


Physical activities and contributions to the prevention of chronic non-communicable diseases

 <https://doi.org/10.56238/sevned2024.007-087>

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ABSTRACT

The objective of this research was to analyze the contributions of physical activities to the prevention of chronic non-communicable diseases. The study adopted an integrative review approach, using Google Scholar and Scielo databases with specific search criteria. Brazilian scientific articles published between 2022 and 2023 were selected and submitted to an analysis of titles and abstracts followed by a thorough reading to identify and synthesize the relevant results. As a result, the relevance of regular physical activity in the prevention and control of chronic non-communicable diseases (NCDs) was verified. Both aerobic and

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anaerobic activities are highlighted as key in reducing the risk factors associated with these conditions. The benefits of physical activity include improvements in cardiovascular and respiratory capacity, as well as reduced risk of various chronic conditions such as obesity, type 2 diabetes, cardiovascular disease, and cancer, contributing to improved quality of life and mental well-being. A significant finding is the observation that risk factors tend to increase when physical activity is stopped, emphasizing the need for consistency in these healthy habits. The importance of health awareness and education is also highlighted, especially among men, to overcome barriers to the adoption of healthy habits. Ultimately, the studies reinforce the importance of physical activity as a crucial tool in health promotion and prevention of NCDs, underlining the need for health policies and programs that encourage and facilitate its practice for a healthier and more resilient population in the long term.

Keywords: Physical activities, Chronic non-communicable diseases (NCDs), Well-being.



INTRODUCTION

Physical activities play a key role in promoting people's health and well-being. Over the years, several studies have highlighted the numerous benefits that regular physical activity can provide to the body and mind. Since ancient times, physical activity has been valued as an essential part of human life, whether through everyday activities, sports, or specific exercises. In modern times, where sedentary life has become more common due to contemporary lifestyle and the advancement of technology, the importance of physical activities for the prevention of chronic non-communicable diseases has been even more emphasized (CARVALHO; NOGUEIRA, 2016).

A key aspect to consider is that chronic non-communicable diseases (NCDs) represent a significant public health challenge in many countries around the world. These diseases, which include conditions such as cardiovascular disease, type 2 diabetes, high blood pressure, obesity, among others, have become increasingly prevalent, resulting in high rates of morbidity and mortality. In this context, physical activities emerge as an essential preventive strategy, capable of reducing the risks associated with these diseases and improving people's quality of life (PEREIRA et al., 2017).

As Malta et al. (2017) reiterate, chronic non-communicable diseases (NCDs) are long-term and usually slow-progressing conditions that are not caused by infectious agents and are not transmitted from one person to another. NCDs are often associated with modifiable risk factors such as smoking, poor diet, physical inactivity, excessive alcohol consumption, and chronic stress, highlighting the importance of prevention through healthy habits, including regular physical activity.

In view of the above, the objective of this research was to analyze the contributions of physical activities to the prevention of chronic non-communicable diseases. It is hoped that the results of this research will provide theoretical and practical subsidies that can support public policies, health promotion programs and clinical interventions aimed at the prevention and control of these diseases.

METHODOLOGY

To carry out this study, we chose to adopt an integrative review approach, a choice based on the need to synthesize and critically analyze the results of previous research on the implications of physical activities in the prevention of chronic non-communicable diseases. The integrative review provides a comprehensive and systematic analysis of the existing literature, which is essential to understand the current panorama of knowledge on this very relevant topic.

As for the data collection, it was conducted in the databases of Google Scholar and Scielo, using specific keywords and search descriptors combined with the Boolean operators AND and OR, in order to ensure a wide coverage of the pertinent literature. The application of inclusion criteria was



judicious, restricting the selection only to Brazilian scientific articles, written in Portuguese, complete, freely accessible, related to the theme and published between the years 2022 and 2023.

In addition, we excluded other forms of studies, such as theses, conference abstracts, and technical reports, to ensure the quality and relevance of the selected articles. Data analysis was carried out in two distinct stages. In the first stage, we analyzed the titles and abstracts of all articles identified in the initial search, to assess their relevance and compliance with the established inclusion criteria.

Then, in the second stage, the selected articles were submitted to a complete reading, enabling a thorough analysis of their contents and methodologies. At the end of this process, we obtained a final sample composed of 4 scientific articles that met the established criteria, which were submitted to a synthesis and critical analysis of the results found.

RESULTS AND DATA ANALYSIS

Table 1. Selected articles

Authors	Objective	Methodology	Conclusion
Ferreira, Sales and Baptista (2021)	To evaluate the relationship between regular physical exercise and the prevention of chronic non-communicable diseases	Cross-sectional study	Regular physical activity, both aerobic and anaerobic, is essential to reduce modifiable risk factors associated with the development of chronic non-communicable diseases (NCDs). Studies show that regular exercise contributes to the maintenance of muscle and bone mass, reduction of body fat, improvement of cardiorespiratory capacity and reduction of risk factors such as obesity, anxiety, sedentary lifestyle, high cholesterol, stress, smoking and triglycerides. Comparative analyses reveal that risk factors tend to increase or return when individuals stop their physical activities, while those who maintain regular practice experience a significant reduction in these factors. In addition, practitioners' own perception of the benefits of physical activity includes improvements in self-esteem, quality of life, disposition, mood, anxiety control, sleep quality, body perception, and reduction of chronic pain. This highlights the importance of sports practice in the prevention and management of NCDs. Finally, it is concluded that constancy in the regular practice of physical activities is essential for the reduction of modifiable risk factors associated with NCDs. Stopping physical exercise increases the likelihood of recurrence of these risk factors, highlighting the importance of maintaining an active lifestyle for health promotion and disease prevention.
Soares et al. (2023)	Identify the importance of healthy and appropriate habits in the prevention of NCDs	Integrative review	The study highlights the importance of healthy habits in the prevention of chronic non-communicable diseases (NCDs), highlighting that factors such as poor diet, smoking, alcohol consumption, drugs, and sedentary lifestyle are associated with the development of several conditions, such as obesity, type 2 diabetes mellitus, cardiovascular disease, osteoporosis, and cancer. Thus, habits such as healthy eating and regular physical activity have been shown to have significant benefits, including improved cardiovascular and respiratory capacity, reduced risk of developing various diseases, decreased mortality from cardiovascular diseases, prevention of osteoporosis, as well as improvements in the immune system and mental health, promoting increased well-being and self-esteem.
Piza et al. (2020)	OBJECTIVE: To analyze the practice of leisure-time physical activity of people with and without chronic	Cross-sectional observational study	The study highlights that most participants, regardless of whether or not they have chronic non-communicable diseases (NCDs), are inactive in relation to leisure-time physical activity (LPA). Although the distribution of AFL levels is similar between the groups with and without NCDs, the prevalence of physical inactivity is significant. On the other hand, previous research indicates that regular physical



	non-communicable diseases who use the Unified Health System in the city of Ribeirão Preto – São Paulo.		activity is associated with lower chances of developing NCDs. Physical inactivity has been linked to a substantial number of breast cancer deaths in Brazil, emphasizing the importance of promoting physical activity in the prevention and management of chronic diseases. Studies suggest that even a single weekly episode of vigorous physical activity can reduce the risk of chronic disease, highlighting the relevance of encouraging exercise even below recommended levels. Therefore, strategies to promote physical activity are essential to prevent, treat and improve the quality of life and health of people, both those with and without NCDs.
Aragão et al. (2020)	OBJECTIVE: To evaluate the association between the practice of physical activity and lifestyle and the presence of chronic non-communicable diseases (NCDs) in male users of a Basic Health Unit (BHU)	Quantitative research	The regular practice of physical activity proved to be fundamental in the prevention of chronic non-communicable diseases, as evidenced in the present study. This association was observed regardless of other factors such as age, smoking and alcohol consumption, in addition to seeking health services. It is noteworthy that the lack of knowledge about men's health care programs is a modifiable variable, the resolution of which can contribute significantly to health promotion and prevention of these diseases.

Source: Survey data (2024).

The article by Ferreira, Sales, and Baptista (2021) analyzes the importance of regular physical activity in reducing modifiable risk factors related to the development of chronic non-communicable diseases (NCDs). Initially, it should be noted that both aerobic and anaerobic activities play a key role in this process. These activities contribute to several benefits, such as maintaining muscle and bone mass, reducing body fat, and improving cardiorespiratory fitness.

The study-based analysis reveals that regular exercise is associated with a decrease in risk factors such as obesity, anxiety, sedentary lifestyle, high cholesterol, stress, smoking, and triglycerides. This finding underscores the positive impact that physical activity can have on global health and the prevention of a range of chronic conditions.

An important observation is made about the tendency of risk factors to increase or return when individuals stop their physical activities. Conversely, those who maintain a regular practice experience a significant reduction in these factors. This highlights the need for consistency in exercise practice to maintain the benefits achieved and prevent the resurgence of health risks.

In addition to the physical aspects, the text also addresses the perception of the practitioners themselves about the benefits of physical activity. This perception includes improvements in self-esteem, quality of life, disposition, mood, anxiety control, sleep quality, body perception, and a decrease in chronic pain. These subjective aspects reinforce the importance of physical activity not only for physical health, but also for mental and emotional well-being.

Ultimately, the text concludes by emphasizing the essentiality of regular physical activity in reducing modifiable risk factors associated with NCDs. It is noteworthy that the interruption of these exercises increases the likelihood of reappearance of these risk factors, highlighting the importance of maintaining an active lifestyle for health promotion and disease prevention. This conclusion



reinforces the text's central message about the continued relevance of physical activity in maintaining health and well-being.

The study conducted by Soares et al. (2023) emphasizes the importance of healthy habits in the prevention of chronic non-communicable diseases (NCDs). It is noteworthy that factors such as poor diet, smoking, alcohol consumption, drugs, and sedentary lifestyle are directly associated with the development of several chronic conditions, including obesity, type 2 diabetes mellitus, cardiovascular disease, osteoporosis, and cancer.

The results of the study indicate that the adoption of healthy habits, such as a balanced diet and regular physical activity, provides significant health benefits. These benefits include improving cardiovascular and respiratory capacity, reducing the risk of developing various chronic diseases, decreasing mortality from cardiovascular diseases, and preventing osteoporosis.

In addition, the study highlights that the adoption of these healthy habits is also associated with improvements in the immune system and mental health, thus promoting an increase in people's well-being and self-esteem. These results reinforce the importance of promoting a healthy lifestyle as a key strategy in the prevention and control of chronic non-communicable diseases.

Authors such as Piza et al. (2020) highlight the prevalence of physical inactivity among participants, regardless of the presence or absence of chronic non-communicable diseases (NCDs), especially with regard to the practice of leisure-time physical activity (LPA). Although the distribution of AFL levels is similar between the groups with and without NCDs, most participants are considered inactive, indicating a significant concern with a sedentary lifestyle.

However, previous research highlights that regular physical activity is inversely related to the development of NCDs. Physical inactivity has been associated with a considerable number of breast cancer deaths in Brazil, emphasizing the crucial importance of promoting physical activity in the prevention and management of chronic diseases.

The study also points out that even a single weekly episode of vigorous physical activity can reduce the risk of developing chronic diseases, which highlights the relevance of encouraging exercise, even if below recommended levels. Therefore, strategies to promote physical activity are considered essential not only to prevent the development of NCDs, but also to treat them and improve the quality of life and health of people affected by these conditions, both those who already have NCDs and those who do not.

Aragão et al. (2020) highlight the crucial importance of regular physical activity in the prevention of chronic non-communicable diseases (NCDs), as observed in their findings. This positive association was identified regardless of other risk factors, such as age, smoking, and alcohol consumption, as well as seeking health services.



A relevant point highlighted in the study is the lack of knowledge about men's health care programs, which is considered a modifiable variable. Resolving this lack of knowledge can have a significant impact on promoting men's health and preventing NCDs. This underscores the importance of educational and awareness programs focused on men's health, aimed at improving access to and adherence to healthy lifestyle habits, including regular physical activity.

FINAL THOUGHTS

The reviewed studies provide an understanding of the importance of regular physical activity in the prevention and control of chronic non-communicable diseases (NCDs). The analysis conducted by different authors highlights that both aerobic and anaerobic activities play a key role in reducing modifiable risk factors associated with the development of these diseases.

The benefits of physical activity are vast, ranging from improving cardiovascular and respiratory capacity to reducing the risk of a variety of chronic conditions such as obesity, type 2 diabetes, cardiovascular disease, and even cancer. In addition, regular exercise has been shown to be associated with improved quality of life, mental well-being, and self-esteem of practitioners.

A significant finding present in the studies is the tendency of risk factors to increase or return when physical activity is stopped, emphasizing the importance of consistency in maintaining these healthy habits. Therefore, the results highlight the need to promote effective strategies to encourage and facilitate adherence to physical activity in all age groups and population groups.

In addition, the studies also highlight the importance of health awareness and education, especially among men, where a lack of knowledge about health care programs can represent a significant barrier to the adoption of healthy habits.

Ultimately, the findings of these studies emphasize the essentiality of physical activity as a key tool in health promotion and the prevention of chronic non-communicable diseases. The implementation of public policies and health programs that encourage and facilitate the regular practice of physical activity is crucial to ensure a healthier and more resilient population in the long term.



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