were recruited for the study. The subjects were recruited from 5 NGOs in Manipur, and in Delhi, 74 IDUs were recruited from the one NGO, Society for Service to Urban Poverty (SHARAN), and 26 IDUs were recruited from 2 Drug De-addiction Centre (DDCs, 13 IDUs from each DDC). The study showed that the high HIV injecting and sexual risk practices among IDUs were higher in Delhi than in Manipur, which generally were statistically significant (p < 0.05). In Delhi, 45% of IDUs indulged high-risk practice of ever sharing of needles & syringes (N&S) in the last 6 months, as compared to 28% in Manipur. In Delhi, prevalences of the high HIV risk practices injecting drug ≥3 times/day, infrequent cleaning of N&S in the last 6 months, non- usage of bleach for cleaning N&S, having sex partners >2 in the last 12 months, non-usage of condom with commercial sex workers (CSWs) and inconsistent use of condoms with CSWs were statistically significantly higher than in Manipur. The level of knowledge and attitude on HIV/AIDS were statistically significantly higher in Manipur than in Delhi. The IDUs in Manipur had utilized health and drug treatment services more frequently than IDUs in Delhi. The findings suggested that the HIV/AIDS policy in Manipur had a beneficial effect on HIV risk practices of the IDUs. However, interpretation of the results was limited by the fact that convenience sampling, not random sampling, was employed in the study. There is a need of coordination between NGOs involved in HIV/AIDS prevention among IDUs and the respective State/National AIDS Control Organization in Delhi, as it is learnt that there has been no financial and technical support for SHARAN in Delhi from National AIDS Control Programme (NACO) in order to carry out the harm reduction Programme for prevention of HIV transmission among IDUs.

	6.1.
Field of study Health Systems Development	Student's signature Militra hisam
A cadamia year 2003	Student's signature Suchitra hisam Advisor's signature RAWN S. Chapman
Academic year 2005	Advisor s signature 1 VV VVI 2 VV WY WY

#### **ACKNOWLEDGEMENTS**

I would like to express my heart-felt gratitude to my thesis adviser Dr. Robert S. Chapman for his unfailing guidance and support during the course of my study. I would like to express my sincere gratitude to Dr. S.K. Bhattacharya, Director of NICED (National Institute of Cholera and Enteric Diseases), Kolkata for recommending me to pursue M.P.H. course under Chulalongkorn University, Bangkok. I would also like to thank Dr. Sadhana Rout, Joint Director (IEC), National AIDS Control Organization (NACO), Government of India, Delhi for helping me out with the contents of my questionnaire format. I also like to thank Mr. Razat Aadhikari and Miss Shashi of FHI (Family Health International), Delhi for lending me valuable research publications and relevant documents for this study. I also express my gratitude to officials in WHO, UNDCP, Delhi for providing me with relevant literature & articles on drug abuse and HIV/AIDS.

I would also like to thank Mr. Luke Samson, Director of SHARAN (Society for Service to Urban Poverty), Delhi and the General Secretaries & coordinators of NGOs (Lifeline Foundation, SASO, Kripa Society, I.A.C., RUSA) in Manipur for allowing me to recruit their clients and also the counselors and outreach workers of SHARAN (Delhi), and those NGOs in Manipur for being my interviewers in this study and for helping me out in the process of data collection. I also like to thank Dr. N. Yaima, Coordinator of ICMR (Indian Council of Medical Research) office on HIV/AIDS &Drug Abuse, Imphal, Manipur for his assistance in contacting the NGOs in Imphal. I would also like to thank my parents for their undying love and moral support and for having confidence in me in undergoing such endeavors that I face in my life. Last but not the least, I would also like to thank the respondents who participated in this study; if not them, my study would never be possible.

## TABLE OF CONTENTS

	Page
ABSTRACT	iii
ACKNOWLEGDEMENTS	iv
TABLE OF CONTENTS	. v
LIST OF TABLES	viii
LIST OF FIGURES	xii
GLOSSARY	xiii
CHAPTER I INTRODUCTION	. 1
1.1 Background & Rationale	. 1
1.2 Scope of the Study	. 9
1.3 Research Objectives	. 9
1.4 Research Questions	10
1.5 Research Hypotheses	. 11
1.6 Operational Definition of Variables	. 11
1.7 Conceptual Framework for the Study	. 15
CHAPTER II LITERATURE REVIEW	. 15
2.1 Injecting Drug Use and HIV/AIDS Risk in India	. 17
2.2 Injecting Drug Use and HIV/AIDS in Manipur	. 18
2.3 Manipur State Response to Injecting Drug Use and HIV/AIDS	. 19
2.4 Implementation of Manipur State AIDS Policy	20
2.5 Injecting Drug Use and HIV/AIDS in Delhi	. 22
2.6 Delhi Government Response to Injecting Drug Use and HIV/AIDS	23

2.7 Harm Reduction Strategies	24
2.8 Injecting Practices and HIV Risk	28
2.9 Socio-demographic characteristics of IDUs	29
2.10 Risk Practice of IDUs in India	30
2.11 Sexual Risk Behavior and Injecting Drug Use in India	31
2.12 Knowledge about HIV/AIDS among IDUs in India	33
CHAPTER III RESEARCH METHODOLOGY	35
3.1 Research Design	35
3.2 Target Population	35
3.3 Study Population	35
3.4 Study Size	36
3.5 Sample Technique	37
3.6 Inclusion Criteria	38
3.7 Exclusion Criteria	38
3.8 Research Instrument	38
3.9 Measurement Scale	40
3.10 Scoring Scale	40
3.11 Content Validity	41
3.12 Reliability	41
3.13 Data Collection and Procedures	41
3.14 Data Analyses	42
3.15 Ethical Consideration	43
3.16 Limitation of the Study	43
3.17 Expected Benefits	43

CHAPTER IV	RESULTS OF THE STUDY	45
Part I	Socio-demographic including peer / family	
	characteristics of the respondents	47
Part II	Knowledge regarding the various routes of HIV infection.	52
Part III	Attitudes regarding the prevention ways of HIV infection.	54
Part IV	Risk practices of the respondents in the two places of study	55
Part V	Utilization of health and drug treatment services	67
Part VI	Associations between the risk practices	
	and their determinants	71
CHAPTER V	DISCUSSIONS, CONCLUSION	
	AND RECOMENDATIONS	75
5.1 Disci	ussion	75
5.2 Cond	lusion	84
5.3 Reco	mmendations	86
REFERENCES		88
APPENDICES.		94
APPEND	OIX I	95
APPEND	DIX II	96
APPEND	OIX III	97
APPEND	OIX IV	98
CURRICULUM	1 VITAE	105

## LIST OF TABLES

		Page
Table 1.1:	The table shows the different modes of HIV	
	transmission in percentage in India (NACO 2002)	3
Table 1.2:	The sero-prevalence of HIV among IDUs in different	
	metropolitan cities/states in India (NACO 2001)	7
Table 4.1:	The distribution of frequency of socio-demographic	
	& peer /family characteristics of the respondents	
	in Manipur and Delhi along with Chi-square	47
Table 4.2:	Distribution of sample population according to age	
	in Manipur and Delhi by independent t-test	50
Table 4.3:	Distribution of sample population according to age	
	in Manipur and Delhi (NGO) by independent t-test	50
Table 4. 4:	The distribution of frequency and percentage of respondents	
	by reasons for using drugs in Manipur and Delhi	51
Table 4.5:	The distribution of frequency and percentage of respondents	
	by knowledge about HIV infection and the routes of HIV	
	transmission in Manipur and Delhi	52
Table 4.6:	The frequency and percentage distribution of respondents	
	by the level of knowledge in Manipur and Delhi	53
Table 4.7:	The distribution of frequency and percentage	
	of respondents by level of attitude towards	
	prevention of HIV infection in Manipur and Delhi	54
Table 4.8:	The distribution of frequency and percentage	
	of respondents by types of injecting practices	
	in Manipur and Delhi	55
Table 4.9:	The t-test for mean, SD for the duration	
	of injecting drug (in months) in Manipur and Delhi	57

Table 4.10:	The frequency of sharing of needles & syringes	
	in the last 6 months among those who shared needles	
	& syringes in Manipur and Delhi	57
Table 4.11:	Frequency of cleaning needles & syringes in the	
	last 6 months among those who shared needles	
	& syringes in Manipur and Delhi	58
Table 4.12:	The frequency and percentage of respondents by using	
	bleach for cleaning needles & syringes among those	
	who cleaned their needles/syringes in Manipur and Delhi	59
Table 4.13:	The distribution of frequency and percentage	
	by sharing of needles & syringes in the last 6 months	
	in Manipur and Delhi (NGO)	59
Table 4.14:	The frequency and percentage of respondents with bleach	
	for cleaning needles & syringes among those who	
	cleaned their needles/syringes in Manipur and Delhi (NGO)	60
Table 4.15:	The distribution of frequency and percentage of respondents'	
	experience of sexual intercourse ever in Manipur	
	and Delhi where N=100	61
Table 4.16:	The Independent t-test for mean, SD for age of first sexual	
	intercourse in Manipur and Delhi	61
Table 4.17:	The distribution of frequency and percentage of respondents	
	by condom usage among those who had sexual intercourse	
	in the last 6 months in Manipur and Delhi	62

Table 4.18:	The distribution of frequency and percentage of respondents	
	by number of sexual partners in last 6 months	
	in Manipur and Delhi	63
Table 4.19:	The distribution of frequency and percentage	
	of male respondents by having sex with CSWs	
	in the last 12 months in Manipur and Delhi	64
Table 4.20:	The distribution of frequency and percentage	
	of male respondents by usage of condom with CSW's	
	in the last 6 months in Manipur and Delhi	64
Table 4.21:	The distribution of frequency and percentage of male	
	respondents by frequency of condom use with CSW's	
	among males who used condom in Manipur and Delhi	65
Table 4.22:	The frequency and percentage of respondents by experience	
	of sex in Manipur with Delhi (NGO)	65
Table 4.23:	Condom usage in last 6 months among those who had	
	sex with CSW's in Manipur and NGO (Delhi)	66
Table 4.24:	The distribution of frequency and percentage of male	
	respondents by frequency of condom use with CSW's	
	in Manipur and Delhi (NGO)	66
Table 4.25:	The distribution of frequency and percentage of respondents	
	by utilization of health & drug treatment services	
	in Manipur and Delhi	68

Table 4.26: '	The distribution of frequency and percentage of respondents	
	by utilization of health & drug treatment services	
	in Manipur and Delhi (NGO)	69
Table 4.27:	Association between the risk practices and level	
	of knowledge towards HIV infection & routes	
	of HIV transmission by Chi-square test	72
Table 4.28:	Association between the cleaning of needles & syringes	
	with bleach and level of attitude on AIDS patients	
	and prevention of HIV infection by Chi-square test	73

## LIST OF FIGURES

	F	Page
Figure 1.1:	The chart shows the HIV prevalence rate of some cities/country	
	in Asia where there is rapid diffusion of HIV injection among	
	IDUs at the beginning of HIV epidemic among IDUs	
	(Stimpson et al. 1996)	. 5
Figure 2.2:	The conceptual framework for the study	
	based on Precede Model	15

### **GLOSSARY**

CSWs : Commercial Sex Workers

DDC : Drug De-addiction Centre

IDUs : Injecting Drug Users

IAC : Indian AIDS Consortium

MACS : Manipur State AIDS Control Society

MSM : Men having Sex with Men

MVHA : Manipur Voluntary Health Association

NACO : National AIDS Control Organization

NGO : Non-Government Organization

NSEP : Needle Syringe Exchange Programme

NS : Needles & Syringes

RIAC : Rapid Intervention and Care Project

RUSA : Rural Service Agency

SASO : Social Awareness Service Organization

SHARAN : Society for Services for Urban Poverty

STD : Sexually Transmitted Diseases

UNAIDS : United Nations Organization on HIV/AIDS

UNODC : United Nations Office on Drug and Crime

#### Glossary of drugs

Avil : Pheniramine meleate

Spasmo Proxyvon : Dicylomine, dextropropoxyphene and acetaminophene

Fortwi : Pentazocin

Nitrosun : Nitrazepame

Calmpose : Diazepam

Tedigisic : Buprenorphine