175 - ANALYSIS OF EPIDEMIOLOGICAL STUDIES IN PHYSICAL ACTIVITY IN NORTHEASTERN BRAZIL

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1. INTRODUCTION

The increase of chronic noncommunicable diseases (NCD), a phenomenon associated with the development of a sedentary lifestyle that characterizes modern cities, has been a major concern in public health (FETER, et al., 2013).

In the field of physical activity, the international literature related to the epidemiology field is showing rapid growth, especially in recent decades, while in Brazil, this production was started later. In this context, changes in morbidity and mortality profiles began the era epidemiological NCDs, which led to the emergence of several epidemiological studies linking physical activity as a means of promoting health.

Sedentary lifestyle is the main risk factor for this association, which has a high prevalence in several countries, including Brazil, where epidemiological studies indicate that a large portion of the population does not meet current recommendations for physical activity. Given this situation, the World Health Organization included physical activity in the global public health agenda, launching the Power Global Strategy, Physical Activity and Health (BUSS; CZERESNIA, 2003).

In any historical moment the physical activity was so present in the public health agenda and in academic debate in the health field as in recent years. However, many challenges, especially as regards the increase in the scientific literature and methodology of the studies are indicated.

The analysis of the domains of physical activity following the trend of the international literature puts the pleasure as the most frequently investigated area. However, there is growing interest in physical activities as a means of travel, work and domestic activities, taken separately or forming an overall score of physical activities.

Currently, there is a growth of research on physical activity in Brazil, however, are clear regional differences observed in the publications, and most studies are conducted in the Southeast and South (HALLAL et al., 2007).

The lack of data in other regions is worrying, because the physical activity levels and associated factors may vary according to geographic location, limiting generalizability of research results. Worryingly, for example, the scarcity of data from the Center-West and North, which is also observed in other areas of knowledge such as the Northeast.

The growth of research on physical activity in Brazil, especially after the beginning of the twenty-first century is justified by the increased number of researchers and research groups in Physical Activity and Health (SIQUEIRA; AZEVEDO, 2007).

It is important to note that the increase in scientific production in physical activity and health in Brazil, from 2000, coinciding with the inclusion of physical education in healthcare. Another aspect to be considered is that the inclusion of physical education professionals in post-graduate courses in public health and related areas have also grown in recent years.

Even if the number of published articles is only one of the wheels of scientific advance, this finding makes it possible, in a way, argue that the debate in the area gradually conquered its space in the national health agenda.

The inclusion of physical education while health promoted a series of challenges for teachers and researchers, to establish parameters for the development of actions to improve the quality of life of individuals and populations, from maintaining or increasing practice physical activity at the population level.

The spread of insertion strategies and promotion of physical activity by the Ministry of Health; increased access to public higher education, the expansion of universities and opening of new undergraduate / graduate in Physical Education; greater integration of physical education teachers in postgraduate courses in epidemiology and public health; and the emergence of post-graduate courses in physical education with lines of research in Physical Activity and Health has influenced on the increase and improvement of scientific literature in Epidemiology of Physical Activity in Brazil and in particular in the Northeast.

2. METHODS

Thus, the present study narrowed to investigate the research on physical activity in the Northeast of Brazil through a literature search that according to Gaya (2008, p.128.):

It is the act of fichar, relate, reference, read, archive, to brief with issues related to research in question. Such research aims to investigate the different scientific contributions on a particular topic, so that the researcher can use it to confirm, confront or enrich their propositions.

Where the author suggests minute script in the process of collecting sources for research development, featuring different stages of this process.

Advances in technology applied to information science and the growth of information resources easier access to scientific production and increased resources for bibliographic research.

The aim of this study was to present the main characteristics and intervention proposals developed in the Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Piauí, Rio Grande do Norte and Sergipe), for studying the epidemiology of physical activity.

For the development of this study, a literature survey was conducted in September and October 2015, in Scielo databases, Medicine® (bases Lilacs and Scielo - http://lilacs.bvsalud.org/). Database of Latin American and Caribbean Health Sciences is a co-operative basis of BIREME system that comprises literature related to the health sciences, published in the countries of the region, starting in 1982. It indexes articles from about 1,300 journals , theses, chapters of theses, books, chapters of books, congress and conference proceedings, technical and scientific reports and governmental publications.

And the method used integrated search and words, allowing a search for words in the data sources used, the words are searched in title fields, summary, topic / subject descriptor and the authors of the articles and documents included in the base data.

For search of articles, the following terms have been used, in Portuguese: "epidemiology"; "physical activity"; "Physical aptitude"; "Inactivity" and "physical education". To narrow the search, only accepted articles that have been performed

only in Brazil. They were used as criteria to characterize the epidemiological studies such as the fact that they have the title, abstract or methodology epidemiological study description (observational or experimental). Recognizing the epidemiological studies such as the study of distribution and determinants of disease or health-related conditions in specific populations (THOMAS; NELSON; SILVERMAN, 2012).

Studies were selected that had its publication in the form of paper, between the years 2010-2015 and who used some sort of health-disease process related to physical activity. They excluded studies that did not assess physical activity as focus or who did not have the abstract or keywords the terms listed above; studies published in Portuguese; studies have not been developed only in states in northeastern Brazil. Review articles, theses and dissertations were not included, despite being within the scope of scientific knowledge of the area. And studies with samples less than 100 people or did not represent a defined population were also excluded, although the sample size does not guarantee representation.

And after analyzing the abstracts, all selected articles were obtained in full and subsequently examined according to established inclusion criteria.

3. RESULTS AND DISCUSSION

Through search procedures were found 35 studies. And after an evaluation process identified 25 articles that met the inclusion criteria. Table 1 describes the studies on physical activity epidemiology of area in northeastern Brazil, published annually.

Table 1. Studies in epidemiology of physical activity in Northeastern Brazil (2010-2015).

Year	% Publications	State	% Publications (2010 - 2015)
2010	16,00	Alagoas	7,69
2011	20,00	Bahia	42,31
2012	8,00	Ceará	7,69
2013	28,00	Maranhão	3,85
2014	20,00	Paraíba	7,69
2015	8,00	Pernambuco	30,77
		Piauí	0,00
		Rio Grande do Norte	0,00
		Sergipe	0,00

Source: survey conducted in December 2015.

Most studies evaluate the physical activity or descriptive transversal way, showing lack of studies with other designs - cohort, case-control and intervention.

Where descriptive studies aim to determine the distribution of disease or health-related conditions, according to the time, place and / or the characteristics of individuals. Ie answer the question: When, where and who gets sick?

And in cross-sectional studies of prevalence or all measurements are performed on a single "moment" does not exist, follow-up of individuals. This type of study is appropriate to describe characteristics of the populations with respect to certain variables and their distribution patterns (Thomas, Nelson and Silverman, 2012).

The productionist logic of articles researched falls within one of the main reasons for this setting, since these works are faster and less expensive as compared to higher monitoring budgets and time of cohort studies and experimental, which may lead to greater difficulty of publishing the studies. And justify the stability in the number of publications in the area, yet the importance of research aimed at obtaining prevalence and / or formulated to investigate the association of physical activity with classic variables (age, gender, education, economic status).

This demonstrates the need for studies focusing on assessment tools and clarify the determinants of physical activity and associated risk factors, mainly coming from the Northeast region and in proposing and developing community trials in order to leverage the discussion issues largely unexplored in the area (PITANGA, 2010).

Studies were found mainly with objectives related to assessing the level of habitual physical activity associated with risk factors (environmental interference) and body composition (excess body fat) (LEAL et al, 2012;. NOBLE; KREBS, 2007).

The work activities were also studied, which in Brazil, the physical activities performed in commuting to work, on the job and in domestic service are more frequent than reports of rich countries, where most of the total physical activity occurs in leisure time, which is also associated with can economical, low-income people or rural characteristics demand a higher energy expenditure in industrial activities, while the biggest economic and resident power in urban areas with higher energy expenditure in leisure activities .

Still, the aims, to establish the prevalence, relative or membership level, Minayo and Minayo-Gómez (2003) point out that the scientific methodology comes to method and considers it as the body of rules and procedures to achieve a goal It is necessary to plan the process of research and explain the types of instruments that are used.

So, with the methods of evaluation and measurement of practice levels of physical activity, the questionnaires were the most used. Although important advantages, such as low cost and speed of data collection, the questionnaires are subjective and retrospective methods, thus more room for error when compared to more objective measures of physical activity level.

The need for an accurate assessment of the variables in epidemiological studies with standardized techniques (objective) that promote consistency in the measures does not occur in most of the research on physical activity due to the use of subjective methods, on the one hand are recommended for large samples as its logistics, on the other, do not have high levels of validity and reproducibility (FLORINDO; HALLAL, 2011).

It is important to note the influence of university expansion (creation of Graduate Programs in Physical Education, with dedicated interface for physical activity and health); appropriate redirection of funds and strengthening of support agencies to research in some northeastern states, the increase in scientific production related to the epidemiology of physical activity.

Regarding the target population, it was observed that adolescents (school) were largely present (n = 9) of the analyzed studies. The fact that the school focus almost all children and adolescents favored the researchers to obtain data from a representative sample of the school population. In addition, studies with population of school age children may expand the investigation into the consequences brought about by changes in lifestyle and the discussion of topics related to the health of schoolchildren. It is known that the lifestyles established in childhood and adolescence tend to persist into adulthood (Oliveira et al., 2007).

The elderly population appeared with the second most searched for in Articles surveyed because they constitute the fastest growing segment in the Brazilian population. And epidemiological studies on the conditions and determinants of health of the elderly, fundamental to subsidize health policies to this population.

Epidemiological population-based studies, ie those investigating elderly community residents, provide this information, but are still rare in Brazil (LIMA-COSTA; BARRETO, 2003).

4. CONCLUSION

The quality of an epidemiological study depends, among other factors, the representativeness of the participants, the quality of information on exposure and disease / condition related to health.

Thus it is concluded that while it is clear the increase in realization in the provision of epidemiological studies on physical activity in the Northeast due primarily to university expansion and development research, more studies are necessary on the long-term effects of physical activity on health more robust methodologies and tools collection to enable the extrapolation of data, whereas methodological limitations make it difficult to compare studies.

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ANALYSIS OF EPIDEMIOLOGICAL STUDIES IN PHYSICAL ACTIVITY IN NORTHEASTERN BRAZIL

ABSTRACT

The epidemiological study as a research tool on the health-disease, is growing, including in the field of physical activity. In Brazil, this production was started later, and currently, there is an evolution of research on physical activity, however, regional differences are observed in the publications, where most studies are conducted in the Southeast and South. The objective was to present the main features and research proposals developed in the Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Piauí, Rio Grande do Norte and Sergipe), in the study of physical activity epidemiology. Literature search in databases Lilacs and Scielo. The following descriptors in Portuguese language being used: "epidemiology"; "physical activity"; "Physical aptitude"; "sedentary lifestyle"; "Risk Factors" and "physical education". To characterize as epidemiological studies should present the title, abstract or methodology epidemiological study description (observational or experimental). Selected studies in the form of paper, between the years 2010-2015 and who used some sort of health-disease process related to physical activity and excluded: studies did not assess physical activity focus; published in Portuguese; that have not been developed only in the states surveyed area and review articles, theses and dissertations. Identified 25 articles that met the inclusion criteria. The results identified 11 articles published in Bahia, eight in Pernambuco, Alagoas and Ceará with two publications, and Paraíba and Maranhão to an article respectively. Among the descriptors found the term "physical activity (motor)" was the most cited, followed by "physical fitness" and "inactivity". Being more surveyed teens (school) and the elderly, the instrument with greater use was the questionnaire (recalls) and between models of epidemiological studies the cross-sectional study (prevalence) was the most used. A regional disparity, however, an increase in the number of scientific publications identified yet.

KEYWORDS: Epidemiology of Physical Activity. Epidemiological study. Northeast. Brazil.

ANALYSE DES ÉTUDES ÉPIDÉMIOLOGIQUES DANS L'ACTIVITÉ PHYSIQUE DANS LE NORD BRÉSIL

RÉSUMÉ

L'étude épidémiologique comme un outil de recherche sur la santé-maladie, est en croissance, y compris dans le domaine de l'activité physique. Au Brésil, cette production a été commencé plus tard, et actuellement, il ya une évolution de la recherche sur l'activité physique, cependant, les différences régionales sont observées dans les publications, où la plupart des études sont menées dans le Sud-Est et du Sud. L'objectif était de présenter le principales caractéristiques et les propositions de recherche développés dans le Nord-Est (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Piauí, Rio Grande do Norte et Sergipe), dans l'étude de l'épidémiologie de l'activité physique. La recherche documentaire dans les bases de lilas et Scielo. Les descripteurs suivants en langue portugaise utilisés: «épidémiologie»; «L'activité physique"; «La forme physique"; "Inactivité"; «Facteurs de risque» et «éducation physique». Pour caractériser que des études épidémiologiques doivent présenter le titre, le résumé ou la méthodologie épidémiologique description de l'étude (observation ou expérimentale). Études

sélectionnées sous la forme de papier, entre les années 2010-2015 et qui ont utilisé une sorte de processus santé-maladie liées à l'activité physique et exclues: aucune étude n'a évalué sur l'activité physique; publié en portugais; qui n'a pas été développé seulement dans les Etats interrogés région et d'examen des articles, des thèses et mémoires. Identifié 25 articles qui répondaient aux critères d'inclusion. Les résultats ont identifié 11 articles publiés dans Bahia, huit en Pernambuco, Alagoas et de Ceará avec deux publications, et Paraíba et Maranhão à un article respectivement. Parmi les descripteurs trouvé le terme «activité physique (moteur)" était le plus cité, suivi de "condition physique" et "l'inactivité". Être adolescents interrogés (plus de scolaires) et les personnes âgées, l'instrument avec une plus grande utilisation était le questionnaire (rappelle) et entre les modèles d'études épidémiologiques l'étude transversale (prévalence) est le plus utilisé. Une disparité régionale, cependant, une augmentation du nombre de publications scientifiques encore été identifié.

MOTS-CLÉS: Épidémiologie de l'activité physique. Étude épidémiologique. Nord-Est. Brésil.

ANÁLISIS DE ESTUDIOS EPIDEMIOLÓGICOS EN LA ACTIVIDAD FÍSICA EN EL NORESTE DE BRASIL
RESUMEN

El estudio epidemiológico como herramienta de investigación sobre la salud-enfermedad, es cada vez mayor, incluso en el ámbito de la actividad física. En Brasil, esta producción se inició más tarde, y en la actualidad, hay una evolución de la investigación sobre la actividad física, sin embargo, las diferencias regionales se observan en las publicaciones, donde se realizan la mayoría de los estudios en el Sudeste y Sur. El objetivo fue presentar el características principales y las propuestas de investigación desarrolladas en el Nordeste (Alagoas, Bahía, Ceará, Maranhão, Paraíba, Pernambuco, Piauí, Río Grande do Norte y Sergipe), en el estudio de la epidemiología de la actividad física. Búsqueda bibliográfica en bases de datos Lilacs y Scielo. Los siguientes descriptores en lengua portuguesa se utilizan: "epidemiología"; "actividad física"; "La aptitud física"; "Inactividad"; "Factores de riesgo" y "educación física". Para caracterizar como estudios epidemiológicos deben presentar el título, el resumen o metodología Descripción estudio epidemiológico (observacional o experimental). Los estudios seleccionados en forma de papel, entre los años 2010-2015 y que utilizaron algún tipo de proceso de salud-enfermedad relacionados con la actividad física y excluidos: los estudios no evaluaron el foco de la actividad física; publicado en portugués; que no se han desarrollado sólo en los estados encuestados artículos de área y de revisión, tesis y disertaciones. Identificado 25 artículos que cumplieron con los criterios de inclusión. Los resultados identificaron 11 artículos publicados en Bahía, ocho en Pernambuco, Alagoas y Ceará con dos publicaciones, y Paraíba y Maranhão a un artículo respectivamente. Entre los descriptores encontrado el término "actividad física (motora)" fue el más citado, seguido de "aptitud física" y "inactividad". Siendo adolescentes más encuestados (escuela) y los ancianos, el instrumento con un mayor uso fue el cuestionario (recuerda) y entre los modelos de estudios epidemiológicos del estudio transversal (prevalencia) fue el más utilizado. Una disparidad regional, sin embargo, un aumento en el número de publicaciones científicas aún identificado.

PALABRAS CLAVE: Epidemiología de la Actividad Física. Estudio epidemiológico. Noreste. Brasil.

ANÁLISE DOS ESTUDOS EPIDEMIOLÓGICOS EM ATIVIDADE FÍSICA NO NORDESTE BRASILEIRO
RESUMO

O estudo epidemiológico, enquanto instrumento de pesquisa sobre o processo saúde-doença, vem crescendo, inclusive no campo da atividade física. No Brasil essa produção foi iniciada mais tardiamente, e atualmente, há uma evolução da pesquisa em epidemiologia da atividade física, entretanto, são observadas disparidades regionais nas publicações, onde a maioria dos estudos são realizados nas regiões Sudeste e Sul. Objetivou-se apresentar as principais características e propostas de pesquisas desenvolvidas na região Nordeste (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Piauí, Rio Grande do Norte e Sergipe), no estudo da epidemiologia da atividade física. Pesquisa bibliográfica nas bases de dados Lilacs e Scielo. Sendo utilizados os seguintes descritores, em língua portuguesa: “epidemiologia”; “atividade física”; “aptidão física”; “sedentarismo”; “fatores de risco” e “educação física”. Para caracterizar os estudos como epidemiológicos deveriam apresentar no título, resumo ou metodologia a descrição de estudo epidemiológico (observacionais ou experimentais). Selecionados os estudos em forma de artigo, entre os anos 2010 a 2015 e que utilizaram algum tipo de processo saúde-doença relacionados à atividade física e excluídos: os estudos que não avaliaram a atividade física como foco; publicados em língua estrangeira; que não foram desenvolvidos unicamente em estados da região pesquisada e artigos de revisão, teses e dissertações. Identificados 25 artigos que preencheram os critérios de inclusão. Os resultados identificaram 11 artigos publicados na Bahia, oito em Pernambuco, Alagoas e Ceará com duas publicações, e Paraíba e Maranhão com um artigo respectivamente. Entre os descritores encontrados o termo “atividade física (motora)” foi o mais citado, seguido de “aptidão física” e “sedentarismo”. Sendo mais pesquisados os adolescentes (escolares) e idosos, o instrumento com maior utilização foi o questionário (recordatórios) e entre os modelos de estudos epidemiológicos o estudo transversal (prevalência) foi o mais utilizado. Ainda identificada uma disparidade regional, porém, com aumento no número de produções científicas.

PALAVRAS-CHAVE: Epidemiologia da Atividade Física. Estudo Epidemiológico. Nordeste. Brasil.