CHAPTER V

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Discussion

The study was conducted to assess the Outcome of antiretroviral therapy among HIV/AIDS patients in Nepal and compare between those receiving treatment and without treatment in terms of quality of life between January and February 2005. The primary data for study was collected by using structured questionnaires through face-to-face interview conducted by trained interviewers. Altogether 84 respondent were interviewed, 17 respondents under DAART treatment, 25 respondents from Non-DAART treatment and 42 without treatment.

Secondary data were also collected from one year of clinical record for respondents under DAART treatment, Non-DAART treatment and without treatment. The data collected was coded and analyzed using SPSS 10 for windows. Chi-square test was used to determine the association between dependent and independent categorical variables. Independent sample t-test was used to determine correlation between continuous variable like age, CD4+ cell count.

The result of the analysis was discussed under seven sections as follows

5.1.1 Socio-demographic characteristic of respondents.

5.1.2 Increment and decrement of CD+4 counts from baseline.

5.1.3 Comparison of side effect experience by the respondents under DAART and Non-DAART.

5.1.4 Comparison of problem with accessibility to treatment between the respondents under DAART and Non-DAART.

5.1.5 Adherence to treatment and comparison by group of study.

5.1.6 Well-being among respondents and comparison between three groups.

5.1.1 Socio-demographic characteristic of respondents

Descriptive

Results show that that the average age of the respondent was approximately 32.12 years old. Female respondent were more common than male respondent comprising 83.3% of all respondents within treatment and non-treatment groups. This is due to the selection of respondents from Maiti Nepal, the NGO who works for rehabilitating the rescued women from Indian brothels. All of the respondents under non-treatment group was from Maiti Nepal hospices (due to variety of limitations) leading to unbalance of male and female ratio.

Majority of the respondents under without treatment had diagnosed with the HIV/AIDS before than the treatment group and the age difference between three groups was significantly different. This might be the reason why the treatment group had less

CD4+ count than the non-treatment group at baseline. The respondents who diagnosed earlier with HIV/AIDS were elder than the respondents who diagnosed with later.

The respondents under Non- DAART had diagnosed with HIV/AIDS before than the respondents under DAART and without treatment, from this result it shows that there was strongly significant different between the educational qualification between three groups of respondents, the reason might be because of the male have greater opportunity to get education in Nepal.

Among three group 56.0% of the total respondents from Non-DAART treatment Have experienced the problem with hosing in 12 months where as no respondent from DAART and without treatment have experienced any problem in relation to hosing. The major cause of differences between DAART, without treatment and Non-DAART is because of the Maiti Nepal NGO which provides the hospice for the women who is living with HIV/AIDS. The finding also shows that significant proportion of respondents (56.0%) have self reported problems of housing conditions.

It was also found that 65.5% of the total respondents in Non DAART group had problem in getting information about anti-HIV treatments in comparison to 23.3% of the total respondents under DAART had problem getting such information.

Only 29.2% respondents under Non-DAART were satisfied with overall knowledge about anti-HIV treatments while 64.0% of total respondents under DAART where satisfied with overall knowledge of anti-HIV treatments.

35.3% of the respondents under DAART had problem with knowledge of anti HIV treatment in past 12 months while 68.0 % of the total respondents under Non-DAART had problem with knowledge about anti-HIV treatment. The reason for this might be the duration of time AIDS patients expend with their health professional. In Maiti Nepal (treatment under DAART) they provide regular health care and counseling for AIDS patients while the Non-DAART patients visit the hospital once a month, when they visit hospital because of stigma discrimination and they do not want to stay at the hospital for long time to receive medicine and another medical check up.. Another reason might be that the respondent under Non-DAART has problem with getting the information about anti-HIV treatment.

In relation to discrimination, 88% of respondents under Non-DAART had experience discrimination while 11.8%, 24.4% of respondents had experienced discrimination among DAART and without treatment respectively. The main reason for less discrimination experienced by patients with DAART might be the respondents under DAART have less exposure to society for daily life since they live in hospice or rehabilitation center.

64.0% of total respondents under Non-DAART had problem in relation to taking anti-HIV treatment regularly while 23.0% of total respondents under the DAART treatment. The main reason for differences between two groups might be the mode of treatment in DAART, where patients have to take medication in front of the medical staff. This also shows the clear indication that DAART mechanism may be helpful to reduce the problem relating to taking medication.

66.7% of the total respondents under Non-DAART were satisfied with knowledge about Adherence while 100% of total respondents under DAART were satisfied with knowledge about adherence. The differences between two groups might be because treatments method and other facility in DAART and Non-DAART treatment.

5.1.2 Increment and decrement of CD+4 counts from baseline.

The one year of retrospective data shows that minimum base line CD4+ counts for respondents were 80/ mm^3 while maximum was 1100/mm^3 and after one year of antiretroviral treatment minimum CD4+counts was 98/ mm^3 and maximum was 900/ mm^3 among respondents under Non- DAART, DAART and without treatment.

CD4+cell count for respondents with treatment increased during one year from base line mean 155.62/mm^3 to 238.10/mm^3. While cd4 cell count decreased for respondents without treatment from mean 604.57/mm^3 to mean 417.19/$mm^3$and this is in concurrent with other research that CD4+ count decrease sharply among HIV/AIDS patients without treatment (Kilaru KR et al., 2004). From one year of retrospective data shows decrease in CD4 cell count among the respondents without treatment during one year; mean (187.38/mm^3). While CD4+4 cell count among three groups has increased by mean (-84/mm^3) during one year of treatment. It shows that in one year of treatment level of CD4+count between respondents with and without treatment was significantly different at alpha=0.05 p =.000, It shows the efficacy of treatment among both group. Note that lower increase of CD4+ count among patient under Non-DAART than DAART.

CD4 cell counts after one year of treatment among Non-DAART and DAART has increased in both group, but CD4+ increased substantially more in the DAART and its also related with other study that AIDS patients under DAAAT has increased more that the respondents without DAART (Tinoco I at al., 2004). Its also shows that significant correlation in the relationship between DAART and CD4+counts p =.*000*.

The CD4+ count increased with similar trend within female respondents as in overall patients under DAART and Non- DAART. The CD4+ has decreased substantially among female respondents without treatment in comparison to those among with treatment.

5.1.3 Comparison of side effect experience by the respondents under DAART and Non-DAART.

The respondents within DAART treatment have lower side effects (47%) than the respondents in Non-DAART treatment (84.4%) *p =. 011*. And its related with the previous study by (Kagay C. R. et al., 2004) that patients under DAART had lower side effects than the patient without DAART.

The respondents with DAART and Non-DAART have experienced greater illness since diagnosed with HIV 84.4and 83.3% respectively. While respondents without treatment is 42.9%. There was significant differences between three group at *p= 0.006.* it shows that the respondent under without treatment has diagnosed with HIV positive later than Non-DAART and DAART treatment group from analysis it also define that the major cause of illness among respondent under without treatment might

be because of the year of diagnosed with HIV/AIDS. Another reason might be respondent under without treatment has greater CD4+ count then respondents under Non-DAART and DAART.

5.1.4 Comparison of problem with accessibility to treatment between the respondents under DAART and Non-DAART.

In regard to access of treatment, respondents were asked about the problems that they have faced in regard to accessibility of antiretroviral treatment. 64% of respondents under Non-DAART have some kind of problem regarding accessibility to antiretroviral treatment while there was not any problem regarding accessibility of anti retroviral treatment among DAART patients. This is in concurrent with that DAART method of treatment is best to provide medication to people living with AIDS (Farmer P et al2003). The respondents under Non-DAART are getting treatment from hospital; they have to collect medication for every 15 days or one month and take medication on the basis of self administration.

5.1.5 Adherence to treatment and comparison by group of study.

While asking to respondents that how many dosages missed in past two weeks, the out come of analysis shows that 11.8 % of total respondents within DAART have missed dosage 1-2 times. While in Non-DAART treatment 1-2 times 52.25%, more than 3 times 20% of total respondents have missed the dosage.

p=0.000. It shows that the adherence to treatment among patients under DAART is obviously greater than Non-DAART because of nature of DAART

treatment and it is concurrent with other research that DAART is one of the approaches to improving adherence among HIV/AIDS patients (Frederick L. et al., 2004). The main reason for the adherence to treatment is the mode of administration of the medication and access to antiretroviral treatment, adherence to treatment is lower among Non-DAART respondent who had problem with access to antiretroviral therapy This is in concurrent with other research that the most important, reason for missing medication doses, is barriers to health care and social services. (Heckman BD. et al., 2001). And this is also in concurrent with adherence was higher for DAART than for Non-DAART medication administration (Altice FL et al., 2001)

5.1.6 Quality of life among respondents and comparison between three groups.

Structured questionnaire for well-being was adopted from WHOQOIL-HIV is based on the WHOQOL-100. There are 6 domains in this questionnaire and response from respondents were calculated and weighed according to WHO scoring and coding method for each domain.

Respondents were asked to rate their quality of life. Comparing among the respondents under Non-DAART and DAART groups, the quality of life is significantly different between these two groups at p=*0.035*. The overall quality of life is higher among patients under DAART in comparison to the Non- DAART patients. This finding is concurrent with the people under NON-DAART have poor overall quality of life because of medical appointments, lack of social support, negative stressors, and accessibility to treatment (Yen CF et al., 2003.) and previous finding in this research

support this agreement that the people under Non-DAART has problem with access to treatment. However the reason behind this cannot be found due to limited research being done comparing wellbeing among Non-DAART and DAART.

Comparing among the respondents under treatment and without treatment groups, the quality of life is significantly different. The overall quality of life is higher among patients under non-treatment group comparison to the treatment group ($p=0.075$). The reason might be all of the respondents without treatments are living in hospices and they have better access to health facility and Hospice than 60% of total respondents in treatment group are living without hospice and social support and health facility. And other reason might be respondents without treatment have greater CD4+ count than the respondents within treatment, i.e. they have faced less health problem than other group.

The respondents were asked to rate their overall satisfaction level about their health. It was found out that 61.0% of respondents were dissatisfied with their health status. The level of satisfaction is better among patients under DAART in comparison to Non- DAART patients. This is in agree with that the patients with supervision of medical for antiretroviral treatment have greater health satisfaction then the patient without supervision of medical professional (Carrieri P. et al., 2002.)

It was found out that 53.7% of respondents were dissatisfied with their health status. The level of satisfaction is better among patients under without treatment in comparison to with treatment group. This finding is contrary with previous research

that HIV-positive population of New Zealand generally has improved health as a result of antiretroviral therapy (Grierson J. et al., 2003)

5.2 Limitation of Study

In this study the major bias was female were more than male, which may bias in terms of comparing CD4+ count and well being among female and male and there were no data available for base line quality of life for HIV/AIDS patients.

Secondly, as per research design, there were not enough clinical data recorded for Non-DAART group during one year of treatment for example weight which may be main predictor for well being and Quality of life.

The time frame was so short to collect all data and get response from all respondents in one month as most of the respondents within Non-DAART were available only during their hospital visit.

Respondents were asked about adherence to treatment before two weeks. Their experience during this short period may not be generalizable to longer periods.

The characteristic between DAART, Non DAART and without treatments were different, the most respondents under DAART were trafficked to India and were working as sex worker while respondents within Non-DAART were male and female.

The findings of the study suggest some obvious difference in respect to housing. Accessibility as the patients under DAART was taken for hospices setting. The classical DAART methodology used in other parts of the world is different than the hospices setting. Careful consideration shall be implied while making recommendation for most effective method of treatment, as hospices based DAART has financial imperative.

5.3 Conclusions

1. The results had shown that there was significant different association between method of treatment, health care facility and outcome of treatment between respondents under DAART and Non-DAART.
2. In terms of increment and decrement of CD4+ count among people with and without treatment, the ratio of decline CD4+ count is greater in patient without treatment. While the CD4+ count has increased in both DAART and Non-DAART group.
3. In terms of accessibility the respondents under DAART had more access to treatment than Non-DAART and respondents under DAART had greater adherence to treatment than Non-DAART, which shows that accessibility to treatment is an important predictor for compliance.
4. Results had shown that the respondents with DAART has better overall quality of life than respondents without DAART.
5. There was no significant different between people with treatment and without treatment in terms of Quality of life or well being

6. Lastly result had shown that the under DAART has more information about adherence, resistance, knowledge about side effect of anti-HIV treatments.
7. From this research it also suggests strongly that DAART mechanism may be helpful to reduce the problem relating to taking medication.

5.4 Recommendation

The above modified cohort study to assess out come of antiretroviral therapy among people living with HIV/AIDS in Nepal in the light of National Center for AIDS and STD Control and Maiti Nepal(NG0) did suggested that policy play a beneficial role to improve wellbeing of patients treated with antiretroviral. Based on findings, some of the recommendations to bring forth were given as follows:

1. Need to provide proper hospice for the people treated with antiretroviral in Non-DAART treatment.
2. Need for the National communicable disease and HIV/Aids center to provide DAART mode of medication to people getting treatment from hospital.
3. It is important for clinicians and policy makers to identify factors that influence health related quality of life.
4. Further research needed based on baseline clinical and quality of life/well-being data.