Enhancing Self-care Ability and Quality of Life among Rural-dwelling Thai Elders with Type 2 Diabetes through a Self-help Group: A Participatory Action Research Approach

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Abstract

The purposes of this study were to investigate the impact of self-help group participation on enhancing self-care ability and quality of life, as well as to explore perceptions about experiences of group participation among rural-dwelling Thai elders with type-2 diabetes. Participatory Action Research (PAR) with an integration of both qualitative and quantitative approaches was designed for the study. Critical social theory was used as a guiding framework to emancipate the rural elders with type-2 diabetes from disadvantaged conditions for a better life. Twenty participants were purposively recruited from rural elders with type-2 diabetes living at a rural village of Ayutthaya Province to participate in the self-help group meetings offered twice a month for six months. Quantitative data assessing the participant's self-efficacy, quality of life, and blood sugar level were analyzed by paired-samples *t* test. Qualitative data from focus group discussion and observation were analyzed by content analysis. The results revealed that after 6-month group participation, participants reported significantly increased self-efficacy and quality of life while their fasting blood sugar level significantly decreased. In addition, they perceived benefits of group participation in enhancing their self-care ability and quality of life. Culturally-sensitive knowledge and a sense of empowerment that individuals received from the group increased their self-control and power for better managing the disease. A sense of self-efficacy fostered them to have competition and conforming to others for improved self-care. The recommendation is that the self-help group as a form of mutual aid that could offer great benefits to rural elders with type 2 diabetes should be implemented in community health sectors.

Keywords: Self-care, Quality of Life, Rural Elder, Type 2 Diabetes, Self-help Group

Introduction

Type 2 diabetes is a national health problem in Thailand, its prevalence increasing each year. From the survey in 2000, the number of Thai elders with type 2 diabetes is 2.4 million and will be nearly double by 2030 (WHO, 2006). Type 2 diabetes is one of the top three causes of early mortality among Thai elders (Chuprapawun, 2000), and the cause of death is its complications. Complications of type 2 diabetes that caused from high blood glucose impact

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on health and quality of life among elders. The chronic, disabling, and demanding nature of type 2 diabetes requires that elders perform intensive self-care,i.e. maintaining body weight and diabetes diet, to control their blood glucose, prevent or delay complications, and maintain their well-being and independence over the long-term.

Rural-dwelling Thai elders with type 2 diabetes, the focal group of interest in this study; faced many barriers in self-care including low education, poverty, lack of family support, and limited access to health and continuing care services that put them at great risk for poor health and quality of life. With respect to the objectives of the 2nd National Plan for Older Persons (2002-2021) that promotes self-care and quality of life by strengthening social participation among elders in communities (Jitapunkul & Chayovan, 2001; Thailand Health Profile, 2004); self-help groups as a form of mutual aid offer much benefit to elders with type 2 diabetes to improve their self-care ability and quality of life (Assuk, 2001; Lertprapai, 1996)

The existing empirical studies had limitations including its used of experimental methods and the lack of patients' perspective on improving health outcomes.

The lack of fit with cultural values, practices, beliefs, and unique life conditions between researchers and participants would contribute to a lack of program effectiveness in maintaining self-care ability and quality of life over the long term (Sringunyung, 2002). As such, participatory action research was used in this study to promote collaborative working between the researcher and participants to establish a self-help group. The knowledge derived from brainstorming among participants could fit with their life conditions and better improve their self-care ability and quality of life in the long run.

Purposes of the study

1. To investigate the impact of self-help group participation on enhancing self-care ability among rural-dwelling Thai elders with type 2 diabetes.
2. To investigate the impact of self-help group participation on enhancing quality of life among rural-dwelling Thai elders with type 2 diabetes.
3. To explore perceptions of rural-dwelling Thai elders with type 2 diabetes about their experiences of participating in a self-help group in relation to their self-care ability and quality of life.

Methods

The design of this study was a participatory action research with an integration of qualitative and quantitative approaches. The measured research outcomes are the diabetic self-efficacy, fasting blood sugar levels, quality of life, and the participants' perception about their experiences of participating in the self-help group affecting their self-care ability and quality of life.

Participants

The participants were selected from 54 diabetic patients receiving health services at a diabetic clinic of a community health center at a rural village in Ayutthaya Province, Thailand. They were male and female Thai elders diagnosed with controllable and uncontrollable type 2 diabetes. Inclusion criteria included: 1) participants age 60 and older, 2) they can able to hear and speak, and 3) they agree to participate in the self-help group meetings at least 10 out of 12 times (80%) of the meetings. Exclusion criteria were: 1) the participants who have severe complications such as heart diseases and the end state of renal failure and 2) the persons who jointed the group meeting less than 10 times.

Instruments

The research instruments used for collecting data were both qualitative and quantitative. The instruments for collecting qualitative data included the question guides for focus group discussion and observation guide. Instruments for collecting quantitative data include the personal information sheet, the WHO Quality of Life-BREF-Thai (WHOQOL-BREF-THAI), the Diabetes Self-efficacy Scale-Thai (DSES-THAI), and fasting blood sugar levels from a chart review of the community health center.

Data collection procedure

1. The researcher and participants had collaboratively worked in a 5-step participatory action research process of planning, acting, observing, reflecting, and revising the plan, for building the self-help group throughout six months of the study.

2. Group meetings had been arranged every two weeks for six months. Length of meetings, date, time, place, objectives, procedure, and activities of group meetings were defined by the participants and researcher.

3. The qualitative data had been collected every two weeks at group meetings for six months by focus group discussion and observation. At focus group discussion, the researcher had discussed with participants following to question guides to evaluate the patients' perceptions about their experiences of participating in the self-help affecting their self-care ability and quality of life including some changes about their self-care ability and quality of life.

4. The quantitative data were collected one month before establishing self-help group by using three sets of survey questionnaires of the personal information sheet, the WHOQOL-BREF-THAI, and the DSES-THAI. The personal information sheet was used to collect participants' personal information such as duration of their type 2 diabetes and methods of health service payment. The WHOQOL-BREF-THAI was used to evaluate levels of participants' perceptions related to their quality of life. The DSES-THAI was used to evaluate levels of participants' self-care ability. Fasting blood sugar levels from participants' booklet and a chart review at their diabetic clinic were also recorded to evaluate their self-care ability.

5. The quantitative data were repeated after the self-help group had established six months by using the survey questionnaires of the WHOQOL-BREF-THAI and the DSES-THAI. Participants' fasting blood sugar levels were accessed again, to compare with the prior results.

Data Analysis

1. Qualitative analysis

The gathered data from interview transcripts, field notes and memos were analyzed with content analysis. The researcher had read all of the transcripts, field notes and memos several times as a whole and then coded in terms of the meaning of each word. The various codes were compared based on differences and similarities and sorted into sub-categories and, then, the groups of similar or identical sub-categories were sorted into categories. The tentative categories were discussed in terms of the meaning. Finally, agreed upon categories were formulated into themes.

2. Quantitative analysis

The quantitative data were gathered from the personal information sheet, the WHOQOL-BREF-THAI and DSES questionnaires, and the fasting blood sugar levels from a chart review. Basic descriptive statistics, more specifically, these consisted of frequencies and percentages, were used to describe participant characteristics or socio-demographics. The survey instrument scores measuring the participants' quality of life, self-care ability and fasting blood sugar levels from a chart review were analyzed the changed scores that can be derived through the paired-samples *t* test to see if there are significant increases in dependent variables before and after participating in the self-help group.

Results

Socio-demographic characteristics of the participants

The numbers of participants comprised 20 persons with 3 males (15%) and 17 females (17%). More than half of the samples (65%) were aged between 60 and 69 years and only one person was aged 80 years. All participants were Buddhist and most of their education levels (95%) were at the primary level of formal schooling. Approximately half of the participants (55%) reported their work status as household work and half of them had average incomes of 2,000-4,000 baht per month. Nearly half of the participants lived with 2-3 family members. Most participants (45%) had developed type 2 diabetes 5-10 years and 70% of them had their blood glucose levels at 120 mg/dl and over. The community health center was the health service center the participants most often used (95%) and nearly half of the participants (45%) were taken to the health service center by their family members or neighbors. Most health service payments (75%) among the participants were made by an Old Age Card.

Effects of participation in the self-help group

Paired-sample *t* tests showed significant increases in diabetes self-efficacy and quality of life scores among the participants after participating in the self-help group while there were significantly decreased fasting blood sugar scores among the participants after participating in the self-help group.

Perceptions of Participation in the Self-help Group

Participants' perceptions about their experiences participating in the self-help group served as the mechanism by which better changes in their self-care barriers and further improvement of their diabetic self-care ability and quality of life occurred among participants. In terms of positive changes in self-care ability, the culturally-sensitive knowledge gained from sharing experiences among participants was likely to fit with each participant's life condition, and enhanced understanding, belief and acceptance among the participants. Social support from the mutual assistance of group peers had fostered more self-confidence and willpower among the participants in managing diabetes in their day-to day lives. A sense of empowerment received from participating in the self-help group had fostered more self-control and power among participants to have better changes in managing their diabetes. A sense of self-efficacy received from participating in the self-help group played a role in motivation and fostered competition and conformity among participants toward better changes in diabetic management.

Regarding positive changes in quality of life after participating in the self-help group, the participants perceived that their quality of life in terms of physical and psychological health, social relationships and environment was increased. Understanding knowledge and information received from the group enhanced with more access to knowledge and information they required in their day-to-day lives. Believing in knowledge and information helped participants have more self-satisfaction and felt life to be meaningful. Applying the knowledge gained from the group i.e. creating equipment for exercising at home made, them have more energy and better sleep, while fostering positive feelings. Having self-confidence in managing diabetes resulted from social support that led participants toward greater self-satisfaction, life enjoyment and opportunities to participate in community activities. Having willpower to manage diabetes derived from social support decreased negative feelings and brought about feelings of a meaningful life. Gaining self-control to manage diabetes derived from a sense of empowerment fostered greater ability to make decisions among the participants. Having power to manage diabetes in the group fostered greater ability to access health services, opportunities for leisure activities and management of home environment among the participants. A sense of self-efficacy received from the group increased self-confidence and satisfaction with life. Having competition in controlling blood sugar with others increased a sense of control. Conforming to group friends in doing self-care such as

exercising and controlling blood sugar increased self-confidence to better manage their diabetes.

Discussion

With regard to the findings of this study, the self-help group as a form of mutual aid falling under the auspice of participatory action research offered many benefits to the elders with type 2 diabetes, including improvement of self-care ability with greater capacity for type 2 diabetic managements and further bring about better quality of life. Since participants often lived alone because their adult children worked outside the home, the group provided a supplementary form of social support that helped participants deal with their diabetes through the provision of information, suggestions and transport encouragement.

Implications and recommendations

Enhancing self-care ability and quality of life through self-help groups may be appropriate for characteristics, community settings, cultural values and beliefs among elders with type 2 diabetes. Doing so may be due to long term effects contributing to research outcomes. Thus, the diabetes self-help group process should be implemented at community health centers. For nursing as a discipline, the findings of this study will be disseminated through scholarly publications to focus on helping elders improve their self-management of diabetes. The self-help group process should be developed for training advanced nurse practitioners. For further researches, researchers should fit the research project to the cultural and community contexts. Understanding the cultural context of rural-dwelling elders with type 2 diabetes in relation to cultural beliefs and values about health and living patterns among elders and family may give rise to greater established trust and develop strong working relationships with participants and local practitioners for advocacy of the self-help group.

Limitations

Since most participants (85%) consenting to participate in this study were females, the perceptions about positive changes in their self-care ability and quality of life are likely to be derived from female viewpoints. As already known, gender differences might affect participants' beliefs and experiences, and the ways they think and perceive. As such, the research findings in the section on participants' perceptions could be varied.

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