



CHAPTER V

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 Discussion

This study was an analytical cross-sectional study concerning knowledge, attitude and practice of preventive behaviors regarding foot ulcers in diabetes type II OPD patient populations at Bangkok Metropolitan Administration Health Center No. 48 named Nakwacharauthit-Nongkham-Pitiwan in Western Bangkok. According to the questionnaire constructed by the author from various books and research papers applicable question items, after the Thesis Committee's approval, non-probability in quota sampling method was applied in subjects with diabetes among 35 years old and over. Two Thai research assistants were equipped in this study so as to be able to answer any questions the respondents might have while filling-in the questionnaire due to the fact that the author was a Korean who had no Thai language proficiency. The data was analyzed by Statistical Package for the Social Science (SPSS) Program for two steps: Descriptive statistics and Inferential statistics.

Regarding the general characteristics, most of subjects (73.3%) were female and majority of the respondents (87.3%) were aged between 45-74 years, and all of them were Thai. Most (72.3%) of respondents were married, 60.7% of respondents were in the range from 4 to 6 in family member. 70% had primary school education. More than half (61%) of subjects were housekeeper, 12.7% were general laborer and 8.7% owned small business. 55.3% of subjects had an income from 10,001 to 30,000 Baht,

while 56.3% of subjects had expenditure from 10,001 to 30,000 Baht. More than half (55.3%) were the subjects with family history of diabetes mellitus, while respondents with self-history of foot ulcer were 45%. 44% of the subjects were normal weight and 39.3% were overweight. 41.3% of the subjects had level of the blood sugar between 121 to 165mg/dl. Regarding the periods (years) suffered from DM, most of them (79.3%) suffered from diabetes mellitus over 4 years.

The study showed that respondents had medium level of knowledge (56.3%), medium level of attitude (49.0%) and low level of practice (40.0%) of preventive behaviors regarding foot ulcer.

Out of all demographic characteristics data, gender had a significant statistically relationship with attitudes ($p < 0.05$); gender and practices ($p < 0.01$); marital status and practices ($p < 0.05$); occupation and attitudes ($p < 0.05$); monthly household income and practices ($p < 0.001$); monthly household expenditure and practices ($p < 0.001$); family history of diabetes and attitudes ($p < 0.05$); and family history of diabetes and practices ($p < 0.001$). There was a significant association between gender and attitudes of preventive behaviors regarding foot ulcer ($p < 0.05$). In female group, the high level of attitudes was 26.4% and low level of attitudes was 22.7%, while in male group, the high level of attitudes was 18.8%, the low level of attitudes was 37.5%, that is, in female subjects the level of attitudes was higher than in male ones. This study found significant association between gender and practices of preventive behaviors regarding foot ulcer ($p < 0.01$). In female respondents, the high level of practices was 29.5% and low level of practices was 34.1%, while in male group, the high level of practices; 18.7%, the low level of practices; 56.3%. The level of practices in female subjects was also higher than in male ones. This result may be explained that female

have by nature more self-care behaviors than male, therefore, they have more K A P of preventive behaviors regarding foot ulcer than males. Also, by nature, lots of patients at BMA Health Centers (all 68 centers) are housewives who have free time during the day to visit the health centers with low cost of medical services.

There was statistically significant association between marital status and practices of preventive behaviors regarding foot ulcer ($p < 0.05$). In the married and widowed subjects, high level of practices was 29.5% and 22.5%, and low level of practices was 40.5% and 26.5% respectively, while in single and divorced subjects, high level of practices was only 15.8% and 13.3%, and low level of practices 57.9% and 53.3% respectively. This result indicated that subjects with family had higher level of practices of preventive behaviors regarding foot ulcer than without family.

The findings of study showed that occupation had statistically significant association with attitudes of preventive behaviors regarding foot ulcer ($p < 0.05$). Out of 300 subjects, housekeeper was 183, own small business 26, agricultural worker 19, and general labor 38. In the group of housekeeper and own small business, high level of attitudes was 26.7% and 23.1%, and low level of attitudes was 21.9% and 11.5% respectively. While in the group agricultural worker and general labor, high level of attitudes was 21.1% and 15.8%, and low level of attitudes was 52.6% and 36.8% respectively. That is, those who owned small business and those housekeepers had more good attitudes level than agricultural worker and general labor.

The association between monthly household income and practices of preventive behaviors regarding foot ulcer showed statistically a strong significance ($p < 0.001$). In the group with monthly household income less than 10,001 Baht had high practice level at 10.5%, in the group of 10,001-30,000 Baht were 25.5%, and in the group of

more than 30,000 were 52.7%. While in the group of monthly household income less than 10,001 Baht had low practice level at 56.6%, in the group of 10,001-30,000 Baht were 40.8%, and in the group more than 30,000 Baht were only 14.6%. **In other words, the less earners had low practice while the higher earners had high practice level of preventive behaviors regarding foot ulcer.** But there were no significant associations between monthly household income and knowledge AND between monthly household income and attitude of preventive behaviors regarding foot ulcer.

This study also found a strong significant association between monthly household expenditure and practices of preventive behaviors regarding foot ulcer ($p < 0.001$), and it was similar to the association between monthly household income and practices of preventive behaviors regarding foot ulcer in term of bracket. The less paid had low level while the higher paid had high practice level of preventive behaviors regarding foot ulcers. However, there were no differences between monthly household expenditure and knowledge, and monthly household expenditure and attitude of preventive behaviors regarding foot ulcer.

Family history of DM showed significant association with attitudes of preventive behaviors regarding foot ulcer ($p < 0.05$), and those who had high level of attitudes in respondents with family history of DM were 26.5%, those in low level were 19.6%. On the other hand, those without family history had high level of attitudes were 21.7% and those in low level attitudes were 34.0%. This says that in respondents with family history of DM, attitude level was higher than ones without. There was also strong significant association between family history of DM and practices of preventive behaviors regarding foot ulcer in the subjects ($p < 0.001$). In the

respondents with family history of DM, the high level of practice was 38.6% and low level was 30.0%. On the other hand, in those without family history of DM, high level of practices was 14.3% and low level of practices was 50.3%. This says that the respondents with family history of DM had higher level of attitudes than without family history of DM.

In this study there was no statistically significant association between history of foot ulcer and practices of preventive behaviors regarding foot ulcer (p-value 0.109). In the subjects with history of foot ulcer, high level of practices was 32.6% and low level of practices was 36.3%, while in ones without history of foot ulcer, high level of practices was 21.8% and low level of practices was 43.0%.

However, the subjects with history of foot ulcer were likely to have good practice level of preventive behaviors regarding foot ulcer than ones without history of foot ulcer, although there was no significant association. This study result might depend on the fact that people have good practice but they may start too late. Therefore, if that is the case, then proactive intervention should be done right after the diagnosis. For instance, it may be necessary to go out and find DM patients to achieve early detection and prompt intervention for foot care practice.

In this study, the attitude of preventive behaviors regarding foot ulcer had significant association with the knowledge of preventive behaviors regarding foot ulcer ($p < 0.05$). In the subjects with high level of knowledge, high level of attitudes was 19.2% and low level of attitudes was 17.0%, while in the subjects with low level of knowledge the high attitude was 19.0% and the low attitude was 38.1% respectively. Other study had also documented that patients who received foot education and their feet examined were significantly more likely to regularly check

their feet (De Berardis et al., 2004). This report is also in agreement with what Jommett (1992) stated that “the increase of knowledge about AIDS and change of attitudes towards sex behavior have salutary effects”.

There was no statistically significance between knowledge and practices of preventive behaviors regarding foot ulcer (p-value 0.487). Respondents with high knowledge had high level of practices for 23.4% and low level of practices for 36.2%, while ones with low knowledge had high practice for 23.8% and low practice for 38.1% respectively. This result is contrary to findings of study in Korea in which significant association was found in the foot care practice activities according to educational levels (Koh & Song, 2006). In fact, according to the learning gained from this study outcome, there must be something in this complete cycle, which is an awareness linking KAP together. It is expected that if patients are aware of how important of self-care for foot ulcer is in the way that it can impact themselves and their health, there might be an impact on their practice of preventive behaviors regarding foot ulcer. This missing link among KAP shows us that in clinical practices, giving only knowledge/education to patients might not be enough, as awareness seems to play a key role from this study result. This complete cycle of knowledge → attitudes → awareness → practice should be taken into consideration. If this complete cycle can be achieved, then next step of clinical practice is to see if patients' practice is good enough or not good enough, which might due to the lack of skills in their practice of preventive behaviors regarding foot ulcer.

There was also statistically significance association between attitudes and practices of preventive behaviors regarding foot ulcer (p<0.05). In the subjects with high level of attitudes, high level of practices was 27.4% and low level of practices

was 31.5%. On the other hand, in the subjects with low level of attitudes, they had high level of practices at 16.3% and low level of practices at 50.0%. That is to say, practice level of preventive behaviors regarding foot ulcer decreased according to low attitudes of preventive behaviors regarding foot ulcer. This result is consistent with the findings of the study in Vietnam in which a significant association was found between attitude and practice on Dengue Fever (Quan, 2001).

5.2 Conclusions

From the findings, it can be summarized with an implication for future research as follows:

1. **Female** samples had better attitudes and better self-care for foot ulcers than male ones as they have more time to visit BMA health centers during day time since they are **housekeepers**. When compared to other occupation ie agricultural workers and general labors, these housekeepers had better attitudes level of preventive behaviors regarding foot ulcers than the other groups. **Married** people had higher practice of preventive behaviors regarding foot ulcers than those non-married. In regards to household income and household expenditure, the **less earners had lower** practice while the **higher earners had higher** practice level of preventive behaviors regarding foot ulcer when compared. Therefore, future study on **males in low income earners bracket working as general labors in the area who have their family** may be emphasized to see how can they increase their practice of preventive behaviors regarding foot ulcers.

2. The samples with **family history of DM** had better attitude level than the ones without. The subjects with **self-history of foot ulcer** were likely to have good

practice level of preventive behaviors regarding foot ulcer than ones without, although there was no significant association. This study result might reveal the fact that people may have good practice but they **may start too late**. Therefore, if that is the case, then **proactive intervention** should be done right after the diagnosis. For instance, it may be necessary to go out and find DM patients to achieve early detection and prompt intervention for foot care practice.

3. There was no statistically significance between **knowledge and practices** of preventive behaviors regarding foot ulcer (**p-value 0.487**). In fact, according to the learning gained from this study outcome, there must be something in-between to complete this cycle, which is an **awareness linking KAP** together. It is expected that if patients are aware of how important the self-care for foot ulcer is towards themselves and their health, there might be an impact on their practice of preventive behaviors regarding foot ulcer. This missing link among KAP shows us that in clinical practices, giving only knowledge/education to patients about self-care might not be enough, as an awareness seems to play a key role from this study result. This complete cycle of **knowledge → attitudes → awareness → practice** should then be taken into consideration. If this complete cycle can be achieved, then next step of clinical practice is to see **if patients' practice is good enough** or not since they might lack the required skills in their practice of preventive behaviors regarding foot ulcers.

5.3 Recommendations

5.3.1 Recommendation in academic terms:

1. It is expected that with training on KAP and awareness-building by BMA health personnel to the patients, as a complete cycle of health prevention/promotion campaign, the level of practice of preventive behaviors regarding foot ulcer may be positively impacted. Information-education-communication (IEC) strategy may serve as a bridge between patients and health service providers. The principle of learning should be employed, active participation and attitudes theory (on self-esteem) and principles of interpersonal communication can not at all be neglected.

2. An awareness for concerned stakeholders to care for health in order to promote life well-being which will lead to higher productivity of Thai population, national economic growth, and happiness of the Thai people, should also be motivated.

3. Future research should also be conducted at some other BMA Health Centers or even all 68 branches of them in order to gain the overall complete picture of such particular diabetes mellitus in their responding population, and future research should be conducted in other types of self-care for diabetes type II OPD patients as well.

4. As well, the result of this study showed that 73.3% of the samples were female , thus there might be **sampling selection bias in gender** which should be avoided in future research so as to get a different perspective from the present one.

5.3.2 Recommendation in operational terms:

In line with Primary Health Care for health prevention and promotion, an implementation for effective self-care program can encourage community participation by taking into account area-based problem, ranging from local characteristics, local felt needs, local cultures, local history and background, and local resources, in order to achieve Health For All National Goals for time to come. It is important to enhance people vision of health prevention and promotion, involved costs and benefits, in order to promote the practice of self-care at home.

The Thai government should promote health and life well-being so as to save not only cost in medical treatment for these diseases but also to gain good productive and quality citizens of the nation.