CHAPTER V

DISCUSSION

5.1 Descriptive Portion

In this study there were 483 subjects in 8 sub-districts, selected in proportion to sub-district population. The largest number of subjects was in Banthumneab sub-district. There are 222 men (46%) and 261 women (54%). The most subjects were in 50-69 years old with 67.1%. The mean of age was 58.48 and standard deviation was 9.377.

The prevalence of diabetes in this study was 5.2%, 2.5% were diagnosed diabetes before the study so more than half the subjects with diabetes had not been previously diagnosed similar to the study of Aekplakorn et al. (2007). The study of Aekplakorn et al. (2003) showed the prevalence of diabetes in Thai adults aged 35 years and over was 9.6%, with 4.8% previously diagnosed and 4.8% undetected before the survey. The different prevalence of diabetes in the present study may be explained partly by caused from the difference aged group of the subjects. Also, the lower prevalence of diabetes in the present study may be cause from location of Kiriratnimom that in the rural are of Thailand, the prevalence of diabetes in rural area may be lower than urban area. The further study should be identifying the prevalence of diabetes between rural area and urban area.

The prevalence of pre-diabetes or impaired fasting glucose of this study was 9.5% compared with 5.4% in the study of Aekplakorn et al. (2003) and 12.5% in the study of Aekplakorn et al. (2007)

5.2 Analytical Portion

In this study, the factors related to diabetes are waist circumference and hypertension. Waist circumference has positive relation to diabetes with odds ratio 1.13 ($p<0.001$). Hypertension has positive relation to diabetes with odds ratio 8.05 ($p<0.001$). The study of Aekplakorn et al. (2006) showed that sex, overweight, obese, abdominally obese, hypertension and to have a parent of sibling with diabetes were associated with diabetes.

The factor that related significantly to pre-diabetes is alcohol consumption with odds ratio 3.2 ($p=0.031$). The study in middle aged Japanese men, there was a U-shaped association between alcohol consumption and incidence of impaired fasting glucose or type 2 diabetes.

The factors related to abnormal blood sugar (pre-diabetes and diabetes) in this study are hypertension, waist circumference and physical activity with odds ratio 3.00 ($p=0.001$), 1.05 ($p=0.002$) and 0.55 ($p=0.043$), respectively. The study of Pereira et al. (1995) showed a significant inverse relationship between physical activity and 2-h load glucose concentration in both males and females.

5.3 Conclusion and Recommendations

In this study, the prevalence of diabetes in people among 40 years and over in Kiriratnikom District is 5.2% which included 2.5% previously diagnosed and 2.7%

undetected before the study. The prevalence of pre-diabetes is 9.5%. According to the Thai study in 2003 that showed the prevalence of diabetes in Thai adults aged 35 years and over was 9.6%. The Third National Health Examination survey 2004 that determined the prevalence of diabetes and impaired fasting glucose (IFG) in sample aged 15 years and over in Thailand showed the prevalence of diabetes and IFG was 6.7% (6.0% in men and 7.4% in women) and 12.5% (14.7% in men and 10.4% in women).

Therefore, the present study shows a substantial burden of undetected diabetes in Kiriratnikon District. There is the health problem in the district because they are high risk of diabetic complications and increase mortality and morbidity in the area from diabetes. Diabetic screening program should be applied to all people aged 40 years and over and people with high risk of diabetes.

For pre-diabetes, diabetic health promotion and prevention programs such as exercise, decrease waist circumference and control blood pressure should be applied. Repeat their blood glucose test is suggested once a year.

The expected number of people aged 40 years and over with diabetes in Kiriratnikom district is 0.052 x 12,058 = 627. But the data from the diabetic clinic in Kiriratnikom Hospital show that there are 455 diabetes patients registered, and some of these people are from other districts. Thus, a substantial number of people are not receiving with diabetic care program. After diabetic screening program, the number of diabetic patients in diabetic clinic will be rising over 455. Patient care team should have planning for increasing number of diabetic patients.

According to diabetic clinic, the diabetic patients will be classified into 2 groups, well controlled blood sugar and uncontrolled blood sugar because there are difference

risks for diabetic complications. In patients with uncontrolled blood sugar, patient are team should identified the cause of uncontrolled blood sugar for improve quality of diabetic care program. Determining factors of the effectiveness of blood glucose level control among diabetic patients in diabetic clinic should be identified.

For the analytical portion of this study, personal characteristics such as gender, age, marital status, educational status, income and location were not related to diabetes. The number of subjects with history of diabetes among first degree relatives or history of gestational diabetes was low, so it was not possible to test relationships between these characteristics and diabetes risk with confidence. Dietary behavior, smoking, alcohol consumption and physical activity are not related to diabetes. Hypertension, waist circumference and waist to hip ratio are related to diabetes. The advantage from this study, the health care program that reduce blood pressure and waist circumference such as exercise for people age 40 years and over to reduce risk for diabetes.

For diabetic care system in the district that composed of diabetic screening and diabetic care, the community cooperation is very importance for the successful of the project. The planning for the project should be taking with multidisplanary team and the representative of the community such as health volunteer, the elderly club and non-government organization.

The further study should be study about diabetic care program for the patient with diabetes. For example, the factors related to uncontrolled blood sugar in diabetic patient. Further research on diabetes in this area, and elsewhere in Thailand, will be very important useful for case detection, health promotion, diabetic prevention, the treatment of diabetes and rehabilitation for diabetic complications.