CHAPTER 1

INTRODUCTION

1.1 BACKGROUND & RATIONALE

The world is in a state of crisis due to the escalating problem of HIV/AIDS fuelled with drug abuse. The HIV/AIDS is one of the most challenging disease events facing the global public health today. It causes incalculable impact on human suffering, social and cultural disruption and has huge economic lost. Since the first case of AIDS was detected on 5th June 1981 among a group of homosexual men in the city of Los Angeles, USA there has been increasing report of HIV infected cases in all parts of the world. There is no country, which is free from HIV/AIDS. Today, it has spread from the high risk to the low risk general population and from urban to rural areas. AIDS is becoming the first leading cause of death in Africa and the fourth cause of death worldwide. By the end of December, 2003 there are already 46 million people living with HIV/AIDS in the world, of which 43 million are adults and 2.9 million are children under 15 years of age-reflecting a global development crisis of huge proportions. AIDS has killed 27.9 million people by the end of December 2003 since the beginning of the epidemic, of which 11.1 million were men, 11.3 million were women and 5.5 million were children below 15 years of age. Altogether 14,000 new HIV infections are occurring everyday (UNAIDS 2003). More than 95% of all HIV infected people now live in the developing world, mostly in countries least able to afford to care for the HIV infected people.

Sub-Saharan Africa remains by far the region worst affected by the HIV/AIDS epidemic. In 2003, an estimated 26.6 million people in this region were living with HIV and AIDS killed approximately 2.3 million people in 2003 (UNAIDS 2003). South Asia accounts for over four million people living with HIV/AIDS by December 2002. Several countries in the region are characterized by a low prevalence among the general population but significantly higher rate among people with high-risk behaviors, such as injecting drug use and commercial sex workers or STD patients associated with low condom use.

India with 1.029 billion populations is having the highest number of people living with HIV/AIDS-next only to South Africa. The first HIV positive case was reported from Madras (now Chennai) in May 1986 from among a cluster of six commercial sex workers. There are estimated 4.58 million people living with HIV/AIDS by the end of December 2003 (UNAIDS & NACO 2003). India is having about 10% of the global HIV/AIDS burden and 65% of the Asia's HIV/AIDS burden. Currently India is the country with the largest HIV/ADS epidemic in the region (Kumar 2001; MAP 2001; NACO 2001). By then end of December, 2002 there was 57,781 AIDS cases reported in India, which was grossly under-reported. No state or union territory is free from AIDS. The epidemic of HIV in India is strikingly diverse between and even within states. The states are categorized as high, moderate or low prevalence states, based on HIV prevalence in antenatal women. The pattern of HIV epidemic is not uniform throughout the country. Six states namely Maharashtra, Tamil Nadu, Manipur, Karnataka, Andhra Pradesh and Nagaland are the worst affected states with a sero-prevalence of HIV infection of 1% or above in the general population as indicated

in the ANC (ante-natal clinic attendees) sentinel surveillance as compared to HIV sero-prevalence rate of 0.8% in India (NACO 2002). The HIV epidemic in India is largely being sustained by the sexual mode of transmission. About 84.53% of HIV infections are through sexual transmission-both heterosexual and homosexual, 3.36% is through sharing of needles and syringes among the injecting drug users. However in some north-eastern states of India like Manipur, Mizoram, Nagaland, the predominant mode of HIV transmission is through sharing of injecting equipment among the injecting drug users where more than 76% of HIV transmission is through sharing of contaminated needles and syringes. In Manipur, 55.9% of the total HIV infections cases are due to injecting drug use (MACS-Epidemiological Report 2003).

Table 1.1: The table shows the different modes of HIV transmission in percentage in India (NACO 2002)

Transmission categories	Percentage
1. Sexual route	84.53
2. Injecting drug use	3.36
3. Blood transfusion	3.27
4. Perinatal transmission	2.14
5. Others	6.7
Total	100

Drug Use has played a critical role in the spread of HIV in several developing countries, which threatens to become an important vector for HIV transmission in others. HIV transmission among drug users is often associated with injecting drug user in many countries (Kara S.R. 1996). Out of the 42 million people affected, 10% are attributable to sharing of contaminated needles and syringes among the injecting drug

users (UNODC 2002). There are 15-20 million injecting drug users in the world, of whom at least 1-2 million are HIV positive (ACIL & AusAIDS 2001). The problem of injecting drug use is prevalent in 136 countries of the world of which 114 countries reported HIV infection among injecting drug users and 20 countries reported injecting drug use without HIV. Injecting drug use has been identified in over 50 developing countries, and HIV transmission associated with injecting drug use has been reported in at least half of these cases (Stimson 1996). In the early eighties, the injecting drug use was found to be more prevalent in Central and Eastern European countries like Russia, Ukraine, and Central Asia than other regions of the world. Injecting drug use is one of the main modes of transmission of HIV in North America and Middle East, South and South-East Asia, East Asia and Pacific, Latin America, East Europe and Central Asia, West Europe, and North America (WHO 1998). The epidemic of HIV infection among IDUs had emerged in 1996 in Russia and about 90% of new HIV infections occurred among IDUs. In Spain, 66% of HIV cases were found among IDUs, Italy with 64% HIV cases in IDUs was reported in 1996 (Stimson et al. 1996). The epidemic in South East countries showed rather disproportionate to regional epidemic. In China in 2001, 70% of all HIV cases are due to injecting drug users. The HIV infection among IDUs was first reported in Bangkok, Thailand in 1987 and injecting drug users constituted about 30% of all HIV cases in 2002. In Manipur, a northeast state of India the HIV prevalence rate shoot up to 80.7% in 1998 among the IDUs, which was one of the highest ever, reported till date in the world (Solunke et al. 1998; Dorabjee & Samson 2000; MACS 2002). The sharing of needles and syringes among the IDUs is the most efficient and commonest mode of HIV transmission in IDUs. Injecting drug use constitutes a leading source of heterosexual and perinatal transmission of HIV in the

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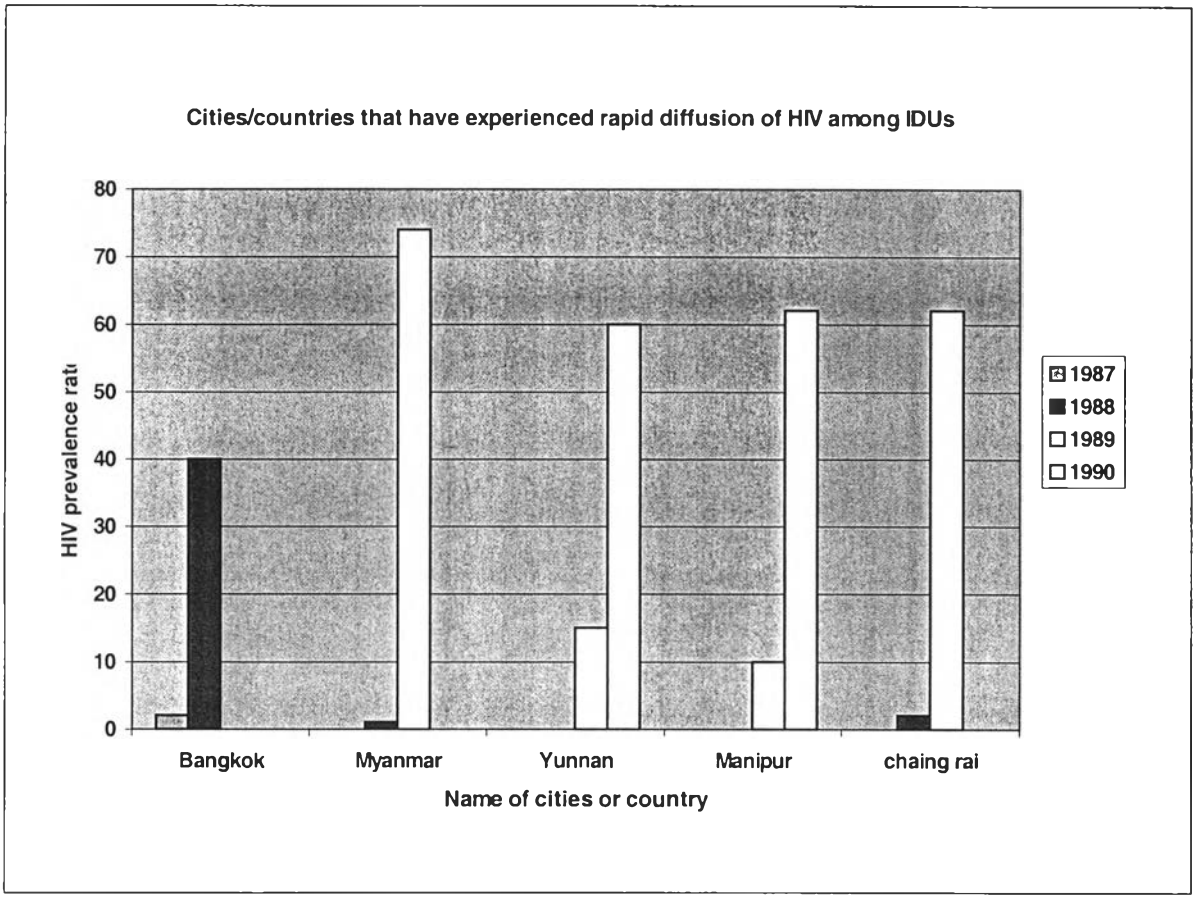
general population. The risky behavior associated with drug use contributes to HIV spread among the non-injecting population.

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)



In India, there are 2.25 million drug users based on the report by the Ministry of Social Welfare, Government of India in 1989. There was one to five million opium addicts in the early 1990s and 750,000 to one million were heroin addicts (West 1992). Injecting of drug became increasingly prevalent by the late 1980s, and throughout the 1990s, which was accompanied by an explosion of HIV infections, first detected in the

north-eastern State of Manipur. Injecting drug use is also well established in a number of cities in India like Kolkata, Chennai, Delhi, Bengalore and Mumbai but it is a big problem in northeastern states of India where the HIV epidemic among IDUs has started. Injecting drug use is increasing in many areas of India especially among young males living in low socio-economic conditions. The number of drug users is found to be significantly high to present a major additional source for fuelling the HIV epidemic in India. In the early 1990s, there are estimated 50,000 IDUs in India (Jain et el. 1994). However, as per Rapid Situation Assessment (RSA) of injecting in India conducted in 1998; there is a major change in the estimates of IDUs and they are as follows: New Delhi 25,000-30,000; Manipur 15,000-20,000; Mumbai 38,0000; Kolkata 10,000-15,000 and Chennai 10,000-15,000 (Dorabjee & Samson 2000). HIV infection among IDUs first appeared in Manipur and increased from 0% in September 1989 to 50% within six months of first reporting (Naik et al. 1991; Sarkar et al. 1993). The sero-prevalence among injecting drug users in some northeastern states of India is among the highest in the world and there is recent evidences suggesting escalating rates among slum dwellers in some big cities. The sero-prevalence of HIV among IDUs in Manipur has increased from 61% in 1994 to 85% in 1997, which was a world record, and in 1998, it was 80.7% (Solanke et al. 1998; Dorabjee & Samson 2000). The prevalence of HIV in metropolitan cities in India is also quite high. However the HIV sero-prevalence among the IDUs in Manipur has shown a decline from 56.3% in 2001 to 39.57% in 2002 and in 2003 it was 30.7 % (MACS Epidemiological Report 2003). The sero-prevalence rate among IDUs in New Delhi was 44.80% in 2000 (NACO 2002). In almost all regions where injecting drug use is prevalent, the HIV prevalence is nearing

or above the critical levels of 10% and this causes a grave public health concern (Dorabjee & Samson 2000; Manning 2001; Kumar 2001).

Table 1.2: The sero-prevalence of HIV among IDUs in different metropolitan cities/states in India (NACO 2001).

Sl. No.	Name of the city/state	HIV prevalence rates (%)
1.	Imphal	56.3
2.	Delhi	44.8
3.	Chennai	31.0
4.	Mumbai	23.7
5.	Aizawl	9.6
6.	Bengalore	4.2
7.	Kolkata	2.0

The most significant and increasing concern in HIV transmission among IDUs is through sharing of injecting equipments and their high risk sexual practices leading to spread of infection to their sex partners and their wives. The HIV transmission from IDUs to wives increase from 6% in 1991 to 45% in 1999 (Panda et al. 2000). The HIV sero-positivity rate among antenatal mothers is 3.1% in Manipur (MACS Epidemiological Report 2003). Risk behavior like sharing of drug equipment is highly prevalent among injecting drug users, presenting a great potential to explosive spread of HIV and other blood borne diseases such as Hepatitis B and C. The rates of ever sharing are very high and as follows: Chennai (76%), Delhi (50%), Kolkata (78%) and Mumbai (61%) (Manning 2001). The risk of HIV transmission from injecting drug users to sexual partners is also high and behavioral change strategies that have been adapted to date in India to reduce this risk have been minimal.

National's response to tackle HIV/AIDS epidemic

Soon after the first reporting of HIV case in India, the Government of India set up a National AIDS Committee in 1986 and National AIDS Control Programme was launched in 1987 and that included a series of programs/strategies focusing on generation of public awareness, screening of blood & blood products for transfusion, conduction of behavioral sentinel surveillance (BSS) activities in epicenter of the epidemic etc. The National AIDS Policy was passed on 2nd April 2002 that envisages effective containment of infection in general population. The preventive activities carried out by the national government to tackle for HIV infection in IDUs are generally poor although the government acknowledges that injecting drug users are at risk of getting HIV infection. As part of BSS, HIV prevalence rate is assessed in IDUs and Government of India approved the fact that the most important strategy to combat problem of IDU & its serious consequences in HIV transmission would be "Harm Minimization", which is an effective preventive mechanism that requires not only giving health education, treatment and referral services, but also provision of clean needles/syringes for used ones, condom promotion and free supply of bleach etc. to IDUs. The responses of the Government of India to tackle HIV/AIDS among IDUs need to include adequate policy response so as to ensure inter-sectoral coordination, to overcome the legal barriers and to ensure voluntary participation of the community including the drug users themselves in the fight against HIV/AIDS and drug addiction.

Manipur State's response to tackle HIV/AIDS problem in IDUs

Since the first time HIV case was reported in 1990, State AIDS Cell was established to tackle the HIV/AIDS situation in the region but the task of effective handling of the problem was possible only when the Manipur State AIDS Control Society (MACS) was established in March 1998. The Manipur Government considers HIV/AIDS as a great public health emergency. State AIDS Policy was adopted in 1996 and Manipur is the first and only state in India till date to have a clear-cut policy on HIV/AIDS that strongly approve has officially endorsed the harm reduction approach for HIV prevention among IDUs. There are many NGOs working on HIV prevention among IDUs with full technical and financial support from MACS, and directly involved in implementation of Rapid Intervention and Care Project (RIAC) a project launched for rapid intervention of HIV prevention among IDUs and sexual partners based on harm reduction supplemented with care & treatment components and the project has been operating since 1999 till to date.

1.2 SCOPE OF THE STUDY

The scope of the study is to assess the risk practices of the IDUs in the two places of study i.e Manipur and in Delhi in the light of distinctive HIV/AIDS Policy for prevention of HIV infection among the IDUs.

1.3 RESEARCH OBJECTIVES

1.3.1 General Objectives

1.3.1.1 To compare the HIV risk practices and their determinants in injecting drug users in Delhi and Manipur, India.

1.3.1.2 To compare the HIV/AIDS related knowledge and attitudes in IDUs in Delhi and Manipur, India.

1.3.2 Specific Objectives

1.3.2.1 To compare the risk practices in Delhi and Manipur, India

1.3.2.2 To compare the level of knowledge and attitude in the two places of study.

1.3.2.3 To analyze the relationship between the risk practices and their determinants like socio-demographic characteristics, family & peers factors, knowledge and attitudes towards HIV/AIDS and routes of its transmission.

1.3.2.4 To describe and compare the HIV/AIDS policies in context to intervention Programme for prevention of HIV infection in Manipur and Delhi, India.

1.4 RESEARCH QUESTIONS

1.4.1 Is there any relationship between the risk practices of the injecting drug users with regard to place of study (Manipur Vs Delhi)?

1.4.2 Are there any differences in the level of knowledge & attitude regarding the HIV/AIDS between the two places of study?

1.4.3 Is there any differences between the risk practices with regard to:

1.4.3.1 Socio-demographic characteristics of the IDUs

1.4.3.2 Family and peer factors like support and care from family

1.4.3.3 Knowledge and attitude on HIV infection

1.5 RESEARCH HYPOTHESES

1.5.1 In injecting drug users (IDUs), risk practices are lower in Manipur where there is a strong policy on HIV/AIDS prevention among IDUs that is based on harm reduction and which has been implemented much earlier than in Delhi where the policy is weak for prevention of HIV infection among IDUs.

1.5.2 In IDUs, there is a higher level of knowledge regarding HIV/AIDS in Manipur than in Delhi.

1.5.3 In IDUs, attitudes regarding HIV/AIDS are different in Manipur and Delhi

1.6 OPERATIONAL DEFINITION OF VARIABLES

There are six variables that has been assessed which are as follows:

1. Socio-demographic characteristics
2. Family and peer factors
3. Knowledge regarding HIV/AIDS
4. Attitude regarding HIV/AIDS
5. Risk practices regarding HIV/AIDS
6. Utilization of health & drug treatment services

Operational Definition of Variables

Types of Variables	Name of variable	Operational Definition
1. Dependent Variable	Risk Practices	Refers to those practices which put the individual at risk of contracting HIV and it relates to (i) injecting practices such as duration of drug use, frequency of injection, sharing & cleaning of injecting equipments, frequency of sharing /cleaning of needles & syringes, use of bleach for cleaning, (ii) sexual practices such as having multiple sex partners, sex without condom with CSW's (Commercial Sex Workers), frequency of condom use with CSW's, ever suffered from STDs (Sexually Transmitted Diseases) etc.

Types of variables	Name of variable	Operational Definitions
2. Independent Variables	Socio-demographic Characteristics of IDUs	Refers to age, gender, marital status, education level, occupation, income level, occupation, place of living
	Family and peer factors	Refers to living with family, support & care from family, reasons of drug use
	Knowledge on HIV/AIDS	Refers to knowledge on HIV infection and on the various modes of transmission of HIV/AIDS
	Attitude on HIV/AIDS	Refers to beliefs, attitude towards AIDS patient, and prevention of HIV infection
	Utilization of health & drug treatment services	Refers to accessibility of IDUs to health & drug treatment services regarding treatment for STDs, participation in NSEP, ever received treatment related to drug use, kind of drug treatment received etc.

Operational Definition of High HIV Risk Practices: High HIV risk practices refer to the high injecting and sexual risk practices in this study. The high injecting risk practices were as follows:

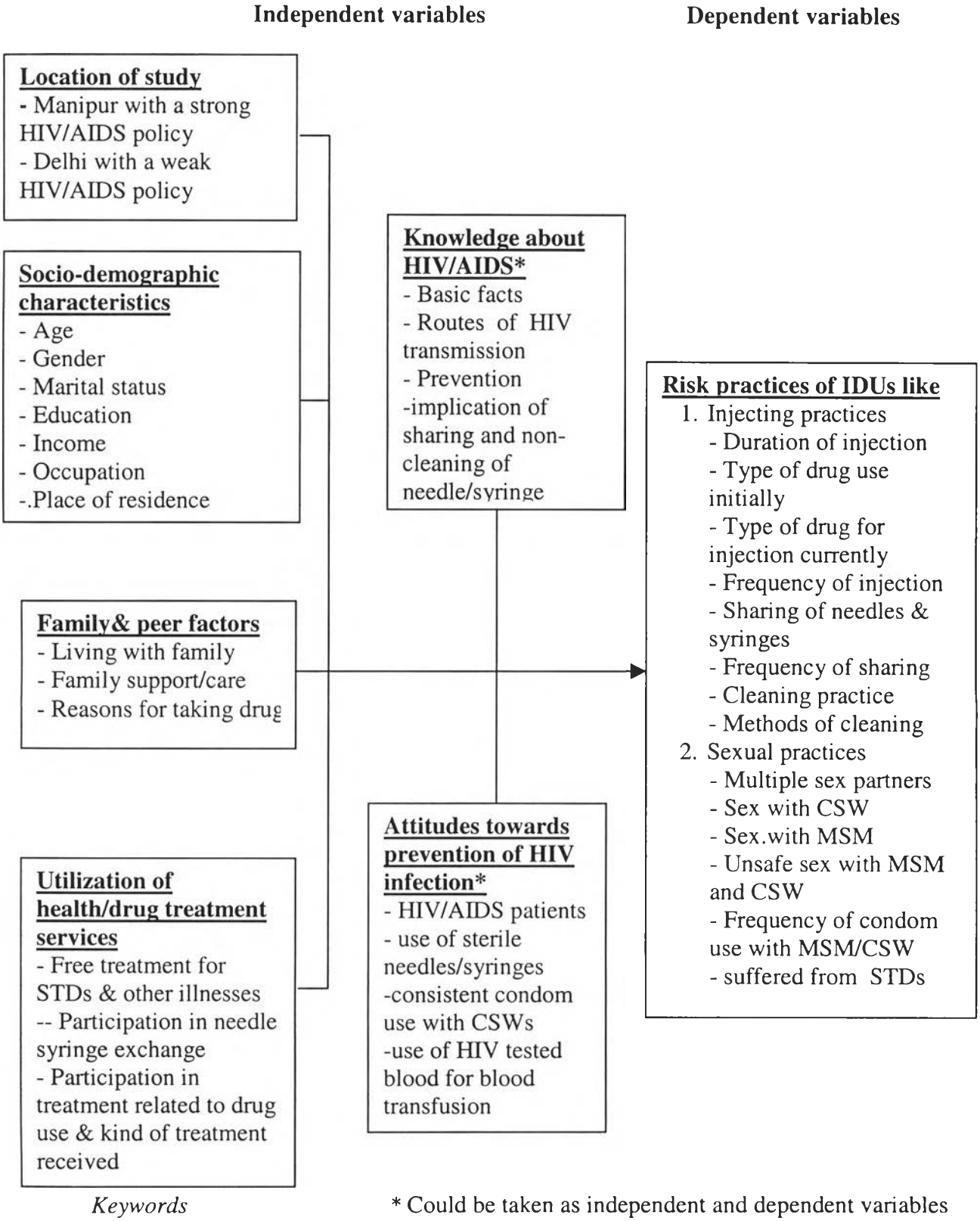
1. Duration of drug injection of ≥ 60 months
2. Frequency of injection of ≥3 times/day
3. Ever sharing of needles & syringes in the last 6 months
4. Non-cleaning of needles and syringes among those who shared N&S
5. Infrequent cleaning of N&S, not every time
6. Cleaning N&S but not using bleach for cleaning

The high sexual risk practices were as follows:

7. Having >2 sex partners in the last 6 months
8. Non-usage of condom with commercial sex workers (CSWs)
9. Inconsistent use of condom with CSWs
10. Ever suffered from sexually transmitted disease (STDs)

1.7 CONCEPTUAL FRAMEWORK FOR THE STUDY

Figure 2.2: The conceptual framework for the study based on Precede Model.



Keywords

* Could be taken as independent and dependent variables

The Precede Model is a step-by step approach to assist health providers in creating appropriate health promotion projects in the 1970's. The PRECEDE stands for " Predisposing, Reinforcing, and Enabling Constructs in Educational Diagnosis and Evaluation". The Precede-Model developed by Marsha Krueter (1968-1974), is used to explain the factors influencing behavior in IDUs in the study. The Precede-Model describes the steps in planning a countrywide health behavior change program. The model has five phases in total from phase 1 through 5 that focus on assessing the social context. Epidemiological data, behavior and environmental diagnosis, health education needs and administrative factors It was proposed that there are three factors that predict behavior change i.e predisposing factors, enabling factors and reinforcing factors. Predisposing factors either increase or decrease the motivation for change. Cognitive variables such as attitudes, beliefs, and values affect the motivation to change. Enabling factors on the other hand are usually thought of as barriers to change created by societal forces or systems that include presence of certain laws/regulations, availability of drug etc. Reinforcing factors are usually social including parents/peers a feedback that either encourages or discourages drug use. Educational diagnosis deals in identifying these predisposing, enabling and reinforcing factors that have effect on behavior of IDUs (Procede/Procede, Overview 2003).