CHAPTER NINE

SUMMARY AND CONCLUSION
CHAPTER – IX
SUMMARY AND CONCLUSIONS

This chapter is designed to summarise the major findings noted in earlier chapters and to highlight some broad conclusions based on the present study. Some recommendations have also been put forth which the other researchers may test in future studies.

The main objective of the present study has been to understand the nutritional profile of the HIV/ AIDS infected patients. Secondly to implement the Nutrition education programme and sex education programme. And thirdly to evaluate the impact of Nutrition Education Programme (NEP) and Sex Education Programme (SEP) on the nutritional profile and sexual behavioural pattern of the patients.

The First ‘Introductory’ chapter has dealt with origin and history of HIV/ AIDS infection in the human beings in the world. It focusses the routes of transmission, signs and symptoms of HIV/ AIDS. This chapter highlights the governmental, non-governmental, national and global programmes supporting this worldwide problem. Current position of the infection of this disease at worldwide, national and regional level is discussed. This chapter also measures the impact of HIV AIDS on the family and community structure. This chapter especially highlights the effect of this disease on the food intake, anthropometry, clinical, biochemical and AIDS related complaints (ARC’s). The importance of counselling through sex education and
nutrition education programme is also explained in this chapter. Bringing awareness, changing sexual attitudes, taking care of nutritional and health status and hygiene etc. are the only solutions to this health hazard. This chapter stated the use of these remedies for the prevention of ARC's and further more spread of HIV/ AIDS in the emerging vulnerable population. The study of universe is at Kolhapur hence, the brief profile of Kolhapur district is discussed.

The available research studies regarding the HIV/ AIDS profile, nutrition education, strategies at national and international levels have been presented in Chapter-II\textsuperscript{nd} under 'Review of Literature'. The collected review from the available relevant studies is discussed under three categories : i) Theories about origin of the HIV infection, ii) Factors responsible for epidemic and spread of HIV/ AIDS with its impact and iii) Major strategies fighting for HIV/ AIDS infection.

Chapter III\textsuperscript{rd} entitled 'Methodology' deals with the entire structuring of present research study. This chapter focusses on the selection of sample size, area, data collection methods, tools and techniques used, frame work of interpretation and presentation of data. Total 52 No. (26 HIV or asymptomatic and 26 AIDS \& symptomatic) patients having age group between 25 to 40 years were selected purposively for the study from Kolhapur city. Among 52 patients 23 No. (13 HIV or asymptomatic and 10 AIDS or symptomatic) female patients were selected. The patients who had shown interest in joining the
Nutrition Education Programme (NEP) and Sex Education Programme (SEP) were chosen. These persons were treated as \text{an\,plan\,} group patients. Ten per cent of the selected total samples (i.e. 5 No.) were studied in detail as case studies.

\textbf{Chapter IV} discusses the \textit{`Socio economic Background of the HIV/ AIDS Patients.'} It highlights that, majority of the female and male patients were from young age (25 to 30 years) and 31 to 35 years in age respectively. Majority married female and unmarried males had infection of this disease. Most of the patients were illiterate, migrated from rural to slum area and had low economic status. Open category 46.2 per cent and 19.2 per cent other backward class category patients from reserved category were reported mainly infected by this disease. More patients from joint family were infected (55.8 per cent) by HIV/ AIDS infection. Most of the patients from business category having small cloth shops, truck drivers from labourer category were infected by this disease.

\textbf{Sexual Behavioural Pattern of the HIV/ AIDS Patients} is discussed in \textit{V} Chapter. It shows that, an overwhelming (76.9 per cent) number of patients had frequently suffered from sexually transmitted diseases (STD's). Most of the patients had complaints about herps genitalis. Young age, marriage, illiteracy and having \textit{slum} background were the responsible factors noticed for more infections of
STD's. The patients who had heterosexual relation with commercial sex workers (CSW's) and taking alcohol were noticed infected with HIV/AIDS. Most of the patients (51.9 per cent) were totally unaware of safer sexual practices. They were neither using safer sexual methods with their partner at home nor with CSW.

Chapter VIth expresses the ‘Nutritional Profile of HIV/ AIDS Patients.’ The data examined about the knowledge-attitude-practices (KAP) related to the nutrition shows that most of the patients had very low level of KAP. An examination of average food intake reveals that except eggs and meat/fish/poultry all the food groups were lacking in the diet of male patients. Female patients were taking diet in lesser quantity as compared to male patients. Both male and female patients had inadequate supply of all the nutrients as compared to respective recommended daily allowances (RDA, 2000).

All the anthropometry indices observed were below the standard level. Most of the patients had low body weights.

Majority of the patients were prone to vitamin, protein-energy and mineral deficiency symptoms. Prevalence of anaemia was noticed more per cent in female (26.2) than in male (10.4 per cent) patients.

Blood analysis report indicated that most of the patient’s Hb level, RBC count, and sugar level were below the normal level. Serum level of
protein, iron, zinc, vitamin A, ascorbic acid and vitamin B₁₂ were also reported at lower level. Loss of appetite and acidity were the main AIDS related complaints (ARC’s) found in majority of the patients under gastrointestinal manifestations. In the neurological manifestations dementia (100.0 per cent), headache (44.8 per cent) and depression (43.5 per cent) were recorded as major complaints among male and female patients respectively. Complaints about pulmonary tuberculosis and bronchitis in male and pneumocystis carini-pneumonia signs were found more among female patients. Male patients also suffered from Pharyngitis (66.7 per cent) and rhinitis (66.7 per cent). Where as most of the patients had complaints about skin lesions and oral lesions.

Chapter VIIth entitled, 'Impact of Nutrition Education Programme (NEP) and Sex Education Programme(SEP).' Section A' gives an idea about the content and implication of Nutrition Education Programme and Sex Education Programme (NEP-SEP). Whereas Section B focuses on the effect of NEP-SEP on the nutritional profile and sexual behavioural pattern of the group of patients. The data reveals that, asymptomatic, young age, unmarried male and married female patients had positive effect when the KAP related to nutrition was analysed after NEP. A significant change was observed in the intake of balanced diet. Intake of nutrients like protein, vitamin B₃, vitamin C, vitamin B₁ and iron was increased more than twenty per cent.
Average body weight (kg) was found increased by 7.5 kg. Whereas other body measurements like skinfold thickness (mm), body frame size and body mass index had improved significantly.

The nutritional deficiency symptoms like β complex, protein-energy, vitamin C and iron were not seen in the patients. Level of blood sugar and haemoglobin had improved significantly. After NEP slight increase of erythrocyte count was also observed among the patients. Improvement in the plasma level of iron, vitamin A and total protein were recorded as 40.2, 18.0 and 4.1 per cent respectively.

Complaints about gastrointestinal tract such as acidity, dysphagia, loss of appetite and diarrhoea were under the controlled condition among more patients.

More than 60 per cent patients had improved significantly the neurological manifestations such as depression and headache. Whereas 42.9 and 25.0 per cent patients were noticed to reduce their complaints about bronchitis and signs of pneumonia respectively. Complaints like pharyngitis and sinusitis were reported recovered by maximum number of patients. Reduction in the complaints i.e. oral lesion (40.0 per cent) and skin lesion (37.5 per cent) were also reported by the patients. The NEP-SEP had very significant impact on the upliftment of nutritional, health status and sexual behavioural pattern among asymptomatic patients, rather than symptomatic patients.
The detailed study about nutritional profile of the selected five cases of HIV/AIDS patients was analysed and reported in the Chapter-VIII under 'Case Studies.'

**Hypotheses Suggested:**

It is generally expected that, the study should come out with certain hypotheses to be tested in further research studies. On the basis of the present study, some generalisations have been noted below. Other researchers may test these generalisation in the form of hypotheses in further research studies.

Due to sexual activity, younger age group is more vulnerable to HIV/AIDS infection. They do not have much knowledge about route of infection and adopt unsafe sexual practices. Unmarried male and married female are infected more by this disease. Low level of education exhibits higher per cent of ignorance and hence more prevalence of HIV/AIDS. This disease is more prevalent in slum area due to migration of people, low level of economic status. Religion and caste do not show any relation with existence of HIV/AIDS infection.

Young age, literacy, female sex and asymptomatic stage of disease are the factors responsible for gain in better knowledge, positive attitude and more acceptability of the practices related to nutrition. Effect of NEP-SEP on the nutritional profile, sexual behavioural and
AIDS related complaints were measured more positive among these patients.

CONCLUSIONS

The present study has brought light to some important facts. On the whole it can be concluded that, unmarried younger age, male were acutely suffering by HIV/ AIDS infection. Married female had caught infection from their husbands. Lack of knowledge about route of infection, non-use of condoms or any barrier methods, multiple sexual relations are the factors responsible for spreading more infections among the population. Due to fast life, changing attitude, western life style and struggle for existence, the moral values are getting deteriorated. Migratory pattern has increased the job searching. Adoption of moral and less freedom in the slum area is more responsible for the prevalence of STD, HIV and AIDS. Depression, unsatisfaction, frustration and stress leads to drug and alcohol addiction. Exposure to TV, cinemas and mass media develop non-acceptable practices and behaviour. These factors are more responsible for the spreading of dangerous infectious disease like STD, HIV and AIDS.

Due to social stigma of such disease the infected peoples do not come forward for the current treatment. They delay the diagnosis, in later stage when it is converted to AIDS related complaints they come to the clinic declared as AIDS death. This infection is more prevalent in
young age, who are the backbone of this country. Now the 'AIDS orphans' is newly developed problem arising at a faster rate in the world. Micro level strategies are more essential i) to develop immunity by better nutrition through nutrition education in the fetus state, ii) adoption of safer sexual practices and iii) bombardment of scientific knowledge regarding causes and route of HIV/ AIDS through counselling should be available in the schools. These are the major strategies in our hand today for the prevention of furthermore victimization of this vulnerable age group by this disease.

RECOMMENDATIONS AND SUGGESTIONS

According to the findings and observations in this study, the following recommendations and suggestions are listed below.

➢ Handling of the HIV/ AIDS patients in a skillful manner, patiently and carefully is necessary. Development of the friendly rapport with the patients is more important, otherwise it is very difficult to establish the support system.

➢ Developing more awareness about health hazards, food safety and personal hygiene of the patients is necessary. To create awareness in these patients regarding the impact of HIV/ AIDS on the socio-economic condition of family and community is essential.

➢ Minimising the social stigma and creating a confidence among patients so, they could be defined openly about their infection and
treated immediately. It will be more helpful for development of such platform for the patients for supportive care and treatment at proper stage of disease through policy organisation.

➢ In the new era mass media has wide scope for the attractive programmes. The attractive programme should rely on awareness about HIV/AIDS, STD, hygiene, food-nutrition and immunity. Hence, mass medias should take initiative for the better awareness and communication through entertainment at grassroot level.

➢ Increasing the quality of moral value and culture in the family, community and society is the need of this hour through researches in social studies. It will be positively useful for the prevention of unsafe practices.

➢ For the prevention of ‘AIDS orphans’ HIV positive pregnant woman should be recommended to terminate pregnancy.

➢ Governmental and non-governmental agencies should implement the programmes and policies (use of condoms, sexual awareness etc.) for the prevention of this disease. These efforts are not sufficient as compared with the wildfire faster rate of this infection. Hence, aggressive counselling programmes at micro level are very important to control this syndrome.
More programmes on medical, therapeutic nutrition counselling, guidance will be helpful for maintenance of good nutritional status and freedom from possible AIDS related health hazards.

If possible the nutrition intervention programmes can be suggested. The government and non-governmental organisations can take lead in such programmes. Such type of programmes are more important to develop better immunity, nutritional and health status in the patients in asymptomatic stage of disease. It helps to delay the conversion of HIV in AIDS related complaints. It may strengthen the life expectancy and also the better quality of life would be possible to asymptomatic patients.
SPECIFIC CONCLUSION

It is specifically concluded that, majority of the patients were unmarried, young, illiterate, migrated, truck drivers and male labourers, where as married females were reported mainly infected by HIV/AIDS. Most of the patients suffered by sexually transmitted disease particularly herpes genitalis. The main route cause of this disease infection was heterosexual relation with commercial sex workers. Most of the patients observed inadequate food intake and had poor knowledge of nutrition. All the patients were below the standard level of anthropometric indices. Majority of the patients were suffering by protein-energy malnutrition, vitamin and mineral deficiencies, particularly anaemia. Loss of appetite, acidity, indigestion, depression, bronchitis, pulmonary tuberculosis, pharyngitis and skin lesions were reported in AIDS patients. The impact of NEP-SEP was very significant in improving sexual behavioural pattern nutrition knowledge and positive attitude practices. Food intake was improved. There was weight gain, reduction in deficiencies and AIDS related complaints, especially loss of appetite, indigestion acidity were not noted again among the asymptomatic patients.