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ORIGINAL ARTICLE

ATTITUDES OF HEALTH PROFESSIONALS TOWARDS TYPE 2 DIABETES CARE IN PRIMARY CARE

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ABSTRACT

Objective: to analyze the attitudes of professionals working in Primary Health Care in relation to the care of people with type 2 diabetes mellitus (T2DM). **Method:** cross-sectional study conducted with 56 primary health care professionals in Divinópolis, a city in the center-west of Minas Gerais. The attitudes of professionals were measured through the instrument Scale of Attitudes of professionals in relation to diabetes Mellitus (EAP-DM) applied via e-Surv web platform. Data were collected between May and July 2019. For analysis, the Mann Whitney and Kruskal Wallis tests were used. **Results:** of the 56 professionals, 36 (64.3%) had less than 10 years of experience in primary care and 40 (71.4%) completed specialization in the area of activity. Participants showed positive attitudes towards diabetes, with a mean score of 4.37 (SD: 0.22), ranging from 3.76 to 4.85. Physicians and psychologists showed less favorable attitudes towards T2DM care when compared to nurses and physical therapists (p-value <0.05).**Conclusion:** all professionals showed positive attitudes and the level of these attitudes varied according to professional category.

Keywords: Attitude. Health professionals. Type 2 Diabetes Mellitus. Primary Health Care.

INTRODUCTION

Type 2 diabetes *Mellitus* (T2DM) stands out as one of the four non-transmissible diseases with the greatest worldwide impact from the clinical and economic point of view. It is considered a major public health problem, representing an important cause of morbidity and mortality in the world. Because it has a multifactorial etiology and has repercussions on psychological aspects, the management of T2DM is still a challenge both for those who live with this chronic condition and for health professionals[1-3].

Thus, professionals should present favorable attitudes to the condition of diabetes, motivating people to changes in behavior and self-care. Attitudes demonstrate the predisposition of each individual and are composed of affective determinants (emotions), behavioral and cognitive (beliefs). The attitudes of health professionals determine the behavior they adopt, with repercussions on the treatment results, and may interfere with the care provided positively or negatively[4,5]. Thus, favorable attitudes can be understood as the ability and ability of professionals to dialogue and empathy in understanding the severity and psychosocial impact of this chronic health condition. Conducting an educational strategy that supports the autonomy of people with diabetes has been proven to produce promising results in the treatment of this condition, significantly related to less depressive symptoms and glycemic control[4].

In this context, Primary Health Care (PHC), with the Family Health Strategy (FHS) as a structural arrangement, It is presented as an adequate scenario for the development of psychosocial strategies conducted by different health professionals in the teaching-learning process and with an empowering posture, preparing the person with diabetes for self-care[6-8].We emphasize the importance of

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multidisciplinary teams that are engaged in the activities offered by the FHSs, which must be educational, dynamic and attractive, always aiming at the active participation of people with this condition[8].

Regarding the follow-up of people with T2DM, studies show that the attitudes of each professional in the consultation, home visit and group activities have revealed differences in the guidelines related to lifestyle change, according to the categories, doctors, nurses, nutritionists and pharmacists[6,9,10].

Given the magnitude of the problem, considering that the attitudes adopted by health professionals can influence people's decisions in the management of diabetes, it is important to identify them. The identification of these attitudes is essential to recognize difficulties and promote investments and adjustments that favor the development of positive attitudes of professionals, an important assumption for the achievement of the principles of the Unified Health System (SUS) within the scope of PHC. Given the above, the hypothesis of the study is that the attitudes of health professionals regarding the care of people with type 2 diabetes differ according to the professional category. Thus, the objective was to analyze the attitudes of professionals working in Primary Health Care in relation to the care of people with T2DM.

METHOD

This is a cross-sectional study. This study was carried out with higher education professionals from the Family Health Strategy (FHS) teams of the PHC of Divinópolis, a medium-sized city in the midwest of Minas Gerais. The Primary Health Care (PHC) of the municipality had coverage of Family Health Strategy (FHS) of the population of 47.79%, corresponding to 32 teams in the year 2020.

The sample was selected for convenience. Only top-level health professionals from 22 FHSs who performed educational activities with people with T2DM were invited to this study. The choice was made because these professionals assume a character of protagonism before the actions agreed in the PHC, so it is necessary to recognize the importance of the profile of health professionals of higher level in relation to diabetes[11].

Regarding the research biases, a possible source of bias would be to select professionals who, for not having a very close relationship with the person with diabetes, could not develop assistance activities recommended by SUS. However, the inclusion criterion tried to control this bias, since the health professional should have been inserted in PHC for three months or more and provide assistance to people with T2DM. Exclusion criteria were those who were removed from their activities in the period of data collection by vacation, health leave and/or maternity.

Of the 80 health professionals invited, 56 professionals from these 22 teams agreed to participate in the study and responded to the instrument. There were 6 participants who did not respond, 16 were excluded according to the proposed criteria and 2 were considered as losses because they did not complete their answers.

The invitation and the link to access the instrument through the e-Surv web platform were sent to each participant through electronic mail provided by the Municipal Health Department. The instrument was divided into three parts: 1) Informed Consent Form (ICF); 2) Sociodemographic data (sex, age) and on training of health professionals; and 3) Scale of attitudes of professionals regarding Diabetes Mellitus (EAP-DM - *Escala de atitudes dos profissionaisemrelaçãoao Diabetes Mellitus*)[5]. Participants only answered the questionnaires after expressing consent to the research by digital signature of the TCLE. Data were collected between May and July 2019.

The variables used to evaluate the characteristics of the participants were sex and age and, in relation to professional training, the following information was requested: area of training, level of training (specialization, master's, doctorate) and time of professional experience (in years). For the assessment of attitudes, the Scale of attitudes of professionals in relation to Diabetes Mellitus (EAP-DM) was applied.

The Scale of attitudes of professionals regardingDiabetes Mellitus (EAP-DM) is a translation, adaptation and validation of the instrument Diabetes Attitudes Scale – third

version (DAS-3), consisting of five subscales, which evaluate different dimensions of care in T2DM, 1) Need for special training focused on education; 2) Severity of T2DM; 3) Value of rigid glucose control when it comes to diabetes care; 4) Psychosocial impact of diabetes; 5) Attitude regarding the autonomy of people with diabetes as severity of diabetes, autonomy of the person who has DM2[5].

This scale contains 33 questions, structured in Likert scale, which have a score ranging between one and five points. On this scale, for the positive questions, the following points were assigned: disagree (1 point), do not have an opinion (3 points), agree in part (4 points), agree (5 points). As for negative questions (2, 3, 7, 11, 13, 15, 16, 23, 26 and 28), the scores work in reverse: agree (1 point), agree in part (2 points), have no opinion (3 points) and disagree (5 points). The option "I have no opinion" is scored equally in the direct and reverse order. The overall score for the EAP-DM can be calculated by the sum of all the grades of each item and the subsequent division of the result of this sum by 33. Score less than or equal to 3 points indicates unfavorable attitudes; above 3 points, favorable attitudes. The closer the values of the maximum score (five points), the more favorable are the attitudes of professionals towards T2DM[5].

The construction of this instrument was guided from the Theory of Planned Action, which states that the intention of a person to adopt a certain behavior can be measured through attitudes[5].

The data were exported from the e-Surv web platform in xls format compatible with the Excel® program and submitted to analysis in the Statistical Package for the Social Sciences (SPSS) software. Descriptive analysis was performed from the calculation of frequencies, means and standard deviation. After analysis of the distribution of normality, we chose to use nonparametric statistics, with the Mann Whitney test for the two independent samples as sex, specialization and age group and Kruskal Wallis for the professional categories. To evaluate in which groups differentiation occurred, the post-hoc test was performed.

For the accomplishment of this study, the normalizations of Resolution 466/2012 of the National Health Council, which regulates the research with human beings, were followed. The study was approved by the Ethics and Research Committee of the Federal University of Minas Gerais (UFMG), under number 2,422,026/2017, and followed the national and international ethical precepts, including the signing of the Informed Consent Form (ICF) by all participants in the survey.

RESULTS

The population of this study was composed of 27 nurses, 11 doctors, 9 dentists, 6 physical therapists, 2 psychologists and 1 pharmacist. Of the 56 health professionals who responded to the instrument, the majority were female (n=40; 71.4%) and were older than 35 years (n=30; 53.6%). Regarding the length of service, the majority (n=36; 64.3%) had less than 9 years of experience in Primary Health Care in the municipality of the study and specialization in the area of activity (n=40; 71.4%). Regarding the professional category, there was greater participation of nurses (48.2%) (Table 1).

Table 1. Sociodemographic characteristics of health professionals in Primary Health Care in Divinópolis, MG, Brazil, 2019.

Variable	N	%
Sex		
Feminine	40	71.4
Masculine	16	28.6
Age		
Up to 34 years	26	46.4
35 years or more	30	53.6
Specialization		
Yes	40	71.4
No	16	28.6
Time of service in Primary Health Care		
0 - 9 years	36	64.3
10 years or more	20	35.7

Profession		
Nurse	27	48.2
Doctor	11	1.8
Dentist	9	10.7
Physical Therapist	6	19.6
Psychologist	2	16.1
Pharmacist	1	3.6

Considering the results obtained in the EAP-DM, all study participants scored between 124 and 160 points and score above 3 for this questionnaire, ranging from 3.75 to 4.84 (standard deviation = 0.22), which means positive attitudes towards care in T2DM. The scores of the attitude scale are presented only in means of the global score, the scores by subscales of this instrument were not performed.

These health professionals who work in FHS (nurses, doctors, physical therapists, dentists, psychologists and pharmacists) showed favorable results in all dimensions of care, such as the severity of diabetes, autonomy of the person who has type 2 diabetes in the therapeutic decision process and psychosocial impact of T2DM on the life of the person living with this condition, as shown in Table 2.

Table 2. Classification of health professionals' attitudes towards T2DM care, according to the general score of the Diabetes Attitudes Scale (EAP-DM). Divinópolis, MG, Brazil, 2019.

Professional categories	**Standard deviation**	**EAP-DM overall score mean**	**95% Confidence interval**
Nurse	0.18	4.41	4.34-4.49
Doctor	0.23	4.25	4.09-4.41
Dentist	0.29	4.30	4.11-4.56
Physical Therapist	0.09	4.47	4.38-4.56
Psychologist	0.15	4.13	2.80-5.47
Pharmacist	-	4.15	-
Total	**0.22**	**4.37**	**4.30-4.42**

In the post-hoc test, psychologist-physical therapist, doctor-nurse, doctor-physical therapist showed statistically significant differences. Doctors and psychologists showed less favorable attitudes than nurses and physical therapists ($p<0.05$). The other comparisons between pairs showed no differences.

There was no statistical difference between sexes ($p=0.256$), between having or not having specialization in Primary Health Care ($p=0.519$), between working time in the institution ($p=0.202$) and categorized age ($p=0.226$). Significant associations were found between professional categories ($p=0.042$).

DISCUSSION

In this study, all health professionals in Primary Care presented high scores in the WBS-DM, with a score in the overall score higher than 3 points, a value considered as a cutoff point for the classification of favorable attitudes regarding the care of people with T2DM[5].

Favorable attitudes are based on the dialogue, problems, feelings and goals of disease control presented by the person with diabetes. On the other hand, attitudes such as suggesting the diet to be followed and making negative judgments about non-compliance with care are presented as hindering for the establishment of a dialogical relationship[11].

These results indicate that all evaluated professionals agree that diabetes is a very serious chronic condition, which requires an approach to its behavioral, psychosocial and clinical aspects for control and prevention of complications. In addition, they consider that to be successful, professionals involved in diabetes education must learn effective communication strategies with people with this condition, encouraging them to make conscious decisions about their care plan, promoting autonomy and self-care[5].

Considering that EAP-DM is an adapted and validated instrument, one of its advantages pointed out by the literature is to enable comparison of the results with studies conducted in several countries[5]. However, due to its recent validation, only one national study on the subject was identified, conducted with Primary Health Care professionals in the city of Diamantina,

Brazil Minas Gerais, in which it was found that professionals presented favorable attitudes towards diabetes in the general scale, a result similar to this study[12].

When compared to international studies, divergent results were identified in a study conducted with pharmacists in Qatar, in which unfavorable attitudes were identified regarding the psychosocial impact of this condition and the autonomy of the person with diabetes, indicating the need for special training for health professionals[13].

It is noteworthy that the level of attitudes found in this study varied according to professional category and that, even with positive attitudes, doctors and psychologists showed less favorable attitudes than nurses and physical therapists. These findings differ from a similar study conducted with health professionals from Primary Health Care in the United Arab Emirates, which also revealed differences in actions according to the professional categories, but showed that physicians presented more positive postures in relation to the severity of T2DM and rigid control of blood glucose compared to nurses[10].

Differences in attitudes towards T2DM by professional categories were identified in studies conducted in several countries. It was observed that physicians and pharmacists showed unfavorable attitudes regarding the participation of people with T2DM in decisions related to treatment, while nurses showed favorable attitudes regarding this participation. Thus, it is suggested that the way professionals perceive this condition has direct implications for T2DM care[6].

The direct implications of favorable attitudes of health professionals in T2DM care in PHC can be demonstrated by practices that consider the cognitive aspects and psychosocial aspects that influence self-care and that support the autonomy of the person with DM, which has proven to produce promising results in the treatment of this condition and in improving the quality of life of these people[6,8,14].

Whereas the knowledge acquired through life-long experiences influences the attitude of professionals, it is believed that professionals trained in this level of care contribute to people with DM receiving quality care, that enable self-care, and develop skills for attitudinal change, thus providing glycemic control, in addition to reducing the occurrence of complications of DM, the main cause of disability, reduced quality of life and death[9,15].

As for the profile of the participants, there was a predominance of females and nurses. These data corroborate what was found in other national studies conducted in PHC, in which the majority of higher education professionals were also nurses and/or women[16,17-19]. Nursing represents more than half of all health professionals in the health workforce in Brazil, with a strong role of nurses in PHC, the majority being female. In this context, nurses play an expanded leadership role, being responsible for management activities, demand management, and their fundamental role in the realization of comprehensive care to users of these services[17,19].

The largest proportion of participants in this study (n=30; 53.6%) was concentrated in the age group of 35 years or more, which converges with the study profile performed in PHC in the city of Pelotas, Rio Grande do Sul, and another similar one performed in Viçosa, Brazil Minas Gerais, which had a higher prevalence of workers from the age group of 30 years[16,17]. It is considered that this age group profile may be related to the time of university education until the entry of this professional in the labor market. The length of service of these professionals in the institution should also be considered.

With regard to education, there was a predominance of health professionals with specialization in their area of activity, also evidenced in other studies conducted in Primary Care. It is noteworthy that, in these studies, professionals have conditions of schooling even higher than those required for the position and own access to professional qualification processes[16,17,19]. It is assumed that the high percentage of postgraduate professionals found in this study may have influenced the favorable attitudes found in relation to T2DM, cultural aspects related to training can influence the way professionals think and act[10].

According to the results, the majority (n=36; 64.3%) of the professionals have less than nine years of experience in the PHC of the municipality, which is consistent with other

national studies[16,17,20], including a study in which it was observed that the time of work of health professionals of higher education in this level of care ranged from 14.5 to 26.8 months[20].

The high turnover is the result of multiple causes, highlighting poor working conditions, unsafe contracts, lagged wages, lack of equipment and materials, and dissatisfaction with work. Previous studies have shown that the difficulty of fixing professionals at the primary level to health is a challenge for health management in Brazilian municipalities[16,20-22].

It is noteworthy that the high turnover of professionals in the FHS evidenced in this study, if it becomes a recurrent situation, may impair the link with the community and the continuity of health actions in the PHC, especially with regard to the monitoring of chronic conditions, studies conducted in this level of attention. In this perspective, the low permanence of health professionals of higher education in PHC can negatively influence their attitudes regarding the care of people with T2DM[16,20-22].

The permanence of professionals is important to create the bond with people and to produce the longitudinality of health actions in diabetes. The bond is nourished by daily life, established by relationships based on dialogue and trust between the professional and the user, enabling constructions that generate positive impacts on the health problems of individuals. Longitudinality, one of the essential attributes of PHC, is considered as a central and exclusive characteristic of this care level. The scope of this attribute in practice provides greater knowledge of users' health problems and construction of health history by the team, in addition to enabling greater confidence and, consequently, greater resolvability[23]. Thus, professionals with more years of experience in PHC can monitor the person with DM over time, in their multiple episodes of disease and in care related to prevention and health promotion.

Studies show that greater job satisfaction contributes to health professionals remaining in teams, contributing to the success of the FHS[16,21]. Given this finding, it is evident the need to develop educational actions with relevant themes through permanent education in health, which enable professionals to perceive greater problem-solving with their work, may contribute to professional fixation. In addition, in order to achieve this resolution, in addition to the availability of trained health professionals, teamwork should also be encouraged, especially with regard to the care of people with type 2 DM[20,24].

There is, therefore, a need to strengthen PHC, which still has weaknesses in the promotion of self-care and prevention of diseases, which requires that continuing education is legitimized as an educational policy in the context of SUS, which changes in the scenarios of professional practices and improvement of the quality of services of the health care network of people with diabetes[25,26].

Therefore, it is suggested that there are investments of local management in continuous training in PHC and continuous evaluation monitoring at this level of care, considering the work process as an object of transformation, strategies for valorization and motivation of professionals in a multidisciplinary and interdisciplinary perspective.

In relation to the limitations of the study, it should be considered that this research was conducted only with health professionals of higher level of Family Health Strategy in a Brazilian municipality, not allowing extrapolation of the results, although in the literature, a similar profile can be found among Primary Health Care professionals from other Brazilian municipalities. In addition, studies will be needed to identify whether the positive attitudes to the care of type 2 DM found in these findings reflect on the glycemic control of users.

Finally, it is important to highlight that the assessment of attitudes of health professionals who provide care to people with type 2 DM allows the identification of how they are dealing with the care of this condition, courses that meet this objective. Starting from the premise that not knowledge, but the attitudes of professionals are associated with better care offered to people with diabetes, and which courses will have better impact if they promote positive attitudes towards diabetes and not only the transfer of knowledge, it is expected that, over the years, health professionals are not only trained, develop skills and attitudes necessary for the proper management of this disease and longitudinal monitoring of cases.

CONCLUSION

Primary Health Care professionals showed positive attitudes towards T2DM care regarding the need for special training for educational interventions; the severity of diabetes; the value of rigid glucose control; the psychosocial impact of diabetes on people's lives and the autonomy of the person living with diabetes. In addition, it was found that the level of these attitudes varied according to the professional category.

ATITUDES DOS PROFISSIONAIS DA SAÚDE EM RELAÇÃO AO CUIDADO EM DIABETES TIPO 2 NA ATENÇÃO PRIMÁRIA

RESUMO

Objetivo: analisar as atitudes de profissionais que atuam na Atenção Primária à Saúde em relação ao cuidado de pessoas com diabetes mellitus tipo 2 (DM2). **Método:** estudo transversal realizado com 56 profissionais da atenção primária à saúde em Divinópolis, município do centro-oeste mineiro. As atitudes dos profissionais foram medidas por meio do instrumento Escala de Atitudes dos profissionais em relação ao diabetes Mellitus (EAP-DM) aplicado via plataforma *web e-Surv.* Os dados foram coletados entre maio e julho de 2019. Para análise, utilizaram-se os testes Mann Whitney e de Kruskal Wallis. **Resultados:** dos 56 profissionais, 36 (64,3%) possuíam menos de 10 anos de atuação na atenção primária e 40 (71,4%) concluíram especialização na área de atuação. Os participantes apresentaram atitudes positivas em relação ao diabetes, com pontuação média de 4,37 (DP: 0.22), variando entre 3,76 e 4,85. Médicos e psicólogos demonstraram atitudes menos favoráveis em relação aos cuidados em DM2, quando comparados aos enfermeiros e fisioterapeutas (valor de p <0,05). **Conclusão:** todos os profissionais apresentaram atitudes positivas e o nível destas atitudes variou conforme categoria profissional.

Palavras-chave: Atitude. Profissionais de saúde. Diabetes Mellitus tipo 2. Atenção Primária à Saúde.

ACTITUDES DE LOS PROFESIONALES DE LA SALUD HACIA ELCUIDADO A LA DIABETES TIPO 2 EN LA ATENCIÓN PRIMARIA

RESUMEN

Objetivo: analizar las actitudes de profesionales que actúan en la Atención Primaria de Salud con relación al cuidado de personas con diabetes mellitus tipo 2 (DM2). **Método**: estudio transversal realizado con 56 profesionales de la atención primaria a la salud en Divinópolis, municipio del centro-oeste del Estado de Minas Gerais-Brasil. Las actitudes de los profesionales fueron medidas a través del instrumento Escala de Actitudes de los profesionales respecto al diabetes Mellitus (EAP-DM) aplicado vía plataforma *web e-Surv*. Los datos fueron recogidos entre mayo y julio de 2019. Para el análisis, se utilizaron las pruebas Mann Whitney y de Kruskal Wallis. **Resultados**: de los 56 profesionales, 36 (64,3%) poseían menos de 10 años de actuación en la atención primaria y 40 (71,4%) concluyeron especialización en el área de actuación. Los participantes presentaron actitudes positivas con relación a la diabetes, con puntuación media de 4,37 (DP: 0.22), variando entre 3,76 y 4,85. Médicos y psicólogos demostraron actitudes menos favorables hacia los cuidados en DM2, cuando comparados a los enfermeros y fisioterapeutas (valor de p <0,05). **Conclusión**: todos los profesionales presentaron actitudes positivas y el nivel de estas actitudes varió según categoría profesional.

Palabras clave: Actitud. Profesionales de salud. Diabetes Mellitus tipo 2. Atención Primaria de Salud.

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