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ORIGINAL

Epidemiological characterisation of sedentary patients at the Hermanos Cruz Polyclinic. June 2021 - June 2023

Caracterización epidemiológica de pacientes sedentarios consultorio médico 138 Policlínico Hermanos Cruz. Junio 2021 - Junio 2023

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ABSTRACT

Introduction: sedentary lifestyle is defined as a lack of regular physical activity, less than 30 minutes of exercise per day and less than 3 days per week. It is the fourth leading risk factor for death. It doubles the risk of cardiovascular disease, obesity and high blood pressure.
Objective: to characterise epidemiologically sedentary patients at the 138 Policlínico Hermanos Cruz clinic between June 2021 and June 2023.
Method: a descriptive, cross-sectional observational study was conducted. The universe consisted of 157 sedentary individuals registered in the ASIS, and the sample consisted of 150 who met the inclusion and exclusion criteria. The variables used were: age, sex, nutritional assessment, occupation, PA, type and risk factors for sedentary lifestyle. The information was obtained from Family and Individual Health Records, the ASIS, the survey and the Pérez-Rojas-García test. Descriptive statistical methods were used, the results were tabulated and expressed in absolute numbers and percentages.
Results: females, the 65-74 age group, overweight individuals, retirees, high blood pressure as a PHD, severe sedentary lifestyle, and lack of interest in physical exercise as a risk factor were prevalent.
Conclusions: lack of physical activity is a rapidly growing global health risk, so educational work with the population and the implementation of government strategies and policies are needed.

Keywords: Sedentary Lifestyle; Physical Inactivity.

RESUMEN

Introducción: el sedentarismo es la falta de actividad física regular, menos de 30 minutos diarios de ejercicio y menos de 3 días a la semana. Constituye el cuarto factor de riesgo de muerte. Duplica el riesgo de enfermedad cardiovascular, obesidad e hipertensión arterial.
Objetivo: caracterizar epidemiológicamente los pacientes sedentarios del consultorio 138 Policlínico Hermanos Cruz en el período junio 2021 a junio 2023.
Método: se realizó un estudio observacional, descriptivo, de corte transversal. El universo estuvo constituido por 157 sedentarios registrados en el ASIS y la muestra conformada por 150 que cumplieron los criterios de inclusión y exclusión. Las variables utilizadas fueron: edad, sexo, valoración nutricional, ocupación, APP, tipo y factores de riesgo del sedentarismo. La información se obtuvo de Historias de Salud Familiar e Individual, el ASIS, de la aplicación de la encuesta y el test de Pérez-Rojas-García. Se utilizaron métodos de estadística descriptiva, se tabularon los resultados y se expresaron en números absolutos y porcientos.

Resultados: prevaleció el sexo femenino, el grupo de edad de 65 a 74 años, el sobrepeso, los jubilados, la hipertensión arterial como APP, el sedentarismo severo y el desinterés por practicar ejercicios físicos como factor de riesgo.
Conclusiones: la falta de actividad física es un riesgo para la salud mundial en rápido ascenso por lo que se debe realizar trabajo educativo con la población y aplicar estrategias y políticas gubernamentales.

Palabras clave: Sedentarismo; Inactividad Física.

INTRODUCTION

Hippocrates stated: "What is used develops; what has not used atrophies." Work is as old as humanity, and it was precisely physical work that gave man his exquisite differentiation over the rest of the animal species. [1] According to the World Health Organization (WHO), at least 60 % of the world's population lives a sedentary life.[2,3,4] Globally, a quarter of the world's population (1,4 billion people) does not do enough physical activity. [5] According to the Madrid City Health Study conducted in 2018, a sedentary lifestyle is more frequent among women, is higher in older ages, and is more prevalent among the functionally illiterate.[1,6]

The World Health Organization, in its 2010 report on the status of noncommunicable diseases, estimates that 3,2 million people die each year due to lack of physical activity, which is the fourth most crucial risk factor for death worldwide (6 % of deaths), only surpassed by hypertension (13 %), tobacco use (9 %) and excess glucose in the blood (6 %).[6,7] The Basic Health Unit São Vicente, Vianopolis, Brazil and as part of the Maís Medico program and in compliance with the implementation of Primary Health Care in the country, a study was conducted in 2018 that assured that individuals who do not practice physical activity or sedentary individuals have a 30 % to 50 % higher risk of triggering Arterial Hypertension. Hence, one of the risk factors related to arterial hypertension is a sedentary lifestyle and/or lack of physical exercise. In this research, 59,4 % of patients were sedentary, with a higher incidence among women, indicating a strong association between this factor and Arterial Hypertension. Previous studies found that 76,9 % of people who suffered a heart attack and 81,2 % of those with arterial hypertension did not engage in any physical activity.[8]

For the three European subregions of the WHO, the proportion of inactive individuals ranges between 16 % and 24 %.[1] In Spain, the most sedentary country in Europe, it is 47 %.[7] The WHO reveals that Latin America is the region of the world with the highest percentage of sedentary individuals, 39 %. The country where it is most entrenched is Brazil, with 47 % of the population engaging in insufficient physical activity. Costa Rica has shown a 46 percent increase, Argentina a 41 percent increase, and Colombia a 36 percent increase.[5,9] The prevalence of a sedentary lifestyle in Cuba in 1995 (33,2 %), in 2001 (38,3 %), and in 2011 (40,4 %).[10] For this, our country implements several programs, such as the establishment of 531 bio-healthy parks and the chair of older people, among others, in compliance with the Guidelines for Economic and Social Policy, which call for strengthening health actions through intersectoral and community participation to improve lifestyles.[11] In Pinar del Rio, the prevalence of a sedentary lifestyle is 69,7 %, and a study conducted in 2012 showed that the occurrence of hypertensive crises was more frequent in patients who did not exercise.[12] In the Hermanos Cruz health area, the prevalence of a sedentary lifestyle is 56,7 %.[13] In the 138 clinics, the prevalence of a sedentary lifestyle is 57,8 %.[14]

Adults typically spend approximately 1/3 of their weekday time (approximately half of their waking time during the week) working. It is understood that the physical activity and sedentary behavior patterns of each occupation differ. Due to the relatively large proportion of work hours in a 24-hour day, differences in work behaviors may have a greater impact on cardiometabolic diseases. However, accurately measuring differences in physical activity and sedentary behavior in the workplace is challenging, and few studies have assessed the differences in physical activity and sedentary time between occupations. A survey conducted with adults in Tanicuchi parish in 2020 aimed to investigate the relationship between the type of occupation as an intervening factor and sedentary behavior. The results showed that those with a dynamic work style were less likely to be sedentary compared to those with a static work style.[15]

Four to five million deaths could be prevented each year if all people were more physically active. In the 2020 guidelines on physical activity and sedentary habits, WHO recommends sustained communication campaigns at the national level to improve awareness and understanding of the multiple benefits of physical activity and reducing sedentary lifestyles. However, for communication campaign activities to have a lasting impact on behavioral change, they must be supported by policies that create enabling environments and provide opportunities for participation in physical activity. The public health recommendations presented in the WHO Guidelines on Physical Activity and Sedentary Habits apply to all populations and age groups, ranging from 5 to 65 years and older, regardless of gender, cultural background, or socioeconomic status. These recommendations are relevant to all individuals, irrespective of their ability. The chronically ill, people with disabilities and

pregnant and postpartum women should endeavor to follow the recommendations to the best of their ability and capacity. The Global Action Plan on Physical Activity 2018-2030 sets a target of reducing levels of physical inactivity by 15 %.[16]

A sedentary, sedentary lifestyle is characterized by a lack of regular physical activity, including less than 30 minutes of exercise per day and fewer than 3 days per week.[1,16] Physical activity is any movement of the body produced by skeletal muscles that results in energy loss, whereas physical fitness is the person's ability to engage in physical activity. The main beneficial effects of physical exercise are: protects against harmful weight gain, decreases body fat percentage, improves blood lipid profile, normalizes blood pressure numbers in hypertensives, reduces peripheral vascular resistance, improves glucose tolerance and insulin sensitivity, improves bone density, improves immune function, reduces the desire to smoke and ingest alcoholic beverages, activates all cells of the body to some degree, and improves physical, mental and social well-being, helps to prevent or delay the manifestation of many syndromes and diseases and prolongs life and increases the capacity of the person and gives them a healthier appearance. The groups at risk of sedentary lifestyles are people over 40 years of age, physically disabled individuals, individuals suffering from chronic diseases, patients with musculoskeletal conditions, obese, sedentary occupations (e.g., administrative staff, intellectuals, etc.), homemakers, and people living in urban areas.[17]

The sedentary lifestyle is evaluated in different ways, two of them are The Pérez-Rojas-García Test for the Diagnosis and Evaluation of Sedentary Lifestyle (modification of the Manero Test), which makes it possible to evaluate the evolution and carry out a more realistic follow-up of The person, and the functional test for the determination of physical capacity (Ruffier), the first is evaluated according to the behavior of the heart rate in the face of various exercise loads and intensities. The second is a test of the vegetative system's investigation, evaluating the vagal, neurovegetative response to vagotonia, which results in slower pulses at rest.[17]

According to the Pérez-Rojas-García test, an individual may present as severely sedentary, moderately sedentary, or active and very active.[17,18] Some of the risk factors are the following: disinterest in practicing any sport, inadequate diets, use of passive means of transportation, overpopulation, absence of parks or sports or recreational facilities, poverty, criminality, traffic density, imitated behaviors, excessive use of technological means, the "protective kangaroo effect" and absence of directives that disseminate good health habits.[5,6,8,19] Scientific and technical development has enabled improvements in living conditions, the humanization of working conditions, and the facilitation of domestic tasks. This fact, combined with the lack of health policies in line with the changes mentioned above, has led to an increase in sedentary lifestyles.[20]

A sedentary lifestyle doubles the risk of cardiovascular disease, type II diabetes and obesity; it also increases the possibility of arterial hypertension, as proven in several studies, such as one conducted in the Angolan municipality of Viana, as well as osteoporosis, breast and colon cancer; it also has other consequences such as easy fatigue, stress, depression, anxiety, loss of flexibility in the joints, muscular atrophy, hypercholesterolemia, immunodeficiencies and hormonal imbalance.[1,5,6,21,22]

Taking into account that the prevalence of sedentary lifestyle in the world is 60 %, in Pinar del Rio 69,7 %, in the Hermanos Cruz Polyclinic 56,7 %, and in the clinic seat of the research is 57,8 %, it can be concluded that the percentage of the sedentary lifestyle of the research site is similar to the rest of the world where this risk factor is the fourth most crucial factor of death. In Office 138, it is responsible for the increase in the prevalence of hyperlipidemias, encephalic vascular accidents, arterial hypertension, obesity, ischemic cardiopathy, and peripheral arteriopathies. Therefore, it is necessary to carry out this research to characterize epidemiologically the selected sedentary population and to specify the risk factors that contribute to the sedentary lifestyle.

By the problem situation addressed above, the following question is posed: What is the epidemiological behavior of a sedentary lifestyle in Medical Office #138 of the Hermanos Cruz Polyclinic during the period 2021-2023?

General objective

To characterize epidemiologically the sedentary patients of the 138th medical office of the Policlínico Hermanos Cruz in the period from June 2021 to June 2023.

METHOD

Research classification

Research and development.

Type of Research

An observational, descriptive, cross-sectional study was conducted to epidemiologically characterize sedentary patients at the 138th medical office of Hermanos Cruz Polyclinic from June 2021 to June 2023.

Variables such as age, sex, weight, nutritional assessment, occupational dedication, type of sedentary

lifestyle, risk factors associated with sedentary lifestyle, and personal pathological antecedents were selected. The information was obtained from Family and Individual Health Histories, Analysis of the Health Situation of the clinic 138, and the results of the diagnostic test and evaluation of the sedentary lifestyle of Pérez-Rojas-García, validated by expert criteria (present in the Degree Project before obtaining the academic degree of Master in Physiotherapy and Rehabilitation of Ms. Grace Verónica Moscoso Córdova, Ecuador, 2019).

Universe and Sample

The universe consisted of 157 sedentary patients registered in the Analysis of the Health Situation of the medical office, and the sample was composed of 150 patients after applying the inclusion, exclusion, and informed consent criteria.

Inclusion criteria

All sedentary patients who gave informed consent to participate in the research and remain in the health area.

Exclusion criteria

Sedentary patients who did not wish to participate in the research or who, for any reason, were registered in the ASIS but were no longer found in the health area.

Methods Used

The research is grounded in the dialectical approach, which serves as the philosophical foundation for the elements addressed in the thesis. From this approach, research methods, procedures, and techniques were used, both theoretical and empirical, as well as mathematical-statistical, based on the theory of Leticia Artíles.

Among the theoretical methods, the following were used:

- Historical-logical analysis was used in the study of the stages through which the behavior of a sedentary lifestyle in the population belonging to Clinic 138 has evolved, allowing for the investigation of its tendencies and regularities.
- Analysis and synthesis were applied throughout the research process to gain specific and general knowledge of the behavior associated with sedentary lifestyles in the population, to identify the essential elements that comprise it, as well as the existing links between them and their most general characteristics.
- Induction and deduction were used in the study, drawing on theoretical references and empirical material, to obtain generalizing conclusions, which facilitated the inferences drawn.

Within the empirical methods:

- Documentary analysis: for the study of essential documents such as the Family and Individual Health Histories, Analysis of the Health Situation of the clinic 138, and the results of the Pérez-Rojas-García sedentary lifestyle diagnostic and evaluation test (Annex 1), for which the resting heart rate (HR) was measured (the person had not smoked or drank coffee 30 minutes before the test was performed) and the blood pressure. Afterwards, 65 % of the maximum HR (MHR) was obtained as a criterion for the evaluation of the different loads.[17]
- FCM = 220 - Age (years).
- 65 % FCM = FCM x 0,65.
- 65 % of the FCM in 15 sec. = 65 % FCM/4: This was the value taken into consideration for the evaluation in this test.

A 25 cm high step was used for its execution. Up to three (3) types of "loads" were performed. In each level the duration of the physical activity was three (3) minutes. First load and first level: 17 steps/minute, second load and second level: 26 steps/minute, third load and third level: 34 steps/minute. The action of climbing the 25 cm high step with the right leg, raising the left leg and lowering both legs was considered as one step. A stopwatch was used to count the steps.[17]

Subsequently, the HR was measured in 15 seconds at the end of 3 minutes for each load.

- If the FC was below 65 % of the FCM, we proceeded to rest for one minute, and moved on to the next load/level.
- If the HR was greater than 65 % of the HRM, the test was stopped and that is the level that corresponds to the person and will be evaluated in the sedentary classification as appropriate.

Once this test was concluded, sedentary people were classified as follows: severely sedentary, those who did not manage to overcome the first load; moderately sedentary, those who did not manage to overcome the

second load; both those who did not manage to overcome the third load and those who managed to do so were classified as active and very active respectively, a level that was not reached by the sample studied because sedentary people were selected.[17]

- Observation: to collect the patients' health status.
- Survey: to collect the patients' opinions on the risk factors of sedentary lifestyle.

Statistical methods

The descriptive statistics method was applied in the research, which facilitated tabulating the different research data in tables and expressing them in absolute and relative frequency.

Table 1. Operationalization of variables

Variable	Type	Scale of use	Description	Indicator
Age	Quantitative continuous	15-24 25-34 35-44 45-54 55-64 65-74 75-84 85-94	By years of age	Percentage of individuals by years of age
Sex	Qualitative nominal dichotomous	Male Female	According to biological sex	Percentage of individuals according to biological sex
Nutritional assessment	Quantitative continuous	<18kg/m^{2}Thin 18,5kg/m^2-25kg/m^{2}Normal weight 25kg/m^2-29,9kg/m^2 Overweight ≥30kg/m^{2}Obesity	According to height and weight	Percentage of individuals according to BMI
Occupational dedication	Qualitative nominal polytomous	Student Worker Retired Housewife Unemployed	According to activity performed	Percentage of individuals according to occupation dedication
Personal pathological history	Qualitative nominal polytomous	Diabetes mellitus Obesity Ischemic heart disease Cerebrovascular disease Hyperlipidemia Arterial hypertension	According to personal pathological history collected at individual health history	Percentage of individuals according to personal pathological history
Type of sedentary lifestyle	Qualitative nominal dichotomous	Severe sedentary lifestyle Moderate sedentary lifestyle	According to the Pérez-Rojas-García test for the diagnosis and evaluation of sedentary lifestyles.	Percentage of individuals according to type of sedentary lifestyle
Risk factors for sedentary lifestyles.	Qualitative nominal polytomous	Disinterest in practicing physical exercise Use of passive means of transport Lack of sports facilities Excessive use of technological means Absence of directives that disseminate good health habits.	According to the results of the survey applied to the patients	Percentage of individuals according to sedentary lifestyle risk factors.

Techniques for obtaining information

A comprehensive national and international bibliographic and documentary review was conducted on the subject under study, serving as the referential basis for the research.

The information was obtained from the registry of sedentary patients registered in the Analysis of the Health Situation of Medical Office 138, from which the universe and sample of the present research were derived, with prior informed consent. Also, the review of the Family and Individual Health Histories, from which the variables (age, sex, nutritional assessment, occupational dedication, APP) were obtained. A survey was conducted,

developed by the research author based on a review of several investigations and a summary of the risk factors that stood out the most, which enabled the identification of which of these were present in the sample. To get the type of sedentary lifestyle, the Pérez-Rojas-García sedentary lifestyle diagnostic and evaluation test was applied, which allowed the sample to be grouped into severe and moderate sedentary individuals. The data were recorded in an Excel database created for this purpose.

Data processing and analysis techniques

The information was processed using a manual method and a statistical study based on percentages on a Dual-Core computer with Windows 10 and Microsoft Word as the word processor. An automated database was prepared in Microsoft Excel, which was regularly reviewed against the original data collection instrument spreadsheets by an external evaluator to ensure the elimination of 100 % transcription errors.

Taking into account the bibliographic review conducted on the object of study, the data collected in the research, and the criteria established by the author, it was possible to synthesize the information using tables. In these tables, the data were presented in percentages as a summary measure for variables, and conclusions and recommendations were drawn.

Ethical aspects

For the development of the present investigation, the collaboration of the 150 sedentary patients who formed the sample was necessary. Before being included in the study, informed consent was requested. The objectives of the research and the importance of their participation were explained to them. They were guaranteed the confidentiality of the information they provided and the option to leave the study if they wished, with no repercussions on their subsequent medical care. Patients' acceptance to participate in the survey was requested verbally and in writing.

RESULTS

Table 2. Distribution of the population according to age groups and sex. CMF 138 Hermanos Cruz Polyclinic. June 2021- June 2023

Age groups	Female		Male		Total	
	No	%	No	%	No	%
15-24	1	0,6	3	2	4	2,7
25-34	4	2,7	5	3,3	9	6
35-44	5	3,3	4	2,7	9	6
45-54	10	6,6	8	5,3	18	12
55-64	11	7,3	10	6,6	21	14
65-74	33	22	18	12	51	34
75-84	12	8	10	6,6	22	14,7
85-94	10	6	6	4	16	10,7
Total	86	57,3	64	42,7	150	100

The table shows the distribution of the population under study by age groups, where it is observed that the female sex is predominant over the male sex, with the former at 57,3 % and the latter at 42,7 %. Additionally, the most representative age group was 65 to 74 years, accounting for 34 %.

The results of the research align with a study conducted in Chile by Carlos Celis Morales and collaborators, which included 5293 participants. The study showed that the group aged 65 to 74 years had the highest prevalence of sedentary lifestyles and physical inactivity. The main results of this study reveal that physical activity patterns in both sexes vary with age. In both men and women, upon reaching 60 years of age, there was a significant decrease in the practice of moderate and vigorous physical activity, accompanied by a substantial increase in time spent on sedentary activities. These results also align with those reported by other studies, which indicate that, with increasing age, the practice of moderate physical activity decreases, and to a greater extent, that of vigorous physical activity.[23]

In Spain, in the Casablanca neighborhood of the city of Zaragoza, García Lanzuela, Y., and collaborators carried out a study that showed the female sex practices sports less,[24] which coincides with the research findings.

Florinda Garcia Poello and collaborators found a high prevalence of physical inactivity among the university population, which was significantly associated with obesity and female gender, in research conducted with

university students in the city of Barranquilla. These differences by gender can be explained from various perspectives and influenced by multiple factors. One of them is related to the motivation that people have to practice some physical activity; thus, some authors report that, while women prefer to practice physical activity to control external factors such as weight or to improve their physical appearance, men do it for reasons related to the improvement in their physical condition and even for the feeling of enjoyment that this type of activity can provide. This indicates that not only individuals over 60 years of age engage in sedentary behaviors, as found in this study, but also at younger ages. Young people constitute a population group that is at high risk of developing sedentary lifestyles due to inadequate behaviors. It is recognized that, although childhood is a critical stage for the acquisition of both healthy and unhealthy lifestyle habits, so is the university stage, in which students tend to go from regular physical activity at school to a physically inactive lifestyle at university; they also develop inadequate eating styles, which will inevitably have repercussions in the maintenance of sedentary lifestyle habits during adulthood and professional life.[25]

Table 3. Distribution of sedentary people according to nutritional assessment according to body mass index (BMI) CMF 138 Policlínico Hermanos Cruz. June 2021- June 2023

BMI	Number	%
< 25 kg/m^{2}Normal weight	24	16
25 - 29,9 kg/m^{2}Overweight	77	51,3
≥30 kg/m^{2}Obesity	49	32,6
Total	150	100

The research found that the predominant nutritional assessment was overweight. The results do not include the underweight group, as it was not represented in the sample studied.

Margareth Lorena Alfonso Mora and collaborators conducted research in Tuja, Colombia, to determine the prevalence of a sedentary lifestyle among people aged 18 to 60 years and the factors associated with this condition. A high frequency of sedentary lifestyle was observed among the participants, with associated variables including gender, body mass index, and marital status. Here, the predominant nutritional assessment was overweight, coinciding with a study carried out in Costa Rica by Alemán C. and Salazar W. with a similar population where a body mass index of 23 % overweight and 14 % obesity was reported, as well as what was found in Bogotá with a high prevalence of overweight (37,3 %) and obesity (9,6 %).[26] All these studies coincide with the present one.

Table 4. Distribution of sedentary people according to occupational dedication. CMF 138 Hermanos Cruz Polyclinic. June 2021- June 2023

Occupational dedication	No	%
Student	3	2
Worker	48	32
Retired	79	52,7
Homemaker	18	12
Unemployed	2	1,3
Total	150	100

Regarding the occupational status of the sample population in this research, the most predominant group was retirees, at 52,7 %, followed by workers, at 32 %.

Roberto Iván Acosta Gavilanez and collaborators conducted a similar study in Ecuador with the objective of knowing the relationship between the type of occupation as an intervening aspect and the sedentary lifestyle of the adult population of the parish of Tanicuhi; it was found that individuals with a dynamic work style did not present sedentary lifestyle compared to those with a static work style.[26] It is understood that the physical activity or sedentary behavior patterns of each occupation are different; however, it is difficult to accurately measure differences in physical activity and sedentary behavior between professions, and few studies have evaluated the same.[23] In this research the unemployed predominated with 34,69 %, followed by day laborers with 11,22 %, a result that coincides with the present study because retirees are within the group of the unemployed, since from the age of 60 years onwards, retirement from work begins and therefore the decrease in the levels of physical activity could be related to the absence of occupational physical activity.[26]

Table 5. Distribution of sedentary people according to personal pathological history. CMF 138 Hermanos Cruz Polyclinic. June 2021- June 2023

Personal pathological history	Number	%
Arterial hypertension	73	48,66
Diabetes mellitus	46	30,6
Obesity	60	40
Ischemic heart disease	36	24
Cerebrovascular disease	6	4
Hyperlipidemias	22	14,6

The personal pathological history that predominated in the sedentary patients in clinic 138 was arterial hypertension.

Obesity, unhealthy eating habits, sedentary lifestyle, and excessive alcohol and tobacco consumption are risk factors that modify the anthropometric profile (weight, height, and waist circumference), as well as biochemical (total cholesterol, HDL, LDL, and glucose) and clinical (blood pressure and heart rate) parameters. They are important aspects to consider in the development of type 2 diabetes mellitus.[27]

Sedentary lifestyle and obesity are closely related factors, which in turn are associated with an increase in the activity of the sympathetic axis, with the onset of cardiovascular hyperreactivity as a phenomenon that increases the risk of arterial hypertension and other cardiovascular diseases.[28]

A sedentary lifestyle and unhealthy eating habits promote an increase in body weight, which leads to overweight or obesity.[27]

After an extensive national and international search of similar works, no results with this profile were found; however, studies were found that reveal a relationship between these chronic diseases and a sedentary lifestyle as a risk factor.

In Pinar del Río in 2018, research was conducted with older adults at Clinic 47 of the Policlínico Universitario Hermanos Cruz. The study concluded that among the risk factors of cerebrovascular diseases identified in the studied elderly, a sedentary lifestyle was the predominant one.[29] Not coinciding with the research because of the total of sedentary people studied, only 4 % suffered from cerebrovascular disease.

In the "Fernando Echenique" Community of the Río Cauto municipality, a study conducted from October 2018 to January 2019 aimed to identify the risk factors associated with arterial hypertension and a sedentary lifestyle, revealing that a sedentary lifestyle was the second most significant risk factor.[30]

According to the III National Survey on Risk Factors and Preventive Activities of NCDs, 30 % of men and 51 % of women reported insufficient physical activity among the total number of individuals diagnosed with hypertension. The World Health Organization (WHO) considers sedentary lifestyles to be a risk factor and cause of the increase in mortality, morbidity, and disability in the world today.[28]

An investigation carried out with adult patients attended at the San Juan de Arequipa Health Center from January to September 2022 showed that from the clinical and epidemiological factors, the lifestyle factor shows a significant statistical relationship with mixed hyperlipidemia; having evidenced that the healthy lifestyle category is a protective factor to avoid mixed hyperlipidemia and the sedentary lifestyle a risk factor being 2556 times more risk of presenting mixed hyperlipidemia when the patient is sedentary.[31]

Table 6. Distribution of the sample according to type of sedentary lifestyle. CMF 138 Hermanos Cruz Polyclinic. June 2021- June 2023

Type of sedentary lifestyle	Amount	%
Severe sedentary lifestyle	122	81,3
Moderate sedentary lifestyle	28	18,6
Total	150	100

The Pérez-Rojas-García physical test has been used in other studies to objectively evaluate the levels of physical activity by categorizing the subjects into very active, active, moderate sedentary, and severe sedentary, according to the performance and behavior of the heart rate against various exercise loads and intensities.[25]

As expressed in the previous table, the application of the diagnostic test and evaluation of Perez-Rojas-Garcia's sedentary lifestyle revealed that a severe sedentary lifestyle predominated in 81,3 %.

A similar study carried out in an educational institution in Popayán, Colombia, by Luz Marina Chalapud

Narvaez, to determine the levels of sedentary lifestyle among students using the Pérez-Rojas-García box test showed that 41,3 % of her sample are severely sedentary and 43,5 % are moderately sedentary, which differs from the findings of this research.[32]

The results of the research do not coincide with a study conducted at the University of Ambato, Ecuador, by Grace Veronica Moscoso Cordova with students of Physical Therapy and Physiotherapy, where it was concluded that in her sample, active students predominated over sedentary students despite the passage of the pandemic of COVID - 19 where physical activity decreased. There was an increase in the levels of sedentary lifestyle.[33]

In Barranquilla, Florinda García Puello applied the Pérez-Rojas-García drawer test to university students, which yielded a greater number of severely sedentary students than moderately sedentary ones. This finding coincides with the present research.[25]

Table 7. Distribution of the sedentary according to sedentary risk factors. CMF 138 Hermanos Cruz Polyclinic. June 2021- June 2023

Risk factors of sedentary lifestyle	Number	%
Disinterest in practicing physical exercise	58	38,6
Use of passive means of transportation	6	4
Access to sports facilities	54	36
Excessive use of technological means	15	10
Access to directives that disseminate good health habits.	17	11,3

With the application of the survey elaborated to know the risk factors that could be present in the sample studied, we found that the option of disinterest in practicing physical exercise is the most prevalent, considering that community interventions could correct this behavior, achieving changes in lifestyles that result in lower incidence of chronic diseases and less decompensation of those diagnosed.

Coinciding with this research, Fredy Omar Villamizar Maldonado investigated fourth-grade students in a rural educational institution in the municipality of Chitagá, Norte de Santander, where he observed that one of the factors contributing to physical inactivity is a lack of motivation and disinterest.[34]

In an article published in the Revista Caribeña de Ciencias Sociales, Aida Monserrate Macías Alvia and collaborators point out as factors of physical inactivity the overpopulation, the increase of poverty, the increase of criminality, the high density of traffic, the poor quality of the air In and the inexistence of parks, sidewalks and sports and recreational facilities; environmental factors that discourage physical activity created by urbanization. In addition, the objective of this project was to determine the prevalence of sedentary lifestyle and obesity among adolescents in the Sector Los Perales, Canton San Vicente, in the Province of Manabí. The results obtained in the survey showed that most of the adolescents have no knowledge about sedentary lifestyles and obesity and that they tend to be obese due to an imbalance in the consumption of caloric food, as well as spending the most time without physical sports activities.[35] Results that are similar to those of the present research.

CONCLUSIONS

The sedentary lifestyle in Clinic 138 is increasing every year, with a predominance in the female sex and among the elderly, according to nutritional evaluations of overweight and retired individuals with occupational dedication. The personal pathological antecedents found are in correspondence with chronic diseases for which a sedentary lifestyle is a risk factor. According to the Pérez-Rojas-García test, the clinic's population is predominantly severely sedentary. Disinterest in physical exercise was a frequently identified risk factor in the research. Lack of physical activity is a global health risk and a widespread, rapidly increasing problem in both developed and developing countries. To achieve the best results in preventing chronic diseases, practical strategies and policies must be implemented to fully recognize the fundamental role of physical activity as a risk marker for these conditions.

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