Therapeutic Adherence According to Nationality: Portuguese and French Patients with Type 2 Diabetes Mellitus

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Abstract

In the literature, four groups of variables related to therapeutic adherence stand out, such as diseases and treatments; intrapersonal factors; interpersonal factors and environmental factors. Nationality comes to diversify the already different combination of these factors. This study aims to compare adherence to the therapeutic regime in users with type 2 diabetes mellitus in users with Portuguese and French nationality. The study is characterized as observational, descriptive, analytical, and transversal, within a quantitative approach). Data collection was carried out by interview, which took place at the time of the nursing consultation. The data collection instrument consists of the questionnaire for the assessment of self-care activities with diabetes (AACD), by Bastos, Severo and Lopes [1] and characterization questions. The sample consists of 280 participants selected for convenience, among which 240 are Portuguese and 40 are French. Of the 240 participants in the sample, mostly male (55%), aged over 65 years (68.3%) and married or in a de facto union (63.3%). The results show that in global adherence, it is the Portuguese who show the highest averages (26,27). In analyze the dimensions of adherence, there are a higher trend in the Portuguese population for almost all dimensions, with exception of physical activity. Through the application of the t test for independent samples, only the existence of statistically significant differences between the two groups in the specific food dimension was confirmed (p <0.001). In relation to the characterization variables and globally, there were statistically significant differences (p <0.001) in relation to the age group, with the youngest individuals having better adherence rates (27.54) and to marital status (p <0.004)., with married or de facto partners having better adherence scores (26.77). Differences in therapeutic adherence are confirmed in the specific diet dimension. In conclusion, age and marital status appear as determinants of adherence. The differences found in the sizes of the two groups of Portuguese and French nationality are limitations to the present investigation. It is imperative to study other sociodemographic variables and the respective health systems. Namely, at the level of surveillance and disease control carried out by nursing. Nursing has a special function here focused on the training of the person, in view of the therapeutic adherence and the management of their disease.

Keywords: Type 2 Diabetes Mellitus; Therapeutic Adherence; Training

Introduction

Diabetes mellitus (DM) has become one of the biggest public health problems worldwide. It is a chronic progressive disease with serious consequences for wellbeing and health and is associated with high social and health system costs. The prevalence of DM has been increasing and is currently considered by the World Health Organization as the pandemic of the XXI century, with predictions that it may reach, in the next 20 years, more than 20% of the world population [2]. Diabetes is a metabolic disease that, due to its chronicity and high morbidity, implies a large investment in constant health care, which is reflected in high human, economic and social costs, being considered a priority problem at world level. Given this perspective, several efforts have been mobilized by governments and scientifi communities to prevent the growth of this disease [3]. Ruiz et al (2012) report that of all DM cases, type 2 diabetes mellitus (DM2) is the most representative (90 to 95%) [3]. There are several factors responsible for this evidence, including population growth and aging, lifestyle changes because of growing industrialization, increased sedentary lifestyles and the increasing prevalence of obesity. The social and economic impact of DM2 is enormous and growing, implying great psychosocial and economic burdens, both for patients and families, and for the Health System. Despite awareness campaigns to change lifestyles and institutions related to it diabetes has tried to find ways to reduce this scourge, success still seems to be far away, because changing behavior is

difficult, and access to healthy food may not be available to everyone. Considering DM2 as a problem of great impact on the person, the way it is perceived by it, depending on their representations of health and disease, the strategies the person adopts in the face of the new health situation, can influence the behaviors of adherence the therapeutic regimen and, consequently, the control of the pathology, which may be reflected in their health status. As such, the user needs learning to acquire knowledge and skills for self-care in the activities and treatment of the disease. Because the knowledge they can influence the behaviors of adherence to the therapeutic regimen and, consequently, the control of the pathology, which may be reflected in their health status. In this sense, nurses play a relevant role in providing care to people with DM2, if they are structured and guided by detailed protocols or clinical guidelines.

Aim

This study aims to compare the adherence to the therapeutic regimen in users with type 2 diabetes mellitus in users with Portuguese and French nationality.

Materials and Methods

The study is characterized as observational, descriptive, analytical, and transversal, within a quantitative approach. Data collection was performed by interview, which took place at the time of the nursing consultation. The instrument for collecting data is composed of the questionnaire on the assessment of self-care activities with diabetes (AACD) and characterization questions. The AACD scale is the version translated and adapted into Portuguese by Bastos, Severe and Lopes, (2007) of the). "Summary of Diabetes Self-Care Activities Measure - SDSCA" de Glasgow, Tooberte Hampson (2000) [1]. The AACD scale in the Portuguese version consists of 24 items [1], which are grouped into 6 dimensions: general diet, specific diet, physical activity, medication, blood glucose monitoring, foot care and smoking habits. Each dimension is called a factor. Factor 1: general diet, including healthy eating, the recommended diet for diabetics and the consumption of fruits and vegetables. Factor 2: specific diet includes consumption of red meat, consumption of bread and alcohol at main meals, carbohydrate mixture in the same meal and use of sugar to sweeten drinks. Factor 3: physical activity includes continuous activity and specific physical exercise. Factor 4: related to foot care, includes foot self-examination, drying and washing. Factor 5: related to medications corresponds to the item of pharmacological therapy. Factor 6: blood glucose monitoring consists of the blood glucose assessment item. Self-care was assessed through parameterized in days of week, on a scale from 0 to 7, which corresponds to behaviors taken in the last seven days, where zero corresponds to the least desirable situation and seven to the most favorable. To obtain consistency in the direction of the responses, the variables relating to the dimension of the specific food supply and that would score negatively are re-coded, inverting the score (0=7, 1=6…7=0). The score by dimension is obtained by summing the items and divided by their number. Results are expressed in days per week, the higher the score, the greater the adherence to the therapeutic regimen [1]. The convenience sampling technique was used, where participants were gathered by interest or accessibility ease [4]. Thus, we can speak of an accidental sampling, by temporal and in-person criteria, when the participant going to consultations at the health centers of a ULS in the north of Portugal and to consultations at the diabetology and endocrinology day hospital at the University Hospital of Paris (France). In ethical terms all principles were considered in accordance with the Declaration of Helsinki and the Oviedo Convention. The approach to the participants was made through direct contact in the Diabetes Nursing Consultation, and their participation was entirely confidential and voluntary. After clarification, informed consent was requested. The privacy and confidentiality of respondents and data was guaranteed. Opinions were requested from the ethics committees of the institutions involved and the authors of questionnaire were asked to authorization for use the AACD scale.

Results

Table 1: Sociodemographic characterization of the sample according to nationality.

Nationality (users)	Portugueses	French
	(n=240)	(n=40)
	n - %	n - %
Sex		
Male	132 - 55%	22 - 55%
Female	108 – 45%	18 - 45%
Age		
≥ 65 years old	164 - 63,3%	27 - 67,5 %
< 65 years old	76 - 31,7%	13 – 32,5%
Marital status		
Singles	23 – 9,6%	6 – 15%
Married/ living in union	152 – 63.3%	22 – 55%
Divorced/Separated	9 – 3,8%	7 – 17,5%
widowers	56 – 23,8%	5 – 12,5

Table 2: Comparison of treatment adherence means according to nationality.

Dimensions	Nationality	n	Mean	t test	p
General food	Portuguese	240	4,543	0,813	0,417
	French	40	4,283		
Specific food	**Portuguese**	**240**	**4,562**	3,624	<0,001
	French	40	3,786		
Physical activity	Portuguese	240	2,360	-1,226	0,221
	French	**40**	2,800		
Foot care	Portuguese	240	4,701	0,692	0,489
	French	40	4,486		
Medicines	**Portuguese**	**240**	**6,650**	0,245	0,806
	French	40	6,600		
Blood glucose	Portuguese	240	3,465	0,661	0,509
	French	40	3,212		
Global therapeutic adherence	Portuguese	240	26,27	1,168	0,244
	French	40	25,17		

Table 3: Comparison of treatment adherence averages according to nationality and the characterization variables.

	Characterization variables	Global therapeutic adherence			Portuguese			French		
		Mean	t	p	Mean	t	p	Mean	t	p
Sex	Female	26,44	0,87	0,385	26,47	0,480	0,632	26,26	153,5	0,229
	Male	25,86			26,12			24,28		
Age	**<65 years old**	**27,54**	3,33	0,001	28,17	3,661	0,001	25,78	139,5	0,303
	≥65 years old	25,29			25,4			23,89		
Marital status	Married/ living in union	26,77	4,591	0,004	26,7	1,291	0,278	27,24	1,757	0,624
	Singles	**26,01**			26,84			22,82		
	Widowers	25,47			25,51			25,12		
	Divorced/Separated	21,72			22,5			20,71		

The sample consists of 280 participants selected for convenience, among which 240 are of Portuguese nationality and 40 are of French nationality [Table 1]. Of the 240 participants that make up the sample, mostly male (55%), aged over 65 years (68,3%) and married or in a de facto union (63,3%). At the level of global therapeutic adherence [Table 2], the results show that the Portuguese show the highest averages (Portuguese participant - mean=26,27; French participant - mean=25,17). Analyzing the different dimensions of therapeutic adherence there are a higher trend in the Portuguese population for almost all dimensions, except for physical activity, with higher means in French patients (Portuguese participant - mean=2,360; French participant - mean=2800). Through the application of the t test for independent samples, the existence of statistically significant differences was only confirmed (p<0,001) between the two groups in the specific food dimension (Portuguese participant- mean = 4,562; French participant- mean = 3,786). Regarding the characterization variables [Table 3] and globally, the comparison of treatment adherence means according to gender allows us to verify that females show higher means, except for the French population, although these differences are not statistically significant. In the analysis of the variables age and marital status, there were statistically significant differences, with the younger individuals (p<0.001) show better adherence rates (<65 years – mean=27.54; ≥65 years – mean =25.29) and the married (p<0.004) or living together with better adherence scores (married or living together – mean=26.77; Separated/Divorced – mean=21.72).

Discussion

The study sample consist of 280 users with a clinical diagnosis of DM2, 240 participants (85.71%) are Portuguese and 40 (14.29%) are French. The analysis of the results in relation to adherence to the therapeutic regimen, according to nationality, showed that Portuguese users have an average overall adherence to the therapeutic regimen that is higher (26.27) compared to that observed in French users (25.17). The means of adherence to the therapeutic regimen obtained in this study are lower than those verified by Correia (2014), in which the mean value of adherence was 67.33, with women showing greater adherence [5]. Roo's, Baptista and Miranda (2015) locked global adherence means were higher (44.94) than those observed in the study sample. In

relation to general food, specific food, foot care, glycemic control, the Portuguese are also the ones with the highest averages [6]. Regarding nationality, and through the application of the *t* test for independent samples, the existence of statistically significant differences (p <0.001) between the groups in self-care related to specific food was only confirmed. Also, in the study by Roo's, Baptista and Miranda (2015), higher means of adherence to self-care, in general nutrition, specific nutrition, foot care, blood glucose control and medication intake were observed in relation to those observed in the sample of this study. In the practice of physical exercise showed adherence averages slightly higher than those observed in our study [6]. *Carvalheiro* (2003) states that Portugal is the country in Europe where the population least adheres to the practice of physical exercise [7]. The results obtained in our study also confirm that the French on average exercise more than the Portuguese. However, we emphasize that the practice of physical exercise of Portuguese participants is higher than the average found in the study by Correia (2014), which found a very low average of adherence [5]. Despite all the efforts made by the multidisciplinary team, it is still necessary to invest in the training of people with DM2, to increase adherence to the therapeutic regimen. The comparison of the means of adherence to the therapeutic regimen according to age group, in the global sample and according to nationality, it was found that both in the global sample and in the sample of Portuguese users, people under 65 years of age had means highest adhesion rates. Age can be a barrier to adherence to the treatment of a chronic disease, because, as age advances, it is common for people to have a reduced ability to understand information, such as also in physical mobility and capacity for self-care [8,9]. The comparison of average adherence to the therapeutic regimen according to marital status, for the overall sample, shows better levels of adherence in individuals who are married or in a de facto union. Different authors consider that the marital status can interfere with DM2and in your control, since, in some cases, the loss of a partner causes health changes such as depression, discouragement and loss of will to live [10]. WHO (2003) considers essential in the control of diabetes mellitus, training for adherence to treatment, especially in related to lifestyles [11]. This is a challenge that must be intensely faced in clinical practice by health professionals.

Conclusion

The control of DM and the prevention of complications involve the user's knowledge and execution of self-care tasks. The training of individuals for self-care should correspond to the first line of intervention and investment by nurses for a more effective self-management of the disease and consequent promotion of individual and collective health. User adherence to the therapeutic regimen depends on several factors that must be considered. From these, strategies that can facilitate this process should be sought, based on the principle that each patient is a unique being, in interaction with the environment, with a life project, constantly seeking balance. In conclusion, and globally, differences are confirmed in terms of therapeutic adherence about the specific food dimension. Regarding the characterization variables, age and marital status appear as determinants of therapeutic adherence. Thus, it is necessary to seek intervention strategies aimed at changing lifestyles, improving adherence to the therapeutic regimen in people with diabetes. The assessment of therapeutic adherence in patients with DM2 is relevant to clinical nursing practice, as it allows directing decision-making in relation to the treatment of people with diabetes. The differences verified in the sizes of the two groups of Portuguese and French nationality constitute limitations to the present investigation. It is imperative to study other sociodemographic variables and those related to the responses of the respective health systems. At the level of disease surveillance and control carried out by nursing because the nurse has a special role here, centered on the person's empowerment, in the face of therapeutic adherence and the management of their disease.

References

1. Bastos F, Severo M, Lopes C (2007) Propriedades Psicométricas da Escala de Autocuidado com a Diabetes Traduzida e Adaptada. Acta Med Port 20: 11-20.

2. Direção Geral de Saúde (2017) Programa Nacional para a Diabetes 2017. Direção Geral da Saúde.

3. Ruiz Q M, Ocozco B D ,Valencia V P, Alarcão B R, De la Sem Fernandez C, et al. (2012) Diabetes mellitus. In: Tratdo da medicina de família Y comunitária.volI,(2ª-edn.),Vol.I, Barcelona: Editora Médica Panamericana.

4. Ribeiro JLP (2010) Metodologia de Investigação em Psicologia da Saúde. (2ª-edn.), Porto: Legis Editora.

5. Correia CIS (2014) Adesão ao regime terapêutico na pessoa com diabetes tipo 2. Tese de Mestrado em Educação para a Saúde. Instituto Politécnico de Viseu-Escola Superior de Saúde.

6. Roos A C, Baptista D R, Miranda R C (2015) Adesão ao tratamento de pacientes com Diabetes Mellitus tipo 2. Demetra: alimentação, nutrição & saúde 10(2): 329- 346.

7. Carvalheiro M. (2003) Onde estamos e para onde vamos na diabetes em Portugal e no Mundo. Boletim da Sociedade Portuguesa de Diabetologia 7: 6-9.

8. Almeida VC, Lopes MV, Damasceno MM (2005) Teoria das relações interpessoais de Peplau. Análise fundamentada em Barnaum. Revista da Escola de Enfermagem USP 39(2): 202-210.

9. Silva AL, Fonseca GSS, Rossi VEC (2015) Adesão ao tratamento medicamentoso entre pessoas com diabetes mellitus. Ciência et Praxis 8(16).

10. Rodrigues F F L, Santos M A, Teixeira C R S, Gonela J T, Zanetti M (2012) Relação entre conhecimento, atitude, escolaridade e tempo de doença em indivíduos com diabetes mellitus. Acta Paulista Enfermagem.25(2): 284-290.

11. World Health Organization (2003). Adherence to long-term therapies. Evidence for action. WHO. 13: 107-114.

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