

# FAMILY SUPPORT AND DIETARY COMPLIANCE OF DIABETES MELITUS PATIENTS : A LITERATURE REVIEW

*by Herlina Jusuf*

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**FAMILY SUPPORT AND DIETARY COMPLIANCE OF DIABETES MELITUS PATIENTS : A LITERATURE REVIEW**

Nurdiana Djamaluddin, Herlir<sup>15</sup> usuf, Diman Apriyadi Manto

Psychiatric Nursing Department, Universitas Negeri Gorontalo, JL. Jenderal Sudirman No.247, Kayubulan, Limboto, Kota Gorontalo, Gorontalo, Indonesia 96211  
\*annadj24@gmail.com

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**ABSTRAK**

Diabetes mellitus is a metabolic disease characterized by abnormal insulin secretion as a result of an unbalanced and irregular diet that causes hyperglycemia<sup>2</sup>. Nutritional therapy or diet is a major component of successful diabetes management. Diabetes patients need help or support from people around them, especially their families, because they have to undergo a diet for a lifetime. Therefore, it is obliged to help by caring and providing support so that diabetes patients are motivated to stick to a diet and have a strong desire to maintain their health and improve their quality of life. The aim of the literature review is to analyze and synthesize the evidence or literature on family supports and its relationship with diabetes mellitus patients dietary compliance. The method of this library research employed the Google Scholar, PubMed and Research Gate database. The search results of 449 articles published from 2015 - 2020 with inclusion criteria of 10 articles with the keyword Family support AND diet adherence diabetes mellitus OR diet compliance diabetes mellitus. The articles showed that generally, the family support provided to diabetes patients was categorized as good and supportive, and dietary compliance of diabetes mellitus patients was categorized as good or complied with the dietary. This library research showed that family supports and dietary compliance of diabetes mellitus patients have a significant correlation.

Keywords: diabetes mellitus; dietary compliance; family support

**INTRODUCTION**

Non-communicable diseases (PTM) have become a major public health problem in Indonesia. This occurs with a shift in the epidemiological pattern of disease from an infectious disease which tends to decline to non-communicable diseases which is increasing globally and nationally has caused the top ten diseases that cause death and the most cases, including diabetes mellitus (DM). Globally, WHO estimates that 422 million adults lived with diabetes in 2014, compared with 108 million in 1980. The prevalence of diabetes worldwide (standardized) has nearly doubled since 1980, increasing from 4.7% to 8.5% in the adult population (Kementrian Kesehatan RI, 2018). Diabetes mellitus is a group of metabolic diseases characterized by hyperglycemia that occurs due to abnormalities in insulin secretion, insulin action or both. Diabetes is a chronic disease that will be carried for life, and causes complications of damage to body organs to cause various diseases,

such as blindness, kidney failure, nerve damage, heart, and diabetic foot which leads to amputation (Perkeni, 2015).

One of the factors causing diabetes is an unbalanced and irregular diet, so that the participation of doctors, nurses, nutritionists and other health workers in managing diabetes is needed. There are four main pillars in the management of diabetes mellitus, namely education (health education), medical nutrition therapy (diet), physical exercise and pharmacological intervention. Nutritional therapy or diet is a major component of successful diabetes management. As a result of dieting, controlling blood sugar levels within normal limits, body weight is within normal ranges and preventing the severity of complications (Perkeni, 2015). However, if the patient does not carry out a diet, it will result in an imbalance of insulin in the blood and will be detrimental to diabetics themselves. Family also has a very important role in diabetes

management efforts, namely providing physical support, information and motivation because family is the closest person to diabetes patients. When family members experience problems with their health, other family members play an important role in the nursing process, giving rise to a sense of care and diabetes patients feel cared for. In addition, diabetes patients need help or support from people around them, especially their families because they have to undergo a diet for a lifetime which will cause boredom or boredom, so the family has an obligation to help solve these problems by taking a role in caring for and providing support to sick families. so that patients achieve optimal health and avoid stress which can worsen the condition of diabetes patients (Hisni, et al., 2017).

The positive impact of family support in carrying out a diet for diabetes patients is that it can control what health workers recommend in carrying out their diet, can remind each other, and motivate each other between family members, especially for patients who are on a diet so that diabetes patients are motivated to stick to the diet and willing to maintain or improve the quality of life (Bangun, et al., 2020). Therefore, support and obedience have a great relationship in achieving a good goal. If family support is not available, diabetes patients will not adhere to the implementation of a diet which will cause diabetes to run out of control and the severity of complications. The purpose of this literature study was explore evidence about family supports and dietary adherence in diabetes mellitus.

## METHODS

The type of review or review used is literature study. The literature study used in this research is based on articles / journals that discuss Family Support with Diabetes Mellitus Patient Diet

Compliance, using a cross-sectional study design method., Articles / journals spanning 2015 to 2020, articles / journals in English and Indonesian. Selection of literature study topics using a framework (PICO (S / T) / SPIDER), the population defined in this literature study is diabetes mellitus patients, and no intervention will be determined in this literature study. Comparison in this literature study topic was not determined by comparison intervention. The outcome determined in the topic of this literature study to determine and analyze whether or not there is a relationship between family support and dietary adherence in diabetes mellitus patients. In addition, this study did not determine the time (time) to intervene in the literature study.

After determining the topic of literature study, the next step is to determine the keywords that will be used in the literature study in the literature search process. The keywords used in this literature study are "family support AND diabetes mellitus diet compliance OR diabetes mellitus diet" in searches of Indonesian journals, as well as the keyword "family support AND diet adherence diabetes mellitus OR diet compliance diabetes mellitus" in international journal searches. After determining the keywords used in the literature study, the next step is to search for literature using a database or search engine. In this literature study using a database or academic search engine Google Scholar, PubMed, and research gate. By tracing the results of scientific publications in the period 2015-2020, using the full text method, in Indonesian and in English.

The initial search of the literature study was started using the google scholar database with the keyword "family support AND diabetes mellitus dietary adherence OR diabetes mellitus diet" in a search for Indonesian journals, which yielded 296 results. The second search used a research gate database with the keyword "family

support and diet adherence diabetes mellitus. or diabetes mellitus compliance diet "returns 100 results. Subsequent searches using the PubMed database using the keyword" family support AND diet adherence diabetes mellitus OR diet compliance diabetes mellitus "yields 53 articles. After obtaining the final results from a search using three databases or search engines, a total of 449 articles were obtained. Of the total number of 449 articles, title / abstract screening and exclusion criteria were obtained and <sup>13</sup> the results were 439 articles that did not meet the inclusion criteria, and 10 articles met the inclusion criteria including google scholar = 8 articles, research gate = 1 article, PubMed = 1 article. A total of 10 articles were screened again to determine articles in Full Text and obtained 10 articles in Full Text, after that screening for duplication and obtained 2 duplicated articles in different databases and still <sup>13</sup> luded in the inclusion criteria, so that the total number of articles that met the literature inclusion of 10 articles, and did not use secondary searches. After collecting the articles to be used, the next step is to analyze each article (solve and identify the important information in it) and then synthesize all the articles obtained (integrated and identified which can be taken from all articles).

## RESULTS

The literature study analysis <sup>24</sup> containing 10 research articles on the relationship between family support and dietary adherence to diabetes mellitus patients used the same research method, namely the cross sectional study design. However, there are also differences in the research articles, namely the differences in respondents / samples used, differences in the research instruments used and differences in the results obtained from the study.

Analysis in terms of the respondents studied, the research articles took the same

respondents, namely patients with type II diabetes mellitus, but with different numbers of respondents and different respondent characteristics based on the characteristics of age, gender, education level, occupation, cultural ethnicity and place of residence. In terms of age characteristics, the majority of full adults (maturity) 30-65 years are included in eight research articles, but in Go'o, et al. (2020) and Hisni, et al. (2017) research using populations with elderly characteristics (65- 70 years). Characteristics of gender and education level, female gender with secondary education level (SMA) constitute the majority of respondents in the research article. Based on occupation, respondents in research articles are mostly unemployed. In terms of ethnicity, Javanese cultural ethnicity is the highest majority in the research article. Based on the place of residence, most of the respondents in the research article lived with their family members. Although the study had differences in the number of respondents and the characteristics of the respondents, in essence the respondents studied were diabetes patients, especially patients with type II diabetes mellitus.

Analysis in terms of research instruments, research articles use the same instrument, namely a questionnaire, but with a different type of questionnaire. To assess family support, the questionnaire used is the hensarling diabetes family support <sup>21</sup> le, social support surveys for diet. diabetes family behavior checklist, diabetes social support questionnaire-family version, and a questionnaire created by the researchers themselves based on Friedman's theory (2010). However, there are also studies that have adopted other questionnaires such as the previous research questionnaire by Delianty (2015). To assess dietary adherence, the questionnaires used were perceived dietary adherence questionnaire, diabetes self-care activities, 1 × 24 hour food form recall,

and the questionnaire created by the researcher itself based on Beck's theory (2011); Webster-Gandy et al (2014); Hardinsyah & Supriasa (2014). Although in several research articles there were differences in the way data collection or research instruments were used, in essence the study was conducted to prove the relationship between family support and dietary adherence to diabetes mellitus patients.

In terms of research results, the research article produced research results which stated that there was a relationship between family support and dietary adherence to diabetes mellitus patients. In addition, the results of the study also showed that the average family support for diabetes patients was the good and supportive category. The results also showed that the dietary adherence of diabetes mellitus patients was in the good or adherent diet category. However, in one other research article stated that there was no relationship between family support and dietary adherence in diabetes mellitus patients.

Research by Ravi, et al. (2018) results showed a statistically significant positive relationship between family support scores and diabetes self-management scores ( $\beta = 0.254, p < 0.00$ ). Research by Lestari, et al (2018) shows that 57.9% of respondents have good family support and obedient dietary adherence (83.3%) with p-value = 0.02 (p-value  $< \alpha$  (0.05)). Research by Shahar et al. (2016) showed that self-motivation ( $r = 0.358, p < 0.05$ ) and family support ( $r = 0.460, p < 0.01$ ) were significantly correlated with dietary adherence. Anjani and Gayatri's research (2017) ) The results showed that 43.9% of respondents followed the diet program. In addition, 28% of respondents had the right family support ( $p = 0.007; p > \alpha$ ). However, different research results were found in the research of Handayani, et al (2017). showed that there was a

relationship between knowledge and dietary adherence in DM patients ( $p = 0.008$ ), but there was no relationship between family support and DM patient adherence ( $p = 0.408$ ).

## DISCUSSION

A literature study of 10 articles, shows that family support has a relationship with diabetes mellitus dietary adherence management. In addition, in this literature study it was found that the support given by families to diabetes patients was in the good or supportive category. The support provided by families to diabetes patients in this study consisted of emotional support, reward support, instrumental support, and information support. In terms of dietary adherence of diabetic patients, the research article indicated that most of the patients' dietary adherence was in the good or adherent diet category. Research in three articles, the type of support provided by families to diabetes mellitus patients is emotional support. This can be seen in the research article Go'o, et al (2020) where the most respondents are elderly, with high school education, and live with family, it was found that some respondents received good family support. This is influenced by the fact that most respondents still live with their families (husband / wife / children and son-in-law). Another factor that influences family support is education, because most of the family members and diabetes patients have high school education so they are easier to receive information in providing support. In addition, most of the support is received by respondents is emotional support, so that respondents feel the love and warmth of the family in helping respondents shape actions that are carried out in accordance with the provisions given by doctors / health workers.

The research article Bangun et al. (2020) also found that family support that is often provided by the respondent's family is emotional family support, so that

respondents feel cared for and connected with the family. Other support that has been done is helping to overcome respondents who are caused by beneficial diabetes, such as helping to calm down their families so that they do not become more anxious if the respondent's blood sugar levels are increasing, as well as reminding them of the time of control to Posbindu to remind them about diet, and stating that their children are always supervised for running a diabetes diet according to recommendations from nurses and doctors at the Puskesmas. Another thing is seen in the research article Jamaludin and Choirunisa (2019), it was found that most families provide emotional support, that is, families always give statements to respondents to maintain their health if they find it difficult to eat according to family recommendations. For information support is also provided by the family by providing all information about the goals, benefits and effects of the dietary rules they are living and the family who informs the respondent about all information obtained from doctors, nurses or other health teams, while instrumental support to respondents mostly done by families with families accompanying or accompanying DM sufferers to seek medical treatment for health services.

The research article Anjani and Gayatri (2017) family support is good because most respondents live with their families, so respondents receive support provided by family members. In addition, other things are influenced by good motivation for diabetes patients. Diabetes patients are always motivated by their families to form a strong desire for them to become better and healthier. Hisni, et al (2017) research article also found that family support is good because most respondents still live at home with their families and the family still has plenty of time so that family support can be well realized. However, to make the respondent's obedience to be good it takes a long time to achieve

optimal health, so there are some respondents who tell about boredom in the treatment process, but they are grateful because they still live with their family, husband, children and some with their grandchildren who are motivated. so that the respondent continues to undergo the treatment process.

The research article by Akyoo, et al (2019) found that respondents often received support because they were closer to family members, especially their children. In addition, some patients carry out dietary adherence because of the positive interaction relationship in the family, the family prepares food ingredients according to dietary recommendations, and the family provides emotional support, namely the family always advises and praises patients who adhere to the diet. Another thing was that respondents who were separated / divorced had low family support because of the lack of a close partner who encouraged, gave advice, and reminded them to follow diet recommendations. In the research article Ravi, et al (2018) stated that any form of family involvement, support and respect, improve family relationship, increase family involvement in diabetes care and support are likely to improve diabetes self-management practices. Supporting behavior in this study is emphasizing on rewarding patients for practicing certain behaviors, and nagging or criticizing patients for not following self-management behavior. It was also found that elderly respondents who live alone without support and have no one to care for or support them can influence diabetes self-management including dietary adherence. Different research results are found in the research article Handayani, et al. (2017) with respondents mostly full adult age (maturity) and high school education, stating that good family support will not succeed in changing and influencing a person's behavior if it is not followed by awareness of one's self. to do the action.

However, family support is a very important factor in motivating patients to take medication and dietary therapy. Another thing is related to the understanding, especially knowledge about nutritional management of diabetic patients, so that it will make a person more alert and careful in choosing the food to be consumed, and in the end there will be a behavior that is obedient to the diet he is taking.

## CONCLUSION

This literature study shows that family support with diabetes mellitus patient diet has a significant relationship. The family is the unit of the community closest to the patient, and support therapy in the hospital or at home will be useless without the support of family support. Some respondents who live with their families, when the family always provides support in the form of information, emotions, appreciation and also instrumental to diabetes patients, then it will affect their psyche, so that they will physically encourage them to do something that will be achieved in this case is implementing the diet diabetes in order to control blood sugar levels within normal limits, body weight within normal ranges and prevent the severity of complications.

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