RESEARCH

NURSING CONSULTATION TO PERSONS WITH DIABETES MELLITUS IN PRIMARY CARE

CONSULTA DE ENFERMAGEM À PESSOA COM DIABETES MELLITUS NA ATENÇÃO BÁSICA

CONSULTA DE ENFERMERÍA DE PERSONAS CON DIABETES MELLITUS EN LA ATENCIÓN PRIMARIA

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ABSTRACT

This study aimed to investigate the actions performed during nursing consultations to persons with diabetes mellitus in primary care. This descriptive study was conducted from August 2010 through June 2011 with 14 nurses who worked in the Family Health Strategy units in Picos-PI. We observed 42 consultations performed by nurses in the selected units. Afterwards, we interviewed the nurses to identify the aspects covered in the consultations. We found that nursing consultations to persons with diabetes are not yet institutionalized as a routine practice in the units investigated and that they are still guided by the biomedical model. In addition, we observed that some aspects of the consultation are only partially developed and, in the view of nurses, the actions that prevail in their consultations are related to patient history and nursing evolution. This study revealed that nursing consultations to persons with diabetes are still incipient. Thus, there is a need for a process of continuing education for nurses involved in the care of DM patients.

Keywords: Diabetes Mellitus; Nursing Care; Primary Health Care; Basic Health Services.

RESUMO

Objetivou-se investigar as ações realizadas durante a consulta de enfermagem à pessoa com diabetes mellitus na atenção básica. Pesquisa descritiva realizada no período de agosto de 2010 a junho de 2011 com 14 enfermeiros atuantes na Estratégia Saúde da Família de Picos-PI. Foram observadas 42 consultas de enfermagem nas unidades selecionadas e, posteriormente, realizadas entrevistas com os enfermeiros a fim de identificar os aspectos que contemplam nas consultas. Constatou-se que a consulta de enfermagem ao usuário com diabetes ainda não está institucionalizada como uma prática de rotina nas unidades investigadas e que ainda é realizada de acordo com o modelo biomédico. Observou-se abordagem parcial de alguns aspectos da consulta e, na ótica dos enfermeiros, em suas consultas prevalecem as ações desenvolvidas no histórico e evolução de enfermagem. Verificou-se que a consulta de enfermagem ainda é incipiente em relação à pessoa com diabetes, fazendo-se necessário um processo de educação permanente dos enfermeiros envolvidos no atendimento.

Palavras-chave: *Diabetes Mellitus; Cuidados de Enfermagem; Atenção Primária à Saúde; Serviços Básicos de Saúde.*

RESUMEN

El objetivo de este trabajo ha sido analizar las acciones llevadas a cabo durante la consulta de enfermería de personas con diabetes mellitus en la atención primaria. Investigación descriptiva realizada entre agosto de 2010 y julio de 2011 con 26 enfermeros de la Estrategia Salud de la Familia de Picos-PI. Fueron observadas 42 consultas de enfermería en los centros elegidos y, posteriormente, realizadas entrevistas con los enfermeros a fin de identificar los aspectos contemplados en las consultas. Se constató que las consultas de enfermería de los usuarios con diabetes todavía no están institucionalizadas como práctica de rutina en los centros investigados y que sólo la llevan a cabo la mitad de los enfermeros. Se observó enfoque parcial de algunos aspectos de la consulta y, desde la visión de los enfermeros, en sus consultas prevalecen acciones desarolladas en la historia clínica y en la evaluación de enfermería. Se verificó que la consulta de enfermería aún es incipiente con respecto a las personas con diabetes y que es necesario que los enfermeros involucrados en este tipo de atención reciban educación permanente.

Palabras clave*: Diabetes Mellitus; Atención de Enfermería; Atención Primaria de Salud; Servicios Básicos de Salud.*

INTRODUCTION

Chronic health conditions impose a high social burden and cost on society, because they can cause dependence and disability, even in young adults. Thus, diabetes mellitus (DM) requires individual and continuous care to prevent acute and chronic complications. The performance of health care professionals in primary care is of paramount importance for the early detection and careful monitoring of DM cases.[1]

Worldwide it is estimated that the number of people with diabetes will reach 350 million by 2025. This increase in the number of DM cases is particularly noticeable in poor and developing countries. Early disease morbidity and mortality are economically burdensome for welfare departments, contributing to the expansion of poverty and social exclusion.[2]

A study conducted in 2011 showed that Brazil, which currently ranks eighth in the number of DM cases (with a prevalence of 4.6%), is expected to rank sixth by 2030 (with a prevalence of 11.3%). In Brazil, the capital city with the highest number of people with DM is Fortaleza, accounting for 7.3% of all cases.[2]

This increase in the global burden of DM requires actions to strengthen and improve care for people with this condition, through comprehensive and longitudinal care. In this context, an important action is the performance of nursing consultations (NCs). It is an exclusive nursing task, which should be executed in such a way as to meet patients´ health care needs in a comprehensive and effective manner. NCs are considered an essential element of health care. They should be performed in an individualized and participatory manner, providing conditions for improving the health-related quality of life of patients and creating a bond with the individual, the family and the community.

NC is a methodology used in the practice of outpatient and community nursing care. It must follow pre-established protocols which were created to standardize health care actions to persons with DM.[4] The Ministry of Health recommends that NCs to this group of people include actions such as: stratify cardiovascular risk; instruct changes in lifestyle and non-drug treatment; verify adherence to treatment and possible complications; plan strategies together with the health care team to promote adherence to treatment; and examine lower extremities for foot at risk.[5]

Nursing interventions in individuals with DM should be comprehensive and focused on education to effective self-care.[6,7] Overcoming the biomedical model of care during consultations is another challenge faced by nurses, because some nurses were trained before the establishment of the Family Health Strategy (FHS) and have concepts and practices that are still incipient with regard to health promotion.[8]

The EC in primary care helps effectively in improving the health situation. Previous studies show that the role of nurses in consultations to persons with DM is significantly associated with glycemic control and that individuals not referred for nursing consultation have worse treatment results.[9,10] In addition, NC is seen by patients and health professionals as a contributor to disease control and an opportunity to promote adherence to therapy.[8]

During the consultation, the nurse has the opportunity to get to know the reality of each patient, promote measures for glycemic and weight control, and encourage regular physical activity and healthful diets.[11] It is necessary to plan strategies to solve DM-specific problems presented by this population. In the nursing process, nursing consultations in primary care are essential in preventing chronic disease complications and encouraging persons with DM to continually assess their care, review their practices and reflect on the best way to perform it.[7]

Furthermore, this research is relevant because it presents and discusses the aspects covered in NCs to DM patients, which should focus on training individuals to perform self-care, using organized and systematic approach that contribute to improving quality of life. The educational process in NCs should prioritize the recommendation of measures to improve quality of life, such as healthy eating habits, encouragement of regular physical activity, reduced alcohol consumption and smoking cessation.[2]

Thus, the aim of this study was to investigate the aspects covered in the NCs to persons with diabetes in primary care, according to the recommendations set out by the Ministry of Health.[2-5] In order to do so, we observed the consultations performed by the nurses and interviewed them afterwards.

METHODS

This descriptive study was conducted from August 2010 through June 2011 with 14 nurses who worked in FHS units in Picos-PI. Our sample was composed of all the nurses who performed NCs in the selected primary health care units (PHCUs) at the time of data collection. The PHCUs were selected by convenience, and the study was conducted at those units to which the authors had better access.

The study was conducted in three distinct phases. In the first phase, the nurses were informed about the research objectives through the Informed Consent Form (ICF) and invited to participate in the study. After agreement to participate was obtained, new visits to the PHCU were scheduled so that the researchers could watch the NCs to persons with DM.

In the second phase of the study, three NCs were scheduled in each unit. DM patients were informed by the nurse and the researcher about the nature of the study, and requested to give their permission for the researcher to stay in the consultation room. A checklist containing the recommended actions for a NC to persons with diabetes was completed while watching the consultations. The checklist was prepared by the authors

of this study based on the recommendations of the Ministry of Healthe[2-5] and had been validated as to its content by experts through the completion of an eletronic evaluation form. The findings were analyzed using Statistical Package for Social Sciences (SPSS), version 17.0, and presented in tables and graphs.

The checklist investigated aspects convered in the consultation, such as: steps of the nursing process (NP) followed; data collected during medical history and physical examination of the person with diabetes; instructions about foot care, diet, insulin therapy and use of oral hypoglycemic agents given during the consultation.

In the third phase, after observing the consultations, a recorded interview was held at the PHCU with the nurses. These interviews were previously and individually scheduled. Nurses were asked the following question: Which aspects should be addressed in the nursing consultation to persons with diabetes?

The statements were organized and categorized using thematic analysis.[12] All interviews were transcribed and content analyzed. We pre-analyzed the data in order to select the parts of the interview that would be later analyzed in the study and to select the analysis (or coding) units, which were sentences and paragraphs. Next, we explored the material available. The data were coded and interpreted according to the literature on the subject.

The results are presented in the following order:

a. aspects covered in the NC (data obtained by observing the consultation and completing the checklist);
b. aspects covered in the NC from the perspective of nurses (results obtained from the analysis of the statements of the interviewed nurses).

The study was approved by the Ethics Research Committee of the Federal University of Piauí, Protocol 0269.0.045.000.10. The study followed the principles expressed in Resolution No. 466/12 of the National Health Council (CNS), which states the ethical principles of research involving human subjects. No physical harm was caused to participants and there was no risk of embarrassment for them.[13]

RESULTS AND DISCUSSION

Aspects covered in the nursing consultations watched by the researchers

The results presented here refer to the observations of 42 NCs. It was necessary to previously schedule all consultations with the nurses and DM patients in order to observe them, because NCs to persons with diabetes are not a routine practice in most of the PHCU investigated, i.e., this care was provided by spontaneous demand, even urban area units. Some nurses reported performing monthly consultations. However, in some cases, patient monitoring was limited to dispensing medications.

The literature recommends that nurses refer: patients with controlled blood glucose level and no signs of lesions in target organs or comorbidities to bi-annual medical consultations; and patients with lesions in target organs or comorbidities, even if with controlled blood glucose levels, to quarterly medical consultations.[5]

For the treatment of DM patients, it is essential to link patients and health care units, ensure diagnosis and provide care by updated professionals, since the diagnosis and control of DM prevent complications and/or at least slow the progression of existing complications. Furthermore, the increased contact with the health care service promotes greater adherence to treatment.[1]

Regarding the implementation of the Nursing Procress (NP), Table 1 presents the aspects covered in the 'nursing patient history' stage – which involved anamnesis and physical examination – observed during consultations.

Table 1 - Aspects covered in the nursing patient history. Picos, 2011

Nursing patient history	*f*	%
Anamnesis		
Dietary pattern/performance of physical activity	35	83,3
Symptoms of hypo- and hyperglycemia	28	66,7
Previous laboratory tests	24	57,1
Metabolic complications	2	4,8
Foot and skin infections	8	19
Lower-extremity ulcers	3	7,1
Visual disturbances	8	19
Physical examination		
Blood pressure	41	97,6
BMI calculation *	35	83,3
Capillary blood glucose	27	64,3
Peripheral arterial pulses	5	11,9
Lower limb edema and foot examination	6	14,3

* BMI: Body Mass Index.

It was noticed that, during anamnesis, questions about eating patterns and physical activity were the most frequently observed actions performed, followed by the assessment of symptoms of hypo- and hyperglycemia, which was conducted in 66.7% of consultations. Regarding the aspects assessed on the physical examination, patients' blood pressure (BP) was measured in 41 consultations, while the body mass index (BMI) was calculated in 35 consultations.

According to the recommendations of the Ministry of Health[2-5], anthropometric measurements and BP are relevant aspects of the physical examination of persons with DM, as

they can detect disease complications and identify other conditions which, when associated with DM, increase morbidity and mortality, and affect treatment.

We found that the examination of the lower extremities was only performed in 14.3% of the consultations. This corroborates other studies in which the examination of the foot was only carried out in 21% of the subjects. The authors reveal that examination of the lower extremities with sensitivity testing is rarely performed, and highlight the absence of the use of monofilament testing.[14-16]

The development of foot self-care skills is an essential part of educational trainings for persons with DM. A study conducted in São Paulo, SP, highlighted that non-recognition of plantar insensitivity and poor metabolic control of persons with DM are predicting factors of foot ulcers, implying high risk of recurrence of amputations.[17]

A similar study conducted in another city of the State of Sao Paulo showed that 55% of patients with DM reported not having performed an examination of the feet since the onset of the disease. This reveals how little attention is paid by health professionals and persons with diabetes to these types of care.[18]

Another important aspect investigated in this study was whether patients were instructed by the nurses to monitor visual disturbances which can be caused by DM. We found that in only 19% of the consultations patients were instructed on this subject. This is a worrying finding, since it is expected that at least 60% of patients with DM undergo eye examination. In this context, the nurse plays a key role in advising and referring patients with DM to an ophthalmologist.[19]

DM is considered the main cause of legal blindness in adults of working age. Education of the person with diabetes and his/her family encourages more regular screening for visual disorders, such as diabetic retinopathy and low visual acuity.[20] Educational activities developed in NCs should be regarded as the mainstay of treatment for the disease, because they contribute significantly to metabolic control and minimize the development of chronic complications by empowering individuals to better self-care.

Health education should be directed at the needs of the individual.This requires more versatility nurses, whose role will shift from a source and transmitter of knowledge (based on a predetermined script) to a facilitator of the knowledge to be acquired by the persons according to what they find necessary.[19-22]

Education for self-care of individuals with DM is a process of education on disease management and should be the focus of NCs.[6] Communication with individual during the consultation is seen as an important health care delivery tool. It plays an important role in the development of trust and bonding between the patient and the caregiver, and represents a care that is capable of producing health, autonomy and creating co-responsibility in promoting quality of life.[23]

Figure 1 summarizes the main instructions given by nurses during the consultations observed by the researchers.

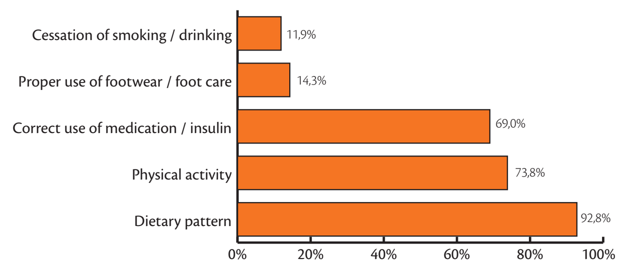

Figure 1 - Instructions given by nurses during NC. Picos, 2011.

Most instuctions given by nurses were related to healthy eating habits, physical activity and proper use of medication. These measures relate to the essential principles of DM treatment and are similar to results reported in other study.[6]

The NCs held by the nurses in this study represent an educational process in line with the recommendations of the Ministry of Health[2-5], because they are designed to help individuals prevent complications and achieve good metabolic control, which usually depends on proper nutrition and regular physical exercise.

Aspects covered in the nursing consultations from the perspective of nurses

From the interviews with the nurses, it was possible to identify which aspects are seen by these professionals as essential to the NC, in order to provide comprehensive care to individuals with diabetes. These aspects are shown in Table 2. Interviews and observations of consultations were conducted at different times.

We found that nurses cited the performance of actions that are related to only two stages of the NP: nursing patient history and implementation. The literature shows that NCs have been performed in a limited way in primary care, due to difficulties such as excessive bureaucratic activities, deficiencies in the physical infrastructure of health care facilities and lack of team bonding.[14]

A study on the aspects covered in NCs to persons with hypertension also found that some important aspects of the NP were not performed by nurses, compromising the monitoring and improvement in health status of those persons.[24]

A study conducted in Minas Gerais with nurses who cared for people with DM in two primary health care units and one hospital service found that nurses did not record all stages of the NP on the medical charts. It is noteworthy that most of the documentation in nursing notes were related to patient complaints, procedures carried out, test results and referrals to specialist professionals such as a nutritionist.[25]

Table 2 - Aspects covered in the NC to persons with diabetes according to the nurses. Picos, 2011

Stages of the Nursing Process	Nurses' quotes	Aspects covered
Nursing patient history	[...] when you hold a HIPERDIA consultation (for hypertension and diabetes patients), you have to see the whole issue, the social issue, see the individual as a holistic being, because everything will affect a person's health [...] (E.2).	Sociodemographic characterization
	And the family history too, you have to know whether the individual with diabetes or hypertension had a diabetic or hypertensive parent or relative (E.4).	Family history
	[...] physical examination is of paramount importance [...] we pay special attention to the eye issue, the issue with the extremities, including the feet [...] in addition, there is the measurement of vital signs, weight, blood pressure, we also check the {body} circumference and include the issue of capillary blood glucose [...] (E.5).	Physical examination
	The tests, do them regularly, those required by the Ministry of Health [...] the blood glucose test has to be performed at least every three months [...] every six months we request creatinine and urea tests, to check kidney function (E.6).	Tests
Implementation	Nurses should start focusing on non-pharmacological therapy again [...] really focus on this recommendation in all consultations and always ask: what are the patient's dietary habits? Does he/she performs physical activity? And at the collective level, always encourage diabetics to truly adhere to those non-pharmacological measures [...] (E.3).	Non-pharmacological treatment
	[...] in addition to the oral medication, we also have the issue of diabetic individuals who use insulin, and then we have to be careful with the handling of the syringe, the measurement of the prescribed dose [...] (E.5).	Pharmacological treatment
	[...] another instruction that we give is to explain about complications [...] he can have hypoglycemia [...] hyperglycemia. So we instruct him about the precautions he should take and the signs and symptoms that show when it is high or low. [...] about the diabetic foot. Regarding the proper use of footwear, how to cut nails, use blunt-tip scissors (E.6).	Complications
	And another thing too, is smoking, smoking habit, right? So [...] we instruct this patient to quit smoking, I know it's hard, but he/she should at least smoke less (E.6).	Lifestyle
	[...] refer to a nutritionist [...] to an ophthalmologist [...] because the performance of a single professional does not help [...] (E.3).	Multidisciplinary care
	[...] we give educational lectures and educate them about what the disease is and what consequences it entails [...] (E.1).	Educational actions

This finding indicates the need for stressing – in nursing education – the importance of the knowledge and use of the NP in different spheres of the nursing activity. Moreover, the quality of records should also be improved through professional training, in order to make feasible the implementation of the NP.

The academic training in nursing must ensure a multi-professional profile and provide professional identity so that nurses are able to act in unpredictable situations, since this is the reality to which nurses are usually exposed in health care services.[24] Using the NP is personalizing care and creating favorable conditions for the application of methods related to the provision of dignified and effective care, which contributes to the improvement of people's health.

In this sense, NCs should be reconsidered as an action that may alone have an impact on health, without the intrinsic need for medication and tests. This is, however, a conflictual exercise for all nurses who have received biomedical training and learned to reason diagnostically.[8]

When the NC allows the exchange of knowledge (through a dialogue) between the nurse and the person with DM, the subject is seen as having a knowledge that must be considered in the care process and discussed for improving coping strategies to deal with the health needs of individuals, families and communities.[23]

The nurses' statements reveal that they consider important to establish the health and disease profile of persons with DM through data collection. Most of them reported developing individual recommendations and making referrals to specialized treatment facilities.

With regard to the advancement of nursing practices for promoting the health of individuals with DM, there are barriers that hinder nurses from focusing their work on populations and their health needs. These barriers involve individual difficulties in working with the community in defense of healthy public policies, since some nurses feel more comfortable working with single individuals. In addition, for some nurses, health promotion is restricted to teaching, especially about behaviors for a healthy lifestyle.[26]

One limitation of the study is that care in the units investigated was provided by spontaneous demand of DM patients, i.e., consultations were not routinely scheduled on specific days of the week. This made it difficult to schedule the observations of NCs. By observing practices of nurses, we could notice that the NP was not used in order to organize and systematize care. This obstacle may be overcome by assessing the factors that hinder the use of the NP by professionals.

Therefore, further studies should be conducted in order to identify the reasons for not performing the NC to persons with

DM in primary care, according to nurses' perception. With this information, managers may be able to plan training activities for nurses, so that they can discuss the benefits from using the NP, both to the patient and to the professional, given that it favors communication and continuity of care.[25]

CONCLUSION

This study was important for showing that only a few nurses perform nursing consultation to persons with diabetes in primary care and that their actions are guided by the biomedical model. These findings are of concern, given the importance of this activity for the prevention of disease complications, the strengthening of nurses' professional identity as members of the family health care team, and patient empowerment for self-care.

Some aspects of the nursing consultation ceased to be addressed, which affected the provision of comprehensive care to patients with DM The most common procedures were: anamnesis, physical examination and individual recommendations. Thus, we conclude that nursing consultations are performed in a fragmented way and represent an opportunity to provide health education under the traditional model, which does not consider the individual in the context of his or her life and with the potential to participate in the care process.

This study therefore evidenced the need for ongoing education of nurses regarding their actions. They should take responsibility for acquiring the necessary competencies to perform nursing consultations appropriately. It is important to stress that managers play a key role in promoting training and incentive programs for systematic practice.

Our findings indicated the need for further actions aimed at the improvement of nursing care delivery to people with diabetes in primary care. Nursing consultations become an essential element in this context and must therefore be carried out in a systematic and effective manner, in order to support health promotion and comprehensive care.

Furthermore, this study contributed to identifying the existing gaps in nursing practice in basic health care settings. Theses gaps affect quality of patient approach, professional autonomy and planning of health actions aimed at community empowerment.

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