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Aspects affecting the choice for scientific journal publishing

Aspectos que influenciam na escolha do periódico para publicação científica

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ABSTRACT

Objective: This study aimed to evaluate the social and academic aspects and factors related to scientific journal that influence and motivate the authors to choose the journal to publish their academic work. **Material and Methods:** The study was conducted with professors and graduate students of the Institute of Science and Technology of Sao Jose dos Campos, UNESP. Participants responded to an online questionnaire, sent via email, and the data were tabulated and analyzed. **Result:** The Thomson Reuters impact factor, followed by Qualis CAPES Index were considered of greater importance at the moment of choosing the journal for 56% of respondents. All respondents considered peer review relevant and 89% pointed out double-blind review as the most important aspect. Indexing and the journal's quality were considered the most significant factors by most respondents. 98% of respondents have knowledge on both open access journals and Digital Object Identifier (DOI). **Conclusion:** The assessed academic community demonstrated good knowledge on the factors inherent to the publication of scientific papers. Impact factor, indexing, and journal's quality influenced on scientific journal publishing.

KEYWORDS

Impact factor; Journal article; Periodicals.

RESUMO

Objetivo: O objetivo deste trabalho foi avaliar aspectos sociais e acadêmicos e fatores relacionados a revista cientifica que influenciam e motivam os autores na escolha do periódico para publicação de seus trabalhos acadêmicos. **Material e Métodos:** O estudo foi realizado com docentes e pós-graduandos do Instituto de Ciência e Tecnologia de São José dos Campos, UNESP. Os participantes responderam a um questionário online, enviado via e-mail, e os dados coletados foram tabulados e analisados. **Resultados:** O fator de impacto Thomson Reuters, seguido pelo Índice Qualis CAPES foram considerados os de maior importância no momento da escolha da revista para 56% dos entrevistados. Todos consideram relevante a revisão por pares e 89% assinalaram a revisão duplo-cego como a mais importante. A indexação e o conceito da revista foram considerados os fatores mais significativos pela maioria dos respondentes. 98% dos participantes responderam ter conhecimento sobre as revistas de acesso aberto e sobre o DOI (Digital Object Identifier). **Conclusão:** A comunidade acadêmica avaliada demonstrou ter bons conhecimentos sobre os fatores inerentes a publicação de trabalhos científicos. Fator de impacto, indexação e conceito da revista influenciam os autores no momento de escolher o periódico para publicação de artigos.

PALAVRAS-CHAVE

Artigo de revista; Fator de impacto; Publicações periódicas.

INTRODUCTION

Over the years, scientific writing challenges the researchers. Many studies on the state of art of scientific publishing report that the study not published is a lost work [1,2].

The reasons for publishing ranging from increasing the knowledge, sharing information, interchanging with the peers, improving the career, to aiming at attracting a high-quality team [3].

The production of information itself is not enough. The information must be shared through scientific publishing to result in Science. The authors need to present their results to peer reviewers and track the knowledge development through the other researches' publications [4,5], which occurs mainly through the scientific publishing.

The so-called *journals* are, until today, the main information route of scientific community, because even after internet, many journals keep both the press and electronic format [6]. It is important noting the available format of the journal, because many people prefer press rather than electronic format. Therefore, journals with both available formats allowed more visibility to please different audiences [7]. The *Open Archives Initiatives* (OAI) proposes the electronic publishing of journals, so-called *Open Journal Systems* (OJS), making easy the flow, publishing, and access to scientific papers by authors, editors, and general people, with low costs and self-sustainably [5].

Most of the authors begin to write without thinking about the journal. Preferably, the journal should be selected prior to writing, because each journal have its own guidelines, thus avoiding rewriting the manuscript at the moment of the submission [8].

The journals generally publish similar manuscripts. One strategy for success is to see the past table of content and evaluate the journals' editors [7]. Also, another strategy is to observe the papers recently published by the journal, focusing on how the authors structured the manuscript [2]. The citation of more than one study published in the desired journal also helps in the manuscript acceptance [7].

The authors should choose journals with qualified peer reviewers, indexed in good databases [3]. Peer review is the evaluation of the manuscript per experts that do not comprise the journal editorial board [9]. The choice for open access journals that assure the copyrights may achieve greater visibility but it does not assure greater number of citations [7].

One of the greatest barriers for scientific writing is the language. According to Baron (2012), even if English is not the native language, scientific writing should be in English because English is the language most used in either press or electronical medical journals with greater impact factor, which enables greater visibility both for the authors and their institution [10].

Impact factor [11,15,16] is a measure reflecting the average number of citations to recent articles published in a given journal at the last two years and it is an excellent guide to choose the journal. Today, the researchers are under pressure to publish in journals with great impact factor [7,12,13,17,18]. Other scientific indexes are also available, such as H index [14] and SCImago that used Scopus database [7]. Given the aforementioned discussion, this study aimed to identify and analyze the aspects influencing and motivating the choice for scientific journal publishing.

MATERIALS AND METHODS

This study was submitted and approved by the Institutional review Board (CEP/h-UNESP-CSJC-ICT) in relation to ethical aspects under protocol no. #1.115.833. The study sample was composed of professor and graduate students of the Institute of Science and Technology (School of Dentistry) of São José dos Campos/SP.

A questionnaire was used to collect data (Appendix A), created by the authors and composed by 16 questions: three questions related to epidemiological information and 13 related to the aspects affecting the choice for scientific journal publishing. Each question was followed by a variable number of alternatives, some of them with option for open response.

Online questionnaire

Google Docs was used to build the *online* questionnaire. *Google Docs* is an application package in AJAX programming. It is completely available online directly at the browser. The applications are compatible with OpenOffice.org/BrOffice.org, KOffice, and Microsoft Office, and currently are composed by word processor, presentation editor, sheet editor, and form editor. After the approval by the Institutional Review Board, the questionnaires were emailed for the participants.

Obtainment of the data

The participants (professors and graduate students) were invited to participate through institutional email. The email also contained the link to answer the questionnaire. The participants had four months to answer the questionnaire. The data obtained from the questionnaire were tabulated directly on *Google Docs*.

Because this is an exploratory and quantitative study (Ferreira, 2009), data were analyzed through graphs.

RESULTS

The graduate students and 93 professors were invited to participate in the research. Of these, 50 answered the questionnaire (52% of females and 48% of males). The most prevalent age range was 35 to 44 years (34%), followed by 45 to 54 years (26%), 25 to 34 years (24%), and 55 to 64 years (16%). Concerning to education, PhDs comprised 28% of the sample and 10% were full professors. The other responses regarding education are seen in Figure 1.

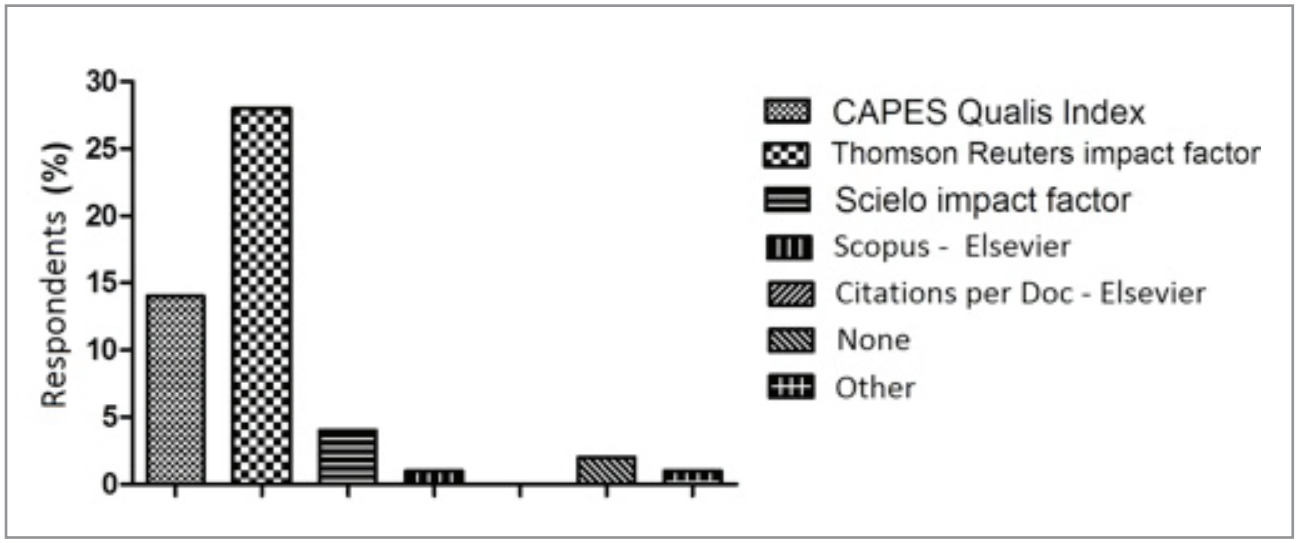

Figure 1 - Percentage of participants with Master degree, PhD, Post-doctoral training, associate professor or professor.

In relation to the question on the knowledge on the eligibility reference index of the journals, all answered that they knew such indexes. For 56% of the sample, the index considered as the most important was Thomson Reuters impact factor (Figure 2). When all indexes were ranked by significance level (multiple choice question), most of the sample (36%) cited Thomson Reuters impact factor, followed by Qualis CAPES index (25%) (Figure 3).

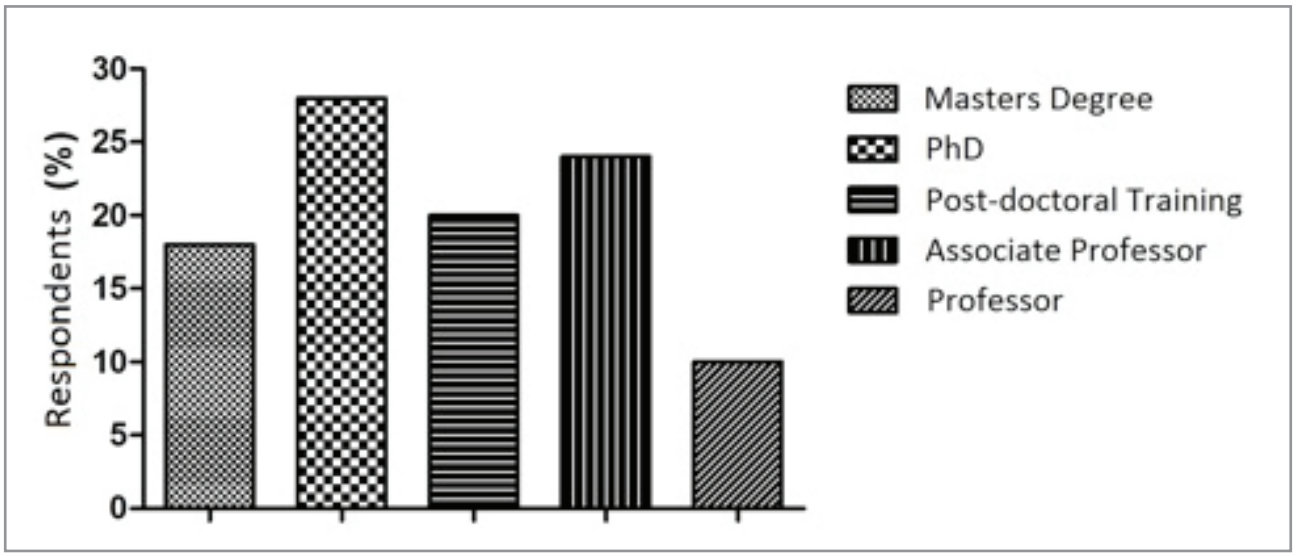

Figure 2 - The graph demonstrates the percentage of responses for the question: "Which reference index would you consider as the most important for qualifying a journal?" Thomson Reuters impact factor, followed by Qualis CAPES index were considered the most important ones by most of the respondents.

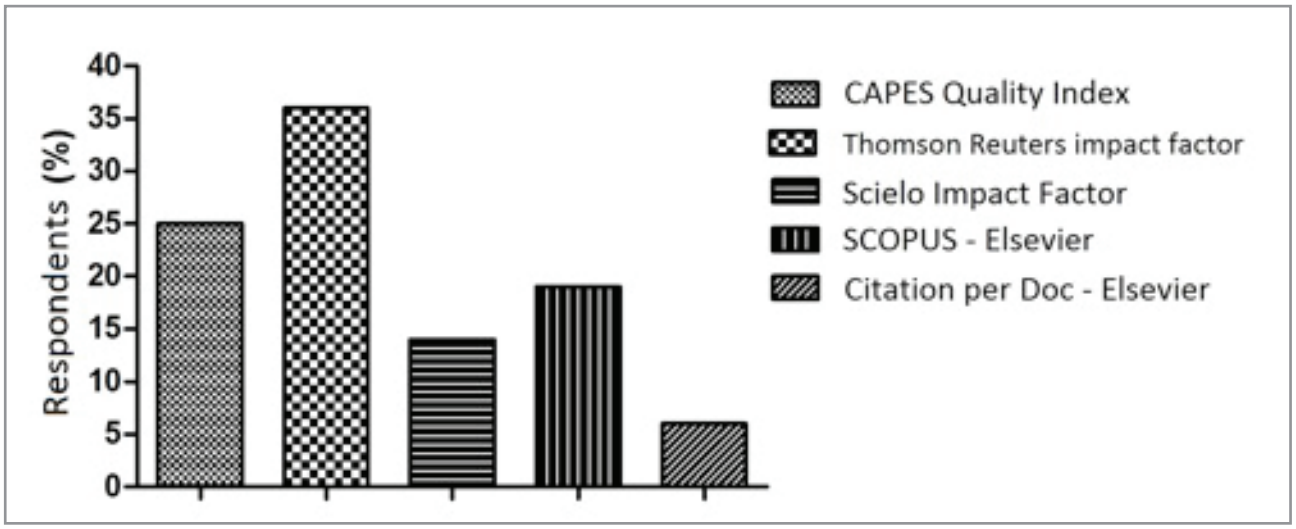

Figure 3 - The graph displays the results for the question: "Which reference index would you consider the most important for qualifying a journal?". Thomson Reuters impact factor, followed by Qualis CAPES index were considered the most important ones by most of the respondents.

Ninety percent of the sample knew about *peer* review. Those who answered that they did not know about peer review should go to question #10. All respondents answered that peer review of manuscripts are important. Also, 89% of the sample considered double-blind peer review (the author did not know who is the reviewer, and vice-versa) as of great importance.

online formats. Accordingly, 98% of the sample knew on the open access process, and 54% of the respondents considered that important while 40% considered that very important. Finally, 98% of the sample knew about DOI (*Digital Object Identifier*). Of these, 59.2% considered DOI important for the manuscript publishing.

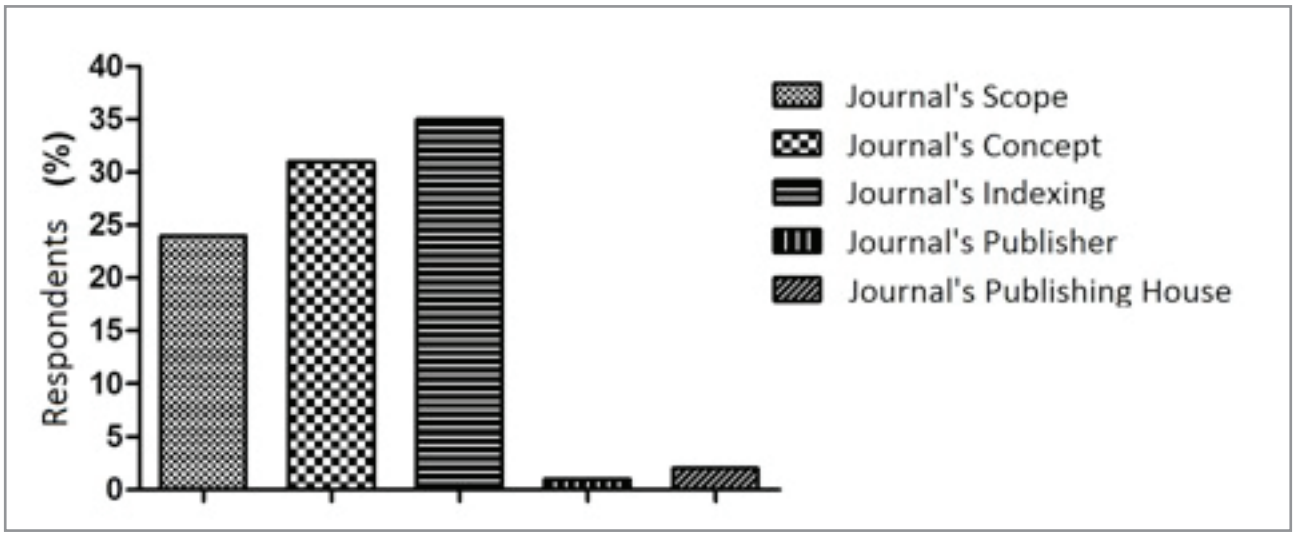

Figure 4 - The graph shows the percentage data for the question: "Which would you consider for choosing a scientific journal to submit your manuscript? ". The journal's indexing was the most indicated factor by most of the respondents.

The respondents were questioned about which they consider for choosing the journal for publishing the manuscript, and 35% of the sample took into consideration the journal indexing at the moment of the choice, followed by the journal impact factor (30%).

The participants were also questioned regarding the eligible language for publishing: English, Portuguese, or Spanish. Most of the respondents (98%) chose the English language and only 2% preferred Portuguese language.

Given the technological world, the publication format was also questioned. Most of the respondents preferred both the press and

DISCUSSION

This present study conducted with professors and graduate students of the Institute of Science and Technology (School of Dentistry) of São José dos Campos/SP provided objective and subjective information on the aspects affecting the choice for scientific journal publishing. Notwithstanding, this study can be performed with other samples. The questionnaire addresses general questions on scientific publishing, allowing the use in other academic institutions. The responses obtained indicated that most of the participants had good level of knowledge on the aspects guiding manuscript publication.

The questions on gender, age range, and education provided more realistic data, because they are objective information on the individual that difficultly would be influenced by other aspects. On the other hand, the questions on the scientific manuscripts may be influence, somehow, because the participant could have had any help either by other people or by searching on the internet, at the moment of answering the questionnaire. This can be a limitation of this study, so that the obtained data could not match the daily routine of the academia. An interview where the individual could have spontaneously given the answers, would maybe decrease this study bias. The rationale behind the use of the electronic questionnaire was the practicality, agility, easy use, and possibility of reaching a greater number of respondents.

The participants' enrollment was a challenged. Although the email containing the link for assessing the questionnaire was sent for 93 professors and all graduate students, only 50 individuals participated in the study. Despite the fact that the respondents probably had a more active academic life, once they participated in the study, the small number of participants is another study limitation, reflecting the behavior of part of the community.

Answering the question "Which reference index do you consider as the most important to qualify a Scientific Journal?" The most cited index was Thomson Reuters' impact factor (56%), followed by Qualis Capes (28%). Thomson Reuters' impact factor refers to the journals indexed on *Web of Science* database and is the average number of citations to recent articles published in a given journal at the last two years, divided by the total number of the articles published in the given journal. The Qualis Capes index is the set of procedures used by Capes to rank the quality of the intellectual production of the Post-Graduation Programs in Brazil. Such process was designed to meet the specific needs of the assessment system and it is based on the information provided through the Data Collection application. As a result, Capes provides a list with the classification of the journals in which the Brazilian Post-Graduate Programs published their scientific production. The quality is directly stratified. Thus, the Qualis index analyzes the quality of the manuscripts and other scientific information types, from the analysis of the quality of the scientific journals [19].

The following questions: *"Do you consider peer review of a manuscript important for publication?"* and *"Which peer review type do you consider the most important?"* revealed great concern on how the scientific manuscript is evaluated, because all respondents (100%) answered that they considered peer review important and most of them (89%) considered double-blind peer review the most important.

The data obtained by the answers for the question *"Which do you consider for choosing the Scientific Journal to submit your manuscript?"* evidenced that the study's participants were more interested in indexing and quality of the journal rather than the content of the journal itself. The questions on the open access journals revealed that the participants knew the issue, but the questionnaire did not question on issues indicating the adhesion of the participants towards this publication option.

This study's findings help the professor and graduates to know the context of scientific publishing and motivate the search for improving it to collaborate for developing the scientific growth of the institution. The study data provide subjective information on the institution's community regarding the scientific publishing because the study lacked evidences that the analyzed aspects were really in the scope of the manuscripts published by this given community. Notwithstanding, these results are relevant and can be used in further studies on this community. Thus, to prove such information, it would be necessary an assessment comparing each published manuscript with the author, journal, review type, reference indexes, and language. This study can be applied to other academia to analyze the profile regarding to scientific publishing.

CONCLUSION

The evaluated academia community demonstrated good level of knowledge on the factors inherent to scientific publishing. The impact factor, database indexing, and quality of the journal affect the choice for scientific journal publishing.

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APPENDIX A – QUESTIONNAIRE

Aspects affecting the choice for scientific journal publishing

1) Mark your gender:

( ) Female

( ) Male

2) Which is your age range?

( ) 25 - 34 years

( ) 35 - 44 years

( ) 45 - 54 years

( ) 55 - 64 years

( ) Above 64 years

3) Which is you education level?

( ) Graduate

( ) Master degree

( ) PhD

( ) Post-doctor

( ) Adjunct/ Assistant professor

( ) Full professor

4) Do you know which reference indexes are used to qualify a Scientific Journal?

( ) Yes

( ) No

If you answered “no”, go to the question number #7.

5) Which reference index do you consider the most important one to qualify a Scientific Journal?

( ) Qualis CAPES

( ) Thompson Reuters impact factor

( ) Scielo impact factor

( ) SCOPUS from Elsevier

( ) Cites per doc from Elsevier

( ) None of the above

( ) Others: _____

6) Which reference index do you consider important to qualify a Scientific Journal? Mark as much alternatives as you want.

( ) Qualis CAPES

( ) Thompson Reuters impact factor

( ) Scielo impact factor

( ) SCOPUS from Elsevier

( ) Cites per doc from Elsevier

( ) None of the above

( ) Others: _____

7) Do you know the meaning of peer review of a manuscript?

( ) Yes

( ) No

If you answered “no”, go to the question number #10.

8) Do you consider peer review important for scientific publishing?

( ) Yes

( ) No

9) Which peer review type do you consider the most important?

( ) Double-blind: the author does not know who is the reviewer and vice-versa

( ) The author knows who is the reviewer but the reviewer does not know who is the author

( ) The reviewer knows who is the author but the author does not know who is the reviewer

( ) Open: the author knows who is the reviewer and vice-versa

10) Which do you consider to choose the Scientific Journal to submit the manuscript? Mark as much alternatives as you want.

( ) Journal's scope

( ) Journal's quality

( ) Journal's indexing

( ) Journal's editors

( ) Journal's publisher

( ) Journal's supporting institution

( ) Others: _____

11) Which language do you consider for scientific publishing?

( ) English

( ) Portuguese

( ) Spanish

( ) Other: _____

12) Which publication format do you prefer?

( ) Press

( ) Electronic

( ) Press and electronic

13) Do you know the meaning of Open Access Journal?

( ) Yes

( ) No

If you answered "no", go to the question number #15.

14) How important is Open Access for you?

( ) No

( ) Little

( ) Indifferent

( ) Important

( ) Very important

15) Do you know the meaning of DOI (Digital object identifier)?

( ) Yes

( ) No

If you answered "no", skip the next question.

16) How important is DOI for you?

( ) No

( ) Little

( ) Indifferent

( ) Important

( ) Very important

Thank you for participating!

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