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Physical Activity Patterns Among Children and Youth in Venezuela: Trends, Challenges, and Opportunities. Review

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Abstract: Physical activity is essential to the growth and development of children and youth. In Venezuela, however, a prolonged political and economic crisis-spanning more than a decade-has severely compromised the ability of young people to meet even their basic needs, including achieving the minimum levels of physical activity required for optimal health. This literature review aims to identify and synthesize available data on physical activity patterns among Venezuelan children and youth from the past 21 years, from January 2003 until December 2024. The search was conducted using platforms such as Google, SciELO, PubMed, and others. After applying specific inclusion and exclusion criteria, 12 primary peer-reviewed articles and 5 secondary peer-reviewed articles were selected for analysis. To provide qualitative insights, two experts were also consulted regarding the current state of physical activity in the country. Overall, the findings reveal significant obstacles that hinder the regular practice of physical activity among this population. Structural challenges, including safety concerns, lack of public infrastructure, and food insecurity, were commonly cited across studies. Expert commentary highlighted a critical gap between national legislation mandating physical education and the actual implementation of programs that promote active, healthy lifestyles. There are considerable barriers preventing Venezuelan children and youth from engaging in adequate physical activity. These challenges must be urgently addressed to ensure the well-being of the country's younger generations. ***An Venez Nutr 2025; 39(1): 15-23.***

Key Words: Physical Activity, Venezuela, Children, Youth, barriers for engaging in physical activity.

Patrones de Actividad física en niños y jóvenes en Venezuela: Tendencias, Retos y Oportunidades. Revisión.

Resumen: La actividad física es esencial para el crecimiento y desarrollo de niños, niñas y adolescentes. En Venezuela, una prolongada crisis política y económica-que ya supera una década- ha afectado gravemente la capacidad de la población joven para satisfacer incluso sus necesidades básicas, incluyendo los niveles mínimos de actividad física necesarios para una buena salud. Esta revisión de literatura tiene como objetivo identificar y sintetizar la información disponible sobre los patrones de actividad física entre niños, niñas y adolescentes venezolanos durante los últimos 21 años, entre enero de 2003 hasta diciembre de 2024. La búsqueda se realizó en motores y plataformas como Google, SciELO, PubMed, entre otros. Tras aplicar criterios específicos de inclusión y exclusión, se seleccionaron 12 artículos primarios revisados por pares y 5 artículos secundarios. Además, se consultó a dos expertos para obtener perspectivas cualitativas sobre la situación actual. En conjunto, los resultados revelan obstáculos significativos que impiden la práctica regular de actividad física en esta población. Entre los desafíos más recurrentes se mencionan la inseguridad, la falta de infraestructura pública adecuada y la inseguridad alimentaria. Los expertos señalaron, además, una brecha crítica entre la legislación nacional que establece la educación física obligatoria y la implementación efectiva de programas que promuevan estilos de vida activos y saludables. Existen barreras sustanciales que limitan el acceso a la actividad física adecuada en la infancia y adolescencia venezolana. Abordar estos desafíos de manera urgente es fundamental para garantizar el bienestar de las generaciones más jóvenes del país. ***An Venez Nutr 2025; 39(1): 15-23.***

Palabras Clave: Actividad Física, Venezuela, adolescentes, niños, barreras para realizar actividad física.

Introduction

Physical activity is vital for children's and adolescents' health, growth, and development. It helps improve physical health by reducing the risk of noncommunicable diseases such as type 2 diabetes,

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cardiovascular diseases, and certain cancers (1). In Venezuela, the ongoing economic and social crisis has created many problems, such as rising poverty and food shortages, which profoundly affect the health of children and adolescents (2). Therefore, the environment in which most children and adolescents are living is immersed in deficiencies, lack of services, and inappropriate sanitation. This is consistent with the reported 40% of children under five years old showing growth deficit, and 33% of children aged 0-2 suffering from chronic undernutrition (3) In this context, the role of physical activity becomes even more crucial, as it may serve as a mitigating factor for the harms of the economic and social crisis: physical activity has been linked to both increased immune function (4) and long-term chronic disease prevention. (5).

Previously, there has been research into the status of physical activity of children and youth, such as the 2018 Venezuela Report Card on Physical Activity for Children and Youth that reports that 71% of adolescents ages 15-19 are inactive, not meeting the recommended 60 minutes of physical activity at least four times a week (6). Only 34% of adolescents in this age group participate in organized sports. However, 63% of adolescents are engaged in active transportation, such as walking for at least 10 minutes to get from one place to another due to a lack of public transportation. Concerningly, in Caracas, at some educational institutions, 22% of male adolescents are classified as obese and 10% as overweight, while 16% of school-aged children (7-8 years old) show signs of cardiovascular risk due to high blood pressure (7).

In this situation, reinforcing the pillars of well-being-sleep, stress management, adequate nutrition, and physical activity- is essential to maintaining the well-being of children and youth or at least ensuring no deterioration of their statuses. Among those pillars, physical activity can be achieved by reinforcing the environment of children, which might be translated into low-cost implementations and savings as physical activity is a way to prevent future chronic diseases (8).

There is a National Plan of Sport, Physical Activity, and Physical Education 2013-2025 that highlights the relevance of physical activity for the Venezuelan population and which establishes the goals for the years between 2013-2025. This document describes Venezuela's strategic direction for these areas over 12 years, aligned with the country's Economic and Social Development Plan. It focused on expanding access to physical education and sports for the whole population while professionalizing high-performance sports to establish Venezuela as a global sports power (9)

The referred situation underscores the urgent necessity for effective strategies to encourage physical activity among children and youth in Venezuela. In partnership with the Active Healthy Kids Global Alliance (AHKGA), this study aims to contribute to the future update of the Venezuela's Report Card on Physical Activity for Children and Youth. This project will depict physical activity patterns, identify challenges and opportunities, and contribute to the Global Matrix. The future work at the Global Matrix will also help compare Venezuela with other countries and guide efforts to promote healthier, more active lifestyles for young people in Venezuela. The objective of this study was to identify the information available on the physical activity patterns among children and youth in Venezuela, in the past 21 years, to describe key trends, challenges, and opportunities to promote active and healthy lifestyles.

Methods

This is a mixed-methods descriptive study that included a literature search of documents, including peer-reviewed articles, official governmental documents, and academic documents, to identify the available information on the physical activity patterns among children and youth in Venezuela during the past 21 years (from January 2003- until the end of 2024). Additionally, qualitative interviews about barriers and supports for physical activity were held with two experts, one in the nongovernmental organization (NGO) sector (Martha Palma Troconis, as CEO of Guerreros Azules, an organization that bring assistance to children and youth with diabetes in Venezuela, and the other in the academic sector (Prof. Rolando Carrizales, who is a professor at Universidad del Zulia, College of Education in the concentration of physical activity). Commonalities/ Differences/Complementarities were assessed between their answers. Below is the description of the process of identification and inclusion criteria.

Identification:

The researchers considered four factors during

the identification stage to cover the entire body of literature: database, keyword, source type, and period.

The search was performed by introducing keywords: Physical activity, exercise, sports, preschoolers, schoolchildren, adolescents, Venezuela, in English and Spanish: Actividad fisica, ejercicio, deportes, pre-escolares, ninos en edad escolar, adolescentes, Venezuela, in search motor engines such as Google, Google Academics, Scielo, and PubMed.

Screening and eligibility

After identifying articles, the screening stage was performed by removing duplicates from the four databases.

From the total number of articles and documents obtained, criteria for inclusion/exclusion were applied: those not relevant to children and youth, those with Latin American data not including Venezuela, and those with topics not relevant to this review.

Inclusion criteria:

In the inclusion stage, the full paper was scanned to ensure consistency with the established keywords. The researchers included only those articles and reports focused on Venezuelan children and youth, related to health, physical activity, exercise, nutrition, and factors that impact those dimensions.

An emphasis on checking the following topics was made:

Food Intake, Food Security, School Programs, Sports for Children and Youth, Education Activities, Sedentary Behaviors, Cardiovascular and Diabetes Risk Factors, Community and Environment, Active Transportation, Activities for Children with Disabilities, Infrastructure, Policies and Programs, Cultural Factors, Behavior, Sedentary Behavior.

Name of the motor search used:

Google, Scielo, Pub Med, Official and Academic local sources (e.g., ENCOVI), Science Direct, Research Gate.

Results

One of the results was the difficulty of finding relevant published articles. Obtaining accurate and recent data from Venezuela is challenging, however a total of 41 documents were identified, and after careful screening, checking the inclusion criteria (time period and matching topics) and eliminating the duplicates (12), a total of 29 articles remained in this first phase: categorized as follows: 25 peer-reviewed articles: 15 primary peer-reviewed articles, and 10 secondary peer-reviewed articles; 4 non-peer-reviewed articles: 2 reports, which are primary but not peer-reviewed, 1 working paper, and 1 report card. No newspaper or portal news articles were included.

Seventeen articles remained after double checking for duplicates, being not relevant for children and youth physical activity, or not matching the country specificity, as some of the originally identified studies in Latin America did not include Venezuela, therefore a final number of: 12 primary peer-reviewed articles and 5 secondary peer-reviewed articles were included in this revision. Figure 1 shows the process of the review and the articles obtained.

In the review of articles, the following factors were identified as having a relationship (either promoting

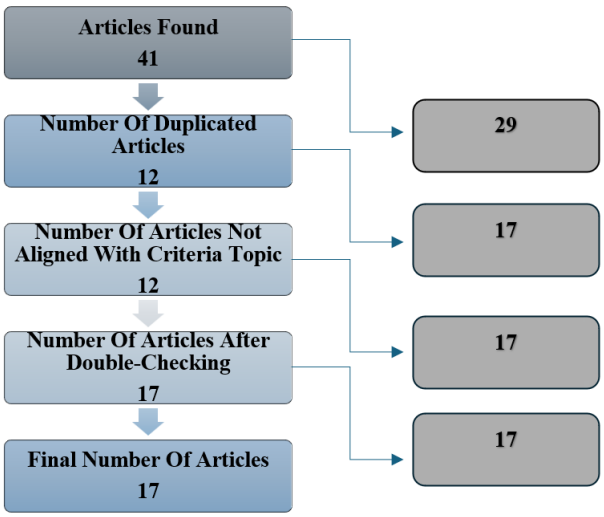

Figure 1: Articles Remaining After Applying Systematic Review Criteria

or resulting from) the physical activity environment: food insecurity, cardiovascular and diabetes risk factors, dietary habits, policies, stunting, cultural factors, gender, school absenteeism, and community environment (Table 1).

The interviews, showed below, identified similar challenges of concern with infrastructure and limited physical activity time in school. They noted that the infrastructure and practices around physical activity do not meet the standards of the law that supports physical activity for youth in Venezuela (Table 2).

Table 1: Factors of Physical Activity Patterns Among Children and Youth in Venezuela (n=17)

Authors	Articles	Population	Factors Identified	Summary
Herrera-Cuenca M, Velasquex J, Rodriguez G, Berrisbeitia M, Abreu N, Zambrano Y. (10)	Anales Venezolanos De Nutrición (2011) Primary peer-reviewed	Over 1,000 Venezuelan school children	Food Intake/ Food Insecurity, Cardiovascular & Diabetes Risk Factors, Sedentary Behaviors/ Behavior, Policies & Programs, Children	"Double burden" of malnutrition, with about 26% overweight and many also undernourished. While unhealthy eating appeared linked to higher weight, the overall statistical connection wasn't strong. Maracay had the highest rate of overweight children, and many came from average or low-income families
Briceño-León R, Perdomo G.(11)	Violence Against Indigenous Children and Adolescents in Venezuela (2019) Primary peer-reviewed	Indigenous children and adolescents in Venezuela	Community & Environment, Cultural Factors, Policies & Programs, Behavior, Infrastructure, Food Intake/ Food Insecurity	Violence against Indigenous children and teens in 21st-century Venezuela has evolved. Research identified four key types: deprivation of basic necessities (food, medicine), organized crime violence (e.g., illegal mining), domestic violence, and state violence. Through interviews and data, it reveals a discrepancy between the government's protective rhetoric and the lived realities of Indigenous youth
Ferrari LM, Kovalskys I, Fisberg M, Gómez G, Rigotti A, Cortés Sanabria LY, et al. (12)	Original Research: Socio-Demographic Patterning of Self-Reported Physical Activity and Sitting Time in Latin American Countries (ELANS) (2019) Primary peer-reviewed	Over 9,000 adults from eight Latin American countries (ELANS survey)	Physical Activity, Sedentary Behaviors/ Behavior, Cardiovascular & Diabetes Risk Factors, Adolescents	Significant variations in transport physical activity (PA) by country, gender, and age. Venezuela had the lowest transport PA, Ecuador the highest. Over 65% were insufficiently active, while younger, more educated, and wealthier individuals were more sedentary. The research highlights the need for tailored interventions to increase activity and reduce sitting across Latin America
Guthold R, Cowan MJ, Autenrieth CS, Kann L, Riley LM.(13)	Physical Activity and Sedentary Behavior Among Schoolchildren: A 34-Country Comparison (2010) Primary peer-reviewed	Over 72,845 schoolchildren from 34 countries across World Health Organization (WHO) Regions: African Region, Region of the Americas, Eastern Mediterranean Region, South-East Asia Region, Western Pacific Region	Physical Activity, Sedentary Behaviors/ Behavior, Cardiovascular & Diabetes Risk Factors, Obesity, Adolescence, Active Transportation, Education Activities	Most students are not getting enough exercise, with only 24% of boys and 15% of girls meeting recommendations. In many countries, more than 1/3 of students spend a lot of time sitting outside of school and doing homework. Overall, the study highlights that most kids needed to be more physically active, suggesting a need for global efforts to increase activity levels among schoolchildren
Villalobos Reyes M, Mederico M, Paoli de Valeri M, Briceno Y, Zerpa Y, Gomez-Perez Y, et al. (14)	Metabolic Syndrome in Children and Adolescents from Mérida City, Venezuela (CREDEFAR Study) (2014) Primary peer-reviewed	916 Venezuelan you	Children, Adolescents, Metabolic Syndrome, Cardiometabolic Risk, Obesity, Diabetes, Cultural Factors	Local standards showed higher metabolic syndrome (MS) prevalence than US standards and linked MS to central adiposity. Compared to international norms, local norms identified more abdominal obesity, high triglycerides, and high blood pressure, but less low HDL cholesterol. The study highlighted the necessity of local standards for accurate MS diagnosis in this population with unique blood fat and pressure levels
Mederico M, Paoli M, Zerpa Y, Briceño Y, Gómez-Pérez R, Martínez JL, et al.(15)	Reference Values of Waist Circumference and Waist/Hip Ratio in Children and Adolescents of Mérida, Venezuela (2013) Primary peer-reviewed	919 young Venezuelans ages 9-17 from Merida, Venezuela	Children, Adolescents, Waist Circumference, Obesity, Cultural Factors, Cardiometabolic Risk, Community & Environment, Gender, Educational Institution, BMI, Physical Activity, Dietary Habits, Sexual Maturation	The waist size (WC) and waist-to-hip ratio (WHR) measurements were generally larger in males, and WC increased as they got older, while WHR decreased. Compared to other regions, these Venezuelan youth had smaller WC and WHR than those in North America but similar measurements to some other Latin American groups. The study offers specific charts for WC and WHR based on age and sex for Merida, Venezuela, which can be used to assess individual health and guide health programs
Bernal J, Frongillo EA, Herrera HA, Rivera JA. (16)	Food Insecurity in Children but Not in Their Mothers Is Associated with Altered Activities, School Absenteeism, and Stunting (2014) Primary peer-reviewed	131 low-income families in Venezuela	Food Intake/ Food Insecurity, Children, Adolescents, Education, Child Labor, Physical Activity, Stunting, Sedentary Behaviors/ Behavior, Socioeconomic Factors, Policies & Programs, School Absenteeism	When children said they didn't have enough food, they were more likely to do chores, cook, care for siblings, and work. They were less likely to play video games. Kids' reports of food insecurity, especially when linked to work, also explained why some kids missed school. The study suggests that asking kids directly about food can help identify those who need help

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Pérez B, Mancera A, Prado C. (17)	Percentage of Fat Adjusted for Build in Post-menarche Venezuelan Adolescents (2003) Primary peer-reviewed	82 girls in Venezuela ages 13-17	Post-menarche, Adolescents, Physical Activity, Dietary Intake, Obesity, Body Fat, Physiological Changes	Wider leg bones (femur) were linked to having more body fat. It was presumed that measuring leg width might be a helpful way to estimate body fat in teenage girls
Méndez de Pérez B, Vásquez M, Landaeta-Jiménez M, Ramírez G, Macías C.(18)	Anthropometric Characteristics of Young Venezuelan Swimmers by Biological Maturity Status (2014) Primary peer-reviewed	115 young male Venezuelan swimmers ages 7-17 across puberty stages	Children, Adolescents, Biological Maturation, Physical Activity, Cultural Factors, Gender, BMI, Nutritional Status	Height and limb length differed between maturity groups. Body size and fat measurements could help coaches group young swimmers by maturity level
Quijada Z, Paoli M, Zerpa Y, Camacho N, Cichetti R, Villarroel V, et al.(19)	The Triglyceride/HDL-Cholesterol Ratio as a Marker of Cardiovascular Risk in Obese Children (2008) Primary peer-reviewed	67 children with varying weight ages 6-12	Cardiovascular Risk, Obesity, Blood Pressure, Hypertension	Obese kids showed higher blood pressure, worse cholesterol, and insulin issues. A blood fat ratio (Tg/HDL-C) was elevated in obese children and linked to other risks. The researchers concluded that childhood obesity raises heart risk, and the Tg/HDL-C ratio could help identify at-risk children
Brazo-Sayavera J, Aubert S, Barnes JD, González SA, Tremblay MS. (20)	Gender Differences in Physical Activity and Sedentary Behavior: Results from Over 200,000 Latin-American Children and Adolescents (2021) Primary peer-reviewed	Over 200,000 Latin American children ages 5-17 across 33 countries	Physical Activity, Sedentary Behavior/ Behavior, Screen Time, Gender Differences, Adolescents, Children, Cultural Factors	Based on WHO guidelines, boys were more physically active than girls, and more girls met screen time limits in only a few countries. The study highlights significant gender differences in meeting these guidelines in Latin America, with boys being more active
Hoehner CM, Soares J, Parra Perez D, Ribeiro IC, Joshu CE, Pratt M, Legetic BD, Malta DC, Matsudo VR, Ramos LR, Simões EJ, Brownson RC.(21)	Physical Activity Interventions in Latin America: A Systematic Review (2008) Secondary peer-reviewed	Review of interventions to increase physical activity in Latin America	Physical Activity, Intervention, School-Based Physical Education, Adolescents, Children, Sedentary Behavior/ Behavior	Only school-based physical education (PE) had strong evidence for effectiveness. More quality studies are needed, and school PE programs should be encouraged to promote activity in Latin American children
Bernabe-Ortiz A, Carrillo-Larco RM.(22)	Physical Activity Patterns Among Adolescents in the Latin American and Caribbean Region (2022) Secondary peer-reviewed	Over 132,000 teens (mean age 14%) across 33 Latin American and Caribbean countries	Physical Activity, Sedentary Behavior/ Behavior, Adolescents, Cultural Factors, Gender	Most teens were insufficiently active (over 60%) and too sedentary (over 40%). Inactivity and insufficient activity were more common in girls than boys
Herrera-Cuenca M, Méndez-Pérez B, Landaeta-Jiménez M, Marcano X, Guilart E, Sotillé L, Romero R.(6)	Results From Venezuela's 2018 Report Card on Physical Activity for Children and Youth (2018) Secondary peer-reviewed	Country level review, including nationwide reports and local, partial population, included	Physical Activity, Venezuelan Youth, Children, Infrastructure/ Safety, Active Transportation, Sedentary Behavior, Physical Fitness, Cardiometabolic Risk, Community & Environment	A Venezuelan report on physical activity (PA) in children and youth found that many older teens do not exercise regularly, partly due to safety and infrastructure issues. The report looked at various factors affecting PA, like active play, sports, and transportation. It used existing data and expert opinions to assess PA levels. The goal was to understand PA in Venezuelan youth and inform future efforts to promote it
Aguilar-Farias N, Martino-Fuentealba P, Carcamo-Oyarzun J, Cortinez-O'Ryan A, Cristi-Montero C, Oetinger AV, Sadarangani KP.(23)	A Regional Vision of Physical Activity, Sedentary Behavior, and Physical Education in Adolescents from Latin America and the Caribbean: Results From 26 Countries (2018) Secondary peer-reviewed	Over 64,000 adolescents ages 11-18 across 26 Latin American and Caribbean countries	Physical Inactivity, Surveillance, Active Transportation, Sedentary Behavior/ Behavior, Inequity, Physical Education Provision, Gender, Community/ Environment, Intervention, Cultural Factors	Low levels of physical activity among adolescents were reported (around 15% met guidelines). While many used active transports to school (42%) and about a third had regular PE, high sedentary behavior was common. Boys were more active than girls. The study emphasizes the widespread inactivity in the region and the need for interventions
González SA, Barnes JD, Abi Nader P, Andrade Tenesaca DS, Brazo-Sayavera J, Galaviz KI, Herrera-Cuenca M, Katewongsa P, López-Taylor J, Liu Y, Mileva B, Ochoa Avilés AM, Silva DAS, Saonuam P, Tremblay MS.(24)	Report Card Grades on the Physical Activity of Children and Youth From 10 Countries with High Human Development Index: Global Matrix 3.0 (2018) Secondary peer-reviewed	10 countries with high levels of economic development	Physical Activity, Sedentary Behavior/ Behavior, Socioeconomic Factors, Policies & Programs, Children, Adolescents	Most countries received a grade around a "D" (a deficient grading) for physical activity, " meaning there is room for improvement. Getting to school actively (like walking or biking) got the best grades, while overall physical activity levels got the worst. These developed countries urgently need to do more to help their youth to become more active and need effective manners to track progress
Herrera M, Rodríguez-Arroyo G, Vansant G, Roelants M, Soubry A, Macias-Tomei C, Landaeta-Jiménez M, López-Blanco M.(25)	Do Parents' Lifestyle Factors and Their Socioeconomic-Food Security Status Affect Children's Growth in Pre-Crisis Venezuela? (2019) Primary Peer-Review	Parents and 1.730 children in eight Venezuelan cities	Growth & Development, Children, Adolescents, Food Insecurity/ Food Intake, Venezuela, Socioeconomic Factors	Children with mothers who drank alcohol tended to have lower body mass index Also, children in homes with less access to good food were more likely to be shorter. The study suggests that a child's social environment, including parental habits and food availability, can impact their physical growth

Table 2: The following table describes expert interviews

Question 1 What are the main barriers that prevent children and adolescents with diabetes from engaging in sufficient physical activity in Venezuela?	Answer Martha Palma Troconis Guerreros Azules Diabetes Tipo 1 | Guerreros Azules | Caracas Lack of infrastructure, lack of personnel which prevents regular physical activity, and families' ignorance about the importance of physical activity for people with diabetes. And of course, the inadequate nutrition of children during these times of crisis	Answer Rolando Carrizales Universidad del Zulia luz.edu.ve The main barrier is that well into the 21st century, the Venezuelan school curriculum includes physical activity only once a week, which goes against WHO recommendations that state physical activity for children and adolescents should occur daily	Commonalities/Differences/ Complementarities School curriculum does not support but PA once a week Lack or deteriorated infrastructure to perform PA Low level of education
Question 2 How has the ongoing economic and social crisis in Venezuela affected the physical activity levels of children and adolescents, and what are the long-term consequences for their health and well-being?	The economic crisis has significantly affected families who must pay out of pocket for food, medications such as insulin, and test strips. This situation shifts their efforts toward securing food and medicine, giving playing sports a lower priority at this time. In our NGO, we organize monthly activities to encourage children, and we now have the sponsorship of tennis player Alexander Zverev, a type 1 diabetic himself, with whom we will be holding a tennis tournament. We know this is not enough and is limited to the capital of the country, but efforts are underway because children, with or without diabetes, need physical activity.	The impact is significant. In a society where the primary concern is meeting basic needs—such as food, as outlined in Abraham Maslow's hierarchy—it becomes difficult to prioritize activities related to self-actualization, such as sports and recreational pursuits. As a result, children are growing up with poor nutrition and insufficient physical activity, leading to unhealthy lifestyle habits. This increases the likelihood that they will enter adulthood with high levels of sedentary behavior. Therefore, it is essential to ensure that physical activity is encouraged from an early age, so individuals are educated in its importance and equipped to maintain an active lifestyle throughout their lives	Both respondents agree that PA is not a priority, but the priorities are food and eventually medicines. For PA to become a priority for families, the basic needs should be achieved
Question 3 What interventions or programs are most effective in promoting physical activity among children and adolescents, and do such programs exist in Venezuela?	In Venezuela, there are no programs as such. The government has set up some spaces that can be used for exercise, such as the construction of parks, but due to the lack of supervision or a clear objective, these cannot be considered programs. At Guerreros Azules, we have a monthly activity called "Blue Sunday," our World Diabetes Day event in November, and we also carry out educational interventions. However, there are no government programs or policies in place.	It is important to clarify that Venezuela has a comprehensive and well-structured legal framework regarding physical activity and sports. The country has a National Plan for Physical Activity, Sports, and Physical Education, as well as the Organic Law on Sports, Physical Activity, and Physical Education, enacted in 2011. These documents are thorough and progressive in their vision. For example, the law mandates that children should engage in physical activity at least three times per week. However, despite the existence of this legal foundation, there are significant shortcomings in its implementation. As of 2025, these mandates are still not being fulfilled. The primary focus of intervention should be to ensure access to physical activity for Venezuelan children who cannot afford private sports education, such as football or baseball academies. Therefore, a public policy aimed at the widespread promotion of physical activity, exercise, and recreational opportunities for children and adolescents is essential to support their biopsychosocial development.	The agreement is to recognize the existence of a law (Ley Orgánica de Deporte, Actividad Física y Educación Física: Gaceta 39741: 2011 - Texto - Leyes de Venezuela Tu Gaceta Oficial .com) but it does not translate into actions, therefore, there are no active programs and policies toward PA for children and youth, particularly at schools
Question 4 What specific recommendations would you give to policymakers or educators to improve physical activity levels and promote healthier lifestyles for children and adolescents with diabetes?	It should primarily start in the schools where children attend, but in Venezuela, children who go to public schools do not attend every day of the week. However, it is in schools where physical activity programs should be implemented so that children can develop the habit	Comply with the law by ensuring a minimum of three physical education sessions per week, with the goal of gradually increasing to daily frequency. It is also essential to guarantee high-quality physical education through the school system and to promote complementary physical activity outside of school hours, in order to meet WHO recommendations. All of this depends on ensuring proper nutrition, as adequate physical activity cannot exist without proper nourishment.	Both agree that schools are the ideal environment to promote PA and reinforce good and healthy lifestyles habits that stay across the lifespan of Venezuelans

Overall, the results show several impairments—such as growth retardation, undernutrition, and a proportion of children with obesity—as consequences of living with food insecurity and disadvantaged environments. Levels of physical activity among Venezuelan children and youth are also reported to be low. Insights from expert interviews indicate that food insecurity is a major barrier to achieving adequate physical activity, a factor that consistently appears in the reviewed literature from the beginning of the evaluated period in 2003 through the most recent studies identified in 2022. Experts also emphasized the persistent gap between the laws that have been established and the extent to which these laws are translated into actions that genuinely improve the wellbeing of Venezuelan children and youth.

Discussion

This review highlighted the crisis in which children and adolescents spend their life and the barriers for achieving a healthy life, for themselves and their families. In both literature review and from expert interviews, the crisis shows as a key barrier that does not allow the achievement of a good physical activity level in general for children and adolescents. The crisis, characterized by a huge economic downturn, leaves exercise practice and recreational activities at the bottom of the priorities where the first one is often a "fight" between food and medicines.

Polycrisis environments, such as wars, economic turndowns, social turmoil, riots, political instability contribute to build vulnerability within the families and households, for whom the experience of those events have health consequences, in terms of deteriorated health and nutritional status (26). According to the experts interviewed, physical activity is being left behind as if it were a luxury, in the quest for the achievement of basic needs, however the ability and capacity to move is also a human need.

As one of the interviewed indicates, for optimal performance of physical activity, an adequate nutrition status is required, and one of the main problems of the Venezuelan population in the country is the food insecurity they must deal with. A study on food security nationwide, conducted during the years 2020-2021 during the pandemics, showed that very few of the studied households were completely food secure (9%), the vast majority were marginally food secure (69%) 18% with moderate food insecurity and 4% with severe food insecurity (27). Being marginally food secure, according to the WFP standards means that people eat, but only because they are sacrificing other basics needs such as medicines, health care, clothing, or education (28).

The Venezuelan crisis was a slow installation crisis, difficult to prove, and even more difficult to follow up with rigorous methodology. This review helps to give a broader scope of some events, because of the selected period, For instance, our findings show that over time the consequences of not having available and accessible foods has consequences in the nutrition realm, manifested as the "double burden of malnutrition", stunting, missing school days and increasing risk of higher body fat mass (10, 14-16, 25). but also in the fact that physical activity was left behind progressively as the environment of crisis got immersed in people's everyday life. Particularly in the context of the polycrisis environment that Venezuelan children face, physical activity could emerge as a key tool to help improve outcomes, as physical activity has been proven to be beneficial in enhancing social connections, and promoting better moods, as well as its effects on metabolic health (29). Studies in other regions of the world show the benefits of including physical activity for children and youth as a way to cope with challenging situations. In Syrian refugee school age children, enrolled in public schools in Adiyaman/Turkiye, it has been concluded that physical education has a considerable positive effect on the adaptation process of Syrian refugee children (30). Another example of a key value of physical activity and sports is the fact that in the world Olympics tournaments, there is a Refugee Olympic Team highlighting a message of hope and inclusion to millions of forcibly displaced people in the world (31).

As the scientific community accepts now, and messages to the general population emphasizes the benefits of regular practice of physical activity during childhood and adolescence, the understanding of the barriers and facilitators to perform physical activity is key, particularly in disadvantaged environments (32). This review shows the importance of sports

and physical activity beyond the frontiers of metabolic, physiological and biological areas for humans entering the social, psychological, and communicational spaces to support the relevance of incorporating exercise, sports and physical activity to the multidimensional society space we live in.

Recommendations to translate into practice the existing law, and programs referring to adequate nutrition for children through the school food program and others are a must, and reviewing the school curriculum to incorporate more weekly sessions of PA should add benefits to the regular practice for children and youth. The relevance of this research expands beyond Venezuela and its population, as the world continues to see more people living in economic and social crises in this time of turbulence with massive cuts to humanitarian funding (33).

Conclusions

In conclusion, social, economic, and political disruption and its resulting food insecurity have become a central barrier to physical activity engagement. Venezuelan families facing severe economic constraints, frequently forgo physical activity in favor of securing food and medicine, which positions physical activity as a secondary priority for survival. Research shows that most Venezuelan youth do not meet global physical activity recommendations and frequently experience obesity and other noncommunicable disease risk factors, those of which that often coexist with undernutrition.

Expert interviews support these findings. They reveal that physical activity is neglected in the current educational system and suffers from poor infrastructure, lack of trained personnel, and the absence of coordinated community programming. While some NGO led efforts show promise, they remain isolated and unsustainable without systemic investment.

In summary, this study affirms that physical activity is a human right and a critical tool for establishing public health resilience. In Venezuela and other disrupted areas of the globe, physical activity must be embraced as an integrated part of the crisis response and should not be postponed until the crisis is corrected.

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