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Identification of factors associated with suicidal behavior in Colombian indigenous children and adolescents

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ABSTRACT

Suicide among indigenous children and adolescents poses a particularly challenging public health issue for Western healthcare systems. The aim of this study was to identify psychological factors and parent/caregiver attachment-related factors associated with suicide risk in indigenous children and adolescents. A correlational cross-sectional study was conducted, involving 399 children and adolescents and their families from four indigenous communities, with a mean age of 11.93 years. 89% of children and adolescents were found to have some level of self-reported suicide risk, with parents identifying this risk in 21.1% of children and youth. The risk was found to be associated with perceived criticism by caregivers, the use of physical punishment, and the identification of feelings of worthlessness. In addition to highlighting high indicators of suicide risk in the studied population, this study concludes that indicators of distress in children and adolescents are associated with disruptions in the perception of relationships with their parents.

KEYWORDS

Suicide; emotions; child behavior; family relationship; indigenous peoples

Introduction

Suicide is a public health issue that affects the global population, but certain populations are more vulnerable due to their context and social environment (Livingston et al., 2019). The indigenous population is one such group, as they face significant structural inequalities such as marginalization, poverty, and cultural discrimination (Londoño, 2021). Suicide rates among indigenous communities, compared to non-indigenous communities, can account for up to 20% of all suicides in some countries in the region of the Americas (Ramírez-Montes et al., 2018; Ramos Camayo & Londoño Pérez, 2022).

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According to statistics from the World Health Organization (WHO, 2021), nearly 700,000 people die by suicide each year. Troya et al. (2022) estimated absolute rate of suicide in ethnic minority groups was 12.1 per 100,000 (95% CIs 8.4–17.6) and reported for indigenous people the highest rates of suicide (23.2 per 100,000; 95% CIs 14.7–36.6). Particularly, the prevalence of suicide among Latin American indigenous children and adolescents is higher than in other non-indigenous youth populations (Livingston et al., 2019; Ramos Camayo & Londoño Pérez, 2022).

Indigenous people represent about 9.8% of the total population of South America, around 58 million people distributed in approximately 800 tribes, which bigger groups lives in rural zones of Bolivia, Ecuador, Peru, Chile, and Colombia. Live conditions of indigenous people are characteristic adverse, mostly they work in the informal economy, have a highest risk of malnutrition (Franco Daza, 2022; Molebatsi et al., 2021). National Survey of Mental Health in Colombia reports that 8.3% of the adult population self-identifies as indigenous, with high rates of poverty (26.6%), and violence (17.8%). The survey shows that 8.1% have any mental problems, and 7.6% have anxiety and depression symptoms (Gómez-Restrepo et al., 2016).

In Colombia, between 2010 and 2019, the suicide rate per 100,000 people ranged from 4 to 5.7 for the entire population, and between 2.6 and 3.5 for children, adolescents, and young people aged 5–19 years (Observatorio del Bienestar de la Niñez, 2018). In 2021, there were 2,998 deaths by suicide, a rate of 5.9 per 100,000 people, the highest number of suicides in recent years (Departamento Administrativo Nacional de Estadística [DANE], 2022). Consistent with the Latin American landscape, a significant increase in the indigenous community is described, with the number of deaths rising from 63 in 2017 to 98 in 2020 (DANE, 2022).

Perspectives on mental health among indigenous communities emphasize the impact of colonization and historical trauma on their well-being but also highlight the importance of family and collective care relations. Mental distress is understood as a consequence of the loss of land, culture, and sources of meaning and significance in the world, like suicide (Agudelo-Hernández et al. 2023). The recognition of the impact of colonization and the value of cultural practices give an important paper for parenting practices that prioritize holistic well-being for their children and youth. In this sense, they emphasize the importance of cultural continuity and the transmission of traditional knowledge and values to promote mental health and resilience (Cianconi et al., 2019; Danto & Zangeneh, 2022).

Suicidal behavior in indigenous populations is largely influenced by a history of destruction and ethnocide, colonization, and the westernization of indigenous cultures, which brought about processes of domination and disintegration of communities, where suicide can be seen as a form of

resistance (Londoño, 2021). The westernization and acculturation of indigenous communities have created economic dependency on industrialized society, an increasing need for money, and cultural clashes that cause high levels of frustration (Azcona Pastor & Chauca García, 2022; Lines & Jardine, 2019; Puertas Rizo, 2017).

Suicide in indigenous communities has a multifactorial etiology with deep historical and sociocultural roots that play a significant role in how individuals understand and respond to life stressors and distressing emotions (Azcona Pastor & Chauca García, 2022; Ramírez-Montes et al., 2018). While the major risk factor for suicide is a previous suicide attempt, the reasons for this escalation in early stages of life are attributed to the influence of sociocultural factors from the westernized world, such as problematic substance use or bullying (Camacho-Martínez et al., 2022; McLoughlin et al., 2015).

Other identified risk factors include childhood abuse and sexual abuse, as they result in long-term emotional dysregulation that is associated with psychiatric disorders in 40% of cases, thereby increasing the risk of suicidal behaviors (Mardomingo Sanz, 2008; Socha Rodríguez et al., 2020). Additionally, mental illness itself is a highly relevant factor, with an estimated 87–90% of young people who die by suicide having a mental illness (McLoughlin et al., 2015). Likewise, the violation of women's rights in economic, social, and emotional aspects is common, often going unpunished by the community and leading to a sense of hopelessness in women from a young age (Urrego-Mendoza et al., 2017).

Likewise, parental problems are related to demographic and cultural variables that, in turn, have an impact on the mental health of indigenous children and adolescents (Cianconi et al., 2019; Gone & Kirmayer, 2020). In Colombia, it has been described that migration, the weakening of culture and the environmental impact could negatively influence parenting practices, which can be considered an additional risk for the mental health of indigenous children and adolescents (Agudelo-Hernández et al., 2023).

Despite the significant presence of risk factors, there are also relevant protective factors such as family unity and communication, positive school engagement, autonomy, a sense of belonging and social support, all of which can reduce the risk of suicide attempts by 70–85% (Mardomingo Sanz, 2008; O'Keefe et al., 2022; Ramírez-Montes et al., 2018; Socha Rodríguez et al., 2020). The psychological well-being of children and adolescents plays a crucial role, and achieving this relies on strong community cohesion, as connection with culture and ethnic identity can help reduce stress levels among indigenous youth (Bryant et al., 2021; Okpalauwaekwe et al., 2022; Ramos Camayo & Londoño Pérez, 2022). Similarly, given that the family plays an essential role in the emotional development of children,

emotional support and family cohesion act as protective factors against the negative effects of childhood trauma and depression symptoms associated with suicide (Choate & Tortorelli, 2022; Ramírez-Montes et al., 2018).

Bonding

Understanding the factors associated with suicidal behavior within Colombian indigenous communities is a key element in identifying early warning signs that increase vulnerability among indigenous children and adolescents. It is important to consider the unique cultural context of indigenous communities in order to provide culturally sensitive prevention programs (Watson, 2022). This entails recognizing that traditional knowledge and indigenous ways of life are strengths that have accompanied indigenous communities for thousands of years (Kirmayer, 2012; O'Keefe et al., 2022).

Understanding these risk and protective factors is important for developing effective preventive measures aimed at reducing suicidal tendencies among indigenous children and adolescents. Based on the aforementioned, the objective of the present study was to identify psychological factors and the parent/caregiver bond related to suicidal behavior in children and adolescents from Colombian indigenous communities.

Materials and methods

A descriptive correlational cross-sectional design was employed to collect, analyze, and relate relevant variables at a single point in time.

Participants

The sample consisted of 399 indigenous children and adolescents from seven to 17 years old, who, along with their parents, were selected through non-probabilistic convenience sampling. The participants, who voluntarily participated, belonged to four indigenous communities: Embera Dobidá, Wayuu, La libertad and Awá.

Instruments

An ad hoc sociodemographic survey was developed, which inquired about the participants' department of residence, indigenous community affiliation, age, gender, and socioeconomic status.[1] Additionally, the PACES scale (an acronym in Spanish for "parenting, behavior, emotions, and suicide risk") was used to record variables related to mental health and suicide risk (Agudelo-Hernández & Giraldo-Álvarez, 2024).

The PACES scale assesses the perceived level of suicide risk as reported by parents, self-reported suicide risk symptoms in children and adolescents, as well as indicators of parental adjustment, perceived parenting competence, emotional problems, and behavioral problems reported by parents (Agudelo-Hernández et al., 2023; Agudelo-Hernández & Giraldo-Álvarez, 2024).

This scale consists of 42 questions presented in two sections, one for primary caregivers and the other for children and young people aged seven to 16. It utilizes Likert-type response options: Never (0), rarely (1), sometimes (2), always (3), indicating the frequency of symptom occurrence or difficulty. The questions that comprise the suicide behavior domain include *"I believe that people close to me do not need me," "I think I cause problems for people close to me," "I feel like I don't belong anywhere," and "When faced with difficulties, I consider death as a solution,"* directed at children and adolescents. Additionally, there is a question for parents/caregivers: *"They say they want to end their life"*. This scale was designed and validated with the same indigenous communities that participated in the study, using a participatory method, and has demonstrated adequate reliability and structural configuration (Agudelo-Hernández et al., 2023).

Procedure

The recruitment procedure by invitation and instrument was administered in the aforementioned indigenous communities' territory, selected based on their interest in participating in the study. The administration was conducted in the native language of the communities by primary healthcare personnel, specifically professionals in psychology and nursing, with intercultural training and proximity to indigenous communities, under the leadership of the Ministry of Health and Social Protection of Colombia.

The instruments were administered in a community setting during the second semester of 2022. Every family interested in participating and disposed to respond the questionary was admitted in the study, without exclusion criteria. Each family went through three stages of administration: one for obtaining informed consent, identify the principal caregiver (mother, father, both or other related) and interviewing the principal caregiver, another for obtaining informed assent and interviewing the children or adolescents, and a final stage for providing mental health recommendations based on the findings or activating care pathways when risks were identified.

This study adhered to the recommendations for biomedical research of the Declaration of Helsinki of the World Medical Association (Adopted by the 18th WMA General Assembly, June 1964) and was approved by the

Ethics Committee of the University of Manizales with protocol number CB022 of 2022. The names of the study participants were kept strictly confidential. Similarly, efforts were made to respect the ethical principles raised by some indigenous groups (Watson, 2022).

Data analysis

The collected data were organized in an Excel matrix and analyzed using the SPSS statistical package (version 26) through descriptive, correlational, and contingency table processes in order to identify the psychological variables related to suicide risk in indigenous children and adolescents.

Results

Out of the 399 children and adolescents, 56.9% were females and 43.1% were males, ranging in age from seven to 17 years old (mean: 11.93). All participants were from socioeconomic strata zero and one, residing in the departments of Chocó, Caldas, La Guajira, Vaupés, Nariño, and Boyacá (see Table 1).

Table 2 contrasts the level of risk identified through parent and youth information, based on sociodemographic variables. It can be observed that the self-reported emotional symptoms by the youth identify a greater number of risk cases, and this level of risk significantly varies between children and adolescents. The self-report of symptoms by the youth indicates that 89% of them have some level of risk. On the other hand, the identification of emotional or behavioral problems by parents only allows for the identification of some level of risk in 21.1% of the children and youth (see Table 2).

The relationships between suicide risk levels among indigenous children and adolescents reveal that both the risk identified through parent-provided information and the risk estimated based on the self-report of the youth are related to the perception of being criticized by caregivers and self-injurious behavior, as well as the use of physical punishment and the

Table 1. Study sample.

		Residence department						
Indigenous community	Life stage	Boyacá	Caldas	Chocó	Guajira	Nariño	Vaupés	Total
Embera Dobida	Childhood		29.82%	7.02%				55.64%
	Adolescence		12.78%	6.02%				
Wayuu	Childhood				9.77%			20.55%
	Adolescence				10.78%			
La Libertad	Childhood						4.01%	4.76%
	Adolescence						0.75%	
Awá	Childhood	1.25%				2.51%		19.05%
	Adolescence	8.02%				7.27%		

Table 2. Suicide risk by sociodemographic variables.

		Perceived risk by parents			Risk by young self-report		
		None	Moderate	High	None	Moderate	High
Indigenous community	Embera Dobida	42.4%	8.0%	5.3%	5.3%	18.3%	32.1%
	Wayuu	16.5%	2.5%	1.5%	2.0%	6.3%	12.3%
	La Libertad	4.3%	.3%	0.3%	.8%	1.8%	2.3%
	Awá	15.8%	1.8%	1.5%	3.0%	4.8%	11.3%
Life stage	Childhood (7–11 years)	40.6%	6.8%	7.0%	4.5%	20.1%	29.8%
	Adolescence (12–17 years)	38.3%	5.8%	1.5%	6.5%	11.0%	28.1%
Gender	Female	45.1%	7.0%	4.8%	7.0%	17.0%	32.8%
	Male	33.8%	5.5%	3.8%	4.0%	14.0%	25.1%
Total		78.9%	12.5%	8.5%	11.0%	31.1%	57.9%

identification of feelings of worthlessness in the youth by their parents. In-depth exploration of these relationships shows that parent/caregiver reports are more sensitive to the identification of risk factors in childhood.

Based on parent/caregiver reports and youth reports suicide risk levels are statistically significantly related to concentration difficulties, restless behavior, easy crying, feelings of worthlessness, authoritarian discipline and negative reinforcement methods, poor emotional regulation of parents/caregivers, and less youth perception of being valued by the parents (see Table 3).

Discussion

The risk of suicide may be higher in indigenous communities due to unique cultural, social, and economic factors that not only limit access to basic services but also significantly impact the overall development of indigenous communities and their members (Lines & Jardine, 2019). Lifestyle changes, industrialization, environmental degradation, and problematic substance use have led the indigenous population to experience what has been described as cultural death (Azuero et al., 2017). In this sense, the present study aimed to identify psychological and parent/caregiver bond factors, beyond well-known structural determinants, related to suicidal behavior in Colombian indigenous children and adolescents.

Indigenous cultural and spiritual practices have been linked to identity and well-being, and these practices are affected for social factors, impacting indigenous mental health and family relationships (Fiedeldey-Van Dijk, 2019; Pomerville & Gone, 2019). The social, political, and structural determinants can have an impact not only on the identity of indigenous groups but also on family relationships and self-perceptions. These structural factors can lead to family divisions, deterioration of bonds, negative parenting practices, and absence of parental figures, which can create vulnerability in mental health (Burnette, 2016; Mozafari et al., 2023).

Table 3. Variables associated with the risk of suicidal behavior.

		Perceived risk by parents				Risk by young self-report			
Related variables		None	Moderate	High	Chi-square	None	Moderate	High	Chi-square
Life stage	Childhood	40.6%	6.8%	7.0%	11.833	4.5%	20.1%	29.8%	9.118
	Adolescence	38.3%	5.8%	1.5%	$p = .003$	6.5%	11.0%	28.1%	$p = .010$
Parent/caregiver observes problems with concentration in the youth	Never	55.1%	4.3%	6.5%	62.746	9.5%	15.3%	41.1%	31.729
	Sometimes	20.1%	3.5%	1.3%	$p =< .001$	1.0%	10.5%	13.3%	$p =< .001$
	Often	3.0%	4.0%	0.8%		.5%	4.8%	2.5%	
	Always	.8%	0.8%				.5%	1.0%	
Parent/caregiver observes restlessness or constant movement in the youth	Never	55.1%	4.3%	6.5%	62.746	9.5%	15.3%	41.1%	31.729
	Sometimes	20.1%	3.5%	1.3%	$p =< .001$	1.0%	10.5%	13.3%	$p =< .001$
	Often	3.0%	4.0%	0.8%		.5%	4.8%	2.5%	
	Always	.8%	0.8%				.5%	1.0%	
Parent/caregiver observes easy crying in the youth	Never	54.1%	5.8%	3.0%	116.523	7.3%	15.0%	40.6%	32.751
	Sometimes	21.8%	3.8%	0.3%	$p =< .001$	3.3%	13.3%	9.3%	$p =< .001$
	Often	2.3%	2.0%	3.3%		.3%	2.0%	5.3%	
	Always	.8%	1.0%	2.0%		.3%	.8%	2.8%	
Parent/caregiver observes self-inflicted injuries in the youth	Never	78.9%	7.8%		375.443	10.5%	30.6%	45.6%	30.788
	Sometimes		3.5%	1.5%	$p =< .001$		0.3%	4.8%	$p =< .001$
	Often		1.0%	3.3%		.3%	.3%	3.8%	
	Always		.3%	3.8%		.3%		3.8%	
Parent/caregiver observes feelings of worthlessness or inferiority in the youth	Never	78.9%	4.8%		321.792	10.3%	28.1%	45.4%	12.444
	Sometimes		5.3%	7.0%	$p =< .001$	0.8%	2.0%	9.5%	$p = .014$
	Often		2.5%	1.5%			1.0%	3.0%	
Parent/caregiver reports providing attention when the youth behave well	Never	8.8%		0.5%	19.579	1.5%	2.5%	5.3%	16.468
	Sometimes	36.8%	7.5%	2.0%	$p = .003$	3.3%	15.0%	28.1%	$p = .011$
	Often	31.8%	4.8%	6.0%		6.3%	12.0%	24.3%	
	Always	1.5%	.3%				1.5%	.3%	
Parent/caregiver reports using physical punishment when the youth misbehave	Never	43.9%	6.3%	0.8%	68.571	3.8%	18.5%	28.6%	43.265
	Sometimes	25.6%	2.5%	6.8%	$p =< .001$	3.0%	9.8%	22.1%	$p =< .001$
	Often	3.0%	3.0%			.8%	2.3%	3.0%	
	Always	6.5%	.8%	1.0%		3.5%	.5%	4.3%	
Parent/caregiver reports getting easily angry with the youth	Never	22.6%	3.5%	5.0%	20.453	3.8%	2.3%	25.1%	67.849
	Sometimes	44.9%	6.3%	1.8%	$p = .002$	5.5%	22.1%	25.3%	$p =< .001$
	Often	5.5%	1.5%	0.5%		0.8%	1.3%	5.5%	
	Always	6.0%	1.3%	1.3%		1.0%	5.5%	2.0%	
Youth indicates that parents/caregivers allow them to make decisions	Never	36.3%	3.8%	1.5%	14.348	5.8%	10.3%	25.6%	6.557
	Sometimes	40.9%	8.5%	6.5%	$p = .006$	5.0%	20.1%	30.8%	$p = .161$
	Often	1.8%	0.3%	0.5%		.3%	0.8%	1.5%	
Youth indicates being criticized by parents/ caregivers	Never	15.5%	0.5%	0.3%	61.635	.8%	5.0%	10.5%	72.910
	Sometimes	37.1%	5.3%	6.5%	$p =< .001$	8.0%	9.0%	31.8%	$p =< .001$
	Often	17.0%	4.3%	0.3%			13.0%	8.5%	
	Always	9.3%	2.5%	1.5%		2.3%	2.8%	7.0%	
Youth indicates feeling loved by my parents/ caregivers	Never	46.4%	5.0%	0.8%	33.999	6.8%	14.5%	30.8%	3.044
	Sometimes	32.6%	7.5%	7.8%	$p =< .001$	4.3%	16.5%	27.1%	$p = .218$

Indigenous youth are exposed to high-demand dynamics, which can make it difficult for them to express sadness, anger, or hopelessness. Some express feelings of worthlessness, being unwanted, or being a burden, while others may exhibit signs of functional impairment such as increased lethargy, frequent crying, concentration problems, or neglect of their appearance (May et al., 2005; Leavitt et al., 2018). Indigenous populations have been isolated not only by governments but also socially. Lack of respect for customs, inequality, and lack of equity have influenced the subjugation of these groups worldwide, forcing them to adapt to a modern world where they have not been given a place and, on the contrary, have been subjected to acculturation or forgotten (Lines & Jardine, 2019). This complex reality has drawn attention to the importance of developing health measures based on cultural identity and the worldview of ethnic groups (Hatcher et al., 2017; Souza et al., 2020).

Other studies have indicated that suicidal behavior in indigenous populations has been associated with the loss of cultural identity, religious and spiritual practices, forced displacement, violence (armed conflict, intrafamily, gender-based), social vulnerability, and difficulties in accessing economic resources (Ordenes et al., 2020; Pezzia & Hernández, 2022; Souza et al., 2020). While the association between these external causes is increasingly being better described from an intersectional approach (Bryant et al., 2021; Ghasemi et al., 2021), studies related to psychological and relational aspects that can be identified and intervened in the short and medium-term are less frequent, also are more uncertain the links between sociocultural factors and psychological individual aspects (Mukherjee & Awasthi, 2021).

Regarding the possible relationship indicated in this study between these social factors and psychological symptoms, a study in the indigenous Kuna people of Panama evaluated food insecurity and its association with mental health outcomes, and it observed an association between food insecurity and depressive symptoms and severe psychological distress (Walker et al., 2019). Similarly, other research has shown high rates of emotional, physical, or sexual violence and low family support in relation to suicidal behavior (Lillie et al., 2020).

As stated in this study, regarding the association of mental illnesses with adverse conditions and events in childhood, it has been determined that individuals with adverse events in childhood have more severe affective symptoms and an increased risk of suicidal behavior (Lippard & Nemeroff, 2020). Family cohesion, a strong bond with school, and a sense of belonging to the environment reduce the risk of suicide attempts, as occurs in non-indigenous children and adolescents, for whom these factors have been shown to reduce the risk of suicide among 70 and 85%

(Carballo et al., 2020). Similarly, other protective factors have been described for North American indigenous children and adolescents, such as communication at home with words of encouragement and affection, strengthening ties with the land and elders who know their culture, their own traditional practices, family values, and autonomy (O'Keefe et al., 2022).

In indigenous cultures, the family is viewed as an important and close-knit unit. Traditional upbringing in indigenous communities emphasizes values such as respect for elders, the importance of collective care, and communal development (Esteves Villanueva et al., 2021; Mathieu et al., 2021). These values are fundamental, but there are also certain practices that could have adverse effects on the emotional well-being of children and adolescents, such as not allowing them to freely express their feelings or not attentively listening when they do (Clifford et al., 2013; Payán Díaz & Flores, 2022).

The results of this study reinforce the importance of emotional distress in young people and their relational experiences with their parents/caregivers. Observing and monitoring the emotions and behaviors of indigenous children and adolescents, as well as recognizing how their bonds with their parents/caregivers are constructed, are crucial for identifying possible signs of suicidal behavior (Agudelo-Hernández & Giraldo-Álvarez, 2024; Loo Martínez et al., 2020). The use of a tool constructed with the communities themselves to determine psychological risk factors associated with suicidal behavior is stated as a strength of the study (Saunders et al., 2023).

As for limitations of this study, it should be noted that the research team had no knowledge of the indigenous language. Although a community leader was used as a translator, some concepts may have been presented from an adult perspective. Future studies could focus on recognizing existing strengths within the communities to prevent and treat health problems (Lange et al., 2023; O'Keefe et al., 2022). Furthermore, the discrepancies between the reports of the young people and those of their caregivers were not studied, which is often related to various forms of psychopathology, different expectations, and poor parental competence (Van Lissa et al., 2019).

This experience highlights the need for more research to understand mental health from an Indigenous perspective and develop new and better tools to improve the evaluation and intervention according to the communities' values and realities. Although Western categories such as "mental health" or "parenting" are analyzed, the instruments were built with the communities, which is fundamental as a principle in research like this, where participatory designs (Watson, 2022) and cultural humility (White et al., 2023), mean that the information is not analyzed solely based on the

epistemologies proposed by researchers. Therefore, future studies could delve into the impact of these factors through qualitative methodologies, which help understand the meanings that concepts such as "mental health" and “symptoms” have for each community.

In conclusion, this study shows significant indicators of distress in indigenous children and adolescents and their association with disruptions in the perception of the affective bond. Although recovery processes are not solely dictated by Western explanations that exclude particular worldviews, paying attention to early signs of distress or disruptions in the bond could contribute to reducing suicidal behavior in indigenous children and adolescents, whenever the health practices show understanding and respect for indigenous beliefs, customs, and values, and clinical practitioners make the self-reflection and curiosity like a constant exercise.

Specifically, suicidal behavior in indigenous children and adolescents is a challenge that requires a comprehensive and sensitive approach. Without disregarding the determining role of historical events and sociocultural factors, it is important to direct attention to the observation of emotions, behaviors, and relationships as they affect the health of indigenous individuals, to develop efficient strategies to prevent, detect and treat the risk that families, communities, and professional can identify in indigenous, especially children and adolescents.

Note

1. Colombian socioeconomic stratification system is a classification of households to set the cost of public services based on the physical characteristics of the dwelling and its surroundings. That system classifies households from strata 0 which corresponds to lesser quality of living conditions and poverty, to strata 6 which refers to the best living conditions and highest incomes.

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Data availability statement

The data from this study is available upon request.

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