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## BRAZILIAN PHYSICAL EDUCATION JOURNALS: ETHICAL AND METHODOLOGICAL ASPECTS OF PUBLICATIONS WITH THE ELDERLY

### PERIÓDICOS BRASILEIROS NA ÁREA DA EDUCAÇÃO FÍSICA: ASPECTOS ÉTICOS E METODOLÓGICOS DAS PUBLICAÇÕES COM A POPULAÇÃO IDOSA

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#### ABSTRACT

The objective of the present study was to analyze ethical and methodological aspects involved in the publishing of studies with the elderly on Brazilian Physical Education journals. It is a narrative review that included national journals ranked as Qualis B1 or over and focused on the Physical Education field. From the seven journals selected, 191 articles were analyzed, which exclusively had senior citizens as participants. It was thus verified that most of the articles reported approval by the institution of origin's Research Ethics Committee and mentioned the Informed Consent Form; most studies used inquiry and testing as data collection techniques. In this way, it was concluded that, on Brazilian Physical Education journals, most published studies involving the elderly address the research's ethical aspects.

**Keywords:** The elderly. Ethics. Methods. Physical Education and Training.

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#### RESUMO

O objetivo do presente estudo foi analisar os aspectos éticos e metodológicos empregados nas publicações de estudos com idosos em revistas da área da Educação Física no Brasil. Trata-se de uma revisão narrativa. Foram incluídas Revistas nacionais classificadas com Qualis B1 ou superior que possuíam foco na área da Educação Física. Das sete Revistas selecionadas, foram analisados 191 artigos, os quais possuíam exclusivamente idosos como participantes. Com isso, verificou-se que a maioria dos artigos relatou a aprovação pelo Comitê de Ética da instituição de origem e fez menção ao Termo de Consentimento Livre e Esclarecido; a maior parte dos estudos utilizou como técnicas de coleta de dados inquirição e testagem. Dessa forma, concluiu-se que as revistas brasileiras da área da Educação Física, as publicações de estudos que envolvem idosos, em sua maioria, apontam os aspectos éticos da pesquisa.

**Palavras-chave:** Idoso. Ética. Métodos. Educação Física e Treinamento.

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#### Introduction

Ethical matters have long been causing debates about research involving human beings. In the 5<sup>th</sup> century, the Hippocratic Oath already reported that medical duties should be fulfilled in a way that was not harmful or unfair to patients. Later, guidelines were created in order to regulate research with human beings, such as the Nuremberg Code and the Declaration of Helsinki<sup>1</sup>. In Brazil, Resolution 196 of 1996<sup>2</sup> stands out as the first national regulatory milestone for research-applied ethics<sup>3</sup>; currently, Resolution 466 of 2012 is in force and all researches involving human beings in the country must comply with its premises<sup>4</sup>.

Among studies with human beings in Brazil, there is a growing number of those conducted with the elderly. As of 2000, there was an increase in the amount of Research Groups in the gerontology filed certified by the National Council for Scientific and Technological Development [*Conselho Nacional de Desenvolvimento Científico e Tecnológico*] (CNPq)<sup>5</sup>. Balbé et al.<sup>6</sup> corroborate this finding, confirming the growth in scientific production about physical activity and ageing in Brazilian Physical Education graduate programs as of 2000. Some factors that may have caused this propulsion in studies

with seniors include the ageing of the Brazilian population and all medical, psychosocial and economic problems that come with it<sup>7</sup>.

Prado et al.<sup>8</sup> state that research related to old age, to senior citizens and to the ageing process is predominantly conducted in the field of Health Sciences. According to classification by the Coordination for the Improvement of Higher Education Personnel [*Coordenação de Aperfeiçoamento de Pessoal de Nível Superior*] (CAPES), Physical Education is a sub-area of Health Sciences and therefore contributes significantly to production of knowledge involving the elderly.

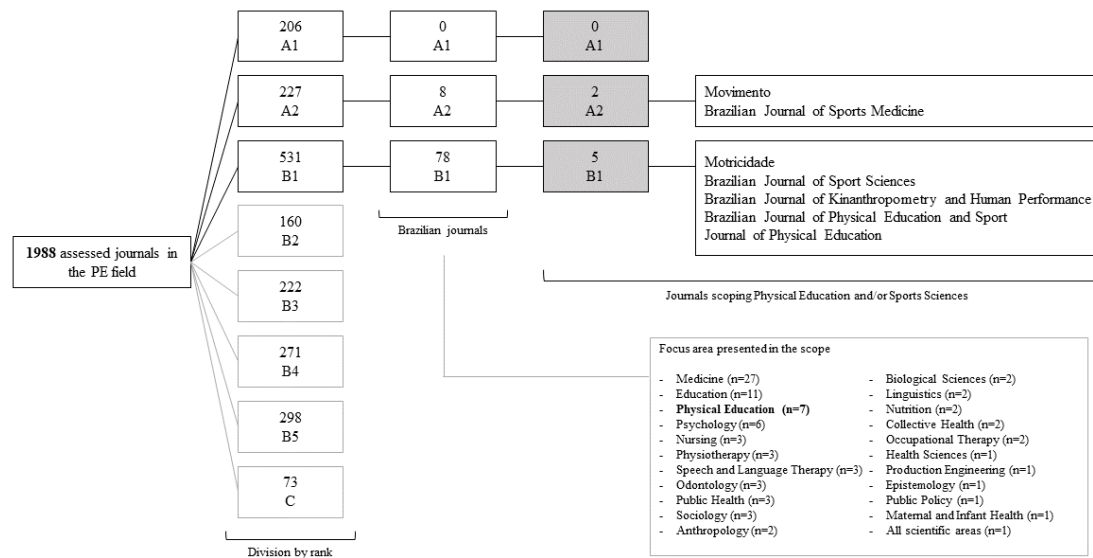
Dias<sup>9</sup> stresses that Physical Education professionals are engaged with the investigation of man and therefore should follow rules that respect the values surrounding the dignity of human condition, thus becoming representatives of bioethical foundations face researches that have human beings as subjects. In contrast, although Silva<sup>10</sup> reinforces the importance of debate and bioethical practice in the Physical Education field, the author argues that this discussion is not yet effective in this area.

As for ethics in research involving older individuals, the Statute of the Elderly<sup>11</sup> ensures this population's right to the inviolability of their physical, psychological and moral integrity, comprehending the preservation of their image, identity, autonomy, values, ideas and beliefs, of their spaces and personal objects. It further states that it is everyone's duty to ensure the elderly's dignity, protecting them from any inhuman, violent, terrorizing, humiliating or embarrassing treatment<sup>11</sup>. The rights of seniors and the duties of society meet the basic principles of bioethics: recognition and affirmation of dignity, freedom, autonomy, beneficence, nonmaleficence, justice and equity<sup>4</sup>.

In this way, the present study becomes relevant with the growing number of studies involving the elderly in the Physical Education field. Thus, debating ethical aspects in researches of this nature can ensure the physical and psychological security of those involved. Nonetheless, the analysis of ethical matters in research cannot be detached from the analysis of its scientificity; therefore, possible ethical implications derived from a certain methodological choice must be analyzed<sup>3</sup>. For Physical Education, which possesses a range of invasive instruments, this discussion is fundamental for the future of research and development of new tools. Therefore, the objective of the present study was to analyze ethical and methodological aspects employed in published studies with the elderly on Brazilian Physical Education journals.

## Methods

The present study is characterized as a bibliographic review. It included national journals ranked as Qualis B1 (Qualis is a ranking system of the Coordination for the Improvement of Higher Education Personnel – CAPES) or over. Only national journals were selected because Brazil has its own legislation for research involving human beings set forth by means of Resolution 466 of 2012. Moreover, the journals should be focused on Physical Education and/or Sports Sciences in their scope in order to allow the identification of ethical processes in this specific area. The journals were selected by rank on the Qualis-CAPES Physical Education list (area 21) available in July 2017; the journals selection process is displayed in Figure 1.



**Figure 1.** Selection process of the journals included in the study

Source: The authors

Taken from the seven selected journals, the articles were analyzed as per the following inclusion criteria: original articles with seniors only (people at the age of 60 or older) as participants in the study/sample, published in Portuguese or English in the last nine years (period from 2009 to 2017), as this period is considered recent for scientific production. The study excluded articles published as special/additional issues, letters to the editor, viewpoints and with secondary data (reviews), and articles with unavailable full version.

In accordance with these criteria, the selected articles' titles were analyzed first. Then, the abstracts of remaining studies were assessed and, finally, the relevance of full articles were considered. The entire process of reading and assessment of articles was carried out by two raters independently, and disagreements between reviewers were solved by comprehensive discussions until consensus was reached. In this way, 191 articles were selected.

Ethical aspects were separated as to the following variables: mention of approval by the REC; mention of use of ICF, and mention of guarantee of confidentiality. Methodological aspects, in their turn, were analyzed based on the following themes: data collection techniques; participants' gender; and sample characteristics and size.

Data were extracted through the preparation of standardized forms for notes on major information of interest that were later checked by the reviewers for data presentation in the study.

Collected information was stored on an Excel<sup>®</sup> spreadsheet and then exported for analyses of frequency, central tendency and dispersion on IBM SPSS<sup>®</sup> for Windows, version 20.0.

## Results

Out of the 191 articles that composed the present study, it was found that, among the national Physical Education journals, the journal that most frequently publishes studies

involving the elderly population is the Brazilian Journal of Kinanthropometry and Human Performance (35%) (Table 1).

**Table 1.** Number of articles with senior citizens by selected brazilian Physical Education journals (n=191)

| Journals |   | f  | %  |
|----------|---|----|----|
| A2       | Movimento   | 5  | 3  |
|          | Brazilian Journal of Sports Medicine                        | 43 | 23 |
| B1       | Motricidade   | 25 | 13 |
|          | Brazilian Journal of Sport Sciences                         | 10 | 5  |
|          | Brazilian Journal of Kinanthropometry and Human Performance | 66 | 35 |
|          | Brazilian Journal of Physical Education and Sport           | 17 | 9  |
|          | Journal of Physical Education                               | 25 | 13 |

**Legend:** f = simple frequency; % = relative frequency

**Source:** The authors

Concerning the analysis conducted during the reading of the articles' full versions, it was observed that most articles reported approval by the REC (93%, n=191) of the institution of origin and mentioned the use of Informed Consent Form (ICF) (75%, n=191) (Table 2). However, many studies did not mention confidentiality (95%, n=191).

**Table 2.** Ethical aspects of articles with the elderly on Brazilian Physical Education journals (n=191)

| Ethical Aspects                         |     |    |
|---|-----|----|
| Mention of approval by the REC          | f   | %  |
| Yes                                     | 178 | 93 |
| No                                      | 13  | 7  |
| Mention of use of ICF                   |     |    |
| Yes                                     | 143 | 75 |
| No                                      | 48  | 25 |
| Mention of guarantee of confidentiality |     |    |
| Yes                                     | 10  | 5  |
| No                                      | 181 | 95 |

**Legend:** f = simple frequency; % = relative frequency; REC = Research Ethics Committee; ICF = Informed Consent Form

**Source:** The authors

With respect to methodological aspects, the median of the sampling size used in the articles was 47 (minimum size of 5 and maximum of 3,265), with 24, 47 and 125 quartiles. Table 3 displays methodological aspects presented in articles with the elderly on brazilian Physical Education journals. It was possible to notice that the most common data collection techniques were inquiry (21%), testing (51%) or both (27%). As for participants' gender, the lowest prevalence was obtained with the participation of men only (2%).

**Table 3.** Methodological aspects presented in articles with the elderly on Brazilian Physical Education journals. (n=191)

| <b>Methodological Aspects</b>     |          |          |
|-----------------------------------|----------|----------|
| <b>Data collection techniques</b> | <b>f</b> | <b>%</b> |
| Observation                       | 1        | 1        |
| Inquiry                           | 40       | 21       |
| Testing                           | 98       | 51       |
| Inquiry and testing               | 52       | 27       |
| <b>Participants' gender</b>       |          |          |
| Male                              | 4        | 2        |
| Female                            | 93       | 49       |
| Both                              | 94       | 49       |
| <b>Sample characteristics*</b>    |          |          |
| None                              | 122      | 64       |
| Long-lived                        | 5        | 3        |
| Exercises or is physically active | 39       | 20       |
| Has Parkinson's disease           | 7        | 4        |
| Has Alzheimer's disease           | 3        | 2        |
| Has hypertension                  | 6        | 3        |
| Fibromyalgia                      | 1        | 1        |
| Has musculoskeletal disease       | 2        | 1        |
| Institutionalized                 | 3        | 2        |
| Has urinary incontinence          | 1        | 1        |
| Obese                             | 2        | 1        |

**Legend:** REC = Research Ethics Committee; ICF = Informed Consent Form; f = simple frequency; % = relative frequency; \* = the same study could address more than one characteristic

**Source:** The authors

## Discussion

The present study found that most of the published articles mentioned approval by the REC and use of ICF. This fact may be related to Resolution 196/96<sup>2</sup>, which was not restricted to the medical field – unlike existing guidelines until then – but rather comprehended all fields of knowledge<sup>12</sup>. As a consequence, Health Sciences journals included specific instructions as to ethical matters in their editorial policies<sup>13</sup>.

Moro et al.<sup>14</sup> concluded in their study that most journals ranked as A1 (100%), A2 (100%) and B1 (52.8%) in the nursing field present ethical instructions from the “instructions to authors” section. From this perspective, it was also verified that 50% of national journals in the medical field ranked as “A” or “I” by the CAPES presented requirement of approval by the REC<sup>15</sup>. Thus, it is clear that, despite an increasing concern from Health Sciences journals, not all of them require authors to explain the ethical procedures adopted in their study. This finding is in line with the present study, which verified that only 7% of the studies mentioned guarantee of confidentiality to research subjects and that some studies did not mention approval by the REC (9%) and use of ICF (22%).

It is worth highlighting the importance of these three aspects, which are preconized by Resolution 196/96<sup>2</sup>. Research registration in a REC and consequent signing of the ICF protect both the researchers and the research subjects. It is of paramount importance that research participants know exactly to which procedures they will be subjected and what their possible consequences are (both positive and negative); this prevents future unfavorable outcomes for participants, researchers and their institutions. Guarantee of confidentiality, though little reported in the present research's studies, should appear in the ICF and presented as of the

first contact with the research subject in order to prevent exposure and consequent psychological or emotional damages. It is the duty of physical education researchers to ensure this guarantee during data collection.

About methodological aspects, most studies used testing techniques, which may bring risks to participants when due caution is not employed. According to Resolution 466/12<sup>4</sup>, researches, including high-risk ones, can be conducted as long as: the higher and the more evident the risks, the greater the caution to minimize them and the greater the protection provided; risks are justified by expected benefits; research participants that happen to suffer any type of damage resulting from their participation in the research are entitled to compensation. Moreover, the Resolution stresses that any research with human beings has risks of different types and levels. That is, regardless of the methods adopted for data collection, the abovementioned premises need to be complied with.

When it comes to the gender of participants in the analyzed study, virtually half of them were conducted with sample containing both genders (49%) or only women (49%), and only 2% of the articles aimed to investigate only male seniors. This result agrees with Resolution 466/12<sup>4</sup>, which mentions equity among bioethical principles. Therefore, it should be pondered whether the equity principle is being employed in Physical Education research with the elderly.

It is a consensus that, about gender, women live longer compared to men<sup>16</sup>. The over-mortality of men at old age is motivated, among other factors, by them failing to seek basic healthcare and thus accessing the health system late for services of medium and high complexity<sup>17</sup>. In this way, Physical Education researchers must produce greater knowledge about this population, searching for alternatives so that this situation is minimized, without restricting this information to women only.

Research with the elderly in Physical Education needs to be broadened, not only in terms of gender. Sampaio<sup>18</sup> problematizes the scientific productivity in CAPES's area 21 (Physical Education area) and emphasizes that "dissonances and diversities need to occupy our journals so that dialogue overcomes 'common place' barriers and excluding vanities". There should therefore be greater reflection on the part of researchers in the area about their roles, not only as researchers but also as health and well-being promoters.

Regarding the participants' characteristics, the present study found researches involving ill, institutionalized and long-lived elderly individuals. These studies require closer bioethical attention, taking into account the possibility of involving people who are more fragile and have difficulties of comprehension. Resolution 466/12 recommends that researches should be developed preferably in individuals with full autonomy<sup>4</sup>, which is not the case of most institutionalized seniors or those with Alzheimer's disease. However, the objective of said studies is in line with the Resolution's remark that research with vulnerable groups can be conducted when the desired information cannot be obtained by means of fully autonomous participants and when the investigation can bring benefits to vulnerable individuals or groups. Both situations seem to happen in the analyzed studies, thus showing that researches with these individuals are being carried out with criterion and bioethical responsibility.

This study presented some limitations. The analysis of articles published as of 2009 and only ranked as B1 or over can limit the extraction of information, not allowing a temporal analysis of ethics evolution with the creation of new norms and resolutions.

## Conclusions

By means of the results presented in this study, it was possible to verify an indissociability of ethical aspects and methodological aspects in national Physical Education publications. It was observed that a big portion, but not all, of the analyzed articles mentioned approval by the REC and use of ICF, and that there was prevalence of studies with female samples and studies that used testing in data collection. It is necessary to broaden discussions about the implications that methodological matters may bring to bioethical aspects, considering the high number of studies using testing as data collection method and the low prevalence of articles mentioning the guarantee of confidentiality. About researchers, they should ponder about equity matters in their studies, expanding their view over those individuals that need their findings most. Future studies should address ethical issues by means of investigations with researchers themselves in order to better analyze this relationship between research, Physical Education and the elderly population.

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Received on Mar, 21, 2017.

Reviewed on Oct, 30, 2017.

Accepted on Dec, 07, 2017.

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