Understanding food selection and dieting patterns: type 2 diabetes mellitus patients and their families

Abstract. Background. The prevalence of type 2 diabetes mellitus (T2DM) is increasing from year to year, especially in Indonesia. The risk of T2DM starts at the dinner table in the family. Meal planning plays an important role in reducing the potential complications associated with poor glycemic, lipid and blood pressure control. Focusing on reducing sugar, fat and sodium intake and incorporating culture-appropriate foods will improve adherence. However, T2DM patients develop conflicting eating disorders in which there is a gap between nutrition and self-fulfillment regarding eating control. The purpose of this research is to explore the understanding of the diabetes patient and their family in determining the selection of food and eating pattern during the disease. Materials and methods. This study explores the understanding of T2DM patients and their families in the Depok and Jakarta. The purposive sampling method used 14 participants and 7 family members. The data obtained from participant observation and in-depth interviews then analyzed using thematic analysis. Using a descriptive phenomenological method with a semi-structured in-depth interview. The interviews were conducted face to face from October 2017 — July 2018 and were analyzed by thematic analysis Collaizzi’s method. Results. This study found 4 important themes: 1) food is believed to affect high blood sugar; 2) changes in diet after diabetes; 3) the main concern of the family is to keep eating but not make it a burden; and 4) the challenge faced by participants and their families is the lack of information. This study recommends continuing education and partnerships from nurses about the importance of the relationship between diet and blood glucose levels. Conclusions. People are inclined to rely on simple strategies that limit search when making food choices. The ability of patients and families regarding food ingredients to maintain blood sugar stability is the concern of nurses in providing nutritional education. Food labels can (and to some extent do) provide a wide variety of desirable information, ranging from food content to production details, the food’s carbon footprint, and its origins. Keywords: type 2 diabetes mellitus; diet; family; food; selection

Introduction
Type 2 diabetes is a progressive disease that results from defects in insulin action (insulin resistance) and insulin secretion (insulin deficiency). Dietary adherence and better food acceptability was associated with lower A1c levels [1]. Meal planning plays a critical role in managing diabetes and reducing the potential complications related to poor glycemic, lipid, and blood pressure control [2]. Focusing on reducing sugar, fat and sodium intakes and incorporating culturally appropriate foods would help to improve adherence [3]. However, diabetes patient can occur eating disorders such as a feeling that can not stop eating and can not regulate the type or amount of food eaten [4]. Evidence from several studies suggests that translation of nutrition recommendations into daily routine is considered a challenge by the majority of diabetes patients and their families [4].

The aim of this research is to explore the understanding of the diabetes patient and their family in determining the selection of food and eating pattern during the disease.

Materials and methods
Using a descriptive phenomenological method with a semi-structured in-depth interview. We involved 14 diabetes patients and 7 family members in the sub district of Depok Jaya, Depok and CiptoMangunkusumo Hospital, Jakarta. The interviews were conducted face to face from October 2017 — July 2018 and were analyzed by thematic analysis Collaizzi’s method. Inclusion Criteria: Adult patient (> 18 years), diabetic patients, diagnosed with diabetic > 2 years.
Result

The results of this study resulted in 4 themes.

**Theme 1.** Food can be believed to affect the high blood sugar.

This theme is generated from three categories. The first category is the family attention to keep eating but make it a burden. This category is obtained from the statement «I change my meal, if I don’t eat regularly, now I use boiled potatoes for breakfast, sauteed broccoli, and scrambled eggs» (P2). The second category is eating patterns that are still unclear and confusing. This category is derived from the statement «I don’t know what happens, sometimes I think, how come I don’t have an appetite, steamed potatoes are tasteless. Sometimes confused about eating this afraid is not allowed, but also unclear why not permitted» (P7).

While the third category is eating patterns are made to control hunger but have a taste on the tongue. This category is obtained from the statement «Sometimes I eat rice, I want to be like that. Sometimes I just eat porridge and a piece of bread. It’s all because I thought I ate something that was delicious on my tongue but still healthy» (P9).

**Theme 2.** The family main attention to keep eating but not make it a burden.

This theme is generated from three categories. The first category is act as security guard in selecting food. This category is obtained from the statement «I am free to choose food, but I am limited to eating sweet things. Only 2 spoons of sugar are added to cooking, previously 7 spoons» (P4). The second category is feedback from nurses on diet. This category was obtained from the statement «Yes, I think there is still little information from nurses about diet and about healthy food for DM, even though we need it. The nurse reminded me to stick to taking medication and routine control» (PF7).

**Theme 3.** The family main attention to keep eating but not make it a burden.

The challenges faced by participants and families in several ways, causing, for example, different types of psychological distress. More attention should be paid to family support from family members plays a crucial role in maintaining lifestyle changes and optimizing diabetes management.

**Theme 4.** The challenges faced by participants and families is the lack of information about foods that can effectively lower blood sugar.

A better health measured physiologically (blood pressure or blood sugar), behaviorally (functional status), or more subjectively (evaluations of overall health status) was consistently related to specific aspects of physician-patient communication [8]. People are inclined to rely on simple strategies that
limit search when making food choices. Food labels can (and to some extent do) provide a wide variety of desirable information, ranging from food content to production details, the food’s carbon footprint, and its origins. Three key tools to avoiding overtaxing the consumer and her tight time budget are prioritization, transparency, and informational shortcuts [9].

Conclusions

People are inclined to rely on simple strategies that limit search when making food choices. The ability of patients and families regarding food ingredients to maintain blood sugar stability is the concern of nurses in providing nutritional education. Food labels can (and to some extent do) provide a wide variety of desirable information, ranging from food content to production details, the food’s carbon footprint, and its origins.

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Вибір їдії та харчових звичок для хворих на цукровий діабет 2-го типу та членів їх родин

Резюме. Актуальність. Поширеність цукрового діабету 2-го типу (ЦД2) зростає з року в рік, особливо в Індонезії. Ризик онемінії збудови та інсульту при ЦД2 значно збільшується при відсутності регулярного діабетичного харчування та неправильної регуляції кровного цукру. Недопустима є збільшена їжа та підвищені розходження в рівнях цукру у крові, що супроводжується збільшенням ризику виникнення костного васкулярного стану та інших осложнень, у тому числі і наслідків у відносині з фізичним та психологічним здоров’ям. Під час хвороби багато в хворих виникне потреба у підтримці та контролі за життєвою активністю, особливо в контексті стабільного переносу хвороби. Аналітичний аспект дослідження полягає в розробці та дослідженні стратегії надання хворим інформації про можливість підтримувати стабільний рівень цукру у крові за допомогою навчання хворих та їх родин. Хоча вибір їдії та харчових звичок здійснюється за рахунок багатьох факторів, серед яких домінують емоційні процеси та соціальні традиції, вибір цукрових продуктів та цукрових звичок є важливою аспектом охорони здоров’я.

Мета дослідження. Це дослідження виявляє 4 важливі аспекти: 1) доведено, що надмірне вживання їжі впливає на високий рівень цукру у крові; 2) необхідно змінювати режим харчування на тлі ЦД2; 3) головна турбота родини — забезпечити раціональне харчування, але не робити це тягарем для хворого; 4) виклик, з яким стикаються учасники дослідження та члени їх родини, — це відсутність належної інформації. Дослідження рекомендує продовжувати навчання хворих і посилювати співпрацю середнього медичного персоналу щодо важливості взаємозв’язку між режимом харчування та рівнем глюкози у крові.

Висновки. Люди схильні покладатися на прості стратегії, що забезпечують раціональне харчування. Здатність цих людей рамках змінювати режим харчування, але не робити це тягарем, є оптимальними в умовах, які забезпечують раціональне харчування. Зроблені висновки відображають загальні тенденції в дослідженнях, які є важливими для зміни укладу життя та політики здоров’я.

Ключові слова: цукровий діабет 2-го типу; дієта; родина; харчування; вибір