

IMPORTANCE OF PHYSICAL ACTIVITY AND ITS IMPACT ON THE CARDIOVASCULAR PART

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Abstract

A documentary review was carried out on the production and publication of research papers related to the study of the variables Radio Media and Social Networks. The purpose of the bibliometric analysis proposed in this document was to know the main characteristics of the volume of publications registered in the Scopus database during the period 2017-2022. The information provided by this platform was organized through graphs and figures categorizing the information by the Year of Publication, Country of Origin, Area of Knowledge and Type of Publication. Once these characteristics have been described, the position of different authors on the proposed theme is referenced through a qualitative analysis. Among the main findings made through this research, it is found that India with 15 publications, was the country with the highest scientific production registered on behalf of authors affiliated with institutions of that nation. The Area of Knowledge that made the greatest contribution to the construction of bibliographic material referring to the study of impact headlines in the Radio Media and their Social Networks was Computer Science with 32 published documents, and the Type of Publication that was most used during the period indicated above was the Journal Article that represents 55% of the total scientific production.

Keywords: Impact Headlines, Radio Media, Social Networks.

I. Introduction

Several authors express writings that allow us to know a little more about the field of Cardiology along with physical and sports activities. It is for this reason that the Editorial Committee of the Spanish Society of Cardiology has considered the publication of a monograph on cardiac rehabilitation (CR). These programs, initially consist of physical exercise training (walking, horseback riding) and dietary guidelines, in 1553 the Spanish doctor Cristóbal Méndez, published in Jaén a book on the excellences of physical exercise for health. The WHO in its Two bulletins in the sixties of the last century, advised the implementation of these programs; a later one, from 1993.

Physical training is still fundamental in CR, as shown by various current scientific studies.

Perfect knowledge and control of the negative psychological factors present in coronary patients and probably reduce the incidence of sudden death.

The World Health Organization (WHO) defines physical activity as all movements that are part of daily life, including work, recreation, exercise and sports. It is necessary for the promotion and preservation of health.

The better therapeutic management of cardiopaths has led to mortality occurring later, but in many cases the deterioration of the patient at the cardiological, physical and psychic level is very severe. It has been necessary to implement Cardiac Rehabilitation Programs to improve the quality of life of these patients, achieving in many cases to act in a very positive way on the prognosis. Many cardiologists believe that

implementing these programs can be very expensive. A perfect planning of them and the economic situations of the countries or regions will allow their development without major problems.

Scientific novelty: The theoretical conception of the model for the design of a program of physical activities from a materialistic dialectical approach, in whose structure the practical component is considered as an element of self-regulation, self-control and self-monitoring of cardiovascular performance.

Problem statement

The problematic situation referred to allows the approach of the following: Scientific problem: How to guide athletes to strategically project the direction of the training process and its impact on the cardiovascular part?

- Current indications and protocols.
- Current knowledge about the effects of physical training on individuals.
- Comprehensive cardiovascular assessment methods and their importance
- Other actions in cardiac rehabilitation: Specialized Smoking Unit
- Practical management of obesity in cardiovascular disease
- Cardiac rehabilitation in patients with ventricular dysfunction
- Material and human needs in cardiac rehabilitation programs.

Ramos, 2002. He states that the heart is one of the organs in which the repercussions of exercise can best be observed. A physical activity of low intensity and long duration (120-140 beats / minute) increases the volume of the cavities (there is more blood in the atria and ventricles) and the

walls (myocardium) become thicker; Thanks to this, muscle mass and cardiac contractibility suffer an increase, which causes it to send blood more strongly to the circulatory system.

These improvements due to physical activity are reflected in an increase in pumping efficiency, which causes a decrease in resting heart rate. That is, with a lower number of beats the same volume of blood is expelled, and the heart performs a more comfortable job (a person has fewer beats per minute when he is trained, than when he is not).

2. General objective

Analyze from a bibliometric and bibliographic perspective, the production of research papers on the variables Physical Activity, Cardiovascular System registered in Scopus during the period 2017-2022.

3. Methodology

Quantitative analysis of the information provided by Scopus is carried out under a bibliometric approach on the scientific production referring to the study of the variables Physical Activity, Cardiovascular System. Likewise, it is analyzed from a qualitative perspective, examples of some research works published in the area of study indicated above, from a bibliographic approach to describe the position of different authors regarding the proposed topic.

The search is carried out through the tool provided by Scopus and parameters referenced in Figure 1 are established.

3.1 Methodological design

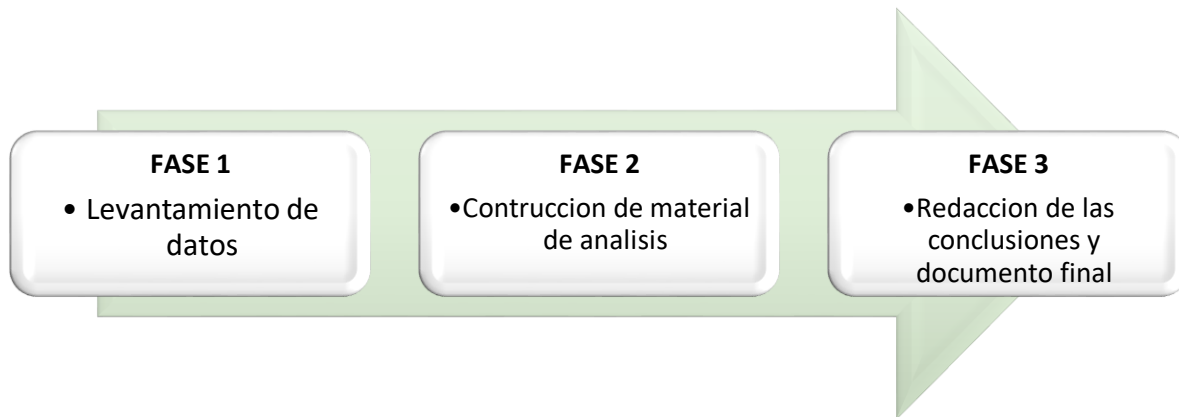


Figure 2. Methodological design

Source: Authors.

3.1.1 Phase 1: Data collection

Data collection is carried out through the Search tool on the Scopus website, through which a total of 430 publications are identified. For this purpose, search filters were established consisting of:

TITLE-ABS-KEY (physical AND activity, AND cardiovascular AND system) AND (LIMIT-TO (PUBYEAR , 2022) OR LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017)) AND (LIMIT-TO (AFFILCOUNTRY , "Brazil") OR LIMIT-TO (AFFILCOUNTRY , "Colombia") OR LIMIT-TO (AFFILCOUNTRY , "Mexico") OR LIMIT-TO (AFFILCOUNTRY , "Chile") OR LIMIT-TO (AFFILCOUNTRY , "Argentina") OR LIMIT-TO (AFFILCOUNTRY , "Uruguay") OR LIMIT-TO (AFFILCOUNTRY , "Peru") OR LIMIT-TO (AFFILCOUNTRY , "Venezuela") OR LIMIT-TO (AFFILCOUNTRY , "Costa Rica") OR LIMIT-TO (AFFILCOUNTRY , "Dominican Republic") OR LIMIT-TO (AFFILCOUNTRY , "Cuba") OR LIMIT-TO (AFFILCOUNTRY , "Panama") OR LIMIT-TO (AFFILCOUNTRY , "Paraguay") OR LIMIT-TO (AFFILCOUNTRY , "Haiti") OR LIMIT-TO (AFFILCOUNTRY , "Honduras") OR LIMIT-TO (AFFILCOUNTRY , "Puerto Rico"))

- ✓ Published documents whose study variables are related to the study variables Physical Activity, Cardiovascular System
- ✓ Limited to Latin American countries.
- ✓ Without distinction of area of knowledge.
- ✓ Without distinction of type of publication.

3.1.2 Phase 2: Construction of analytical material

The information identified in the previous phase is organized. The classification will be made by means of graphs, figures and tables from data provided by Scopus.

- ✓ Co-occurrence of Words.
- ✓ Year of publication
- ✓ Country of origin of the publication.
- ✓ Area of knowledge.
- ✓ Type of Publication

3.1.3 Phase 3: Drafting of conclusions and outcome document

After the analysis carried out in the previous phase, we proceed to the drafting of the conclusions and preparation of the final document.

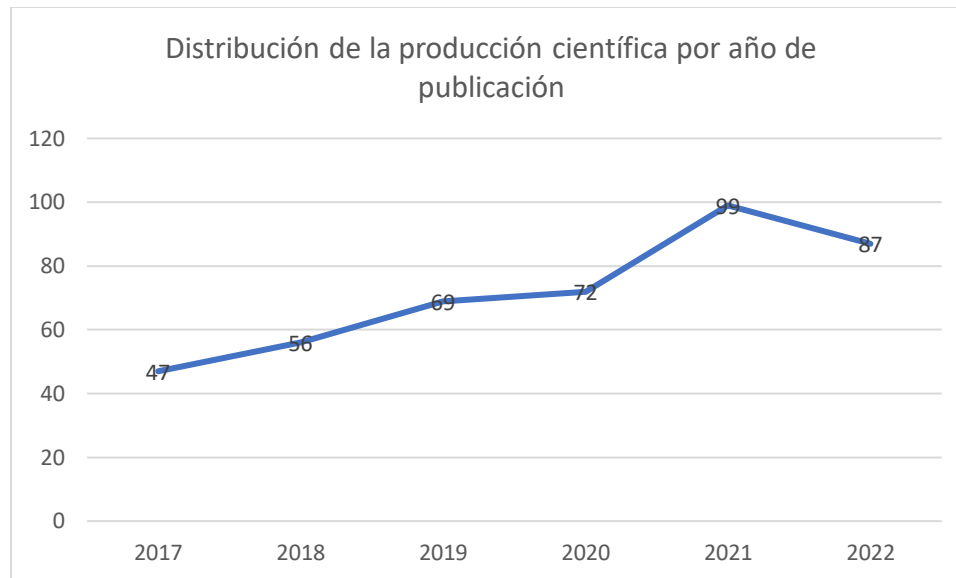


Figure 3. Distribution of scientific production by year of publication.

Source: Own elaboration (2023); based on data provided by Scopus.

The volume of scientific production related to the study of Physical Activity and diseases in the cardiovascular system, is characterized by a significant number of works published in high impact journals indexed in Scopus, taking into account that the geographical delimitation was carried out at the Latin American level. Among the main characteristics of this, is the number of publications registered annually, for the purposes of this research, the indexed products during the period 2017-2022 are taken into account, being the year 2021 the period in which the largest number of publications was achieved with a total of 99 documents, secondly, the year 2022 with 87 and 2020 with 72 publications. It is of vital importance to highlight how the growth in the number of publications registered year after year, grows

progressively, which allows us to infer that the scientific community has managed to encourage interest in the evaluation of cardiovascular conditions in people and how physical activity manages to reduce the risks associated with diseases in this system.

4.3 Distribution of scientific production by country of origin.

Figure 4 shows how scientific production is distributed according to the nationality of the authors.

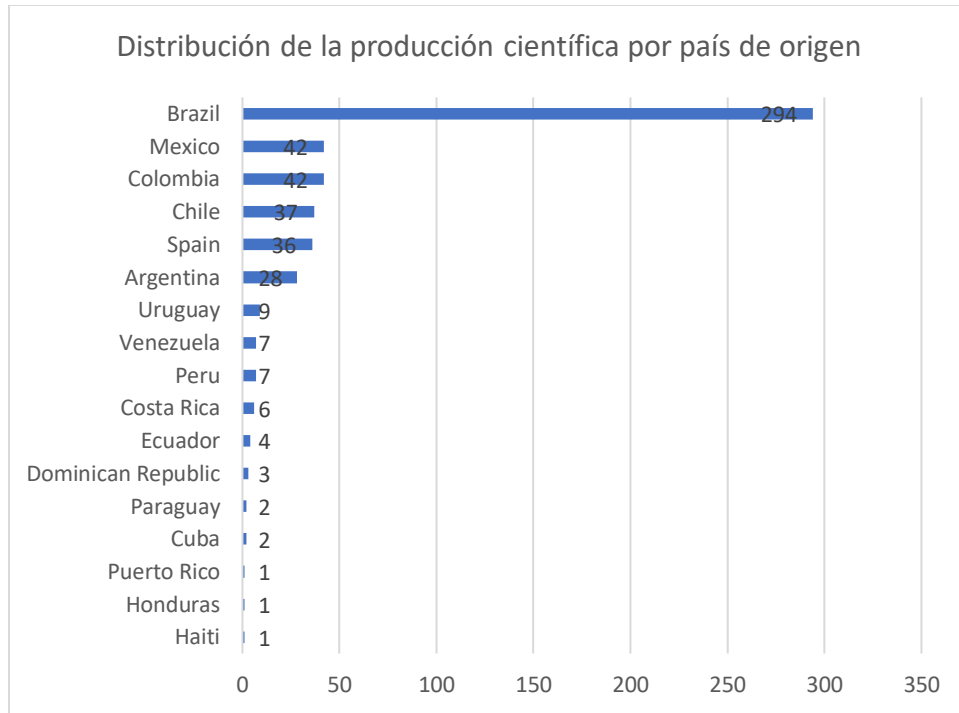


Figure 4. Distribution of scientific production by country of origin.

Source: Own elaboration (2023); based on data provided by Scopus.

Brazil was the Latin American country with the highest number of publications registered in Scopus during the period 2017-2022 with a total of 294 documents referring to the study of the importance of physical activity and its impact on the cardiovascular system with a wide difference in relation to the second place shared between Mexico and Colombia with 42 publications each, followed by Chile with 37 documents. From the above, the remarkable interest on the part of researchers affiliated with institutions in Brazil stands out, in generating new knowledge about the study of the reduction of risk factors in cardiovascular complications, not only based on physical activity, but also on improving eating habits and behaviors harmful to health such as smoking, alcoholism, psychosocial conditions,

among others, which allows the promotion and early prevention of diseases associated with the cardiovascular system. It is even possible to affirm that, through scientific research on the subject proposed by this article, public health policies that promote self-care and early detection of risks associated with these pathologies are also based.

4.4 Distribution of scientific production by area of knowledge

Next, it is shown in Figure 5, how the production of scientific publications is distributed according to the area of knowledge through which the different research methodologies are executed.

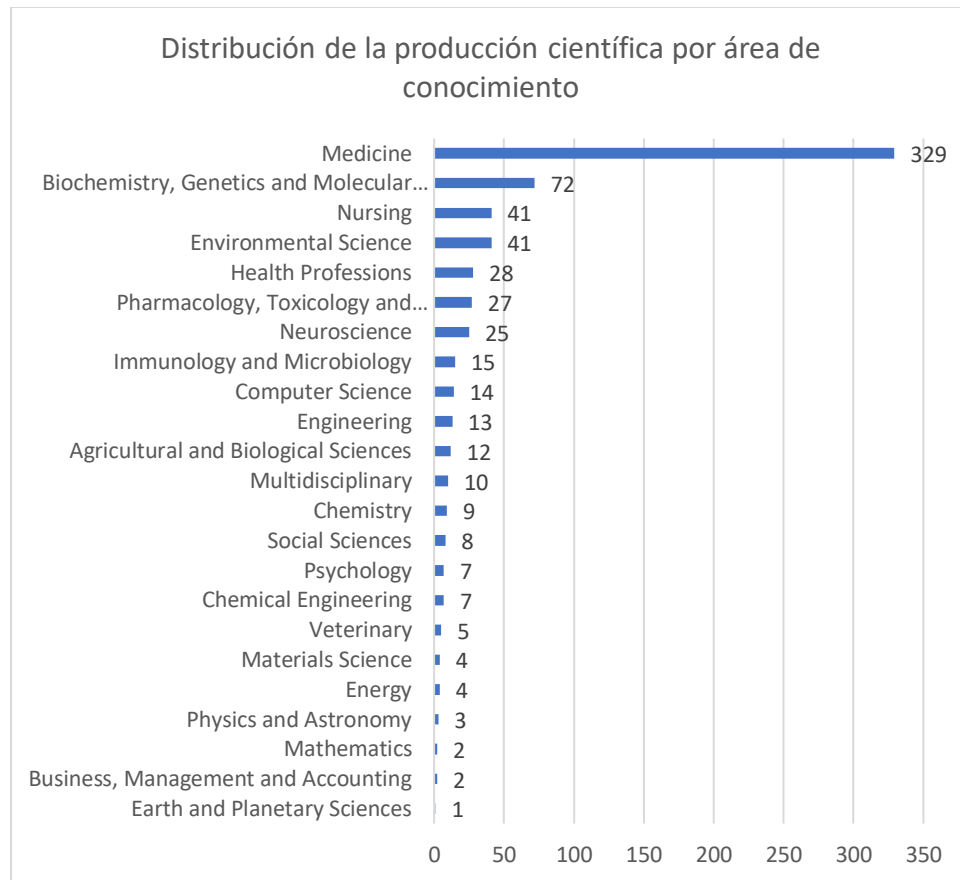


Figure 5. Distribution of scientific production by area of knowledge.

Source: Own elaboration (2023); based on data provided by Scopus.

Due to the very nature of the study, the area of knowledge with the highest number of publications registered in Scopus was Medicine with a total of 329 documents based on the implications on health and cardiovascular risks of high, medium or low levels of physical activity and their impact on the reduction of these risk factors. Secondly, Biochemistry, Genetics and Molecular Biology with a total of 72 publications, understanding that at the genetic level there are also factors in terms of predisposition that can increase the possibility of suffering from cardiovascular disease. Nursing and Environmental Sciences rank third with 41 documents indexed in Scopus. It is necessary to emphasize that thanks to multidisciplinary it is

possible that the same article is counted as production to two or more areas of knowledge, which enriches the generation of new theories that increasingly cover different health and living conditions of patients diagnosed with cardiovascular disease.

4.5 Type of publication

Figure 6 shows how the bibliography production is distributed according to the type of publication chosen by the authors

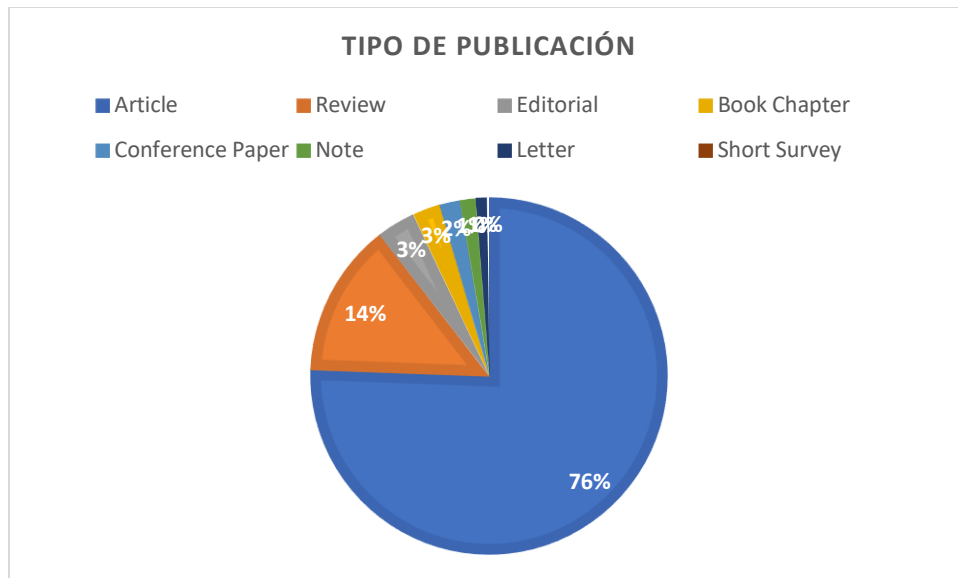


Figure 6. Type of publication

Source: Own elaboration (2023); based on data provided by Scopus.

76% of the scientific production registered in Scopus during the period 2017-2022 related to the impact of Physical Activity and the Cardiovascular part, corresponds to Journal Articles, followed by Reviews with 14%, Publishers with 3%, the same percentage as Book Chapters. On the other hand, Conference Articles represent 2% of the publications identified and analyzed in this document.

5. Final considerations

Within the bibliometric analysis carried out on scientific production, it is possible to conclude that within the Latin American community, Brazil was the country with the highest number of publications, leading the studies of the impact of physical activity on the reduction of cardiovascular risks, with a total of 294 documents indexed in Scopus during the period 2017-2022, being the year 2021 with 99 publications, the year in which the largest number of registrations in said database was carried out. The area of knowledge with the greatest influence on the execution of research projects was Medicine, with a total of 329 publications, of which it was possible to highlight that the nature of the measures to be used in the

importance of physical activities and their impact on the cardiovascular part is necessary to include in these programs, particularly in countries, cities or areas of limited resources, some of its characteristics:

- ✓ Implement a program that is feasible to all participants in the region in question, using the minimum necessary resources existing in the community.
- ✓ All professionals and other health workers and the general population should be aware of the need and its benefits.
- ✓ Inclusion in the curriculum of professionals, as well as through the use of mass media, in that of the general population.
- ✓ The characteristics of the program must be related to the possibilities and resources of each community; It should be evaluated periodically seeking updating and improvement, as well as correcting probable deficiencies.
- ✓ Physical activities should be integrated into the health and social security systems of each country or region.

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