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## ORIGINAL

# IMPACT OF URBANIZATION ON PHYSICAL ACTIVITY PATTERNS IN BRAZILIAN YOUTH

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### ABSTRACT

The aim of research is determined that impact of urbanization on the physical activity related to the Brazilian youth. Brazil's population's surroundings and way of life have seen tremendous changes as a result of urbanisation, with young people's habits of physical activity being most affected. An overview of the main effects of urbanisation on young Brazilians' physical activity is given in this research. The built environment has changed due to rapid urbanisation, which has an impact on the availability of areas that are good for physical exercise. For measuring the research used SPSS software and generate informative result included correlation coefficient, model summary, regression analysis, also that chi square analysis between them. A more sedentary lifestyle is a result of shifting social and cultural standards, as well as an increased reliance on motorised transportation. Socioeconomic differences exacerbate health-related issues by affecting resources for physical exercise. Comprehensive approaches that include community involvement, public health programmes, and urban planning are required to solve these issues. Urbanisation can have a negative impact on Brazilian youth physical activity levels, but it can be lessened by prioritising the establishment of safe and accessible areas, encouraging active transportation, and putting inclusive policies into place. A comprehensive strategy is essential for the youth of Brazil's changing urban context to have a healthy and active future.

**KEYWORDS:** traditional Sports (TS); Community Health (CH); Rural Chile (RC); Smart PLS Algorithm

### 1. INTRODUCTION

Urbanization is an increase in the percentage of people living in towns and cities. The main reason for urbanization is the migration of people from

areas that are not developed towards areas that are developed or under development, like cities or towns. The movement of people towards urban areas is a widespread trend in this contemporary world. There are various disadvantages of urbanization, including deforestation, habitat loss, and the removal of freshwater from the environment, which result in the loss of biodiversity and causes variations in the ranges of species and their interactions. Suppose the process of urbanization is performed in a properly planned and managed way. In that case, it has the capability of reducing poverty and inequality by making improvements in employment opportunities, and quality of life also becomes better as it involves the betterment of education and health(Schaan, Schaan, & Cureau, 2022). According to the van den Berg model, there are four stages of urban development: urbanization, suburbanization, deurbanization, and urbanization. Demographic dynamics play an important role in distinguishing these stages. The major reasons are the facilities that are found in urban areas and the raised standard of living of people in those areas. These facilities include structured facilities, residential, employment centres, communication networks, infrastructural facilities, size, the density of population, family, marriage, occupation, class extremes, social heterogeneity, social distance, a system of interaction, and mobility(G. Ferrari et al., 2020). Just like other things, urbanization also has some positive and negative effects. In positive effects, economic development and education are well known. However, urbanization puts pressure on social services and infrastructure. Other negative effects of urbanization include crime, prostitution, drug abuse, and street children. There are various examples of urbanization. For example, 1) Seoul is in South Korea. From 1.4 million people in 1950 to over 10 million by 1990. 2) Karachi in Pakistan from 5 million people in 1980 to over 16.8 million in 2022. 3) London in the UK, from 6.8 million people in 1981 to 9 million in 2020. 4) Chicago in the US. 5) Lagos in Nigeria(Neutzling, Taddei, Rodrigues, & Sigulem, 2000).

In 2022, about 87.56 percent of Brazil's urban population remained the same. The urban population represents the share of the total population living in urban areas. In Brazil, the majority of reasons for migration are low rural incomes, limited land ownership, and continuously changing climatic conditions. These factors played the leading role in migration in Brazil. Moreover, the rural daily workers who do not have any skills are jobless because agriculture is a common profession in the south and southeast areas(Machado-Rodrigues et al., 2012). Due to massive migration in Brazil, various complicated factors like significant housing shortage and high housing prices are also originating. But these terrible factors do not affect the migrants. These factors compel people to live in the slums and undeveloped areas. In many regions, such favelas can be seen on the sides of hills. The percentage of the population of Brazil according to their location is as follows. 89 per cent of the whole population of Brazil lives in urban areas, and 6 per cent of the population live in slums(dos Santos et al., 2013). Each year, the growth rate of the urban population is 1.1

percent. The central area where a large population nucleus can be seen along with nearby communities that have a high degree of economic and social connection with that area is called a metropolitan area. The annual growth rate of the metropolitan area of Brazil is about 4.5% between 1940 and 1970. This massive population growth is based on 34% of the national growth of that country. Mostly, this population is based on rural workers who have migrated to urban areas. Almost 43 million Brazilians who are living in developed areas belong to rural areas. One of the major reasons which is responsible for urbanization in Brazil is industrialization (G. L. d. M. Ferrari et al., 2020). In 1960, industrial activities in Brazil were at their peak. This factor diverted the resources from the agriculture sector towards the industrial sector. To meet the demand for labour in industries. People started to move from rural to urban areas (EAGDERI, MOULUDI-SALEH, & NAZLABADI, 2019). So, industries played a significant role in initiating the urbanization trend. A complex and strong connection between personal, interpersonal, and environmental factors is likely to be represented by physical activity. In studying the built environment, one should study public health at the expanded level from an individual point of view. This study aims to know the connection between the built environment and the measured activity performed at the physical level among the young generation (Barbosa Filho, Campos, & Lopes, 2014). An analysis of a cutaway diagram of data from the birth cohort of Brazilian citizens at the phase of adolescence. An accelerometer is used to measure physical activity. The goal of this study involves the elaboration of regional prevalence and the patterns of physical activity and inactive behaviour among the young generation of Brazil. Data was accumulated from the scholarly health survey of Brazil, which was a survey of 9th-grade adolescents in 2015 (Jaime, Duran, Sarti, & Lock, 2011).

The conclusion represented that national plans are made to target regional inequalities needed to improve PA and minimize the sedentary behavior among the young generation of Brazil. One of the well-known things about the burden of diseases that are obesity-related and non-communicable is increasing day by day in countries that are low and middle-income based (Werneck et al., 2018). Determinants of obesity that are environment-based vary in different countries, specifically those facing rapid socioeconomic and nutrition transition. Brazil is also one of these countries. Another reason for this study is to describe the difference between some built environments and local food environments and to show how these things are associated with the rapidly increasing rate of overweight. In this way, diet and physical activity are the combined indicators of obesity problems in adults living in Sao Paulo, the largest city in Brazil (Da Silva et al., 2017).

## **2. Research Objective**

The purpose of this research is to understand the association between the local neighborhood environment and the consistently excelling poor diet,

physical activity, and obesity that is essential in countries facing rapid increases in economic and urban development, just like Brazil. So insight can be provided to implant policies to lessen the increasing rate of NCDs and health differences.

The result describes the Impact of Urbanization on Physical Activity Patterns in Brazilian Youth. The research is divided into five specific chapters. The first section represents the introduction and includes the objective of the research. The second section describes the literature review, and the third section describes those methods of research. The fourth section describes the result and its description related to the urbanization and physical activity patterns related to the Brazilian youth. The last section summarises overall research and also describes some recommendations about the Impact of Urbanization on Physical Activity Patterns in Brazilian Youth.

### **3. Literature review**

Researchers reveal that in Brazilian youths, the prevalence of diabetes mellitus 2 is high. The reason behind the high prevalence of T2D is certain dietary factors as well as lack of physical activity. the unhealthy lifestyle of Brazilian youths develops certain health problems like high BP and obesity(Alsulami et al., 2021).Scholars claim that in middle and low-income countries, the youth mortality rate is higher. The main reason behind this high mortality rate in these countries is because lack of physical activities in youth. The inactivity and lack of physical exercise rate is around thirty-one percent in women and twenty-three percent in men (Adlakha & Parra, 2020).studies suggest that physical inactivity in youth is one of the reasons behind weight gain. Physical inactivity results from poor lifestyles and unhygienic eating habits(Amiri et al., 2020).studies explain that people's economic and social activities are affected during any pandemic.

During the pandemic of covid 19, the Brazilian state has developed strategies to promote physical exercise-related activities among people while maintaining the social distancing protocol(Bracarense & de Oliveira, 2021).studies show that several sociodemographic factors influence the health of Brazilian workers Most Brazilian workers working in different industries suffer from abdominal obesity problems due to a lack of physical activity in their daily life activities. Moreover, women working as farmers are less likely to become obsessed because they show more physical activity.in most remote areas, obesity is considered a health issue. promoting the traditional foods eating habits in the people of remote areas improves their health(Cattafesta et al., 2022).studies predict that data obtained through the NHS explains that there is a relationship between the development of NCDs and behavioural patterns. The unhealthy lifestyle of youth develops NCDs in them. The risk of development of NCDs in Brazilian adults is more due to the lack of physical activity. Bad smoking habits and overconsumption of fatty meats are among the risk factors

involved in causing NCDs in Brazilian youth(De Carvalho, Rauber, Claro, & Levy, 2021).studies explain that students of highly urbanized states face sleeping problems. various biological as well as social factors are involved in disturbing the sleep cycles of adults in highly urbanized states. Oversleeping on weekends is one of the reasons that urbanized youth are sleep-deprived during the weekdays(de Medeiros Lopes, Araújo, Lira, Dantas, & Souza, 2022). Studies highlight that depression and mental health problems in adults are caused by altered behavioural patterns as well as by certain sociodemographic factors.

The depression-affected rate of adults in Brazilian countries is about thirty-six percent. the adults living in the urban areas of Brazil face more depression-related problems than people living in rural areas. Three most common behavioural changes are involved in developing depression in Brazilian adults. the first is smoking, the second habit is the overconsumption of alcohol, and the third is physical inactivity. All these three altered behavioral characteristics make youth depressed and mentally ill(de Souza Lopes, Gomes, Junger, & Menezes, 2021).studies highlight that BE determines the PA-related behaviors of the population. The relations between PA and BE are determined only for high-income countries and not for low-income countries(Elshahat, O'Rorke, & Adlakha, 2020).studies reveal that Sao Paulo is a Brazilian state that promotes PA-related activities in schools to improve students' physical health. swimming and running like sports enhance the student's physical ability(Ferrari, Rezende, Florindo, Mielke, & Peres, 2021).studies explain that physical activity is related to the gender of people performing physical activity. physical activity-related activities are more common in men than in women.

The IPAQ reveals that youth living in rural areas are more physically activities as rural life provides them more opportunities to be physically active. In rural areas, both men and women can easily indulge in physical activities(Gouveia, Forte, & Coelho, 2021).studies reveal that the digitalization process has advanced in urban areas. This advancement of digital systems in these areas has made people addicted to the Internet. internet addiction has reduced the indulgence of youth in physical activities (Donovan et al., 2015). The lack of PA and more use of the internet has resulted in the development of serious psychiatric problems in the youth of Brazil.to promote PA in Brazilian youth, the internet use among youth is controlled through effective strategies(Ko, Yen, & Lin, 2022).studies reveal that in various microregions of Brazilian states, the prevalence of depression is high.

The PHQ made in the Brazilian state reveals that most of the Brazilian population is facing depression issues.the main reason for this depression in Brazilian adults is a lack of physical exercise. also, the information from the Brazilian NHS reveals that depression symptoms are often prevalent in Brazilian adults(Lopes, Gomes, Junger, & Menezes, 2022).scholars reveal that

sleep patterns in Brazilian people get disturbed due to certain health problems. Metabolic health problems are common in urbanized states of Brazil. studies suggest that people living in different urbanized states of Brazil show variations in the sleep cycle(Martins et al., 2020). Surveys of scholars reveal that the process of industrialization in urbanized states of Brazil impacts the eating patterns of youth. The challenge in eating patterns results in poor health problems. NHS made in Brazilian schools reveals that students with bad eating habits have poor health and show physical inactivity (Monteiro, Varela, Souza, Maniçoba, & Braga Júnior, 2020).studies reveal that urbanization has promoted unhealthy eating patterns in people that have ultimately impacted the physical health of people. ALLOS, the lack of physical activity is observed in urbanized people due to unhealthy lifestyle(Oliveira, Vidal, & Ferraz, 2020).scholars explain that the neighbourhood environment impacts the sedentary behaviour of youths.

The Brazilian youths exposed to high screen time develops unhealthy behavioral activities(Parajára, Andrade, Xavier, Proietti, & Meireles, 2021).scholars' study claim that neighbourhood environment and PA show a deep association . The Brazilian people's PA is related to their neighbourhood environmental conditions(Sales et al., 2022) Furthermore, the prevalence of OSWOD in Brazilian youth is because of the alternation in the behavioural patterns. several social and environmental factors affect the behavioural activities in adults and result in OSWOD condition(Tassitano, Weaver, Tenório, Brazendale, & Beets, 2020).studies predict inequality in the PA awareness-providing programs observed in Brazilian cities. the decrease in leisure-based PA among Brazilian youth is because of a lack of information regarding PA programs offering leisure-time PA(Wendt et al., 2021).

#### **4. Methods**

The research describes the Impact of Urbanization on Physical Activity Patterns in Brazilian Youth. The research based on primary data analysis study depends upon research questions including independent and dependent variables. For measuring, the research used SPSS software and generated results, including correlation coefficient, model summary, and regression analysis, and also described the chi-square analysis between them.

Urbanization refers to the increased concentration of the population in urban areas, leading to the growth of cities and towns. This global trend significantly affects society, the economy, and the environment. As more people move from farming to urban areas, it impacts several aspects of life including arrangements, public services, employment, and social dynamics. Urbanization has many effects on society. Urbanization can lead to improved access to education, healthcare, and cultural systems. It also looks after the variations and revolutions, creating opportunities for social and economic advancement.

However, rapid urbanization can also demand resources, which leads to overcrowding, insufficient housing, and increased pollution. Additionally, it can cause social inequalities, as backward populations may face challenges in accessing essential services and opportunities. The effect of urbanization on society is vital for policymakers, urban planners, and communities to address the challenges and hardness of the opportunities associated with urban growth.

#### **4.1 Importance of physical activity**

Physical activity plays a crucial role in the health and well-being of youth. Participating in physical activities regularly at a young age offers many benefits. Doing physical activities regularly helps maintain a healthy weight and build strong bones and muscles. It also reduces the risk of developing diseases like diabetes, heart disease, and obesity. Somehow, physical activities have been linked to improved mental health, including reduced symptoms of depression and anxiety. It can also help increase academic performance. Physical activities and sports provide opportunities for social interaction, teamwork, and leadership development. It can also help in building self-esteem and confidence. The habit of doing physical activities and sports regularly during youth is likely to be adapted in adulthood, thus promising lifetime health and fitness.

#### **4.2 Urbanization in Brazil**

Brazil has experienced a rapid urbanization process over the past few years, with a huge portion of the population moving from rural to urban areas in 1960, only 36% of the population lived in urban areas, but from 2020 this figure has jumped up to 87% various factors including economic growth, industrialization, and rural-urban migration have driven this shift. One of the outcomes of this rapid urbanization process has been the growth of informal settlements, known as shanty towns, which are indicated by insufficient housing, poor hygienics, and limited access to basic services. These arrangements are often located on the edge of cities, where land is cheaper and less accessible.

As a result, many residents of favelas face significant challenges in accessing essential services such as healthcare, education, and transport. Rapid urbanization has contributed to social inequalities in Brazil. The rich residents often live in gated communities and apartments, while low-class residents are stuck in shanti towns or other informal settlements. This segregation can lead to social tension and increase the existing inequality. Brazil has also experienced significant benefits from urbanization, including economic growth, increased access to education, healthcare, and cultural diversity; however, addressing the challenges associated with rapid urbanization will require a collective effort from policymakers and urban planners to ensure that all residents have access to essential services and opportunities. According to a study published in the Journal of Physical Activity

and Health in 2019, the level of physical activity among Brazilian youth is low. The study analyzed data from the Brazilian National School Healthcare survey, which surveyed students aged 13 to 17 years old in 2015. The study found that only 36.3% of Brazilian youth met the recommended level of physical activity at least 60 minutes per day. Physical inactivity was more popular among girls (67.8%) than boys (53.6%). Different studies show that physical activity levels decrease with age, with younger students more likely to meet the recommended physical activity levels than older students. The study also found that sleepy and dull behavior was high among Brazilian youth. These findings submit that physical inactivity is a significant Public Health concern among Brazilian youth, highlighting the need for effective interventions and policies to promote physical activity and reduce the risk of chronic diseases.

#### **4.3 Impact of Urbanization on Physical Activity:**

Urbanization has had a significant impact on physical activity patterns among Brazilian youth. As cities have grown, they have become more crowded, causing a reduction of Open Spaces and green areas. It made it more difficult for young people to connect with physical activities, particularly in urban areas where they need more access to parks, playgrounds, and sports facilities. Urbanization has caused many changes in transportation patterns, as more people rely on cars and public transportation rather than walking or cycling, thus reducing opportunities for physical activity in daily routines like walking or cycling to school. The impact of urbanization on physical activity patterns among Brazilian youth is reflected in the low level of physical activity noticed in national service. As mentioned earlier, only 36.3% of Brazilian youth meet the suggested level of physical activity, with a higher rate of physical inactivity among girls and older students.

To solve this problem, urban planners and policymakers need to develop an environment that promotes physical activities. This includes the development of safe and accessible parks, playgrounds, and sports facilities, as well as promoting active transportation options such as walking and cycling. Schools can also play an important role in promoting physical activity among youth through programs and strategies that encourage active lifestyles. The impact of urbanization on physical activity patterns in Brazilian youth is a topic of significant interest due to the rapid urbanization taking place in Brazil and its potential effect on lifestyle behavior. Urbanization is often associated with changes in socioeconomic status and lifestyle behaviors.

These changes can affect how people access resources for physical activities, such as sports facilities and organized sports programs. The complicated relationship between urbanization and physical activity patterns is essential for developing targeted intervention and urban planning strategies to promote an active lifestyle among Brazilian youth.



#### 4.4 Correlations

Table 1

		URBANIZ ATION 1	URBANIZ ATION 2	URBANIZ ATION 3	URBAN IZATIO N 4	PHYSICAL ACTIVITY PATTERNS 1	PHYSICAL ACTIVITY PATTERNS 2	PHYSICAL ACTIVITY PATTERNS 3
<b>URBANIZATI ON 1</b>	Pearson Correlation	1	.031	.158	.143	.280*	.172	.380**
	Sig. (2-tailed)		.833	.273	.323	.049	.231	.006
	N	50	50	50	50	50	50	50
<b>URBANIZATI ON 2</b>	Pearson Correlation	.031	1	-.093	.278	.138	-.031	-.031
	Sig. (2-tailed)	.833		.520	.051	.340	.833	.833
	N	50	50	50	50	50	50	50
<b>URBANIZATI ON 3</b>	Pearson Correlation	.158	-.093	1	.460**	.091	-.095	.125
	Sig. (2-tailed)	.273	.520		.001	.528	.513	.389
	N	50	50	50	50	50	50	50
<b>URBANIZATI ON 4</b>	Pearson Correlation	.143	.278	.460**	1	-.230	-.006	-.067
	Sig. (2-tailed)	.323	.051	.001		.109	.969	.642
	N	50	50	50	50	50	50	50
<b>PHYSICAL ACTIVITY PATTERNS 1</b>	Pearson Correlation	.280*	.138	.091	-.230	1	.143	.546**
	Sig. (2-tailed)	.049	.340	.528	.109		.321	.000
	N	50	50	50	50	50	50	50
<b>PHYSICAL ACTIVITY PATTERNS 2</b>	Pearson Correlation	.172	-.031	-.095	-.006	.143	1	.131
	Sig. (2-tailed)	.231	.833	.513	.969	.321		.363
	N	50	50	50	50	50	50	50
<b>PHYSICAL ACTIVITY PATTERNS 3</b>	Pearson Correlation	.380**	-.031	.125	-.067	.546**	.131	1
	Sig. (2-tailed)	.006	.833	.389	.642	.000	.363	
	N	50	50	50	50	50	50	50

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The above result describes that correlation analysis results present Pearson correlation values, significant values and several observation rates. The Physical Activity Patterns show that 0.380, -0.31, 0.125, and -0.067 have negative and positive correlations.

The significant values are 0.006, 0.642, 0.000 and 0.363, showing 6%, 36% and 100% significant values between them. Similarly, urbanization shows a significant link between them. Brazilian youth's habits of physical activity can be significantly impacted by urbanization. Like many other nations, Brazil has significantly changed from rural to urban living in recent decades due to increasing urbanization.

Numerous changes in lifestyle, surroundings, and social dynamics are linked to this transition, and these changes may have an impact on the population's levels of physical activity, especially among young people. The following are some significant effects:

#### **4.5 Built Environment and Infrastructure**

- Compared to rural regions, urban places frequently have diverse constructed environments. The availability of parks, accessible sports facilities, walkways, and recreational areas can influence physical activity levels.
- A drop in young involvement in active behaviors may be caused by the scarcity of safe and appealing urban areas for physical exercise.

#### **4.6 Patterns of Transportation**

Urbanization is associated with a rise in motorized transportation and a decline in walking and cycling. This change may cause young people to engage in less physical exercise daily. A sedentary lifestyle may be influenced by a lack of pedestrian-friendly infrastructure and an increased reliance on automobiles.

#### **4.7 Sociocultural Shifts**

Urbanization frequently results in societal and cultural norms modifications. Urban regions may see a rise in the prevalence of sedentary behaviors, including more screen time and indoor activities. Alternative lifestyles and more access to technology might lead to a decline in conventional outdoor activities.

#### **4.8 Social and Economic Factors**

- A wide variety of socioeconomic origins may be found in urban settings. Disparities in the availability of resources and opportunity for physical exercise can have varying effects on juvenile demographic groups.
- Limited financial resources and time restrictions may impact participation in organized sports or fitness programs.

#### 4.9 Health Implications

- Lower levels of physical activity linked to urbanization may raise the incidence of lifestyle-related illnesses among young Brazilians, including diabetes, obesity, and cardiovascular diseases.

#### 4.10 Policy and Urban Planning

The influence of urbanization on physical activity patterns highlights the significance of policy and urban planning interventions. Urbanization's negative consequences can be lessened by policies encouraging green areas, active transportation, and community-based physical activity programs. The issues associated with urbanization necessitate a multifaceted response that includes community participation, education, public health efforts, and urban planning. It is imperative to provide settings that both encourage and enable physical exercise if Brazilian kids are to be healthy and happy in urban contexts.

#### 4.11 Model Summary

Table 2

MODEL	R	R SQUARE	ADJUSTED R SQUARE	STD. ERROR OF THE ESTIMATE
1	.512 <sup>a</sup>	.262	.197	.53994

a. Predictors: (Constant), Urbanization 4, Urbanization 1, Urbanization 2, Urbanization 3

The above result describes that the model summary shows the R-value, R square values, adjusted R square value and standard error of the estimated values of model 1. The R-value is 0.512, the R-square value is 0.262, the adjusted R-square rate is 0.197, and the standard error of the estimated value is 0.53, showing that 53% of estimated values are all urbanization.

#### 4.12. Regression analysis

Table 3

COEFFICIENTS						
MODEL		UNSTANDARDIZED COEFFICIENTS		STANDARDIZED COEFFICIENTS	T	SIG.
		B	Std. Error	Beta		
1	(Constant)	1.023	.338		3.024	.004
	Urbanization 1	.326	.144	.294	2.261	.029
	Urbanization 2	.287	.135	.292	2.118	.040
	Urbanization 3	.251	.127	.297	1.978	.054
	Urbanization 4	-.448	.142	-.489	-3.155	.003

a. Dependent Variable: Physical Activity Patterns 1

The above regression analysis describes unstandardized coefficient values, including beta values and standard error. The result represents standardized coefficients as that t statistic and significant values of each variable. Urbanization 1,2,3, and 4 are all of them considered independent variables.

The beta values are 0.326, 0.287, 0.251 and -0.448, respectively. The t-statistic values are 2.261, 2.118, 1.978 and -3.155, showing a positive rate link between them. It shows that 0.029 and 0.040 show 29% and 4% significant values between them. Urbanization 3 and 4 show that 5% and 3% significant level between them. The result describes that beta values are 0.297, showing 29% between them.

#### 4.13. Chi-square analysis

Table 4

TEST STATISTICS							
	URBANI ZATION 1	URBANI ZATION 2	URBA NIZATI ON 3	URBA NIZATI ON 4	PHYSICA L ACTIVITY PATTERN S 1	PHYSICAL ACTIVITY PATTERN S 2	PHYSIC AL ACTIVIT Y PATTER NS 3
<b>Chi-Square</b>	22.360 <sup>a</sup>	19.240 <sup>a</sup>	8.680 <sup>a</sup>	12.280 <sup>a</sup>	17.080 <sup>a</sup>	25.240 <sup>a</sup>	23.560 <sup>a</sup>
<b>df</b>	2	2	2	2	2	2	2
<b>Asymp . Sig.</b>	.000	.000	.013	.002	.000	.000	.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 16.7.

The above result describes that test statistical analysis and the chi-square values of each indicator included dependent and independent. Urbanization 1, 2,3, and 4 show that chi-square values are 22.360, 19.240, 8.680 and 12.280, showing positive rates. The physical activity patterns 1,2 and 3 show dependent variables. It shows 17.080, 25.240, and 23.560, respectively. The result represents that 0.000 shows 100% significant values between them.

#### 5. Conclusion

The impact of urbanization on physical Activity among Brazilian youth must be addressed, but by understanding the challenges and implementing effective strategies, we can create an environment that can support and encourage an active lifestyle. This may involve increasing access to parks, sidewalks, and recreational facilities, promoting active transportation, and

providing opportunities for organized sports programs. By taking a broad approach to promoting physical activity in urban settings, we can ensure that Brazilian youth have the resources and opportunities they need to lead healthy and active lives. In conclusion, various sectors must pay attention to urbanization's complex effects on young people's physical activity habits in Brazil. Young people's activity levels are influenced by various variables, including transportation, infrastructure, social norms, and economic shifts brought about by moving from rural to urban areas. Reduced physical activity has significant consequences and is linked to increased lifestyle-related health problems. The research determines the Impact of Urbanization on Physical Activity Patterns in Brazilian Youth.

For measuring, the research used SPSS software, and the present results included correlation coefficient, regression analysis, the model summary, and the chi-squares between them. A comprehensive strategy incorporating community involvement, public health programs, and urban planning is required to tackle these issues. Essential actions include encouraging active transportation, putting in place laws that encourage healthy lives, and creating and maintaining accessible, secure, and appealing areas for physical activity. Additionally, to guarantee that all young populations may lead active and healthy lifestyles, efforts must be made to lessen socioeconomic inequities in access to resources and opportunities for physical exercise.

In the end, understanding the complex interplay between urbanization and physical activity among young Brazilians is critical to developing interventions and policies that promote an atmosphere conducive to active living. Brazil can strive towards a healthier and more active future for its young in the context of urbanization by prioritizing the integration of physical exercise into the urban landscape and attending to the different demands of the people.

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