CHAPTER TWO

Research Methodology
CHAPTER II

RESEARCH METHODOLOGY

This chapter deals with research methodology selected for the present study. It also deals with research approach, design, sample and sampling technique, setting of the study, construction of tools and technique used, testing of the tools, pilot study, data gathering process and plan for data analysis.

Importance of Scientific Method in Social Research: Generally the research is considered as an endeavor to arrive at answers of intellectual and practical problems through the application of scientific method to know the knowledge universally. It is the movement from the known to the unknown.

Methodology is identical to a research model employed by a researcher in a particular project, including basic knowledge related to the subject and research methods in question and the framework employed in a particular context. In this sense, every investigation has a distinct methodology, which might vary from study to study (S.Sarantakos, 1998:33).

The first step towards doing research is to develop a model that will present a summary of the main elements of the research, namely what will be studied, how, when and where it will take place: then, how it will be executed
and, finally, how the data will be analyzed and published. Such a model can be very prescriptive or rather loose and flexible, depending on the type of methodology employed and the type of research to be undertaken.

There are two major methodologies, quantitative methodology and qualitative methodology have merge in social sciences, each of which contain theoretical and methodological principles.

Qualitative research is a systematic, interactive, subjective approach used to describe life experiences and give their meaning. Quantitative research is concern with qualitative phenomena. It involves broadly stated questions about human experiences and realities, studied through sustain contact, with people in natural environment, generating rich, descriptive data that helps us to understanding their experiences.

Quantitative is a formal, objective systematic process to describe, test relationship, and examine cause and effect interaction among variables. It based on measurement of quantity or amount and it is applicable to pneumonia that can be exposed in terms of quantity.
A step of the research methodology includes:

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The acquired Immunodeficiency Syndrome (AIDS) has had major repercussion throughout western and developing countries. The enormous developments which have occurred over the last many years have led to a confusing array of specialist information which for the generation may be difficult to place in context. AIDS pandemic which has percolated across the world has widespread consequences on society.

HIV / AIDS are a threat to mental health, social relationships and quality of life. The psychological aftermath of HIV infection / AIDS, has a broad range and multiple factors interact in HIV related distress including perceived responsibility for having contracted HIV, the potential for having unknowingly placed others at risk, and changes in physical appearance that may occur in later stages. Reaction to HIV infection may include feeling of sadness worry, depression, despair and confusion, as well as other effective, cognitive and behavioral responses.

2.1 Introduction and concept of study

Young men and women ages 15-24 are at the centre of the global HIV / AIDS epidemic. Currently, 11.8 million people in this age range are living with HIV or AIDS. Close to half of the new infections are occurring in young people. Every day 6,000 more young people become infected with HIV, and most of them do not even know they are infected. Sixty-two percent of infected young
people are female. In addition, young people often have to care for family members with HIV/AIDS.

Numerous factors facilitate the rapid spread of HIV among youth, including age and biological and emotional issues. A number of social and economic issues further complicate the situation. They can include extreme poverty, socioeconomic and socio-political factors, hopelessness, and stigma, lack of infrastructure with limited access to healthcare and education, and limited opportunities for employment. Young men, and particularly young women, may also be the victims of violence and/or sexual abuse and exploitation. In extreme cases, young people may be sold by their own families to support remaining family members. A significant number of young people who escape abusive families or who are orphans or refugees are forced to live on the streets in urban areas where they sell themselves for sex to earn money and are, therefore, at high risk for HIV and other serious health threats.

Although surveys demonstrate a steady increase in the number of young people worldwide who have heard about the HIV/AIDS epidemic, many still lack knowledge about how to protect themselves and about how the virus spreads. Even in countries with high HIV prevalence, many sexually active youth do not perceive themselves to be at risk. In addition, the majority of HIV-infected young people are not aware they are infected. Most are not aware that people with HIV can look normal and healthy.
Knowledge about HIV / AIDS education and awareness is the process which affects change in the health practices and attitude towards health practices of people. Change will make them aware of taking self-care related to this public health problem. This study will help with aim to connect with young people's aspirations and potentials and promote their positive attitude, Promoting emotional wellbeing of self and towards people living with HIV infection.

**Need of the assessment of the knowledge:** The study helps to identify knowledge level and the attitude of college students who plays an important role as social function. The family is the basic unit, who cares, shares, who loves, feeds, involve in all good and bad experiences. They are having emotional bounding for each other and their HIV infected near one and dear one. Respondents also play many roles for family and society e.g. son, daughter, brother, sister, friends, colleagues, employee in workplace, productive member for family and member of society in lives. HIV infected individual's family affects adversely their own personal, physical, social and emotional status.

Young adult constitute one at risk and vulnerability group they are in the process of forming sexual habits and therefore can be influenced to develop the right habit. They are entering an age of sexual curiosity and experience and may be at a special risk to form wrong habits and led to HIV infection.
Statement of the problem:

"The Knowledge and Attitude of the college students about the HIV / AIDS prevention in urban areas of Maharashtra state: with special reference to Mumbai and Sangli urban centers (2005)."

Objectives:

• To assess the existing level of knowledge about prevention of HIV / AIDS among the college students in urban area.

• To study the attitude of undergraduate college students about prevention of HIV / AIDS and towards HIV infected people.

• To study the relationship of selected factors like Age, Sex, Location of the college, Type of family and Socio-economic status of students with their level of knowledge about AIDS.

• To find out a co-efficient of correlation between the knowledge and attitude of the undergraduate students regarding prevention of HIV/AIDS.

• To compare the level of knowledge and attitude of college students two urban centers in the state of Maharashtra.
Hypothesis

1) Awareness programmes about HIV /AIDS in school and college should be associated with adequate level of knowledge among college students which will help them to prevent HIV infection.

2) If college students have positive attitude about HIV / ADIS they will be interested to gain more knowledge about it and will care the people affected with HIV.

Review of Literature

Going through the available literature on the topic of research, it is possible for the researcher in social sciences how to conduct studies on the awareness about the same topic and other aspects related to topic. Hence we can say that, this is the unique study of its kind. However few researches can be sited within has been used by the researcher as the background of the study. (Details of review of literature is given in Review of literature chapter)

Selection of the topic

Explosion of knowledge demands maximum utilization of mental abilities, on the part of the learner, to receive, understand, assimilate and use the ever-increasing knowledge. While imparting store information the efforts are taken to the development of cognitive skills, to help an individual to become
more adaptable to new and changing circumstances and help the individuals in problem solving skills.

A society is fundamentally a mental phenomena and society relates with two concepts of interest and attitude. Though these concepts primarily relates to psychology understanding of this is important because molding of behavior of human being determine the social relationship.

The social relationship plays an important role in development of an attitude hence there is a close relationship between man's personality and his attitude. Attitude in part arises out of social situation and in part depends on the educational system.

Over half of the world's population is now under 25 years of age. This group is more threatened by AIDS than any other; equally it is group that has more power to fight the epidemic than any other. Young people are at the centre of the global epidemic in terms of rates of infection, vulnerability, impact and potential for change.

Young people are particularly vulnerable to sexually-transmitted HIV, and to HIV infection as a result of drug-use. Young people 15-24 years old accounts for half of all new HIV infections worldwide more than 6,000 become infected with HIV every day. More than a third of all people living with HIV are under age of 24 years, and two-thirds of them are women, exploitation increases their susceptibility to infection. Even if they are not currently engaging in risk behaviors, as they become older, young people may soon be exposed to
situation that put them at risk. Indeed, globally, most young people become sexually active in their teens. The fact that they are or soon will be - at risk of HIV infection makes young people a crucial target for AIDS education.

Coping with a life-threatening illness during adolescence, difficult period of life can be overwhelming. As many of the young people most at risk of acquiring HIV also confront issues of poverty, sexual orientation, sexually transmitted disease co infection, abuse, mental health and substance use, the optimal management of HIV disease becomes extremely complicated for many teenagers and their providers. Adolescents with HIV should have the right to expect high-quality medical and social services provided with sensitivity to their needs, so that they may make the transition to healthy adulthood.

Young people are particularly vulnerable to HIV infection for social, cultural, biological and economic reason whatever their circumstances, in order to protect themselves against HIV young people need; Information, Life Skills, Youth -friendly health services and a safe and supportive environment. Education is really the only way to chip away the stigma and fear of the virus and the ignorance about how it spreads.

The college community is uniquely powerful force in any society which needs to be harnessed if we have to bring the AIDS pandemic control. Providing health education on AIDS to college students therefore will be a good investment in order to get the returns in terms of prevention and control of the problem of AIDS.
It is within these concepts and perspectives that study has been undertaken to assess the level of knowledge and attitude of young adults engaged in educational system, concerning with varied social background in relation to HIV/AIDS as a social problem in urban as well as in rural community.

2.2 The research methodology

The research design should deal with the question like, what population coverage to aim it, what information to seek, how to go about collecting this information: how to process and interpret the results and so forth. Final all this in order to achieve the objective set for the study. Research design prepared for covering the objective for the study.

The research design is prepared on the descriptive survey method. It takes help of primary source of data as well as secondary sources. In order to assess the knowledge and attitude of college students related to HIV/AIDS and to identify the factors for the same was planned in three stages;

A) To collect the review of literature with the help of secondary sources.

B) To collect the data from secondary sources from the respondent as a base of study. The list of colleges was collected from the respective authority and classwise number of student's information about selected colleges was also collected.
C) To collect the information with the help of structured questionnaire schedule this was convened to all respondents. The investigator visited each college and filled the questionnaire.

**Types of data**

*Primary data*

Primary data is first-hand information collected through various methods such as observation, questionnaire, mailing etc; Primary data was collected from respondents of the colleges of Mumbai and Sangli centers.

*Secondary data*

Secondary data is collected from different libraries, institutions’, Internet-Website and government offices and reports published by them as listed below.

- Tata Institute of Social Sciences, Mumbai
- Mumbai Districts AIDS Control Society (MDACS)
- AVERT Society
- National Institute of Research and Reproduction (NIRR)
- Tilak Maharashtra University, Pune
- Grant Medical College, JJ Hospital, Mumbai
2.3 Research Approach

Descriptive survey method is selected because the present study was aimed at identifying knowledge and awareness about HIV / AIDS and attitude towards people living with HIV and its illness among college students and to determine its relationship with the help of available facts and figures.

This approach helps the investigator to assess the levels of knowledge and awareness of college students about prevention of HIV infection and their attitude towards the care of HIV infected people in community.

Research design: Non-experimental research design is used to make account of events as they naturally occur was the purpose behind. Survey search collects detailed description of exiting phenomenon and uses the data either to justify current condition and practices or to make more intelligent plans to improve them. Survey research examines the characteristic, behavior and intentions of a group being studied by asking to answer a series of question. Comparative descriptive design is used to describe variables and to examine differences in variable in two or more groups that occur naturally in a setting.

Research design is the backbone or the structure of the study. It provides a framework that supports the study and holds it together. In the present study, the investigator selected survey method. In view of the objectives of the study, the investigator, interviewed respondents using
tools, such as structured questionnaire which is prepared according to the Likert Scale.

2.4 Sampling and sampling technique

1) Selection of Maharashtra state

Maharashtra is 2nd largest state in India with population of 100 million and area of 3.08 lacks Sq. Km., divided into total of thirty-five districts. The State has always remained on forefront in the world in health care delivery with a very well knit rural and urban infrastructure.

Maharashtra is one of the highest HIV prevalence states and has also experienced a rapid increase in the number of cases since 1986. The bed occupancy in many hospitals due to HIV positive persons has been as high as 25% to 30%, the ANC (Antenatal cases) prevalence is around 1% the HIV prevalence in STD clinics is 10.4%. There are 216748 registered HIV positive persons in the state today and an estimated figure of 8, 51,420 people living with HIV / AIDS. The total number of AIDS Cases is 47,386 and those who have died are 2958. (NACO 2001) .Following are the factors contributing to high prevalence rate in state:

- Highest rate of urbanization (41 %) and migration.
- Well established Sex industry (Brothel to non brothel)
- Prevalence of HIV alarming in Western Part and industrial belt.
• High prevalence of STDs.
• HIV infection amongst sex workers is high (50 to 60%)
• Hospital bed occupancy by HIV positive varies from 24 to 40%.

According to the 2001 censes Maharashtra has experienced a net in-migration at the state level. During 1999-2001, nearly two million men entered into Maharashtra, while nearly 0.4 million men moved out of the state. Three-fourth of the migration from out side the state entered five districts, Mumbai 37%, thane 25%, Pune 9% and Nagpur 6%.

The first AIDS case was reported from Mumbai in 1986. An implementation of an effective HIV services programme in the state resulted in better understanding of epidemiological scenario in the state. The HIV infection is not restricted to the core groups in the state but has spread into bridge as well as low risk operation. Few cities in the state have already entered into 3 phases of the epidemic. It is now evident that spread of HIV in Maharashtra is not restricted to high risk behavior of individual, urban cities but it has established its roots in low risk population as well as distant rural area of the state.

The districts like Mumbai, Sangli, Kolhapur, Pune, Satara, Latur, Raigad, Akola, Chandrapur etc. are experiencing a relatively higher prevalence of HIV / AIDS in the state. It is evident from the distribution of the AIDS cases that the epidemic has already spread to the rural areas in
the state as the least urbanized districts like Sangli, Satara are also experiencing high prevalence of HIV/AIDS.

The three societies under the Govt. viz. - Maharashtra State AIDS Control Society (MSACS), Mumbai District AIDS Control Society (MDACS) and AVERT are heading towards attainment of major goals of bringing about a behavior change in the population and also to care for the patients who are HIV positive and are facing the threat of getting into an immuno compromised state with full blown AIDS.
### Table No 2.1  HIV prevalence in Maharashtra by district (2003 and 2006)

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Districts</th>
<th>ANC Clinic attendance</th>
<th>STD Clinic attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2003</td>
<td>2006</td>
</tr>
<tr>
<td>1</td>
<td>Ahmednager</td>
<td>1.63</td>
<td>0.75</td>
</tr>
<tr>
<td>2</td>
<td>Akola</td>
<td>0.56</td>
<td>0.63</td>
</tr>
<tr>
<td>3</td>
<td>Amravati</td>
<td>0.50</td>
<td>0.25</td>
</tr>
<tr>
<td>4</td>
<td>Aurangabad</td>
<td>0.13</td>
<td>0.75</td>
</tr>
<tr>
<td>5</td>
<td>Bhandara</td>
<td>1.00</td>
<td>0.38</td>
</tr>
<tr>
<td>6</td>
<td>Bid</td>
<td>1.50</td>
<td>0.75</td>
</tr>
<tr>
<td>7</td>
<td>Buldhana</td>
<td>0.25</td>
<td>0.88</td>
</tr>
<tr>
<td>8</td>
<td>Chandrapur</td>
<td>1.50</td>
<td>1.75</td>
</tr>
<tr>
<td>9</td>
<td>Dhule</td>
<td>1.01</td>
<td>1.13</td>
</tr>
<tr>
<td>10</td>
<td>Gadchiroli</td>
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<td>0.25</td>
</tr>
<tr>
<td>11</td>
<td>Bhundiya</td>
<td>0.88</td>
<td>0.63</td>
</tr>
<tr>
<td>12</td>
<td>Hingoli</td>
<td>0.38</td>
<td>1.63</td>
</tr>
<tr>
<td>13</td>
<td>Jalgaon</td>
<td>1.50</td>
<td>1.50</td>
</tr>
<tr>
<td>14</td>
<td>Jalna</td>
<td>0.25</td>
<td>1.13</td>
</tr>
<tr>
<td>15</td>
<td>Kolhapur</td>
<td>1.50</td>
<td>1.38</td>
</tr>
<tr>
<td>16</td>
<td>Latur</td>
<td>1.50</td>
<td>0.88</td>
</tr>
<tr>
<td>17</td>
<td>Mumbai(Suburban)</td>
<td>1.15</td>
<td>1.00</td>
</tr>
<tr>
<td>18</td>
<td>Mumbai</td>
<td>2.26</td>
<td>2.25</td>
</tr>
<tr>
<td>19</td>
<td>Nagpur</td>
<td>1.75</td>
<td>0.88</td>
</tr>
<tr>
<td>20</td>
<td>Nanded</td>
<td>0.63</td>
<td>0.50</td>
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<td>21</td>
<td>Nandurbar</td>
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<td>Nasik</td>
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<td>0.63</td>
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<tr>
<td>23</td>
<td>Osmanabad</td>
<td>0.75</td>
<td>1.50</td>
</tr>
<tr>
<td>24</td>
<td>Parbhani</td>
<td>1.38</td>
<td>0.88</td>
</tr>
<tr>
<td>25</td>
<td>Pune</td>
<td>1.38</td>
<td>0.50</td>
</tr>
<tr>
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<td>Raigarh</td>
<td>0.38</td>
<td>0.88</td>
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<td>27</td>
<td>Ratnagiri</td>
<td>1.00</td>
<td>0.25</td>
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<td>Sangli</td>
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<td>2.00</td>
</tr>
<tr>
<td>29</td>
<td>Satara</td>
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<td>Sindhudurg</td>
<td>0.13</td>
<td>0.13</td>
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<td>Sulhapur</td>
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<td>1.00</td>
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<tr>
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<td>Thane</td>
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<td>0.88</td>
</tr>
<tr>
<td>33</td>
<td>Vardha</td>
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<td>0.25</td>
</tr>
<tr>
<td>34</td>
<td>Vashi</td>
<td>0.13</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>Yawatmal</td>
<td>2.25</td>
<td>1.38</td>
</tr>
</tbody>
</table>

ii) Selection of Urban Centres

Non-probability purposive sampling method was used for the study. Purposive sampling also termed judgmental sampling is a type of non-probability sampling in which subject is selected because it is identified as knowledgeable regarding the subject under investigation. The investigator establishes certain criteria thought to be representative of the target population and deliberately select subjects according to these criteria. Two distinct were selected from Maharashtra state with high prevalence rate of HIV / AIDS.

Mumbai and Sangli were selected on the basis of purposive method. Wherein prevalence of HIV is relatively higher to other districts in Maharashtra. Out of the total number of cases registered in Maharashtra nearly one-third are registered in Mumbai and almost one-fourth cases are in Sangli district. These two districts account nearly two-third of the total AIDS cases registered in Maharashtra.

In the year 2003, Prevalence of HIV attending ANC clinic are (2.26%), (1.1%) and STD clinic (37.50%), (19.60%) in Mumbai and Mumbai suburban respectively. Similarly, HIV prevalence attending ANC clinic is (4.0%) and attending STD clinics (15.6%) in Sangli. It is relatively higher than other districts in state. With this reason these two districts were selected for present study to assess the knowledge level of young people where HIV prevalence is very high.
a) District Mumbai

Mumbai as metropolis city has selected for this study for two main reasons. First, the city has a high prevalence, historically and currently. Secondly working relationship and networks already established with medical practitioners, AIDS workers, NGOs and community-based organization, as well as groups for HIV positive people.

Mumbai is the capital of the Indian state of Maharashtra. The city proper has approximately 14 million people and, along with the neighboring suburbs of Navi Mumbai and Thane, Mumbai forms the world’s 4th largest urban agglomeration with around 19 million people.

Mumbai is the commercial and entertainment centre of India, generating 5% of India’s GDP and accounting for 25% of industrial output, 40% of maritime trade, and 70% of capital transactions to India’s economy. Mumbai is home to important financial institutions such as the Reserve Bank of India, the Bombay Stock Exchange, the National Stock Exchange of India and the corporate headquarters of many Indian companies and numerous multinational corporations. The city also is having a centre of India’s Hindi film and television industry, known as Bollywood. Mumbai’s business opportunities, as well as its potential to offer a better standard of living, attract migrants from all over India and, in turn, make the city a potpourri of many communities and cultures.

For administrative convenience, the metropolis has been divided into two revenue districts- Mumbai City and Mumbai Suburban District. However, it is
under a single municipal corporation. The Metropolis attracts tourists from all over the world, each coming for different reasons. Mumbai is called India in Miniature as people from all corners of India and those speaking almost all languages are found in Metropolis, blending secularism and social integration for peaceful coexistence.

According to the 2001 census, the population of Mumbai was 11,914,398, according to extrapolations carried out by the World Gazetteer in 2008, Mumbai has a population of 13,662,885 and the Mumbai Metropolitan Area has a population of 20,870,764. The population density is estimated to be about 22,000 persons per square kilometer. The overall literacy rate of the city is above 86%, higher than the national average. There are 875 females to every 1,000 males, lower than the national average.

The religions represented in Mumbai include Hindus (67.39%), Muslims (18.56%), Buddhists (5.22%), Jains (3.99%) and Christians (3.72%), with Sikhs and Parsis making up the rest of the population. This unique mix of cultures is a result of the settlement of people of various communities from India. The city also attracts foreign nationals because of the business opportunities available in the city.

Mumbai suffers from the same major urbanization problems seen in many fast growing cities in developing countries: widespread poverty and unemployment, poor public health and poor civic and educational standards for a large section of the population. According to the 2001 census, 54.1% of
Mumbai's population lives in slums like Dharavi, Asia's second largest slum is located in central Mumbai. The number of migrants to Mumbai from outside Maharashtra during the 1991-2001 decade was 1.12 million, which amounted to 54.8% of the net addition to the population of Mumbai.

Educational Institutions: Educational institutions at the higher secondary level consist of the schools run by the Municipal Corporations and the privately owned schools. Other than that there are the colleges which provide specialized education in the field of media, arts, music, engineering, science and law. There are total 422 Degree colleges, 40 engineering and Medical colleges in Mumbai.

Perhaps 3 to 5 million people in India are living with HIV (in 1997). Infection rates nationally are less than 1%, although high-risk groups, especially in big cities, may have over 50% infection rates.

The incidence of HIV in Mumbai has grown rapidly since the first surveys were performed in 1989. Random testing of different segments of the population show different levels of incidence. Alarmingly large incidence rates of 51% have been found among sex-workers in Mumbai. Spread into the general heterosexual population has been found in a random testing of pregnant women in Mumbai which showed incidence rates of 2.4% in 2001. Similar rates were found among blood donors in various government run hospitals.
ii) District Sangli

Another area for the study selected was Sangli urban centre, a district headquarters. Sangli is one of the fast developing districts of Maharashtra and the 21st district in terms of size with total land area of 87,572 sq.km. It is one of the southern districts of Maharashtra and forms a part of Deccan plateau. It is bounded with Satara and Sholapur districts to the north, state of Karnataka to the east and south, Kolhapur district to the southwest, while it has a small boundary with Ratnagiri District in the west.

Demographic Profile of Sangli district

<table>
<thead>
<tr>
<th>Density</th>
<th>301 per sq km</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>2.79% of Maharashtra</td>
</tr>
<tr>
<td>Sex Ratio</td>
<td>957 (10th rank)</td>
</tr>
<tr>
<td>Literacy</td>
<td>76.70 (15th rank)</td>
</tr>
<tr>
<td>Total Population</td>
<td>2581835</td>
</tr>
<tr>
<td>Males Population</td>
<td>1319267</td>
</tr>
<tr>
<td>Female-Population</td>
<td>1262568</td>
</tr>
<tr>
<td>Growth Rate</td>
<td>16.85</td>
</tr>
<tr>
<td>Male Literacy</td>
<td>86.25</td>
</tr>
<tr>
<td>Female Literacy</td>
<td>66.88</td>
</tr>
</tbody>
</table>

(Source: 2001 census)

Out of the total cases in Maharashtra, nearly one third are reported in Sangli district alone. The main factors responsible for the rapid spread of the epidemic can be attributed to the following reasons:
(i) Migrant population: Because of the wide range of road and rail network communications from different states, mainly from Karnataka and Andhra Pradesh and particularly from the bigger cities like Mumbai and Hyderabad, the place (Sangli) has become a centre of trade and commerce for the nearby rural areas. The poor people from the rural areas of the district and also from the neighbouring states have been migrating to the twin cities of Sangli and Miraj due to the existence of different industries and other employment opportunities.

(ii) Good economic condition: Sangli is one of the highest productive districts in agricultural production because of its good irrigational facility and irrigated lands. As a result, even the rural population of this district is socio-economically better off. In addition, a substantial proportion of Sangli population is involved in the business related to gold and jewellery and hence linked with Mumbai and Surat. Thus, business network of Sangli is with cities like Mumbai and Surat, which is considered as the centres for trade and commerce, is responsible for the economic prosperity of this district. Thus, the economic prosperity of the people coupled with their mobility pattern and lack of proper knowledge regarding the mode of transmissions of HIV/AIDS creates a vulnerable environment for the spread of HIV/AIDS.

(iii) Commercial Sex Workers: The practice of commercial sex is quite common and well known in the district of Sangli. The urban areas of the district have an
easy access for these kinds of practices. Most of the Commercial Sex Workers (CSWs) who are practising their profession in the red light areas of these towns are the migrants from different districts of Maharashtra and the neighbouring states like Karnataka and Andhra Pradesh. These urban areas are also having different types of industries, which accelerate the process of migration and mobility of population in the district. The Commercial Sex Workers (CSWs) are also visited by the youths from different parts of the district. The existence of commercial sex workers also found in even along the high traffic flow areas.

(iv) Devadasis: The practice of Devadasi tradition (temple prostitutes) is still prevalent in the district of Sangli. The Devadasis are the migrants from the neighbouring state especially from Karnataka. The majority of the Commercial Sex Workers (CSWs) of Miraj town are the Devadasis.

(v) Awareness of HIV is very low (28 percent among males and 12 percent among females). More males (45 percent) were aware of STI compared women (12 percent). Although awareness of HIV / AIDS was high among both males and females, the percent of respondents having misconceptions about HIV / AIDS was 29 percent and 35 percent amongst males and females respectively. Most of the people had sought treatment for RTI from private doctors.

The twin cities, Sangli and Miraj have merged to form the largest urban agglomeration in Southern Maharashtra. The cities have important education
centres offering graduate and post graduate quality education in the areas of arts, science, commerce, management, medicine, and engineering degree courses.

Survey indicates that Sangli district is facing rapid expanding epidemic of HIV/AIDS. The majority of those infected are in the 20-35 years of age group. Female are the hardest hit between the ages of 20-24 years.

According to Maharashtra State AIDS Control society's statistical data, Sangli District is second highest in Maharashtra State for HIV / AIDS spread. NACO selected Sangli as targeted area for prevention and control programs.

Table 2.2 Year wise prevalence of HIV positive cases in STD Clinic Attainders, Sangli.

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</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td>6.5</td>
<td>31.8</td>
<td>37.8</td>
<td>37</td>
<td>50.36</td>
<td>85.75</td>
<td>47.43</td>
<td>44.6</td>
<td>41.6</td>
<td>39.45</td>
</tr>
</tbody>
</table>

Source: General hospital, Sangli, 2001

Table 2.3 Totals No. AIDS cases found in different Age Groups in Sangli District. 2001

<table>
<thead>
<tr>
<th>Age</th>
<th>0-6</th>
<th>7-14</th>
<th>15-19</th>
<th>20-29</th>
<th>30-39</th>
<th>40-49</th>
<th>50-59</th>
<th>60+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases</td>
<td>171</td>
<td>36</td>
<td>38</td>
<td>659</td>
<td>872</td>
<td>339</td>
<td>117</td>
<td>62</td>
</tr>
</tbody>
</table>

Source: General Hospital, Sangli, 2001
iv) Selection of Colleges

For present study from each selected district Mumbai and Sangli two colleges were randomly selected. From Mumbai two colleges were selected one from greater Mumbai and one from Mumbai suburbs. At present these colleges offers the undergraduate level courses in all the three streams arts, sciences and commerce three-year Bachelor degree courses. It also offers Vocational Course in Electronics and Computers.

2.5 Population

Population refers to an category of person or objects that meet the criteria from study, established by the researcher, any set of persons, objects or measurements having and observable characteristics in common (Busvantthappa:1998:189) population in study are college students mainly from Arts, Commerce, Science and other existing faculty in selected colleges in urban area.

Young men and women ages 15-24 are at the centre of the global HIV / AIDS epidemic. The risk perception and behavior of the country's 230 million adolescent (10-19) and 14 million youth (13-35) would determine the future direction of HIV/AIDS. A large number of them are out of school (57% drop-out), sexually active, marry early, migrate for work in vulnerable situation and are exposed to peer pressure and risk environment. Their knowledge of reproductive health, sexual hygiene as well as risk perception is very low.
Almost 73% of young people have misconceptions about the modes of the transmission. Nearly 33% of reported cases are in the age group of 15-29 years. Close to half of the new infections are occurring in young people. Every day 6,000 more young people become infected with HIV, and most of them do not even know they are infected. Sixty-two percent of infected young people are female. In addition, young people often have to care for family members with HIV / AIDS (Kishore: 2005:p203).

Following are the reasons for the selection of young population those who are studying in colleges. India has adolescent’s population of 10% of total population (2001 census). Heterosexual, promiscuity is particular risk factors since sexual freedom is greater in urban societies than in more traditional rural societies. A large section of adolescent’s population is in student category. The students from colleges of Mumbai and Sangli give affair representation of studying adolescents / young population of urban area. It was easy to approach this population through colleges; they would be assessed easily to data collection.

2.6 Selection of Sample

A sample is a selected proportion of the defined population, it subset of the population of the interest. Sample refers to a portion of a large population of subjects or objects. Method of descriptive survey used and sample were selected by the purposively sampling method. In this study the sample are
undergraduate's students of selected colleges studying either in Arts, Commerce or Science or any other faculty.

Sampling technique when a large portion of individuals or items or units have to be studied, we take a sample it is easier and more economical to study the sample than the whole population of the universe. Great care therefore is taken in obtaining a sample. It is important to ensure that the groups of people or items included in the sample are representative of the whole population to be studied.

For practical reason It was decided to study a sample of 300 college students form each urban centers i.e. 50 students from each faculty from each college, Samples are selected purposively from each class as predetermined numbers from faculty, which were present on the day of data collection, considering their class time schedule and permitted by their class teacher. The representative of three faculties in the sample was approximately in the same proportion from both the colleges in cities.

- Inclusive criteria for selection sample from Mumbai and Sangli
- Equal propositions (50 students) were selected for each faculty from each college.
- Students who were present on the day of data collection.
- Students willing to participate in the study.
- Senior college of co-education (Boys and Girls)
Total number of 620 samples was participated in the study from both cities i.e. 315 samples from Mumbai colleges and 305 samples from Sangli colleges. Colleges taken for pilot study were excluded from study.

2.7 Tools and technique

Keeping the objectives of the study tool was developed. Tools and technique used for data collection was the structured Questionnaire. This method elicits personal information about the sample. It also probes in natural manner and opportunity to get relevant information in a natural way and language used is English.

The various techniques of data gathering involve the use of appropriate recording forms. These are called tool or instrument of data collection. They consist of observation schedule, interview schedule / guide questionnaire, rating scale, checklist etc. Each of the above tools is used for specific method of data gathering. Questionnaire is paper and pencil instrument that research subject is asked complete. It is designed to gather data from individuals about knowledge, attitude, benefits and feelings. Questionnaire comprises of series of questions prepared by the researcher that are annexed and filled by all the respondents. Methods of questionnaire are filled by himself or by mail.
Development of tools

As the objective of the study to assess the existing knowledge of college student about HIV /AIDS The structured questionnaire were developed for data collection. Questionnaire contains a set of question logically related to a problem under study, aim at eliciting responses from the respondents.

To prevent the further spread of HIV it's fundamental that people have a good knowledge about the disease. Since many risk behaviours, associated with the transmission of HIV, are adopted in young ages it's very important to put much of the preventive efforts on adolescents. In this study knowledge about HIV /AIDS includes the meaning causes, mode of transmission, diagnostic test signs and symptoms, treatment, control measures, source of information and attitude of college students in relation to HIV /AIDS. Questions based on the stated objective for this study as categorized as following sections;

Section I.

Demographic data

This section includes general information of respondent. Identification data of respondent comprises 13 questions which includes age, sex, faculty and class, religion, language, residences, type of family, education and occupation of the parents, family income and whether respondent is earning and his hobbies.
Section II.

Knowledge in relation to HIV/AIDS

1. Knowledge in relation to HIV / AIDS as health problem which includes meaning of terms HIV and AIDS, increase in the number of cases in age group of 19-25 years and becoming a social problem.

2. Knowledge in relation to HIV / AIDS as Transmission of HIV infection; includes various mode of transmission which they should aware about it to prevent the infection for themselves.

3. Knowledge in relation to HIV / AIDS as Predisposing factors and categories of high-risk peoples in the community.

4. Diagnostic test- confidentiality, voluntary testing, name of laboratory test and places for diagnostic test is available.

5. Knowledge in relation to HIV / AIDS as Clinical manifestations (sign and symptoms) this question is important because the term HIV and AIDS two different terms and there is varied period between to getting infection to develop the AIDS. As all HIV infected people not develops AIDS they can be only HIV positive for a period of time. How to recognize the AIDS there are certain signs everyone should aware about these.

7. Knowledge about Care and support to HIV positive people there is stigma associated with disease but these HIV infected peoples also needs the care and support as an individual and as persons who have been affected with other diseases and have the responsibility to prevent further spread of HIV infection.

8. Sources of information- included identifying the various sources to get information about the topic to young adolescents.

Section III.
Attitude of students towards HIV / AIDS and people living with HIV includes:

a) Attitude towards the HIV / AIDS as a health problem
b) Attitude towards the Diagnostic test and confidentiality
c) Care and support and human right Impact of HIV/AIDS
d) Attitude towards social stigma related to problem
e) Prevention and control measure to HIV / AIDS and
f) Attitude towards AIDS education
The Likert Scale, which was designed to measure the opinion or attitude of a subject, contains a number of declarative statements with a scale after each statement. The Likert scale is the most commonly used scaling technique. The original version of the scale consisted of five categories. However, number of categories may range from four to seven. Values are placed on each response with a value of 1 on the most negative response and value of 5 on the most positive response (Nunnally and Bernstein, 1994:69). Response choices on a Likert scale most commonly address agreement, evaluation or frequency. Agreement responses may include options such as strongly agree, agree, uncertain, disagree, and strongly disagree. Evaluation Responses ask the respondent for categorical rating along a good-to-bad continuum such as positive to negative or excellent to terrible. Categorical options may include such as rarely, seldom, sometimes, occasionally and usually. The values from each item are summed to provide a total score.

2.8 Content Validity

The content validity of the tool is concerned with the extent to which a test reflects the variable it seeks to measure. Validity of tool was tested by the Chronbach's and alpha coefficient.

To determine the content and construct validity, the tools were prepared and given to experts from various field such as experts from preventive and
social medicine, Sociologist and nursing. Suggestions were incorporated in the tools as per their recommendations. Then we feel that the tool which we have adopted may be useful to attain the objectives.

2.9 Pilot study

A pilot study is to assess feasibility and practicability of the research methodology and to ensure that the investigator as laid out the protocol is realistic. Pilot testing the design often reveals potential confounding variables as threats to internal validity as well as problem in sampling, measurement, and procedure.

Pilot study was conducted on fifty college students from various colleges at Mumbai in order to ensure the feasibility of the tool and practicability of the research study. The pilot study helped the investigator to visualize some of the practical problem experienced during the pilot study the changes were made in the tool.

Reliability

After the pilot study tool was readministrator to the same samples. But only forty students were present at the time of retesting as compared to first test. Product moment co-efficient of correlation was computed for two colleges separately.
2.10 Data Collection Process

Collection of data is the first step in the statistical treatment of the problem. Data means information that is systematically collected in the course of study. The method of data collection for this study is classified as non-experimental method under selected research design “Descriptive Survey Approach”.

The method of data collection process has direct influence on selected sources of data collection which are classified as—

Primary sources:

Include first hand preliminary information about the prevention of HIV / AIDS from undergraduate students of selected colleges of Mumbai and Sangli city using the structured questionnaire as per planned schedule for the study.

Secondary sources:

Includes available facilities to reach to the selected senior colleges such as transportation and physical infrastructure like classrooms to be utilized for data collection.

The formal administrative permission was obtained from the executive authority from selected colleges. Informal meeting were held with the teaching staff, students, NCC and NSS representatives from the colleges to get their cooperation during the study. They were helpful to collect and motivate the students to participate in the study.
A plan of visit to the colleges for data collection was conducted with the consent of concerned principles. Dates were fixed, taken into consideration the academic activities of students, location of the college and time constraints. The principals were asked whether their students had participated in HIV / AIDS education programme or had any seminar on the topic since this would influences their responses. The selected colleges were organized and attained the educational programme by the NSS activities.

A structured questionnaire was devised to collect the information about the universal variables as well as the selected study variables. The questionnaire includes the multiple choice type of questions for the assessment of the knowledge about the various different aspects of AIDS. The questionnaire was pretested before carrying out the study to determine its applicability, practicability and the time required for answering the questions. The questionnaire was then suitably modified before it was used for the study.

Data collection in colleges was done during January-February 2005 according to the planned schedule. The questionnaire was distributed to a group of students in their respective class rooms, common rooms and even in premises as availability of students in their respective colleges. Students were explained the purpose of the study and the method of answering the question in order to maintain uniformity and explained that their responses would be confidentional. The answer to the questions were either filled or tick marked by the students without consulting each other in presence of the investigator within
a period of about thirty minutes. The students were specially asked not to write their names on questionnaire card and requested to answers the all questions compulsory.

Data gathering process was a challenging task for the investigator. colleges and the class for filling up of the questionnaire, taking permission of the particular class teacher, timings of their lectures, gaining their co-operation, climbing the staircase up to the third –fourth floor, was hectic. Some time some of the students were not interesting to participate in the study when they knew that it is related to HIV /AIDS. Some of them also expressed their views that, they know every thing about this topic and don't want to answer it now, and pointing out to others to participate is it, considering HIV/ AIDS is not their problem.

Though the data collection process was tiring and exerting to the investigator but also it was a satisfactory achievement. Thus the investigator completed the data gathering process. The collected data had to be analyzed so as to make it meaning information to the researcher.

2.11 Plan for Data analysis

Statistical techniques were used for the analysis of data. The data was planned to be analyzed on the basis of the objectives of the study, the quantitative analysis was planned. Analysis of data requires a systematic organization of the material in order to discover inherent relationship and
differences in the data. Demographic data analyzed in terms of frequency and percentage, presented in table form. The selected variables with reference to knowledge and attitude of the sample analyzed as-

a) Pearson's chi-square test is applied to test the relationship of knowledge in samples from both urban centres.
b) A p value (significance) of < 0.05 is deemed statistically significant
c) A significance of 0.000 should be read as p<0.0001 (Very Highly significant) as the software can detect significance up to 3 decimal points only

- Stata SE 10.1 was used to analyse data. SPSS 16.0 was used to enter and code data.
Fig 2.1: Location of Mumbai and Sangli Urban Centers in map of India
Fig 2.2: Location of Mumbai and Sangli in the map of Maharashtra
Fig 2.3: Location of selected colleges in the map of Mumbai and suburban

Mumbai City Map
Fig 2.4: Location of selected colleges in the map of Sangli Urban Centre