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INTERPERSONAL RELATIONSHIPS IN THE NURSING CARE OF PEOPLE WITH TYPE 2 DIABETES

Relação interpessoal no cuidado de enfermagem a pessoas com diabetes tipo 2

Relación interpersonal en el cuidado de enfermería a personas con diabetes tipo 2

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ABSTRACT

Objectives: to analyze the effectiveness of the interpersonal relationship in nursing care and its relationship with general self- care and foot care in people with type 2 diabetes. **Method:** this cross-sectional, analytical study was conducted at a University Hospital with 150 people with type 2 diabetes who answered the Interpersonal Relationship in Nursing Care Questionnaire, a questionnaire on self-care activities with diabetes, and a questionnaire to assess adherence to feet self-care. **Results:** the results showed that the effectiveness of the interpersonal relationship in care ranged from moderate to high. The questionnaire scores were significant with nephropathy comorbidities, cerebrovascular accident, diet adherence, and receiving foot care guidance. **Conclusion:** interpersonal relationships in effective care can strengthen bonding, trust, and verbalization of feelings, improving diabetes education and adherence to self-care behaviors.

DESCRIPTORS: Type 2 diabetes mellitus; Diabetic foot; Interpersonal relations; Nursing; Patient compliance.

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RESUMO

Objetivo: analisar a efetividade da relação interpessoal no cuidado de enfermagem e sua relação com as práticas de autocuidado geral e com os pés em pessoas com diabetes tipo 2. **Método:** estudo transversal, analítico, realizado em um Hospital Universitário, com 150 pessoas com diabetes tipo 2 que responderam ao Questionário relação interpessoal no cuidado de enfermagem, questionário de atividades de autocuidado com diabetes e questionário da avaliação da adesão ao autocuidado com os pés. **Resultados:** os resultados mostraram que a efetividade da relação interpessoal no cuidado variou de moderada a alta. Os escores do questionário mostraram significância comorbidades nefropatia, acidente vascular encefálico, aderir à dieta e receber orientações sobre cuidados som os pés. **Conclusão:** a relação interpessoal no cuidado efetiva pode fortalecer a criação de vínculos, a confiança e verbalização de sentimentos, contribuindo para melhoria na educação em diabetes e para adesão de comportamentos de autocuidado.

DESCRITORES: Diabetes mellitus tipo 2; Pé diabético; Relações interpessoais; Enfermagem; Cooperação do paciente.

RESUMEN

Objetivos: analizar la efectividad de la relación interpersonal en el cuidado de enfermería y su relación con las prácticas generales de autocuidado y con los pies en personas con diabetes tipo 2. **Método:** estudio transversal, analítico, realizado en un Hospital Universitario, con 150 personas con diabetes tipo 2 que respondieron el Cuestionario de Relación Interpersonal en el Cuidado de Enfermería, cuestionario sobre actividades de autocuidado con diabetes y cuestionario para la evaluación de adherencia al autocuidado con los pies. **Resultados:** los resultados mostraron que la efectividad de la relación interpersonal en el cuidado varió de moderada a alta. Los puntajes del cuestionario mostraron significación con las comorbilidades de la nefropatía, el accidente cerebrovascular, la adherencia a la dieta y recibir orientación sobre el cuidado de los pies. **Conclusión:** la relación interpersonal en el cuidado efectivo puede fortalecer la creación del vínculo, la confianza y la verbalización de los sentimientos, contribuyendo para una mejoría en la educación en diabetes y la adherencia a las conductas de autocuidado.

PALABRAS CLAVE: Diabetes mellitus tipo 2; Pie diabético; Relaciones interpersonales; Enfermería; Cooperación del paciente.

INTRODUCTION

There are currently 463 million people with diabetes mellitus (DM) in the world aged 20-79 years, and 700 million individuals worldwide with this disease in this same age group are estimated for 2045. Diabetic Foot (DF) management remains a challenge to health systems[1] among DM complications. One million people with DM are known to lose part of their leg at the rate of three amputations per minute annually worldwide. This reality is no different in Brazil. Type 2 Diabetes Mellitus (Type 2 DM) corresponds to 90 to 95% of all DM cases. A total of 484,500 ulcers, 169,600 hospital admissions, and 80,900 amputations, of which 21,700 with a possible death outcome,[2] are estimated out of 7.12 million people with DM. Diabetic Foot ulceration (DFU) incidence is 19-34%, with an annual incidence of 2%. Recurring rates after DFU treatments are 40% within one year and 65% within three years.1

DM treatment implies lifestyle changes that include reorganizing eating habits, regular physical activity, achieving adequate body weight, smoking cessation, low consumption of alcoholic beverages, and surveillance to reduce stress, which requires educational support and empathy from all members of the multidisciplinary team during the patient follow-up period.[3]

To this end, interventions in people with diabetes aim to obtain metabolic control effectively throughout life to avoid episodes of acute decompensation and prevent or delay the onset of chronic complications by encouraging self-care.

The interpersonal relationship in the health clinic is essential to establish healthy bonds that generate positive feelings, facilitating harmony among people and the productive and effective work performed,[4] corroborating the precepts of the interpersonal system proposed by Imogenes King, which structure and give meaning to the nurse-patient relationship.[5] In this study, the interpersonal relationship in nursing care is defined as the interaction between two or more people who communicate and transfer values and energy from their societal roles.[6]

The nurse's approach and reception in the face of the type 2 DM client's problem. The nurse's attitude in fostering effective interpersonal relationships will drive the type of visit. The professional should know how address each situation and have a plan tailor-made for the patient's profile, providing the information regarding therapeutic adherence and self-care clearly, creatively, and connectedly, implying the patient's pleasure and satisfaction in each visit and boosting the follow-up of nurse-oriented self-care.[7]

Several studies are published daily in the scientific databases, dealing with several subjects about diabetes. However, this research presents a particular and singular approach since it aims to elucidate how the interpersonal relationship in nursing care influences the self-care actions of people

with type 2 DM. Does it contribute to adherence to self-care actions in people with type 2 diabetes?

This study aims to analyze the effectiveness of the interpersonal relationship in nursing care and its relationship with general self-care and foot care in people with type 2 diabetes.

METHODS

Study design

This cross-sectional, quantitative study followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines.

Study population and location

The population consisted of 768 people with type 2 DM assisted at the Endocrinology and Diabetes Service (SED) of a public, high-complexity hospital institution that serves people from the State of Ceará and adjacent regions part of the Brazilian Unified Health System (SUS). The sample was calculated using the finite population formula for means difference, adopting a 95% confidence interval, 5% sampling error, sample power of 80%, and standard deviation of effectiveness in the interpersonal care relationship of 3.84 based on a previous study.[8] Therefore, the sample would correspond to 179 people with type 2 DM, which hindered achieving the intended sample due to the pandemic. Thus, the final sample consisted of 150 people, representing almost 20% of the population. We included people diagnosed with type 2 DM, with a time of diagnosis of 5 years or more, over 18 years of age in continuous follow-up at the SED mentioned above, and able to understand, verbalize and answer the questions. People who were unable to perform anthropometric measurements or with total bilateral foot amputations and who discontinued follow- up with the service during data collection due to lack of attendance at appointments were excluded.

Study variables

The outcome variable was the Interpersonal Relationship in Nursing Care, measured through the Interpersonal Relationship in Nursing Care Questionnaire (QRIC) and classified on a five-level scale ranging from very low effectiveness to very high effectiveness.[6]

The independent variables included sociodemographic (sex, age, profession, income, marital status, origin, education), behavioral (physical activity, diet, tobacco and alcohol use, general self- care, and foot self-care), and anthropometric and clinical (Body mass index, waist circumference, neck circumference, blood pressure, and comorbidities) aspects.

Data collection instruments

Data were retrieved through a form and three questionnaires. The form contained sociodemographic, disease-related, blood pressure measurements, anthropometric measurements, lifestyle habits, and micro and macrovascular complications.

Data were collected considering the changes in the number of visits due to the pandemic. We decided to collect data by time series during all working days of outpatient care from March to December 2020, performed by a professional trained to complete the form and the questionnaires. The same endocrinology professional applied the instruments during the entire collection period.

We adopted the 31-item with four-point adjectival scale (never, sometimes, almost always, and always) evaluation questionnaire of the interpersonal relationship in nursing care (QRIC), which essentially shows the effectiveness of nursing care's interpersonal relationship.[6] The QRIC was developed per the Interpersonal System theoretical framework of King's Interacting Open Systems Model[5]. The calculation of the effectiveness score is performed using the Item Response Theory (IRT) in the instrument's calculator and classified into five levels of effectiveness ranging from < 30 to > 60, classified as very low (< 30), low (30-39), moderate (40-49), high (50-59), and very high (> 60)[6]. The QRIC obtained good validity evidence regarding internal structure through the Item Response Theory (IRT).[6]

The Diabetes Self-Care Activities Questionnaire (QAD) was translated and adapted for Brazil. The QAD has seven dimensions and 15 diabetes self-care assessment items: "general diet" (with two items), "specific diet" (three items), "physical activity" (two items), specifying the weekly physical activity frequency, "blood glucose monitoring" (two items), "foot care" (three items) and "medication use" (three items, used per the medication schedule), and three items for the assessment of tobacco use, totaling 18 items[9]. Patients report how often they performed the activities or behaviors in the last seven days. The answers range from 0 to 7. A mean value of adherence is generated for each self-care item performed, where "zero" corresponded to the least desirable situation and "7" was the most favorable. The values were inverted (7=0, 6=1, 5=2, 4=3, 3=4, 2= 5, 1=6, 0=7) in the items that assess the dimension "specific food", which asks about fat- rich foods and the consumption of sweets. The tobacco use analysis was performed through the absolute and relative frequencies of smokers in the sample.[9]

The items of the foot self-care questionnaire for people with diabetes (QPED) were used to assess adherence to foot self-care. The questionnaire has 14 closed-ended questions to assess foot self-care adherence, with items focused on the health service, social support, and personal behavior, which can facilitate the detection and measurement of compliance with essential preventive care to avoid the incidence of diabetic ulcers.[10] The QPED items were validated through the IRT. Each QPED item represented a self-care activity and was evaluated as a dichotomous variable.

Data analysis

The Kolmogorov-Smirnov test assessed data distribution normality. Data were exposed by descriptive statistics

composed of mean, standard deviation, median, and analytical statistics. Nonparametric data were compared using the Mann-Whitney and Kruskal-Wallis tests. The correlation was tested using the Spearman correlation test. The SPSS Program, version 24.0, was employed for statistical analysis.

Ethical aspects

This study followed Resolution Nº 466/2012[11] of the National Health Council (CNS) and was approved by the Human Research Ethics Committee of the State University of Ceará (UECE) under Opinion Nº 23914719.00000.5534. Moreover, the participants received information about aspects related to the study, voluntary data, and confidentiality and signed the Informed Consent Form.

RESULTS

Sample sociodemographic description

More than half of the sample consisted of females, older adults with a partner, and retired, mainly from the capital and the metropolitan region. More than half of the people had low schooling and income. Regarding lifestyle, more than half were tobacco users or former users, alcohol users or former users, and sedentary, which shows a low adherence to healthy behaviors and lifestyle (Table 1).

Table 1 - Sociodemographic and lifestyle characteristics (n=150). Fortaleza, CE, Brasil, 2020.

Variable (%)	Mean (SD) or Number
Age in years	62.05(DP =9.19)
Sex	
Female	92 (61.3)
Male	58 (38.7)
Origin	
Capital and metropolitan region	123 (82.0)
Inland region	27 (18.0)
Marital status	
With partner	101(67.3)
Without partner	49(32.7)
Schooling	
Illiterate to ≤ 8 years	80(53.0)
9 years and over	70 (47.0)
Profession/occupation	
Salaried worker	10(6.7)
Freelancer or self-employed professional	13(8.7)
Unemployed/Housekeeper	23(15.4)
Retired/Pensioner	89(59.4)
Other	15(10.0)
Household income in minimum wages (MW)	
>1-2 MW	109(72.7)
>2 MW	29(19.4)
Lifestyle	
Tobacco use	
No	57(38.0)
Yes	93(62.0)
Alcohol use	
No	69(46.0)
Yes	81(54.4)
Physical activity	
No	96 (64.0)
Yes	54 (36.0)

In this study, the interpersonal relationship in nursing care stood at the higher effectiveness levels on the QRIC scale (Figure 1). Fifty-three percent of respondents were at the moderate effectiveness level. This level is characterized by the strengthened interpersonal relationship with the perception of individualized care, resulting in a feeling of companionship between the patient and the nurse. We also found very high effectiveness in the interpersonal relationship, with care that transcends biomedical issues and reaches the emotional sphere. Few respondents showed very high interpersonal relationship effectiveness. In this small group, patients are endowed with otherness in constructing

Figure 1 - Effectiveness of interpersonal relationships in nursing care. Fortaleza, CE, 2020.
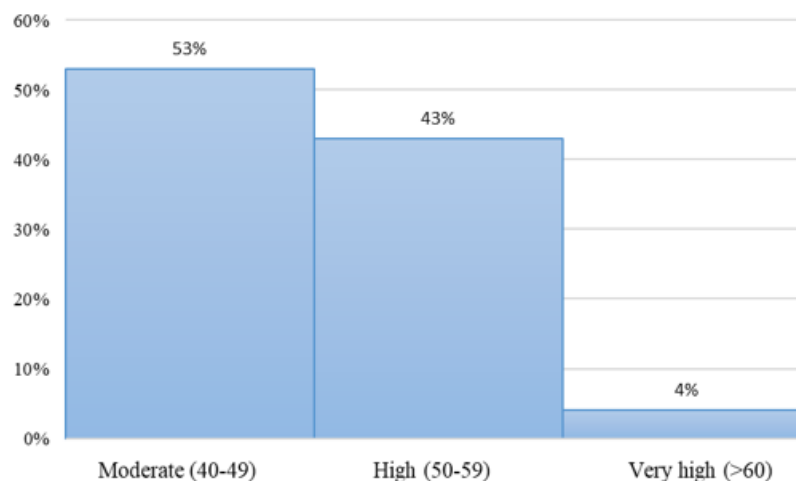
their care. In this study, we did not identify lower levels of effectiveness of interpersonal relationships in nursing care.

The association between interpersonal relationships in nursing care and clinical variables is described in Table 2. The association of the QRIC score with clinical variables was significant for people with nephropathy and stroke history, p=0.016 and 0.020, respectively.

Table 2 - Association between interpersonal relationships in nursing care and clinical variables (n=150). Fortaleza, CE, Brasil, 2020.

Variable	QRIC SCORE			
	Mean	Standard deviation	Median	p-value
Systolic blood pressure				
< 130 mmHg	49.60	4.31	49.09	0.552*
≥ 130 mmHg	50.04	4.15	49.82	
Diastolic blood pressure				
< 80 mmHg	49.99	4.30	49.73	0.760*
≥ 80 mmHg	49.85	4.15	49.62	
BMI < 18.5 below normal	45.13	4.75	45.13	0.177**
Normal or eutrophic (18.5-24.9)	49.04	4.62	47.72	
Overweight or pre-obese (25-29.9)	50.47	4.08	50.38	
Obesity ≥ 30.0	49.92	4.08	49.67	
Abdominal circumference (cm)				
< 80 (woman) / < 90 (man)	50.81	3.28	50.81	0.612*
≥ 80(woman) / ≥ 90 (man)	49.89	4.21	49.62	
Neck circumference (cm) ≤ 34 (woman) / ≤ 37 (man	49.01	3.32	49.38	0.352*
≥34 (woman) / ≥37 (man)	50.13	4.37	49.98	
Retinopathy				
Yes	50.60	4.70	50.06	0.116*
No	49.13	3.41	48.97	
Nephropathy				
Yes	51.15	4.54	50.81	0.016*
No	49.26	3.87	48.81	
Neuropathy				
Yes	50.39	4.49	49.56	0.327*
No	49.40	3.83	49.67	
Cardiopathy				
Yes	50.46	4.54	49.95	0.241*
No	49.49	3.89	49.51	
Peripheral vascular disease				
Yes	51.04	4.78	49.71	0.233*
No	49.55	3.94	49.57	
Ulcers				
Yes	50.94	4.44	50.29	0.187*
No	49.68	4.12	49.56	
Amputations				
Yes	51.91	4.38	52.93	0.081*
No	49.71	4.14	49.56	
Yes	52.42	4.68	52.67	0.020*
No	49.60	4.05	49.51	
Gastroparesis				
Yes	51.82	5.89	50.80	0.163*
No	49.66	3.89	49.46	
Depression				
Yes	51.59	4.50	51.06	0.059*
No	49.64	4.10	49.41	
Hypertension				
Yes	49.99	4.23	49.62	0.698*
No	49.11	3.70	49.76	
Dyslipidemia				
Yes	49.90	4.11	49.51	0.975*
No	49.93	4.73	50.13	
Hepatopathy				
Yes	50.26	5.10	50.38	0.807*
No	49.84	4.04	49.56	

Note: *Mann-Whitney Test. **Kruskal-Walls Test

Table 3 shows a correlation between the QRIC score and self-care actions. We identified significance with ingesting ≥ 5 servings of fruits/vegetables and a positive association (p=0.009).

Table 3 - Correlation of interpersonal relationships in nursing care and diabetes self-care activities. Fortaleza, CE, Brasil, 2020

QAD items	QRIC scores	
	Spearman's correlation	p-value*
1. Following a healthy diet	0.157	0.055
2. Following the dietary guidelines	0.156	0.056
3. Eating five or more servings of fruits or vegetables	0.211	0.009
4. Ingest red meat or whole milk derivatives	0.043	0.599
5. Eating sweets	-0.032	0.696
6. Performing physical activities for at least 30 minutes	-0.002	0.984
7. Performing specific physical activities (i.e., walking and swimming)	0.042	0.606
8. Assessing blood glucose	0.006	0.946
9. Checking blood glucose the recommended number of times	0.022	0.788
10. Examining your feet	0.098	0.233
11. Examining inside the shoes before putting them on	0.141	0.085
12. Drying the spaces between your toes after washing them	-0.020	0.808
13. Taking diabetes medications as recommended	-0.063	0.445
14. Taking insulin injections as recommended	0.033	0.692
15. Taking the indicated number of diabetes pills	-0.024	0.772

Note: * Spearman's correlation test

Table 4 shows a positive association between the QRIC score and following the prescribed diet (p=0.014) and receiving foot care guidance (p=0.015).

Table 4 - Correlation of interpersonal relationships in nursing care and QPED. Fortaleza, CE, Brasil, 2020.

Variable	ESCORE QRIC			
	Mean	**Standard deviation**	**Median**	**p-value**
1. Looks for a professional when having foot problems				
No	50.36	3.63	50.44	0.186*
Yes	49.79	4.48	49.23	
2. Receives help/incentive to perform foot care				
No	49.38	3.68	49.09	9.394*
Yes	50.10	4.37	49.90	
3. Performs physical activity for at least 30 minutes				
Never	49.80	4.10	49.23	0.687*
At least once a week	50.05	4.34	50.06	
4. Controlled blood glucose at the onset of treatment				
No	49.54	4.29	49.12	0.340*
Yes	50.24	4.12	50.06	
5. Managed to follow the prescribed diet				
No	48.97	3.66	48.78	0.014*
Yes	50.92	4.51	50.43	
6. Takes the recommended medications				
No	50.93	2.15	50.88	0.235*
Yes	49.85	4.28	49.56	
7. Received orientation on foot care				
No	46.69	3.13	46.11	0.015
Yes	50.11	4.18	49.67	
8. Feels like taking care of own feet				
No	50.44	5.11	50.66	0.373*
Yes	49.71	3.81	49.51	
9. Examines feet regularly				
Never	50.20	5.14	48.58	0.553**
Weekly	49.22	4.75	49.38	
Daily	50.06	3.96	49.62	
10. Dries the spaces between the fingers				
No	50.31	4.80	50.42	0.650*
Weekly	50.47	2.19	49.97	
Daily	49.76	4.17	49.37	
11. Checks shoes before wearing them				
No	48.92	4.95	47.25	0.402**
Rarely	49.63	3.76	50.33	
Always	50.04	4.15	49.67	
12. Cuts nails square				
Never	50.04	4.02	49.79	0,607**
They are cut square	49.82	4.31	49.56	
13. Uses foot moisturizer				
Never	49.95	4.21	50.43	0.972**
Rarely or never	49.89	4.21	49.56	
14. When with a foot wound or injury, makes dressing using homemade solutions or other products				
No, I never use homemade solutions or products not recommended by other professionals, or I have never had wounds	49.93	4.05	49.67	0.998**
Yes, I always use homemade solutions or other products on my own or on the recommendation of someone who has already used	49.81	4.63	49.56	

Note: *Mann-Whitney Test. **Kruskal-Walls Test.

DISCUSSION

We assessed the interpersonal relationship in nursing care at moderate effectiveness levels by people with type 2 DM. The QRIC and its scale measure the effectiveness of the interpersonal relationship construct in care based on a theory of modern psychometrics. The levels qualitatively show the interpersonal relationship effectiveness points with the involvement of behaviors related to the transaction and interaction concepts, followed by the patient-nurse role in the relationship.[6] A study with older adults with type 2 DM followed up in PHC showed moderate effectiveness for 80.6% of the participants.[8] The moderate effectiveness is anchored in transaction and interaction, showing that the interlocutors exchange type 2 DM care experiences with capacity for linking the patient to the therapeutic process.

The sociodemographic profile of the study participants was aligned with national and international studies that addressed type 2 DM. The age range of respondents ranged from 41 to 83 years, with a mean of 62 years. According to data from the IDF, Brazil is the fourth nation globally in the number of people with diabetes, and most of them are already old.[12]

Females prevailed, as shown in other studies in Brazil,[13-14] Pakistan,[15-17] and Saudi Arabia.[19] We should point out that women show more concern about their health and the health of their partners/family members and accompany them in visits, unlike men.

The clientele seen at the outpatient clinic originated from the capital, metropolitan region, and inland region of the state, but this category represented a negligible number of visits, which was also found in national and international studies. A study at the University Hospital of Pará identified that most people were from the metropolitan region.[19] Another study in a hospital in Saudi Arabia found that the population served lived in urban areas and more than a half had rented houses.[20]

The same result was obtained in a study in Bangladesh, where three-quarters of the participants lived in urban areas.[21]

The schooling level was low, and more than half of the people reported not knowing how to read or write or had less than eight years of study. This data is confirmed by the literature, where studies that reported low schooling level[18-19,22-23] were found. The patients' household income ranged from one to two minimum wages. Low schooling and income are known to interfere with treatment adherence.

Regarding the lifestyle assessment, more than 50% did not engage in physical activity, and those who reported exercising did not do it as recommended (<150 minutes 3x/week).[2] Similar results were identified in other studies. A study to assess the level of physical activity in people with DM observed that most were overweight and had a lower level of physical activity. The study also showed that people with a higher level of physical activity had satisfactory glycated hemoglobin levels.[24] Its adoption by people with diabetes increases twenty-fold glucose utilization by muscle, improving insulin sensitivity and aiding glycemic control.[24]

Moreover, most had a history of tobacco and alcohol use in this study. In contrast, a study that analyzed lesions characteristic of DM decompensation showed that the proportion of participants who reported never having smoked was higher than those who mentioned a tobacco use history.[25] A study in Tanzania showed a higher incidence of DF in people with tobacco and alcohol use history.[26]

Adopting therapeutic measures such as healthy lifestyle habits, medication adherence, and glycemic control will ensure a successful treatment. Adherence to self-care activities, a factor that must be evaluated in visits, is a complex and challenging process, as 98% of care is the exclusive responsibility of people with DM.[27] Nursing care is established through the nurse-patient relationship in a complex way, as the required demands must be met considering the patients' individuality. The professionals must be aware of behaviors that can centralize the discourse, not allowing people to express their difficulties, anxieties, and fears, influencing adherence to therapeutic measures.

In this context, the interpersonal relationship in the care of people with type 2 DM can lead to therapeutic success, providing a more humanitarian praxis based on health promotion and suffering prevention with improved care. A more effective level of interpersonal relationships in nursing care can stimulate self-care activities, and individualized alternatives for behaviors that are not or are hardly performed due to restrictions imposed by the DM and cognitive or knowledge impairment.

Interpersonal relationships occur through verbal and non-verbal communication. The care approach must be conducted comprehensively. Communication is an integral part of caring and, therefore, a working tool for nurses. Thus, an educational approach should be designed to curb communication barriers between individuals and professionals to obtain better results.

Communication is a complex, dynamic, flexible phenomenon with structured elements that can negatively or positively influence the understanding between people. Individuals must be willing and attentive to the communicative act as a whole so that interaction occurs favorably, as it contains what is spoken and written and what is observed and perceived.[28]

Regarding the association of interpersonal relationships with clinical variables, a significant result was identified among people who reported renal complications and stroke history, indicating greater receptivity to guidelines for type 2 DM control, preventing the progression of these complications. Regarding type 2 DM self-care activities, statistical significance was identified with ingesting five or more servings of fruits/vegetables. A higher level of effectiveness of the interpersonal relationship in the care provided a better response to fruit/vegetable consumption guidelines and treatment follow-up. A positive association was identified with following the prescribed diet and receiving foot care guidance in evaluating the interpersonal relationship with foot self-care activities.

We should emphasize dialogue reciprocity because the receiver should be attentive when the professional is communicating. Also, the professional must display attention when the roles are reversed, facilitating socialization.[29] Caring for the other is built in the meeting by developing attitudes of concern, interest, motivation, respect, consideration, kindness, and willingness to listen carefully. In the communication process, respect, sincerity, and honesty are seeing and understanding that the other should be recognized as a person with feelings, emotions, sensitivity, and dignity.

A study on interpersonal relationships in the family health strategy highlights the role of effective communication in meeting people's health needs and establishing bonds. We should mention that a relevant factor in creating bonds is to consider the users' knowledge and perceptions about their health and approach and include their family.[29] Listening is essential to receive information and establish assistance: it involves the professionals' internal availability, effort, and energy.

Patient-centered care requires the patient to feel understood and accepted to reduce barriers. Effective therapeutic communication is essential to facilitate adherence to self-care behaviors, which was reinforced by this study's findings. Knowledge of people's perception of how this relationship is built is essential for improving health services and creating public policies that encourage professionals to reflect on their praxis, modifying behaviors that can cause negative repercussions and compromise the effectiveness of nursing care.

The study's limitations were the smaller sample than previously stipulated due to the COVID-19 pandemic, which caused a reduction in face-to-face visits, and a scarcity of studies using the instrument for evaluating the effectiveness of the interpersonal relationship in nursing care, limiting the discussion of the results. However, we should mention that this is an innovative study in which the interpersonal relationship quantitatively evaluates professional performance.

The effectiveness of the interpersonal relationship had a moderate level, which may improve adherence. The effectiveness of the interpersonal relationship in nursing care was associated with the clinical variables origin, renal complications and stroke history, the ingestion of five or more servings of fruits or vegetables, foot self-care activities, adherence to diet, and receiving foot care guidance. Greater dialogue between people with type 2 DM and health professionals allowed for expressing feelings, sharing experiences, exchanging knowledge, and sharing responsibility in care.

CONCLUSION

The study may contribute to the prospect of improving care through a better interpersonal relationship in nursing care for people with type 2 DM, making the therapeutic bond more visible, less impersonal, brief, and formal, providing better interaction and better self-care. It will allow for a personal change in the professionals' way of looking at the disease and make people with type 2 DM rethink values and attitudes that may compromise the interpersonal relationship in nursing care. Further research is crucial, given the scarcity of studies on Interpersonal Relationships in Nursing care and knowledge gaps in using QRIC.

ACKNOWLEDGMENTS

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