

DOI: <https://doi.org/10.63332/joph.v5i7.3070>

Sociocultural and Demographic Factors Associated with Quality of Life in Adults with Chronic Non-Communicable Diseases

Yanedsy Díaz Amador¹, Nohelia Romina Robinson Cedeño², Maykel Soto Rodríguez³

Abstract

The present study aimed to determine the association between sociocultural and demographic factors and quality of life in adults with chronic non-communicable diseases. The participants were 256 adults aged 20 to 64 years, of both sexes, who attended the Dr. Liborio Panchana General Hospital, Ecuador. The sample consisted of 155 adults, selected by simple random method, during the year 2024. A quantitative, descriptive, cross-sectional approach was used, with a non-experimental correlational level. The results were processed using the statistical program SPSS, version 27. The mean age of older adults was 51.2 ± 56.4 years, 52.25% were women, and a significant association was found in age, level of academic education, type of housing construction, essential basic services and monthly economic income ($p < 0.05$). It is concluded that sociocultural and demographic factors are associated with the quality of life of adults with NCDs.

Keywords: Adults, Quality of Life, Sociocultural Determinants, Chronic Diseases, Health.

Introduction

Chronic non-communicable diseases (CNCDs) represent one of the most pressing public health challenges worldwide, especially in developing countries like Ecuador. These conditions, which include diabetes mellitus, high blood pressure, and chronic heart and respiratory diseases, are the leading cause of mortality and disability globally. According to the World Health Organization (WHO), NCCDs are responsible for approximately 41 million deaths annually, of which 15 million affect individuals between 30 and 69 years of age. The figures are alarming, highlighting 17.9 million deaths from cardiovascular diseases, 9 million from cancer, 3.9 million from chronic respiratory diseases, and 1.6 million from diabetes mellitus (Aguilar et al, 2021).

In parallel, sociocultural determinants of health (SDH) are intrinsic factors that shape the well-being of individuals and communities. These include the living environment, access to healthcare services, educational level, economic status, and the culture of society (Ángel & Valdés, 2020). A comprehensive approach to social and environmental health is crucial to address health inequalities and improve the quality of life of populations, since health is conceived by the WHO as a state of complete physical, mental and social well-being, beyond the mere absence of disease (Cadena, 2022).

¹ Docente titular auxiliar 1, Doctora en Ciencias de la Salud, Carrera de Enfermería, Universidad Estatal Península de Santa Elena, Ecuador. Correo electrónico: yanedsy2014@gmail.com. (Autora para correspondencia)..

² Egresada de la Carrera de Enfermería, Universidad Estatal Península de Santa Elena, Ecuador. Correo electrónico: nrobinson@upse.edu.ec

³ Doctor en Odontología, Doctor en Ciencias de la Salud, Universidad Nacional de Tumbes, Perú. Correo electrónico: maykel.soto@gmail.com



In the Ecuadorian context, the 2022 reports from the National Institute of Statistics and Census (INEC) indicate that cardiovascular and respiratory diseases are the leading causes of mortality. In the province of Santa Elena, NCDs constitute a significant public health problem, accounting for 72% of the deaths recorded in 2022 (Chacón et al, 2025). This underlines that NCDs are a latent challenge that affects vulnerable groups and deteriorates the quality of life of those who suffer from them (Chiroy & Muñoz, 2023). Therefore, nursing professionals, in their care and research roles, must be at the forefront of new research that addresses this issue, seeking a balance between the sociocultural determinants that, in many cases, limit or make it impossible to control and manage these diseases.

This study aimed to determine the association between sociocultural and demographic factors and quality of life in adults with chronic non-communicable diseases treated at the Dr. Liborio Panchana Sotomayor General Hospital in the province of Santa Elena, during the year 2024. This research seeks to provide real and contextualized data that contribute to a deeper understanding of this complex interaction and to the formulation of more effective intervention strategies.

Materials and Methods

A quantitative methodological study was conducted with an observational, descriptive, cross-sectional, correlational design. The study population consisted of 256 adults, both sexes and ages, between 20 and 64 years old, who attended the outpatient department of Dr. Liborio Panchana Sotomayor General Hospital, Santa Elena Province, Ecuador.

To determine the sample size, the free software "QuestionPro Calculator" was used, considering the total population (N=256), with a confidence level of 95%CI and a margin of error of 5%. The result was a sample of 155 adults, both sexes, between the ages of 20 and 64 years old, who attended the outpatient department of the same health center in the province of Santa Elena, Ecuador.

The observational method and simple random probability sampling were used, and the selection criteria were adults aged 20 to 64 years, with a history of a diagnosed chronic non-communicable disease (CNCD), and those who agreed to participate in the study.

The technique used was a survey, and the instruments used were a data collection form that included sociocultural factors (type of housing construction, essential basic services, and monthly income) and demographic factors (age, sex, marital status, and educational attainment).

The WHOQOL-BREF Questionnaire (Das Neves et al, 2023), It was applied to measure the level of quality of life in surveyed adults. It was developed by the World Health Organization (WHO) in 1991 and consists of 26 items grouped into 4 dimensions or domains: physical health, psychological aspect, social relationships, and environment. Responses were based on a Likert scale of 1 to 4, where (1 = very dissatisfied, 2 = dissatisfied, 3 = satisfied, and 4 = very satisfied), representing the adult's perception of their quality of life. Responses varied depending on the score and were associated with levels such as low (0-49), moderate (50-74), and high quality of life (75-100). The instrument spectaculars a reliability of $\alpha = 0.96$, reflecting excellent reliability for its application.

The procedure was carried out after the 155 adults who comprised the study sample were selected. They were contacted at the outpatient department of Dr. Liborio Panchana Sotomayor General Hospital. Participation was voluntary, and confidentiality and anonymity were

guaranteed by signing an informed consent form. The instrument was administered by the researchers after analyzing its reliability, with Cronbach's alpha coefficient of 0.91.

The data were processed and analyzed using the Statistical Package for the Social Sciences (SPSS) version 27. Descriptive statistical techniques were used, using absolute and relative frequency distribution measures for categorical variables. Inferential analysis was also performed using Pearson's Chi-squared coefficient of association, with a significant level of 95%, after testing homogeneity and independence.

The study was conducted in accordance with the ethical principles for the protection of participants, in accordance with the Regulations of the General Health Law, Article 7, Section 1, which states that "it requires respect for the dignity, rights, and well-being of those involved, guaranteeing both anonymity and confidentiality of information." The literature on the ethical principles upheld by the Declaration of Helsinki was also subsequently reviewed (Devassy et al, 2020), which provides for greater protection of vulnerable populations, with more substantial commitments to justice and equity in care and research, which considered the following:

1- Principle of respect for human dignity: Participants were always respected, and their participation was free and voluntary. They were offered fair treatment based on individual and collective rights.

2- Principle of beneficence and absence of harm: Through this principle, research instruments were applied, always avoiding causing any harm due to the vulnerable conditions some presented.

3- Principle of equality, justice, and equity: Through this principle, all participants were shown equity in terms of gender, social and cultural status, economic status, and educational level. Participants were also treated fairly and equally, regardless of their way of thinking and acting.

The process of validation and acceptance by the institutional ethics committee was also carried out. The research was the result of a research project involving research professors and students in the process of obtaining degrees. The research was also done to obtain the necessary permits for the study.

Results

The total study population consisted of 155 adults, with a mean age of 34 years. 52.25% were female and 47.74% were male. Regarding marital status, 37.43% were in a common-law relationship, single (21.29%), married (18.06%), divorced (15.48%), and widowed (7.74%). Regarding academic education, 40.2% had a high school diploma, 28.38% had a secondary education, 18.06% had a primary education, and 13.54% had completed high school (Table 1).

Sociodemographic variables	Descriptive statistics	
	Absolute Frequency (<i>Fa</i>)	Relative Frequency (<i>Fr</i>)
Age: 20-64 años (\bar{x} - DS)	(51,2 – 56,4)	
Sex		
Male	74	47,74
Famale	81	52,25
Marital estatus		

Single	33	21,29
Married	28	18,06
Divorced	24	15,48
Conjugal unión	58	37,43
Widowed	12	7,74
academic instruction		
Primary	28	18,06
Secondary	44	28,38
bachelor's	62	40,2
University	21	13,54
Total	155	100

Table 1: Sociodemographic Characteristics of the Study Sample.

Abbreviations: \bar{x} (Arithmetic mean) DS (Standard deviation)

Regarding the characterization of sociocultural factors, it was found that the types of housing where adults lived were concrete houses (42.58%), wood (27.74%), brick (17.43%), and 12.25% cane. Regarding essential basic services, 57.42% of adults did not lack these services in their homes, while 42.58% did have them. However, in terms of income, it is evident that 54.83% of participants received a monthly income that ranged from \$201 to \$400 USD, 26.45% less than \$200 USD per month, 10.34% between \$400 and \$600 USD per month, and 8.38% more than \$601 USD (Table 2).

Variables Sociocultural factors	Descriptive statistics	
	Absolute Frequency (<i>Fa</i>)	Relative Frequency (<i>Fr</i>)
Type of home construction		
Concrete	66	42,58
Brick	27	17,43
Wood	43	27,74
Reed	19	12,25
Essential basic services		
Yes	66	42,58
No	89	57,42
Monthly income		
Less than \$200 USD	41	26,45
Of \$201 to \$400 USD	85	54,83
Of \$401 to \$600 USD	16	10,34
Greater than \$601 USD	13	8,38
Total	155	100

Table 2: Characterization of The Sociocultural Factors of the Study Sample, Ecuador 2024.

The descriptive analysis on the level of quality of life of the participants shows that 56.14% presented a low level, followed by the moderate level (26.45%), while 17.41% of the adults were at a high level of quality of life (Table 3).

Quality of life level	Descriptive statistics	
	Absolute Frequency (<i>Fa</i>)	Relative Frequency (<i>Fr</i>)
Low (0-49)	87	56,14
Moderate (50-74)	41	26,45
Higt (75-100)	27	17,41
Total	155	100

Table 3:

Distribution of quality-of-life levels in adults with chronic noncommunicable diseases. Ecuador 2024.

The bivariate analysis of demographic factors with quality of life reflects that the variables age and academic instruction show a statistically significant association with a p equal to 0.001 ($p < 0.05$), while sex and marital status were not statistically significant ($p > 0.05$), Table 4).

Demographic factors		Quality of life levels					
		Low	Moderate	Higt	Total	Chi 2	Worth p
		n	n	n	n		
Age	20-34 years	8	4	23	35	30,885	,001*
	35-49 years	10	17	6	33		
	50-64 years	36	42	9	87		
Sex	Male	30	12	6	48	15,774	,315
	Famale	50	42	15	107		
Marital estatus	Single	24	19	14	57	13,560	,0289
	Married	5	3	2	10		
	Divorced	7	5	2	14		
	Conjugal union	29	22	14	65		
	Widowed	4	2	3	9		
Academic instruction	Primary	21	16	4	41	38,812	,001*
	Secondary	14	10	2	26		
	bachelor's	45	20	12	77		
	University	3	5	3	11		

Table 4.

Bivariate analysis of demographic factors and quality of life among adults with chronic noncommunicable diseases. Ecuador 2024.

Note: * $p < 0,05$ (Statistically significant)

From the results obtained in the inferential analysis of sociocultural factors and quality of life, it is obtained that the variables type of housing construction ($p=0.00$), essential basic services ($p=0.002$) and economic level ($p=0.001$) reflect a statistically significant association for values less than 0.05, (Table 5).

Sociocultural factors		Quality of life levels					
		Low	Moderate	Higt	Total	Chi 2	Worth p
		n	n	n	n		
Type of housing construction	Concrete	19	25	17	61	157,41	,000*
	Briks	12	9	6	27		
	Wood	26	12	5	43		
	Reed	10	8	6	24		
Essential basic services	Yes	28	17	21	66	55,899	,002*
	No	44	31	14	89		
Monthly income	Less tehan \$200 USD	23	18	5	46	48,103	,001*
	Of \$201 to \$400 USD	31	26	22	79		
	Of \$401 to \$600 USD	14	8	4	26		
	Greater than \$601 USD	2	1	1	4		

Table 5.

Inferential analysis between sociocultural factors and quality of life of the adult subjects of the study.

Note: * $p < 0,05$ (Statistically significant)

Discussion

The findings of this study, conducted among adults in the province of Santa Elena, reinforce the complex interconnection between NCDs and health determinants, a perspective that has been increasingly emphasized in global and national scientific literature. The prevalence of NCDs in the population studied is consistent with the epidemiological trends reported by (Díaz et al, 2023), which indicate the increase of these conditions worldwide.

The identification of a growing number of patients with high blood pressure levels, low-sodium diet intake, and high consumption of processed products, underlines the influence of inadequate lifestyles that influence high rates of people diagnosed with NCDs such as high blood pressure and heart disease, as some researchers point out in their study (Duran et al, 2022) and (Fabián, Cuenca & Lucio, 2022).

Academic instruction was the demographic factor with statistical significance in the quality of life of the participants, coinciding with another study (García et al, 2022), in which they found people with NCDs with a low level of education, so the author states that a lower educational level leads to a low level of knowledge about health and is related to less control and self-care, which is a greater probability of early mortality and lower functional capacity.

The significant association between NCDs and sociocultural determinants, such as the type of housing construction, access to essential basic services, and monthly economic income is a critical point of agreement with previous studies (García, 2023) and (Guarango, Brito & Cevallos, 2022). They have demonstrated how living conditions influence the prevalence and complications of NCDs, as well as people's ability to make informed decisions about their health.

The results of this study show that 54.83% of the population does not exceed 400 dollars per month, which limits the acquisition of essential products in the basic basket, as well as obtaining necessary medications for the control of present comorbidities, being significantly reflected in a low quality of life, these results agree with other authors (Hernández, Solano & Ramírez, 2021), where they point out that people with a low socioeconomic status may present a situation that worsens the disease, physical health, mental health and quality of life.

The perception of an "unhealthy" physical environment and unsatisfactory living conditions also contribute to an increased risk of NCDs, which is supported by the results of other studies (Hidalgo et al, 2021) and (Jiménez et al, 2019), describe the influence of the environment on health. However, the impact of the COVID-19 pandemic, although not considered in the study, is inferred to be a factor that may have exacerbated pre-existing conditions and limited access to health services, as noted in the justification of the problem. Therefore, the interruption of primary care services during the pandemic (Lincango, 2024), aggravated the management of NCDs and contributed to the low level of quality of life in the sample.

Dorothea Orem's Self-Care Deficit Theory (Macías, Ortega & Azua, 2023) and Nola Pender's health promotion model (Fabián, Cuenca & Lucio, 2022), They provide a robust theoretical framework for interpreting how limitations in self-care and lack of healthy behaviors can be influenced by demographic and sociocultural factors, and how, from a holistic perspective, the role of nursing can intervene to promote well-being.

The prevalence of NCDs in the adult population of Santa Elena is like that reported in other national studies (Manzini, 2020) and (Márquez et al, 2022), They underline the need for specific and contextualized interventions, due to the significant association of these factors found in the verification of the hypothesis. It is a call to action for health policies and nursing interventions to address not only the clinical aspects of NCDs, but also the sociocultural roots that condition them (Chacón et al, 2025).

Regarding the level of quality of life in the participants, it was found that 56.14% reveal a worrying trend towards low levels of quality of life, a significant finding that indicates that more than half of the adults who attended the hospital's outpatient clinic experience considerable limitations or dissatisfaction in aspects that influence their general well-being. However, another important percentage highlights that 26.45% of adults have a moderate quality of life, which places them in an intermediate situation, possibly with some needs covered, but still with significant areas for improvement. The opposite is true for a minority of adults where 17.41% of them do report a high quality of life, perceiving an overall well-being and satisfaction with their living conditions, health and environment (Palomino, 2020) and (Sánchez, 2021).

Finally, a marked prevalence of low quality of life is highlighted and this pattern underlines the critical need to implement health interventions and programs that address not only the specific medical conditions of users, but also the socioeconomic, psychological and environmental factors that influence the perception of well-being and quality of life (WHO/PAHO, 2023) and (Zhu et al, 2024).

Conclusion

The results confirmed the relationship between demographic and sociocultural factors and the quality of life of adults with chronic non-communicable diseases. Of the 155 people in the study sample, half were women, with an average age of 51, in a common-law marriage, with a secondary education level of 51, living in reinforced concrete housing lacking basic services, with a monthly income of less than \$400, and a poor quality of life.

There is a statistically significant association between the health determinants of age, educational level, housing construction type, essential basic services, and monthly income and the quality of life of the adults studied. This leads to health inequalities and inequities that can lead to late diagnosis, inadequate nutrition, and poorer management of chronic diseases, reflected in the low quality of life of adults suffering from these conditions.

Acknowledgments

The authors would like to thank the Nursing Program and the INCYT Department of the Santa Elena Peninsula State University in Ecuador for funding this important research project to benefit the older adult population and for developing skills for the graduates who participated in it (grant code INCYT-918 70000.0000.387830).

References

- Aguilar, E., Reyes, R., Van, J., Félix, F. J., Delgado, I., Aroca, Á., & González, M. (2021). Quality of life in adults after congenital heart surgery: first Mexican cohort. *Archivos de Cardiología de México*, 91(1), 34–41. <https://doi.org/10.24875/acm.20000107>
- Ángel, M., & Valdés, S. (2020). Chronic noncommunicable diseases and the COVID-19 pandemic. *Revista Cubana de Salud Pública*, 10(45), 1–7. [http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S2221-24342020000200078#:~:text=According%20to%20statistics%20from%20the,%20\(1%2C6%20million.](http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S2221-24342020000200078#:~:text=According%20to%20statistics%20from%20the,%20(1%2C6%20million.)
- Cadena, J. C. (2022). Nursing care in patients at cardiovascular risk is based on Nola J. Pender's theory. *Investigación en Enfermería: Imagen y Desarrollo*, 19(1), 107. <https://doi.org/10.11144/javeriana.ie19-1.ecep>
- Chacón, J., Samaniego, P., Altamirano, P. P., Argudo, C. P., & Molina, A. P. (2025). Prevalence of chronic non-communicable diseases and risk factors in older adults from Sayausí parish, Cuenca, Ecuador. *Scientific and Academic Journal, VITALIA*, 1(3), 1-17. <https://doi.org/10.61368/r.s.d.h.v6i1.637>
- Chiroy, R. J., & Muñoz, J. F. (2023). Determinants of quality of life in older adults with sarcopenia 2021. *Revista Guatemalteca de Cultura*, 3(2), 29–40. <https://doi.org/10.61368/r.s.d.h.v6i>
- Das Neves, T. T., Queiroz, A. A. R., Carvalho, E. A., Assis, C. J., Elias, T. M. N., & Menezes, R. M. P. (2023). Clinical and sociodemographic profile of users with chronic diseases in primary health care. *Global Nursing*, 22(1), 271–282. <https://doi.org/10.6018/eglobal.512211>
- Devassy, S. M., Benny, A. M., Scaria, L., Nannatt, A., Fendt, M., Joubert, J., & Krishnakumar, P. (2020). Social factors associated with chronic non-communicable disease and comorbidity with mental health

- problems in India: A scoping review. *BMJ Open*, 10(6). <https://doi.org/10.1136/bmjopen-2019-035590>
- Díaz, Y., Herrera, I. D. V., Ordoñez, C. R., Robinson, N. R., Merchán, M., Vera, B. J., & Mera, M. (2023). Social Determinants of Health and Chronic Diseases Post Covid-19. Salinas, Ecuador. *International Journal of Health Sciences*, 3(51), 2–10. <https://doi.org/10.22533/at.ed.1593512307073>
- Duran, T., Herrera, J. L. H., Salazar, M. E., Mireles, M. A., Oria, M., & Ruiz, J. M. (2022). Family Functioning and Quality of Life in Older Adults with High Blood Pressure. *Ciencia y Enfermería*, 28. <https://doi.org/10.29393/ce28-3fftj60003>
- Fabián, S., Cuenca, M., Paola, T., & Lucio, P. (2022). Home Visit: Its Impact on the Surveillance of Chronic Noncommunicable Diseases. *Ateneo*, 24(1), 109–122. <http://colegiomedicosazuay.ec/ojs/index.php/ateneo/article/view/187>
- García, A. E., Horta, L. F., Bautista, M. A., Ibáñez, E. A., & Cobo, E. A. (2022). Quality of life and health perception in older adults with chronic illnesses. *Revista Salud Bosque*, 12(1), 1–13. <https://doi.org/10.18270/rsb.v12i1.3278>
- García, S. (2023). *Noncommunicable Diseases and Human Rights in the Americas*. (1st ed.). REDESCA. https://www.oas.org/es/cidh/informes/pdfs/2023/redesca_enfermedades_notransmisibles_ddhh_sp.pdf
- Guarango, P., Brito, L., & Cevallos, M. (2022). Physical activity, nutritional status and quality of life in older adults from rural areas. *Revista Cubana de Medicina Militar*, 51(4), 1-18. https://www.mendeley.com/catalogue/d738a5f6-633b-3d41-b658-10ace4e990f7/?utm_source=desktop&utm_medium=1.19.8&utm_campaign=open_catalog&userDocumentId=%7B4802f987-a287-4cd3-846b-cb34d8d05097%7D
- Hernández Vergel, V. K., Solano Pinto, N., & Ramírez Leal, P. (2021). Social environment and emotional well-being in older adults. *Revisit Venezolana de Gerencia*, 26(95), 530–543. <https://www.redalyc.org/journal/290/29069613004/html/>
- Hidalgo, C. A., Morales, G., Ortiz, M. S., Rojas, M. J., Balboa, T., Lanuza, F., & Cifuentes, P. (2021). Psychometric properties of the Chilean version of the whoqol-bref for quality of life. *Behavioral Psychology / Psicología Conductual*, 29(2), 383–398. <https://doi.org/10.51668/bp.8321210s>
- Jiménez, W. G., Baquero, D. S., Mora, M. D. P., & Salinas, L. R. (2019). Social determinants of health influence complications in hypertensive and diabetic patients with kidney failure. *Revista Médica de Risaralda*, 25(1), 1-15. <https://doi.org/10.22517/25395203.15871>
- Lincango, A. I. (2024). Physical activity in older adults is prevention of chronic non-communicable diseases. *Systematic Review. MENTOR*, 3(9). <https://revistamentor.ec/index.php/mentor/article/view/8312>
- Macías, M. G., Ortega, G. A., & Azúa, M. J. (2023). Chronic noncommunicable diseases and quality of life in Ecuador. *MQRInvestigar*, 7(1), 1592–1612. <https://doi.org/10.56048/mqr20225.7.1.2023.1592-1612>
- Manzini, J. L. (2000). Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects. *Acta Bioethica*, 1(6), 1–14. <https://scielo.conicyt.cl/pdf/abioeth/v6n2/art10.pdf>
- Márquez, S., Molina, M., Ortiz, D., & Ordóñez, R. (2022). Prevalence of chronic non-communicable diseases. *Ser Científica la Universidad de las Ciencias Informáticas*, 15(2), 127–137. <https://dialnet.unirioja.es/servlet/articulo?codigo=8590677>
- Palomino, E. E. (2020). Prevalence of Risk Factors for Chronic Non-Communicable Diseases in Peru. *Revista Cuidarte*, 11(2), 1–11. <https://doi.org/10.15649/cuidarte.1066>
- Sánchez, W. (2021). Treatment Adherence and Quality of Life in Patients with Type 2 Diabetes Mellitus in a Hospital in Ayacucho. *Universidad Ricardo Palma*.

- https://www.mendeley.com/catalogue/8eaa2fa5-ad5a-3f8b-9958-c65c0fb88a35/?utm_source=desktop&utm_medium=1.19.8&utm_campaign=open_catalog&userDocumentId=%7B5738f36d-ed01-4705-a747-4aa7efe7e4a5%7D
- WHO/PAHO. (2023). Noncommunicable diseases. WHO, PAHO. <https://www.who.int/es/news-room/fact-sheets/detail/noncommunicable->
- Zhu, J., Zhang, K., He, Y., Zhang, Q., Ran, Y., Tan, Z., & Liu, X. (2024). Metabolic engineering of *Saccharomyces cerevisiae* for chelerythrine biosynthesis. *Microbial Cell Factories*, 23(1), 1–13. <https://doi.org/10.1186/s12934-024-02448-4>.