REVISTA DE ODONTOLOGIA DA UNESP
www.revodontolunesp.com.br

Original Article

© 2018 - ISSN 1807-2577

Ethical guidelines in scientific journal policies: analysis and recommendations

Diretrizes éticas nas políticas de periódicos científicos: análise e recomendações

Catarina Pereira Monteiro LIMA[a], Larissa Braz PONTES[a], François Isnaldo Dias CALDEIRA[b], Luan Viana FARIA[b], Fernando Afonso de OLIVEIRA[b], Luana Raphael da SILVA[a], Maurício Gandini Gianni MARTELLI[b], Clemente Maia da Silva FERNANDES[c], Mônica da Costa SERRA[c*]

[a]UNESP – Universidade Estadual Paulista “Júlio de Mesquita Filho”, Faculdade de Odontologia de Araraquara, Departamento de Odontologia Restauradora, Araraquara, SP, Brasil
[b]UNESP – Universidade Estadual Paulista “Júlio de Mesquita Filho”, Faculdade de Odontologia de Araraquara, Departamento de Diagnóstico e Cirurgia, Araraquara, SP, Brasil
[c]UNESP – Universidade Estadual Paulista “Júlio de Mesquita Filho”, Faculdade de Odontologia de Araraquara, Departamento de Odontologia Social, Araraquara, SP, Brasil

How to cite: Lima CPM, Pontes LB, Caldeira FID, Faria LV, Oliveira FA, Silva LR, et al. Ethical guidelines in scientific journal policies: analysis and recommendations. Rev Odontol UNESP. 2025;54:e20250011. https://doi.org/10.1590/1807-2577.20250011

Resumo

Introdução: O crescimento das publicações científicas online ampliou a disseminação do conhecimento, porém também favoreceu o surgimento de revistas predatórias que desconsideram princípios éticos de publicação. **Material e método:** Uma amostra de 270 periódicos foi selecionada aleatoriamente a partir de 2.523 identificados no portal Qualis, distribuídos entre Odontologia (15,9%), Ciências da Saúde (53,7%) e áreas multidisciplinares (30,4%). **Resultado:** Os achados revelaram uma queda nos padrões éticos de submissão à medida que o fator de impacto e a classificação Qualis diminuíam. **Conclusão:** Periódicos de maior impacto enfatizavam metodologias robustas, adesão ética e resultados confiáveis, enquanto periódicos de menor impacto apresentavam políticas menos rigorosas. Essas tendências também se aplicaram a periódicos multidisciplinares.

Descritores: Ética na publicação científica; periódicos; diretrizes.

Abstract

Introduction: The growth of online scientific publications has expanded the dissemination of knowledge but has also fostered the emergence of predatory journals that disregard ethical principles of publishing. **Objective:** This study examined ethical requirements in health science journals using “Submission Guidelines” from journal websites. **Material and method:** A sample of 270 journals was randomly selected from 2,523 identified via the Qualis portal, distributed across Dentistry (15.9%), Health Sciences (53.7%), and multidisciplinary areas (30.4%). **Result:** Findings revealed a decline in ethical submission standards with decreasing impact factor and Qualis classification. **Conclusion:** Higher-impact journals emphasized robust methodologies, ethical adherence, and reliable results, contrasting with lower-impact journals, which showed less stringent policies. These trends also applied to multidisciplinary journals.

Descriptors: Ethics in scientific publication; journals; guidelines.

INTRODUCTION

With the advancement of the Internet, academic publications have undergone significant changes in recent years. There has been an increase in the number of publications as well as an expansion in publication formats, enabling many scientific journals to transition to online formats[1,2]. For example, MEDLINE, a well known database of health-related articles, indexes more than 5,600 journals[3]. However, the increased demand for publications has also brought higher costs and access challenges associated with traditional academic publishing. In response, the “open access” movement emerged, aiming to ensure free public access to scientific research results, thereby promoting broader knowledge dissemination[2].

The assurance for the scientific community—and society at large—in both researchers and journals to uphold ethical standards in the pursuit of scientific truth is essential. This trust extends to authors' confidence in the peer-review process, the scientific community's confidence in published results, and journals confidence in the data submitted by authors for publication[4]. Journals implement politics to maintain publication ethics, requiring authors to follow guidelines designed to prevent ethical violations, including research misconduct, plagiarism, failure to disclose conflicts of interest, and other unethical practices[1].

The transition from print to digital media, combined with the open access movement, shifted the financial burden from readers to authors. This shift led to the emergence of numerous new journals more focused on charging publication fees than on the quality of their content[5]. Among the strategies used to attract authors, so-called “predatory journals” tend to cover a wide range of topics and frequently provide false information about their impact factor or indexing in databases[6]. The result of such predatory practices is a proliferation of publications lacking proper scientific criteria, including the absence of peer review, ethical committee approval, and reliable data[6,7].

Ethical guidelines provided by journals should address these issues by offering clear rules for researchers interested in publishing[8]. There are resources available to help avoid predatory journals and those that fail to follow ethical standards, such as those recommended by the International Committee of Medical Journal Editors (ICMJE) and the Committee on Publication Ethics (COPE), among other global organizations. These bodies require authors to commit to specific publication standards[9,10]. However, despite the existence of such organizations and committees, journals often lack clear ethical recommendations or requirements for the studies they accept for publication.

Thus, it is timely to examine the conduct of scientific journals and the current state of ethical requirements in Brazilian and international journals in the health field. This study aims to assess the current situation of Brazilian and international scientific journals regarding these aspects, using a convenience sample of health-related scientific journals.

MATERIAL AND METHOD

Study Design

This study was observational and cross-sectional in nature, with data collection based on the “Submission Guidelines and/or Instructions for Authors” available on the official websites of scientific journals. Since it used publicly and unrestrictedly accessible data sources, the research did not require submission to an ethics committee, in accordance with guidance from the Brazilian National Commission for Research Ethics (CONEP).

Selection and Eligibility Criteria of the Sample

Initially, scientific journals related to the field of Dentistry were identified on the QUALIS portal, a Brazilian system maintained by the Coordination for the Improvement of Higher Education Personnel (CAPES). QUALIS was originally designed to classify the scientific output of graduate programs in terms of articles published in scientific journal[11]. In the 2017–2020 classification, the most recent to date, scientific journals were categorized into nine strata: A1, A2, A3, A4, B1, B2, B3, B4, and C. The complete list of journals classified in the field of Dentistry was obtained on July 24, 2023, comprising a total of 2,523 journals. From this list, 30 journals from each stratum were randomly selected using Microsoft Excel software to form the convenience sample for this study, resulting in a final sample of 270 journals (10.7% of the total).

Data Collection and Analysis

Two independent researchers accessed the official websites of the scientific journals and collected the data of interest. All data were cross-checked by two reviewers. In cases of disagreement, a third independent researcher was consulted for review and decision-making. The data were organized into pre-constructed tables in Microsoft Excel and analyzed using descriptive and inferential statistics via the GraphPad Prism 9.0 software (GraphPad Software Inc., La Jolla, CA, USA). To compare proportions, Fisher's Exact Test and Monte Carlo Simulation were applied, with a significance level set at 5%. Grouping variables included Qualis strata (categorized as A1/A2, A3/A4, B1/B2, B3/B4, and C), Journal Impact Factor (IF) (0, 0.1–2, 2.1–4, <4), and journal specialty (dentistry-focused journals, general health-focused journals, or multidisciplinary journals).

Sample Evaluation Criteria

The variables collected and the evaluation criteria among researchers were defined following a pilot test with four journals from each stratum and are detailed in Table 1.

Table 1. Variables and analysis criteria adopted for interpreting different ethical requirements and recommendations in submission guidelines of scientific journals, 2023.

Variable	Analysis criteria
Grouping Variables	
a) Qualis	The 2017-2020 CAPES Classification[11].
b) Impact Factor	The Incites Journal Citation Reports (JCR) by Clarivate Analytics[12] was used.
c) Journal Specialty	The journals were grouped into three categories based on their scope: **Dentistry Specialty Journals -** Journals publishing articles exclusively related to Dentistry; **Health Journals -** Journals publishing articles from medical and related fields, including Dentistry; **Multidisciplinary Journals -** Journals publishing articles from various fields of knowledge.
Outcome Variables	**Analysis criteria**
I. Approval from ethical committee designed to protect humans	This item was considered fulfilled if the guidelines required approval from Research Ethics Committees for studies involving humans, directly or indirectly, including the presentation of the approval protocol number or justification for exemption.
II. Study must be conducted in accordance with the Helsinki Declaration	This item was considered fulfilled if the journal guidelines mentioned that reports of studies involving humans must be conducted ethically, based on the 1964 Declaration of Helsinki[13] and its subsequent amendments or comparable ethical standards.
III. Ethical approval for animal studies	This item was considered fulfilled if the guidelines required approval from Research Ethics Committees for studies involving animals, including the presentation of the approval protocol number or justification for exemption.
IV. Declaration of potential conflicts of interest	This item was considered fulfilled if the guidelines recommended the need to declare potential conflicts of interest by authors that could have a direct or potential influence on the work.
V. Funding source declaration	This item was considered fulfilled if the guidelines recommended including information about sources of funding and any financial interests involved.
VI. Registries for conducting clinical trials	This item was considered fulfilled if the guidelines required clinical trials to be registered on publicly accessible platforms such as clinical registers[14], clinical trials[15], the UK's clinical study registry[16] or similar platforms.
VII. Standards of reporting for conducting original research (Exemple: EQUATOR, STROBE, STARD, ARRIVE)	This item was considered fulfilled if the guidelines recommended that authors follow the minimum reporting guidelines hosted by the EQUATOR Network[17] when preparing their manuscripts. If at least one of these guidelines was cited, this requirement was considered fulfilled.
VIII. Standards of reporting for conducting review studies (Exemple: PRISMA, COCHRANE)	This item was considered fulfilled if the guidelines recommended that authors follow specific guidelines for preparing literature review studies, provided the journal accepted this type of study. For journals that do not publish literature reviews, this item was automatically considered "fulfilled."

Table 1. Continued…

Variable	Analysis criteria
IX. Use of peer review (blind)	This item was considered fulfilled if the submission guidelines clearly stated that the peer-review system was blinded (single-blind or double-blind review system).
X. Plagiarism guidelines	This item was considered fulfilled if the submission guidelines included recommendations regarding plagiarism practices and/or writing misconduct.
XI. Use of originality or duplicate checking software	This item was considered fulfilled if the submission guidelines clearly stated that the journal uses or may use plagiarism detection software
XII. Remenadtions to authorship	This item was considered fulfilled if the submission guidelines included recommendations regarding principles of authorship and good authorship practices. Guidelines for changes in authorship, recommendations for addressing authorship disputes or issues, or procedures for deceased or incapacitated authors were not included in the evaluation of this variable
XIII. Detailed contribution recommendations following criteria established by the International Committee of Journal Editors	This item was considered fulfilled if the submission guidelines required authors to declare the specific contributions of each author (regardless of whether this information would later be published in the final version of the work).
XIV. Recommendations about use of generative AI in scientific writing	This item was considered fulfilled if the submission guidelines included recommendations on the use of artificial intelligence (AI) and AI-assisted technologies in the writing process.
XV. Copyright transfer agreement for Open Access research	The journals were classified into three groups: *Hybrid journals* **-** Journals requiring readers to subscribe for content access, with no mandatory article processing charges, although authors may opt for open-access publication by paying fees; *Paid journals* **-** Journals where authors are required to pay article processing charges; *Free journals* **-** Journals that do not charge authors for article processing, regardless of whether they publish content in an open-access format or not.
XVI. Journal on Beall's list of predatory open-access publishers	For the evaluation of this item, journal names were cross-referenced with Beall's List. A January 2017 version of the list was used, as the blog maintained by the original researcher was discontinued, and updates on potential predatory journals ceased. The latest version of the list is currently preserved by an anonymous individual website[18].

RESULT

Out of 270 journals selected from the Qualis Brazil Platform, 43 (15.9%) were focused on Dentistry, 145 (53.7%) were related to Health Sciences, and 82 (30.4%) had multidisciplinary characteristics. Regarding impact factor, it was found that 44 (16.3%) had an impact factor ≥ 4, 52 (19.3%) had an impact factor between 2.1 and 4, 93 (34.4%) ranged between 0.1 and 2, and 81 (30%) had no impact factor.

Table 2 provides the stratification of information regarding the Qualis Brazil Classification and the variables analyzed. Concerning the requirement for approval by Human Ethics Committees, no statistically significant differences were observed in relation to the Qualis Brazil Classification (P = 0.148). However, when analyzing the percentage distribution of the sample, journals classified as Qualis C exhibited a high percentage (46.7%) of missing information about the need for prior registration with Human Research Ethics Committees. Submission guidelines analysis revealed differences among the strata, with the variables Conflict of Interest and Funding Source Declaration being statistically significant ($P < 0.001$).

Regarding recommendations for registering clinical trials on public platforms, it was found that, considering the Qualis Classification, most journals analyzed do not include information in their author guidelines. Additionally, guidelines related to reporting standards for conducting original research (EQUATOR, STROBE, STARD, ARRIVE, etc.), review studies (PRISMA, COCHRANE), and detailed contributions according to the criteria of the International Committee of Medical Journal Editors showed significant differences among the strata ($P < 0.001$).

Moreover, when analyzing recommendations on the use of artificial intelligence for writing scientific articles, it was noted that as the Qualis Brazil Classification decreases, the number of journals without this information increases, alongside a rise in journals listed in Beall's list ($P < 0.001$).

Table 2 presents the analysis results of variables according to Impact Factor. The analysis indicates notable diversity in the approaches adopted, particularly with Impact Factor. When examining the ethical approval requirements in committees, sample distribution consistency was observed, with no significant differences ($P = 0.339$).

Analysis of the variable "Ethical Approval for Animal Studies" revealed a significant difference in relation to Impact Factor ($P = 0.015$). Higher-impact journals (2.1-4 and >4) are more likely to recommend prior registration for conducting animal research in their author guidelines than lower-impact journals (0 and 0.1-2). Furthermore, the variable "Funding Source Declaration" showed a significant association ($P < 0.001$) as the Impact Factor increased. Journals with Impact Factors between 2.1 and 4 and >4 exhibited higher rates of information in their submission guidelines for this variable, being 84.6% and 93.2%, respectively.

When evaluating information related to clinical trial registrations in journals, the results highlight that the global average (59.3%) of journals did not provide this information in their author guidelines. Additionally, guidelines related to reporting standards for original research (EQUATOR, STROBE, STARD, ARRIVE) and review studies (PRISMA, COCHRANE) showed significant differences with Impact Factor ($P = 0.007$ and $P = 0.002$, respectively). Overall, most evaluated journals do not include these guidelines, with 72.5% and 68.9% missing, respectively.

Anti-plagiarism guidelines and the use of plagiarism-checking software did not show significant variations across Impact Factor categories, indicating a uniform practice throughout the sample. Both Contribution Details and AI usage recommendations showed significant differences in relation to Impact Factor ($P < 0.001$).

Table 2 highlights key findings from the analysis of variables concerning journal scope. Regarding ethical approval, the data show lower trends for multidisciplinary journals at 54.9%, compared to Dentistry journals at 79.1%, and Health Sciences at 82.1% ($P < 0.001$). These trends were also reflected in ethical approval requirements for animal studies, being 48.8% for multidisciplinary journals, 71% for Health Sciences, and 62.8% for Dentistry ($P = 0.004$). No significant differences were observed in funding source declaration rates among specialties ($P = 0.615$). Furthermore, multidisciplinary journals exhibited lower percentages of information regarding clinical trial registrations (26.8%, $P = 0.008$), reporting standards for original research (EQUATOR, STROBE, STARD, ARRIVE) (13.4%, $P = 0.009$), and review studies (PRISMA, COCHRANE) (17.1%, $P = 0.001$). No significant differences were identified in the use of blind peer review across specialties ($P = 0.175$), with adoption rates consistently high, ranging from 92.7% to 95.9%. Anti-plagiarism guidelines did not show significant variations across specialties ($P = 0.655$), ranging from 51.2% to 55.9%.

Table 2. Relative frequencies (%) of the variables analyzed (I to VII) according to the journal's Qualis, categorized Impact Factor and specialty, 2023

Variable		Qualis classification					P value	Journal's Impact Factor				P value	The journal's specialty			Total	P value
		A1-A2	A3-A4	B1-B2	B3-B4	C		0	0.1-2	2.1-4	< 4		Dental Specialty	Health Sciences	Multidisciplinary		
I. Approval from ethical designed to protect humans	**Yes**	76.7%	78.3%	75.0%	73.3%	53.3%	0.148	72.8%	68.8%	82.7%	72.7%	0.339	79.1%	82.1%	54.9%	73.3%	**< 0.001**
	No	23.3%	21.7%	25.0%	26.7%	46.7%		27.2%	31.2%	17.3%	27.3%		20.9%	17.9%	45.1%	26.7%	
II. Study must be conducted in accordance with the Helsinki Declaration	**Yes**	60.0%	61.7%	56.7%	36.7%	10.0%	**< 0.001**	30.9%	45.2%	73.1%	61.4%	**< 0.001**	53.5%	52.4%	40.2%	48.9%	0.174
	No	40.0%	38.3%	43.3%	63.3%	90.0%		69.1%	54.8%	26.9%	38.6%		46.5%	47.6%	59.8%	51.1%	

Table 2. Continued…

Variable		Qualis classification					P value	Journal's Impact Factor				P value	The journal's specialty			Total	P value
		A1-A2	A3-A4	B1-B2	B3-B4	C		0	0.1-2	2.1-4	< 4		Dental Specialty	Health Sciences	Multidisciplinary		
III. Ethical approval for animal studies	Yes	66.7 %	75.0 %	65.0 %	61.7 %	30.0 %	**0.001**	54.3 %	58.1 %	78.8 %	0.5 %	**0.015**	62.8 %	71.0 %	48.8 %	63.0 %	**0.004**
	No	33.3 %	25.0 %	35.0 %	38.3 %	70.0 %		45.7 %	41.9 %	21.2 %	29.5 %		37.2 %	29.0 %	51.2 %	37.0 %	
IV. Declaration of potential conflicts of interest	Yes	93.3 %	91.7 %	76.7 %	70.0 %	76.7 %	**0.001**	64.2 %	86.0 %	90.4 %	97.7 %	**< 0.001**	83.7 %	84.1 %	78.0 %	82.2 %	0.513
	No	6.7 %	8.3 %	23.3 %	30.0 %	23.3 %		35.8 %	14.0 %	9.6 %	2.3 %		16.3 %	15.9 %	22.0 %	17.8 %	
V. Funding source declaration	Yes	95.0 %	85.0 %	73.3 %	55.0 %	73.3 %	**< 0.001**	59.3 %	79.6 %	84.6 %	93.2 %	**< 0.001**	72.1 %	78.6 %	7075. 6%	76.7 %	0.615
	No	5.0 %	15.0 %	26.7 %	45.0 %	26.7 %		40.7 %	20.4 %	15.4 %	6.8 %		27.9 %	21.4 %	24.4 %	23.3 %	
VI. Registries for conducting clinical trials	Yes	40.0 %	60.0 %	48.3 %	26.7 %	16.7 %	**< 0.001**	24.7 %	43.0 %	59.6 %	43.2 %	**< 0.001**	44.2 %	47.6 %	26.8 %	40.7 %	**0.008**
	No	60.0 %	40.0 %	51.7 %	73.3 %	83.3 %		75.3 %	57.0 %	40.4 %	56.8 %		55.8 %	52.4 %	73.2 %	59.3 %	
VII. Standards of reporting for conducting original research (EQUATOR, STROBE, STARD, ARRIVE)	Yes	20.0 %	40.0 %	30.0 %	18.3 %	6.7 %	**0.003**	12.3 %	32.3 %	32.7 %	22.7 %	**0.007**	23.3 %	31.7 %	13.4 %	24.8 %	**0.009**
	No	80.0 %	60.0 %	70.0 %	81.7 %	93.3 %		87.7 %	67.7 %	67.3 %	77.3 %		76.7 %	68.3 %	86.6 %	75.2 %	
VIII.Standards of reporting for conducting review studies (PRISMA, COCHRANE)	Yes	23.3 %	51.7 %	36.7 %	23.3 %	10.0 %	**< 0.001**	17.3 %	38.7 %	44.2 %	25.0 %	**0.002**	27.9 %	40.0 %	17.1 %	31.1 %	**0.001**
	No	76.7 %	48.3 %	63.3 %	76.7 %	90.0 %		82.7 %	61.3 %	55.8 %	75.0 %		72.1 %	60.0 %	82.9 %	68.9 %	
IX. Use of peer review (blind)	Yes	93.3 %	96.7 %	95.0 %	90.0 %	93.3 %	0.646	93.8 %	93.5 %	90.4 %	97.7 %	0.568	88.4 %	95.9 %	92.7 %	93.7 %	0.175
	No	6.7 %	3.3 %	5.0 %	10.0 %	6.7 %		6.2 %	6.5 %	9.6 %	2.3 %		11.6 %	4.1 %	7.3 %	6.3 %	
X. Plagiarism guidelines	Yes	45.0 %	66.7 %	48.3 %	50.0 %	60.0 %	0.116	46.9 %	58.1 %	55.8 %	52.3 %	0.512	48.8 %	55.9 %	51.2 %	53.3 %	0.655
	No	55.0 %	33.3 %	51.7 %	50.0 %	40.0 %		53.1 %	41.9 %	44.2 %	47.7 %		51.2 %	44.1 %	48.8 %	46.7 %	
XI. Use of originality or duplicate checking software	Yes	41.7 %	48.3 %	36.7 %	38.3 %	46.7 %	0.683	30.9 %	48.4 %	46.2 %	43.2 %	0.104	32.6 %	49.0 %	34.1 %	41.9 %	**0.039**
	No	58.3 %	51.7 %	63.3 %	61.7 %	53.3 %		69.1 %	51.6 %	53.8 %	56.8 %		67.4 %	51.0 %	65.9 %	58.1 %	
XII. Remenadtions to authorship	Yes	90.0 %	75.0 %	71.7 %	46.7 %	20.0 %	**< 0.001**	38.3 %	65.6 %	84.6 %	90.9 %	**< 0.001**	55.8%	67.6%	65.9 %	65.2 %	0.366
	No	10.0 %	25.0 %	28.3 %	53.3 %	80.0 %		61.7 %	34.4 %	15.4 %	9.1 %		44.2%	32.4%	34.1 %	34.8 %	
XIII. Detailed contribution recommendations following criteria established by the International Committee of Journal Editors	Yes	81.7 %	41.7 %	40.0 %	36.7 %	6.7 %	**< 0.001 ***	18.5 %	44.1 %	65.4 %	72.7 %	**< 0.001**	37.2 %	50.3 %	40.2 %	45.2 %	0.188
	No	18.3 %	58.3 %	60.0 %	63.3 %	93.3 %		81.5 %	55.9 %	34.6 %	27.3 %		62.8 %	49.7 %	59.8 %	54.8 %	

Table 2. Continued…

Variable		Qualis classification A1-A2	A3-A4	B1-B2	B3-B4	C	P value	Journal's Impact Factor 0	0.1-2	2.1-4	< 4	P value	The journal's specialty Dental Specialty	Health Sciences	Multidisciplinary	Total	P value
XIV. Recommendations about use of generative AI in scientific writing	**Yes**	51.7%	15.0%	3.3%	5.0%	3.3%	**< 0.001**	1.2%	11.8%	25.0%	47.7%	**< 0.001**	2.3%	15.9%	26.8%	17.0%	**0.001**
	No	48.3%	85.0%	96.7%	95.0%	96.7%		98.8%	88.2%	75.0%	52.3%		97.7%	84.1%	73.2%	83.0%	
XV. Copyright transfer agreement for Open Access research	**Hibrid journals**	68.3%	46.7%	38.3%	21.7%	43.3%	**< 0.001**	45.2%	59.6%	68.2%	18.5%	**< 0.001***	25.6%	42.1%	56.1%	43.7%	**0.027***
	Paid journals	20.0%	31.7%	11.7%	25.0%	6.7%		22.6%	25.0%	25.0%	12.3%		27.9%	21.4%	14.6%	20.4%	
	Free journals	11.7%	21.7%	50.0%	53.3%	50.0%		32.3%	15.4%	6.8%	69.1%		46.5%	36.6%	29.3%	35.9%	
XVI. Journal on Beall's list of predatory open-access publishers	**Yes**	0.0%	0.0%	1.7%	5.0%	43.3%	**< 0.001**	9.9%	7.5%	0.0%	4.5%	0.088	4.7%	4.8%	9.8%	6.3%	0.327
	No	100.0%	100.0%	98.3%	95.0%	56.7%		90.1%	92.5%	100.0%	95.5%		95.3%	95.2%	90.2%	93.7%	
XVII. The journal's specialty	**Dental Specialty**	6.7%	15.0%	18.3%	15.0%	33.3%	**0.021**	21.0%	19.4%	11.5%	4.5%	**0.026***	-	-	-	-	-
	Health Sciences	46.7%	61.7%	55.0%	60.0%	36.7%		49.4%	53.8%	65.4%	47.7%		-	-	-	-	-
	Multidisciplinary	46.7%	23.3%	26.7%	25.0%	30.0%		29.6%	26.9%	23.1%	47.7%		-	-	-	-	-

*Fisher's Monte Carlo P-Value.

DISCUSSION

This study included a sample of 270 journals, assessing various aspects and ethical requirements in submission Guidelines and Policies, as well as Instructions to Authors. Three classification forms of journals were used: Qualis, Impact Factor provided by the Journal Citation Reports (JCR), and journal scope. All journals had publication information available on their own websites, accessible to interested authors.

In general, higher-impact journals demonstrated stricter publication policies. Variables such as studies guided by the Declaration of Helsinki, ethical approval for animal studies, conflict of interest and funding declarations, clinical trial registrations, research standards for original articles and reviews, authorship recommendations, detailed contributions of each author, AI usage guidelines, Open Access publication models, and predatory journals listed in Beall's list showed statistically significant differences between journals with higher and lower impact factors.

Regardless of the Qualis classification and impact factor, most journals required Ethics Committee approval for studies involving humans and animals. Ruy Carneiro et al.[19] observed that in dental journals, regardless of the impact factor, most journals required approval by Human Ethics Committees. However, in this study, stricter policies were observed in health journals, possibly due to the particularities of research in this field, as it may directly affect the health and well being of participants and animals. Additionally, journals with higher impact factors (>2.1) are more likely to adopt policies for publishing research guided by the Declaration of Helsinki. This declaration constitutes a set of ethical guidelines that guide researchers on conducting studies involving humans, ensuring the integrity of research participants during scientific investigations[13].

Recommendations for disclosing authors' conflicts of interest are essential for improving transparency between authors, editors, and readers, as result manipulation can significantly impact society[9]. A systematic review with meta-analysis conducted by Malički et al.[20]found that 85% of journals with an impact factor equal to or greater than 3 addressed conflicts of interest issues, whereas in journals with an impact factor below 1, this percentage was 72%. This significant difference was also observed in our study, revealing that 64.2% of journals with an impact factor of zero included recommendations about conflicts of interest in their guidelines, while in those with an impact factor greater than 2, this percentage exceeded 90%. Another study analyzed the approach to conflicts of interest in journals with and without impact factors and found that higher-impact journals were more likely to require clarification on this topic[21].

Funding sources may directly relate to conflicts of interest, and when disclosed, they can convey transparency, integrity, and trustworthiness to the scientific community regarding published data[22]. According to the results of this study, the higher the journal's impact factor, the greater the requirement for funding declarations, suggesting that higher-impact journals are associated with higher quality and a greater concern for such requirements. The demand to disclose funding sources is steadily growing, also driven by the mandatory citation requirements imposed by government funding agencies[23].

Clinical trial registration is crucial as it ensures researchers adhere to rigorous protocols and avoid methodological changes after research begins, preventing duplication by making information publicly available[21]. Despite its importance, we observed that most journals do not require this registration (<50%), consistent with other studies[12,24,25]. Sims et al.[25] observed that only 43.2% of articles mentioned clinical trial registration. Only journals with an impact factor between 2.1 and 4 showed a higher requirement (59.6%). The study by Ruy Carneiro et al.[20] found that dental journals with an impact factor >1.452 required clinical trial registration more often than those with an impact factor <1.452. Furthermore, a higher percentage of registration requirements was observed for health journals (47.6%), while multidisciplinary journals showed only 26.8%. This disparity may be attributed to the specific nature of health research, coupled with stricter guidelines in health journals due to the clinical impact these studies may have on diagnosing and treating diseases. Nevertheless, since multidisciplinary journals also publish health research, failing to demand this variable can lead to the publication of studies that potentially violate ethical recommendations, which may still be accessible to the scientific community.

Another point rarely emphasized by journals was adherence to guidelines recommended for observational studies and systematic reviews, such as STROBE, ARRIVE, PRISMA, and GRADE. In our study, adherence was below 50% for all journals, whether in health sciences or multidisciplinary fields, regardless of impact factor. Similar results were observed in another study that reported low adherence to these guidelines in dental studies, regardless of impact factor[12]. Han et al.[26] evaluated 126 systematic reviews published in high-impact journals in South Korea and observed that only 5% adhered to the GRADE guidelines. The lack of adherence may be attributed to the complexity and length of these guidelines, requiring resources and time, as well as the predominant clinical focus of journals.

Peer review is essential for assessing manuscript quality and preventing the publication of unreliable data[9]. In our study, we observed that most journals (>90%), regardless of Qualis classification or impact factor, adopted the peer review system. This system aims for maximum impartiality in manuscript evaluation, ensuring the publication of high-quality articles, and is generally adopted by top-tier scientific journals[27]. Reviewers are responsible for providing constructive feedback and suggesting improvements to the text, emphasizing the importance of journals ensuring transparency in research and impartiality in the review process[12].

Plagiarism, in turn, is considered unacceptable in scientific research, as it violates intellectual property rights and compromises the integrity of knowledge. It is a crucial issue that must be addressed[9,28,29]. Alongside data falsification and fabrication, it is deemed scientific misconduct.

It involves the appropriation of ideas, processes, results, or words of others without proper attribution. Criminalization depends on the laws of each country, but such misconduct may also be regulated by administrative or ethical norms, with sanctions for offenders[28]. The results of our study indicate a concerning scenario: even without significant differences in relation to impact factor, journals with an impact factor of zero showed less than 50% adherence to anti-plagiarism guidelines. Additionally, fewer than 50% of journals, regardless of impact factor, use anti-plagiarism software to detect duplication. Thus, it is crucial for scientific journals to adopt stricter policies to curb this practice.

Our results indicate that higher-impact journals are more likely to have policies related to authorship and detailed contributions of authors in the research process. Resnik et al.[30] analyzed the authorship policies of 600 journals from the JCR database. They found that 62.5% of journals had authorship policies, which were also associated with impact factor. Of the journals with such policies, 99.7% provided guidance on authorship criteria; however, only 5.3% required authors to describe their contributions. Another study by Wagner[31] analyzed 234 journals and found that 41% did not include instructions on authorship, and only 9% required information about authors' contributions. Authorship policies and detailed contributions are essential for ethical publishing, enhancing accuracy, fairness, and transparency in author listings[28,31].

In 2022, with the launch of Chat GPT, artificial intelligence has been widely discussed due to its writing capabilities[32,33]. There are reports in the literature that this tool has already been added as a co-author in some publications[32]. In this context, in 2023, the World Association of Medical Editors (WAME) published recommendations on the use of chatbots and Generative Artificial Intelligence in academic publications[34]. Some scientific journals have recognized the need to include guidelines for using these tools in scientific writing, such as *Nature* and *Science*. So far, no studies in the literature evaluate whether journals address issues related to artificial intelligence in their guidelines. The results of this study revealed that only journals with Qualis A1-A2 addressed the topic in more than 50% (51.7%). Regarding the impact factor, although none of the categories exceeded 50%, an association can be observed between the impact factor and the presence of guidelines on the topic in the journals' instructions.

A widely discussed point is Open Access publication, which generally provides open and free reading for the reader. In 2012, a hybrid model was introduced to promote the sustainability of open access, in which publication fees began to be charged to authors. In this way, the text becomes accessible to the public who are not journal subscribers, making it the predominant modality[23], as confirmed by our study, reaching 68.9% in Qualis A1 journals. Publication in this model has been suggested to increase citations and disseminate knowledge, and these factors may guide the choice of journals for publication[35].

Journals that charge processing fees for publishing articles have been heavily criticized regarding their publication standards[36]. Most predatory journals do not conduct adequate peer reviews, which raises questions about the validity and credibility of the published literature[37]. A previous study evaluated 613 predatory journals included in Beall's list, a list containing journals that do not comply with a set of criteria established by the Committee on Publication Ethics, between the years 2010–2014, and observed that the publication of scientific articles in these journals grew from 53,000 to almost 420,000 in four years[38]. According to our study, most journals with an impact factor provided by JCR were not present on the list of predatory journals (<10%). Regarding Qualis, we observed a significantly higher quantity in Qualis C journals (43.3%), possibly due to the less rigorous evaluation policies of these journals. Thus, the presence of an impact factor provided by JCR and/or a higher Qualis classification can be important, suggesting a more trustworthy publication in ethical terms.

Journals with high editorial standards and higher impact factors tend to adopt more rigorous publication policies compared to journals with lower impact factors, prioritizing well developed work with consolidated methodologies that follow ethical requirements from the beginning of research to its conclusion, disseminating reliable and potentially reproducible results. It is important for authors to pay attention to the specific guidelines of journals, seeking to publish their studies in high-quality journals. Similarly, the scientific community must be attentive to this scenario to prioritize citing works published in journals that demand greater compliance with ethical guidelines.

AUTHORS' CONTRIBUTIONS

Catarina Pereira Monteiro Lima: Data acquisition, Writing, Review of the manuscript.
Larissa Braz Pontes: Data acquisition, Writing, Review of the manuscript.
François Isnaldo Dias Caldeira: Work design, Data acquisition, Analysis.
Luan Viana Faria: Work design, Data acquisition, Analysis.
Fernando Afonso de Oliveira: Data acquisition, Manuscript writing.
Maurício Gandini Gianni Martelli: Data acquisition, Manuscript writing.
Luana Raphael da Silva: Data acquisition, Manuscript writing.
Clemente Maia da Silva Fernandes: Editing, Critical review of the manuscript.
Mônica da Costa Serra: Editing, Critical review of the manuscript.

REFERENCES

1. Oermann MH, Nicoll LH, Chinn PL, Ashton KS, Conklin JL, Edie AH, et al. Quality of articles published in predatory nursing journals. Nurs Outlook. 2018 Jan-Feb;66(1):4-10. https://doi.org/10.1016/j.outlook.2017.05.005. PMid:28641868.

2. Yan JR, Baldawi H, Lex JR, Simchovich G, Baisi LP, Bozzo A, et al. Predatory publishing in orthopaedic research. J Bone Joint Surg Am. 2018 Nov;100(21):e138. https://doi.org/10.2106/JBJS.17.01569. PMid:30399085.

3. Ball S, Kopel J, Alexander R, Nugent K. Solicitation for article submission by electronic journals. Proc Bayl Univ Med Cent. 2018 Sep;31(4):443-6. https://doi.org/10.1080/08998280.2018.1498725. PMid:30948976.

4. Graf C, Wager E, Bowman A, Fiack S, Scott-Lichter D, Robinson A. Best practice guidelines on publication ethics: a publisher's perspective. Int J Clin Pract Suppl. 2007 Jan;61(152):1-26. https://doi.org/10.1111/j.1742-1241.2006.01230.x. PMid:17206953.

5. Beall J. What I learned from predatory publishers. Biochem Med. 2017 Jun;27(2):273-8. https://doi.org/10.11613/BM.2017.029. PMid:28694718.

6. Sharma H, Verma S. Predatory journals: the rise of worthless biomedical science. J Postgrad Med. 2018 Oct-Dec;64(4):226-31. https://doi.org/10.4103/jpgm.JPGM_347_18. PMid:30306968.

7. Taylor GA. Predatory journals: a different pandemic. Pediatr Radiol. 2021 Apr;51(4):516-8. https://doi.org/10.1007/s00247-020-04918-4. PMid:33404785.

8. Sullivan LS. Motivated reasoning and research ethics guidelines. J Appl Philos. 2022 Jul;39(3):519-35. https://doi.org/10.1111/japp.12577.

9. Isaacs D, Elliot C, Kilham H, Preisz A. The ethics of publishing in medical journals. Paediatr Respir Rev. 2021 Sep;39:41-7. https://doi.org/10.1016/j.prrv.2019.04.005. PMid:31678037.

10. Strong G. Understanding quality in research: avoiding predatory journals. J Hum Lact. 2019 Nov;35(4):661-4. https://doi.org/10.1177/0890334419869912. PMid:31491365.

11. Brasil. Coordenação de Aperfeiçoamento de Pessoal de Nível Superior – CAPES. The 2017–2020 CAPES Classification. Brasília: CAPES; 2023 [cited 2025 May 14]. Available at: https://sucupira.capes.gov.br/sucupira/public/index.jsf

12. Journal Citation Reports. Zendesk. 2024 [cited 2025 Apr 30]. Available from: https://jcr.clarivate.com/jcr/browse-journals

13. World Medical Association – WMA. Declaration of Helsinki 2008. WMA; 2008 [cited 2025 Jan 30]. Available from: https://www.wma.net/what-we-do/medical-ethics/declaration-of-helsinki/doh-oct2008/

14. European Medicines Agency. EU Clinical Trials Register. The Netherlands: European Medicines Agency. 2025 [cited 2025 Jan 30]. Available from: https://www.clinicaltrialsregister.eu

15. ClinicalTrials.gov. Clinical Trials. Bethesda: National Library of Medicine; 2025 [cited 2025 Jan 30]. Available from: https://clinicaltrials.gov

16. ISRCTN. The Uk's Clinical Study Registry. ISRCTN; 2025 [cited 2025 Jan 30]. Available from: https://www.isrctn.com

17. Equator Network. Enhancing the quality and transparency of health research; 2023[cited 2025 Jan 30]. Available from: https://www.equator-network.org/

18. Bealls list. Potential Predatory scholarly open-acess publishers. Bealls list; 2021 [cited 2025 Jan 30] Available from: https://beallslist.net/

19. Ruy Carneiro NC, Vieira Prado H, Duda Deps Almeida T, Almeida Pordeus I, Borges-Oliveira AC, Castro Martins C. A survey of dental journal methodological practices: reporting guidelines and ethical policies. J Am Dent Assoc. 2018 Dec;149(12):1057-64. https://doi.org/10.1016/j.adaj.2018.08.008. PMid:30244866.

20. Malički M, Jerončić A, Aalbersberg IJ, Bouter L, Ter Riet G. Systematic review and meta-analyses of studies analysing instructions to authors from 1987 to 2017. Nat Commun. 2021 Oct;12(1):5840. https://doi.org/10.1038/s41467-021-26027-y. PMid:34611157.

21. Teixeira RK, Yamaki VN, Gonçalves TB, Botelho NM, Silva JA. O fator de impacto influencia na ética das instruções aos autores de uma revista? Rev Assoc Med Bras. 2013 May-Jun;59(3):280-4. https://doi.org/10.1016/j.ramb.2012.12.003. PMid:23680270.

22. Fontanarosa PB, Flanagin A, DeAngelis CD. Reporting conflicts of interest, financial aspects of research, and role of sponsors in funded studies. JAMA. 2005 Jul;294(1):110-1. https://doi.org/10.1001/jama.294.1.110. PMid:15998899.

23. Mugnaini R, Igami MPZ, Krzyzanowski RF. Acesso aberto e financiamento da pesquisa no Brasil: características e tendências da produção científica. Encontros Bibli. 2022;27(1):1-26. https://doi.org/10.5007/1518-2924.2022.e78818.

24. Cooper CM, Gray H, Barcenas L, Torgerson T, Checketts JX, Vassar M. An evaluation of reporting guidelines and clinical trial registry requirements among addiction medicine journals. J Am Osteopath Assoc. 2020 Dec;120(12):823-30. https://doi.org/10.7556/jaoa.2020.148. PMid:33075122.

25. Sims MT, Checketts JX, Wayant C, Vassar M. Requirements for trial registration and adherence to reporting guidelines in critical care journals: a meta-epidemiological study of journals' instructions for authors. Int J Evid-Based Healthc. 2018 Mar;16(1):55-65. https://doi.org/10.1097/XEB.0000000000000120. PMid:28863029.

26. Han MA, Kim SJ, Hwang EC, Jung JH. The status quo of systematic reviews published in high-impact journals in Korea: a study focused on protocol registration and GRADE use. Epidemiol Health. 2022;44:e2022108. https://doi.org/10.4178/epih.e2022108. PMid:36397240.

27. Bazi T. Peer review: single-blind, double-blind, or all the way-blind? Int Urogynecol J. 2020 Mar;31(3):481-3. https://doi.org/10.1007/s00192-019-04187-2. PMid:31820012.

28. Serra MC, Penteado VP, Barbosa ACS, Fernandes CMS. Research integrity and scientific misconduct: international guidelines, national standards and cooperative research. Ethical and legal reflections. Res Soc Dev. 2021;10(9):e46110918219. https://doi.org/10.33448/rsd-v10i9.18219.

29. Beltrão JF, Silva TC, Silva NLL. Análise das políticas de plágio na publicação científica: o caso de um segmento de revistas da área de Ciências Humanas na América Latina. Transinformacao. 2022;34:e220018. https://doi.org/10.1590/2318-0889202234e220018.

30. Resnik DB, Tyler AM, Black JR, Kissling G. Authorship policies of scientific journals. J Med Ethics. 2016 Mar;42(3):199-202. https://doi.org/10.1136/medethics-2015-103171. PMid:26714812.

31. Wager E. Do medical journals provide clear and consistent guidelines on authorship? MedGenMed. 2007 Jul;9(3):16. PMid:18092023.

32. Gomes WJ, Evora PRB, Guizilini S. Artificial intelligence is irreversibly bound to academic publishing - ChatGPT is cleared for scientific writing and peer review. Braz J Cardiovasc Surg. 2023;38(4):e20230963. https://doi.org/10.21470/1678-9741-2023-0963. PMid:37797272.

33. Rahimi F, Talebi Bezmin Abadi A. ChatGPT and publication ethics. Arch Med Res. 2023 Apr;54(3):272-4. https://doi.org/10.1016/j.arcmed.2023.03.004. PMid:36990890.

34. Zielinski C, Winker MA, Aggarwal R, Ferris LE, Heinemann M, Lapeña JF Jr, et al. Chatbots, generative AI, and scholarly manuscripts: WAME recommendations on chatbots and generative artificial intelligence in relation to scholarly publications. Colomb Med. 2023 Sep;54(3):e1015868. https://doi.org/10.25100/cm.v54i3.5868. PMid:38089825.

35. Patel RB, Vaduganathan M, Mosarla RC, Venkateswaran RV, Bhatt DL, Bonow RO. Open access publishing and subsequent citations among articles in major cardiovascular journals. Am J Med. 2019 Sep;132(9):1103-5. https://doi.org/10.1016/j.amjmed.2019.02.009. PMid:30851265.

36. Ferris LE, Winker MA. Ethical issues in publishing in predatory journals. Biochem Med. 2017 Jun;27(2):279-84. https://doi.org/10.11613/BM.2017.030. PMid:28694719.

37. Manca A, Martinez G, Cugusi L, Dragone D, Mercuro G, Deriu F. Predatory open access in rehabilitation. Arch Phys Med Rehabil. 2017 May;98(5):1051-6. https://doi.org/10.1016/j.apmr.2017.01.002. PMid:28115073.

38. Shen C, Björk BC. 'Predatory' open access: a longitudinal study of article volumes and market characteristics. BMC Med. 2015 Oct;13(1):230. https://doi.org/10.1186/s12916-015-0469-2. PMid:26423063.

CONFLICTS OF INTERESTS

The authors declare no conflicts of interest.

DATA AVAILABILITY

Data available on request from the authors.

*CORRESPONDING AUTHOR

Mônica da Costa Serra, UNESP – Universidade Estadual Paulista "Júlio de Mesquita Filho", Faculdade de Odontologia de Araraquara, Departamento de Odontologia Social, Rua Humaitá, 1.680, 14801-903 Araraquara - SP, Brasil, e-mail: monica.serra@unesp.br

Received: May 14, 2025
Accepted: August 25, 2025

Edited by

Editor: Rosemary Adriana Chierici Marcantonio