

# SELF AWARENESS OF BLOOD SUGAR CONTROL FOR THAI COMMUNITY DM. AT PREMRUTHAI PRAVATE COMMUNITY BANGKOK

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## ABSTRACT

**Aims:** To change the ability of self-efficacy, self regulation and self-care health behavior about eating health behavior for prevention and control of diabetes complication. with. Self Awareness of Blood sugar control.

**Methods:** The sample of subjects at risk and patients with diabetes and high blood pressure. A total of 28 people from the Premruthi community 20 at Pravate Bangkok. Most are female have lower education. Entitled to healthcare Gold in Bangkok. The Vulnerable groups and groups with diabetes and high blood pressure 51.3 percent. Accounted for 10.6 per cent of the risk factors is important. Obese / BMI was 24.7 percent higher risk behavior is eating spicy food (sweet, sour, salty) 40.7 percent. Lack of exercise, stress, 12.7 percent to 28 percent, Genetic risk is 23.3 percent and 12.7 percent were smokers. By the method of participatory learning with Self Awareness of Blood sugar control.

**Research design** 4 times meeting each time consisted of 4 steps (planning, action, observe and reflect). The main activities in health education Self Awareness of Blood sugar control.

**Program behavior** were motivate compliance by ice breaker to know each other providing practical learning, Take feedback from each pair/group accepting all suggestions. Learning by doing .You Are What You Eat. Care and share about experience and information, empowerment, story telling, two-way communication, reflective thinking, team-based learning, , active learning in the prevention and control of diabetes complication among participants in group.

**Results:** Most members were satisfied with the high level of 97.3 per cent suggested in the project next time. After receiving behavior modification ago have efficacy in their health behavior self-regulation and self-care in eating behaviors better than before the event: 92.3 percent, 90.0 and 96.6 of the participants, respectively. It is a change in a better direction.

**Conclusion:** This research focused on the development of activities that encourage participants have the skills and knowledge through practical action. Make sustainable approach is organized in accordance with activities that blend into community everyday life. Obtaining social support to encourage volunteerism, some extra incentive to participate. These factors resulting trust and cooperation from members and communities of practice to f

**Keywords-** with Self Awareness of Blood sugar control, participatory action research, Health education

## INTRODUCTION

Diabetes is one of the largest global health emergencies of the 21<sup>st</sup> century. Each year more and more people live with this condition, which can result in life-changing complications. In addition to the 415 million adults who are estimated to currently have diabetes, there are 318 million adults with impaired glucose tolerance, which puts them at high risk of developing the disease in the future death<sup>1</sup>. Of complications to the eyes, kidneys, nervous system, heart and stroke.

In Thailand are facing diabetes Data from the Bureau of Policy and Strategy Ministry of Public Health Meet people died from diabetes in the year 2009, about 7,019 people, or about 19 people per day, and a survey of the health status of people aged 15 years and over Thailand 2<sup>nd</sup> Year 1996-1997 compared to the three years from 2546 to 2547, prevalence increased from 4.4 percent to 6.9 percent for the fourth time as last time. Year 2551-2552 Found the same prevalence of diabetes is 6.9 percent. And a survey of the health status of Thailand found that one in three times, four of those with diabetes do not know they have diabetes before. For those who have been diagnosed by a physician as diabetes, 3.3 percent were not treated. And those who were treated with only 28.5 percent of the control of blood sugar levels in the less than 126 milligrams per deciliter had<sup>2</sup>. So for those who are at risk from diabetes and asymptomatic. Reducing risk factors and treatment of early stage as well as encouraging people with diabetes to take care of themselves properly, so it is a measure that will reduce and slow down the disease and the effects. Diabetes is caused by several common factors that can be prevented complications by behavior modification, eating diminish the fat diet and exercise can prevent cardiovascular disease in diabetes mellitus e<sup>13</sup>. By helping vulnerable groups and people with diabetes understand and realize the threat of disease. Knowing the causes of disease know the early warning signs of diabetes. Knowing how to prevent delay diabetes. Learn self-care on diabetes control and prevent complications that arise as a consequence. The objective of nutritional therapy is to help people with diabetes learn how to make appropriate lifestyle choices. Once made, these can help people with diabetes achieve optimum metabolic control and prevent diabetes complications. These choices include: changes to eating patterns, changes in activity patterns. Health professionals need to apply their knowledge of nutrition and medical and behavioural science to successfully counsel people with diabetes. Food choice, methods of preparation, portion sizes, meal timing, physical activity, inter-current illness - such as coeliac disease, delayed gastric emptying - all affect the diabetes treatment plan and play a role in achieving optimal diabetes outcomes<sup>18</sup>

The Da Qing study in China followed people for 6 years. Subjects were randomized to three groups: Diet intervention, exercise intervention, combined diet and exercise. After 6 years, the 'diet' group showed a risk reduction of 31%. The 'exercise' group showed a greater risk reduction (46%). There was no additive effect of diet and exercise, with the 'diet and exercise' group showing a similar risk reduction (41%) to that of the 'exercise' group alone. In the Finnish study, 522 subjects with impaired glucose tolerance (IGT) were randomized to a control group or a group who had a diet and exercise intervention. They were followed for 3.2 years. There was a 58% reduction in the incidence of type 2 diabetes in the 'diet and exercise' group<sup>3</sup>. Finnish Diabetes Prevention Study (Finland) 2001 522 persons, 40-64 years BMI >25 Random selection by persons 3.2 years follow-up Diet + exercise 58% decreased incidence in the 'diet + exercise' group<sup>4</sup>. Diabetes Prevention Programme (USA) 2002 3234 persons =>25 years, BMI =>22 (Asian people), =>24 (other groups), random selection 2.8 years follow-up 3234 persons =>25 years, BMI =>22 (Asian people), =>24 (other groups), random selection 2.8 years follow-up 31% decreased incidence of diabetes in the metformin group 58% decreased incidence in the 'diet + exercise' group. The Diabetes Prevention Program also studied people with

impaired glucose tolerance (IGT). In this study, people were randomized to one of three groups: Placebo Metformin Diet and exercise.<sup>5,6</sup> The main principles of nutrition therapy are:<sup>18, 1920</sup>

- To provide energy and nutrients for health, growth and development
- To preserve people's social and psychological well-being
- To reduce the symptoms of diabetes, i.e. to achieve and maintain target blood glucose values and prevent hypoglycaemia and hyperglycaemia
- To attain and sustain 'acceptable' body weight – no longer referred to as ideal body weight. This refers to a weight which is reasonable and achievable in the short term and can be maintained in the long term. This should be acceptable to both the person with diabetes and the healthcare professional.
- Organize the participants into pairs or small groups and ask them to brainstorm the question.

**Summary** Theoretical information alone cannot bring about the changes necessary for people with diabetes to look after their own health. Education providing practical learning opportunities will help to make the theory come alive. Through these practical experiences the person's motivation to change is stimulated and behavioural change strategies can be developed. Improvements in lifestyle skills, self-care strategies and decision-making abilities are the outcome of such changes. Given the socio-economic, cultural, educational and linguistic diversity of people with diabetes and differences in the quality of medical care available, it is clear that one single approach cannot work in all practices, let alone in all countries.

- We know that living with diabetes is not easy; people with diabetes must assimilate a great deal of information and complete a series of daily tasks in order to effectively self-manage their condition. Before deciding what form of dietary intervention to make, a full evaluation of the past and present circumstances of the person with diabetes is necessary. Such an evaluation should take account of the following issues: The person's previous experience of diabetes: any prior diabetes education their knowledge and self-care skills Their current situation: self-management practices (nutrition and treatment plans) Any relevant objectives associated with the care of their diabetes: clinical goals (target blood glucose and lipids) nutritional goals Lifestyle factors: levels of physical activity The great variety of education methods available to people with diabetes around the world is a result of cultural and ethnic diversity as well as differences in access to care and resources in different countries. Ask participants to discuss food options available in their region It is important for the healthcare provider to evaluate personal outcomes, e.g. HbA<sub>1c</sub> levels, lipid levels, quality of life, etc. Diabetes nutrition therapy aims to When ordering a meal, choose foods which are steamed, broiled, baked, roasted, poached, lightly sauteed or stir-fried.
- Look for foods which are cooked in a healthy way. Ask for sauces and dressing to be served on the side. Organize participants into groups and ask them to consider the factors that are relevant to preparing an individual dietary plan.
- Encourage participants to brainstorm their ideas before going through this list as a whole group: Clinical information and nutritional status Health status – physical and mental Dietary intake and food availability Lifestyle (including work, leisure, daily routine and physical activity) Ethnic/cultural/social/economic background Social importance of food Learning capabilities
- This needs to be taken into consideration when providing eating health behavior the first step is to educate in order to facilitate informed decision making. Although many people with type 2 diabetes do not view their condition as serious, it needs to be acknowledged and understood that

complications occur with all types of diabetes. Diabetes is largely managed by the person with the condition on a day-to-day basis. Thus, caring for diabetes is a personal responsibility.

We can think of education as the body of information, skills and technologies that a person with diabetes needs to learn. As discussed in the teaching and learning module, how they learn will have an impact on whether or not behavioural changes follow. In this module we will discuss how to help people take the steps to behavioural change once they have the necessary knowledge.

However, by a skilled multidisciplinary healthcare team in diabetes education, 'teaching and practicing can be perceived as offering people with diabetes the opportunity to learn.

A person cannot be forced to learn something; effective teaching creates an interest in a subject so that students will want to grasp the opportunity to learn. There are many risk factors for type 2 diabetes. Some are preventable and a great deal of work has been done to try to develop programmes to prevent diabetes. To maintain good health habits as a way of life of each individual, consisted as the follow<sup>12</sup>:

1. Positive reinforcement
2. Result based management
3. Optimism
4. Motivation
5. Individual or client center
6. Self- esteems

The efficacy of a behavioral change, therefore, the implementation of the project was to maintain good health habits as a way of life of each individual promote learning how to prevent diabetes complications.

Thus Self Awareness Of Blood sugar controll For Thai County DM . at Premruthai Pravate Community Bangkok This results in reducing complication, morbidity and mortality rates from diabetes complications, and maintain good health habits as a way of life of each individual promote learning how to prevent diabetes complications in Premruthai Pravate Community Bangkok

## **OBJECTIVES**

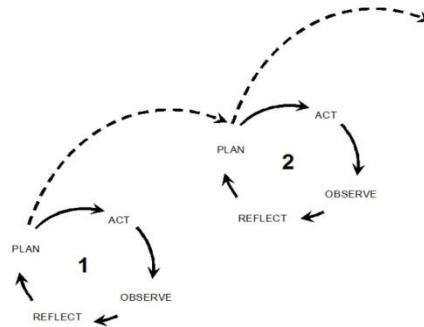
The members who attended this program is maintain good health habits eating as a way of life of each individual promote learning to prevent diabetes complications.

## **RESEARCH DESIGN AND SAMPLES**

The research design by using Participatory Action Research (PRA) with 28 purposive sampling at Premruthai Pravate Community Bangkok, who at risk for diabetes or high blood pressure. They enroll in the participatory activity with Self Awareness Of Blood sugar controll during January 2013 -July 2013, for creating 3 S (self awareness, self regulation and self care) as in the step figure 2.

**Figure 1**

Shows a spin around the operating part for prevention and control of Diabetic complication



## Methodology

The duration of the operation in January 6, 2558 - July 31, 2558. By the method of participatory learning with Self Awareness Of Blood sugar controll program. Research design 4 times meeting each time consisted of 4 steps (planning, action, observe and reflect. The main activities in Self Awareness Of Blood sugar controll program behavior were motivate compliance by ice breaker to know each other, teaching and practicing, care and share about experience and information,empowerment,story telling,two-way communication,reflective thinking, ,active learning about Self Awareness Of Blood sugar controll among participants in group. The plan of activities for promoting health and behavioral modification in each time were in the following

### **1.1 The first meeting activity**

- Icebreaker
- Initial health assessment activities.Take blood sample from the patient for DTX testing.After that let the participants eat food which by team of researcher :boil ricewith pork,condiments(fish sauce,sugar,pepper,vinegar withbchilee) The participants can eat any of these in moduration.After two hours ,draw blood sample oneand do another DTX test.Compare the results of the first and the second test.Let the participants know the results of the first and the second test.Interpretationthe result to the participants ,explain the effect of the food he /she has taken to the body and then give somr helpful advice about balance diet in order tocontrol the level blood-sugar content in our body.

- Group discussion, participation in solving problems of the participants.

### **1.2 The second meeting activity**

- Icebreaker
- To Improve understanding of health behavior modification
- Training activities to educate about eating health behavior .
- Group discussion participation in solving problems of the participants, empowerment .

### **1.3 The third meeting activity**

- Icebreaker
- Promoting knowledge to use in eating group practice
- Evaluation activities individually by test phone and home visits by nurse.
- Group discussion participation in solving problems of the participants, empowerment of th **Self**

## **regulation and Self Blodd sugar**

### **1.4 The fouth meeting activity**

- Icebreaker

- Assessment activity after participating and posttest.
  - Summary of the activities and the benefits of participating.
  - Group discussion and observation participation in solving problems of the participants, demonstration, practicing and the empowerment of the self to the self-regulatory. , Awards and souvenirs.
  - Evaluate program
  - Closed the program

### **ETHICS**

The research takes into account the right of the sample. The objectives of the research process, research. And a period of research The clarification of the right to accept or refuse to participate in this research. Without affecting in any way the lesson. In addition, during the research If the samples do not wish to participate in the research completed on schedule. Can be terminated Without affecting the learning of information obtained from this research are confidential. Presentation of data will be presented in an overview. There is no disclosure of the name and surname When samples are willing participants. The research sample Sign a consent form to participate in the study (informed consent form).

### **RESULTS**

From the risk group with diabetes and high blood pressure 51.3 percent. Accounted for 10.6 per cent of the risk factors is important. Obese / BMI was 24.7 percent higher risk behavior is eating spicy food (sweet, sour, salty) 40.7 percent. Lack of exercise, stress, 12.7 percent to 28 percent, Genetic risk is 23.3 percent and 12.7 percent were smokers. The results showed that after receiving Thus Self Awareness Of Blood sugar controll program on have efficacy in their eating health behavior (Self-regulation and Self-controll), better than before the event: 92.3 percent, 90.0 and 96.6 of the participants , respectively. It is a change in a better direction. And blood pressure drop 86 percent to 36 percent weight loss and BMI decrease of 20.7 percent. That health status has changed to the better . Most members were satisfied with the high level of 97.3 per cent

The behavior change after Self Awareness Of Blood sugar controll were changed as following.

1. That the efficacy of behavioral change their health than before, increasing participation of 26 people, representing 92.8 percent of the total.
2. Directing the behavior of people at increased over the first 25 participants, representing 89.2 percent of the total.
3. Has the self-care behaviors. The increase over the first 26 people to attend the event 92.8 percent of the total.

### **Satisfaction of the Program**

The satisfaction of participants in this program at the high level of 89.2 percent.

### **Data Analysis from Qualitative Data**

By analyze qualitative data about Self Awareness Of Blood sugar controll in the prevention and control of diabetes complication on a daily basis that involves behavior modification& health promotion. The study concluded by telling the members about controlling diabetes complication risk by teaching and practicing you are what you eat The result concluded that most control blood sugar,

**Table 1**  
**Numbers and percentages of the sample (n = 28 patients)**

<b>Data</b>	<b>n</b>	<b>%</b>		<b>Data</b>	<b>n</b>	<b>%</b>
<b>Age (yrs)</b>				<b>Sex</b>		
40-49	8	28.6		Female	20	71.4
50-59	8	28.6		Male	8	28.6
>60	12	42.8		<b>Satisfaction of Program</b>		
<b>Education</b>				Moderate	3	10.7
High school, Vocational	15	53.6		High	25	89.2
Bachelor.	13	46.4				
<b>Right of Medical Care</b>						
Gold Card	12	42.8				
Social Security	14	50.0				
Government	2	7.2				
<b>Data</b>	<b>n</b>	<b>%</b>				
<b>The risk for diseases (more than one risk)</b>						
Diabetes Mellitus	25	89.2				
Hypertension	15	53.0				
Cerebovascular	8	28.5				
Obesity	20	71.4				
<b>Sample with disease</b>						
Diabetes Mellitus	20	71.4				
Hypertension	14	50.0				
Cerebovascular	8	12.5				
Obesity	8	28.6				

**Table 2**  
**Blood sugar of participants at baseline and after 3 month participation in the Self Awareness of Blood sugar controll**

<b>Variables</b>	<b>n</b>	<b>Mean</b>	<b>SD</b>	<b>t-value</b>	<b>p-value</b>
DTX at 3 month	38	110.66	45.615	-1.759	0.047*
DTX at baseline	38	120.58	31.249		

\*Difference is significant at the 0.05 level (p < 0.05)

After 3 months of applying the Self Awareness Of Blood sugar controll, the participants showed significantly decreased blood sugar (DTX) from the baseline (p < 0.05), as noted in Table 2.

It was concluded that the Self Awareness Of Blood sugar controll could enable participants to control their blood sugar.

## DISCUSSION

The result from this research shows that the biodata of samples mostly 71.4 % is female and 28.6 is male. This results is according to the study of Intharakamhang, A. et.al (2010)<sup>5</sup> “ Study of Administration and Evaluation to Health Adaptation of Health Center in Bangkok 21 projects in 2009 found that DM person is female 67.68% and male is 32.32 % compare with World population (2015) DM person is female 199.5 million and male is 215.2 million, contrast with this study and finding of Intharakamhang, A. et.al study<sup>8</sup>. It may be the different from race context in many areas include economic, life style, nutrition, exercise, sleep and rest, working.

The sampling s BMI decreased 50% , BP decreased 85.7% .. This results is according to the study of Intharakamhang, A. et.al (2010)<sup>8</sup> “ Study of administration and evaluation to The health adaptation of Health Center in Bangkok 21 projects in 2009 found that participation group decrease BMI 65.36% , BP 61.45% , BS (DTX) 59.49% , mean that they can modified behavior must good self awareness so they can got self regulation at last they can self management to prevent complication both acute and chronic complication mean that they got self efficacy.

. This results is also according to the study of Sumnuk, N. “Study of effective program modification behavior people health risk group to hypertension in community, Pakpanung district, Nakornsri thamaraj” and Boonsri Kittichottipanich et.al<sup>17</sup> (2013) The Nutritional Health Behavior Modification for Controlling Hypertension at Ruampattana Community Bangkok found that participation got more knowledge, activities, exercises, means of self management behavior about eating exercise increase after the study significant. The satisfaction of participants in this program at the high level of 89.2 percent . Robert Scales, PhD\* and Joseph H. Miller, MSW<sup>10</sup> Motivational Techniques for Improving Compliance with an Exercise Program: Skills for Primary Care Clinicians Found that it is one of several useful approaches that can be used by a primary care clinician to improve patient compliance.

Thus in this program, the most participant increase knowledge&self regulation behavior. That is the one guideline for controlling and prevention diabetes complication.

## CONCLUSION AND RECOMMENDATIONS

This research using participatory action research make sustainable approach is organized in accordance with activities that blend into everyday life. Obtaining family friend and social support to encourage remind control and avoid participant for you are what you eat, some extra incentive to participate. These factors resulting trust and cooperation from members and communities of healthy community to promotion and modification health behaviors which focused on the development of activities that encourage participants have the skills and knowledge through practical action.



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