COMPORTAMENTO ALIMENTAR E OS ASPECTOS QUE INTERFEREM NA ADESÃO E TRATAMENTO DOS DIABÉTICOS TIPO II: UMA REVISÃO INTEGRATIVA

EATING BEHAVIOR AND THE ASPECTS THAT INTERFERE WITH THE ADHERENCE AND TREATMENT OF TYPE II DIABETIC PEOPLE: AN INTEGRATIVE REVIEW

Jéssica Alencar Cavalcante¹
José Leonardo Gomes Coelho²
Natália do Santos Almeida³
Suiany Timóteo da Silva⁴
Guilherme Correia Alcantara⁵
Élida Mara Braga Rocha⁶
Juliana Ribeiro Francelino Sampaio⁷
Willma José de Santana⁸

RESUMO

O diabetes mellitus é considerado um dos principais problemas de saúde pública na atualidade, sendo o diabetes mellitus tipo II a forma prevalente entre os indivíduos com idade mais avançada. Assim, o objetivo deste estudo foi conhecer o comportamento alimentar e os aspectos que interferem na adesão e tratamento dos diabéticos tipo II. Para isso, realizou-se uma pesquisa bibliográfica, em bases de dados, considerando artigos publicados no período de 2014 a 2018. Encontrou-se um total de 365 artigos que, seguindo critérios de inclusão e exclusão, foram reduzidos a 12. Os resultados mostraram que os argumentos para a não adesão ao tratamento elencados nos estudos são inúmeros, variando desde a falta de tempo, falta da colaboração da família na mudança dos hábitos alimentares, dificuldades financeiras, e culturais. Dessa maneira, pode-se concluir que há diversos fatores que influenciam no tratamento, especialmente os hábitos alimentares previamente adquiridos, e que estes dever ser considerados pelos profissionais, preservando a individualidade do paciente.


ABSTRACT

Diabetes mellitus is currently considered one of the major public health problems, with type II diabetes mellitus as the prevalent among individuals with more advanced age. Thus, the objective of this study was to investigate the eating behavior and the aspects that interfere with the adherence and treatment of type II diabetic people. To do this, there was a bibliographic search on databases, considering articles published in the period from 2014 to 2018. The search returned 365 articles, which that, following the inclusion and exclusion criteria, were reduced to 12. The results showed that the arguments for non-adherence to the treatment listed in the studies are numerous, ranging from the lack of time, lack of collaboration of the family in the change of habits, financial difficulties, and cultural rights. In this way, several factors influence the treatment, especially the eating habits previously acquired, which should be considered by professionals, preserving the patient's individuality.

Keywords: Type II Diabetes Mellitus. Food Adherence. Eating Behavior.
**INTRODUCTION**

Diabetes Mellitus (DM) is a group of metabolic diseases defined by elevated fasting blood glucose (hyperglycemia), being characterized by defects in the secretion and/or action of insulin. There are four classifications of diabetes: Type I or insulin-dependent diabetes mellitus (DM1); type II or non-insulin dependent diabetes mellitus (DM2); gestational; and the secondary to other diseases.

Currently, diabetes mellitus (DM) stands out as an important cause of morbidity and mortality. Estimates reveal that 8.3% of people live with DM, and this number may increase over the years, thus making it one of the most important causes of mortality worldwide.

Type II diabetes mellitus has been gaining huge proportions in the entire planet and causing health problems, since it has high mortality rate in the population, and this results from people’s sedentary lifestyle, poor diet and poor nutritional follow-up, thus accompanying the high degree of obesity and aging of the population.

The measures of prevention in the treatment of DM involve following a balanced diet, practicing physical activity, in addition to using medications. Nevertheless, the individuals are responsible for adhering to the recommendations made by health professionals, thus trying to make some changes or incorporate a new life style.

The purpose of this article is to know the eating behavior and the aspects that interfere with the adherence and treatment of type II diabetic people.

**METHOD**

This is an integrative review, which consulted the databases SCIELO and LILACS, finding 2,276 studies, and, after applying the filter, 365 remained, of which only 12 were included, excluding 353 articles. Figure 1 shows the survey scheme.

The inclusion criteria were articles in Portuguese and English, published in the period from 2014 to 2018, available free of charge and with complete text. The following descriptors were used: type II diabetes mellitus, adherence and eating behavior. The research took place between January and May 2018.
RESULTS AND DISCUSSION

This study included 12 articles that presented evidence on the eating behavior and the aspects that interfere with the adherence and treatment of type II diabetic people. Table 1 describes the distribution of the selected articles.

Table 1. Description of the articles used in the research.

<table>
<thead>
<tr>
<th>JOURNAL/YEAR</th>
<th>TITLES/AUTHORS</th>
<th>OBJECTIVE</th>
<th>RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ciência e Saúde Coletiva; 23(3): 953-961; 2018.</td>
<td>Factors associated with the treatment adherence of the diabetic elderly in primary health care. BORB A, A. K. O. et al.</td>
<td>To investigate the factors associated with the treatment adherence of the diabetic elderly assisted in primary health care.</td>
<td>The results revealed that, among the elderly, 27.3% self-reported full treatment adherence.</td>
</tr>
<tr>
<td>RASBRAN- Revista da Associação Brasileira de Nutrição. São Paulo, Ano 8, n.2, p.58-66, Jul/ Dez, 2017.</td>
<td>Nutrition treatment adherence of type 2 diabetic mellitus patients: a bibliographic review. PEREIRA, J; FRIZON, E.</td>
<td>To identify the main factors that interfere in the diabetic treatment adherence.</td>
<td>Eating habits, emotional aspects and social or family support were the factors that most influenced the dietary treatment adherence.</td>
</tr>
<tr>
<td>HU Revista, Juiz de Fora, v.42, n.4, p.277-282, nov/dez, 2016.</td>
<td>Dietary treatment adherence and nutritional and clinical evolution of patients with type 2 diabetes mellitus. OLIVEIRA, L. M. S. M; SOUZA, M. F. C; MELO, I. R. C.</td>
<td>To assess the dietary treatment adherence and the evolution of the nutritional and clinical status of diabetic patients.</td>
<td>Regarding nutritional treatment, only 13.3% of the sample adhered to the proposed diet plan.</td>
</tr>
<tr>
<td>Rev APS; 19(2); 181-190; abri/jun, 2016.</td>
<td>Diabetes mellitus treatment adherence in rural zone in the city of Vitória de Santo Antão-PE. FARIAS, R. F. S. et al.</td>
<td>To evaluate the treatment adherence of individuals with diabetes, especially concerning the use of medication, diet and physical activity.</td>
<td>The results showed that, of 57 diabetic individuals, 10 (17.5%) adhere to the recommended treatment.</td>
</tr>
<tr>
<td>Rev. Bras. Promoç Saúde, Fortaleza, 28(3): 370-378, jul/set, 2015.</td>
<td>Eating and diabetes mellitus: The elderly's perception and food consumption in the countryside of Pernambuco. BARBOSA, M. A. G. et al.</td>
<td>To evaluate the knowledge about diet related to diabetes mellitus, to identify factors that may interfere in the nutritional therapy adherence and in the food choices of participants in an Elderly Living Center in the city of Saúre-PE.</td>
<td>The majority is aware of the types of foods that can influence the diabetes mellitus treatment. Checking food consumption, there was a higher consumption of foods with a high glycemic index.</td>
</tr>
<tr>
<td>Acta Paul Enferm; 28(4); 315-22; 2015.</td>
<td>Diabetes mellitus treatment adherence and sociodemographic, clinical and metabolic control variables. ARRELIAS, C. A. A. et al.</td>
<td>To investigate the association between type 2 diabetes mellitus treatment adherence and clinical and metabolic control variables.</td>
<td>Based on the results, about 98.3% showed non-adherence to the diet plan, 41.9% to physical activity and 15.8% to drug treatment.</td>
</tr>
<tr>
<td>Rev. Esc. Enferm USP; 49(4): 619-625; 2015.</td>
<td>Adherence to nutritional recommendations and sociodemographic variables in patients with diabetes mellitus. ZANETTI, M. L. et al.</td>
<td>To analyze if there is a relationship between adherence to nutritional recommendations and sociodemographic variables of Brazilian patients with DM2.</td>
<td>Adherence to nutritional recommendations was associated with females, over four years of education and family income below two minimum wages.</td>
</tr>
<tr>
<td>Demetra; 10(2): 329-346; 2015.</td>
<td>Treatment adherence to of patients with type 2 diabetes mellitus. ROSS, A. C.; BAPTISTA, D. R.; MIRANDA, R. C.</td>
<td>To verify treatment adherence and knowledge about type 2 DM, as well as to identify associations between those variables and sociodemographic and clinical variables.</td>
<td>There was a high rate of overweight, partial knowledge about the disease and a difference between the means of adherence to the different types of care activities.</td>
</tr>
<tr>
<td>Revista Interd. V.8, n.4, p. 199-204; out/nov/dez; 2015.</td>
<td>Diet adherence barriers in patients with type 2 diabetes mellitus: a narrative review. SANTOS, G. F.; DAMMERO, D. R. R.; VAZ, J. S.</td>
<td>To carry out a narrative review of Brazilian studies that address barriers to nutritional treatment adherence in patients with type 2 diabetes mellitus (DM).</td>
<td>The study showed innumerable arguments for non-adherence to treatment, since the lack of time, family collaboration in changing eating habits, in addition to mistaken beliefs about food and financial difficulties.</td>
</tr>
<tr>
<td>Rev. Min. Enferm; 18(3): 685-690; jul/set, 2014.</td>
<td>Adherence to nutritional counseling for diabetes mellitus in a primary health care service. RODRIGUEZ, M. T. G.; SANTOS, L. C.; LOPES, A. C. S.</td>
<td>To analyze adherence to nutritional counseling in patients with diabetes mellitus (DM) in a Primary Health Care service. 63.6% of the individuals showed low adherence, citing food restriction as the main barrier.</td>
<td></td>
</tr>
<tr>
<td>Psicologia, Saúde e Doenças; 15(3); 567-585; 2014.</td>
<td>Self-monitoring effects on emotional indicators and diabetes treatment adherence. RAMOS, L.; FERREIRA, E. A. P.; NAJJAR, E. C. A.</td>
<td>To compare the effects of three intervention procedures on emotional indicators, quality of life domains and treatment adherence in adults diagnosed with type 2 diabetes. In view of the results, the self-monitoring procedure favored the change of emotional indicators, but had no effect on adherence to diet and regular physical activity.</td>
<td></td>
</tr>
<tr>
<td>Cogitare Enferm; (22)3; 2017.</td>
<td>Therapy adherence of elderly people with diabetes mellitus: Integrative review. COSTA, S. S. et al.</td>
<td>To identify in the literature the factors that influence the therapy adherence of the elderly with Diabetes Mellitus. The study showed low levels of evidence and the urgency of intensifying awareness-raising dialogue with the elderly and their families, in order to maximize and/or maintain their quality of life, autonomy and independence.</td>
<td></td>
</tr>
</tbody>
</table>

According to Pereira and Frizon, the acceptance of the therapy by individuals with type II Diabetes Mellitus has been a challenge for health professionals, caused by the influence of various factors, and requiring changes in the patient’s traditions and life habits. The eating practices one of the fundamental changes, however, these changes are influenced by many variables and are not easy to be absorbed and employed in practice. According to the study conducted by Roos, Baptista and Miranda, treatment adherence should not be considered as an isolated process, but multidimensional, because patients may accept perfectly one aspect of the therapeutic regimen, but not others. According to the information obtained in this study, the sample studied showed little knowledge about issues related to the disease itself. There was no connection between purchasing power and schooling with knowledge about the disease and the factors of therapy adherence. Nevertheless, they highlighted the presence of difference between the means found for adherence to the various modes of self-care activities.

In the research of Costa et al, the acceptance of the treatment many times requires family support, as well as psychological support, especially to adapt to the diet plan. The assistance from the family, coexistence groups and health professionals is important for the therapy adherence and to preserve glycemic control, in addition to the religiosity of the elderly. Some variables negatively affect therapy adherence, namely: existence of complications and other comorbidities, side effects of medications and their continuous and unsafe unavailability by Basic Health Units, thus hindering the correct execution, the low income of the elderly and low level of schooling.

For Zanetti et al, the results of their study showed that adherence to the nutritional recommendations is connected to the female sex, educational level over four years and family income under two minimum wages. This study contributes to the evolution of knowledge about the variables that facilitate and hinder the nutritional treatment adherence in diabetes.

The research performed by Ramos and Najjar reveals a number of factors that influence the difficulties of people with diabetes to accept health professionals’ guidelines. They highlight the absence of a service systematization by the BHU to participants, since the therapy goals were not clear for this sample. The participants could not interpret the values of glycated hemoglobin, program menus aiming to control the consumption of carbohydrates, in order to continue the treatment without affecting the quality of life.

The studies of Rodriguez, Santos and Lopes found that, in addition to impediments narrated by the subjects as obstacles to nutritional therapy adherence, there is the limited evaluation of adherence to the nutritional guidance, mainly by the lack of specific methods in the literature. For the good acceptance of the nutritional therapy by people with DM, some recommendations should be better performed in the nutritional counseling, such as raising the intake of legumes and raw vegetables and fruits, besides reducing the ingestion of oil and fatty foods, aiming to provide with the glycemic control and prevent the complications related to DM. Furthermore, the presence of a specific tool for the practice of nutritional counseling, related to the recommendations for the DM treatment, represents an important strategy to facilitate health professionals’ counseling, as well as to facilitate the understanding of the subject by patients.

Barbosa et al argues that the degree of knowledge about nutrition in diabetes mellitus of the elderly was considered appropriate, but realized that socioeconomic and cultural variables can affect the adherence to the nutritional treatment of diabetes or, yet, food alternatives of people. Nonetheless, the food intake is more suitable among patients with diabetes, since they show a low frequency in intake of high glycemic food and higher frequency in intake of low glycemic food, when compared to the non-diabetic population.

According to Oliveira et al, this jeopardizes the nutritional therapy and, consequently, the evolution of anthropometric and biochemical measurements. The study showed that diabetic patients showed little adherence to dietary guidelines. Thus, to promote information, encourage the studied population and encourage adherence to the personalized treatment and DM control, there should be psychosocial intervention and implementation of nutritional education programs during the assistance.

In the studies by Farias et al, which aimed to observe the adherence by users of long-term therapies, 85% of individuals with diabetes regularly use medicines, nutrition and physical exercise were at second and third plans.

Arrelas et al describe how the DM population is identified and their characteristics, being able to grant contributions of possible aspects that lead patients with DM to
non-acceptance of the treatment. The reasons for non-acceptance are various and different in each studied person. The results of Borba et al., in relation to the adherence to healthy life habits and the creation of more researches to better establish the role of health values and care practices in this population, indicate the accuracy of activities that stimulate behavioral change. However, what allows for the promotion of care actions with the glycemic control is the design of educational activities with active methodologies based on reflection and respect for the autonomy of the diabetic elderly. 

Santos, Dammero and Vaz roused the issue of some obstacles to diet adherence, and how adult patients with DM II perceive them. The subject needs to face several situations to adhere to nutritional therapy, including the DM2 reality as a chronic condition that requires continuous control. Little time, low family participation in modification of dietary practices, mistaken beliefs about the food and financial problems are the various arguments for non-adherence to treatment. Nevertheless, a relevant argument listed among qualitative researches is the distance between the professional and the patient.

The low adherence to the proposed food plan and consequent inappropriate food consumption relate to increased risks caused by poor control of the disease. Differently from what occurs with an adequate diet rich in fibers, capable of reducing total cholesterol and LDL.

The difficulties to change eating habits can be understood by the complexity involving eating behaviors. Not only the social and financial conditions can hinder the involvement of the treatment by the person with diabetes, but also the difficulty to follow the diet, to use medications, lack of time to practice some kind of physical exercise and the non-acceptance of the disease can interfere in the treatment of diabetes. Health professionals have a relationship with treatment adherence, in which new approaches should be made to motivate patients with DM regarding the acceptance of new eating habits and life style.

The adherence to the therapeutic regimen of Diabetes Mellitus is often negatively influenced by the lack of family support, or even financial resources, once this disease has no cure, requiring a continuous treatment throughout patients’ life.

However, the nutritional therapy adherence for individuals with DM II is of paramount importance, considering the individuality of each patient, thus respecting the cultural aspects, resulting in lower rates of complications associated with diabetes mellitus.

**FINAL THOUGHTS**

The review made in the articles showed that the main factors associated with low treatment adherence were eating habits, linked to socioeconomic, cultural and social aspects, as well as the assistance received by individuals with type II Diabetes Mellitus, directly influencing the way they will live with and treat the disease. Health professionals should act as facilitators in the motivation for behavioral changes needed to control the disease, and support the development or strengthening of self-care skills.

Thus, one reiterates the importance of encouraging educational practices and innovative strategies that foster self-care and contribute to the quality of life of the people living with this condition, raising awareness about the importance of changing the life style, which will assist in the prevention and/or delay of complications resulting from the disease.

**REFERENCES**


