THE EFFECT OF GROUP PROCESS ON SELF CARE BEHAVIOR IN POORLY CONTROLLED BLOOD SUGAR LEVEL OF NON - INSULIN DEPENDENT DIABETES IN PATIU HOSPITAL

Thunyanunt Oupara

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 2001

ISBN : 974 - 03 - 0705 - 1

© College of Public Health ,Chulalongkorn University

Bangkok, Thailand

I.20693588 2 ; ม.ย. 2547

Thesis Title : The Effect of Group Process on Self Care Behavior in Poorly Controlled Blood Sugar Level of Non-Insulin Dependent Diabetes in Patiu Hospital

By : Thunyanunt Oupara

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

Thesis Advisor : Assistant Professor Sathirakorn Pongpanich, M.A., Ph.D.

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

....., Dean of the College of Public Health
(Samlee Plianbangchang, M.D., Dr.P.H.)

THESIS COMMITTEE

....., Chairman
(Assistant Professor Nuntavarn Vichit-Vadakan, MS., M.P.H., Dr. P.H.)

....., Thesis Advisor
Assistant Professor Sathirakorn Pongpanich, M.A., Ph.D.

....., Member
(Vatinee Sukmak, R.N., Ph.D.)

ต้นฉบับ หน้าขาดหาย

ABSTRACT

The purpose of this study was to evaluate the effectiveness of the health education program which used group process on self – care behavior in Non–Insulin Dependent Diabetes Millitus . This study utilized quasi–experimental research design. The sample was non- insulin dependent diabetes mellitus patients who attended Patiu Hospital during October 1999 to March 2000. The purposive sampling selected was divided into an experimental group and a control group. The experimental group comprised of 18 patients .The control group was 19 patients. The experimental group received the health education program which used group process 4 times in 2 months. The control group received the hospital's routine health education. The data was collected by interview questionnaire. Frequencies, percentages, mean, standard deviation, pair sample t – test and independent sample t - test were applied to analyze the data.

The results found that the experimental group gained a statistically higher level of knowledge and self- care behavior than did the control group. The fasting blood sugar levels has decrease after the end of the course of the program. Also, the experimental group had significantly lower fasting blood sugar level than did the control group.

These findings demonstrated that the health education program leads to improved self- care behavior and blood sugar levels. Therefore, the program should be applied to the other chronic disease patients.

ACKNOWLEDGEMENT

I would like to take this opportunity to acknowledge my sincere appreciation to the concerned persons who helped me in my thesis.

First, I would like to thank to Dr. Sathirakorn Pongpanich, my advisor Assistant Professor for his invaluable advice, excellent supervision and providing encouragement though the course of this study including suggestions.

I would also like to thank my co– advisor Dr. Vatinee Sukmak, who guided and helped me to checked the contents and to edit my English and make my learning meaningful. This thesis would not have emerged without her guidance and valuable advice.

Many thanks to my excellent Arjarn Direk Kanjanapat for his valuable help with my English. Also, I wish to thank MS. Panomvan sansuk and MS. Junya Daungkaew the Health Education Technical Official of Yasothon provincial Health office. Who help about data analysis .

In addition, I would like to thank to MR. Arkorm Moonsan Health Technical official of Patiu Health office, who helped with the computer, internet or E- mail through the course of this study.

Furthermore, I would like to thank to Dr. kiattikul Silaburt Director of Patiu Hospital in past, who advised, helped and supported me regarding papers, documents and books concerning my thesis through the course.

Last, I would like to extend my gratitude to Ms. Leanglug Sawangong ang Ms.Ratree Chojampee, co – researchers and DM patients who joined research; without their help , my thesis would not be completed .

Thunyanunt Oupara

CONTENTS

Page

Abstract iii

Acknowledgements iv

List of contents v

List of tables vii

List of figures ix

Abbreviation x

CHAPTER 1 Introduction 1

CHAPTER 2 Research description

2.1 Goals and objectives 10

2.2 Hypothesis 10

2.3 Research methodology

2.3.1 Research design 11

2.3.2 Sampling 13

2.3.3 Data collection methods 13

2.4 Data analysis and results 19

2.5 Limitations 34

CHAPTER 3 Evaluations

3.1 Introduction 35

3.2 Purpose 36

3.3 Evaluation questions 36

3.4 Evaluation design 37

3.5 Data collection methods 38

3.6 Data analysis and results 38

page

CHAPTER 4 Discussions and conclusions..... 44

CHAPTER 5 Recommendations..... 49

REFERANCEES..... 51

APPENDICES

Appendix 1 Definition of variable..... 53

Appendix 2 The questionnaire for collecting data..... 55

Appendix 3 The average score of DM knowledge and self- care behavior 65

Appendix 4 The result of evaluation of group activity..... 67

Appendix 5 Privilege protection and application form..... 68

Appendix 6 Health education program using group process

for self- care of DM patient..... 70

CURRICULUM VITAE 103

LIST OF TABLES

page

1 Personal data..... 20

2 Personal data (continued)..... 21

3 Number and percentage of sample according to DM knowledge level in experimental group and control group..... 22

4. Comparison between pre and post test knowledge in experimental and control group by pair t- test 23

5. Comparison between experimental and control group knowledge by using an independent t- test..... 23

6. The number and percentage of sample according to Self – care behavior level before and after experiment in experimental and control group 25

7. Comparison of self – care behavior in experimental group and control group, before and after experiment by using pair t-test..... 26

8. Comparison of self – care behavior between the experimental and control group, before and after experiment by using independent t-test 26

9. Comparison of knowledge about food control, exercise, drug taking and self- health care between the experimental and control group before and after experiment by using independent t-test 27

10. Comparison of self- care behavior about food control, exercise, drug taking and self- health care between the experimental and control group before and after experiment by using independent t-test 29

Page

11. The number and percentage of sample according to FBS level before and after experiment in experimental group and control group..... 31
12. Comparison FBS in experimental group and control group, before and after experiment by using pair t- test..... 32
13. Comparison of group FBS level between experimental group and control group, before and after experiment by using independent sample t-test..... 33
14. The average score of DM knowledge analyzed according to factor scores..... 65
15. The average score of DM self-care behavior analyzed according to factor scores 66
16. Health education program by using group process..... 73

LIST OF FIGURES

page

1. Ratio of DM patient in Yasothon..... 4
2. The number of NIDDM in Patiou Hospital..... 5
3. Percentage of poorly controlled BS..... 5
4. The steps and model of health education at DM clinic..... 7
5. Conceptual framework..... 9
6. Experimentation..... 12
7. The steps of data collection..... 18
8. Evaluation design..... 37

ABBREVIATION

DM	- Diabetes Mellitus
IDDM	- Insulin Dependent Diabetes Mellitus
NIDDM	- Non Insulin Dependent Diabetes Mellitus
FBS	- Fasting blood sugar
BS	- Blood sugar
BP	-Blood pressure
BW	- Body weight
HE	- Health education