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## ASSOCIATION OF FAMILY'S SUPPORT, ATTITUDE AND BEHAVIOR TO QUALITY OF LIFE OF PATIENT WITH DIABETES MELLITUS TYPE II

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### ABSTRACT

**Background:** As diabetes mellitus has become the global burden of disease, regional center Endocrinology Society of West Kalimantan found the prevalence of DM was quite high, at 11%. Lack of support, attitudes and family roles to patients with Diabetes Mellitus type II were found as the determinant factors of low quality life of patients with DM type II.

**Aims:** to assess the association of family's support, attitudes and behaviors with the quality of life of patients with diabetes mellitus type II

**Methods:** This research was a quantitative research using correlation analytic method and cross sectional approach that emphasizes time measurement / observation of independent and dependent variable data, only once at one time. In 11-day sampling, thirty (30) patients with diabetes mellitus type II were selected from total 282 patients who visited Kitamura Pontianak Clinic, Indonesia, using a non-probability sampling (non-random sample) with consecutive sampling method. A questionnaire was employed in order to assess the level of family's support, attitude, and behavior to quality of life of the participated patients.

**Results:** From total 30 selected patients, only 26.7% had good support from their family. Moreover, the majority notified their family orchestrating less attitude and behavior toward Diabetes Mellitus type II, respectively, at the percentage of 40% and 46.7%. In the other hand, only 6 patients claimed their family having either good attitude or good behavior. It is not surprising notice only 20 respondents claimed they had good quality of life, while 36.7% declared having enough quality of life, and the majority (43.3%) experienced less quality of life responding to their health. Using Rank Spearman test, the data suggests that there were significantly positive association between family's support, attitude, and behavior toward respondents' life quality, with significant value less than 0.05.

**Conclusions:** Finding revealed among the participated patients with Diabetes Mellitus type II at Kitamura Pontianak Clinic, Indonesia, their family orchestrate low support, attitude, and behavior toward the disease. The results suggest the important role of family to the health, comfort, and happiness among the patients. Family should be active in finding information about Diabetes Mellitus, certainly in controlling blood sugar.

**Keywords:** Family support, attitudes, behavior, quality of life, Diabetes Mellitus type II.

### INTRODUCTION

In Indonesia, there are various problems in the field of health and one of them is the non-contagious Diabetes Mellitus (DM) (1). Based on the number from Genesis world, cases of diabetes mellitus have increased from year to year and will deteriorate in the quality of human life if not treated seriously (2,3). Moreover, the epidemic of diabetes mellitus is associated with the increasing number of prosperity, change

of diet, lack of physical activity, and lack of support, attitudes, and the family role in patients with diabetes mellitus (1.2).

The International Diabetes Federation (IDF) statistics mentioned that there are around 230 million cases of diabetes mellitus in the world. This figure is growing up to three percent or about seven million people each year (4). Therefore, with the current growth rate, the patients with diabetes mellitus is expected to reach 350 million in 2025, including 80 percent patients concentrated in the countries with low and medium income. On the survey conducted by the team of Endocrinology Society (PERKENI, 2011), West Kalimantan province has the most diabetes mellitus sufferers in Indonesia, which accounted for 11.1%. The World Health Organization stated that the cases of diabetes in Asia, especially India, China, Pakistan and Indonesia, will rise up to 90% in 20 years to come (5.6). The cause of the high number of such patients are changes in the quality of life of the community because of the lack of physical activity, and lack of support, attitudes, and the family role in patients with diabetes mellitus (7).

Diabetic patients require emotional and physical support from their closed social circle such as family. The support of the family is identified as the assistance provided by other family members to provide physical and psychological comfort on those who are confronted with a stressful situation (8). The attitude is the readiness to react to the object in a particular environment as a matter of the object. The behavior is an activity that can either be observed directly or indirectly (9.10). This study is to know the relationship between support, attitudes and behaviors of the family with the quality of life for patients with diabetes mellitus type II in the clinic.

## METHODS

This is a quantitative research conducted by using correlation analytic method with cross-sectional approach, which emphasizes time measurement / observation of independent and dependent variable data only once at one time. Questionnaires are used in order to see the relationship between support, attitude, and family behavior with the type-II diabetes mellitus patients' quality of life at Kitamura Pontianak clinic in 2015 (11.12).

The population in this study were 282 patients with type-II diabetes mellitus. Sampling technique in this study is non-probability sampling (non-random sample) with consecutive sampling method. Researchers use counting by way of thumb that is 30 people in the period of 11 days.

## RESULTS

*Relationship between family support, attitude, behavior, and respondents' quality of life*

Table 1. Response of family to Diabetes Mellitus type II

Variables	Family Support		Attitude		Behavior		Quality of life	
	N	(%)	N	(%)	N	(%)	N	(%)
Less	13	43.3	12	40	14	46.7	13	43.3
Enough	9	30	12	40	10	33.3	11	36.7
Good	8	26.7	6	20	6	20	6	20
Total	30	100	30	100	30	100	30	100

The data about family support in patients with diabetes mellitus type-II shows that 13 (43.3%) patients receive less support. On the attitude measurement, there is a tie between less and enough attitude with 12 respondents (40%) each. The result on family behavior show that less got the most with 14 (46.7%) responses. Meanwhile, most of the diabetes mellitus type-II patients' quality of life is mentioned as low by 13 (43.3%) respondents.

*Determining factors of quality of life among respondents living with diabetes mellitus type-II*

Table 2. Analysis family support, attitude, behavior, respondents' life quality

Variables	Family					
	Support		Attitude		Behavior	
	P value	r	P value	r	P value	r
Respondents' life quality	0.022	0.417	0.022	0.416	0.022	0.415

Table 2 shows how family support, attitude and behavior affect the quality of life among respondents. Using Rank Spearman test, the data shows that the three factors affect positively to the life quality of patients living with diabetes mellitus type-II. The results in respect to respondents' quality of life show supports from the family ( $\rho=0.022$ ,  $r=0.417$ ), attitude of the family ( $\rho=0.022$ ,  $r=0.416$ ), and family behavior ( $\rho=0.022$ ,  $r=0.415$ ).

## DISCUSSION

### *The Support of the Family of Diabetics*

Based on the results, it was concluded that some of the patients lack family support. This is due to the family's lack of knowledge in diabetes mellitus to patients as much as 11.24%. Based on the results of the study, the majority of patient families of Kitamura clinics are busy with their respective activities and they do not have time to do more research on diabetes mellitus. Lack of family support is also caused by the perception that clinical treatment is sufficient to cure the illness hence there is no need for family support. Moreover, there is an insecurity – inferior and hopeless feeling - among the diabetic patients that their illness is not well-accepted by their family or community. The animosity between all parties involved may reflect the patients' low level of support in coping with diabetes.

Another cause of the lack of family support is because the patients assume that it can be inconvenient for the family to pay for their treatment at the clinic. So, most patients prefer to fund their own treatment without family assistance with 12.06% percentage. The research also shows that the most support for patients with type-II diabetes mellitus comes from the family (9). Family support affects the quality of life of the patient itself (10). Thus, to increase family support for the patients, the family shall be involved in educating themselves about diabetes mellitus, having quality time together, as well as providing rewards, knowledge, and emotional support.

### *The Attitude of the Family of Patients with Diabetes Mellitus*

Based on the results of the researchers' analysis, the lack of family attitudes toward type-II diabetes mellitus patients in Kitamura clinic is because the family assumes that the patient is confused with the limitations in consuming sugary food and beverages. This is due to the perception of both the patient and the family that the illness cannot be cured. The sense of despair and resignation of the patients with their current condition lead to assumption that they will not survive. The results stated that the factors related to diabetic family attitudes have been influenced by personal perception, culture, mass media, and educational institutions (16).

Thus, to improve the attitude of the family, it is necessary that all parties are well-informed about the pattern of diet, especially the limitation sugary intakes. Educational courses about the benefits of blood sugar control and diabetes mellitus are important to improve the patients' life motivation and to encourage family attitudes towards supporting the recovery of patients with diabetes mellitus.

### *The Behavior of the Family of Diabetics Patients*

The analysis showed that as much as 10.86% of the patients perceive that their families are less lively to research for information about diabetes mellitus. This is because the majority of the patients' families are busy with their activities and they do not have time to do more research on diabetes mellitus. Not only that, the low family behavior is also caused by the families' failure to remind the patients to exercise as well as the schedule of taking medication and insulin shot.

Family behavior are determined by three groups of factors namely predisposing factors, driving factors, and supporting factors (9). Health education or counseling has an important role in changing and strengthening family behavior factors (8). Thus, to increase family behavior, the family must play an active role in educating themselves about diabetes mellitus by attending health education activities / counseling and understanding the five pillars of diabetes mellitus.

### *The Quality of Life of Patients with Diabetes Mellitus*

It can be concluded that, from 11.13% respondents, the low quality of life among patients with diabetes mellitus is caused by the low level of communication between patients and their family. Further analysis conducted by researchers found that the quality of life of diabetic patients is low because the sufferers perceive that there is little improvement in terms of healing. Patients have negative feelings such as despair, anger, embarrassment, and not concerned about improving health, and it adversely affect their quality of life.

Type-II diabetes mellitus patients may carry the risk of experiencing physical, psychological and social disability. However, patients with a good educational background tend to be more mature in adapting themselves to their new health state, hence it will be easier for them to stay positive and to seek ways to improve their conditions (8.10).

### *The Relationship between Family Supports and the Quality of Life of Patients with Diabetes Mellitus Type-II*

The research conducted at Kitamura clinic, Pontianak showed that respondents who receive less support from their families turn out to have a lower quality of life. The Rank Spearman statistical test produced the  $p$ -value = 0.022, which is smaller than  $\alpha = 0.05$ . With  $p < 0.05$ ,  $H_a$  is accepted; which means that there is a relationship between family support and the quality of life of patients with type-II diabetes mellitus. The value of contingency coefficient in the above table is 0.417, which translates to medium relationship level. The result is in line with the statement that the higher the support from the families, the higher the quality of life of the patients (16). Family may express their support in form of warmth and friendliness, emotional support related to glucose monitoring, and motivation for healthy diet and exercise. The aforementioned support can boost the patients' self-esteem and inspire them to take better care of themselves (8).

Family support is indeed very helpful to improve the life of type-II diabetes mellitus patients. Patients who receive emotional support, reward, or instrumental support from their family will be able to achieve the sense of security and comfort, which will foster their motivation and increase satisfaction level. Communication and family's liveliness in researching information about type-II diabetes mellitus also positively affect the patients' perception that the family is making efforts to support the patients' healing process. This condition will prevent the emergence of stress and reduce anxiety among the patients.

### *The Relationship between Family Attitude and the Quality Of Life of Patients with Diabetes Mellitus Type-II*

The attitude of the family has the impact on blood sugar control support actions in the management of diabetes mellitus (17). The attitude of the family is viewed as the instincts to protect the family members who are in poor health. The family with negative attitudes will make a strong predictor in the psychological state of the patient, which may then impair the latter's health and quality of life. If the family's attitude is less and the quality of life is low, then there is no positive attitude in the family (7).

### *The Relationship between Family Behavior and the Quality of Life of Patients with Diabetes Mellitus Type II*

The statistical test of relationships between family factors and the quality of life of the patients with type-II diabetes mellitus produced the following values: family supports and the quality of life ( $\rho=0.022$ ,  $r=0.417$ ), family attitude and the quality of life ( $\rho=0.022$ ,  $r=0.416$ ), and family behavior and the quality of life ( $\rho=0.022$ ,  $r=0.415$ ). The behavior of the family is very influential to the quality of life for patients with diabetes mellitus. The patients who received family assistance will not feel singled-out because of their conditions. Moreover, the patients will feel more confident if they can socialize and be part of the society (3).

### **CONCLUSION**

Positive family support, attitude, and behavior are associated with better quality of life of patients living with type-II diabetes mellitus. Therefore, education related to the know-how of support, attitude and behavior to improve quality of life of patients with type-II diabetes mellitus is necessary for the family. It is recommended that further research on the quality of life of patients with type-II diabetes mellitus can more actively involve families and emphasize the research on environmental characteristics, such as prevailing culture and customs in the community.

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