

Scientific corrections of publications by authors affiliated with Chilean institutions

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ABSTRACT

Objective. The objective of this study was to analyze the scientific corrections published in Scopus-indexed journals authored by researchers affiliated with Chilean institutions between 2000 and 2024.

Methodology. A mixed-methods approach was employed, combining quantitative and qualitative analyses. A total of 1,204 documents were retrieved from Scopus, which were subsequently included in the study. The errors were then categorized based on their type and impact.

Results. Scientific corrections involving authors affiliated with Chilean institutions demonstrated a persistent and substantial increase over time. The most common errors were related to author identification, tables and figures, and typographical issues. Of all the reported cases, 83.47% were classified as trivial, 14.04% as minor, and 1.58% as major. The fields with the highest number of corrections were Physics and Astronomy, Medicine, and Earth and Planetary Sciences.

Conclusions. Despite the fact that the proportion of corrections remains low relative to the total number of publications, the steady increase in errata is a cause for concern. It is incumbent upon Chilean scientific institutions to establish clear policies and guidelines to prevent errors in academic publications.

Originality and value. This study makes a significant contribution to the existing body of research by addressing the dearth of research in Chile that examines the causes and impacts of scientific corrections. This issue is especially salient in light of Chile's status as the second most scientifically productive nation in the region

KEYWORDS: correction; errata, scientific publication; Chile.

1. INTRODUCTION

THE PUBLICATION of scientific research is considered a fundamental component of

the generation, validation, and dissemination of knowledge (Ortega, 2020). In recent decades, there has been a substantial increase in academic output, driven by a variety of factors.

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These include institutional performance metrics, incentive systems, and academic career evaluations (Niles *et al.*, 2020; van Dalen, 2021). Additionally, there has been a reduction in publication barriers (Teixeira da Silva, 2022). This growth has placed traditional mechanisms for safeguarding scientific integrity to the test. The responsibility for published scientific literature is distributed among publishers, peer reviewers, and authors, who play a crucial role in the prepublication review process (Teixeira da Silva, 2022). However, there is a possibility that particular errors may persist and manifest in the final version of an article (Aboumatar *et al.*, 2021; Erfanmanesh & Morovati, 2019). Such errors can be understood in two ways. First, they can be considered a natural consequence of scientific work and the inherent complexity of research processes (Aboumatar *et al.*, 2021). Second, they can be understood as a byproduct of the “publish or perish” culture that shapes the global research system (Guraya *et al.*, 2016).

The scientific enterprise is founded on the principle of self-regulation, whereby the academic and research community assumes responsibility for identifying and correcting errors in published work (Gasparyan *et al.*, 2014; van Ravenzwaaij *et al.*, 2023; Vazire & Holcombe, 2022). In this context, corrections in the scientific literature primarily seek to prevent undetected errors from propagating and being used by readers, practitioners, or researchers as the foundation for their work or future studies (Akhaddar, 2021). To this end, the publishing system employs a range of mechanisms, such as expressions of concern, retractions, and formal corrections (errata), that serve as essential safeguards for maintaining the quality and integrity of the scientific record (Hesselmann *et al.*, 2017; Ortega, 2020). Expressions of concern are formal notifications disseminated by publishing entities to inform readers of potential instances of scientific misconduct in a given article (Talari & Ravindran, 2020; Teixeira da Silva & Nazarovets, 2024). While these measures are intended to prevent such issues, their efficacy as corrective instruments remains a subject of debate. These measures do not directly amend the published content; rather, they cast doubt on its integrity (Teixeira da Silva & Nazarovets, 2024). In the event that the suspicions are confirmed following the

corresponding investigation, such notices may result in a formal correction or, in more serious cases, the retraction of the article (DeMaria, 2012).

Scientific retractions, in turn, serve as a formal mechanism through which a journal or publisher formally withdraws an article, either due to the presence of significant flaws in the research itself or to issues that arose during the publication process (Ortega, 2020). Once such flaws have been identified, a retraction invalidates the study’s findings and conclusions (Dal-Ré, 2020), thereby notifying readers that the work should no longer be cited or relied upon as a basis for future research or professional practice. Finally, authors issue errata to correct errors in publications that are significant enough to affect the overall quality of the article (Ajiferuke & Adekannbi, 2020) or to lead to misinterpretations (Teixeira da Silva & Dobránszki, 2017), but that do not substantially compromise the study’s findings or conclusions (DeMaria, 2012). Therefore, they do not justify the retraction of the work (Ajiferuke & Adekannbi, 2020). The nomenclature employed to delineate these corrections exhibits variability across journals and databases. According to Bentan *et al.* (2024), errata refer to errors introduced by the journals themselves, whereas corrigenda denote mistakes attributable to the authors. However, the U.S. National Library of Medicine does not differentiate between corrections, errata, and corrigenda (Akhaddar, 2021; Talari & Ravindran, 2020). Furthermore, related terms such as erratum, corrigendum, and addendum are employed (Akhaddar, 2021; Moradi & Abdi, 2021), as well as their English equivalents, including cut, deletion, addition, amplification, supplement, adjustment, alteration, modification, revision, improvement, renovation, clarification, explanation, and explication (Scarlat, 2017).

Despite its scientific and ethical pertinence, research on corrections in the scientific literature has focused primarily on retractions (Yang *et al.*, 2022). In contrast to retractions, scientific errata have received considerably less attention, despite their status as one of the most prevalent forms of correction. A preponderance of extant studies has exhibited a propensity to concentrate on discrete academic disciplines, predominantly within the health sciences.

These include investigations in clinical imaging (Castillo *et al.*, 2012), neurosurgery (Akhaddar, 2021; Liu & Kaliaperumal, 2022), otolaryngology (Bentan *et al.*, 2024), studies related to the coronavirus 2019 (COVID-19) (Moradi & Abdi, 2021), systematic reviews (Farrah & Rabb, 2019), general medicine (Hauptman *et al.*, 2014), biomedicine (Peterson, 2010), and oncology (Molckovsky *et al.*, 2011). However, research on errors in fields outside of biomedicine remains limited and fragmented, with a predominant focus on disciplines such as library and information science (Ajiferuke & Adekannbi, 2020; Chang & Meng, 2025; Yang *et al.*, 2022), the physical sciences (Poworoznek, 2003), electronic journals (Jones *et al.*, 2003), and mathematics (Grcar, 2013). Furthermore, the phenomenon has received scant attention from geographical and national perspectives, with few studies systematically examining the frequency, nature, and causes of corrections within specific regional contexts. A notable example of this type of study is that conducted by Teixeira da Silva and Erfanmanesh (2021).

The extant literature examining errors across various academic disciplines has demonstrated a general consensus that the majority of these errors are of a minor nature. However, it should be noted that certain studies have reported more serious cases within specific fields of study (Hauptman *et al.*, 2014; Molckovsky *et al.*, 2011). The most prevalent errors pertain to issues related to authorship, tables, figures, and references (Akhaddar, 2021; Bentan *et al.*, 2024; Moradi & Abdi, 2021; Yang *et al.*, 2022), while errors in content or results occur less frequently. Furthermore, several studies have identified disciplinary patterns in the distribution of errors, with a higher incidence observed in highly technical and biomedical fields, particularly Medicine; Biochemistry, Genetics and Molecular Biology; Physics; Chemistry; and Mathematics (Pichardo-Corpus *et al.*, 2020; Teixeira da Silva & Erfanmanesh, 2021). In light of the recent surge in such practices (Gasparyan *et al.*, 2014; Yang *et al.*, 2022), it is imperative to undertake a more profound examination of these phenomena to enhance our comprehension of their ramifications and to fortify the mechanisms of editorial oversight and scientific ethics. In this context, and considering the paucity of extant literature on errata in Latin

America, this study aims to characterize scientific corrections in publications authored by researchers affiliated with Chilean institutions, as indexed in the Scopus database between 2000 and 2024. The objective of this study is to identify the underlying causes of article corrections and to provide empirical evidence that fosters a more transparent and trustworthy scientific culture founded on rigor and responsibility.

This study is of particular pertinence in light of Chile's recent, substantial augmentation in its scientific output over the past two decades. This development necessitates an examination of the quality, reliability, and correction mechanisms associated with this production. However, to date, no systematic research has characterized the nature, typology, or frequency of scientific corrections in this context. The article is structured as follows: following the introduction, the methodological approach is described; the next section presents the results, and the final section discusses the findings and conclusions of the study.

2. METHODOLOGY

This study employs a mixed-methods design, integrating both quantitative and qualitative methodologies. The quantitative component of the study employs statistical techniques to examine the evolution, frequency, and distribution of corrections to the scientific output of authors affiliated with Chilean institutions between 2000 and 2024. The qualitative component enables the examination and categorization of the content of correction notices, understood as an umbrella term encompassing erratum, addendum, corrigendum, and errata, among others.

2.1. Data collection

For this study, records corresponding to *erratum* and *retraction* documents published between 2000 and 2024 were retrieved from the Scopus database. Despite the fact that the analysis concentrated exclusively on *errata*, both document types were downloaded, as in some cases *errata* may be indexed under the *retraction* category and vice versa. The search was executed using the following strategy through the advanced search option: *AFFILCOUNTRY*

(Chile) AND PUBYEAR > 1999 AND PUBYEAR < 2025 AND (LIMIT-TO (DOCTYPE , “tb”) OR LIMIT-TO (DOCTYPE , “er”)). A total of 1,267 documents were retrieved for analysis. During the preliminary screening, 56 records were excluded due to their association with expressions of concern or retractions. Following

the initial stage of the analysis, the number of documents was reduced to 1,211. A subsequent screening was then conducted to identify and remove duplicate records, resulting in the exclusion of seven additional entries. The final dataset comprised a total of 1,204 documents, as illustrated in Figure 1.

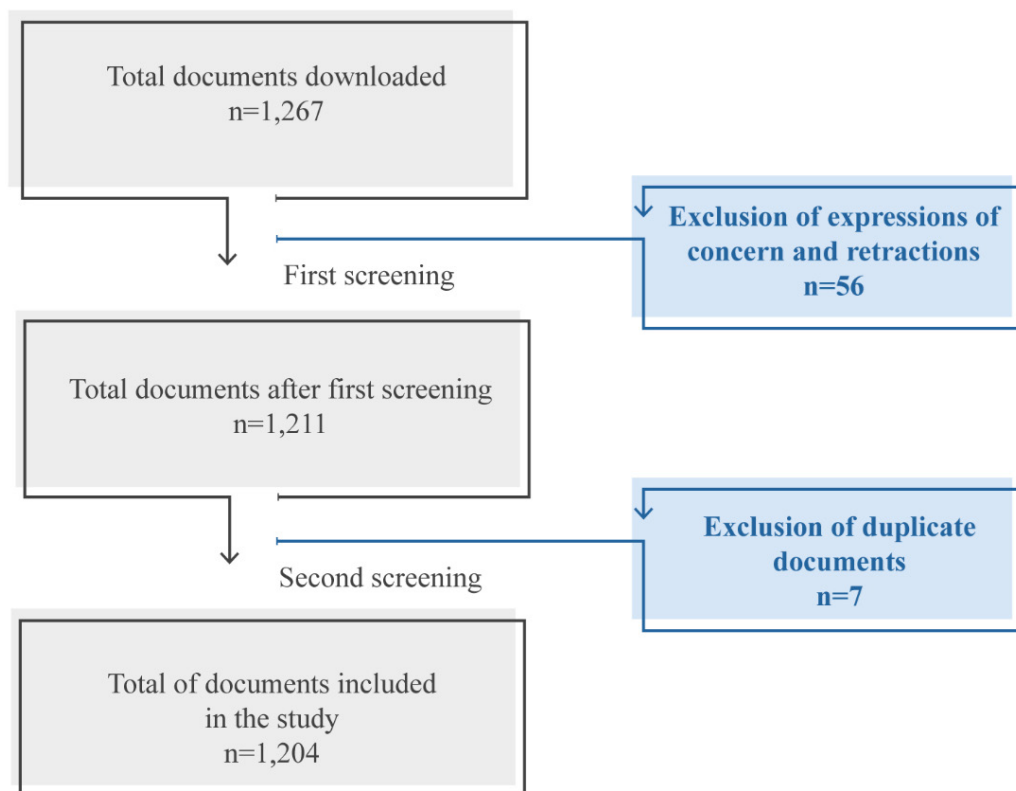


Figure 1. Flowchart of document selection for the study.

Following the identification of the documents included in the study, an Excel database was created to record pertinent information for each entry. This included the title, DOI, authors, journal, publisher, authors' institutions, year of publication, year of revision, and the corresponding field of knowledge.

2.2. Categorization of errata

Subsequent to database generation, the erratum notices were grouped. An initial categorization was conducted based on the type of error, followed by a second categorization according to the impact of the reported error(s). Each correction notice was meticulously reviewed to ascertain the nature of the error

and evaluate its implications. Two authors independently analyzed all 1,204 documents, which were divided equally between them. For impact classification —particularly in cases involving major errors— a joint analysis was carried out, as these instances required a more thorough examination and consensus in evaluation. For the categorization by error type, the taxonomies proposed by Molckovsky *et al.* (2011) and Ajiferuke and Adekannbi (2020) were adapted. The resulting typologies are presented in Table 1.

To ascertain the impact of each correction, the classification proposed by Bentan *et al.* (2024) was utilized as a reference. The categories utilized in this classification are outlined in Table 2.

Type	Description
Text/typographical	This category comprises spelling and grammatical errors, incorrect punctuation, and typographical inconsistencies.
Author identification	This category encompasses a range of issues, including misspellings of names or affiliations, incorrect author order, omission of contributors, and issues related to corresponding authorship.
References/attributions	Such errors occur when sources are cited inaccurately or incompletely, or when ideas, findings, or quotations are misattributed to incorrect authors.
Results/conclusions	Such errors involve the presentation of incorrect, inconsistent, or manipulated data, often resulting from miscalculations, misstatements, or misinterpretations.
Tables/figures	Such errors include mislabeled graphs, incorrect units of measurement, duplicated datasets, inappropriate scales, and low-resolution images.
Editorial errors	Errors of this nature arise during the editorial process, encompassing such issues as incorrect layouts, flawed titles or subtitles, erroneous page numbering, broken DOI links, and misplacement within an inappropriate journal issue.
Acknowledgment	Such errors occur when sources of support—including funding bodies or acknowledged individuals—are omitted or inaccurately represented.
Equation/formula	Errors of this nature encompass incorrectly written mathematical symbols, improperly stated operations, and inconsistencies between formulas and the text that accompanies them.
Materials or methods	Such errors occur when the description of the experimental design, instruments, procedures, or conditions is inaccurate, incomplete, or methodologically flawed.
Analysis/calculations	Such errors occur when statistical methods are misapplied, inappropriate tests are selected, or other methodological inaccuracies are introduced.
Others errors	This category comprises errors identified in the supplementary materials or additional content accompanying the main document.
Other authorship errors	This category encompasses omissions or inaccuracies in declarations of conflicts of interest and copyright statements.

Table 1. Types of errors.

Category	Description
Trivial	Errors that do not affect the interpretation of results or conclusions.
Minor	Errors that compromise the interpretation of results but do not alter the study's conclusions.
Major	Errors that compromise the interpretation of results and conclusions, requiring substantial revisions to the document.

Table 2. Categories according to error impact.

2.3. Data analysis

To ensure a comprehensive understanding of the results, a combination of descriptive and inferential analyses was employed. The statistical analyses were conducted using SPSS (version 21), while Excel was utilized for the generation of graphs.

3. RESULTS

3.1. Frequency and evolution

Figure 2 illustrates the evolution of Chile’s scientific output indexed in Scopus between 2000 and 2024. The figure reveals a steady upward trend throughout the observed period. The

linear regression analysis confirms a highly significant increase, with a coefficient of determination of $R^2 = 0.964$ and an adjusted $R^2 = 0.963$ ($F_{1,23} = 619.93$, $p < 0.001$). These results suggest that the passage of time explains a substantial portion of the variability in Chile’s scientific output, accounting for approximately 96.4% of the observed variance.

Figure 3 illustrates the progression of errata disseminated by authors associated with Chilean institutions. Linear regression analysis yielded $R^2 = 0.806$ and adjusted $R^2 = 0.797$ ($F_{1,23} = 95.72$ and $p < 0.001$), indicating that 80.6% of the variability in the number of corrections can be explained by time. Moreover, the number of corrections has increased significantly over the period under consideration.

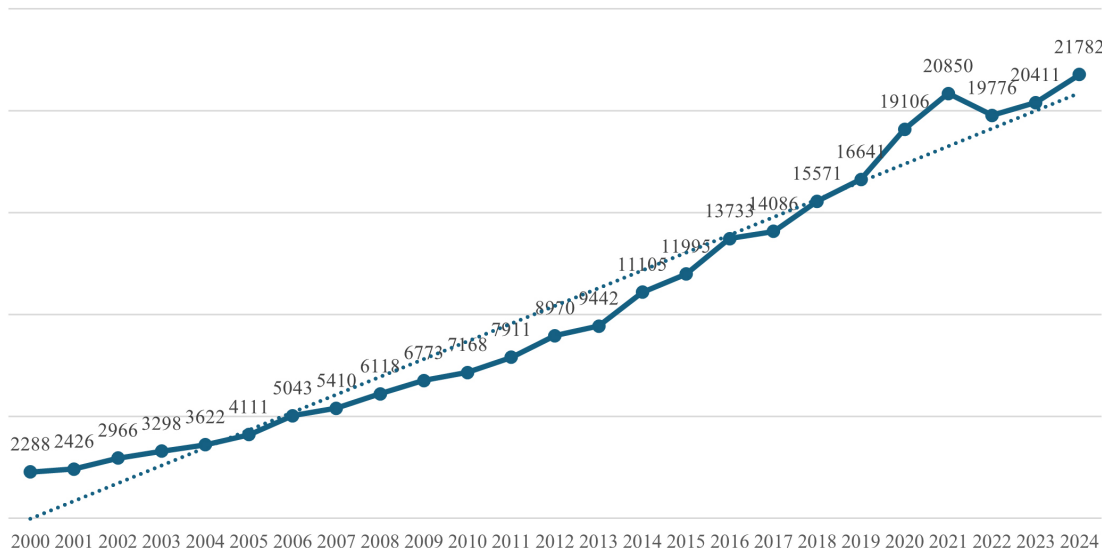


Figure 2. Evolution of Chile's scientific publications in Scopus (2000-2024).

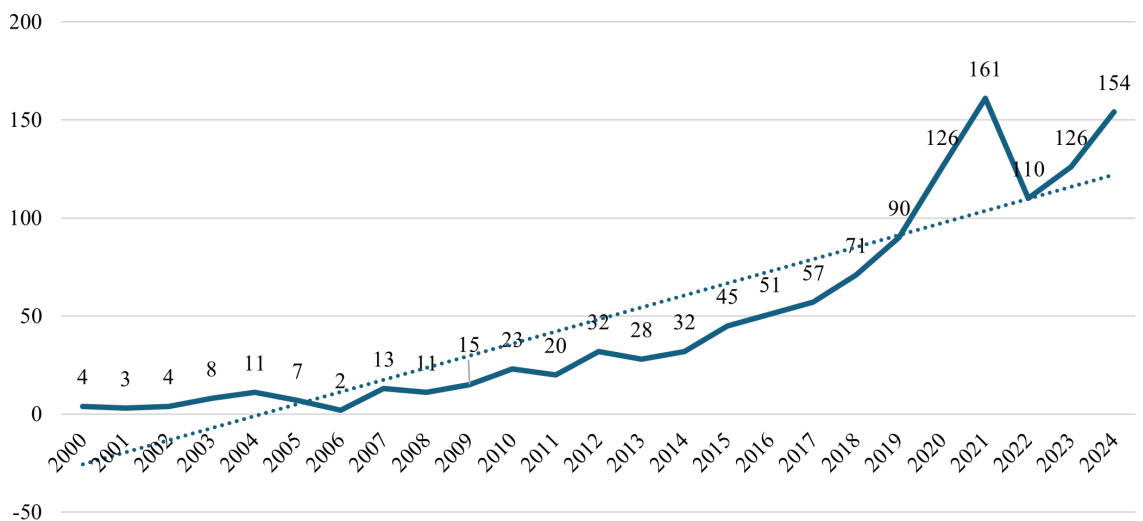


Figure 3. Evolution of Chile's scientific corrections in Scopus (2000-2024).

Table 3 presents the number of publications and corrections by field of knowledge between 2000 and 2024, along with the correction rate per 10,000 publications. During this period, authors affiliated with Chilean institutions produced 260,602 publications and 1,204 corrections, yielding a correction rate of 46.20 per 10,000 publications. The fields with the highest number of corrections are Physics and Astronomy (306), Medicine (255), and Earth and Planetary Sciences (218). Conversely, the disciplines with the highest relative correction rates include Multidisciplinary Sciences (183.73), Neuroscience (98.29), and Biochemistry,

Genetics and Molecular Biology (77.42). These findings suggest that the occurrence of errors is not solely determined by the overall volume of scientific output.

It is important to note that a single document may contain one or more errors that trigger a correction. Consequently, the total number of errors may exceed the number of correction notices. Furthermore, the frequency of errors does not inherently correlate with the gravity of a correction. The presence of three or four errors does not automatically categorize a correction as significant. For instance, the article with DOI 10.1364/AO.378008 contains three errors

Subject area	Number of publications	Number of corrections	Correction rate per 10,000 publications
Physics and Astronomy	41,289	306	74.11
Medicine	56,893	253	44.47
Earth and Planetary Sciences	31,464	218	69.29
Biochemistry, Genetics and Molecular Biology	22,734	176	77.42
Agricultural and Biological Sciences	34,009	136	49.99
Engineering	30,113	103	34.20
Multidisciplinary	5,334	98	183.73
Chemistry	16,446	105	63.85
Mathematics	20,593	89	43.22
Environmental Science	19,532	85	43.53
Social Sciences	39,852	79	19.83
Neuroscience	5,392	53	98.29
Immunology and Microbiology	7,154	51	71.29
Computer Science	23,336	48	20.57
Materials Science	13,370	42	31.42
Chemical Engineering	8,489	40	47.11
Psychology	7,514	40	53.23
Pharmacology, Toxicology, and Pharmaceutics	4,903	36	73.43
Decision Sciences	4,039	29	71.80
Economics, Econometrics, and Finance	5,484	26	47.42
Arts and Humanities	19,318	19	9.84
Business, Management and Accounting	5,665	19	33.54
Energy	7,052	18	25.52
Nursing	5,189	16	30.83
Health Professions	4,361	16	36.70
Veterinary	2,679	5	18.66
Dentistry	2,035	1	4.91
Total (2000-2024)	260,602	1,204	46.20

Table 3. Publications and corrections by subject area and correction rates (2000-2024).

Note: Publications and corrections may be indexed in one or more subject areas; therefore, the total does not necessarily correspond to the sum of publications and corrections across all subject areas.

in the author affiliation, abstract, and funding sections. A total of 1,517 errors were identified across the 1,204 articles that were analyzed, corresponding to an average of 1.26 errors per document. The most prevalent error type was author identification (26.96%), followed by errors in tables and figures (22.08%) and text or typographical errors (11.8%) (Table 4).

Table 5 lends further support to the previously mentioned assertion that a corrected article may contain more than one error. As demonstrated in the tabular data, the preponderance of documents exhibits a single error, with a frequency of 77.82%. A total of 18.6% of the documents exhibited two errors, while 3.32% of the documents exhibited three errors. Only 0.25% of the documents exhibited four errors.

Type of error	Number of errors	Percentage (%)
Author identification	409	26.96
Tables/figures	335	22.08
Text/typographical	179	11.80
Acknowledgments	140	9.23
Results/conclusions	134	8.83
Equations/formulas	111	7.32
References/attributions	65	4.28
Analysis/calculations	66	4.35
Other authorship errors	26	1.71
Materials or methods	22	1.45
Editorial errors	20	1.32
Other errors	10	0.66
Total	1,517	100

Table 4. Frequency and percentage of errors by type.

Number of errors	Number of documents	Percentage (%)
1	937	77.82
2	224	18.60
3	40	3.32
4	3	0.25
Total	1,204	100

Table 5. Number of errors per document.

The second categorization of errors was based on their impact, classified as trivial, minor, or major (Figure 4). The majority of the identified errors were classified as trivial (1,005; 83.47%), indicating that they did not significantly compromise the validity of the articles. An example of a trivial error is the article <https://doi.org/10.3389/fpsyg.2024.1462134>, which was corrected due to the inadvertent omission of a funding source. A total of 169 cases (14.04%) were attributed to minor errors. While these errors do not affect the primary conclusions, they may have an impact on the analysis or interpretation of specific results. For instance, the article <https://doi.org/10.1007/s00229-017-0921-z> included a theorem correction that influenced the reasoning and intermediate results but did not modify the overall conclusion. Finally, the presence of major errors was found to be a minor occurrence, with a total of 19 cases identified (representing 1.58% of the total). However, these errors were found to have substantial implications for the integrity of the

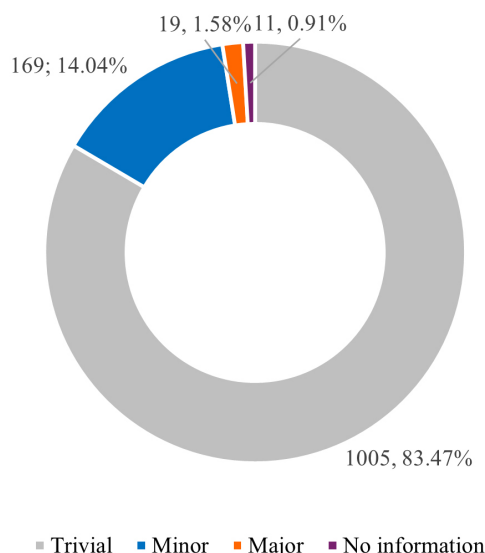


Figure 4. Categorization of corrections by impact.

findings. An illustration of this methodological approach can be found in the article <https://doi.org/10.1063/1.3657344>, wherein the inaccuracy identified in Theorem 3.3 had a deleterious effect on the foundational principles of subsequent results, necessitating the formulation of a novel hypothesis. These results suggest that, while the majority of corrections address relatively minor issues, a small yet significant proportion of errors have the potential to compromise the scientific reliability of the publications.

As illustrated in Figure 5, the impact of corrections varies across different disciplines. The findings indicate that trivial corrections are prevalent in all fields, with percentages exceeding 90% in areas such as Dentistry (100%), Chemical Engineering (92.5%), Environmental Science (91.8%), Social Sciences (91.1%), Multidisciplinary Sciences (90.8%), Neuroscience and Chemistry (90.6%), and Psychology (90%). Conversely, minor corrections contribute to an intermediate proportion. They are particularly concentrated in disciplines such as Nursing (31.25%), Earth and Planetary Sciences (25.3%), Veterinary Science (25%), Material Science (21.43%), Physics and Astronomy (23.86%), and Mathematics (21.35%). Major corrections are infrequent occurrences; fields such as Physics and Astronomy (11; 3.59%) and Earth and Planetary Sciences (5; 2.29%) are notable exceptions. This phenomenon aligns with the observation that these are two of the three disciplines with the highest number of total corrections.

Table 6 presents the journals with the highest number of corrected articles, all of which are classified in the Q1 quartile. This finding suggests that high-quality academic journals are not necessarily immune to the presence of errors. Furthermore, the study posits that journals with greater visibility tend to have a higher number of corrections due to increased scientific scrutiny. The journal with the highest number of corrected articles is *Scientific Reports* (69; 5.8%), followed by *Astronomy and Astrophysics* (54; 4.5%) and the *Astrophysical Journal* (35; 2.9%). It is noteworthy that, among the 10 journals with the highest number of corrections, several belong to the field of astronomy. This phenomenon can be explained by the fact that this is the discipline with the highest number of correction reports submitted by authors affiliated with Chilean institutions (Table 5).

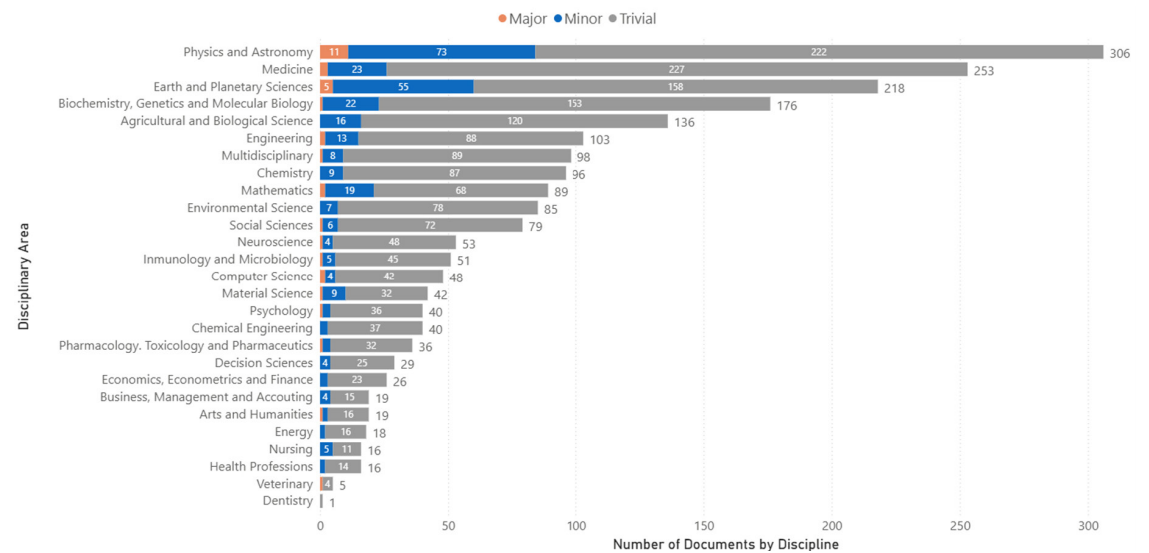


Figure 5. Error categories across subject areas.

Rank	Journal	Quartile	Number of articles	Articles(%)
1	Scientific Reports	Q1	69	5.8
2	Astronomy and Astrophysics	Q1	54	4.5
3	Astrophysical Journal	Q1	35	2.9
4	Monthly Notices of the Royal Astronomical Society	Q1	32	2.7
5	European Physical Journal C	Q1	26	2.2
6	Journal of High Energy Physics	Q1	20	1.7
7	Nature Communications	Q1	18	1.5
8	Nature	Q1	17	1.4
9	Astronomical Journal	Q1	12	1
10	Scientific Data	Q1	10	0.8

Table 6. Journals with the highest number of corrected articles.

4. DISCUSSION

The findings of this study suggest that scientific corrections associated with authors affiliated with Chilean institutions have demonstrated a consistent increase from 2000 to 2024, reflecting the general growth in national academic output. This phenomenon aligns with international evidence, which indicates that the escalation of scientific endeavors has concomitantly led to an increased frequency of corrections (Santos-d’Amorim *et al.*, 2025; Teixeira da Silva & Erfanmanesh, 2021). The congruence between the findings of the study and those documented in the international literature serves to substantiate the proposition that the majority of corrections in scientific publications pertain to trivial or low-impact errors. This pattern suggests that the majority of corrections result

from formal or technical issues rather than substantive flaws in the research itself. Among articles authored by researchers affiliated with Chilean institutions, 83.47% of the errors were classified as trivial, 14.04% as minor, and only 1.58% as major. This phenomenon aligns with the findings documented in earlier studies. Bentan *et al.* (2024) found that 73.6% of errors were classified as trivial, 16.6% as minor, and 9.7% as major, while Yang *et al.* (2022) reported 67% trivial errors and 3.6% major errors. Research conducted across various academic disciplines lends further credence to this pattern. For instance, Ajiferuke and Adekannbi (2020) observed that 98% of errors in library science journals were minor, whereas in radiology. Castillo *et al.* (2012) identified 93.7% minor errors and 6.3% major errors. However, a paucity of studies has reported higher proportions of

major errors. For instance, Molckovsky *et al.* (2011) reported a 14% rate of major errors in oncology, while Hauptman *et al.* (2014) reported a 24.2% rate in general medicine.

With respect to the typology of errors documented in the extant literature, numerous studies have identified relatively consistent patterns. In the domain of head and neck surgery, Bentan *et al.* (2024) documented that the most prevalent errors pertained to authorship (36.8%) and figures (23.1%). Yang *et al.* (2022) similarly determined that, in library and information science journals, the most prevalent type of scholarly error was found to be authorship errors, accounting for 23.7% of all errors identified. This was followed by errors involving tables and figures, which constituted 21.2% of the errors, and errors in references, which accounted for 15.8% of the errors. In publications related to COVID-19, Moradi and Abdi (2021) also reported that the most common errors involved author information (24%), tables (9.4%), and results (9.1%). In a similar vein, Akhaddar's (2021) study identified a preponderance of authorship errors (42.3%), followed by content errors (13.6%) and figure-related errors (12.4%) in the domain of neurosurgery. In general, these findings align with the results obtained in this study. The persistent occurrence of errors pertaining to authorship, affiliation, and graphical representation (tables and figures) across various disciplines indicates that inaccuracies in the attribution of scientific work and the visual presentation of results persist as pervasive challenges within the research process. While such errors do not inherently invalidate the findings, they can progressively diminish the transparency, ethical integrity, and communicative clarity of scientific reporting.

The findings of this study corroborate and expand upon extant literature concerning the concentration of corrections across specific disciplines. In accordance with the observations documented by Teixeira da Silva and Erfanmanesh (2021) and Pichardo-Corpus *et al.* (2020), it was determined that the fields of Physics and Astronomy; Medicine; and Biochemistry, Genetics and Molecular Biology are among those with the highest number of corrections. This pattern suggests that highly technical and biomedical disciplines tend to be

more prone to the occurrence of errata. In this study, Physics and Astronomy accounted for the highest number of errors (306 cases), followed by Medicine (253) and Earth and Planetary Sciences (218). These figures may reflect both the high volume of scientific output and the methodological complexity characteristic of these areas. Despite the meticulous characterization of scientific corrections provided by researchers affiliated with Chilean institutions, it is imperative to acknowledge the study's limitations. First, the data source was constrained to Scopus, excluding databases such as Web of Science and SciELO. Consequently, the sample might not fully capture the breadth of the scientific output produced by Chilean-affiliated authors. Second, the interpretation of error impact is inherently subjective. While the taxonomy employed aligns with frameworks established in previous research, its application ultimately depends on the reviewers' judgment, introducing an inherent subjective component, even when independent evaluations and author consensus are achieved. Finally, the study does not examine the relationship between corrections and the citation impact or visibility of the corrected documents, a subject that merits further research.

5. CONCLUSION

This study characterized the presence of scientific corrections in publications authored by researchers affiliated with Chilean institutions between 2000 and 2024. The findings indicate a persistent surge in correction notices, concomitant with the escalating national scientific output. This pattern suggests two things. First, it suggests greater dynamism in scientific and academic activity. Second, it suggests the need for stronger author accountability, institutional mechanisms to prevent errors, and more robust editorial processes. The most prevalent errors were associated with author identification, tables and figures, and textual or typographical issues. With respect to disciplinary distribution, the highest frequencies were observed in Physics and Astronomy, Medicine, and Earth and Planetary Sciences. The highest correction rates (per 10,000 publications) were observed in the fields of Multidisciplinary Sciences; Neuroscience; and Biochemistry, Genetics and

Molecular Biology. The majority of the errors were classified as trivial, followed by minor ones, with only a small number of major cases. These findings demonstrate that corrections are a normal and necessary mechanism within the process of scientific communication. Ensuring the traceability, detectability, and prompt correction of scientific errors is paramount to preserving public trust and safeguarding the cumulative value of scientific knowledge.

Conflict of interest

The authors declare that there are no conflicts of interest.

Contribution statement

Cristian Zahn-Muñoz: Conceptualization, data curation, methodology, Writing – original draft, Writing – proofreading & editing.

Bastian Aravena-Niño: Conceptualization, formal analysis, visualization, methodology, writing – proofreading and editing.

Ezequiel Martínez-Rojas: Conceptualization, supervision, methodology, writing – original draft, Writing – proofreading and editing.

Alberto Martínez-Quezada: Research, Writing – original draft, Writing – proofreading and editing.

Statement of data consent

The data generated during the research are included in the manuscript. 

REFERENCES

- ABOUMATAR, H., THOMPSON, C., GARCIA-MORALES, E., GURSES, A. P., NAQIBUDDIN, M., SAUNDERS, J., KIM, S. W., & WISE, R. (2021). Perspective on reducing errors in research. *Contemporary Clinical Trials Communications*, 23, Article 100838. <https://doi.org/10.1016/j.conctc.2021.100838>
- AJIFERUKE, I., & ADEKANNBI, J. O. (2020). Correction and retraction practices in library and information science journals. *Journal of Librarianship and Information Science*, 52(1), 169-183. <https://doi.org/10.1177/0961000618785408>
- AKHADDAR, A. (2021). Error publication (published erratum) in neurosurgical journals worldwide using PubMed during the last 30 years. *Child's Nervous System*, 37(2), 637-643. <https://doi.org/10.1007/s00381-020-04824-y>
- BENTAN, M. A., FENTON, J. E., & COELHO, D. H. (2024). Errata and corrigenda in the OHNS literature. *Ear, Nose & Throat Journal*, 1-8. <https://doi.org/10.1177/01455613241266467>
- CASTILLO, M., NORTHAM, M., & HALM, K. E. (2012). Postpublication errors in imaging-related journals. *American Journal of Neuroradiology*, 33(8), 1447-1448. <https://doi.org/10.3174/ajnr.a3026>
- CHANG, Y., & MENG, M. (2025). Errata publishing in library and information science journals from 2001 to 2020 and citation patterns of published errata: Analysis and insights. *Journal of Educational Media & Library Sciences*, 62(1), 29-61. [https://doi.org/10.6120/JoEMLS.202503_62\(1\).0046.RS.AM](https://doi.org/10.6120/JoEMLS.202503_62(1).0046.RS.AM)
- DAL-RÉ, R. (2020). Analysis of biomedical Spanish articles retracted between 1970 and 2018. *Medicina Clínica*, 154(4), 125-130. <http://dx.doi.org/10.1016/j.medcle.2019.04.033>
- DEMARIA, A. N. (2012). Scientific misconduct, retractions, and errata. *Journal of the American College of Cardiology*, 59(16), 1488-1489. <https://doi.org/10.1016/j.jacc.2012.03.005>
- ERFANMANESH, M., & MOROVATI, M. (2019). Published errors and errata in library and information science journals. *Collection and Curation*, 38(3), 61-67. <https://doi.org/10.1108/CC-12-2018-0024>
- FARRAH, K., & RABB, D. (2019). Errata for trial publications are not uncommon, are frequently not trivial, and can be challenging to access: A retrospective review. *Journal of the Medical Library Association*, 107(2), 187-193. <https://doi.org/10.5195/jmla.2019.629>
- GASPARYAN, A. Y., AYVAZIAN, L., AKAZHANOV, N. A., & KITAS, G. D. (2014). Self-correction in biomedical publications and the scientific impact. *Croatian Medical Journal*, 55, 61-72. <https://doi.org/10.3325/cmj.2014.55.61>
- GRCAR, J. F. (2013). Errors and corrections in mathematics literature. *Notices of the American Mathematical Society*, 60(4), 418. <https://doi.org/10.1090/noti988>
- GURAYA, S. Y., NORMAN, R. I., KHOSHHAL, K. I., GURAYA, S. S., & FORGIONE, A. (2016). Publish

- or perish mantra in the medical field: A systematic review of the reasons, consequences and remedies. *Pakistan Journal of Medical Sciences*, 32(6), 1562-1567. <https://doi.org/10.12669/pjms.326.10490>
- HESELMMANN, F., GRAF, V., SCHMIDT, M., & REINHART, M. (2017). The visibility of scientific misconduct: A review of the literature on retracted journal articles. *Current Sociology Review*, 65(6), 814-845. <https://doi.org/10.1177/0011392116663807>
- HAUPTMAN, P. J., ARMBRECHT, E. S., CHIBNALL, J. T., GUILD, C., TIMM, J. P., & RICH, M. W. (2014). Errata in medical publications. *The American Journal of Medicine*, 127(8), 779-785. <https://doi.org/10.1016/j.amjmed.2014.03.012>
- JONES, D. A., WATSON, M. M., COMEGYS, M., BURNETT, A., & TUCKER, B. (2003). Errata and retractions in electronic journals: Notification practices. *Journal of Hospital Librarianship*, 3(2), 19-27. https://doi.org/10.1300/J186v03n02_02
- LIU, J., & KALIAPERUMAL, C. (2022). Errata and corrigenda in neurosurgical publications: An in-depth analysis and inference. *World Neurosurgery*, 160, e549-e565. <https://doi.org/10.1016/j.wneu.2022.01.070>
- MOLCKOVSKY, A., VICKERS, M. M., & TANG, P. (2011). Characterization of published errors in high-impact oncology journals. *Current Oncology*, 18(1), 26-32. <https://doi.org/10.3747/co.v18i1.707>
- MORADI, S., & ABDI, S. (2021). Pandemic publication: Correction and erratum in COVID-19 publications. *Scientometrics*, 126, 1849-1857. <https://doi.org/10.1007/s11192-020-03787-w>
- NILES, M. T., SCHIMANSKI, L. A., MCKIERNAN, E. C., & ALPERIN, J. P. (2020). Why we publish where we do: Faculty publishing values and their relationship to review, promotion and tenure expectations. *PLoS ONE*, 15(3), Article e0228914. <https://doi.org/10.1371/journal.pone.0228914>
- ORTEGA, J. L. (2020). The relationship and incidence of three editorial notices in PubPeer: Errata, expressions of concern, and retractions. *Learned Publishing*, 34(2), 164-174. <https://doi.org/10.1002/leap.1339>
- PETERSON, G. M. (2010). The effectiveness of the practice of correction and republication in the biomedical literature. *Journal of the Medical Library Association: JMLA*, 98(2), 135-139. <https://doi.org/10.3163/1536-5050.98.2.005>
- PICHARDO-CORPUS, J. A., CONTRERAS-NUÑO, G., & DE LA PEÑA, J. A. (2020). Proporción y distribución de erratas en publicaciones científicas. *Investigación bibliotecológica*, 33(80), 97-116. <https://doi.org/10.22201/iibi.24488321xe.2019.80.58000>
- POWOROZNEK, E. L. (2003). Linking of errata: Current practices in online physical sciences journals. *Journal of the American Society for Information Science and Technology*, 54(12), 1153-1159. <https://doi.org/10.1002/asi.10320>
- SANTOS-D'AMORIM, K., SANZ-CASADO, E., & MACEDO DOS SANTOS, R. (2025). Errors, questionable practices, or misconduct? A bibliometric and altmetric review covering two decades of retractions in Latin America. *Scientometrics*, 130, 3679-3706. <https://doi.org/10.1007/s11192-025-05343-w>
- SCARLAT, M. (2017). Erratum, corrigenda et emendatio or “mistake, correction and amendment”. *International Orthopaedics (SICOT)*, 41, 1071-1072. <https://doi.org/10.1007/s00264-017-3501-7>
- TALARI, K., & RAVINDRAN, V. (2020). Corrections in biomedical literature: Errata, expressions of concern, and retractions. *Indian Journal of Rheumatology*, 15(4), 258-260.
- TEIXEIRA DA SILVA, J. A. (2022). A synthesis of the formats for correcting erroneous and fraudulent academic literature, and associated challenges. *Journal for General Philosophy of Science*, 53, 583-599. <https://doi.org/10.1007/s10838-022-09607-4>
- TEIXEIRA DA SILVA, J. A., & DOBRÁNSZKI, J. (2017). Notices and policies for retractions, expressions of concern, errata and corrigenda: Their importance, content, and context. *Science and Engineering Ethics*, 23, 521-554. <https://doi.org/10.1007/s11948-016-9769-y>
- TEIXEIRA DA SILVA, J. A., & ERFANMANESH, M. (2021). Errata and retractions associated with research papers published by authors with Hungarian affiliations. *European Science Editing*, 47, Article e60203. <https://doi.org/10.3897/ese.2021.e60203>
- TEIXEIRA DA SILVA, J., & NAZAROVETS, M. (2024). Better guidance is needed for editorial expressions of concern. *Accountability in Research*, 31(8), 1260-1276. <https://doi.org/10.1080/08989621.2023.2206021>

- VAN DALEN, H. (2021). How the publish-or-perish principle divides a science: the case of economists. *Scientometrics*, 126, 1675-1694. <https://doi.org/10.1007/s11192-020-03786-x>
- VAN RAVENZWAAIJ, D., BAKKER, M., HEESSEN, R., ROMERO, F., VAN DONGEN, N., CRÜWELL, S., FIELD, M., HELD, L., MUNAFO, R., PITTELKOW, M., TIOKHIN, L., TRAAG, V., VAN DEM AKKER, R., VAN VEER, A., & WAGENMAKERS, J. (2023). *Perspectives on scientific error*. *Royal Society Open Science*, 10, Article 230448. <https://doi.org/10.1098/rsos.230448>
- VAZIRE, S., & HOLCOMBE, A. (2022). Where are the self-correcting mechanisms in science? *Review of General Psychology*, 26(2), 212-223. <https://doi.org/10.1177/10892680211033912>.
- YANG, S., DIAO, H., ZOU, Y., & XIAO, A. (2022). Characteristics of correction practice and its citation in library and information science journals. *Journal of Librarianship and Information Science*, 55(4), 1088-1101. <https://doi.org/10.1177/09610006221124623>

