

**PREVENTION OF TYPE 2 DIABETES FOR HIGH RISK GROUP
TAMBOL RAILUGTHONG PHANAT NIKHOM DISTRICT
CHON BURI PROVINCE, THAILAND**

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**A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Public Health
Health System Development Programme**

College of Public Health

Chulalongkorn University

Academic Year 2002

ISBN : 974-9599-01-2

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Bangkok, Thailand

I29099431


Thesis Title : Prevention of Type 2 diabetes for High Risk Group in Tambol
Railugthong Phanat Nikhom District Chon Buri
Province,Thailand

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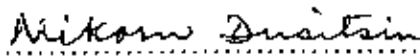
Program : Master of Public Health (Health systems Development)
College of Public Health

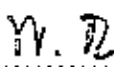
Thesis Advisor : Wacharin Tanyanont, M.S.

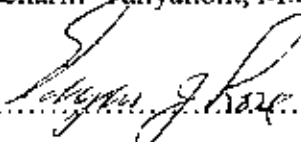
Accepted by the College of Public Health, Chulalongkorn University, Bangkok
Thailand in Partial Fulfillment of the Requirement for the Master's Degree

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ABSTRACT

Background

Type 2 diabetes increases its prevalence in persons who have sedentary lifestyle and obesity. It is a serious public health problem worldwide in spite of the fact that type 2 diabetes can be prevented by interventions that have affects on the lifestyle of high-risk persons. A healthy diet and exercise are the mainstays of controlling, which are most modifiable to prevent all risk factors for diabetes

Objective

The objectives of this project were to increase knowledge of diabetes among high-risk groups of people and to encourage high-risk group to have more exercises and diet control.

Methods

Railugthong Health Center, with the joint effort with Phanat Nikhom Hospital, commenced Type 2 Diabetes Prevention Program (T2DPP) in December 2001. The project was aimed to screen persons in the sub-district of Railugthong who aged above 40. Village public health volunteers were trained to use *Diabetes Risk Test* to screen people in community, 441 of which were found to have risk factors for diabetes (which include family history, obesity, a previous history of gestational diabetes, high blood pressure and blood lipid abnormality). A total of 221 persons were screened with blood testing on voluntary basis. Among these, 14 new diabetic cases were identified and

referred to Phanat Nikhom Hospital for treatments. Persons with normal blood test results (FBS <126 mg/dl) were encouraged to participate in Type 2 Diabetes Prevention Program (T2DPP). Of these, 49 persons voluntarily participated in the project (41 females and 8 males). They were trained to acquire knowledge about diabetes and its prevention, advantages of diet control and exercise. Participants had mutual commitment to attend workshops for demonstration of healthy food preparation once a month, have exercise activities every day from Monday to Friday for 5 consecutive months. The evaluation of the project efficiency was carried out using questionnaires to assess participant about their knowledge, perception about benefits and obstacles of the prevention, perception of their self-efficacy, behavior of food habits and exercise. The evaluation also carried out by taking body weight, calculating body mass index (BMI), taking blood pressure and testing for blood sugar, before participation in the project and at 3 months and 5 months thereafter.

Results

A paired t-test showed a significant difference between pre-test and post-test, pre-test and 3-month follow-up; on overall knowledge, and on knowledge about cause and prevention. There were significant on knowledge difference of biological diabetes and dietary between pre-test and 3-month follow-up but no significant were found between pre-test and post-test.

Significant difference was not found between the pre-test and post-test results of participants who rated themselves as "poor" to health status. While there was a significant increase in participants' between the pre-test and post-test on perceived risk

of developing diabetes, (from 73.5% to 91.8%) The participants had statistically significant increase in perceived barrier to prevent diabetes and perceived self-efficacy. At the time, however, reduction in mean perceived benefit of prevention was not significant.

At the end of 5 months, the participants had statistically significant reduction of systolic blood pressure, mean body weight for all participants, normal weight, and overweight groups (from $P < 0.05$ to $P < 0.001$), mean BMI (from 26.8 to 26.1), and the Fasting blood sugar mean decreased from 92.4 to 91.9 mg/dl. Upon completion of the project, none of participants were found to have developed diabetes. Participants were asked to respond about health related quality of life that they gained from participating in the project, in the dimensions of physical, mental, emotional, social and spiritual. The top 5 quality of life responded include pleasure and funs, being active and fresh, having chances to socialize with friends in the group, developing the belief that *exercise* could help preventing diabetes and developing the belief that *diet control* could help preventing diabetes .

Conclusion

Three strategies were used in this program. Firstly, the screening strategy to identify persons at risk of diabetes in the population who were over 40 years of age. Secondly, the referral strategy to refer patients for treatment was adopted. The third strategy used was health promotion strategy to change health behaviors in diet and exercise. The results indicate that the health promotion encouraging people at risks of diabetes to change their behaviors of food habits and exercises are able to improve participants' knowledge and their self-efficacy, and to reduce their risks to develop type 2 diabetes.

ACKNOWLEDGEMENTS

I would like to extend great appreciation to my advisor, Mrs. Wacharin Tanyanont, together and my co- advisor, Dr. Ratchanee Sunserm , who provided all the good advice, supports and comments for all the work. Thanks to Miss Benjaporn Rachataramya, Praboromrajchanok Institute, and Collage of Public Health and Sirinthorn -Chonburi for supporting funds.

Special thanks to Professor Edgar J. Love for guidance and shaping my concepts and intervention plan for this project and Mrs. Chanida Liangthorachon for continually stimulating and mental support.

And thanks to Dr. Singtho Weraarchakul, Dr. Bunthoeng Yaowattananukum, Dr. Narucon Vongjaturapat, Mr. Seri Jedsukontorn, Miss Rattana Samrongthong and Mr. Mana Sreechant for their consultations. Thanks to Mrs. Nimmuan Songkitrat, Mrs. Kunyarat Prechatanapoj, Mr. Prayud Wongsoontorn, Mrs. Jinjuta Pummarin, Mrs. Nigoon Pattasama and Miss Nonglug Bunya who contributed their times to provide knowledge to participants.

In addition, I would like to thank all staffs and health volunteers who lend helping hands. Special thanks to participants for their willingness to join the program and their practice that made participation of the program becomes the best.

Above all, thanks to my mother for mental support and taking care of me with love. Thanks to my son for support. He was the great friend to travel every where to collect data.

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ABBREVIATION

BMI	Body mass index
BP	Blood pressure
BW	Body weight
CHL	Cholesterol
Cm	Centimeter
FBS	Fasting blood sugar
HPM	health promotion model
Kg.	Kilogram
Type 2 diabetes	Non- insulin-dependent diabetes mellitus
T2DPP	Type 2 Diabetes in high risk group Prevention Program

