



Quality of life among indigenous people in a city on the Bioceanic Route

Qualidade de vida em Indígenas de uma cidade da Rota Bioceânica

Calidad de vida de los pueblos indígenas en una ciudad de la Ruta Bioceánica

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Abstract: Indigenous peoples face historical inequalities that impact their health and quality of life, including difficulties in accessing basic services, low levels of education, and food insecurity. This quantitative cross-sectional study analyzed the quality of life of 42 self-declared indigenous adults (18–60 years old) living in urban areas of Jujuy, Argentina, a city on the Bioceanic Route. Non-probabilistic convenience sampling was used, using a sociodemographic questionnaire and the WHOQOL-BREF. Descriptive statistical analysis was performed using Excel and SPSS. The mean age was 49.76 years (SD=13.21), with a predominance of women (66.7%) and complete secondary education (42.9%). The domain with the highest score was “Social Relations” (M=3.88; SD=0.79), followed by “Psychological” (M=3.47; SD=0.58). However, dissatisfaction with health (M=2.93), limiting physical pain (M=2.14), frequent negative feelings (M=2.19) and financial insufficiency (M=2.26) were observed. These factors negatively impacted the participants' quality of life. Therefore, it is concluded that there is an urgent need for intersectoral public policies that consider the sociocultural specificities of this population, aiming at promoting their physical, emotional and social well-being.

Keywords: indigenous peoples; health education; health behavior; Bioceanic Route.

Resumo: Os povos indígenas enfrentam desigualdades históricas que impactam sua saúde e qualidade de vida, incluindo dificuldades de acesso a serviços básicos, baixa escolarização e insegurança alimentar. Este estudo objetivou analisar a qualidade de vida dos povos indígenas urbanos da Província de Jujuy, Argentina. O estudo quantitativo transversal foi realizado com 42 adultos autodeclarados indígenas (18-60 anos) residentes em territórios urbanos. Utilizou-se amostragem não probabilística por conveniência. Os instrumentos incluíram questionário sociodemográfico e WHOQOL-BREF para avaliação da qualidade de vida. A análise foi realizada por estatística descritiva usando Excel e SPSS. A amostra apresentou média de idade de 49,76 anos (DP=13,21), sendo 66,7% mulheres. A maioria tinha ensino secundário completo (42,9%). Na avaliação da qualidade de vida, o domínio “Relações Sociais” obteve maior pontuação (M=3,88; DP=0,79), seguido pelo “Psicológico” (M=3,47; DP=0,58). Itens críticos identificados incluíram baixa satisfação com a saúde (M=2,93), presença de dor física limitante (M=2,14), sentimentos negativos frequentes (M=2,19) e insuficiência financeira (M=2,26). O estudo evidenciou que fatores como dor física, sentimentos negativos, insatisfação com a saúde e limitações financeiras impactam negativamente a qualidade de vida dos participantes. Os achados reforçam a necessidade de políticas intersetoriais que considerem as especificidades socioculturais desta população, visando a promoção do bem-estar físico, emocional e social.

Palavras-chave: povos indígenas; educação em saúde; comportamentos relacionados com a saúde; Rota Bioceânica.

Resumen: Los pueblos indígenas enfrentan desigualdades históricas que impactan su salud y calidad de vida, incluyendo dificultades para acceder a servicios básicos, bajos niveles de educación e inseguridad alimentaria. Este estudio transversal cuantitativo analizó la calidad de vida de 42 adultos autodeclarados indígenas (18-60 años) residentes en zonas urbanas de Jujuy, Argentina, ciudad ubicada en la Ruta Bioceánica. Se empleó un muestreo no probabilístico por conveniencia, utilizando un cuestionario sociodemográfico y el WHOQOL-BREF. El análisis estadístico descriptivo se realizó con Excel y SPSS. La edad media fue de 49,76 años (DE=13,21), con predominio de mujeres (66,7%) y educación secundaria completa (42,9%). El dominio con mayor puntaje fue "Relaciones Sociales" (M=3,88; DE=0,79), seguido de "Psicológico" (M=3,47; DE=0,58).

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Sin embargo, se observó insatisfacción con la salud ($M=2,93$), dolor físico limitante ($M=2,14$), sentimientos negativos frecuentes ($M=2,19$) e insuficiencia financiera ($M=2,26$). Estos factores afectaron negativamente la calidad de vida de los participantes. Se concluye que existe una necesidad urgente de políticas públicas intersectoriales que consideren las especificidades socioculturales de esta población, con el objetivo de promover su bienestar físico, emocional y social.

Palabras clave: pueblos indígenas; educación en salud; conductas relacionadas con la salud; Ruta Bioceánica.

1 INTRODUCTION

Argentina is currently home to approximately 1,878 officially recognized indigenous communities, of which 298 are located in the Province of Jujuy (Instituto Nacional de Assuntos Indígenas [INAI], 2024). These peoples belong to 39 different ethnic groups, whose linguistic, cultural, and social diversity is significant, but still made invisible by public policies historically marked by forced assimilation, marginalization, and identity erasure.

Since the colonial period, through the formation of the Argentine nation-state in the 19th century, indigenous peoples have been systematically excluded from civil rights and citizenship policies. Military incursions, such as the Desert Campaign, and processes of violent evangelization significantly compromised the continuity of their original ways of life, imposing a civilizational model that disregarded their health, education, and social organization systems (Almeida; Rosa, 2021).

In the field of health, the effects of this exclusion are still evident. Indigenous populations face more precarious living conditions, limited access to health services, and a high incidence of preventable diseases. Factors such as territorial marginalization, multidimensional poverty, food insecurity, low educational attainment, and the absence of health professionals with intercultural training contribute to higher rates of morbidity and mortality compared to the non-indigenous population (Pérez; Santillán, 2021). In many cases, there is institutional racism and denial of access to care, especially in regions where there are no effective intercultural policies.

From the 1940s onwards, Argentina began to invest in expanding health coverage in rural areas, focusing on health campaigns and the prevention of endemic diseases. In the 1970s, driven by the Alma-Ata Conference, Primary Health Care (PHC) gradually began to incorporate principles of health promotion and community participation. However, it was only in 2001 that indigenous peoples began to be regularly included in Argentine national censuses, allowing the production of more accurate indicators on the socioeconomic and health reality (INDEC, 2022).

Recent studies point to an epidemiological profile marked by the persistence of infectious diseases such as tuberculosis and viral hepatitis, with the advance of chronic non-communicable diseases (NCDs), such as diabetes, hypertension, and cardiovascular diseases. This profile reflects a disorderly epidemiological transition, in which historical social vulnerabilities and emerging risk factors coexist, such as sedentary lifestyle, inadequate diet and urban stress (Miranda; Lozano, 2023).

The increasing consumption of ultra-processed foods is indicated as one of the main factors for the increase in obesity and type 2 diabetes in urban indigenous populations. These products, which are high in calories, low in nutrients and rich in sodium, sugar, and trans fats, have replaced traditional diets based on natural and locally prepared foods (Gentile; Núñez, 2023). In this context, the loss of food culture represents not only a threat to physical health, but also a process of erosion of identity and cultural autonomy.

The urbanization of indigenous populations has been a growing phenomenon in recent decades, driven by processes of expulsion from traditional territories, the precariousness of rural

living conditions and the search for access to urban services. However, urban centers do not always offer the expected opportunities. Socioeconomic exclusion, informal work, urban violence, and internal xenophobia accentuate the vulnerability of these populations (Almeida; Rosa, 2021).

The research carried out in the Province of Jujuy aimed to understand the health behaviors of the indigenous population living in urban areas, analyzing variables such as diet, physical activity, access to health services, housing conditions, risk factors and perception of quality of life. These aspects are directly related to the Sustainable Development Goals (SDGs) of the 2030 Agenda, especially SDG 3 (Good Health and Well-being), SDG 5 (Gender Equality) and SDG 10 (Reduced Inequalities) (ONU, 2015).

According to the most recent guidelines from the World Health Organization, adults aged 18 to 64 should perform 150 to 300 minutes of moderate physical activity per week, or 75 to 150 minutes of vigorous activity, in order to obtain substantial health benefits (WHO, 2020). The lack of safe spaces, precarious urban routines and lack of knowledge about the benefits of physical activity contribute to a sedentary lifestyle among many indigenous people in urban contexts, which increases the risk of NCDs.

At the same time, mental health emerges as a central aspect. The rupture with traditional community life, everyday racism, institutional violence, and socioeconomic insecurity produces psychological suffering.

2 METHODOLOGY

This is a quantitative, cross-sectional study carried out with the urban indigenous population, residing in communities recognized by the government of the Province of Jujuy, Argentina.

2.1 Population and Sample

Self-declared indigenous adults of both sexes, aged between 18 and 60 years, living in urban indigenous territories were included. The sampling was non-probabilistic through convenience.

2.2 Exclusion Criteria

Individuals with severe cognitive disabilities, pregnant women, and those who refused to sign the Free and Informed Consent Form (FICF) were excluded.

2.3 Data Collection Instruments

A structured questionnaire consisting of two blocks was used.

- Sociodemographic information (age, sex, education, occupation, income, among others)
- WHOQOL-BREF questionnaire developed by the World Health Organization, with the objective of assessing quality of life in four domains: physical, psychological, social relationships and environment.

2.4 Procedure and Data Collection

The data collection was carried out by previously trained and qualified interviewers. The interviews were conducted in person, in reserved spaces within the communities, in order to

guarantee the privacy, comfort and safety of the participants. All stages respected the ethical principles of research with human beings.

2.5 Data Analysis

The collected data were organized in Microsoft Excel spreadsheets and later analyzed using the Statistical Package for the Social Sciences (SPSS, version 28). Descriptive statistical analyses (frequencies, mean and standard deviation) and, when applicable, inferential analyses were performed, adopting a significance level of 5% ($p < 0.05$).

3 RESULTS

3.1 Sociodemographic Profile

The study sample consisted of 42 participants, with a mean age of 49.76 years and a standard deviation of 13.21, indicating a relatively wide age range. Regarding gender, the majority were female (66.7%), while men represented 33.3% of the total. Regarding marital status, there was a balanced distribution between single (42.9%) and married (45.2%) individuals, with a lower proportion of separated/divorced (7.1%) and widowed (4.8%). Regarding education, most participants had completed secondary education (42.9%), followed by those with complete primary education (21.4%) and complete tertiary education (19%). A significant proportion had never studied (14.3%), while only 2.4% had not completed secondary education. Table 1 presents the sociodemographic data.

Table 1– Sociodemographic Characteristics of Participants (n = 42)

Variable	Statistics / Frequency
Age (years)	Mean = 49.76 • SD = 13.21
Sex	Male: 14 (33.3%) Female: 28 (66.7%)
Marital Status	Single: 18 (42.9%) Married: 19 (45.2%) Separated/Divorced: 3 (7.1%) Widowed: 2 (4.8%)
Education	Primary education completed: 9 (21.4%) Incomplete secondary education: 1 (2.4%) Secondary education completed: 18 (42.9%) Tertiary education completed: 8 (19.0%) Never studied: 6 (14.3%)

Source: By the authors.

3.2 Quality of Life (WHOQOL-BREF)

The data in Table 2 reveal varied perceptions of participants regarding different aspects of quality of life. Items such as "Satisfaction with personal relationships" ($M = 4.12$; $SD = 0.80$), "Meaning of life" and "Ability to move around" (both with $M = 4.05$) stood out with the highest averages, suggesting positive evaluations in these domains. On the other hand, the lowest scores were observed in "Physical pain limits activities" ($M = 2.14$), "Frequency of negative feelings"

(M = 2.19) and "Adequacy of money" (M = 2.26), indicating perceived difficulties in these areas. Most items presented a standard deviation between 0.6 and 1.2, reflecting some variability in the responses.

Table 2 presents the descriptive data of all the questions answered by the study population.

Table 2 – Quality of life – descriptive statistics (Scale 1 to 5)

Item	Short Description	Mean	SD
G1	Quality of life assessment	3,81	0,74
G2	Satisfaction with health	2,93	1,26
G3	Physical pain limits activities	2,14	1,12
G4	Need for medical treatment	2,21	1,22
G5	Enjoyment of life	3,67	1,03
G6	Meaning of life	4,05	0,62
G7	Ability to concentrate	3,26	1,08
G8	Feeling of security	3,71	0,89
G9	Evaluation of physical environment	3,14	0,84
G10	Energy for daily life	3,57	0,89
G11	Acceptance of physical appearance	3,81	1,04
G12	Adequacy of money	2,26	0,91
G13	Access to information	3,31	0,87
G14	Leisure opportunities	2,81	0,97
G15	Ability to move around	4,05	0,79
G16	Satisfaction with sleep	3,55	0,92
G17	Satisfaction with daily activities	3,71	0,94
G18	Satisfaction with ability to work	3,93	0,75
G19	Satisfaction with self	3,86	1,12
G20	Satisfaction with personal relationships	4,12	0,80
G21	Satisfaction with sex life	3,64	1,08
G22	Support from friends	3,88	1,02
G23	Conditions of the place where one lives	3,81	0,77
G24	Access to health services	3,19	1,11
G25	Satisfaction with transportation	2,95	1,03
G26	Frequency of negative feelings	2,19	0,89

Source: By the authors.

In the assessment of the WHOQOL-BREF domains, the "Social Relations" domain obtained the highest mean (M = 3.88; SD = 0.79), followed by the "Psychological" domain (M = 3.47; SD = 0.58), which indicates a relatively good perception of the participants in relation to these aspects of quality of life.

The "Physical" domain obtained an intermediate mean (M = 3.31; SD = 0.42), while "Environment" had the lowest mean score (M = 3.15; SD = 0.52), suggesting that the participants may face more difficulties or dissatisfaction related to the physical environment, safety, transportation, and access to services. Table 3 presents the scores of the WHOQOL-BREF domains.

Table 3 – WHOQOL-BREF Domain Scores (n = 42)

Domain	Mean	Standard Deviation
Physical	3,31	0,42
Psychological	3,47	0,58
Social Relations	3,88	0,79
Environment	3,15	0,52

Source: By the authors.

2.3 Critical Items Identified

Health satisfaction was relatively low among study participants, with a mean of 2.93 (SD = 1.26) on a scale of 1 to 5. This result suggests that a considerable portion of individuals do not feel fully satisfied with their current health status, which may reflect both physical issues and subjective perceptions related to general well-being.

In addition, items related to physical pain and the presence of negative feelings presented low means, of 2.14 (SD = 1.12) and 2.19 (SD = 0.89), respectively.

These findings indicate that physical limitations due to pain and negative emotions were frequent experiences among participants, which may directly impact quality of life, willingness to perform daily activities, and mental health.

Another highlight was the perception of insufficient financial resources, with a mean of 2.26 (SD = 0.91), indicating that many participants face economic difficulties. Furthermore, the mean score given to access to leisure opportunities was only 2.81 (SD = 0.97), highlighting a significant limitation in terms of free time and pleasurable activities. These material and social restrictions can significantly compromise well-being and the sense of balance in daily life.

4 DISCUSSION

The results obtained in this study reveal significant and worrying data on the quality of life perceived by an urban indigenous population in the Province of Jujuy, Argentina. It was observed that, despite some positive indicators related to social relationships and psychological perception of life, there are critical aspects related to physical health, emotional suffering and socioeconomic situation that significantly compromise the well-being of this population.

The low average satisfaction with health (M = 2.93) found in this research is consistent with what has been reported in other studies with urban indigenous populations in Latin America. Authors such as Miranda and Lozano (2023) highlight that the transition to the urban environment is accompanied by a loss of access to traditional care practices, greater exposure to hostile environments and a breakdown of cultural support networks, contributing to a generalized feeling of insecurity and helplessness. The physical pain reported by participants (M = 2.14) appears to be a limiting factor for functional autonomy and directly impacts other dimensions of life. Studies indicate that chronic pain is associated with higher rates of anxiety, depression, and social isolation (Almeida; Santos, 2020). In the case of indigenous populations, pain can be aggravated by the difficulty in accessing responsive health services, with few professionals trained to understand the specific demands of these groups (Borges et al., 2022).

The frequency of negative feelings (M = 2.19) observed among participants is also symptomatic of an underlying psychological distress. Racism, institutional discrimination,

unemployment, food insecurity, and low self-esteem are factors widely related to mental illness in urban contexts (González; Barrientos, 2022). In the case of indigenous women, especially, this vulnerability is accentuated by the overlapping of gender, ethnic, and class oppressions.

Another relevant finding concerns the perception of financial insufficiency ($M = 2.26$). This condition not only hinders access to basic health, food, and transportation services, but also restricts leisure, continuing education, and housing security, all of which are fundamental elements for building a dignified life (Gentile; Núñez, 2023). The low average observed in the item "leisure opportunities" ($M = 2.81$) is indicative of a daily life centered on survival, with few possibilities for recreational spaces and cultural expression. Despite these challenges, the high average for the "Social Relations" domain ($M = 3.88$) stands out, which demonstrates the importance of family and community ties in sustaining subjective well-being. The literature highlights that, among indigenous peoples, the support of internal solidarity networks is a protective factor against mental suffering and contributes to cultural resilience in the face of adversity (Alves et al., 2021). Furthermore, the psychological dimension ($M = 3.47$) performed relatively well, which may be related to the presence of a sense of life that is more rooted in community, spirituality, and traditions.

These data reinforce the need to understand quality of life as a multidimensional and intersectional construct. As argued by Bortolotto et al. (2022), quality of life cannot be dissociated from the social determinants of health and is strongly impacted by structural factors such as inequality, access to education, housing, safety, and working conditions. Therefore, the results presented here have important implications for public policy planning.

From a practical point of view, the findings indicate the urgency of intersectoral strategies that integrate health, education, social assistance, and culture. Health promotion programs must be sensitive to ethnic-cultural diversity, training professionals to listen in a qualified and respectful manner that values traditional knowledge. The implementation of collective listening spaces, therapeutic workshops and cultural activities can be a powerful way to restore self-esteem, belonging and protagonism among urban indigenous populations.

4.1 Study Limitations

Despite making relevant contributions, this study has some methodological limitations that should be considered when interpreting the results. The main limitation concerns the relatively small sample size ($n = 42$), which compromises the ability to generalize the findings to other urban indigenous populations. This is a localized sample, obtained for convenience, which implies a possible selection bias.

In addition, the predominance of female participants (66.7%) may have influenced the results, since there is evidence that women tend to report psychological and physical symptoms more frequently, as well as demonstrate greater willingness to participate in health research (Santos; Oliveira, 2022). The cross-sectional design of the study also constitutes a limitation, as it does not allow for causal inferences. Therefore, it is not possible to state whether variables such as physical pain or lack of financial resources are causes or consequences of a worse quality of life.

Another relevant limitation concerns the use of self-report instruments. Although the WHOQOL-BREF is validated and widely used, responses may be influenced by the understanding of the questions, memory, and cultural aspects that impact the interpretation of the items (Paschoal et al., 2021).

It is suggested that future studies use larger and more diverse samples, with an intersectional focus on gender, ethnicity, and class. The inclusion of qualitative and longitudinal approaches may also contribute to a more comprehensive understanding of the determinants of quality of life in urban indigenous populations.

5 FINAL CONSIDERATIONS

This study contributes to the deepening of knowledge about the quality of life of indigenous peoples in urban contexts, a topic that has not been explored in Latin American scientific literature. The results show the coexistence of positive factors, such as social support networks, and critical aspects, such as physical pain, emotional suffering, and economic hardship, which directly influence the perception of well-being.

The identification of specific domains with low averages points to the need for targeted interventions. Coping with chronic pain, for example, requires not only access to biomedical care, but also the recognition of traditional knowledge and indigenous healing practices. Likewise, improving emotional well-being must consider the cultural, historical, and social context of the subjects.

The intersectoral and intercultural perspective is essential for the formulation of effective public policies. Health policies that integrate cultural aspects, that promote dignified and humanized access to services and that strengthen local communities have greater potential for positive impact. The promotion of spaces for citizen participation and the training of indigenous leaders is also strategic.

In a context in which the SDGs of the 2030 Agenda reinforce the importance of reducing inequalities and promoting health and well-being, the data from this study have political and social relevance. Investing in the quality of life of urban indigenous populations is a condition for fulfilling global commitments to sustainable development.

Finally, the importance of collaborative and community-based research that involves the subjects themselves in the construction of knowledge is highlighted. The generation of scientific evidence will only be ethically consistent when it respects and values the epistemologies of indigenous peoples, contributing to the strengthening of their struggles, rights, and ways of life.

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DATA AVAILABILITY

All data supporting the results of this study are available within the article itself.