

Health education and methodological devices applied in the care of Diabetes Mellitus

Educação em saúde e dispositivos metodológicos aplicados na assistência ao Diabetes Mellitus

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ABSTRACT The objective of this study was to identify the use of methodological devices for behavioral changes and practice of health education for individuals with Diabetes Mellitus (DM). A descriptive, exploratory, cross-sectional study developed in the city of Aracaju, Sergipe, Brazil, with 138 professionals, doctors and nurses of the Family Health Strategy, using a structured interview, having as a theoretical-methodological reference the Model of Care to Chronic Conditions. The results showed that most of the professionals referred to developing health education activities, with the most mentioned themes being: healthy eating and physical exercise. Regarding the use of approaches to change the behavior of users, the most used was the motivational interview, followed by the Transtheoretical Model of Change (MTT). All professionals who use MTT agree with its applicability. It is concluded that the practice of health education for people with DM is developed, while the use of methodological devices for behavior changes is still underutilized, especially the Operative Group.

KEYWORDS Health education. Diabetes Mellitus. Motivational interview.

RESUMO O objetivo deste estudo foi identificar o uso de dispositivos metodológicos para mudanças de comportamento e a prática de educação em saúde aos indivíduos com Diabetes Mellitus (DM). Estudo descritivo, exploratório, de abordagem transversal, desenvolvido no município de Aracaju, Sergipe, com 138 profissionais, médicos e enfermeiros da Estratégia Saúde da Família, utilizando entrevista estruturada, tendo como referencial teórico-metodológico o Modelo de Atenção à Condição Crônica. Os resultados mostraram que a maioria dos profissionais referiu desenvolver atividades de educação em saúde, sendo os temas mais referidos: alimentação saudável e exercício físico. Com relação ao uso de abordagens para mudança de comportamento dos usuários, a mais utilizada foi a entrevista motivacional, seguida do Modelo Transteórico de Mudança (MTT). Todos os profissionais que utilizam o MTT concordam com sua aplicabilidade. Conclui-se que a prática de educação em saúde para pessoas com DM é desenvolvida, enquanto o uso de dispositivos metodológicos para mudanças de comportamento ainda é subutilizado, sobretudo o Grupo Operativo.

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PALAVRAS-CHAVE Educação em saúde. Diabetes Mellitus. Entrevista motivacional.



Introduction

Health education can be defined as a set of pedagogical, participatory practices, that encompass knowledge which include the various fields of action and that empower individuals and communities to develop their capacities as a result of a praxis based on critical reflection on reality¹. In this sense, the National Policy on Health Promotion highlights, among other topics, the importance of health education and the need to strengthen and qualify family health².

Traditional health education translates into preventive activities, focusing on diseases, how to avoid them, their consequences and their reestablishment, using prescriptive actions³, contemplating biomedical themes related to the disease and its treatment. On the other hand, contemporary health education practices are dialogical, addressing themes that are related to the daily life of people, such as leisure, healthy eating, and popular knowledge⁴.

Health education is a form of intervention proposed by the Care Model to Chronic Conditions (MACC)⁵. This intervention can be individual or group type⁶.

Chronic conditions can be understood as health situations that require continuous care, which can be for a long period or even for a lifetime⁷, like Diabetes Mellitus (DM). Since it is a permanent condition, it is important that the affected person can take care of his/her own health. Self-care supported by the health professional is a more recent practice and translates into the use of technologies according to the needs of the individual⁵, and can be instrumentalized through the use of health education as a strategy for co-responsibility of the person for care, from the awareness about their health condition and their role in this process⁸.

A study carried out with people with type 2 Diabetes Mellitus (DM2) identified that individual intervention allows clarification of doubt, knowledge, as well as reduction of the

impact of DM2 on the quality of life of people; and when added to group practice, there is an increase in treatment adherence⁶.

For the treatment of DM, it is important to Change of the Lifestyle (MEV). In order to achieve this goal, methodological and practical health education⁸ methods can be used. Among the devices or approaches to behavior change are: Transtheoretical Model of Change (TMC), Motivational Interview (MI) and Operative Group (OG)⁵.

The use of methodological devices to promote behavior and lifestyle changes with the use of contemporary technologies is implemented with the expectation of improving care for people with chronic conditions⁵.

From the exposed above, the present study aimed to identify if the practice of health education for people with DM is developed, as well as if methodological devices are applied for behavior changes.

Material and methods

This is a descriptive, exploratory, analytical, cross-sectional study, developed at the Family Health Units of the city of Aracaju, state of Sergipe.

The population was made up of doctors and nurses of the Family Health Strategy (FHS). The sample consisted of 138 professionals who met the criterion of inclusion: being a doctor or nurse in the workforce of the family health teams. Professionals who worked in the team by contract linked to the Primary Care Professional Valorization Program (Provab), More Doctors Program, autonomous RPA (Receipt of Autonomous Payment) were excluded. Thus, 43 doctors (31.16%) and 95 nurses (68.84%) participated in the study, most of them female (107 – 77.54%), with an average age of 47.28 ± 10.09 years, 127 (92.03%) were specialists, with 68 (53.54%) in public health/collective health/family or community health and 59 (46.46%) in other areas.

Data collection was carried out through interviews with the application of an instrument

developed for this study, containing questions regarding the practice of health education and the use of approaches to behavior change, according to the theoretical and methodological framework of MACC⁵.

Methodological devices or approaches for behavior change:

Transtheoretical Model of Change (MTT):

Behavior changes occur sequentially, in stages in which the person goes through to until develop a new desired behavior⁵. This model can be used by people who want to succeed and not retroact in their behavior⁹. Authors describe stages of behavior change¹⁰: pre-contemplation, contemplation, preparation, action and maintenance.

Pre-contemplation: at this stage, there is still no intention of changing behavior. Individuals are not aware of their problems, while close people are aware of their existence.

Contemplation: stage in which the individual recognizes the problem, but still is not able to change attitude, behavior.

Preparation: here the individuals intend to change and take action.

Action: it is at this stage that changes occur and that new behaviors can already be observed.

Maintenance: at this stage, the individual strives to maintain the new behavior in a sustained manner. When describing this stage, they emphasize on the possibility of relapse, and the individual can regress to the pre-contemplation stage.

Recurrence, also called relapse, can be considered a sixth stage⁵.

Motivational Interview (MI):

This device considers the state between the awareness of the problem and the attitude towards behavior change/readiness. The professional uses his/her professional knowledge, the experiences of the individual and the incentive to autonomy. It is important to consider the context, understanding and difficulties of each individual, developing a dialogical relationship⁵.

Operative Group (OG):

It is an active intervention technique in which the individual, subject of care, is fundamental in the process of learning, knowledge building and health self-care¹¹. It is characterized by being formed by people with needs and common goals, in an organized way, in which there is a development of effective bonds⁵. It is composed of a coordinator, an observer and the members¹¹.

After collecting the data for analysis, they were compiled in the program Microsoft Office Excel[®] version 2016, from the technique of double typing. Univariate and inferential descriptive analysis were performed. Nominal and ordinal qualitative variables and quantitative variables were obtained.

The descriptive analysis of the qualitative variables proceeded with the categorization of the data and obtaining the respective frequencies and percentages; and for the quantitative variables, measures of central tendency (mean) and variability (standard deviation) were calculated.

For the inferential analysis, a cross-check was made between the qualitative variables related to its application and use in the MACC perspective. The software used for statistical analysis was R, version 3.4.0¹². In association with other qualitative variables, Chi-Square and Fisher's Exact tests were adopted. The significance level of 5% was considered as the decision threshold.

The data collection was initiated after approval of the project by the Ethics and Research Committee with human beings of the Federal University of Sergipe, under the n^o CAAE 77719517.3.0000.5546.

Results

When asked about the accomplishment of health education activities, more than half of the professionals reported developing it; and among the themes addressed, the most mentioned were healthy eating and physical activity (*table 1*).

Table 1. Implementation of educational activities for individuals with DM by doctors and nurses of the FHS. Aracaju, SE, Brazil, 2017-2018

Variable	n(%)
Educational activities	
Yes	89 (64,49)
No	49 (35,51)
Themes referred to*	
Healthy eating	80 (89,89)
Physical exercise	58 (65,17)
Foot Care	46 (51,68)
Weight control	36 (40,45)
Self-monitoring of capillary glycemia	30 (33,71)
Use of medicines	25 (28,09)
Use of alcohol and tobacco	21 (25,59)

Source: Own elaboration.

*n=89.

As for the use of approaches to behavior change, some professionals use one or more, simultaneously (*table 2*), while 42 (30.43%) use MI, and 6 (4.35%), MTT.

Table 2. Use of approaches to behavior change of individuals with DM by doctors and nurses of the FHS. Aracaju, SE, Brazil, 2017-2018

Variable	n(%)
Motivational Interview	42 (30,43)
Transtheoretical Model of Change	6 (4,35)
Transtheoretical Model of Change, Motivational Interview and Operative Group	4 (2,90)
Transtheoretical Model of Change and Motivational Interview	84 (60,87)
Motivational Interview and Operative Group	2 (1,45)

Source: Own elaboration.

Regarding the relation between the agreement and the use of MTT by the doctors and nurses of the FHS, 131 professionals agree with its applicability; and of these, 92 (70.23%) use, while 7 do not agree and do not use.

Discussion

According to the National Primary Care Policy, educational activities focused on prevention are the responsibility of the FHS¹³ teams. The results revealed that health education activities directed at people with DM have been carried out by the majority of professionals within the scope of the FHS of Aracaju.

The themes mentioned by the participants of this study are part of the menu suggested in the care line of the Ministry of Health for people with DM⁸. As in the present study, diet¹⁴⁻¹⁸, physical exercise¹⁴⁻¹⁷, foot care¹⁴, monitoring glycaemia^{15,17}, medications^{14,15,17}, and alcohol consumption¹⁹ were the subjects explored in health education activities. It should be emphasized that the present study is different from the others because it brings a quantitative description of the number of professionals participating in the research that approach each theme in the health education activities that they develop.

Healthy eating, practice of physical exercise, alcohol consumption, drug treatment, when indicated, are among the pillars of DM treatment, because they interfere with glycemic control, as well as in the control of other risk factors for cardiovascular diseases⁸.

Foot care was the third theme mentioned by most participants. However, although it is an extremely relevant topic due to the high number of amputations²⁰, only one study explored health education activities¹⁴.

The consumption of alcohol and tobacco were the subjects mentioned by the smaller part of the participants. Moderate

consumption of alcoholic beverages is allowed for people with DM, but overuse may lead to uncontrolled blood glucose²¹. Study results revealed that approximately 90% of people with DM had a low risk for alcohol dependence¹⁹, however, the study was performed with a relatively small sample, which may have influenced the outcome.

Studies mention other themes addressed in health education activities, such as insulin therapy^{14,15}, pathophysiology of DM, signs of hypoglycemia and hyperglycemia¹⁴, complications and maintenance of the emotional balance for good conviviality with DM¹⁷.

The results also revealed that 35% of the professionals did not perform health education activities, which draws attention, considering that these practices help in the health care of the person with DM, promoting behavior change, increased adherence to treatment, empowerment and self-care of health, aspects that interfere in glycemic control¹⁶. In this sense, FHS teams should include educational activities aimed at health promotion and prevention of complications¹³.

Associated with health education activities, tools to approach behavior change can be used by properly trained professionals, such as cognitive-behavior strategies that help in adherence to MEV⁸.

Most of the participants in this study use more than one approach to behavior change, especially MI and MTT. The periodicity of the use of these methodological devices by professionals is daily in their performance in clinical practice with people with chronic conditions. The choice of approach for each case is defined based on the needs of each client and directly implies adherence to the care plan, metabolic control and quality of life in face of the health condition⁵.

MI is evaluated as an efficient methodological device^{22,23}, used for health education aimed at people with DM^{24,25}.

MTT makes it possible to diagnose the situation of availability to change behavior in

the population at stake, making possible the understanding of early strategies to avoid diseases and complications²⁶. This study reveals that positive responses from interventions based on the MTT led to changes in eating and physical activity behavior in people with DM2, as well as improved anthropometric and biochemical data²⁷.

The OG approach has been little used in Aracaju. A literature review study on the implementation of this approach in Primary Health Care has evaluated it as efficient, practical, that enables qualified listening, as well as prevention, promotion and health education²⁸. In the context of DM, recent references that used OG were not found in the literature. A study conducted with people with DM identified their use as a successful practice²⁹.

The use of contemporary technologies in managing the care of people with DM contributes to the achievement of results, considering the behavior and lifestyle changes. The methodological devices are applied in the monitoring of the chronic conditions and follow the specificities of each case, making the plan of care real and sustainable, significantly improving the quality of life of the people assisted. Studies have shown successful results of the use of devices in health promotion and prevention²⁸, food control, physical exercise, glycemic control²⁷, and weight loss²⁶.

Conclusions

The practice of health education for people with DM is developed by most of the professionals who were part of this study. The methodological devices for behavior change are still underutilized, especially the OG.

The results of this study reveal the need to train professionals to apply the tools suggested by MACC in order to improve professional practice and optimize care for people with DM.

Collaborators

Lima GCBB (0000-0002-1192-3201)* contributed to the conception, planning, analysis and interpretation of data; elaboration of the draft, critical review of content; and approval of the final version of the manuscript. Guimarães AMDN (0000-0003-2856-971X)* contributed to the elaboration of the draft and approval of the final version of the manuscript. Silva JRS (0000-0002-1918-7122)* contributed to data analysis and critical review of content. Otero LM (0000-0002-4436-2877)* contributed to the elaboration of the draft and critical review of content. Gois CFL (0000-0003-4499-3756)* contributed to the conception, planning, analysis and interpretation of data; elaboration of the draft, critical review of the content; and approval of the final version of the manuscript. ■

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