

PUBLICATION RATES OF PAPERS PRESENTED AT THE BRAZILIAN ORTHOPEDIC MEETING

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ABSTRACT

Objective: To quantify the publication rates of the papers presented at the 2007 Brazilian Orthopedics Meeting (Congresso Brasileiro de Ortopedia - CBOT). **Methods:** Evaluation of the proportion of abstracts submitted by the various orthopedic subspecialties and according to the Brazilian states. Then, a Lilacs and PubMed search was performed in order to determine which presentations generated national or international published papers. **Results:** São Paulo and the Southeast region were responsible for the greatest number of presentations at the congress (54.1% and 68.3% respectively). Shoulder and

Elbow were the subspecialty responsible for more presentations (13.8%). Among the 653 studies presented at the congress, 174 (26.6%) were published. Oral presentations obtained a publication rate 3.58 times higher than posters. **Conclusion:** The CBOT publication rate is lower than 30%. Many of the papers presented at the CBOT does not pass the scrutiny of scientific journals and therefore should not be the only source of scientific update of the participants: **Descriptive Epidemiologic.**

Keywords: Scientific and technical publications. Scientific and educational events. Orthopedics.

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INTRODUCTION

Presentations of scientific papers in national and international conferences are an important forum for the dissemination of scientific discoveries in all areas of medicine. The publication of these presentations in a peer reviewed scientific journal represents the completion of a hard work that was thoroughly analyzed.¹ Previous publication demonstrate that a significant number of conference papers are never published. The publication rates among medical specialties range from 2% to 66%.²⁻¹⁰ The Brazilian Society of Orthopedics and Traumatology is responsible for the organization of the Brazilian Congress of Orthopedics and Traumatology (CBOT), held annually, with more than 5000 participants. The area of Orthopedics and Traumatology, like other medical fields, is an area in continuous evolution. A significant portion of Congress consists of the orthopedic community, not linked to academic centers. The CBOT is an important forum for continuing medical education, and various behaviors and opinions presented in this congress are incorporated into clinical practice by the participants. Therefore, it is necessary to evaluate the legitimacy of the scientific papers presented. One way to accomplish this assessment is the analysis

of the rate of papers published in scientific journals, where the acceptance rigor of the works is known to be greater than that required in congresses.¹

Facing this scenario, the objectives of our study were: (1) to assess publication rates of papers presented at the CBOT in 2007, (2) whether there are differences in publication rates among posters and oral presentations, (3) if there are differences in the number of papers presented between the various sub-specialties, and (4) whether there are differences in publication rates between regions in the country.

MATERIALS AND METHODS

Proceedings of the 39th CBOT conducted in 2007 in São Paulo (SP) were used as a database of papers presented at the Congress, being divided into oral presentations, posters and e-posters. In the transcript, the work was divided according to the orthopedic sub-specialty (Arthroscopy, Basic sciences, Spine, Knee, Hand, Shoulder and Elbow, Osteometabolic, Foot and Ankle, Pediatric, and Hip). It was also available the city and state of the service responsible for the presentation. The following data was collected: presentation form, title of the work, first, second and last author, orthopedic sub-specialty and

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hometown. Posters and e-posters were analyzed together due to the low statistical representation of the latter form of presentation (only 39 works).

After collecting these data, we initiated a search for papers in PubMed and Lilacs databases in order to assess the publishing rates. We use the strategy previously described by Bhandari *et al.*⁵ Initially, we conducted a search in Lilacs by the name of the first author of the paper. In case of a positive search, the items found were evaluated by the title, co-authors and summary to determine if the paper found was the same as the work presented at the congress. If the first search was negative, the strategy was repeated with the second and last authors. After searching Lilacs, the same search was performed in PubMed, following the same strategy. Even in cases where Lilacs search was positive, the same search was performed again on PubMed. In case this search was positive, the following data were collected: the database where the work was found, the journal in which the work was published and the year of publication. In works published in more than one journal, the year of publication evaluated was the one of the first publication. In this situation, we conducted a thorough examination to assess the differences between the two articles. The data were presented descriptively using percentages and absolute numbers.

RESULTS

In the 39th CBOT 653 papers were presented, being 286 (43.8 %) in the form of oral presentations and 367 (56.2 %) as a posters. The sub-specialties that account for more presentations were: (Table 1) Shoulder and Elbow (90 works - 13.8 %), knee (82 works - 12.6%) and trauma (70 works - 10.7%). In reviewing the origin of the works, (Table 2) we found the state of São Paulo responsible for the largest number of presentations (353 - 54.1 %), followed by Rio de Janeiro (52 - 8.0 %) and Rio Grande do Sul (43- 6.6 %). Analysis by the geographic regions in Brazil (Figure 1) shows that the Southeast region had the largest number of works (446 - 68.3 %), followed by the South region (101 - 15.5 %) and the Northeast (71 - 10.9 %). After conducting the searches in PubMed and Lilacs databases, we found that 174 works (26.6 %) were published. From the papers published, 143 were found in LILACS and 55 in PubMed. Of the 286 oral presentations, 118 (41 %) were published, and of the 367 posters, 56 (15 %) were published. Oral presentations were 3.58 times more likely to be published. When analyzing the percentage of publications according to Brazilian regions (Table 3) we observe that 29.6 % of the work from the Southeast were published, 27.7 % works from the South, while no work from the North was published. The Southeast region was responsible for 43 (78 %) of the papers published in PubMed, while the South region published seven papers (13 %), the Northeast region four (7 %) and the Midwest one paper (2 %). When evaluating the year of publication of the papers, we found that 22 works were published prior to 2007, and one work was published in 1995 and one in 1999. Most of the work was published between 2008 and 2012. (Figure 2) We found ten articles that appeared in both PubMed and Lilacs because they were published in journals belonging to the two databases. Fourteen papers were found in the two databases in two different journals. After further analysis of these 14 papers, we found that five papers were published in different journals, because they addressed different aspects of the same study, or because they showed a larger sample than the first paper. Nine articles published in different journals (one national and

Table 1. Number of presentations by sub-specialty.

Sub-specialty	Presentations
Arthroscopy	27 (4.1%)
Reconstruction	7 (1.1%)
Spine	69 (10.6%)
Knee	82 (12.6%)
Hand	41 (6.3%)
Shoulder and Elbow	90 (13.8%)
Tumor	56 (8.6%)
Pediatrics	58 (8.9%)
Osteometabolic	11 (1.7%)
Basic science	37 (5.7%)
Hip	36 (5.5%)
Foot and ankle	35 (5.4%)
Orthopedic Trauma	70 (10.7%)
Sports Medicine	34 (5.2%)

Table 2. Number of presentations and publications by state.

State	Presentations	Publications
São Paulo	353 (54.15%)	109 (63%)
Rio de Janeiro	52 (8%)	11 (6.32%)
Rio Grande do Sul	43 (6.6%)	11 (6.32%)
Minas Gerais	37 (5.7%)	12 (6.9%)
Paraná	34 (5.2%)	9 (5.17%)
Bahia	27 (4.1%)	8 (4.6%)
Santa Catarina	24 (3.7%)	8 (4.6%)
Paraíba	17 (2.6%)	0
Ceará	13 (2.0%)	1 (0.57%)
Pernambuco	9 (1.4%)	1 (0.57%)
Distrito Federal	8 (1.2%)	0
Goiás	7 (1.1%)	1 (0.57%)
Espírito Santo	4 (0.6%)	0
Amazonas	3 (0.5%)	0
Sergipe	3 (0.5%)	1 (0.57%)
Mato Grosso do Sul	2 (0.3%)	1 (0.57%)
Rondônia	2 (0.3%)	0
Maranhão	1 (0.2%)	0
Alagoas	1 (0.2%)	0
Roraima	1 (0.2%)	0
Other countries	12 (1.8%)	1 (0.57%)

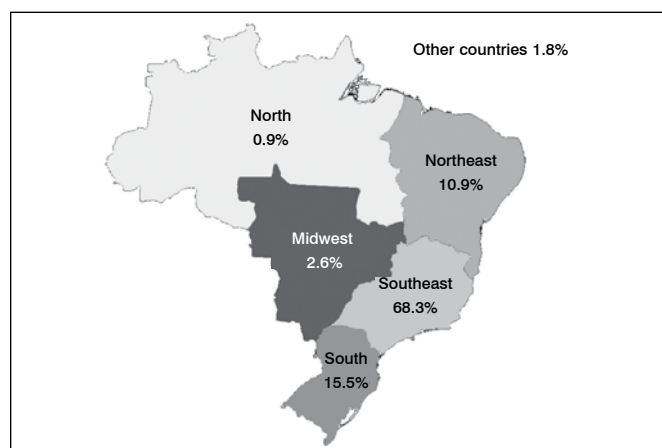


Figure 1. Works presented at the 39th CBOT.

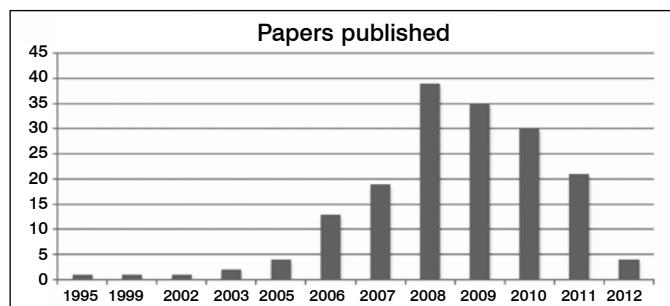
one international) were extremely similar.

DISCUSSION

In this study, we evaluated the rates of publications in scientific journals of the 653 papers presented at the CBOT in 2007. The Southeast region was responsible for the largest amount of work and sub-specialty Shoulder and Elbow had the highest representation. Oral presentations showed a higher rate of publications than posters.

Table 3. Publication rate by region.

Region	Published works
Southeast	132 (75.9%)
South	28 (16.1%)
Northeast	11 (6.3%)
Midwest	02 (1.1%)
North	0
Other countries	1 (0.6%)

**Figure 2.** Works presented at the 39th CBOT.

We identified a publication rate of 26.6% of the papers presented at the CBOT. The Congress of the American Academy of Orthopedic Surgeons, the largest American Congress of Orthopedics, present a publications rate of 47%,⁸ rate substantially higher than the rate found in our Congress. A likely explanation for our lower rate of publication in comparison to the U.S. Congress would be the largest variety of orthopedics journals based in the United States. There is a natural tendency of authors submitting their work to journals of the same language, nationality, and specialty. In our country we have only two orthopedics journals (*Revista Brasileira de Ortopedia* and *Acta Ortopédica Brasileira*), which makes publication of national studies harder.

Regarding other medical specialties, Scherer et al.¹¹ in a systematic review of 79 articles showed a publication average of 44.5%. In national literature, we found a discrepancy on the rate of publications in other specialties. In the area of urology, the publication rate after the national congress was 39%,¹² in the vascular surgery congress, 6.32%, and 2.9% of the 13 papers presented at a trauma conference were published,¹⁴ while the rate of publication in the general surgery congress was only 2.6%.⁷

When we consider the amount of work presented among states

and regions, we observed a prevalence of Southeast and South. If we draw a parallel between the work frequency and the amount of accredited orthopedics service in the country, we found a direct relationship. Of the 110 services throughout Brazil, 60 (54.5%) are located in the Southeast, with 33.6% in São Paulo and 13.6% in Rio de Janeiro, 26 (23.6%) are in the South, 13 (11.8%) are in the Northeast, eight (7.27%) are in the Midwest, and three (2.73%) are in the North region.¹⁵ The published works originated from the Southeast were 68.3% (representing 54.1% of the overall from the state of São Paulo and Rio 8%), 15.5% of the south and 10.9% in the Northeast. A possible bias is the fact that in 2007 the Congress has been held in the city of São Paulo, which can lead to a greater number of participants and submission of papers from authors of this state.

The higher publication rate of oral presentations in comparison with posters had already been demonstrated by Donegan et al.⁸ who showed a rate of 4% for the publication for posters and 52% for oral presentations. However, our difference was higher (41% vs 15%). The low rate of publication for posters shows a possibly poor quality of the research presented in this way in the CBOT in 2007.

Our study has some limitations. We only searched the databases PubMed and Lilacs, opting not to perform searches in the Cochrane database, Embase and Google Scholar. This choice was due to the fact that these two databases are the most important in the national literature, but this restriction may have resulted in some false negatives. The restriction to only two databases is in agreement with previous studies that examined publication rates of the Congress of the American Academy of Orthopedic Surgeons which searched only Medline and PubMed databases.^{5,8} The five year period chosen may also underestimate publication rates, since some works may still be published after this period. However, previous studies have shown that over 90% of papers are published in the first four years after the congress.^{6,16,17}

CONCLUSION

We have seen that the rate of publication of the Congresso Brasileiro de Ortopedia from 2007 was 26.6%. The sub-specialty responsible for the largest number of papers presented at the congress was Shoulder and Elbow, and the state with the largest number of works was São Paulo. Oral presentations had a 3.58 times greater chance of being published compared to posters.

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