Chapter Three

RESEARCH METHODOLOGY

The chapter describes the rationale of the present PhD study and the methodology adopted to conduct the study including the study locale, the study procedure, limitations and the scope of the study.

3.1 Rationale of the Present Study

Apart from the field experiences of the researcher, the rationale of the present study has essentially emerged from the review of available literature in the area of HIV/AIDS in prisons in India.

The Prison inmates appear to be isolated, but they are part of the general population. They belong to the larger community and the HIV prevalence in the larger community is likely to be reflected among the prison population as well.

It is also important to note that in many countries in the world, the rates of HIV infection among prisoners are much higher than in the general population. This is more prevalent in countries where HIV infection in the general community is predominantly due to injecting drug users, who over-represents in the correctional institutions. In these countries, high rates of HIV are primarily related to sharing of injecting equipment outside and inside prison. Also, higher rate of HIV population in prisons is found in countries (primarily in Africa) where there are high rates of HIV infection in the general population with infection rates driven primarily by unsafe heterosexual sex (Jurgens, 2006; Lines & Stover, 2005).

Although the prevalence of HIV positive prison inmates tend to be much higher than in the general population for reasons stated above, the accurate data on the prevalence of HIV positive prisoners vary among countries. This is because in some cases, homogeneous surveillance data are not available, and in other cases different factors are at work in different societies. Also, the testing procedures vary from place to place (e.g. voluntary testing, screening of all new arrivals, screening on occasion of outbursts of infectious diseases) (Bollini & Gunchenko, 2001).

Another opposing trend regarding availability of data on prevalence of HIV in prisons is the fact that although the most common form of HIV research in prison has
been in the form of HIV surveillance, much of the data regarding HIV/AIDS prevalence in prisons comes from developed, high income countries. Information about developing countries and countries in transition is more limited. When data do exist, they tend to be quite varied and unsystematic. Additionally, in many cases the existing data are not recent enough to provide an accurate picture of the current situation in prisons. Even in high-income countries, the precise number of HIV positive prisoners is difficult to estimate, and rates of HIV infection reported from studies undertaken in a single prison or region may not be an accurate measure of HIV prevalence in prisons across the country as a whole because the levels of HIV infection may vary from region to region within a country. Nevertheless, a review of the literature demonstrates that HIV infection is a serious problem in most prison systems, and one that requires immediate action (Reindollar, 1999).

Some groups of people in society are at higher risk of contracting HIV than others. These groups of people are either engaged in high risk behaviours or are exposed to situations making them vulnerable to contract the disease. The high risk population includes commercial sexual workers, truck drivers, injecting drug users (IDUs), transgender population, men having sex with men (MSM) and prison inmates (Lines & Stover, 2005). Everywhere, the prison population consists of individuals who are at greater risk for contracting HIV as compared to the general population, including the injecting drug users, those living in abject poverty, alcohol abusers, and those belonging to the minority communities (Reindollar, 1999).

In a nationwide behavioural sentinel surveillance survey (BSS) conducted by NACO in 2001, both for the general population and the high risk groups like female sex workers and their clients, men who have sex with men and injecting drug users, wide variations in knowledge of HIV/AIDS between different states and between rural and urban populations was revealed. While 76.1% of the Indian population had heard of HIV/AIDS, the figure was 93.2% for urban males and 65.2% for rural women. Only 46.8% of the respondents were aware of the two important methods of prevention of transmission i.e. consistent condom use and sex with uninfected partner (NACO, 2006).

The situation may be same in the prison population as well where many HIV positive inmates are likely to be infected before they are imprisoned or while they are outside the prison on bail or parole. Reported cases of HIV/AIDS in prisons only include cases that are known but there may be many inmates who are either ignorant
about their HIV positive status or may not disclose their HIV positive status due to the stigma attached to the disease.

The presence of HIV infected prisoners within the correctional facilities raises a host of issues. Some cases relate to the spread of the HIV infection due to drug use and sexual activity within the prisons while the other concerns relate to the public health, as majority of the prison population is a “**floating population**” who are constantly moving in and out of the prisons. Thus in this context, it is very much essential to study the knowledge, attitude, behaviour and understanding of prevention of HIV/AIDS (KABP) of such a floating population who are constantly going back to the larger community. Such KABP level will help to understand the requirement of the HIV intervention in the prison setting.

Further, in **total institutions** (Goffman, 1961) like prisons, prisoners are literally a “**captive audience**” who are logically easier to reach than similar at risk population in the community for HIV prevention programs (Braithwaite, Hammett & Mayberry, 1996). Thus, provision of targeted HIV/AIDS intervention in prisons will also benefit the larger society, since the vast majority of the prison inmates eventually return to the community.

As evident from the literature review, there have been several **interventions** to tackle the issue of HIV/AIDS in prisons. In the context of HIV/AIDS intervention in prisons, intervention should facilitate the prison system including the prison administration and the prison inmate in dealing with the problem. Also, as Braithwaite, Hammett & Mayberry (1996) points out that the appropriateness of the HIV prevention efforts in prison settings is another thorny issue. Although injection drug use is common in prisons, inmates do not receive any information on sterilizing needles. The timing of the intervention also presents a logistical problem. There is confusion as to the appropriate time for program implementation: whether the appropriate time for programme implementation is prior to incarceration for those indicted and awaiting due process from the court system, i.e. at the undertrial stage, after persons are sentenced and serving time, or upon release from the prison during probation or parole or at the completion of the sentence.

In the context of HIV/AIDS, it is important to understand how information about HIV/AIDS has entered the consciousness about the prison population, how attitudes form, how people view one another, and ultimately how collectives mobilize around their experiences with AIDS (LeBlanc, 2000). One of the sociological findings
related to health research has been socioeconomic status as associated with greater health related knowledge. Understanding the ways in which social position influences such knowledge and how such knowledge shapes an array of attitudes, behaviours and outcomes pertaining to health is also essential. When people receive pieces of HIV related information via readily recognized “sources”, such as a film or magazine article, they often go on to have conversations about HIV/AIDS with friends and family, sometimes receiving clarification, other times becoming misinformed. Sometimes, news about AIDS does not reach all people with equal impact. Rather it is instantly filtered through “prisms of culture” associated with race and ethnicity, sexual orientation, and socioeconomic status (Freeman as cited in LeBlanc, 2000).

One of the major issues related to the HIV/AIDS pandemic involves attitudes of the general public towards people living with HIV/AIDS. This is because HIV/AIDS carries a lot of social stigma and discrimination and many AIDS patients have encountered a frightened, unsympathetic and judgemental public. Thus it is important to identify the circumstances and the processes underlying these negative attitudes towards those affected by HIV/AIDS (LeBlanc, 2000).

HIV/AIDS not only affects the individual but also it enters the consciousness of groups. There are many collectives that have been formed in response to AIDS for various purposes (LeBlanc, 2000). Thus here it is important to trace what kinds of collective actions the prison administration has taken to tackle the problem of HIV/AIDS in prisons.

A lot of emphasis has been made on education as a primary tool to lessen the spread of HIV and AIDS. This highlights the need for estimating HIV related knowledge levels in the general population, and also for understanding the factors that affect the diffusion of HIV related information (LeBlanc, 2000). This is particularly of significant importance in the prison settings considering the fact that prisons are the most neglected places and most of the prison population being undertrials, are in constant contact with community.

To summarize, the rationale of the present PhD study is based upon the following issues:

1. HIV/AIDS is as prevalent in the prison population as in the general population.
2. Certain groups of the general population is at higher risk to contract HIV than others, who may also be found in the prison population.

3. Understanding of knowledge, attitude, behaviour and understanding of HIV/AIDS prevention is influenced by several factors like socioeconomic factors, prisms of culture, stigma related to the disease etc.

4. It is easier to initiate interventions in prisons as they form a captive group of audience.

5. Although various research studies and official government reports are available on various aspects of prisons, there are no studies which throw light on the issue of HIV/AIDS in the Indian prison. Added to this gap in the literature, no studies have been reported so far on the knowledge, attitude, behaviour and understanding of prevention (KABP) of prison inmates regarding HIV/AIDS in Indian prisons.

It is in this context that the present study attempted to explore the knowledge, attitude, behaviour and understanding of prevention of HIV/AIDS (KABP) of prison inmates. It is also imperative to explore the intervention by an outsider, or an “intervener” and intervention by the prison administration. Apart from these gaps, the MPhil research study on, “HIV/AIDS in Prisons: A Human Rights Perspective”, by the researcher (Guin, 2007), also revealed inadequate knowledge of prison inmates and the lower level prison functionaries regarding HIV/AIDS.

**3.2 Objectives**

The broad objective of the study is to understand the knowledge, attitude, understanding of HIV/AIDS prevention of prison inmates and their vulnerability towards HIV/AIDS.

The specific objectives are:

1. To study the socioeconomic characteristics of the prison inmates;
2. To understand knowledge of HIV/AIDS among prison inmates;
3. To measure attitude of prison inmates towards people living with HIV/AIDS and their understanding of HIV/AIDS prevention;
4. To examine the vulnerability and HIV risk factors of prison inmates;
5. To suggest ways and means to evolve effective prison health policy.
3.3 Research Questions
The research questions addressed in the PhD study are as follows:

1. What is the vulnerability of the prison inmates for contracting HIV/AIDS in prisons in terms of prison conditions, high risk behaviour etc?
2. What is the level of knowledge of the prison inmates regarding HIV/AIDS?
3. What is the level of understanding of prevention of HIV/AIDS of the prison inmates?
4. What are the medical services available in prisons in India in general and with respect to HIV positive prison inmates in particular and what are the roadblocks in providing better medical services in prison, if any?
5. What could be an effective intervention strategy to address the problem of HIV/AIDS in prisons in terms of awareness generation and provision of better medical facilities for HIV positive inmates?

3.4 Conceptual Framework
Based on the objectives of the study and the research questions, the following conceptual framework was developed. The interrelation and influencing factors about knowledge, attitude, behaviour and understanding of prevention of prisoners towards HIV/AIDS have been depicted in a conceptual framework as shown in figure 3.1:

The framework tries to delve upon the various processes that result in knowledge, attitude, behaviour and understanding of prevention of the respondents towards HIV/AIDS and a brief description of each of those stages. From the diagram, it is clear that the background characteristics of the respondents viz. socio-economic characteristics, family background, exposure to mass media and vulnerability factors before incarceration like high risk behaviour etc influences the understanding of the high risk factors regarding HIV/AIDS and its associated diseases like STIs. These high risk factors together with the vulnerabilities created by the condition of incarceration may be considered as intermediate factors which together in turn results in the knowledge, attitude, behaviour and understanding of prevention aspects of HIV/AIDS of the respondents.
Figure 3.1: Conceptual Framework
3.5 Operational Definitions of Key Concepts

Operational Definition of key concepts means that terms must be defined by the steps or operations used to measure them. Such a procedure is necessary to eliminate confusion in meaning and communication (Burns, 2000).

The operational definition of the key concepts is explained below:

1. **Knowledge of HIV**: In this study, knowledge regarding HIV/AIDS includes the understanding of the prison inmates regarding various processes and stages of HIV/AIDS infection and any other information in relation to HIV/AIDS.

2. **Attitude**: In the present study, attitude is defined in terms of the positive or negative views and response of the prison inmates towards people living with HIV/AIDS.

3. **Behaviour**: In the present study, behaviour means the high risk behaviours that the prison inmates might indulge in before and / during their incarceration period which might place them at higher risk of contracting HIV/AIDS. The high risk behaviour which has been included in the study are unprotected sexual relationship with multiple partners, unprotected male to male sex, injecting drug use, untreated sexually transmitted diseases and reuse of injection equipment for blood transfusion.

4. **Prevention**: Understanding of prevention of the prison inmates refers to the knowledge and understanding of the prison inmates regarding the preventive measures of HIV/AIDS including HIV testing and exposure to interventions.

5. **Intervention**: Intervention in the present study means the various programmes and processes undertaken either by the prison administration or by an organization outside to the prison administration to address the problem of HIV/AIDS in the prison setting.

6. **Vulnerability**: Vulnerability is defined in terms of all the factors that prison inmates are exposed to which makes them highly susceptible to contract HIV/AIDS. These factors could be their high risk behaviour and also the living and the medical situation in the prison.

7. **Prison**: A prison is any place used permanently or temporarily under the general or special orders of State Government for the detention of prisoners.

8. **Prison Inmate or Prisoner**: In this study, a prison inmates or a prisoner includes both convict and undertrial.
9. **Convict:** A person sentenced to imprisonment in prison.

10. **Undertrial Prisoner:** A person who is accused of any crime and is undergoing his trial in the court of law.

11. **Central Prison:** Central Prison house prisoners who have been sentenced for over three years and which sometimes also houses undertrials. It has a larger capacity of accommodation and also offers correctional facilities for prison inmates.

12. **District Prison:** Generally, district prison house prisoners who are sentenced to less than three years of imprisonment and also undertrials.

13. **Superintendent of Prison:** The officer who is appointed by the State Government to be in charge of a person with such designation as it may specify. The Central and District prisons are supervised by full time Superintendents.

14. **Rigorous punishment:** The punishments with hard labour, to which offenders are liable under the provisions of the Indian Penal Code

15. **ART:** ART or Anti-Retroviral Therapy is the recommended treatment for HIV. This is a combination of several drugs, which usually must be taken at different times with various specific directions accompanied with meals or fluids, and other such requirements.

### 3.6 Study Variables

A number of variables were used in the analyses. The predictor variables in the study include sex, age, education, occupation, employment, marital status, place of residence before imprisonment, prison setting, religion, caste, income, and exposure to mass media of the prison inmates. The outcome variables include concepts like knowledge, misconception, scientific knowledge, attitude and understanding of prevention etc.

### 3.7 Methodology

Both quantitative and qualitative methodologies were used in the study. Quantitative methodology was used to study the knowledge, attitude, behaviour and understanding of prevention (KABP) of prisoners regarding HIV/AIDS. Qualitative methodology was used to gather data from the HIV positive prisoners, prison staff and the prison
medical officers to deduce the vulnerability of prison inmates towards HIV/AIDS and to collect information on interventions on HIV/AIDS in the respective prison, if any.

3.7.1 Area of the Study

The PhD study was conducted in Maharashtra state in India. Located in western India, Maharashtra is India's third largest state in area and second largest in population, 9.4% of India’s total population\(^1\). The State of Maharashtra covers an area of 3,07,784 sq. km. It comprises of 35 revenue/ districts, 353 Tehsil and 43,722 villages (inhabited and uninhabitated). There are 378 towns in the state. Based on 2001 census, the population of Maharashtra in 2005 was 10,73,93,682 covering 5,59,25,838 males and 5,14,67,844 females. The urban population was 43.71% and the rural population was 56.29%. The percentage literacy was 76.9% as per the 2001 census (State Crime Records Bureau, 2005). Maharashtra is the richest state in India with highest per capita income, contributing to 15% of the country's industrial output and 13.2% of its GDP in year 2005-06 \(^2\). The following map shows the location of Maharashtra in India:

\(^1\) http://en.wikipedia.org/wiki/Maharashtra retrieved on September 1, 2008  
\(^2\) www.worldbank.org retrieved on September 1, 2008
Among the 2.31 million people living with HIV/AIDS in India, the highest number of PLHA are highest in Andhra Pradesh and Maharashtra, with nearly 0.5 million PLHA each. As referred in Chapter 1, the second highest number of PLHA are living in Maharashtra. Also, Maharashtra is one of the states where high HIV prevalence is recorded among MSM (male having sex with men), female sex workers and injecting drug users. (NACO, 2008a).

Maharashtra state has a total of 38 prisons consisting of 8 Central prisons and 23 district prisons (Inspectorate General of Prisons, 2006). The state is divided into four prison regions. The Central prisons from the eastern region are at Nagpur and Amravati, in the western region are at Yerwada and Kolhapur, in the Southern region

Source: www.mapsofindia.com retrieved on September 2, 2008

Figure 3.2: Location of Maharashtra in India
are at Mumbai and Thane and at the Central region are at Aurangabad and Nasik (Inspectorate General of Prisons, 2006).

The following two figures show the location of places from where data were collected.

Source: www.mapsofindia.com retrieved on September 2, 2008

Figure 3.3: Location of Amravati, Aurangabad, Thane, Pune
Figure 3.4: Location of Kalyan and Byculla in Mumbai district

3.7.2 Universe

All prison inmates belonging to the four prison regions of Maharashtra state constitutes the universe of the study. Thus prison inmates from all the six prisons form the universe of the present study.
3.7.3 Research and Sample Design
The present study is descriptive in nature and uses the quantitative survey research design. Thus, primarily, data was collected from 300 prison inmates. However, secondary information was also collected from HIV positive prison inmates, prison medical doctors and prison staff as supportive data.

A *purposive sampling technique* was employed to select prisons from which to sample inmates. The data were collected from four central Prisons at Amravati, Yerwada, Thane and Aurangabad and two district prisons at Byculla and Kalyan. To select prison inmates, availability or convenience sampling technique was used for the study. Availability samples are generally easy to complete, expedient and economical, but precision and accuracy are sacrificed with this method. Availability or convenience sample are the least representative and generalisable type of samples. The nonrepresentativeness of availability samples must be noted in the methodology section (Bachman & Paternoster, as cited in Gillespie, 2005).

Unfortunately, many times, the prison system itself places numerous restrictions on researchers that make conducting this type of tightly designed research close to impossible (Bryan, Robbins, Ruiz, O’Neill 2006). Thus, the researcher had to be flexible as regards to the research design while data collection. While the sample could not be collected according to the strict methodological procedures, it can be said that more or less the sample was representative and generalisable as the researcher could ask the prison staff (precisely the prison warder) to call inmates who were fulfilling the inclusion criteria.

3.7.4 Inclusion Criteria

It is methodologically valuable to survey a diverse cross section of inmates about a variety of issues related to the prison environment and the inmate subculture in the context of HIV/AIDS and the activities that facilitate transmission (Krebs, 2002). For the quantitative data, in order to cover cross section of the population, care was taken to include equal number of convict and undertrial prison inmates both from the male and female respondents. Any respondent who were above 18 years were included in the study.

For the qualitative data, any reported case of HIV positive inmate was included in the study to collect data from the HIV positive inmates. Any prison staff and medical
A doctor working in the prison was included in the study to collect information from the prison staff and the prison medical doctors.

3.7.5 Sample Size

The quantitative data was collected from 300 prison inmates. 75 prisoners from each of the four prison regions were selected. The 75 prison inmates consisted of 50 male prisoners and 25 female prisoners. During the data collection, it was not possible for the researcher to select the sample by preparing a sample frame consisting of a list of all prisoners in the particular prison. This was mainly due to the apathy of the prison officials to open their official record concerning each prison inmate. Thus, the researcher had to depend on the prison officials for the selection of the prison inmates. However, the researcher could use her choice in asking the prison officials which category of prisoner she wanted to interview. However, the choice of selection of the prison inmates remained limited to their being undertrial or convicts. So the researcher had to specify that she wanted to interview 25 undertrials and 25 convicts (from male prison) and accordingly the prison warder or the prison guard, whoever was deputed for the researcher’s security, made the arrangement to call such prisoner from the respective barrack or cell.

The qualitative data was collected through case studies of 10 HIV positive male prison inmates (Annexure II) across the six prisons collected through indepth interviews guided by Interview Guide. This included some of the prison inmates whom the researcher had interviewed earlier\(^3\), and inmates who reported to be HIV positive after 2006. In the pilot study, the researcher was able to know the number of reported cases in each prison, which was very negligible. Prison being a closed institution, the researcher had to entirely depend on the prison administration including the Superintendent and the Medical Officer to gain access to the prisoners. However, it was made clear to the prison officials that the researcher would be interested to interview only those prisoners who were willing to talk to the researcher.

Apart from this, in order to build a holistic picture, data was also collected from prisoners (not having HIV/AIDS through informal focus group discussions), the prison staff and the doctors (prison medical officers and para-medical staff) through informal unstructured interviews. Six FGDs were conducted in all the six prisons with

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\(^3\) As per the data collected during 2006 for the unpublished MPhil Research on, “HIV/AIDS in Prisons: A Human Rights Perspectives”, by Guin, Sayantani 2007
an average number of four to eight prison inmates who were not HIV positive. Thus on an average, **48 prison inmates who were not HIV positive** were interviewed. The researcher initiated the Group Discussion and then directed it allowing interactive discussions. The FGDs were conducted with the help of a interview guide (Annexure VI). Five prison staff (1 superintendent, 1 jailor, 3 prison constable) from each of the six prisons was interviewed using an unstructured interview guide. Thus total **30 prison staff** was interviewed. Information from the prison medical staff was collected from 2 prison doctors and 3 para medical staff from each of the six prisons was interviewed. Thus, **30 prison medical staff** was interviewed in total.

The following table gives an overview of the sample selected for data collection

<table>
<thead>
<tr>
<th>Type of Data</th>
<th>Study Instrument</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantitative Data (Primary)</td>
<td>Prison Inmates</td>
<td>Interview Schedule</td>
</tr>
<tr>
<td>Qualitative data (Secondary)</td>
<td>HIV positive male prison inmates</td>
<td>Interview Guide</td>
</tr>
<tr>
<td></td>
<td>HIV negative inmates</td>
<td>Focus Group Discussion</td>
</tr>
<tr>
<td></td>
<td>Prison staff</td>
<td>Interview Guide</td>
</tr>
<tr>
<td></td>
<td>Prison medical staff</td>
<td>Interview Guide</td>
</tr>
</tbody>
</table>

### 3.7.6 Selection of Prison

The selection of prison was done in a way to give wider coverage of prison studies in Maharashtra state. In a previous study\(^4\), the researcher had covered Yerwada, Mumbai and Nasik during data collection. Thus, in this present study, the researcher wanted to include those prisons which were not covered as yet. This included Aurangabad Central Prison from the central prison region instead of the Nasik Road Central Prison and the Thane Central Prison from the Southern region instead of the Mumbai Central prison. Yerwada Central Prison was again included in the present study despite the fact that it was included in the earlier MPhil study as because the Yerwada Central Prison is the biggest prison in Maharashtra and the

highest number of *convicts* are also reported from this prison. Being so, a larger number of reported cases of convict prisoners who were HIV positive were from this prison. From the Eastern region, Amravati Central Prison was selected instead of the Nagpur Central prison because of the researcher’s convenience.

The four central prisons were also selected in such a way that two central prisons covered the urban population and two central prisons covered the rural population. Central Prisons in Maharashtra are classified in such a way that each Central prison forms the catchment area of the neighbouring districts. This, Amravati Central Prison was selected from the Vidharva region of Maharashtra which covers the prison population mainly from the rural / tribal areas. Similarly, Aurangabad Central Prison is in the Marathwada region of Maharashtra. Thus the Central prisons at Amravati and Aurangabad covered the rural population from the adjoining rural areas and the Central Prisons at Yerwada and Thane covered the urban population.

Also, the Central prisons at Amravati, Yerwada and Aurangabad housed both the male and female prison inmates in separate enclosures. Only Thane Central prison housed male prison inmates. Thus from the Southern region, the district prisons at Byculla and Kalyan were selected so as to cover the women prison respondents from the southern region.

The region wise Distribution of Central Prisons in Maharashtra State & Selection of Sample is as follows:

![Figure 3.5: Region wise Distribution of Central Prisons in Maharashtra State & Selection of Sample](image-url)
3.7.7 Study Instruments

The study is based on both primary as well as secondary data. The primary data was collected by using the following study instruments:

1. **Interview schedule**: The quantitative data was collected with the help of a structured interview schedule (Annexure I) designed based on the literature review. A pre-testing of the interview schedule was done in one of the prisons before the primary data collection to make any further modifications in the interview schedule. In total 300 prison inmates were interviewed from all the six prisons.

   The interview schedule consisted of the following sections:

   A. **Demographic parameters** included sex, age, marital status, number of surviving children, religion, caste, education, employment history, occupation, monthly income and place of residence before imprisonment.

   B. **Family details** including the family structure, number of family members and total family monthly income of the respondents.

   C. **Criminal background** of the prison inmates which included their previous arrest history, if any, reasons for imprisonment etc.

   D. **Link of the prison inmates with their family** during their incarceration period. This included details on the visits of the family members while they were in prison.

   E. **Level of Exposure to Media**: Respondent’s level of exposure to media was measured by asking women and men three statements regarding the frequency with which they watched television, read newspaper or listened to radio before being imprisoned. Respondents were asked to respond to each statement on a summated Likert Scale ranging from 1= never, 2= rarely, 3= Sometimes and 4= most often. Finally the scores were categorized into three groups ranging from low, medium and high exposure to media.

   F. **HIV/AIDS Knowledge**: This section comprised of questions regarding knowledge of HIV/AIDS, the sources of their knowledge, misconceptions and some questions to deduce the scientific knowledge regarding HIV/AIDS. The responses to these questions were either in “yes”, “no”, and “don’t know/ no idea” or multiple responses. A set of seven questions having response category of, “yes”, “no” and “don’t know/ no idea” was used to calculate **level of knowledge**. A summated scale was created and the Cronbach’s alpha for this
scale was 0.559 for overall knowledge. Similarly, a summated scale was created with a series of thirteen questions to assess misconceptions regarding HIV/AIDS and the scale was categorized as “no misconceptions”, “only one misconception”, and “more than one misconception”. Cronbach’s alpha for these items was 0.918 for misconception. The level of scientific knowledge of respondents was also deduced using a similar summated scale with thirteen questions and then categorizing into low, medium and high scientific knowledge. Cronbach’s alpha for these items was 0.73 for scientific knowledge. The individual questions on which scales were deduced are presented in the respective sections.

G. **Level of Attitude of respondents towards HIV/AIDS:** Respondents who had heard of HIV/AIDS were asked to respond to each of seven statements based on a Likert Scale ranging from 0= definitely no, 1=probably no, 2= don’t know/ may be, 3= probably yes and 4= definitely yes. Scores for level of attitude were obtained by summing the total number of responses and then were categorized into low and high attitude. Cronbach’s alpha for these items was 0.974 for level of attitude. Apart from these, there were seven questions with multiple responses.

H. **High Risk Behaviour:** This section comprised of questions on drug use immediately before incarceration except exclusive tobacco use, questions only for the injecting drug users, questions on sexual risk behaviour, homosexuality, sexually transmitted infections (STIs) and blood donation. Responses to these questions comprised of “yes”, “no”, “don’t know/can’t say”, or multiple response.

I. **Prevention of HIV/AIDS:** This sections comprised of questions on cure and prevention of HIV, spread of HIV in prison, HIV testing and exposure to HIV interventions. Responses to these questions comprised of “yes”, “no”, “don’t know/cant say”, or multiple response. Understanding of level of general HIV preventive measures was created by using a summated score of 7 questions and categorizing it into low, medium and high. Cronbach’s alpha for this scale was 0.72. Similarly summated score of another 7 set of questions was used to deduce level of understanding regarding specific HIV/AIDS preventive measures into low, medium and high. Cronbach’s alpha for these items was 0.815.
2. The **qualitative data** was collected by using the following instruments

   i. **Interview guide:** Data from the **HIV positive inmates** was collected by using a Interview guide from which case studies of HIV positive inmates were prepared. This interview guide consisted of questions related to their background information, the experience of the medical services in the prison, prison living conditions, their high risk behaviour, care and treatment, preventive measures related to HIV/AIDS inside prison etc (details in Annexure III).

   ii. **Interview guide for the prison staff:** To elicit data from the prison staff, the interview guide consisted of questions relating to the prison living conditions, the prison health care system, staffing procedure, training regarding HIV/AIDS issues, need for NGO involvement, HIV/AIDS preventive measures in the prison etc (details in Annexure IV).

   iii. **Interview guide with the prison medical doctors:** To get the views of the prison doctors and the paramedical staff, the interview guide aimed towards asking questions regarding prison medical services, testing procedure regarding HIV/AIDS, dealing with ethical issues, HIV/AIDS preventive measure inside prison and any release programmes for the HIV positive prison inmates languishing in the prison (details in Annexure V).

   iv. **Focus Group Discussion guide with the HIV negative inmates:** The focus group discussion guide consisted of questions relating to the prisoners views regarding the prison living conditions, prison medical services, knowledge of HIV transmission and high risk behaviour (Annexure VI).

The **Secondary data** was mainly collected from the office record and also from books, journals, in and across various libraries. Secondary data on HIV/AIDS in general and HIV/AIDS in prisons in particular was collected from various international organizations like the World Health Organization (WHO), Joint United Nations Programme on HIV/AIDS (UNAIDS), Office of the High Commissioner for Human Rights (OHCHR), United Nations Office on Drugs and Crime (UNODC), Human Rights Watch, The World Bank, etc and various National Organizations like National Aids Control Organization (NACO), Bureau of Police Research and Development (BPRD), National Crime Records Bureau (NCRB), National Aids
3.8 The process of data collection

The prison is a very critical health care setting that needs even more research if public health goals are to be reached for both prisons and society at large. Prison based studies are feasible despite all the challenges that make engaging in this area to be viewed as a not so glamorous field for scientists. Researchers need to acknowledge that gaining access to prisons requires continuous negotiations and understanding with prison officials at different command levels, as correctional facilities are highly controlled and closed systems (Sifunda et. al. 2008). Thus, in the present study, the researcher had to be in constant touch with the prison superintendent and the prison jailor so as to coordinate her visits to the prison for data collection.

The data collection for the study began in November 2007 and continued till March 2008. The medium of communication was mostly Hindi and in rare cases English. The data collection process began with the researcher visiting each of the prison after fixing an appointment with the prison superintendent. In the meeting on the scheduled date, the researcher had to explain the purpose of the study, and what she was exactly looking for during her data collection. The prison superintendent usually asked the jailor to make the arrangements for the data collection. Data collection in the male prison section was always accompanied by a male prison guard due to security concerns of the researcher. In fact, in three of the four prisons (to collect from the male prison inmates), the researcher was asked to conduct the data collection in the office of the prison jailor.

In one of the prison, the interview was conducted in the office of the senior jailor. Although the prison jailor was mostly out for official work or he was busy with visitors, but at times the data collection happened in his presence. In other cases, a prison guard or a prison warder was always around, though at a distance. Inside the office of the jailor, the researcher was given a separate table and chair and a stool was provided across the table for the respondent to sit and participate in the interview.
process. The prison warder used to call the prison inmates from their respective barracks.

In order to ask certain sensitive questions regarding homosexuality or the sexual behaviour, the researcher had to wait for appropriate time during the interview when the prison jailor went for his prison round. Sometimes, the researcher had to use the time when the jailor was busy talking to the visitors. This was helpful sometimes as the respondent became enthusiastic to share their opinion regarding topics such as homosexuality and sexual behaviour, which otherwise they were forbidden to discuss inside the prison premises. The fact that the researcher was a woman may have also made the men respondents enthusiastic to share their views regarding the sensitive topics. However, at times the respondents were uncomfortable to answer those questions. The researcher observed that certain non verbal gestures were helpful in making the respondents comfortable. For example, the respondents answered more freely when the researcher asked questions without looking directly at the eyes of the respondents. Sometimes when she asked questions while directly looking at the respondent, the respondent tended to be little uncomfortable and started answering in monosyllables. Thus, to make the interview more fruitful, the researcher maintained eye contact only when needed and not throughout the interview.

In another prison, the researcher was asked to conduct the data collection in the office of the weaving factory unit of the prison. So, apart from the jailor, there were two more people working inside the office, one of them being a woman. The researcher was given table and a chair in this office and a stool was provided for the respondent to sit. So apart from the researcher there were three more prison staff in the room. Initially, the data collection in this prison was little problematic in the presence of so many people. In the first day itself, the researcher was asked by the jailor to maintain certain distance while talking to the prisoner and not to ask questions which might make the prisoner ‘uncomfortable’. Also, the prisoner was asked to sit near the door of the room, so there was interruption whenever some one entered or left the room. However, things became little easy after three or four days of starting the interview, when the prison staff including the jailor became little convinced with the fact that the interview was merely an academic procedure and that the interview questions were academic. It was at this point of time that the researcher got time to ask some of the questions. Also the researcher chose an early time to start the interview, which meant that she could interview before other office staff arrived.
In another prison, the researcher was asked to conduct the interview in the office of the laboratory assistant who was a lady and of the same age as the researcher. She was quite understanding and never intervened in the interview process. Moreover, she was out for certain hours of the day for work. Although, the prison guard was present outside the room, the interview process was quite smooth and uninterrupted in this prison.

**Data collection in the women sections**

The data collection in the women prisons was quite smooth. Once the researcher introduced the research to the respective prison superintendent, the women jailor in charge of the women prison was called and introduced to the researcher. After this, the researcher was allowed inside the women prison. Once inside the women prison, the researcher was free to interact with whichever women prison inmate she wanted to. In the women sections also, the researcher was given table and chair to conduct the interview and a stool was provided for the respondent. However, here also the researcher was denied access to the prison record so as to formulate the sample frame. Thus the researcher had to pick and choose whoever respondent were interested for the interview.

**3.9 Data Analysis**

The unit of data analysis was the quantitative data collected from the 300 prison inmates. The data analysis was mainly done using statistical tools of analysis with the help of SPSS (Statistical Package for the Social Sciences). Since the data had a mix of nominal and ordinal variables, basic as well as inferential statistics had been used. Basic statistics used were frequencies, percentages and cross tabulations. Simple cross-tabulation was used to determine the proportion of prison inmates who had obtained information about HIV/AIDS, their level of awareness and the use of methods for HIV/AIDS prevention. Chi-square tests and correlations had been used to find out association between variables.

Scales were constructed to measure knowledge, attitude and understanding of prevention using various items. The items were subjected to reliability analysis to
measure the internal consistency of the resulting scale. Scales were constructed that had a Cronbach’s alpha of .60 or higher.

The qualitative data collected from the HIV positive male prison inmates, HIV negative inmates, the prison staff and the prison medical staff was analysed qualitatively. The data collected from the HIV positive inmates were in the form of narratives, which was analysed theme wise and presented case wise (Annexure II). The rest of the qualitative data was analysed in separate themes and was presented in the text under various sections, wherever applicable. The secondary qualitative data was mainly used as supportive data wherever required.

3.10 Chapterization Plan

The PhD thesis has been divided into a total of eight chapters. The first chapter gives an overview of the topic of the study related to HIV/AIDS in prisons. The second chapter is a review of literature on the major studies related to HIV/AIDS in the general population and in the prison population. The third chapter describes the methodology adopted to conduct the PhD study. The fourth chapter gives a detailed description of the characteristics of the respondents. The fifth chapter is on the knowledge of the respondents regarding HIV/AIDS. The sixth chapter is on the attitude and understanding of prevention of the respondents. The seventh chapter highlights the vulnerability and HIV risk factors of the prison inmates and finally the eight chapter gives a summary of the whole PhD thesis and presents the emerging recommendations.

3.11 Ethical Considerations

The following ethical considerations were adhered while collecting data:

1. Informed Consent: In order to seek a person’s participation in the research, the researcher fully informed the prospective participant of various factors such as the absence of any monetary or material inducement, the purposes of the research, the academic institution the researcher belonged to, the duties and responsibilities of the researcher, the manner of keeping records and the guarantee of confidentiality. Before starting the interview, the researcher explained her purpose of the visit and the need and requirements of the study. After explaining in detail, the researcher
asked each one of the inmates if they were willing to participate in the interview session. The researcher also explained that none of their names would be mentioned in the research study. The prisoners were interviewed only after their consent and on the basis of their willingness to participate in the research.

2. **Confidentiality:** The case studies do not reveal the identity of any of the prisoner. No information is revealed relating to their name and address. This is purposefully done to protect the interest of the prisoner and to keep their HIV positive status confidential.

### 3.12 Scope of the Study

The study would be significant in providing information relating to the knowledge and awareness level of prisoners on HIV/AIDS. As per the literature review, no such study seems to have been conducted in the Indian prisons. Further, the study focuses on the health services available in prisons for HIV positive prison inmates. The study looks into the situation of HIV/AIDS in prisons and the factors, if any. The information might provide insights to fellow researchers interested in prison study in India. The study might also be helpful for policy and development planners, especially those interested in policy issues regarding health in prisons.

### 3.13 Limitations of the Study

1. Ideally, it would have been appropriate to study a sample covering all the Central prisons in Maharashtra state (total eight Central prisons). However, considering the time and monetary constraints to carry out a complete enumeration of all such prisoners and then do a sample survey, there was a problem of delimitation and hence the universe had to be restricted to 300 prison inmates and 10 case studies of HIV positive prisoners.

2. The research setting being a closed structured setting unlike the usual open community settings, permission had to be sought from the Inspectorate of Prisons, Maharashtra State during the research proposal writing stage. A permission letter elaborately describing the research objectives and scope of
study was sent to the Inspector General of Prisons, Maharashtra State, in order
to get permission for data collection. The permission letter was written on the
behalf of the research guide and not on behalf of the researcher to ensure that
permission is granted promptly. However, permission was not granted at the
very first instant and the researcher was asked to prove her nationality by the
Inspectorate of Prisons, Maharashtra State. Only then, the researcher was
permitted to collect data from the six prisons in Maharashtra State. However,
the visits in the prisons were depended on the availability and the suitability of
the prison officials. Before each visit to the prison, the researcher had to
formally inform the respective Prison Superintendent about her visit in the
prison and request him to make the necessary arrangements. Despite having
permission, sometimes the researcher had to wait at the prison gate waiting to
be permitted inside by the Superintendent A major problem faced by the
researcher was the limited access inside the prison in order to conduct the
interviews with the prisoner due to security reasons. Every time inside the
prison premises and also during the interview, one person from the prison staff
would be accompanying her on security ground. Sometimes, interview
happened in the presence of either the prison staff or the prison doctor. This
sometimes proved a threat to the inmate to participate in the interview with
full openness. Also, while interviewing the HIV positive prison inmate, apart
from the researcher, the accompanying police staff also came to know that the
interviewee was HIV positive. This raised ethical dilemmas in the mind of the
researcher. However, she went ahead with the interviews as most of the
participants openly discussed their problems being HIV positive and that if
required they would themselves disclose their HIV positive status to others.
Also, the inmates expressed their expectation from the researcher from time to
time by asking help either related to their disease or related to administrative
matters like prison transfer. At such times, the researcher had to apologize and
admit her limitation as a researcher.

3. The data related to high risk behaviour viz., injecting drug use, homosexuality
in prison, sexually transmitted infections and blood donation are inadequate
and thus might be imperfect so as to convey the frequency of each high-risk
activity. For example, these data simply represent the perception of the inmate
regarding the percentage of inmates they know who indulge in high risk sex, and not how frequently each of those inmates have sex or how risky the sexual activity actually is. Secondly, as the data regarding the above issues had been collected in a relatively restricted situation in the presence of the prison staff, respondents could have been fearful to give correct answers, which would substantially affect the accuracy of their responses. Although the data are imperfect, they do provide some insight into what inmates perceive about high-risk HIV transmission behaviour both prior to and inside prison. Despite the methodological limitations of employing these data, doing so is of both theoretical and substantive use.