Aportación original
Vol. 63
Núm. 5

Impact of incorrect affiliations on the recognition of Mexican scientific institutions

Impacto de afiliaciones incorrectas en el reconocimiento de las instituciones científicas mexicanas

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Abstract

Background: Scientific productivity is a key parameter for measuring the effectiveness of healthcare institutions. Incorrect institutional names in affiliations can have legal implications and affect their visibility.
Objective: To analyze the prevalence and impact of incorrect (apocryphal) institutional affiliations in Mexican scientific publications.
Material and methods: A bibliometric analysis was conducted using PubMed and Scopus on publications from 20 Mexican institutions and universities. The affiliation loss ratio was calculated as the proportion of publications with apocryphal affiliations compared to those using the official name, and impact on institutional h-index was assessed to quantify visibility losses.
Results: The average affiliation loss ratio was 13.92% (range: 2.1% to 66.5%), with highest rates for the *Instituto Nacional de Salud Pública* (66.5%), *Instituto de Oftalmología Conde de Valenciana* (62.6%), and *Instituto Nacional de Medicina Genómica* (32.9%). The analysis of h-index showed that correcting apocryphal affiliations could increase this metric by up to 6 points for some institutions, potentially improving international ranking positions.
Conclusion: Incorrect institutional affiliations are common in Mexican scientific publications and significantly affect health institutions' visibility and international recognition. Prompt correction of this problem would improve Mexico's position in international rankings.

Resumen

Introducción: la productividad científica es un parámetro clave de medición de las instituciones de salud. Los nombres institucionales incorrectos en las afiliaciones pueden tener implicaciones legales y afectar su visibilidad.
Objetivo: analizar la prevalencia e impacto de las afiliaciones institucionales incorrectas (apócrifas) en las publicaciones científicas mexicanas.
Material y métodos: se realizó un análisis bibliométrico con PubMed y Scopus sobre publicaciones de 20 instituciones y universidades mexicanas. Se calculó la razón de pérdida de afiliación como la proporción de publicaciones con afiliaciones apócrifas comparadas con aquellas que utilizan el nombre oficial y se evaluó la variación en el índice-h como subrogado de pérdidas de visibilidad.
Resultados: el promedio de la razón de pérdida de afiliación fue 13.92% (rango: 2.1% a 66.5%), con las tasas más altas encontradas para el Instituto Nacional de Salud Pública (66.5%), el Instituto de Oftalmología Conde de Valenciana (62.6%), y el Instituto Nacional de Medicina Genómica (32.9%). El análisis del índice-h indicó que corregir las afiliaciones apócrifas podría aumentar este indicador hasta 6 puntos para algunas instituciones, mejorando potencialmente sus posiciones en *rankings* internacionales.
Conclusiones: las afiliaciones incorrectas son comunes en las publicaciones científicas mexicanas y afectan su visibilidad internacional. La corrección inmediata de este problema mejoraría el posicionamiento de México en *rankings* internacionales.

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Keywords
Organizational Affiliation
Mexico
Publishing
Databases, Bibliographic
Periodicals as Topic

Palabras clave
Afiliación Organizacional
México
Edición
Bases de Datos Bibliográficas
Publicaciones Periódicas Como Asunto

Received: 26/06/2025

Accepted: 28/07/2025

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How to cite this article: Gradilla-Magaña P, Cisneros-Barrios A, Barajas-Ochoa A, *et al.* Impact of incorrect affiliations on the recognition of Mexican scientific institutions. Rev Med Inst Mex Seguro Soc. 2025;63(5):e6685. doi: 10.5281/zenodo.16748326

Background

A *name* is a fundamental element of identity and legitimacy. For individuals, it grants belonging, prestige, and access to rights, as well as compliance with obligations. For institutions, it becomes a driver of visibility, impacting their reputation, competitiveness, and ability to attract collaborations and funding, create wealth, and comply with the law.

Scientific productivity is a key parameter for measuring the competitiveness of hospital and university institutions. Authors of scientific publications are expected to correctly identify their institutional affiliation, acknowledging their workplace with its official name. Incorrect institutional names, whether due to alternative names or unauthorized translations, can have legal implications and significantly affect the institution's opportunities. For instance, writing an incorrect name could be interpreted as a breach of the agreement between the researcher, the institution, and the funding agency. Furthermore, it could result in a loss of institutional productivity in major bibliographic databases such as Medline via PubMed, the Science Citation Index, and SCImago. It could also impact international rankings, such as the QS World University Rankings[1] or the Times Higher Education (THE) World University Rankings,[2] ultimately limiting the institution's prestige[3] and affecting its ability to participate in public health initiatives.

An example of this issue comes from the university library of the *Universidad de Málaga*, which reported that between 1980 and 2012, its researchers used more than 30 variations of the institution's name in their publications.[4] While there is anecdotal evidence of Mexican authors misattributing their affiliations, little is known about the magnitude and implications of this phenomenon. In a previous opinion article, our group found that the use of apocryphal affiliations, such as "Mexican Social Security Institute" or "Mexican Institute for Social Security" instead of *Instituto Mexicano del Seguro Social*, was not uncommon.[5]

This study aims to assess the prevalence and impact of apocryphal institutional names in scientific publications from 20 major Mexican health institutions and universities, examining temporal trends and quantifying the effect on institutional recognition metrics.

Material and methods

This study is a bibliometric, audit-type analysis examining the total number of publications attributed to Mexican health and university institutions, comparing official and apocryphal institutional names. The analysis was conducted between October and December 2024.

Operational definitions

Official affiliations were defined as the names of institutions and hospitals as stated on their official websites and the Mexican government's website (https://www.gob.mx).

Apocryphal affiliations were defined as any variation of an institutional name that does not match the official designation, regardless of translation accuracy or linguistic quality. This includes English versions that may appear grammatically correct but are not officially recognized. The term "apocryphal" in this study does not imply intentional misrepresentation or bad faith; rather, it denotes any unauthorized modification or translation of the institution's registered name.

To identify the most *prominent health institutions* and universities in Mexico, the SCImago Institutions Rankings (2024)[6] for health institutions and the QS World University Rankings (2025)[1] for universities were used. These rankings consider research output, academic reputation, employer reputation, and citation impact, among other factors. Additionally, two ophthalmology institutions were included for convenience.

Scientific productivity was defined as the total number of published articles linked to each institution, whether using official or apocryphal affiliations.

Measurement variables

Affiliation loss ratio was defined as the proportion of the institution's scientific publications associated with an apocryphal affiliation relative to those using the correct (official) name. This ratio was calculated based on official affiliations rather than total publications to provide a more precise measure of the impact of incorrect affiliations on institutional visibility and academic recognition.

The *h-index* is a metric used to quantify the productivity and impact of scientific publications by an author or institution.[7] It is calculated as the maximum number of articles (h) that have been cited at least h times each. For example, an h-index of 10 means that the institution has 10 articles cited at least 10 times each. Citation data were retrieved from searches conducted in Scopus.

With regards to *temporal trends*, the use of apocryphal affiliations over time was evaluated using the search strategy described for PubMed, employing the "search by year" function.

Procedures

The search for the affiliation names of each selected university and health institution, both official and apocryphal, was conducted using PubMed and Scopus. For PubMed, the advanced search strategy used was: (institution name[Affiliation]) AND (mexico[Affiliation]) NOT (Spain[Affiliation]) NOT (españa[Affiliation]), with no restrictions on time period, accent marks, or publication type. For Scopus, the search strategy used was: AFFIL ("institution name") AND AFFILCOUNTRY ("mexico") AND (LIMIT-TO(SUBJAREA, "MEDI")) NOT AFFILCOUNTRY (spain) NOT AFFILCOUNTRY (españa), with no additional restrictions, including time-frame. The outputs were exported separately to Excel.

Duplicate records were identified and removed from each output, particularly in cases where authors registered the same affiliation using both the official and apocryphal names. For PubMed, duplicates were identified using PMID (PubMed Unique Identifier), and for Scopus, using EID (Elsevier Identifier).

Statistical analysis

The study was based on 2 working hypotheses. Firstly, the proportion of publications with apocryphal affiliations was expected to be below 3%, based on anecdotal estimates from less experienced authors. Secondly, if apocryphal affiliations had been corrected, their impact on the institution's h-index would be minimal. Data were analyzed using descriptive statistics, presenting results as total counts and ratios. No probabilistic calculations were performed due to the heterogeneity of the study subjects (universities and hospitals), which differ significantly in size, research output, and institutional focus, making direct statistical comparisons unreliable.

Regarding ethical considerations, this is a bibliometric study that uses exclusively publicly available databases and published literature, without involving human subjects or patient data. Therefore, research or ethics committee approval was not required for this non-interventional research.

Results

Table I and Table II present the 13 health institutions and 7 universities included in the study, ranked according to their position in the SCImago Institutions Rankings (health institutions) and QS World University Rankings 2025 (universities). The tables also include the number of duplicate records identified and excluded from the analysis. These duplicates typically resulted from authors using both the official and apocryphal institutional names in separate entries for the same affiliation. The *Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán* has been listed on these platforms since its official renaming in 2000.

A total of 18 institutions exceeded the expected 3% affiliation loss ratio. The analysis revealed variations in affiliation loss ratios among the 20 studied Mexican institutions, ranging from 2.1 to 66.5%, with an overall average of 13.92%. The institutions with the highest affiliation loss ratios were the *Instituto Nacional de Salud Pública* (66.5%), the *Instituto de Oftalmología "Conde de Valenciana"* (62.6%), and the *Instituto Nacional de Medicina Genómica* (32.9%). In contrast, institutions with lower loss ratios included *Instituto Nacional de Cancerología* (2.1%) and *Universidad Panamericana* (2.9%).

The h-index analysis demonstrated that correcting apocryphal affiliations could substantially improve institutional metrics. Out of the 20 studied institutions, 9 would expe-

Table I List of the first 10 selected health institutions and universities, and the number of duplicate affiliations removed

Institutions	Duplicate articles	
	PubMed	Scopus
Instituto Mexicano del Seguro Social	21	31
Instituto Nacional de Cancerología	9	11
Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán	10	13
Instituto Nacional de Salud Pública	76	137
Hospital General de México "Dr. Eduardo Liceaga"	6	7
Instituto Nacional de Medicina Genómica	9	5
Instituto Nacional de Cardiología Ignacio Chávez	7	13
Instituto Nacional de Enfermedades Respiratorias Ismael Cosío Villegas	2	1
Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado	0	0
Instituto Nacional de Pediatría	12	40

Table II List of the second half of the 20 selected health institutions and universities, and duplicate affiliation records removed

Institutions	Duplicate articles	
	PubMed	Scopus
Hospital Infantil de México Federico Gómez	6	2
Asociación para Evitar la Ceguera en México	1	2
*Instituto de Oftalmología "Conde de Valenciana"**	0	3
Universidad Nacional Autónoma de México	111	64
Instituto Tecnológico y de Estudios Superiores de Monterrey	2	1
Universidad Panamericana	1	0
Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional	0	0
Universidad Autónoma de Nuevo León	20	19
Universidad de Guadalajara	23	27
Benemérita Universidad Autónoma de Puebla	2	0

*This institution appears in official records under multiple Spanish-language name variants. In this study, we specifically searched using this variation

rience an increase in their h-index if incorrect affiliations were consolidated with their official names. The most significant potential improvements were observed for the *Instituto Nacional de Salud Pública* (from 30 to 36, a +6-point increase), the *Universidad de Guadalajara* (from 21 to 26, a +5-point increase), and the *Instituto Nacional de Medicina Genómica* (from 12 to 15, a +3-point increase).

Figure 1 illustrates the yearly trends in publications since 2000 assigned to both official and apocryphal institutional names, showing a consistent pattern over time.

Discussion

This study highlights that for decades authors in Mexico have frequently used apocryphal names for their institutional affiliations, suggesting a widespread problem that affects institutional visibility and academic credibility.

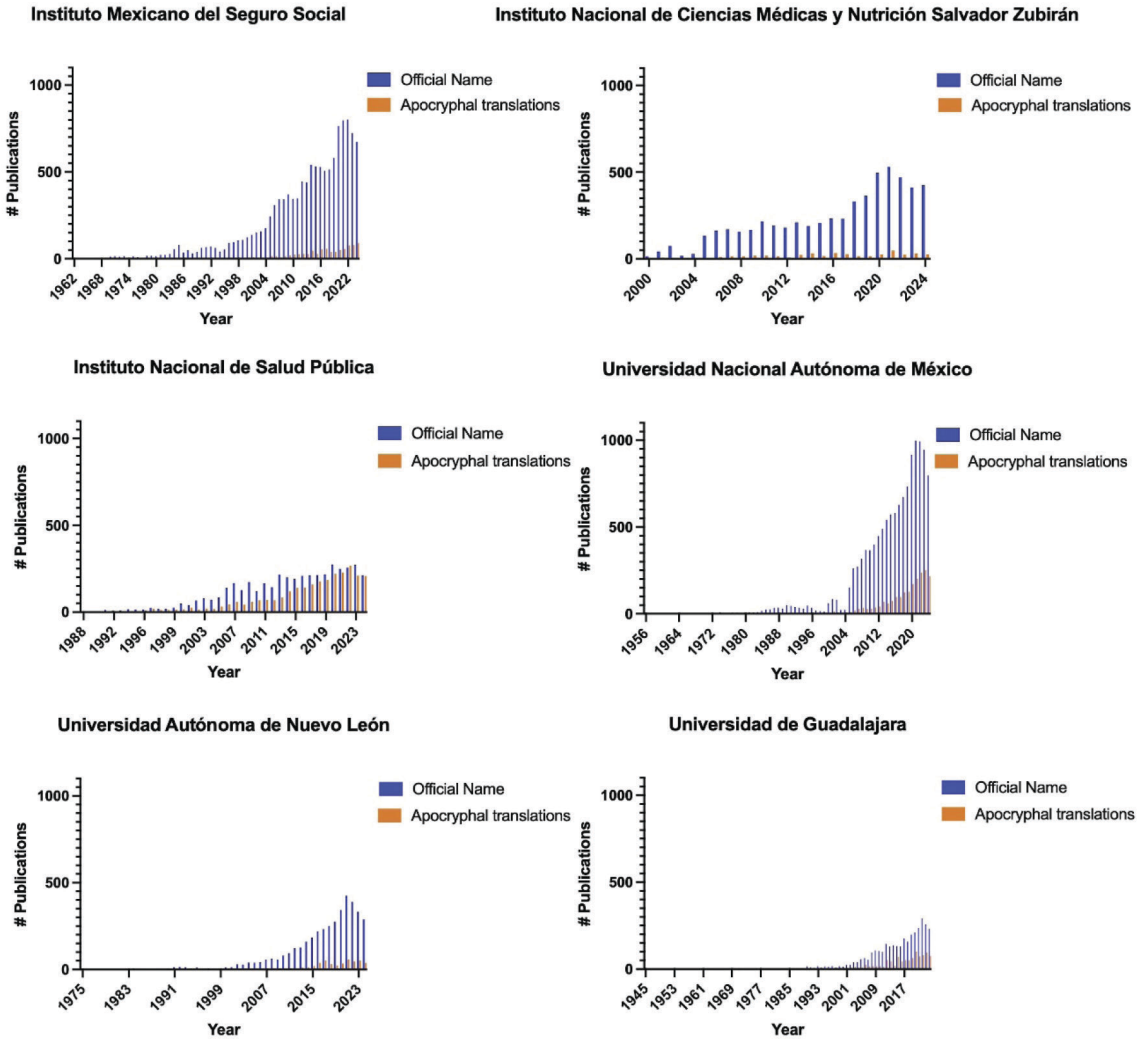
We found no other similar study to compare. However, we did find strong arguments opposing the translation of institutional affiliations, which span from logical inconsistencies and legal violations to misalignment with international reference guidelines, diminished institutional visibility, and reputational harm.

Firstly, the legal argument is straightforward. To operate legally in Mexico, each institution must have an official name registered with the competent authorities, as established in Article 6 of the *Ley General de Sociedades Mercantiles* (General Law of Commercial Companies)[8] and Article 233 of the *Ley de la Propiedad Industrial* (Industrial Property Law), which stipulates that an institution's official name, like a registered trademark, must be preserved in its original form.[9] Additionally, tax-related laws also require a proper register.[10] This registration underscores the importance of maintaining a consistent and legally recognized institutional name.

Secondly, the financial argument. Within an institutional context, a department or laboratory is typically assigned to a cost center, which entails a specific budget. When research is published under an apocryphal affiliation, the institutional affiliation is altered. This act could be considered as a violation of the terms of a funding contract, as the funds are allocated to a specific institution, not an apocryphal one.[11] A potential risk may arise, for example, with the *Secretaría de Ciencia, Humanidades, Tecnología e Innovación* (formerly CONACYT and CONACHYT), which may question whether research funds were allocated correctly if the institution is misidentified.

Visibility is a third argument. Rankings are essential for evaluating institutional performance and allocating resources. If Mexican institutions would correct the use of incorrect affiliations (achieving an affiliation loss ratio of 0), 9 of the 20 studied institutions would improve their h-index, with some increasing by up to 6 points. This improvement would directly impact their global positioning and visibility in international rankings such as QS. For example, in 2024, the SCImago Institutions Rankings places the *Instituto Nacional de Salud Pública* at position 804, tied with the Kenya Medical Research Institute, below Australia's Burnet Institute and 14 places below *Clínica Las Condes in Chile*.[6] Although we do not have all the data to make precise estimates, we can infer that reducing the affiliation loss ratio from 66.5% to 0, with a 6-point increase in its h-index, could result in a significant rise in ranking position. The same pattern would likely apply to the other studied institutions.[3,12]

Figure 1 Yearly trends in publications assigned to official and apocryphal names since their inception in the six most productive institutions



The fourth argument concerns standardization aspects. Internationally recognized guidelines, such as the one of the Modern Language Association (MLA),[13] a style guide from the United States, which is widely used in academia, establish that the names of foreign institutions should be cited in their original language to ensure accuracy and consistency in citations and bibliographic references. Similarly, in Spain, universities such as the *Universidad de Málaga*,[4] *Universitat Pompeu Fabra*,[14] and *Universidad de Salamanca*,[15] as well as the *Universidad de Buenos Aires*[16] in Argentina, follow this practice.

The fifth argument is consistency. In all aspects of research, from experimental methods to writing style and bibliographic references, consistency is essential. When an institution is cited with its official name in some publications, but apocryphal names are used in others, inconsistency arises. This inconsistency highlights weaknesses in institutional identity management, which may undermine its academic reputation.[17]

The sixth argument is implausibility, as seen in recent publications, such as 'Laboratory of Medical and Pharmaceutical Biotechnology, Faculty of Biotechnology, Popular and Autonomous, University of the State of Puebla (UPAEP)', 'Healthy Aging Laboratory of the National Institute of Genomic Medicine (INMEGEN) at the Aging Research Center (CIE-CINVESTAV)', 'Health Research Office, State Coordination of the Mexican Social Security Institute',[18] 'National Institute of Medical Sciences and Nutrition of Mexico Salvador Zubirán',[19] and 'National Institute of Perinatology, Ministry of Health'.[20] All affiliations appear verbatim as published in the sources; however, it is worth noting that none of these institutional designations officially exist, representing unauthorized translations or improper combinations of organizational terms.

The strength of this study lies in the use of 2 of the largest health databases, which provided consistent results. Additionally, the search strategies accounted for possible errors, such as confusion between the *Universidad de Guadalajara* and institutions in Spain, and the h-index was used as an impact indicator. However, several limitations must be considered. Firstly, the results depend on searches conducted using English-translated names, so the obtained attrition rate is a minimum estimate. Secondly, while it is plausible that similar patterns may occur in other health institutions in Mexico or non-health-related institutions, our findings cannot be generalized beyond the studied sample. Thirdly, the study design precludes the development of explanatory models for why authors translate their institutional affiliations into English. Possible reasons include *malinchismo*, a cultural tendency to favor foreign elements, or procedural inertia, where errors persist simply because they have been previously made. On the other hand, some publishers require affiliations to be registered according to their catalogs, which means that some must be transliterated if written in non-Latin characters. However, major publishers do not require affiliations to be translated from Spanish to English. Moreover, authors maintain full control over their institutional affiliations throughout the submission process: they can manually enter their official institutional name regardless of catalog suggestions, and they have the opportunity to review and correct any discrepancies during the proof review stage before final publication. Therefore, the responsibility for accurate institutional identification remains entirely on the authors, as established by international publication standards such as the International Committee of Medical Journal Editors (ICMJE)[21] and the Committee on Publication Ethics (COPE).[22] Finally, it was not possible to assess the impact of the attrition rate on an institution's ranking, as the necessary data to calculate these parameters are not publicly available.

Conclusions

Translating an institution's official name has detrimental effects, impacting visibility, academic rankings, and institutional recognition. These apocryphal names can be avoided if rectors and directors mandate clear guidelines for their researchers on proper institutional affiliation citation. Until such guidelines are in place, institutional names should be presented in their complete official form, without abbreviations or modifications, as stated in official documents. Departments or laboratories should also be cited in Spanish according to their official designation. However, in the 'Materials and methods' section, an English version may be included to describe the setting, ensuring consistency and accuracy in publications.

Acknowledgement

El Dr. Julio Enrique Castañeda-Delgado es Investigador por México de la Secretaría de Ciencia, Humanidades, Tecnología e Innovación (SECIHTI).

Conflict of interest disclosure: The authors have completed and sent the Spanish-translated form of the Declaration for Potential Conflicts of Interest of the International Committee of Medical Journal Editors, and no conflicts of interest were reported related to this article.

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