
PUBLIC HEALTH RESEARCH

Elderly Diabetic Patients' Perception on Family Support and Glucose Control

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ABSTRACT

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| Introduction | Elderly are often associated with multiple social and health problems. Family members are important in helping them doing their daily activities. For elderly diabetics, family support has a role in diabetes management and glucose control. The aim of this study is to explore the perceptions of elderly diabetics regarding the role of family support on their glucose control. |
| Methods | This qualitative technique was a part of the study on glucose control and its associated factors among elderly diabetics. It was conducted from February until May 2009 in Kulim. Ten respondents were purposively sampled based on their glucose control. HbA1c 6.5% or less was considered as good glucose control. In depth interview, using semi-structured interview guide was used in this study. The conversation had been taped, transcribed to verbatim and analyzed manually using thematic analysis. |
| Results | All ten respondents perceived that family support did not play a role on their glucose control. They believed that self-awareness and self-determination were important to control the glucose level. Those with good glucose control practiced healthy diet, and not affected by food prepared by their family members compared to those with poor glucose control. However, both groups claimed that, they did not receive much advice from their family members and no special food was prepared for them. |
| Conclusions | Elderly diabetics should be motivated on self-determination and focusing on good glucose control. Health education should be given to patients and their family members to increase their diabetes knowledge especially on useful advice and proper food preparation. It could motivate the elderly diabetics to control their glucose level. |
| Keywords | Family support - glucose control - elderly diabetics - qualitative. |

INTRODUCTION

Elderly are those who aged 60 years old and above, as agreed by the United Nations during assembly in Vienna, 1982¹. Globally, the proportion of elderly population is on the increasing trend. In 1950, elderly were 8.2% from the world population, increased to 10.0% in 2000 and is projected to 21.1% in 2050². Elderly are often associated with multiple social and health problems. They live alone, having hearing and visual problem, lack of physical abilities as well as having chronic diseases such as coronary heart disease, stroke, dementia, hypertension and diabetes mellitus^{3,4}.

Family institution plays an important role in the social support of the elderly⁵. The main support usually comes from the spouse, children and other family members, whom can provide the emotional, physical and information support⁶. Emotional support includes having loved and affection, sharing problems and somebody who care for the elderly. They are able to share their personal problems with their spouse or children. They need somebody to talk to, and this may solve or minimize the problems. To help them in daily activities, especially for the elderly men, their wives help them in preparing and cooking food, doing the housekeeping and taking care when they are sick. The children could also help in the financial support especially for the elderly without regular income. Even though there is migration from rural to urban, family institutions are still the main social support. Therefore, the current family systems and the relationship between parents and children should be strengthened⁶.

For elderly diabetics, family support has a role in diabetes management. It includes food and drug preparations, blood glucose monitoring and transportation to the clinics^{7,8}. Study by Epple et al. and Choi & Rankin showed that family support in the nutritional aspect, plays a role in blood glucose control^{9,10}. Another study in Japan found that, social support would increase the self-efficacy, while daily burden and problems with diabetes reduced the self-efficacy. Meanwhile, self-efficacy has an association with glucose control¹¹.

Family member's attitude and behaviours that help in diabetes management are dietary control, general relational support and reminders. The non-helpful behaviours are nagging, problems with diet management and poor communications¹². Miller & Davis found that diabetic patients need more guidance on their food choices. Nutritional educations are important for diabetic patients to help them in choosing and preparing healthy meals¹³.

Elderly diabetics who were diagnosed as diabetes for more than five years need more help in the aspects of diabetes care and management compared to those who were diagnosed less than five years. Family's involvement has a role in

diabetes management. Diabetes mellitus is one of chronic diseases that may cause burden for the elderly diabetics and their family¹⁴.

METHODS

This qualitative exploration on the role of family support in glucose control is part of the study on determinants of glucose control among elderly diabetics, conducted from February until May 2009 in Kulim. Ten respondents were purposively sampled based on their level of glucose control. HbA1c 6.5% or less was considered as good glucose control. Five respondents from good glucose control and another five from poor glucose control group were interviewed. In depth interview, using semi-structured interview guide was used. The conversations were taped, transcribed to verbatim and analyzed manually using thematic analysis.

RESULTS

The respondents consist of three males and seven females. All of them were Malays. The socio-demographic characteristics of the respondents were shown in Table 1. The themes identified are laid down according to two sub-groups. Five themes for the good glucose control and four themes for the poor glucose control groups are laid down below.

Table 1 Socio-demographic background of respondents

| No. | Name | Gender | Age | Marital status | Education | Income | Stay with | DM duration |
|-----------------------------------|-------|--------|-----|----------------|-----------|---------|-----------|-------------|
| Good glucose control group | | | | | | | | |
| 1 | Mrs A | Female | 64 | Widow | Primary | RM 300 | Daughter | 12 |
| 2 | Mr B | Male | 63 | Married | Secondary | RM 900 | Wife | 19 |
| 3 | Mrs C | Female | 65 | Widow | Secondary | RM 1100 | Daughter | 7 |
| 4 | Mrs D | Female | 61 | Widow | Primary | RM 530 | Daughter | 4 |
| 5 | Mrs E | Female | 64 | Married | Primary | RM 600 | Husband | 8 |
| Poor glucose control group | | | | | | | | |
| 6 | Mrs F | Female | 60 | Married | Secondary | RM 1000 | Husband | 16 |
| 7 | Mr G | Male | 64 | Married | Secondary | RM 1200 | Wife | 9 |
| 8 | Mrs H | Female | 65 | Widow | Primary | RM 800 | Daughter | 11 |
| 9 | Mr I | Male | 66 | Married | Tertiary | RM 2000 | Wife | 15 |
| 10 | Mrs J | Female | 73 | Widow | Primary | RM 700 | Grandson | 14 |

Good glucose control

All the respondents who belong to the good glucose control group fortunately practiced healthy diet. They have a strong determination and good understanding of what and why good control is important. To them family support is important but not the main player.

i. Linking good control to spiritual needs

Respondents in this group have good self-motivation and practiced healthy diet. Mrs A whose HbA1c was 6.0% specifically mentioned that she need to be healthy in order to be able to devote herself to religion. She said,

‘I control my diet. I cannot eat a lot and I take less sweet food. I took coffee or tea two times a week. Need to be healthy. I have duty in life, should pray and perform ‘ibadah’. Therefore I should control my glucose level, to ensure healthy life.’

ii. Aware of complications

Fear of the outcome of poor glucose control was heard from their voices. Though their knowledge level was acceptable as coming from a layman, Mr B whose HbA1c was 5.3% for example said,

‘I will eat food in small amount on my own because I know about the diabetes complications. If the glucose is not controlled, it is much easier to develop other illnesses.’

iii. Not affected by varieties of food prepared by family members

It is a normal practice among Malaysian especially Malays to prepare all sorts of food especially during gatherings. The children tried to make their parents happy by getting together in their parents’ home and of course eat together. Mrs A and Mr B appreciate this and felt very happy to have her family members around. Being a widow, Mrs A appeared as someone with strong determination,

but somehow will try to please her children. She said,

‘If my daughters bought food from night market, I ate it but in small amount and they would understand.’ (Mrs. A)

So does Mr B who is lives in an extended family setting. According to him,

‘Even though my wife and children prepare varieties of food almost everyday, I still take only small amount because I have been practicing this habit since I was younger.’

iv. No advice from them

Respondents in this group claimed that they are responsible for their medications. They went for follow-up, saw the doctors, given medications and take them regularly. They did not expect their family members to take over the role in terms of their medications and diet control. Everyone spontaneously said that they took the medications on their own and not based on reminder from family members. Three of the respondents gave almost similar response:

‘I take care of my own medication. My children did not advice me.’ (Mrs. A)

‘I have been controlling my diabetes on my own. My children did not give any advice.’ (Mrs. C with HbA1c of 6.2%)

‘I take my medicine on my own’ (Mrs. D with HbA1c of 6.2%)

v. No special food for diabetic patients

Respondents, who have good glucose control, ate the same food with their family members. They claimed no special food prepared for them. Even if they are the one who cook food at home, it is a usual practice that one cooking is for everyone.

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'My wife cooks as usual. She did not cook any special food for me.' (Mr. B)

Mrs E who has been having diabetes for the past eight years, is the one who normally does all the cooking during festive seasons or family gathering. She too did not purposely prepare special food for herself.

'During family gathering, my children will love my cooking. I cook the same dishes for my family members. I didn't cook separately for me.' (Mrs. E with HbA1c of 6.2%)

Poor glucose control

Respondents from this group also have the same perception that family members did not play much role in controlling their diabetes. However they themselves did not practice healthy diet. Despite being told to control their diet, most of them still cannot resist sweet food. They will take eat food according to their appetite. Self determination is not strong among these respondents.

i. They eat as if they are not a diabetic

All the respondents in this group did not practice healthy diet. They do not restrict themselves to foods and eat whatever is available and depending on their appetite:

'If my daughter comes home, she will usually buy fruits like mango. I can finish one mango at one go. What to do I love mangos' (Mrs. F with HbA1c of 9.4%)

Mrs F also cannot resist sweet drinks such as tea. She believes that we must eat delicious food.

'When I eat food outside, I choose the delicious food. I pay for it. Who will not eat delicious food' (Mrs. F)

Mrs G, who's HbA1c, was 11.4% had a similar thought as Mrs F with regards to food.

'I cannot control my diet intake. I will eat depending on my appetite.'

ii. Affected by varieties of food, prepared by family members

Respondents in this group felt difficult to control their diet intake during family gathering. Family members prepared varieties of food. They themselves also contribute by preparing food. Mrs H whose HbA1c was not as bad as Mrs F, happily told me that it is the tradition in her family that all family members including her siblings will gather during festive seasons.

'During Hari Raya, we take turn, gathering at our siblings houses. We will cook varieties of food and

eat together all day. How can I not get affected by delicious food' (Mrs. H with HbA1c of 7.9%)

Mrs F also was counting all kinds of food that she could remember that they prepared for their family gathering.

'When our families get together, we will bring varieties of food. I will buy food. We will eat fried noodle, laksa and if we want to eat tapioca, I will search for it.'

iii. No advice from them

With regards to getting advice on diabetic control from family members, they were similar to those respondents in the *good glucose control group*. Family members did not give any advice on the aspects of medicine and diet intake to control blood glucose. When asked whether anyone reminds them on medication, Mr I, the only respondent with tertiary education who suffers from diabetes for the last 15 years (HbA1c was 14.0%) said,

'I take my medicine on my own. My children never remind me about it.'

Perhaps those who are non diabetic do not feel that it is important for them to know about the illness. This could be seen from comments given by respondents about involvement of family members. Mrs F who lives with her husband denied receiving any advice from her children regarding dietary. Also a 65 years old widow who lives with her daughter commented that,

'My children did not bother about my glucose control.' (Mrs. H)

iv. No special food for diabetic patients

Like their counterparts in the *good glucose control group*, respondents in this group cooked and ate the same food with their family members. There are no specially prepared foods for the respondents. They still took fried food and '*gulai*'. Mrs J who is the oldest participant and Mr G commented,

'I eat the same food. I cook '*gulai*', chicken with soy sauce and '*asam pedas*'. I did not cook using boiling or grilled method.' (Mrs. J with HbA1c of 9.4%)

'My wife will cook the same food for the whole family. She did not prepare special food for me.' (Mr. G)

DISCUSSION

Poor glucose control has been an issue in diabetic patients. Being an elderly diabetic, they have several other limitations due to impaired visual, hearing and low physical energies. They need help from their family members in their daily activities.

Therefore, this study was done to explore the role of family support in controlling blood glucose among the elderly diabetics.

Respondents from the good glucose control group believed that self-awareness and self-determination are important to control the glucose level. This corresponded to study by Williams et al. which showed that, there was an association between self-determination and glucose control¹⁵. Self-determination theory explained that there were two types of motivations, which were controlled motivation and autonomous motivation. Controlled motivation was depending on rewards and punishments that they received. Autonomous motivation rose from awareness of own-selves¹⁶. Therefore, based on the findings in this study, respondents' perceptions were corresponded to the autonomous motivation.

Although the respondents perceived that family members did not play a role on their glucose control, food preparation by their family members influenced the respondents' diet intake especially for those with poor glucose control. Furthermore, as no special food was prepared for the respondents, they have to eat the same food with their family members. Therefore, nutritional educations are important for diabetic patients and their families in order to help them in choosing and preparing healthy food¹³. However such health education should involve patients and their families to ensure better glucose control¹⁷. Furthermore, previous study had shown that patients who attended health educations sessions frequently have better glucose control compared to those who did not attend health education sessions¹⁸.

Apart from that, the family members of the respondents in this study were not involved in giving advice with regards to medication and glucose control. Explorative study by Trief et al. showed that, family members' attitude and behaviours that help in diabetes management were on dietary control, general relational support and reminders¹². Therefore, family members should increase their knowledge regarding dietary control and useful advice in diabetes management. They could motivate the diabetic patients to control their blood glucose.

However, there were some limitations in this study. This study was only among the Malay population; therefore the result cannot be referred to the general multi-racial population. Another important aspect that was not explored was regarding family members' encouragement on physical activities and exercises. These two aspects may influence the glucose level.

Hence, elderly diabetics should be motivated on self-determination and focusing on good glucose control. They should be encouraged to change their lifestyles, practice healthy diet and do physical activities. These will increase their

awareness on the importance of good glucose control. Health staffs should explain on the importance of good glucose control, which may help in reducing the risks on diabetes complications. Apart from that, health education on diabetes mellitus should be given to patients and their family members. This will increase their diabetes knowledge especially on useful advice and proper food preparation. It will motivate the elderly diabetics to control their glucose level.

CONCLUSIONS

This study found that, family support did not play a role in glucose control. It showed that, self-awareness and self-determination were important to control blood glucose. However, there are some improvements could be made especially on health education for the family members regarding useful advice and proper food preparation in diabetes management. It could motivate the elderly diabetics to control their blood glucose.

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