

## CHAPTER FOUR

### KNOWLEDGE, PERCEPTION AND BEHAVIOUR ABOUT AIDS AND HIV INFECTION

It is presumed that health behaviour of a person is often influenced by his knowledge and perception about various diseases. Knowledge and perception are therefore considered as the preconditions for determining the health behaviour of an individual. In present study, the health behaviour of army personnel has been examined with particular reference to their knowledge and perception about AIDS/HIV.

#### **What is Knowledge**

Knowledge constitutes the motivating dynamics of institutionalized conduct. It defines the institutionalized areas of conduct and designates all situations falling within them. It defines and constructs the note to be played in the context of institutions in question. Infact, it controls and predicts all such conduct. Since this knowledge is socially objectivated as knowledge, that is, as a body of generally valid truths about reality any radical deviance from the institutional order appears as a departure from reality. (*Peter Berger and Thomas Luckmann, 1966*).

What is taken for granted as knowledge in the society comes to be coextensive with knowable, or at any rate provides the frame work within which anything not yet known will come to be known in the future. This is the knowledge that is learned in the course of socialization and that meditates the internationalization within individual conciousness of the objectivate structures of the social world.

Knowledge in this sense is at the heart of fundamental dialectic of society. It programs the channels in which externalization produces an objective world. It objectifies this world through language and cognitive apparatus based on language, that is, it orders into objects to be apprehended as reality. It is internalized again as objectively valid truth in the course of socialization. Knowledge about society is thus a 'realization' in double sense of the word, in the sense of apprehending the objectified social reality, and in the sense of ongoing producing this reality.

As social stock of knowledge is constituted, which is transmitted from generation to generation and which is available to the individual in everyday life. "I live in the common sense world of everyday life equipped with specific bodies of knowledge. What is more, I know that others share at least part of this knowledge and they know that I know this. My interaction with others in everyday life is therefore, constantly affected by our common participation in the available social stock of knowledge. Social stock of knowledge includes knowledge of situation and its limits" (Peter Berger : 1966). Having realized the definition of knowledge, the knowledgeability of AIDS/HIV is the area of prime concern of this study which is discussed now.

### **Knowledgeability about AIDS and HIV**

In order to assess their knowledgeability about AIDS/HIV the respondents were asked whether they have heard the name of this particular disease or not. Interestingly the response score reveals that majority of them (90 per cent) have heard about the lethal disease called AIDS/HIV. The respondents, who have heard about AIDS/HIV infection, their sources of information were however not the same. About 9 per cent have learnt it from TV, 30 per cent from newspapers, 6 per cent from radio, 13 per cent from posters, 3 per cent from leaflet/pamphlets, 0.50 per cent from slides/films, 6 per cent from doctors, 11 per cent from senior officers and 14 per cent from seminars/lectures. The majority of army personnel thus first came to know about AIDS from newspapers and then from posters and other sources. So to make the respondents aware about AIDS and HIV infection newspapers had a definite and major role to play. The other mass communication media had certain positive but limited role in this regard. The seminars and lectures on the other hand have been

found somewhat effective in making the respondents aware about AIDS in general and its causes and preventive measures in particular.

A respondent was asked that since when he knows about AIDS/HIV and when did he first come across the term AIDS. That information was important in order to judge his initial state of knowledge about this killer disease and its present status. The findings reveal that only 4 percent of respondents came to know about this disease before 1985. On the other hand, about 85 per cent of them have heard about AIDS only during the decade 1985-95. Since mid '95 until date the corresponding proportion was only 9 per cent. This particular trend denotes that majority of army personnel became initially familiar with the pandemic disease called AIDS during the decade 1985-1995. They do not fall in the category of long standing knowledgeable persons and the proportion of army men having late knowledge about AIDS is not all that significant. The latter phenomenon urged upon to review the method of communicating AIDS related messages to the target population.

The abbreviated term AIDS is not simple and easy for comprehension. Many personnel do not know the exact meaning of the words AIDS and HIV. However, when among the officers 80 per cent were in a position to explain the actual meaning of the abbreviation, the corresponding proportion was 11 and 5 per cent among the junior leaders and jawans respectively. Thus the majority of the lower ranked personnel did not know the actual meaning of the word AIDS and could not make even wild guess as to what exactly those abbreviated words are meant for.

### **Knowledge and Familiarity**

The respondents stated that none of them came across any victim of AIDS. Only 8 per cent of them reported that they have seen only HIV positive person in their units. Some of them confessed that their level of knowledge about the symptoms of the disease complex was so poor that they could not differentiate an HIV positive person and a normal unaffected person in the unit. Moreover, for many reasons and restrictions very few of them had the opportunity to come in personal contact with some HIV positive individuals within the military unit.

As it has been discussed in 'Profile' chapter, the discipline of unit life of army personnel is such that when a person reports to be suffering from any ailment he is immediately evacuated to Medical Information Room (MI Room) and he does not return to the unit lines till he is declared fit for duty by the MO (medical officer). So even if some one is detected as an HIV Positive patient, other members of the unit are not supposed to know it and may not be able to meet him till his further disposal. The one who is detected as HIV positive, his colleagues stand limited chance to visit a patient of such diagnosis, even while he is awaiting disposal to any military hospital. Thus any possibility of acquiring knowledge about the disease from personal contact with an AIDS/HIV person is almost non-existent for jawans because of the laid down channel of evacuation of patients, distance of hospitals from the unit lines, and confidentiality in medical follow up procedures maintained in the organization. Information on certain diseases if disseminated to troops, may affect their morale seriously. In their day to day life, it is appreciated detrimental if confidentiality on many accounts is not maintained, it may cause man management problems.

### **Specific Knowledge**

A particular type of virus causes AIDS and it is known to 87 per cent of the respondents. Even when they do not have any fair idea about what is a virus, they can easily guess that some minute germs, possibly which cannot be seen with naked eyes, are responsible to infect any person with the virus of this lethal disease. About 65 per cent of the respondents know that an HIV positive person is a carrier of AIDS, and 61 per cent know it as a serological precondition of AIDS. A sizeable proportion of army personnel (38 per cent) is totally unaware of the exact medical causes that lie behind infection of AIDS. About 58 per cent of the respondents however know that an HIV infected person at a later stage ultimately becomes an AIDS patient.

These surveyed data depicts that among the army personnel, there is a dearth of knowledge about HIV infection and its ultimate manifestation. About 67 per cent of the respondents are rest assured that an HIV positive person can easily infect others whereas 7 per cent do not believe so. Such a response score exemplifies the knowledgeability level of army personnel about AIDS/HIV and its causes of transmission.

Regarding treatment and care of AIDS patients, 81 per cent of the respondents believe that they can be treated and cured, whereas 6 per cent know it well that there is no cure of AIDS patient. Surprisingly 40 per cent of the personnel have no idea about the treatment and curative measures of AIDS. The knowledge score on clinical detection of HIV virus reveals that most of the respondents (90 per cent) know about the prescribed pathological procedures involved in it. The others are totally ignorant about any such test.

It was the general opinion of 82 per cent of respondents that an AIDS infected person needs personal care, psychological support and regular medical assistance. On the other hand 3 per cent had a diametrically opposite view, and 14 per cent expressed their absolute ignorance in this matter. The basic perception about the disease that it is not curable one is not known to a sizeable section of army population. The specificity thus lacks seriously. The methods of propagating proper knowledge about the disease appear to be inadequate. The available channels of information do not pass on all the messages with authenticity. If the basic fact that AIDS is a non-curable disease, is not clearly known to a respondent that will certainly delimit his concern and attitude towards this disease. Therefore, each individual needs to be well informed about the symptoms of this disease as early as possible to avoid fast spread of infection.

## **Symptoms**

Every disease shows some symptoms in normal course unless the state of infection is asymptomatic. AIDS, being a syndrome, which enable any disease virus to grow sporadically causing ultimate end of the life of an infected individual, has also certain manifested symptoms. Medical detection of AIDS is normally done through observation of such symptoms. The present study shows that there is an urgent need to grow adequate knowledge about this particular syndrome and its manifested symptoms. Inadequate, incomplete, wrong and erratic perceptions about AIDS were quite common among larger number of army personnel (see table 11). About 22 per cent of them however knew about certain symptoms of AIDS. On the other hand, another 36 per cent contested the very symptoms otherwise specified against AIDS. There was hardly any general consensus about the characteristics of this disease among the respondents.



It is important to note that 55 per cent of respondents had no knowledge or idea about different signs and symptoms of AIDS. That shows the level of their cognition about AIDS and its physiological manifestations. It seems that many of them were not aware of the disastrous end which this symptoms may lead to. Their perception about AIDS was somewhat casual and not very clear and complete. Many of them even had no hesitation to record smilingly their total ignorance about symptoms of AIDS.

### **Major Symptoms**

It is a loss of ten percent of body weight within a short period, chronic diarrhoea persisting for more than a month, chronic fever for more than a month.

### **Major Signs**

Diarrhoea is very common in people with AIDS. The diarrhoea is usually a clear and watery in nature. It is sometimes associated with abdominal cramps and vomiting. Chronic diarrhoea leading to a significant loss in weight is the most striking feature of AIDS. This led to the disease being called 'slim' in Uganda'. Diarrhoea is often accompanied by persistent fever and night sweats.

### **Minor Signs**

There are six mentionable minor signs of AIDS which have been recorded so far.

- (a) persistent cough for more than a month
- (b) generalised itchy skin basins (dermitites)
- (c) Recurrent Herpes Joster (shingles)
- (d) Oral Candidiasis (thrush)
- (e) Chronic Herpes Simplex
- (f) Generalised enlargement of Lymph nodes.

The diagnostic diseases, kaposi sarcoma or crypto coccal meningitis, are sufficient by themselves for a diagnosis of AIDS.

## **Enlarged Lymph glands.**

The lymph nodes or glands are an important part of the body's immune system and are located in various parts of the body such as under the jaw and neck, armpits and groin. An early sign of AIDS is often painless lumps or swellings of at least one centimetre diameter in these lymph nodes. This is called "persistent generalised lymphadenopathy" or PGL. Lymph node enlargement can occur in other diseases such as mumps, glandular fever and tuberculosis (*John Hubley : 1995*).

## **Oro - Pharyngeal Candidiasis (Oral Thrush)**

A common symptom of AIDS is a white furry coating on the tongue and roof of the mouth and sometimes the vagina. This is caused by a yeast candida albicans. Candidiasis is not usually seen in healthy people because their immune systems are able to resist the infection. It can be seen in bottlefed, ill babies and in debilitated elderly persons. In persons with a damaged immune system such as persons with AIDS, candidiasis can persist for a long time and can spread from the mouth to the gullet and lungs.

## **Chronic Herpes Simplex**

Herpes simplex is a virus that produces sores—often called cold sores—in and around the mouth or in the genital or in rectal areas. In people with normal functioning immune system these sores are usually few in number, small in size and last only two to three days. In AIDS patients the sores are more severe and recur more often.

## **Recurrent Shingles (Herpes Zoster)**

Shingles is a viral infection which used to be seen only in older people or in those with weakened immunity. Now shingles is common opportunistic infection in younger people with AIDS.

Shingles begins as extremely painful rash with blisters, usually on the face, limbs or trunk.

Shingles on the face may affect the eyes, causing pain and blurred vision. It usually appears at the trunk or face and stops exactly at the mid line of the body.

### **Pneumocystis Carinii Pneumonia**

This is common in AIDS patients from America and Europe. It is caused by a fungus that infects the lungs and results in a form of pneumonia. It appears as a persistent dry cough and as the infection spreads, the patient could develop a fatal pneumonia.

### **Diagnostic Diseases**

#### **Kaposi sarcoma**

This is a cancer of the cells in the blood vessels or lymph system, which was very rare before 1980. It appears as dark (brown or purple) raised areas on the skin or in the mouth. It may also begin as enlarged skin nodules (lymph glands) which are not itchy or painful. The cancer can spread to internal organs of the body causing the enlargement of the internal organs or bleeding from the lungs or digestive tract. Kaposi sarcoma affects patients differently – some people have only mild complaints arising from the appearance of the lesions, while others may become very ill as a result of the cancer.

#### **Cryptococcal Meningitis**

This is caused by a yeast like fungus. Early symptoms include fever and mild headache followed by nausea, vomiting, headache and blurred vision. If untreated this disease is fatal.

### **Other symptoms found in AIDS patients**

#### **Tuberculosis (TB)**

TB is another disease that can take advantage of a weakened immune system and develop in a patient. The symptoms are a persistent cough, loss of weight and increasing weakness, mild fever, sweating at night and loss of appetite. If some one has AIDS, he can also develop less usual

tuberculosis symptoms, such as fever without a cough. Tuberculosis can also infect the lymph nodes, especially in children – most often those in the area of the neck and shoulders.

In many developing countries TB is the most common opportunistic infection associated with AIDS. It is also a very important cause of death in people with AIDS. Many countries are experiencing a substantial increase in TB because of AIDS.

### **AIDS dementia complex**

The HIV virus can pass the blood-brain barrier and damage the brain, spinal cord and nerves. The effect will depend on the part of the brain affected. Symptoms could be strange unusual behaviour and confusion. Other symptoms could be paralysis or uncoordinated movements.

### **AIDS-Related Complex (ARC)**

This term was originally used to describe patients who did not fit all the rigid criteria in the initial case definition of the Centre for Diseases Control at Atlanta. With the WHO case definition and the availability of tests for HIV1 and HIV2, it is a term that is being used less and less.

### **AIDS in children**

HIV infection in children occurs mainly through two routes. Firstly, as explained in previous statements a HIV infected woman can pass on the infection to her unborn baby either before birth or at the time of birth. It has been estimated that between one third and one half of babies born to HIV antibody positive women are infected and will develop AIDS. Most of these children die by the age of five years.

A study shows that most children with AIDS are under five years of age and are infected from their mothers. The other group of children who has been found to have HIV infection is the one who receive repeated transfusions of blood or blood products for blood disorders such as haemophilia

or thalassemia. In addition to these routes, an older adolescent child may contract HIV through sexual intercourse.

Some babies must have become infected through breast milk but as described in the next chapters the numbers infected through breast feeding are likely to be very small.

A baby will carry his mothers' antibodies for the first 12 to 18 months of life. An HIV antibody test during this period will not indicate whether a baby is infected with HIV as a positive result might be due to the mother's antibodies to the baby before birth.

The transition from being infected to development of AIDS and death is much quicker with babies than adults and can take between two to five years.

However there is growing evidence that some children survive a little longer. The symptoms are similar to the major and minor symptoms described above. The child will grow slowly and show many childhood infections especially diarrhoea. Very similar signs may be seen in children who do not have AIDS; severe malnutrition can also lead to a damaged immune system.

The clinical case definition for children is still under review. It is important to confirm the diagnosis by testing the mother for HIV antibodies (although an HIV antibody positive mother does not always mean that the child is also infected). The WHO has adopted a provisional case definition where a child is considered to have AIDS when it has two of the major signs and two of the minor signs (herpes is not included among the minor signs). For the purposes of the case definition, a positive HIV test on the mother is considered a minor sign.

Some vaccines used in immunization contain live, organisms that have been weakened so that they do not, cause disease in a normal person. Some people have expressed concern whether it is advisable to give those immunizations to a child with HIV infection or AIDS. WHO has recommended that all children should continue to receive the full range of normal childhood

immunizations including diphtheria, polio tetanus, measles and mumps. Children with known or suspected, HIV infections are at increased risk of severe measles. The only exception is the BCG injection against tuberculosis. The increase in TB associated with AIDS makes immunisation against TB extremely important and WHO recommends that BCG should be given to all children except when they show symptoms of HIV related illness.

Only very few respondents were clear and confident enough about the signs and symptoms of AIDS/HIV. It is observed that, often a person who knew about one symptom confidently did not know about the other. There are 50 to 62 per cent of army personnel who do not know anything about symptoms of AIDS. The level of knowledge found to be low about symptoms of AIDS and HIV infection is an obvious indication of poor Health Education System and required information available to the army staff. There is a need to enhance the knowledge level, which may help the respondents to be aware and cautious about AIDS and HIV infection. Unless symptoms of AIDS are known clearly and the perception about AIDS are thorough, it is difficult for the individual to adopt exact preventive strategies to counter its effects.

### **Transmission of the disease**

Every virus of a disease has a set transmission paradigm, which follows a route typical for that particular disease. There is no deviation or alternate to this. The strategy to intervene transmission of the disease is normally worked out in a way to counteract the transmission system. AIDS also has a medium of transmission through which it spreads the infection from one person to another. Therefore regarding transmission of AIDS it is essential to know what are those common routes and how best they can be intervened before the transmission. Where knowledge about the routes of infection of HIV is inadequate, it is difficult to adopt its preventive measures. Therefore, it is important to recover the wrong ideas and cultivate educational points to improve exact knowledge about AIDS through accurate and specific health education programs.

‘AIDS virus gets transmitted through blood’ is known to 96 percent of respondents (see

Table 12). They know that blood and blood products are the basic medium through which this virus spreads from a carrier to another. There are also 30 per cent of respondents who believe that HIV can spread through saliva, whereas 42 per cent do not endorse the same. About 65 per cent of the personnel know that HIV does not spread through sweat. However, 10 per cent of the respondents understand that sweat of an AIDS patient may infect others. About 40 per cent of the respondents believe that HIV spreads into a new born baby through mother's milk, whereas 32 per cent do not agree with this particular view. The remaining 27 per cent are not aware about this channel of transmission of AIDS.

While studying the sources of such infection each possibility has been considered and accordingly the surveyed data has been analyzed. A large number of personnel (90 per cent) strongly believe that HIV gets transmitted through vaginal fluid whereas 6 percent is found ignorant about the same. Even most of them are quite sure of the fact that sexual intercourse with an unknown partner can be the major contributing factor behind infection of AIDS. Being an adult, almost all respondents know what is vaginal fluid and how it helps transmitting AIDS. This particular knowledge helps the community members to be cautious against establishing illicit sexual relationship with unknown or an infected partner. The fear of unknown acts as a matter of blessing for the rest of the population, so far as this disease is concerned.

When asked about specific medium through which AIDS gets transmitted, majority of the respondents (89 per cent) replied that semen is the prime medium through which AIDS virus passes on easily. In contrast, 4 per cent do not believe that semen could be a medium of transmission of AIDS. Even when AIDS is commonly considered as a sexually transmitted disease, 51 per cent of army personnel know it well that urine has nothing to do with AIDS and it can not be a carrier of virus.

Table : 12

**KNOWLEDGEABILITY ABOUT  
SOURCES OF AIDS INFECTION**

Type of Sources AIDS Virus spreads through	State of Knowledge		
	YES	NO	DO NOT KNOW
Blood	192 (96)	1 (.50)	8 (4)
Saliva	60 (30)	85 (22)	56 (28)
Sweat	20 (10)	131 (65)	50 (25)
Breast Milk	81 (40)	65 (32)	55 (27)
Vaginal Fluid	180 (86)	7 (3)	14 (7)
Semen	178 (89)	9 (4)	14 (7)
Urine	45 (22)	102 (51)	54 (27)
Tears	13 (6)	130 (65)	58 (29)
Spit	44 (22)	113 (56)	44 (22)
Insect Bite	40 (20)	109 (54)	52 (26)
Used Utensils	43 (21)	118 (59)	40 (20)
Contaminated Water	32 (16)	127 (63)	42 (21)
Body Contact	22 (11)	142 (71)	37 (18)
Used Garments	33 (16)	132 (66)	36 (18)
Any Other	02 (1)	34 (17)	165 (82)

*Note : Figures shown in the parenthesis denote percentage.*

Table : 13

**GENERAL KNOWLEDGEABILITY  
OF THE RESPONDENTS ABOUT AIDS**

Knowledge Items	State of Knowledge		
	YES	NO	DO NOT KNOW
AIDS is an infection caused by a germ (virus)	174 (87)	3 (1)	24 (12)
It is killer virus	170 (89)	7 (3)	14 (7)
HIV positive is carrier of AIDS	130 (65)	6 (3)	65 (32)
HIV positive is pre-warning of AIDS	121 (60)	5 (2)	75 (37)
There is no treatment of AIDS	163 (81)	11 (5)	27 (13)
HIV positive can infect others	134 (67)	14 (7)	53 (26)
HIV positive does not show symptoms straightway	114 (57)	7 (3)	80 (40)
HIV positive patients become formal AIDS patient subsequently	115 (57)	11 (5)	75 (37)
Special blood test can detect HIV positive	181 (90)	1 (.50)	19 (9)
For infected person regular blood test and counselling is required	165 (82)	6 (3)	30 (15)

*Note : Figures shown in parenthesis denote percentage.*

From the knowledge score (see Table 12) it evidences that 65 per cent of the army personnel know that tears and spit are not the media of transmission of this disease. Insect or mosquito bite does not cause any transmission of HIV from an infected person to another and it is known to 54 per cent of army personnel. Interestingly, 20 per cent army men still believe that insect bite can transmit HIV since the virus easily travels through blood. However, a large percentage of them are quite confident that insect bite could not be an agent of transmission of this virus.

Used utensils of an AIDS infected patient are not suitable media to carry such virus so the same can not be instrumental in spreading this disease. While 59 per cent of the respondents opined the

same, another 21 per cent have expressed opposite view. They are of the opinion that utensils used by AIDS patient are to be kept separate because those may cause infection. Water is often considered as the most susceptible medium for many waterborne diseases. It is only through water that many diseases spread quickly. However, 63 per cent of army personnel understand that AIDS is not a water borne disease, and its virus can not spread through water. On the other hand, in the minds of 16 per cent of this population there is still an apprehension that water used by an AIDS victim must be avoided otherwise it may cause infection. This apprehension is related to use of a swimming pool by an infected person.

How far any simple body contact between an AIDS victim and others can cause infection is quite a common question in a society today. Findings show that 71 per cent of the respondents do not agree with the view that AIDS spreads through simple body contact, whereas 10 per cent do not endorse such an idea. As a matter of daily usable item another common query may arise in the minds of people whether HIV gets infected via garments used by an infected agent. About 65 per cent of the personnel know it well that the garments used by an AIDS infected person do not carry germs. But in the views of other 21 per cent, the AIDS virus can easily pass through the garments of an infected person; therefore, such garments are to be kept separate.

It is seen (Table 13) that in terms of the level of knowledge about AIDS the majority of the respondents are found to be quite afraid of AIDS/HIV. Moreover, there is high degree of incomplete knowledge and misinterpretations about the disease, its symptoms and medium of transmission, which need to be clarified through expert health educationists. So a well designed health communication plan may help them with specific and complete knowledge to grow exact awareness about AIDS.

### **Mode of Transmission of AIDS**

There are many modes through which HIV positive virus is transmitted. For example unprotected sexual intercourse, infected mother to foetus, sharing of needle and razors, transplantation of body parts are few very common examples of such modes.

Table 14 shows the knowledge score of the respondents about transmission of AIDS/HIV. By now we know that AIDS virus is transmitted through unprotected sexual intercourse. It is strongly supported by 42 per cent of the respondents whereas 13 per cent do not agree with the said fact. Among this selected army population 16 per cent believe that dry oral kissing helps transmitting the virus. But a chunk of the population (61 per cent) on the other hand, however think that from dry oral kissing there is no chance of getting infected from AIDS/HIV. Any intimate oral kissing may cause infection, which is approved by 60 per cent of the respondents.

**Table : 14** **KNOWLEDGEABILITY ABOUT TRANSMISSION OF AIDS/HIV**

Medium of Transmission	Knowledgeability		
	YES	NO	DO NOT KNOW
Protected Intercourse	84 (42)	27 (13)	90 (45)
Oral Kissing (Dry)	13 (6)	123 (61)	65 (32)
Oral Kissing (Intimate)	120 (60)	19 (9)	62 (31)
Infected Pregnant Women	166 (84)	7 (3)	28 (14)
Using Public Toilet	47 (23)	113 (56)	41 (20)
Sharing Needle	181 (90)	2 (1)	18 (10)
Blood Transfusion	178 (89)	5 (2)	18 (9)
Mosquito bite/Bed Bugs	64 (32)	100 (50)	37 (18)
Sharing Shaving Razor	145 (73)	21 (10)	35 (17)
Being Sneezed	30 (15)	130 (65)	41 (20)
Sharing Cups and Plates	42 (21)	124 (62)	35 (17)
Sharing Same Room	31 (15)	130 (65)	40 (20)
Embracing	29 (14)	133 (66)	39 (19)
Shaking Hands	16 (8)	150 (75)	35 (17)
Casual Contact	21 (10)	142 (71)	38 (19)
Through Air	12 (6)	151 (75)	38 (19)
Swimming Pool	31 (15)	128 (64)	40 (20)

*Note : Figures shown in the parenthesis denote percentage.*

About 83 per cent of the respondents know it well that an infected woman can transmit the virus to the foetus. This is not known to 13 per cent of the people and another 3 per cent when told do not believe so. The majority (56 per cent) of the respondents is of the view that HIV or AIDS infection is not transmitted through public toilet. However, other 23 per cent perceived that HIV infection might occur through public toilets/urinals. It is encouraging that 90 per cent of the army personnel know it well that sharing of unsterilized needles may cause infection of such virus. So they are likely to remain careful while being treated in military hospitals, health care centres and should advise their families and children to demand sterilized or disposable syringes when being administered with injections.

Blood transfusion is an essential medico pathological means to save lives of an injured/surgically managed patient by ensuring artificial blood transfusion. Since a recipient of blood receives it from another source or person, it is essential to know it beforehand that the quality of the blood, is free from contamination. About 89 per cent respondents have clear conception that through untested transfused blood the HIV can easily pass on from the carrier to the recipient of blood. In this context the next question may arise whether mosquito bites or bite of bed bugs may be possible causes of spreading infection of HIV? As per surveyed response score it shows that 32 per cent strongly believe the statement, when 50 per cent have ruled it out totally. The remaining 18 per cent have rarely thought about the matter.

In army unit life, the barbershops provide shaving and haircutting facilities to all its resident members and each unit is organized to run barbershops. With the passage of time and change of individual taste, most of the army personnel now a days prefer to keep a personal razor set in their shaving kit for daily use. Though the service of both hair cutting and shaving are available at unit barbershops, the army staff normally visit barbershop for hair cutting only. Very few of them avail the facility of shaving in barber shops in the morning. However, sharing of razors among troops, is not something new. The majority believes that sharing of a razor set may be a cause of transmission of HIV. Among the respondents, 72 per cent are aware that the common razors, which are unsterilized, may cause transmission of this virus easily. On the question of using utensils of an infected person 62 per cent are sure that the utensils used by an AIDS patient do not infect others who use the same utensils after wash.

The army personnel of a unit in general, live in barracks which are further divided into dormitories and rooms. So it was asked whether sharing of a room with an identified AIDS patient is risky or not. About 15 per cent of the respondents feel it quite risky to stay with an AIDS infected colleague. On the other hand, another 65 per cent (the majority) has clear knowledge about the disease who expressed no hesitation to share a room with an AIDS patient. Similarly according to the perception of 66 per cent of the respondents (when asked) said that any embracing does not cause transmission of HIV where as other 14 per cent stated opposite. Similarly shaking of hands with an infected person cannot cause transmission of infection and it is believed by 75 per cent of the army personnel. It is also felt by the majority (71 per cent) that any casual physical contact with an HIV positive or AIDS victim cannot cause any infection. Another 10 per cent however believe that it is risk prone and thus they prefer to avoid coming in physical contact with an AIDS infected person. About 64 per cent of the respondents feel that AIDS virus cannot be transmitted from a common swimming pool. In contrast, 15 per cent are of the opinion that an AIDS patient should not be allowed to use a common swimming pool, otherwise others may get infected from the water of the same pool polluted with HIV. A negligible percent of the respondents are not sure whether HIV can pass through swimming pool water and infect others or not. A similar query has been analyzed earlier. Whether HIV can transmit through water or not. It may be drinking water, other consumable water or the huge pool of it at swimming pool.

If modes of transmission of AIDS are known to all with exact knowledge, it is evident that all such people can adopt proper preventive measures against such infection. Any inadequate or incomplete knowledge about this disease may lead to adoption of wrong preventive measures which will be counter productive. By virtue of their better education and freedom of action, the officer community is found to be well acquainted with the symptoms, modes of transmission and the preventive means of this pandemic disease. Whereas the knowledgeability score of the junior leaders and jawans (OR) does not match proportionately. Thus, it is observed that a gross difference lies between the officers and other ranks in their perception about AIDS and HIV infection. With activation of effective intervention policy, such gap needs to be minimized.

As it is a dangerous disease it is essential to study its 'risk factor'. The study of risk factor of this disease brings out involvement of some typical professions which are considered to be prone to infection of AIDS/HIV, in comparison to other professions.

### Detection of Risk Factor and Agents

As far as the professional risk factor is concerned, it is necessary to identify the categories of people who are quite susceptible to AIDS/HIV. Sexual intercourse is often considered as a prime cause in transmitting HIV. Homosexuality or Lesbianism are very susceptible sexual liaison responsible for transmission of HIV. Table 15 depicts that among the army personnel 64 per cent viewed 'homosexuals' as those people who belong to 'high risk' category and they can transmit AIDS easily. Women having sex with women are called lesbians. About 31 per cent of the respondents expressed that the 'lesbians' are in 'high risk', 14 per cent in the 'low risk', and 11 percent in the 'no risk' category. Interestingly a large number of personnel (43 per cent) are totally ignorant of both 'homosexuality' and 'lesbianism' as an act of sexual liaison. Unlike other countries, a common person finds no proved circumstance – which may make him to believe such fact. Mostly people are found to display expression of hatred when explained.

**Table : 15 KNOWLEDGEABILITY ABOUT RISK FACTORS**

Risk Caused by	High Risk	Low Risk	No Risk	Do Not Know
Men having sex with men	129 (64)	16 (8)	3 (1)	53 (26)
Men having sex with women	59 (29)	75 (37)	21 (10)	46 (23)
Women in sex with women	63 (31)	29 (14)	22 (11)	87 (43)
Prostitutes	151 (75)	9 (4)	1 (.50)	40 (20)
IDU	137 (68)	13 (6)	5 (2)	46 (22)
Dentists	17 (8)	68 (34)	71 (37)	45 (22)
Doctors/Nurses	11 (5)	68 (34)	75 (37)	47 (23)
Blood Donors	140 (70)	14 (7)	3 (1)	44 (23)
Foreigners	124 (62)	19 (9)	6 (3)	52 (26)
Soldiers	68 (34)	55 (27)	35 (17)	43 (21)
Truck Drivers	128 (64)	23 (11)	5 (2)	45 (22)
Slum Dwellers	126 (63)	24 (12)	6 (3)	45 (22)

*Note : Figures shown in parenthesis denote percentage.*

Among the respondents, 29 per cent considered that even normal sexual relations and intercourse might involve 'high risk' in transmission of HIV. On the other hand, 37 per cent believe it as a 'low risk' factor and 10 per cent thought that there is 'no risk' of being infected from HIV and AIDS out of normal heterosexual relations with own wife. With reference to the question of promiscuous sex relations as a contributing factor of HIV transmission, 75 per cent of army personnel believe that a 'sex worker' invariably belongs to the 'high risk' category, whereas only 4 per cent feel such a worker falls into 'low risk' group.

Though 'intravenous drug use' is considered as a clandestine act in the civil society, army personnel have least knowledge about such evil and its consumers. However, when probed into the matter 68 per cent replied that intravenous drug users belong to the 'high risk' category and through them HIV can easily spread. Only 6 per cent ranked them in the 'low risk' category.

Dentists by profession get themselves frequently exposed to oral regions of different dental patients. However, 33 per cent of the respondents thought that there is least of risk on the part of the dentists to be infected from HIV positive victims while attending dental surgery of such a person/persons. However, 8 per cent thought that dentists also belong to 'high risk' category. Similarly, when 5 per cent of army personnel considered doctors and nurses as persons belonging to 'high risk' category the others did not think so.

As explained earlier, blood donation and particularly transfusion of blood is one of the needed facts of life, when some one needs to be cured through surgical management. Among the respondents, 70 per cent are of the view that blood donation and transfusion of blood involve 'high risk' as far as infection of HIV is concerned. Similarly, 62 per cent identified that foreigners as individuals should be categorised in 'high risk' so far as this disease is concerned.

Any army in the world, is represented through a sizeable population of such country. Many social scientists have viewed them as to be the population who comes under the 'high risk' category,

whereas 17 per cent feel soldiers cannot be the carriers or agents of HIV. Long distance truck drivers, because of their typical work schedule and mode of life, tend to be leading a promiscuous life and are out of such group about 64 per cent of the respondents believe this. A similar proportion of respondents feel that slum dwellers are the people who also belong to the “high risk” category. A sizeable proportion of the respondents is aware of promiscuous habits of truck drivers and slum dwellers. They are of the opinion that through such illicit sexual intercourse solicited by these category of people, the dimension of infection from this disease enlarges.

While studying AIDS as a disease, its cultural construction has to be known first. Unlike many, the Indian society has a concrete value based cultural heritage born through centuries. As Mahatma Gandhi has said that sex can not be eradicated but may be controlled, there are similar teachings by various ‘gurus’ on this. In Indian society sex is controlled through value based motivation. Mahatma Gandhi said “*Bramhacharya*” i.e. administration of self control of sex is ‘abstinence’ – which in normal course is manifestation of control of sexual desire. The term is not unknown to Indians, which used to be taught in schools from vedic ages. It’s basic culture is related to sex and sexuality. Man as any other possesses it as part of the instinct. The sexual urge, a biological phenomenon which is not bound by gender but it is a social construct. The propensity to solicit sexual desire is common to both masculine and feminine gender. Since it can not be eradicated from human body, it is within the scope of reasonable control. Through growth of exact knowledge regarding sex and the disease, healthy practices can be formed. Thus healthy practices will further enable an individual to control such instinctual demon. Automatically the chance of infection will be controlled. It is essential for each sane human being to know and understand this cultural construction which will help them to protect against such infection, saving the disaster of the society in the long run.

As part of the design of infection of AIDS shows that it is most commonly spread by having used unsterilized injections and having indulged in ‘unprotected’ sexual contact with an infected partner. The virus can enter human body through the tract of the vagina, vulva, penis, rectum. (*UNAIDS Fact Sheet, May, 2001*)

Since the infection gets transmitted through direct contact of 'blood' or 'blood products', it can be transmitted between 'homosexuals' and 'lesbians' one being affected in each case. The 'homosexuality' is a gay subculture as *Anthony Giddens (1989)* says in his book "*Sociology*". It is not distinctively associated with any form of psychiatric disturbance. 'Homosexuality' means sexual act between two males or a male and a female where the penis of the male is inserted into the anus of either the male or the female. In case of 'Lesbians' it is the sexual act performed by two females, which does not involve in any such penetration as may be between 'gaymen'.

The biological construction of human tissues and muscles are such that the inner walls of vagina and the anus are different in terms of structure of cells and its strength. The tissues of anal inner walls are more delicate, less elastic and prone to tearing off under stress, where as in case of vaginal tract the tissues of inner walls are stronger, stretchable and less susceptible to injuries. In case of 'homosexuality' the chances of permeability of the virus through such injured tissues is easier and faster than in case of sexual act between two 'lesbians'. In this case since there is no copulation and penile insertion, there is no chance of any injury to the vaginal inner walls, no bleeding and thus least chance of passage of any virus.

So the mode of transmission of the virus is not the same in case of 'homosexuals' and 'lesbians' for above reasons.

There had been continuous research on the drugs for AIDS as a major disease, in American and other countries. Such efforts are in progress in many developing countries also. Out of these, Brazil's AIDS program has become a model for developing countries around the globe. In absolute terms Brazil has a high number of registered AIDS cases as 210,000 but it has managed to keep HIV infection to less than one per cent of her population with aggressive prevention and education process. Brazil has also stood up to the international pharmaceutical industry, producing eight of the twelve drugs used in the anti AIDS cocktail and distributing them free of charge to patients.

Doctors without Borders, or Medicines Sans Frontiers, plan to work with Brazil to transfer the technology and training needed to establish similar programs in hard hit countries.

*Pecoul (2001)* said “countries like Argentina have the capacity to develop their own projects, while many nations in Africa and Central America have to pool resources to develop regional anti AIDS programs”.

In the mean time, Doctors without Borders aim to buy AIDS drugs made by Brazil’s state laboratory Far-Manguinbos, though *Pecoul* stresses it will not be a commercial operation.

Under the planned agreement, Brazil would sell medicines at cost, *Pecoul* said.

Doctors without Borders also buy generics from other companies like India’s Cipla and would continue to buy the medicines offered at lowest prices.

“Today is just a letter of intent and in coming months we will try to turn it into concrete support” *Pecoul* said.

Doctors without borders currently operate in 29 countries, half of those in Africa. Brazil has become a leader in the fight, pressuring the International drug industry to lower prices or face competition from cheaper Brazilian made drugs (*Medline search Doctors group to export Brazil program, drugs, Sept 2001*).

### **Application of Knowledge in preventing AIDS**

It is expected that along with the advancement of knowledge on AIDS there will be better awareness about this particular disease and that will ultimately influence one’s behaviour and attitude towards AIDS and HIV infection. So when the army personnel were asked whether they would like to undergo screening of blood for HIV test, 96 per cent agreed to opt for such a test. Similarly, 90 per cent said that they would also allow their families to go for such a test. The facility for AIDS

screening test is available in Military Hospitals and it is known to 94 per cent of the respondents. Thus, almost all of the personnel are aware of the fact that there is a provision for a special serological test of blood in army hospitals and such provision is meant for detection of HIV positive patient.

In our society often an HIV victim is stigmatized as a guilty person. When such question was included in survey, it came out that among the army personnel 62 per cent believe it, whereas another 30 per cent do not admit it as true. They do not find any logic to label an AIDS victim or HIV positive person as 'guilty' and or to be an evil person in the eyes of the society. When it was asked whether an AIDS infected person should be treated like a criminal and to be kept in police custody, 61 per cent did not endorse the proposal of treating an AIDS victim in such a harsh way. However, another 33 per cent strongly agreed with the view and suggested that such a victim must be kept in custody otherwise the AIDS virus may spread easily.

Though AIDS spreads through a typical virus, one can always adopt preventive measures against its spread. There are chances of getting infection by default of circumstantial compulsions and accidents as well. It is known to many respondents that AIDS is transmitted through infected/used syringes/needles and transfused blood or blood products, which the recipient may not anticipate in advance. In this regard, a sizeable section (31 per cent) of army personnel who think otherwise. Therefore, it is mostly the circumstances, which make such persons a victim of this disease. When it was asked to the respondents, 38 per cent endorsed such a view whereas 53 per cent conceded with the fact that infection from HIV/AIDS cannot be a circumstantial manifestation alone.

AIDS is known to be a fatal disease and 55 per cent of the personnel are somewhat afraid of AIDS and its victim. However, another 39 per cent do not express any such anxiety and fear. Any individual knowledge about AIDS needs to be shared with others for verification, clarification if any, and for further dissemination to others. The majority (91 per cent) of the army men accepts it. Moreover, 82 per cent, of the personnel strongly felt that health education should be made compulsory

which will make them sufficiently aware about AIDS and its prevention. The pace with which such infection wave is engulfing the human race its fast growing rate can only be dissipated if knowledge and awareness attain relatively faster speed.

Use of 'Condoms' is considered as a preventive measure against sexually transmitted diseases including AIDS, by 77 per cent of the army men. The remaining proportion of respondents however did not agree with the same. According to 74 per cent of the personnel, it is better to go through necessary blood test before marrying an unknown person/girl. That may help them to detect the presence or absence of HIV in the serum of prospective spouses. In the context of sexual behaviour, when it was asked whether pre martial sex relation is good or undesirable, 21 per cent of the army staff replied that it is good, whereas 57 per cent considered it as a bad habit and the rest were found somewhat indifferent in this matter. Majority (89 percent) of the army personnel is of the opinion that to keep oneself free from infection of HIV/AIDS, a person should avoid promiscuity and remain satisfied with single and known sex partner. Moreover, it has been suggested by 86 per cent of the respondents that a carrier of AIDS needs to avoid sexual relations with any body. Otherwise, that may cause transmission of such a virus easily.

The knowledge, perception and behaviour of army personnel about AIDS and HIV infection also need to be examined in the context of their organizational environment where they live and work. The army personnel undergo a routine medical check up by the army doctors. It has a well-designed health management organization and adequate medical facilities are available in all units. Majority of the respondents knew that AIDS is a sexually transmitted disease. The propensity towards promiscuity among them is a professional aggravation of habit, which has also been reported by 73 per cent of the respondents. About 62 per cent of the respondent believe that a sizable section of army personnel visit professional sex workers for enjoyment and sexual outlet. When it was asked whether they want sponsored brothels to be located near the units, 82 percent army men vehemently opposed the proposal, while a negligible section endorsed it.

In army camp life consumption of liquor often stimulates some of them to get involved in illicit sexual act, such tendency has been noticed particularly among those living as single. About 42 per cent of the army men supported this fact whereas another 31 per cent did not find any logic against such an observation. Thus, 26 per cent of personnel suggested that the official distribution of hard drinks among the army personnel should be stopped immediately while other 59 per cent asked to maintain status quo in this matter. The majority of opinion was that, issue of hard drinks being certified by medical authorities has something to neutralize the effect of fatigue of troops. So there is no need to discontinue it.

In the unit under study, every second person was in favour to make ELISA test compulsory for all the personnel as a matter of policy and suggested making sex education obligatory. A sizeable section (86 per cent) of respondents suggested that exhaustive education on AIDS/HIV should be given to the army personnel. That will help them not only to know about the causes of such a disease but also enable them to adopt required preventive measures against it. They felt, once the required knowledge is developed, their attitude, perception and behaviour towards this disease will automatically change.

When the respondents were asked whether they have any hesitation in donating blood, out of fear of AIDS, 62 percent replied that they have no fear and they will continue to donate blood whenever it is required. However, another 21 per cent of army staff were somewhat apprehensive about this matter. Syringe is the only instrument, which is widely used for application of injection. Used and unsterilized syringe is likely to carry AIDS germs/virus from one person to another. The army population in general is found quite aware of the fact that blood and blood products are the major medium through which AIDS virus is transmitted easily from the carrier to others. Thus, majority of them (88 per cent) know it well today that disposable syringes need to be used while taking any injection and also for blood testing. They confirmed that it is already being followed in the army clinics and hospitals to safeguard the population against transmission of AIDS. A higher percentage of army personnel is not in favour of establishing any sexual relations with some one

who is suffering from AIDS. However, 55 per cent believe that there is no harm in having sex with such an AIDS patient if 'condom' is used. It shows the variation in knowledge and perception about the disease.

A large number (83 per cent) of respondents identified visiting of 'professional sex worker' as one of the major causes of being infected from AIDS. They thought that it is better to avoid going to such places to satisfy sexual need. Similarly, quack dentist is also identified as a risky agent in transmitting virus of AIDS. Therefore, 76 per cent of the respondents avoid visiting them.

Due to inadequate knowledge about HIV and AIDS, 46 per cent of respondents are found somewhat scared to touch a bleeding patient/person; whereas 33 per cent are free from such a fear. Blood is a medium through which HIV virus easily spreads. Therefore, any purchase of untested blood from private clinic is considered not safe enough for transfusion and it is believed by 81 per cent of the respondents. More or less similar proportion of army personnel suggested that before any blood transfusion, it is necessary to know for certain that the blood is free from HIV.

The state of knowledge, perception and behaviour of army personnel about AIDS and HIV infection has been discussed in preceding sections. It is assumed that the people under study are likely to be guided by their acquired perception about the said lethal disease. Through this, they will adopt possible preventive measures to protect themselves against any infection from AIDS.

Thus keeping in view the level of knowledge of this particular population it is advisable to introduce most effective prevention strategy to ensure resistance against further spread of this disease. It has been observed that knowledgeability of the army personnel about AIDS and HIV infections is not very satisfactory. A large proportion of respondents (20-49 per cent) is not aware of the disease at all. Even among the respondents (50-55 percent) whose knowledge about the disease is found inadequate and disjointed. Their perception about AIDS and HIV is not specific. The origin of the disease, its routes of transmission, symptoms and risk factors are not always clearly understood

by them. Such a level of cognition is detrimental to such large group of people, because they are mobile and circumscribed community and among them the possibility of transmission of HIV may become vigorous because of such state of knowledge and awareness.

The primary aim of any health education program is to develop a thorough knowledge base on preventive measures of all diseases. Health education has the potentiality to grow awareness through various aspects of health related to AIDS/HIV. Keeping in view socio cultural constraints of army life the preventive measures which are essential to be adopted by them to check and stop further infection of this disease has been discussed in the succeeding chapter.