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Health Education on Type-2 Diabetes Mellitus Prevention and Self-Care Measures for Employees of a Higher Education Institution

Daniel Lucas Costa Monteiro[1], Adrielly Cristiny Mendonça Fonseca[2], Ana Paula Silva Feio[3], Thais do Socorro Botelho de Lima e Silva[4], Beatriz dos Santos Silva[5], Igor Almeida Teixeira da Silva de Figueiredo[6], Yasaman Larissa Lujan Kós Miranda[7], Luana Fernandes Coelho[8], Thaiz Taiana Cardoso de Barauna[9],Samuel da Silva Ribeiro[10], Emanuel da Silva Ribeiro[11], Juliane Costa Santos[12], Marivaldo de Moraes e Silva[13], Francisco Miguel da Silva Freitas[14], Marcelo Antony Dantas de Veiga Cabral[15], Daniela Delgado Carvalho Ramos[16], Iasmim Rodrigues Salvador[17], Bruno Rodrigues Salvador[18], Raphaela Thais Santana Pinheiro Feio[19], Adrianne Raposo Ponte[20], Jakeline Lima da Costa Marchezini[21], Daniela Mafra Fernandes[22], Hilane dos Santos Alves[23], Gabriel Azevedo Parreira Martins[24], Giovana Escribano da Costa[25], Danilo Nascimento de Barauna[26], Laide de Sousa Oliveira[27], Dilena Maria Costa Monteiro[28], Shirley Aviz de Miranda[29]

[1]Academic of Medicine. Metropolitan University Center of the Amazon (UNIFAMAZ). Belem, Para, Brazil.Email: daniel.lucas@htomail.es
[2]Academic of Nursing. Metropolitan University Center of the Amazon (UNIFAMAZ). Belem, Para, Brazil.
[3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22]Academic of Medicine. Metropolitan University Center of the Amazon (UNIFAMAZ). Belem, Para, Brazil.
[23,24]Academic of Medicine. University Center of Para (CESUPA). Belem, Para, Brazil.
[25]Academic of Medicine. Federal University of Para (UFPA). Belem, Para, Brazil.
[26]Doctor, Metropolitan University Center of the Amazon (UNIFAMAZ). Belem, Para, Brazil.
[27]Nurse,University Center of Maranhao (UNICEUMA). Belem, Para, Brazil.
[28]Nurse, Metropolitan University Center of the Amazon (UNIFAMAZ). Belem, Para, Brazil.
[29]Nurse, Master in Nursing from the Federal University of Pará (UFPA). Professor at the Metropolitan University Center of the Amazon (UNIFAMAZ), Belém, Pará, Brazil.

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Abstract**—** *Objective: report an experienced experience regarding the educational action related to type 2 Diabetes mellitus and its self-care for employees of a Private Education Institution. Method: This is a descriptive research, of the experience report type, developed by medical and nursing students, and supervised by medical and nursing professionals, in an Institution of Higher Education, theoretical and dialogued exposition, through an educational lecture, with the intention of orienting as to type 2 diabetes mellitus, which was subdivided into two fundamental stages, the*

***Keywords*— Diabetes Complications, Chronic Disease, Outcome Assessment, Health Care, Preventive Health Services.**

first related to the orientation of the theme and the second as to the verification of capillary glycemia. Results:The concern of the participants was evidenced by their concerns through questions and doubts about the theme. During the process, it was found that approximately 22% of those evaluated had rates between 100mg / dL and 125mg / dL, in addition, about 9% of respondents obtained rates above 125mg / dL. Conclusion:In view of these prevention aspects, it is possible to verify the need for employee evaluation more frequently, guaranteeing, in addition to the benefit to the employees' quality of life, the reduction of absenteeism rates and increasing their productivity for the company.

I. INTRODUCTION

Diabetes Mellitus is a disease of high metabolic complexity with an incidence at national and global level, which is triggered by factors that directly interfere in the quality of life of members, which can result in disabilities or even in the reduction of life expectancy. It is considered a chronic pathology and that due to the great morbidity and mortality related to the affected criteria requires a high cost of investments in this area (Cheng, S. W., Wang, C. Y., & Ko, Y., 2019)

Due to dietary errors and increasing sedentary lifestyle nowadays in addition to other modifiable factors, type-2 diabetes (T2D) has become a worldwide epidemic, bringing with it a high occurrence of microvascular (neuropathy, nephropathy, and retinopathy) and macrovascular (acute myocardial infarction and cerebral vascular accident) (Pivari, F., Mingione, A., Brasacchio, C., & Soldati, L., 2019).

The current aging of citizens has caused a greater prevalence of diabetes, which is related to a high risk of complications in their health. Among these, the diabetic foot (DF) is evidenced by its high incidence and great mutilating power. Regarding this perspective, reducing the incidence and comorbidities associated with T2D is to ensure prophylactic measures, especially in people at high risk, such as individuals who have an altered fasting glycemic index or reduced glucose tolerance. (Martinez, L. C., Sherling, D., & Holley, A., 2019).

In this sense, behavioral and medication measures have influenced the prophylaxis and control of the disease. Thus, changes in life habits, such as therapeutic dietary control, associated with the practice of physical exercises in daily life, in addition to the use of oral agents, have shown satisfactory results(Uusitupa, M., et al, 2019).

Therefore, modifiable agents must be the intervention point for T2D, even though age, family history and other non-alterable variables may be present. A factor of great relevance is obesity, which significantly increases the risk for the evolution of T2D, with the individual's resistance to insulin enzyme being an important association factor for understanding in conjunction with the high deposition of visceral fat, presenting a highmetabolic turnover; and as a sedentary lifestyle is a trend of the world population, the need for intervention tends to become more urgent(Uusitupa, M., et al, 2019).

Thus, any mechanism that aims to reduce weight results in a concomitant reduction in glycemic indexes for T2D. The systematization of physical activities results in benefits to the musculoskeletal structures, with more efficient use of energy, both for adults who live with the disease, and for those who use this habit as a prophylactic form, including directed at young people and children(Bullard, T., Ji, M., An, R., Trinh, L., Mackenzie, M., & Mullen, S. P., 2019).

Therefore, the objective of this research is to report an experience on an educational action related to the prevention and awareness of type 2 Diabetes mellitus and on their self-care of the hyperglycemic state and its possible complications, directed at employees of a Private Education Institution.

II. METHOD

This is a descriptive research, of the type of experience report, by medical and nursing students, supervised by professionals in the field of medicine and nursing, from a Private Education Institution, on August 14, 2020, in the city of Belém, Pará. The action was developed with 64 employees, aged 18 to 52 years old, from a Private Education Institution who work in the sectors of general services, security, assistance and even teachers of the institution, who attended according to the availability presented by each participant and avoiding crowds.

The methodology used was a theoretical and dialogued exposition, through an educational lecture, with the aim of guiding as to type-2 diabetes mellitus, including epidemiology, more frequent signs, and symptoms, in addition to presenting the necessary measures both for the prophylaxis of the disease and for adequate control, aiming

to minimize possible complications, such as diabetic neuropathy.

Subsequently, an individual conversation was held with each of the participants to identify risk factors, and a capillary blood glucose test was performed to check the glycemic index and, from this, to verify if the participant had glycemic alterations, ensuring that there was an understanding of the importance of these interventions more frequently and of the care with the modifiable factors related to T2D, including psychological stress, obesity, hypercaloric and hyperlipidic diets, and sedentarism.

III. RESULTS AND DISCUSSION

The experience made it possible to address the employees' self-care in association with lifestyle habits, a balanced diet, physical activity practices and emotional balance. During the lecture everyone was communicative and focused, thus ensuring an exchange of information. From this, there was a need to explain in detail about Diabetes because these individuals are exposed to risk factors.

In this sense, Cheema S, et al (2018), emphasizes the importance of assessing risk factors, given that these characteristics result in the highest probability of both the development of chronic disease and its complications. Thus, several well-established risk factors were associated with multiple complications and isolated microvascular complications, but each separate microvascular complication was linked to many risk factors, demonstrating the need for preventive care and periodic analyzes with professionals in the field. Therefore, ensuring the evaluation of possible changes over the age and avoiding major complications.

Through this, the participants' concern was evidenced through frequent questions about the theme, whether due to personal modifiable factors, such as food, physical activities, and other life habits, or because of non-modifiable factors, related to heredity, given that many of them did not perform, or performed in a precarious way, the prevention of Diabetes and the diseases present in serious or decompensated forms of the disease.

In this regard, Uusitupa M, et al (2019), demonstrates that the change in lifestyle helps not only in preventing new cases of type 2 diabetes, but also ensures the maintenance of those who have already been diagnosed with the disease, either through glycemic indexes, or with moderate weight reduction. According to this same study, the main gains from lifestyle changes are more related to long-term preventive forms.

During the process it was verified that approximately 22% of the people evaluated had indexes between 100mg/dL and 125mg/dL, besides that, about 9% of the interviewees had indexes above 125mg/dL, and they were oriented to re-educate their life habits and take complementary exams, in cases of possible diagnosis of Type 2 Diabetes Mellitus.

Considering this, Khan R, et al (2019), points out that DM2 is a silent disease that affects numerous individuals progressively, so that 1 in 2 people are unaware of the condition, and this is one of the factors that result in further complications.

Such results associated with the dialogue carried out with the participants, it was found that the lifestyle of each individual or the family history were factors that influenced the achievement of these results. It was noticed that individuals had numerous practices that could increase the morbidity of the disease, such as stressors, which in some cases were frequent, in addition to irregular eating, with the intake of fatty and very caloric foods, often associated with sedentary lifestyle. These aspects demonstrate the importance of frequent and continuous clinical evaluation, with a view to prevention and adequate control.

González-Ruiz, et al (2019) demonstrates the need for professional interventions for proper control and adherence to the treatment of patients with diabetes, demonstrating that not only formal and face-to-face dialogue can be used as a measure, but also the use of technological means that can, in addition to reducing costs, facilitate access to numerous individuals. In this sense, Timpel P., Oswald S., Schwarz P., & Harst L (2020), refer to measures such as telemedicine, as an advance in relation to the potential clinical control of patient with Diabetes, but that careful measures should be taken due to the limitations presented by the tool.

In view of this, it was noticeable that this action allowed a critical and reflective reflection to the employees of the institution, considering that the old personal habits could harm not only their daily performance as a worker, but would also directly affect their quality of life.

IV. CONCLUSION

In view of these prevention aspects, it is possible to verify the need for employee evaluation more frequently, guaranteeing, in addition to the benefit to the employees' quality of life, the reduction of absenteeism rates and increasing their productivity for the company.

Another important factor is the reduction of complications associated with the disease, such as

retinopathy and diabetic neuropathy, which result in permanent limitations to the professionals who acquire them. Thus, these findings reinforce the importance of providing accessible guidance and encouraging patients' self-care.

With this, it is necessary to carry out educational programs with a more accessible language, seeking understanding and interest of the population, thus favoring adherence to treatment, particularly with regard to lifestyle changes, assisting in proper glycemic control as a way to reduce or prevent complications.

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