

Categoría: Congreso Científico de la Fundación Salud, Ciencia y Tecnología 2023

ORIGINAL

## Nursing Care on Quality of Life in Regular basic education teachers treated at a Hospital in North Lima

### Cuidados de enfermería en la calidad de vida de docentes de educación básica regular atendidos en un hospital de Lima Norte

Juan Saberbein-Muñoz<sup>1</sup>  , Christian Hilario-Quispe<sup>2</sup>  , Maria Salinas-Cruz<sup>3</sup>  

<sup>1</sup>Facultad de Tecnología. Nacional de Educación Enrique Guzmán y Valle.,

<sup>2</sup>Escuela Profesional de Contabilidad. Universidad Nacional de Cañete.,

<sup>3</sup>Facultad de Pedagogía y Cultura Física. Nacional de Educación Enrique Guzmán y Valle.

**Citar como:** Saberbein-Muñoz J, Hilario-Quispe C, Salinas-Cruz M. Nursing Care on Quality of Life in Regular basic education teachers treated at a Hospital in North Lima. Salud, Ciencia y Tecnología - Serie de Conferencias 2023; 2:403. <https://doi.org/10.56294/sctconf2023403>

Recibido: 01-06-2023

Revisado: 29-07-2023

Aceptado: 30-09-2023

Publicado: 01-10-2023

#### ABSTRACT

Diabetes mellitus worldwide is one of the main diseases in which it considerably compromises the health status of the person and decreases over time their quality of life, so the research objective is to determine nursing care on the quality of life in Regular basic education teachers treated in a hospital in North Lima. It is a quantitative, descriptive-cross-sectional study, with a total population of 132 patients who developed a questionnaire of sociodemographic data and the Diabetes 39 instrument. In their results, we observed that between the ages of 30 and 59 years of age, 58,8 % have an average quality of life. In conclusion, educational counseling on self-care in patients with diabetes mellitus should be performed.

**Keywords:** Quality of Life; Diabetes Mellitus; Nursing Care; Noncommunicable Diseases.

#### RESUMEN

La diabetes mellitus a nivel mundial es una de las principales enfermedades en la cual compromete considerablemente el estado de salud de la persona y disminuye con el tiempo su calidad de vida, por lo que el objetivo de la investigación es determinar los cuidados de enfermería sobre la calidad de vida en docentes de educación básica Regular atendidos en un hospital de Lima Norte. Es un estudio cuantitativo, descriptivo-transversal, con una población total de 132 pacientes a quienes se les elaboró un cuestionario de datos sociodemográficos y el instrumento Diabetes 39. En sus resultados, observamos que, entre los 30 y 59 años de edad, el 58,8 % tiene una calidad de vida media. En conclusión, se debe realizar consejería educativa sobre autocuidado en pacientes con diabetes mellitus.

**Palabras clave:** Calidad de Vida; Diabetes Mellitus; Cuidados de Enfermería; Enfermedades no Transmisibles.

## INTRODUCTION

Diabetes mellitus (DM) is a metabolic disease that affects the population and is considered one of the biggest public health problems today.<sup>(1)</sup> Population ageing, increasing urbanization, sedentary lifestyle, inadequate nutrition and obesity are largely responsible for the increase in the incidence and prevalence of DM, which represents a challenge for health services.<sup>(2)</sup>

Quality of life (QoL) is considered a good indicator of life expectancy, especially for people with special health conditions, in addition to improving patient care and disease management, particularly during the coronavirus (COVID-19) pandemic, future implementation can also improve the quality of life of people with diabetes mellitus.<sup>(3)</sup>

Since knowledge about the disease and the attitude adopted towards the self-care of DM have been related to QoL.<sup>(4)</sup> It is believed that the more extensive knowledge the individual has about the disease and its treatment, the greater the probability that he will adopt positive attitudes, which translates into aspects that can be reflected directly or indirectly in his QoL.<sup>(5)</sup>

Diabetes distress is known to be a problem related to diabetes care, access to social support and care, and emotional stress and anxiety.<sup>(6)</sup> This often includes the worries, fears, and threats associated with the demands of a chronic disease such as diabetes.<sup>(7)</sup>

In the United States, a study confirmed that diabetes distress (DD) is associated with lower diabetes quality of life (QoL) for people with type I and type II diabetes; suggesting that attending or working in the teaching area may be associated with high diabetes distress scores and lower diabetes quality of life.<sup>(8)</sup>

A study in Cuba conducted on 82 people suffering from Type II Diabetes in the city of Teresina; it reveals that most people living with diabetes have a good QoL, and those who suffer a negative impact have the emotional factor as the most affected domain.<sup>(9)</sup> Among the sociodemographic and clinical conditions associated with low QoL, age, type of housing, type of diabetes and time since diagnosis of the disease stood out.<sup>(10,11,12,13)</sup>

A study in Mexico where 27 patients diagnosed with type II DM were evaluated, showing that the highest level of quality of life is reflected in social and professional care, satisfaction with treatment and impact on treatment; while the most affected aspects were general well-being and concern about the future effects of diabetes.<sup>(14,15,16,17)</sup> In addition, a small, positive and statistically significant correlation was found between the time of disease progression and adverse effects of treatment.<sup>(18)</sup>

In Asia, a study conducted in Iran surveyed 266 elderly people with type II diabetes; revealed that barriers to treatment such as psychological distress related to diabetes management, type of treatment, and age were statistically significant predictors of QoL dimensions.<sup>(19)</sup> On the other hand, a study among DM patients living in central Thailand in 2019 showed that more than half of DM patients had a good quality of life.<sup>(20)</sup>

A study conducted in Spain showed that the quality of life of women in terms of health is worse than that of men. Age, number of years since diabetes, presence of complications, as well as comorbidities, medication regimens and glycemic control.<sup>(21,22,23,24,25)</sup> Everything affects directly. On the other hand, living alone, low socioeconomic status, low social support, and needing help for diabetes were associated with poor quality of life.<sup>(26)</sup>

In Africa, Southwestern Ethiopia reported that all dimensions of HRQoL in Regular basic education teachers were affected in this study setting; identifying important predictors such as age, duration of illness and fasting glucose levels. Interventions beyond standard care are needed to improve HRQoL in people with diabetes.<sup>(27)</sup>

In Latin America, a study conducted in Brazil showed that there is a high impact of DM on the QoL of patients, with the main correlated variables being age, sex, time of diagnosis of the disease, glycemic control and the presence of complications/comorbidities.<sup>(28,29,30,31)</sup>

Likewise, in Peru, a similar result was found in which there is a significant association between the level of knowledge about DM2 and the level of adherence to DM2 treatment; both the level of education and the origin, which indicates the importance of determining certain factors specific to a population that intervene directly on adherence to treatment of this disease.<sup>(32,33)</sup>

Therefore, the research objective is to determine nursing care in Regular basic education teachers treated at a hospital in North Lima.

## METHODS

In the study according to its properties is quantitative, with descriptive-transverse non-experimental methodology.

The population is made up of a total of 132 participants who are diagnosed with diabetes mellitus who go to their care in a hospital in North Lima.<sup>(34)</sup>

### Inclusion Criteria

- Participants who are over 30 years old
- Participants who are seen in the endocrinology office
- Participants who voluntarily agree to participate in the study

The technique used was the survey, in which the Diabetes 39 data collection instrument was described.

For data collection, the survey is distributed by sociodemographic aspects and the Diabetes 39 instrument comprising 39 items distributed in 5 dimensions: energy and mobility (15 items), diabetes control (12 items), control and concern (4 items), social overload (5 items) and sexual function (3 items), in which it is valued with a Likert scale with 7 response options: "1 = no affection at all", "2 = almost nothing", "3 = a little", "4 = fair", "5 = a lot", "6 = too much", "7 = tremendously affect", so his score would be "1 to 91" is low quality of life, "92 to 183" half-life quality and "184 to 273" high quality of life, the higher the score, the higher the patient's quality of life". And finally, two items that go to the end (perception of the patient and severity of the disease) were not taken into account since they do not contribute the final score.

The validation of the instrument was given through the Kaiser-Mayer-Olkin sample adequacy obtaining a coefficient of 0,965 ( $KMO > 0,5$ ) and in Bartlett's sphericity test obtained significant results ( $\chi^2$  approx. = 9497,375; gl = 741; p = 0,000).

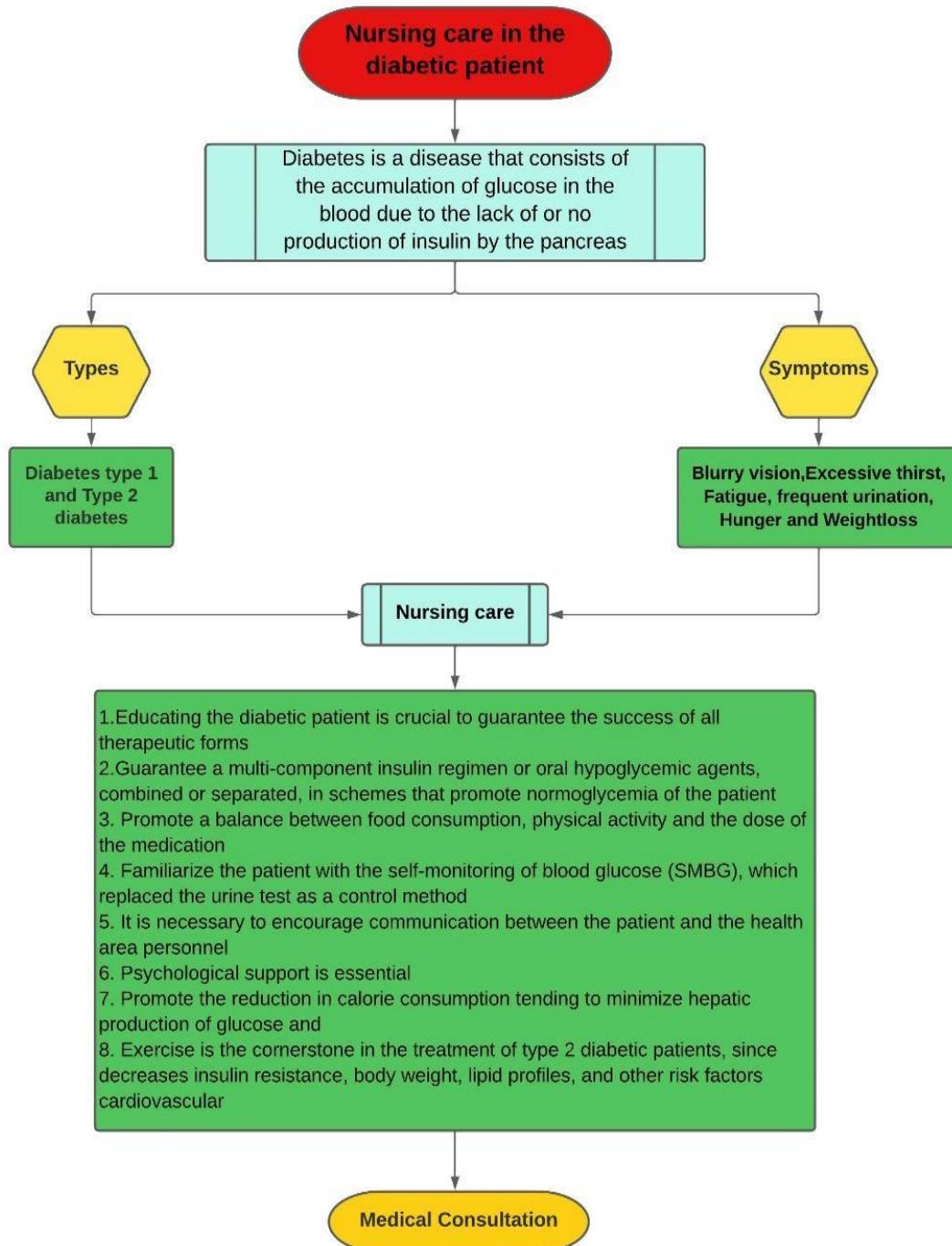
As for the reliability of the instrument, it was given through Cronbach's Alpha obtaining a score of 0,989 ( $\alpha > 0,8$ ) for the 39 items of the instrument.

For the realization of the survey, prior coordination was made with the head in charge of external consultation of endocrinology so that the study is carried out, and in turn details were given so that they have the knowledge of what is going to be done.

This flow chart shows the process that the nursing professional must perform for the care to be performed in the patient diagnosed with diabetes mellitus.

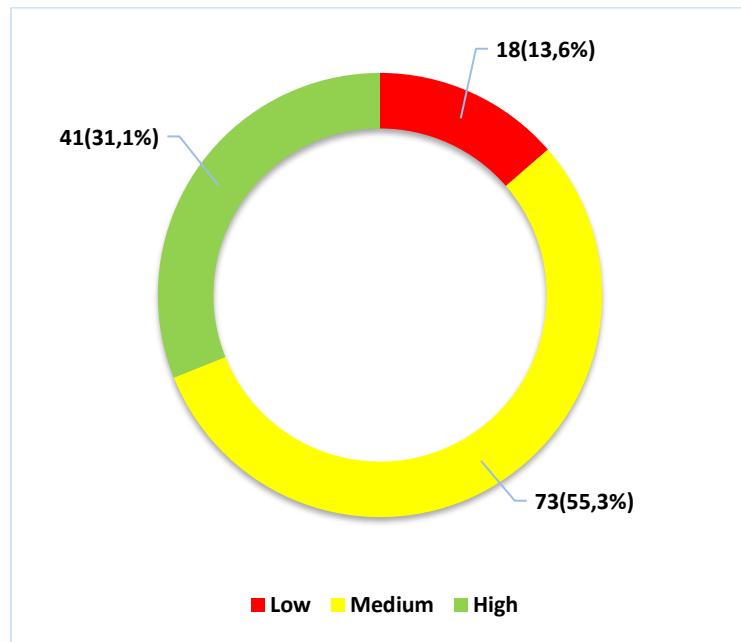
The importance of glycemic control to reduce complications in the diabetic patient has been clearly demonstrated in long-term studies and interventions, where the first objective of glycemic control in most diabetics is to decrease glycosylated hemoglobin to less than two percentage points above the upper limit of normal. In addition to the intensity of the treatment, it must be carried out individually and adjusted in each case.<sup>(35)</sup> It is essential in the care of the diabetic patient to simultaneously manage the other metabolic variables that coexist altered with hyperglycemia, that is, the concentration of serum cholesterol, HDL cholesterol, LDL and triglycerides must be strictly monitored, as well as the variables weight, body mass index (BMI), waist-hip ratio and systolic and diastolic blood pressure, thus to minimize the incidence of acute and chronic complications.<sup>(36)</sup>

For this, nursing care includes assessment and control of symptoms, but also adequately inform the patient about the guidelines to follow, both medical, nutritional and physical for the self-treatment of their disease.



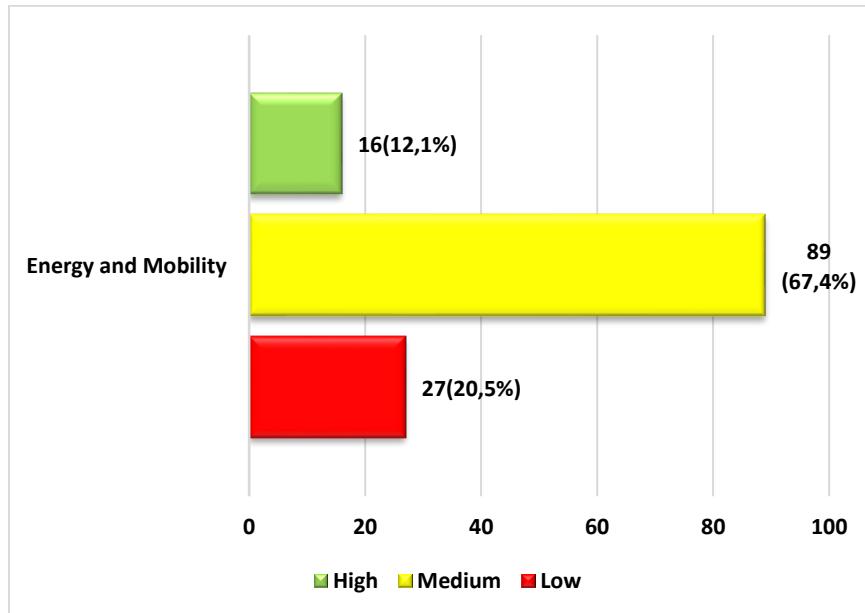
**Figure 1.** Flowchart on nursing care for a diabetic patient

## RESULTS



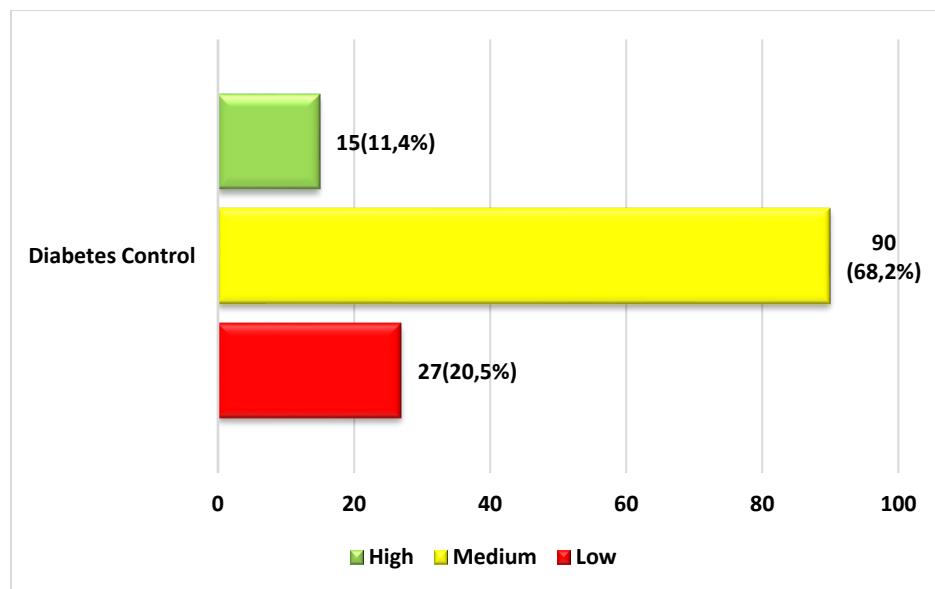
**Figure 2.** Quality of life in Regular basic education teachers treated at a hospital in North Lima

Figure 2 shows that 13,6 % (n=18) of the participants had a low quality of life, 55,3 % (n=73) a median quality of life and 31,1 %(n=41) a high quality of life.



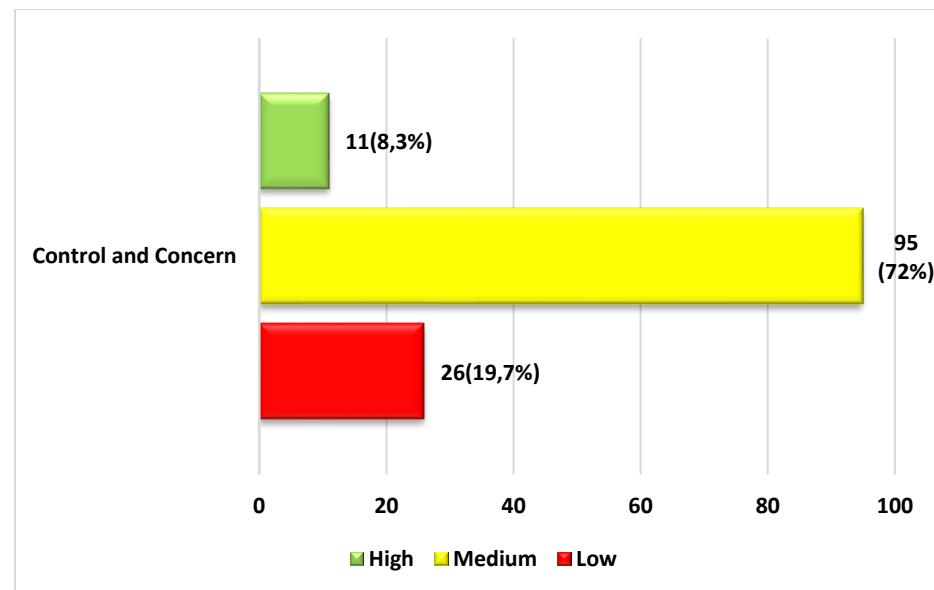
**Figure 3.** Quality of life in its dimension energy and mobility of Regular basic education teachers treated in a hospital in North Lima

In figure 3, we can see that 12,1 % (n=16) of the participants have a high level of quality of life with respect to their energy-mobility dimension, 67,4 % (n=89) a median quality of life and 20,5 % (n=27) a low quality of life.



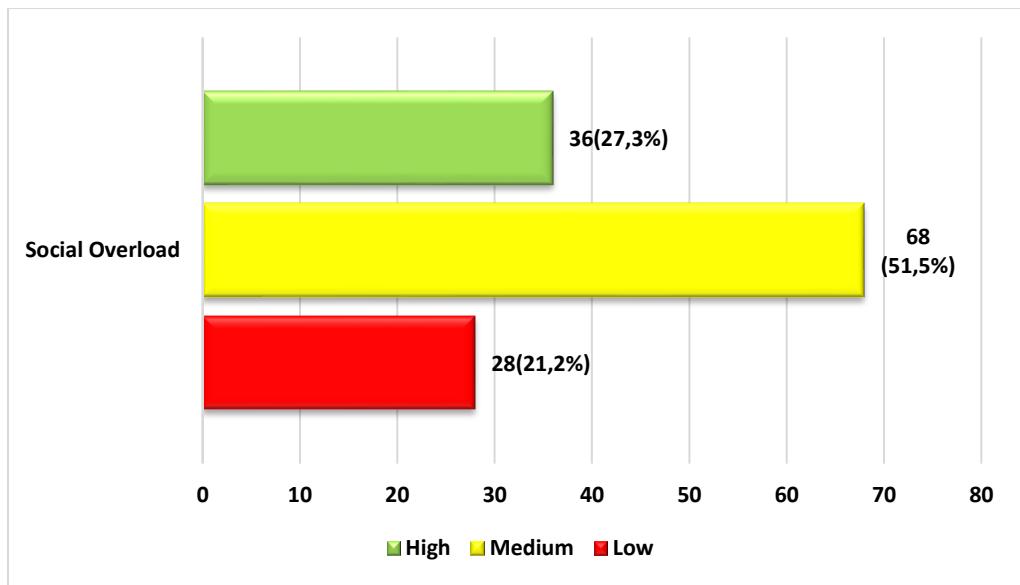
**Figure 4.** Quality of life in its dimension diabetes control of Regular basic education teachers treated in a hospital in North Lima

In figure 4, we can see that 11,4 % (n=159) of the participants have a high level of quality of life with respect to their diabetes control dimension, 68,2 % (n=90) a mean quality of life and 20,5 % (n=27) a low quality of life.



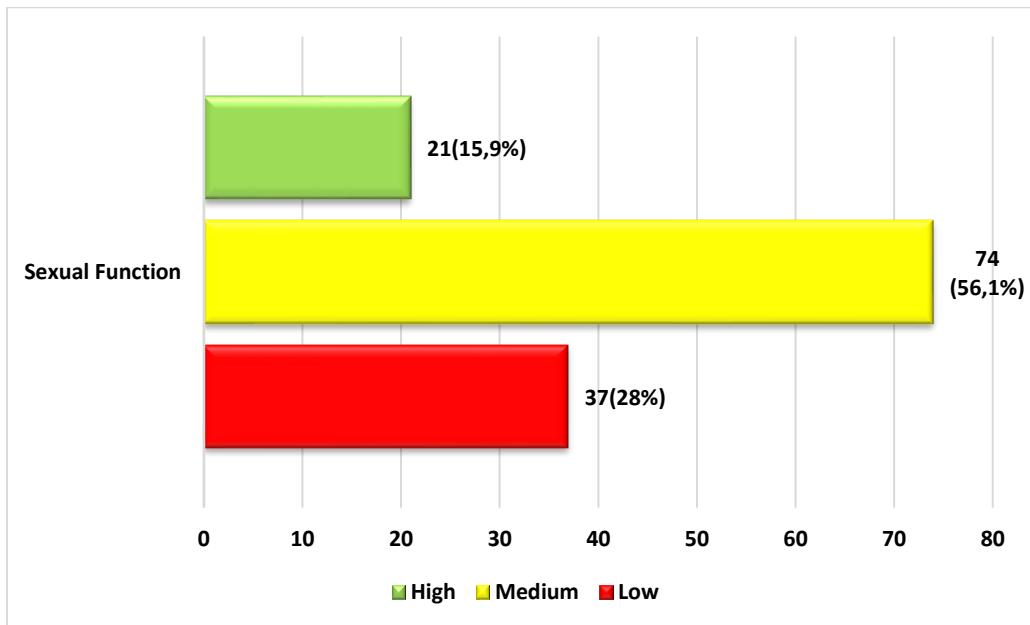
**Figure 5.** Quality of life in its dimension control and concern of Regular basic education teachers treated in a hospital in North Lima

In figure 5, we can see that 8,3 % (n=11) have a high quality of life with respect to their control and concern dimension, 72 % (n=95) a half-life quality and 19,7 % (n=26) a low quality of life.



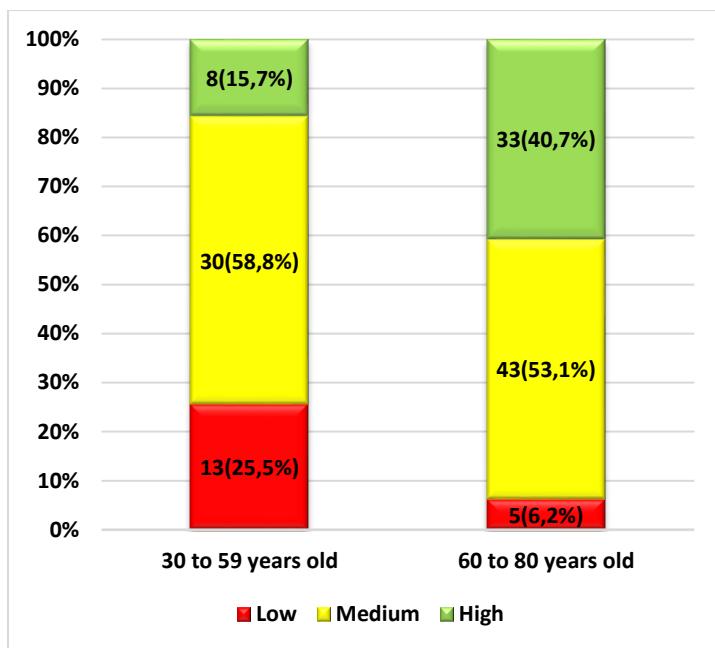
**Figure 6.** Quality of life in its dimension social overload of Regular basic education teachers treated in a hospital in North Lima

Figure 6 shows that 27,3 % (n=36) of the participants have a high quality of life with respect to their social overweight dimension, 51,5 % (n=68) a median quality of life and 21,2 %(n=28) a low quality of life.



**Figure 7.** Quality of life in its dimension sexual function of Regular basic education teachers treated in a hospital in North Lima

In figure 7, we can observe that 15,9 % (n=21) of the participants have a high quality of life with respect to their sexual function dimension, 56,1 % (n=74) a half-life quality and 28 % (n=37) a low quality of life.



**Figure 8.** Quality of life in relation to the ages of Regular basic education teachers treated in a hospital in North Lima

In figure 8, we can see that 15,7 % (n=8) of the participants between the ages of 30 and 59 years have a high quality of life, 58,8 % (n=30) a mean quality of life and 25,5 % (n=13) a low quality of life; and participants between the ages of 60 to 80 years 40,7 % (n=33) have a high quality of life, 53,1 % (n=43) a median quality of life and 6,2 % (n=5) a low quality of life.

## DISCUSSIONS

In the present research, emphasis was given to cardiovascular and metabolic diseases, with a view to the promotion and prevention of cardiovascular risks in diabetics, and in turn nursing care in Regular basic education teachers.<sup>(37)</sup>

In the results on quality of life in diabetics we observe that, they have a measured quality of life, this is interpreted in that, all Regular basic education teachers as they live with the disease tend to modify their lifestyle, where self-care will be an important role for the diabetic person, where a healthy diet, exercise, correctly follow the treatment and a good family interaction, will make you maintain and improve your quality of life with yourself, minimizing the risk that your disease can cause, and that in turn you can carry out your life normally following the advice according to what health professionals mention, since they seek strategies that allow improving the self-care of the diabetic person, and that this fundamentally allows the development of coping skills to the disease, allowing to improve physical, mental and family behavior.<sup>(38,39,40)</sup>

Although it occurs mostly in older people than in young people, since young people tend to be very careless in their health, since diabetes appears more easily because the high exposure of glucose where factors such as sugars, fat and carbohydrates, are factors that are usually related to high blood pressure, high cholesterol and obesity, and that these diseases are usually considerably related to diabetes, therefore, the organism is not suitable for such consumption, do not usually adapt to the new situation, since being a young organism, they do not usually adapt quickly to the increase in glucose, so the risks of contracting diabetes is generated more easily if you do not make healthy habits so that it does not have as a consequence this disease that will accompany him for the rest of his life.<sup>(41,42)</sup>

For the results of the dimensions, it is observed that the diabetic people of the study have a quality of life in relation to all the dimensions, this can be interpreted in that, the changes made by diabetic people, usually cause conflicts in their organism, since the activities they performed and the intake of food that they consumed and cannot consume product of the disease, Occasionally it usually improves the quality of life of the diabetic person, since by coping with the disease correctly performing the coping strategies given by the health professional, it allows to maintain their stable quality of life against the disease they are suffering.

## **CONCLUSIONS**

It is concluded that motivational counseling should be provided to the diabetic person on self-care that allows to increase behavioral and emotional levels.

It is concluded that, talks should be given on the promotion of a healthy lifestyle, oriented in people with diabetes mellitus.

## **REFERENCES**

1. Tamornpark, S. Utsaha, T. Apidechkul, D. Panklang, F. Yeemard, and P. Srichan, "Quality of life and factors associated with a good quality of life among diabetes mellitus patients in northern Thailand," *Health Qual. Life Outcomes*, vol. 20, no. 81, Dec. 2 022, doi: 10.1186/s12955-022-01986-y.
2. Alvarado NC, Herrera YF, Rosa RG, Palomino-Ccasa J. Adaptación y validación de una escala de apoyo social en personas que sufrieron COVID-19. *Revista Científica de Ciencias de la Salud* 2023;16:8-17. <https://doi.org/10.17162/rccs.v16i2.1980>.
3. Aspajo JM, García LET. Cambios en los factores asociados al ingreso a la Universidad Nacional de la Amazonía Peruana en el contexto de la postpandemia del COVID-19. *Apuntes Universitarios* 2023;13:52-64. <https://doi.org/10.17162/au.v13i4.1404>.
4. B. Farías and D. Bardales, "Conocimientos sobre Diabetes Mellitus tipo 2 y Adherencia al tratamiento en pacientes del Hospital Reátegui, Piura, Perú," *ACTA MEDICA Peru.* , vol. 38, no. 1, pp. 34-41, Apr. 2021, doi: 10.35663/amp.2021.381.1119.
5. B. Meneses , N. Gonzalez, W. Alvarado, and J. Meneses, "Quality of life in patients with diabetes mellitus treated in an outpatient clinic of a hospital in North Lima," *Int. J. Adv. Appl. Sci.* , vol. 9, no. 5, pp. 1-8, 2022, doi: 10.21833/ijaas.2022.05.001.
6. Komaratat, N. Auemanekul, and W. Kittipichai, "Quality of life for Type II Diabetes Mellitus patients in a Suburban tertiary Hospital in Thailand," *J. Heal. Res.*, vol. 35, no. 1, pp. 3-14, Jan. 2021, doi: 10.1108/JHR-05-2019-0100.
7. Fernández and P. Baptista, "Research Methodology." p. 634, 2015, [Online]. Available: <http://observatorio.epacartagena.gov.co/wp-content/uploads/2017/08/metodologia-de-la-investigacion-sexta-edicion.compressed.pdf>.
8. Condori JEXC, Céspedes JMZ. Programa «PODER» y su efecto en el uso de los dones y ministerios espirituales. *Revista Estrategias para el Cumplimiento de la Misión* 2023;21:66-89. <https://doi.org/10.17162/recm.v21i1.2065>.

9. Chipana, M. Chipana, R. Villegas, B. Meneses, and H. Matta, "Type 2 diabetes risk and physical activity in outpatients treated in health centers in a district of north Lima, 2020," *Adv. Sci. Technol. Eng. Syst.* , vol. 5, no. 6, pp. 1651-1656, 2020, doi: 10.25046/AJ0506196.
10. Beverly, R. Rennie, And. Guseman, A. Rodgers, and A. Healy, "High Prevalence of Diabetes Distress in a University Population," *J. Am. Osteopath. Assoc.* , vol. 119, no. 9, pp. 556-568, Sep. 2019, doi: 10.7556/jaoa.2019.099.
11. Vieira, F. Stumpf, J. Carneiro, R. Pontarolo, and A. Wiens, "Evaluation of the application of the diabetes quality of life questionnaire in patients with diabetes mellitus," *Arch. Endocrinol. Metab.* , vol. 64, no. 1, pp. 59-65, Jan. 2020, doi: 10.20945/2359-3997000000196.
12. Enriquez MAC. Inicio y desarrollo de la Iglesia Adventista del Séptimo Día en la zona quechua de Yauri - Espinar: Revista Estrategias para el Cumplimiento de la Misión 2023;21:3-18. <https://doi.org/10.17162/recm.v21i1.2006>.
13. Figueroa LC, Obedd GCG, Andree GEC, Karen ZJM, Milagros GFJ. Bajo una mirada de la NIC 2: Los costos y su efecto en la rentabilidad de las PYMES del sector avícola en Lima Metropolitana, año 2022. Revista de Investigación Valor Agregado 2023;10:19-51. <https://doi.org/10.17162/riva.v10i1.1971>.
14. Figueroa LC, Obedd GCG, Andree GEC, Karen ZJM, Milagros GFJ. Bajo una mirada de la NIC 2: Los costos y su efecto en la rentabilidad de las PYMES del sector avícola en Lima Metropolitana, año 2022. Revista de Investigación Valor Agregado 2023;10:19-51. <https://doi.org/10.17162/riva.v10i1.1971>.
15. Flores M. Antropología y misión en las comunidades Mbya guarani. Revista Estrategias para el Cumplimiento de la Misión 2023;21:19-44. <https://doi.org/10.17162/recm.v21i1.1946>.
16. Guevara RM. Compromiso cristiano y su relación con la parentalidad y conyugalidad en una muestra de feligreses adventistas del Perú. Revista Estrategias para el Cumplimiento de la Misión 2023;21:45-65. <https://doi.org/10.17162/recm.v21i1.2024>.
17. Gül MD, Costu B. Investigating the difficulty level of multimodal representations used by science teachers of gifted students. Apuntes Universitarios 2023;13:65-87. <https://doi.org/10.17162/au.v13i4.1473>.
18. Rezakhani, And. Sobhi, and A. Habibi, "Determinants of Quality of Life among elderly Patients with Type 2 Diabetes in Northwest of Iran: based on problem areas in diabetes," *Front. Endocrinol. (Lausanne)*. , vol. 13, no. 1, pp. 1-8, Jul. 2022, doi: 10.3389/fendo.2022.924451.
19. Huanca WV, Sanca CRC, Alicia QM, Torres-Miranda JS. Satisfacción con los recursos laborales y la calidad de vida en trabajadores del rubro comercial de la ciudad de Juliaca. Revista de Investigación Valor Agregado 2023;10:83-99. <https://doi.org/10.17162/riva.v10i1.2026>.
20. Huanca WV, Sanca CRC, Alicia QM, Torres-Miranda JS. Satisfacción con los recursos laborales y la calidad de vida en trabajadores del rubro comercial de la ciudad de Juliaca. Revista de Investigación Valor Agregado 2023;10:83-99. <https://doi.org/10.17162/riva.v10i1.2026>.

21. Gálvez, M. Cáceres, J. Guerrero, C. López, and N. Durán, "Quality of life related to health in patients with diabetes mellitus in a basic health zone," *Enferm. Clin.* , vol. 31, no. 5, pp. 313-322, Sep. 2021, doi: 10.1016/j.enfcli.2021.03.001.
22. Zavala, F. Mego, S. Cornejo, B. Meneses, H. Solis, and L. Matta, "Quality of life in patients with type 2 diabetes of the central hospital of the Peruvian Air Force, 2019," *Adv. Sci. Technol. Eng. Syst.* , vol. 5, no. 6, pp. 1340-1344, 2020, doi: 10.25046/AJ0506160.
23. Boyer and J. Earp, "The Development of an Instrument for Assessing the Quality of Life of People with Diabetes: Diabetes-39," *Med. Care*, vol. 35, no. 5, pp. 440-453, 1997, doi: 10.1097/00005650-199705000-00003.
24. J. López and R. Rodríguez, "Adaptation and validation of the Diabetes 39 quality of life instrument in Mexican patients with type 2 diabetes mellitus.," *Salud Publica Mex.* , vol. 48, no. 3, pp. 200-211, 2006, doi: 10.1590/S0036-36342006000300004.
25. Santos et al. , "Qualidade de vida de pessoas com Diabetes Mellitus acompanhadas pela Unidade Básica de Saúde," *Rev. Cubana Enferm.* , vol. 37, no. 1, pp. 1-14, 2021, [Online]. Available: <https://orcid.org/0000-0002-3452-5759>.
26. Jabbarov R, Valiyeva S, Poladov D, Nasibova U, Karimli N. Manifestations of emotional exhaustion in psychology students. *Apuntes Universitarios* 2023;13:25-40. <https://doi.org/10.17162/au.v13i4.1479>.
27. Jaramillo VLM, Cuenca DAR. Índices antropométricos como predictores de obesidad y riesgo metabólico en adolescentes de Loja. *Revista Científica de Ciencias de la Salud* 2023;16:52-60. <https://doi.org/10.17162/rccs.v16i2.2021>.
28. Reyes et al. , "Quality of life in patients with Type II Diabetes Mellitus, in Pachuca Hidalgo," *Inst. Health Sciences Univ. Auton. del Estado Hidalgo*, vol. 8, no. 15, pp. 1-6, 2019, [Online]. Available: <https://repository.uaeh.edu.mx/revistas/index.php/ICSA/issue/archive>.
29. L. Fernández, A. Rodríguez, A. Humberto, and A. Díaz, "Quality of Care for Type 2 Diabetic at José Antonio Echeverría Polyclinic," *Rev. Finlay*, vol. 9, no. 4, pp. 1-10, 2019, [Online]. Available: <http://www.revfinlay.sld.cu/index.php/finlay/article/view/715>.
30. Laguna OAF, Mercado DA. Competencias en procesos contables, control interno y conocimientos generales en contadores de entidades religiosas en países interamericanos. *Revista de Investigación Valor Agregado* 2023;10:100-23. <https://doi.org/10.17162/riva.v10i1.2050>.
31. Laguna OAF, Mercado DA. Competencias en procesos contables, control interno y conocimientos generales en contadores de entidades religiosas en países interamericanos. *Revista de Investigación Valor Agregado* 2023;10:100-23. <https://doi.org/10.17162/riva.v10i1.2050>.
32. Llanos EGA, Diaz DGA, Alessandra EQM, Rivera VTF, Flores JMG. Una nueva visión de la gestión de costos de calidad y su influencia en la rentabilidad de las bodegas del sector vitivinícola, año 2022. *Revista de Investigación Valor Agregado* 2023;10:52-82. <https://doi.org/10.17162/riva.v10i1.1972>.

33. Llanos EGA, Diaz DGA, Alessandra EQM, Rivera VTF, Flores JMG. Una nueva visión de la gestión de costos de calidad y su influencia en la rentabilidad de las bodegas del sector vitivinícola, año 2022. Revista de Investigación Valor Agregado 2023;10:52-82. <https://doi.org/10.17162/riva.v10i1.1972>.

34. Martins and M. Rodrigues, "Diabetes: Patient Adhesion and the Role of the Family in this New Reality," Rev. Atenção à Saúde, vol. 17, no. 59, pp. 2359-4330, May 2019, doi: 10.13037/ras.vol17n59.5838.

35. Quispe YM, Mamani DJ. Nivel de ansiedad y miedo al COVID-19 en adolescentes durante la post pandemia en la ciudad de Juliaca y Tacna, 2022. Revista Científica de Ciencias de la Salud 2023;16:42-51. <https://doi.org/10.17162/rccs.v16i2.1974>.

36. Rosa CPOL, Navarro JAS, Lino JRS, Arevalo KLZ, Flores JMG. Auditoría de gestión y su impacto en el índice de morosidad de las cajas municipales de ahorro y crédito en Lima, periodo 2022. Revista de Investigación Valor Agregado 2023;10:1-18. <https://doi.org/10.17162/riva.v10i1.1970>.

37. S. Moawd, "Quality of Life in University Students with Diabetes Distress: Type 1 and Type 2 of Diabetes Differences," J. Diabetes Res. , vol. 1, no. 1, pp. 1-7, 2022, doi: 10.1155/2022/1633448.

38. Saldaña JMV, Ríos FT, Rodríguez KR, Turpo JA, Aulestia SR. Actitudes sobre el amor y dependencia emocional en estudiantes universitarios de la ciudad de Tarapoto. Revista Científica de Ciencias de la Salud 2023;16:1-7. <https://doi.org/10.17162/rccs.v16i2.2025>.

39. Şanal A, Ozen G. Analysis of Physical Performance Parameters According to Playing Positions of Amputee Football Players. Apuntes Universitarios 2023;13:41-51. <https://doi.org/10.17162/au.v13i4.1463>.

40. Sinty TC, Mamani AQ, Sucapuca YQ. Adicción a redes sociales y cansancio emocional en estudiantes Universitarios de la carrera de Psicología de una universidad privada en la ciudad de Juliaca, 2022. Revista Científica de Ciencias de la Salud 2023;16:18-32. <https://doi.org/10.17162/rccs.v16i2.1959>.

41. Sucari HCR, Rabelo CMM, Sucari SAR. La poesía comprometida de Nicomedes Santa Cruz, una lectura aproximativa. Apuntes Universitarios 2023;13:11-24. <https://doi.org/10.17162/au.v13i4.1500>.

42. T. Gebremedhin, To. Workicho, and D. Angaw, "Health-related quality of life and its associated factors among adult patients with type II Diabetes attending Mizan Tepi University Teaching Hospital, Southwest Ethiopia," BMJ Open Diabetes Res. Care, vol. 7, no. 1, p. e000577, Feb. 2019, doi: 10.1136/bmjdrc-2018-000577.

## **FINANCING**

The authors did not receive funding for the development of this research.

## **CONFLICT OF INTEREST**

The authors declare that there is no conflict of interest.

## **AUTHORSHIP CONTRIBUTION**

*Conceptualization:* Juan Saberbein-Muñoz, Christian Hilario-Quispe, María Salinas-Cruz.

*Data curation:* Juan Saberbein-Muñoz, Christian Hilario-Quispe, María Salinas-Cruz.

*Formal analysis:* Juan Saberbein-Muñoz, Christian Hilario-Quispe, Maria Salinas-Cruz.

*Acquisition of funds:* Juan Saberbein-Muñoz, Christian Hilario-Quispe, Maria Salinas-Cruz.

*Research:* Juan Saberbein-Muñoz, Christian Hilario-Quispe, Maria Salinas-Cruz.

*Methodology:* Juan Saberbein-Muñoz, Christian Hilario-Quispe, Maria Salinas-Cruz.

*Project management:* Juan Saberbein-Muñoz, Christian Hilario-Quispe, Maria Salinas-Cruz.

*Resources:* Juan Saberbein-Muñoz, Christian Hilario-Quispe, Maria Salinas-Cruz.

*Software:* Juan Saberbein-Muñoz, Christian Hilario-Quispe, Maria Salinas-Cruz.

*Supervision:* Juan Saberbein-Muñoz, Christian Hilario-Quispe, Maria Salinas-Cruz.

*Validation:* Juan Saberbein-Muñoz, Christian Hilario-Quispe, Maria Salinas-Cruz.

*Visualization:* Juan Saberbein-Muñoz, Christian Hilario-Quispe, Maria Salinas-Cruz.

*Drafting - original draft:* Juan Saberbein-Muñoz, Christian Hilario-Quispe, Maria Salinas-Cruz.

*Drafting - proofreading and editing:* Juan Saberbein-Muñoz, Christian Hilario-Quispe, Maria Salinas-Cruz.