CHAPTER V
CONCLUSION AND DISCUSSION

Conclusion and discussion

The study of "Adherence assessment and factors affecting adherence to ART among HIV-infected/AIDS at TAKSIN hospital" was an analytical, cross–sectional study. The objectives of this study were to assess the adherence to ARV medication among HIV-infected/AIDS patients at TAKSIN hospital by using multiple adherence measurement and to analyze the relationship between the factors affecting patient adherence to ARV medication. The data collection was conducted by using interviewing and assessment tools during March to April 2010 in HIV-infected/AIDS outpatient clinic at TAKSIN Hospital. The samples were 200 HIV/AIDS patients who took antiretroviral therapy.

5.1 Demographic data

The sample in this study is 200 HIV-infected/AIDS patients who took antiretroviral therapy at TAKSIN Hospital, it was found that majority of the samples were male, 106 cases (53 percent), were married, 87 cases (43.5 percent), were completed primary school, 71 cases (35.5 percent), were employee, 117 cases (58.5 percent), had an income less than 5,000 baht per month, 84 cases (42 percent). The average age of the patients was 38.2 years-old.

5.2 Treatment data

It was found that majority of the samples were in universal health care coverage program, 141 cases (70.5 percent), contacted infection due to heterosexual transmission, 131 cases (65.5 percent), no adverse event from antiretroviral within 1 month, 163 cases (81.5 percent), during the data collection period the patients took ARV medicines two times/day, 141 cases (70.5 percent), had an average of duration of treatment of 3 years.

5.3 Knowledge of disease and medicine data

It was found that the patients had average of the score knowledge at 11.89 scores. The most correctly answered question was item 12, which asked "you have to take medicine on time depending to physician s' instruction " 198 cases (99 percent) and least correctly answered question was item 10, "while you take medicine and you have mild rash and itching ,you should stop taking medicine " 101 cases (50.5 percent). Using the 25 and 75 percentile to classify the level of knowledge of the disease and medical data, the results showed that there were 50 cases, (25 percent) who were classified into low knowledge level. There were 65 cases, (32.5 percent) who were classified into moderate knowledge level. There were 85 cases, (42.5 percent) who were classified into high knowledge level. These results showed that majority of HIV-infected/AIDS patients did not know what to do when they had mild adverse event due to ARV medicine. They usually stopped to take medicine when they had mild adverse event. This situation can increase drug resistance and treatment failure in the future. Therefore healthcare provider should provide the important information that when they faced with mild adverse event they should go back to see the doctor.

5.4 Self-efficacy in take antiretroviral data

It was found that patients had an average of the score self-efficacy at 49.47 scores. The most confidence to take ARV medication was item 1 "when you are at home", 4.58 scores and the least confidence to take ARV medication was item 5 "when the medicine can cause mild side effects", 3.68 scores. Using the 25 and 75 percentile to classify the level of self-efficacy in taking antiretroviral, the results showed that there were 46 cases, (23 percent) who were classified into low self-efficacy level. There were 103 cases, (51.5 percent) who were classified into moderate self-efficacy level. There were 51 cases, (25.5 percent) who were classified into high self-efficacy level. These results showed that majority of HIV-infected/AIDS patients had least self-efficacy to take ARV medicine when the medicine caused mild side effects. This situation can increase drug resistance and treatment failure in the future. Therefore, healthcare provider should provide suggestion to patients when they faced an adverse event from antiretroviral treatment in order to increase self-efficacy in taking antiretroviral therapy on time and regularly.

5.5 Social support data

It was found that patients had average of the score social support was 38.49 scores. The highest average score of social support was item 7 "you have someone who love you", 4.05 scores, and least average score was item 6 "you have someone accompany you to see the doctor if you needed it", 3.59 scores. Using the 25 and 75 percentile to classify the level of social support, the results showed that there were 48 cases, (24 percent) who were classified into low social support level. There were 92 cases, (46.0 percent) who were classified into moderate social support level. There were 60 cases, (30.0 percent) who were classified into high social support level. The majority of HIV-infected/AIDS patient were not have someone to accompany them to visit the doctor. Therefore, health care providers had to give consultation and care with patients regarding to the social support of patients such as parents, siblings relative, friends and girlfriend in order to increase effective treatment of patients.

5.6 Physician-patient relationship data

It was found that patients had average of the score physician-patient relationship at 60.25 scores. The highest average score of the patient provider relationship was item 15 "You trust to health care providers' treatment", 4.38 scores and the least average score was item 9 "Healthcare provider get you participate in selection ARV medicine that you would prefer", 3.60 scores. Using the 25 and 75 percentile to classify the level of physician-patient relationship, the results showed that there were 49 cases, (24.5 percent) who were classified into low physician-patient relationship level. There were 101 cases, (50.5 percent) who were classified into moderate physician-patient relationship level. There were 50 cases, (25.0 percent) who were classified into high physician-patient relationship level. Therefore, healthcare provider should provide the best relationship to the patients in order to improve the relationship with the patients then it would affect to the quality of treatment.

5.7 Adherence data

The evaluation of adherence to ARV medicine of HIV-infected/AIDS patient by using multi-method such as self-report, visual analogue scale (VAS), pill identification test (PIT) and pill count based on the recommendation of WHO

recommendation [35] was used in this study. WHO recommended that accurate assessment adherence was necessary for effective and efficient treatment. Using many tools to assess adherence was found in the studied of Steel, Nwokike, Joshi and others [15] and studied of Thidaporn Jirawattanapisal, Opart Karnkawingpong, Ponlasin Narkwichienet and others [55]. The majority of HIV-infected/AIDS patients in this study adhered to ARV medication, 140 cases (70 percent).

The results from Paterson, Swindells, Mohr and others[13] studies found that percentage adherence of more than 95 percent adherence had been necessary for HIV viral suppression and the relation between adherence and viral load (VL) was proved that if adherence decreases then viral load (VL) will be increase as a counter dose–response effect. Good adherence to antiretroviral will be increase efficacy of treatment such as preserve immunologic function, increase CD4 and decrease opportunistic infections, decrease HIV-related morbidity and prolong survival, suppress viral load, prevent vertical HIV transmission.[1,6,23] Therefore healthcare providers should aware to the importance of adherence and tried to improve the adherence in every process of the treatment, regularly.

5.8 Analytical the relationship between adherence and the factors affecting patient adherence to ARV medication

It was found that female, self-efficacy and patient-health care provider relationship had high associate with adherence to ARV medicine, significantly, ($p < 0.05$).

1. Female had a higher adherence level for 2.501 times compared to male (OR: 2.501: 95%CI: 1.244-5.031).

2. The moderate level of self-efficacy had a higher adherence level for 2.656 times compared to low level of self-efficacy (OR: 2.656: 95%CI: 0.794-8.884) and high level of self-efficacy had a higher adherence level for 4.126 times compared to with low level of self-efficacy (OR: 4.126: 95%CI: 1.444-11.789).

3. The moderate level of patient-health care provider relationship had a higher adherence level for 4.367 times compared to with low level of patient-health care provider relationship (OR: 4.367: 95%CI: 1.485-12.846) and high level of patient-health care provider relationship had a higher adherence level for 1.699 times

compared to low level of patient-health care provider relationship (OR: 1.699: 95%CI: 0.652-4.425).

However, this study had not found the association between status, education, occupation, income, knowledge of disease and medicine, age, adverse effect, duration of treatment, dose frequency, social support and adherence to ARV medicine.

It was found that the female, self-efficacy and patient-health care provider relationship had an association with adherence to ARV medicine, significantly ($p < 0.05$).

Female associated to adherence to ARV medicine was similar to the study of Littlewood, Vanable, Carey and others [37] which was found that women associated to the increasing of adherences.

Self-efficacy associated to adherence to ARV medicine was similar to the study of Golin, Liu, Hays and others [41] and Kanitta Punsreniramon studied [40] which were found that self-efficacy affect to adherence.

Patient-healthcare provider relationship associated to adherence to ARV medicine was similar to the study of Schneider, Kaplan, Greenfield and others [61] and the study of Kanitta Punsreniramon.[40]

This study had not found any association between status, education, occupation, income, knowledge of disease and medicine, age, adverse effect, duration of treatment, dose frequency, social support and adherence to ARV medicine.

Marital status not associated to adherence was not similar to the study of Kamolrat Inthisak[54] which was found that married affect to adherence.

Education not associated to adherence was not similar to the study of Thidaporn Jirawattanapisal, Opart Karnkawingpong, Ponlasin Narkwichienet and others [55] which were found that lower education affect to non adherence.

Occupation not associated to adherence was different to the study of Thidaporn Jirawattanapisal, Opart Karnkawingpong, Ponlasin Narkwichienet and others [55] which were found that occupation affect to adherence.

Income were not associate to adherence that difference from study of Golin, Liu, Hays and others[41] that found that low income to affect non adherence.

Knowledge of disease and medicine were not associate to adherence that difference from study of Kanitta Punsreniramon studied [40] that found that knowledge regarding the disease and antiretroviral therapy on the part of patients

knowledge in disease and antiretroviral therapy were associated with adherence in antiretroviral therapy.

Age were not associate to adherence that difference from study of Kamolrat Inthisak[19] studied that found that younger affect to more than 95% adherence.

Adverse effect were not associate to adherence that difference from study of Duran, Spire, Raffi and others[9] found that high number of adverse symptom was affect to non adherence.

Duration of treatment were not associate to adherence that difference from study of Howard[44] that found that the length of time on the prescribed medication that patients on antiretroviral therapy for more than 2 years will had an adherence level more than patients on antiretroviral therapy of 2 years or less than 2 years ($p=0.005$).

Dose frequency were not associate to adherence that difference from study of Golin, Liu, Hays and others[41] Murphy, Belzer, Durako and others[38] Pinheiro, Carvalho-Leite, Drachler and others[48] that found that a greater dose frequency was associated with a lower adherence level ($p=0.006$).

Social support were not associate to adherence that difference from study of Kanitta Punsreniramon[40] that found that social support had affect to adherence.

This study show that the female, self-efficacy and patient-health care provider relationship that had associate with adherence to ARV medicine, significance ($p<0.05$).

Therefore, health care providers should provide the programs to enhance the self-efficacy of the HIV/AIDS patients and also establish the good relationship between patients-providers in order to increase the adherence level to improve the effectiveness of treatment in HIV/AIDS patients.

Limitation of this study

1. This study was an analytical and a cross-sectional study then it may not be appropriate to measure adherence to ARV medicine only one time, in order to confirm the results, we should have a repeated measurement to adherence more than one time.

2. The majority of questionnaires were Likert scale and close questionnaire. Some additional details such as the reason why they do or do not were not being included in the questionnaire. It may limit the response in patients' answering.

3. Data collection was done by interviewing in the hall which may not have privacy.

Recommendations based on the results

1. Multi-method was more effectiveness in classifying adherence than only one method.

2. Health care providers should pay more attention to male HIV-infected/AIDS patients than female because male patients usually have lower level of adherence than female patients.

3. Health care providers should provide the programs to enhance self-efficacy, good relationship between patient-providers in order to increase adherence level such as providing the privacy room for HIV-infected/AIDS patients consultation and also for the activities with their friends.

4. The pharmacists should be one of the health care team to take care of HIV-infected/AIDS patients and give information about ARV medications that they take, and consult them for the antiretroviral therapy side effects, in order to increase good relationship and good perception that affected to patients' adherence.

Policy Recommendations

1. It was found that female, self-efficacy in taking medicine and good relationship between patient-providers affected to good adherence therefore health care providers in hospital should pay more attention to male HIV-infected/AIDS patients than generally in order to increase adherence and health care providers should provide the programs to enhance self-efficacy, good relationship between patient-providers in order to increase adherence level.

2. In the future the multi-method for assessment adherence to antiretroviral therapy should be applied in clinical practice.

Recommendations for further study

1. Further study should be designed to measure adherence every 3 months and 6 months to monitor the adherence level.

2. Further study should use the opened questionnaire to ask patients about their opinion and reasons of the patients concerning the factors affected adherence in order to find their causes of miss dose.