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FRATURAS FACIAIS PEDIÁTRICAS: UMA ANÁLISE BIBLIOMÉTRICA

PEDIATRIC FACIAL FRACTURES: A BIBLIOMETRIC ANALYSIS

FRACTURAS FACIALES PEDIÁTRICAS: UN ANÁLISIS BIBLIOMÉTRICO

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Resumo

O trauma facial pediátrico representa um relevante desafio na saúde pública e na medicina especializada, devido ao impacto no desenvolvimento e ao risco de mortalidade. O objetivo deste estudo foi caracterizar a produção científica sobre trauma facial e maxilofacial pediátrico indexada na Web of Science Core Collection. Realizou-se uma análise bibliométrica descritiva, com busca em 27 de outubro de 2026, sem restrições de idioma, ano ou tipo de documento. Foram recuperados 1.187 registros, dos quais os dez mais citados foram selecionados para análise detalhada. Observou-se crescimento da produção científica nas últimas décadas, com predomínio de publicações em inglês e maior participação dos Estados Unidos. Os estudos mais citados abordaram principalmente

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epidemiologia, padrões de lesão e manejo do trauma facial pediátrico. Conclui-se que a análise identificou tendências de publicação e padrões de visibilidade científica na área. Entretanto, o número de citações não representa necessariamente a qualidade metodológica ou o nível de evidência dos estudos.

Palavras-chave: Traumatismos Faciais; Fraturas Maxilofaciais; Criança; Odontopediatria; Bibliometria.

Abstract

Pediatric facial trauma represents a significant public health and clinical challenge due to its potential impact on development and associated mortality. This study aimed to characterize scientific publications on pediatric facial and maxillofacial trauma indexed in the Web of Science Core Collection. A descriptive bibliometric analysis was conducted on October 27, 2026, without restrictions on language, publication year, or document type. A total of 1,187 records were retrieved, and the ten most-cited publications were selected for detailed analysis. Scientific production increased over recent decades, with a predominance of English-language publications and the largest contribution from the United States. The most-cited studies primarily addressed epidemiology, injury patterns, and management of pediatric facial trauma. This analysis identified publication trends and patterns of scientific visibility in the field. However, citation counts do not necessarily reflect methodological quality or level of evidence.

Keywords: Facial Injuries; Maxillofacial Injuries; Child; Pediatric Dentistry; Bibliometrics.

Resumen

El traumatismo facial pediátrico constituye un desafío relevante en salud pública y medicina especializada debido a su impacto en el desarrollo y su riesgo de mortalidad. El objetivo de este estudio fue caracterizar la producción científica sobre traumatismos faciales y maxilofaciales pediátricos indexada en Web of Science Core Collection. Se realizó un análisis bibliométrico descriptivo mediante una búsqueda efectuada el 27 de octubre de 2026, sin restricciones de idioma, año o tipo de documento. Se recuperaron 1.187 registros y se seleccionaron las diez publicaciones más citadas para un análisis detallado. Se observó un aumento de la producción científica durante las últimas décadas, con predominio de publicaciones en inglés y mayor participación de Estados Unidos. Los estudios más citados abordaron principalmente epidemiología, patrones de lesiones y manejo del traumatismo facial pediátrico. El análisis permitió identificar tendencias de publicación y patrones de visibilidad científica. Sin embargo, el número de citas no refleja necesariamente la calidad metodológica ni el nivel de evidencia de los estudios.

Palabras clave: Traumatismos Faciales; Traumatismos Maxilofaciales; Niño; Odontología Pediátrica; Bibliometría.

1. Introduction

Pediatric facial trauma is a topic of paramount relevance in public health and specialized medicine, representing one of the most significant factors associated with childhood mortality and morbidity (Andrew et al., 2019; Rogan et al., 2024; Schild et al., 2021). Fractures involve the complete or incomplete disruption of the osseous structures of the face and skull, occurring from birth through skeletal maturity, which is typically reached between 16 and 18 years of age (Chandra and Zemplenyi, 2017).

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The anatomical patterns of pediatric facial fractures undergo continuous modification throughout childhood development as a result of skeletal growth (Chandra and Zemplenyi, 2017). Notably, the proportion between skull volume and facial volume decreases substantially with age, shifting from 8:1 at birth to 4:1 at age 5, and reaching 2:1 in adulthood, explaining why young children have a higher propensity for cranial injuries, whereas older individuals and adults are more prone to isolated facial fractures (Chandra and Zemplenyi, 2017; Rogan et al., 2024).

The incidence of facial fractures in the pediatric population is estimated at approximately 15% (Vyas et al., 2008), with soft tissues being more frequently affected than hard tissues (Lim and Hopper, 2021; Zerfowski and Bremerich, 1998). Demographically, males are affected more frequently than females, at a ratio of 2:1 (Chandra and Zemplenyi, 2017; Rogan et al., 2024). The etiology of these injuries is diverse, predominantly stemming from motor vehicle accidents, falls, child abuse, and recreational or sports activities inherent to childhood, such as running and bicycle riding (Andrew et al., 2019; Schild et al., 2021). Anatomically, mandibular fractures represent the most prevalent injury, accounting for 23% to 50% of pediatric facial traumas, followed in decreasing frequency by nasal, zygomaticomaxillary complex, and orbital fractures (Chandra and Zemplenyi, 2017; Lim and Hopper, 2021).

Beyond clinical and epidemiological understanding, bibliometric analysis has become an essential methodological tool in the scientific landscape for constructing quantitative indicators to evaluate academic production (Santos, 2003). Through the systematic study of literature, it is possible to map publication volume over time, identify citation and co-citation patterns, assess author and country productivity, and recognize areas of academic excellence and emerging topics (Filippo, 2002; Vanti, 2002). Such investigations assist the scientific community in understanding research trends and knowledge dissemination behaviors (Carvalho, 2005; Zupic and Cater, 2015; Serra et al., 2018).

Despite the broad application of bibliometric studies and the high clinical relevance of childhood maxillofacial trauma, the scientific literature still lacks comprehensive mappings dedicated to this topic, with very few bibliometric initiatives

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published to date (Mourão et al., 2024). Given this scarcity of bibliometric data and the need to identify the classic works that have shaped current clinical practices, mapping high-impact publications is fundamental. Therefore, the objective of this study was to characterize the scientific literature on pediatric facial and maxillofacial trauma indexed in the Web of Science Core Collection, with particular emphasis on the ten most-cited publications, identifying publication trends, geographical distribution, journal representation, citation patterns, and predominant research themes.

2. Methodology

A quantitative and descriptive bibliometric study was conducted using the Web of Science (WoS) Core Collection database. The search was performed on October 27, 2026, without applying additional filters or restrictions regarding publication year, language, or document type.

The following search strategy was applied to the Topic (TS) field of the Web of Science Core Collection, combining six search expressions with the Boolean operator OR:

(TS=(pediatric facial trauma)) OR (TS=(pediatric maxillofacial fracture)) OR (TS=(pediatric maxillofacial trauma)) OR (TS=(pediatric facial fracture)) OR (TS=(pediatric maxillofacial fractures)) OR (TS=(pediatric facial fractures))

The search strategy prioritized the term "pediatric" in combination with expressions related to facial and maxillofacial trauma and fractures. Although this approach was intended to identify publications focused on traumatic injuries in pediatric populations, alternative terms such as "paediatric," "child," "children," and "adolescent" were not explicitly included. Consequently, relevant publications using different terminology may not have been retrieved.

A broad definition of pediatric orofacial trauma was adopted, encompassing facial bone fractures, dentoalveolar injuries, soft tissue injuries, orbital trauma, and other traumatic injuries affecting the oral and maxillofacial region. This scope included studies addressing the epidemiology, etiology, diagnosis, clinical characteristics,

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management, and outcomes of pediatric orofacial injuries, including those associated with child physical abuse. Facial fractures were therefore not required to constitute the primary focus of every publication.

The bibliometric analysis was conducted at two distinct levels. First, the complete set of 1,187 records retrieved from the Web of Science Core Collection was considered for the descriptive characterization of the scientific literature. Second, all retrieved records were ranked in descending order according to their total citation counts (Citations: highest first), and the ten highest-ranked publications were directly selected for detailed bibliometric analysis. No additional screening or exclusion procedures were performed during this selection stage, and document types were treated as descriptive bibliometric characteristics rather than eligibility criteria. The remaining 1,177 records were not included in the detailed analysis because they fell outside the predefined top-ten citation ranking.

For each of the ten selected publications, the following bibliometric variables were extracted and tabulated: article title, authorship and number of authors, country of origin (based on the corresponding author's affiliation), publication year, language, Web of Science subject category, journal title, and total citation count in WoS.

Citation counts were extracted from the Web of Science Core Collection on October 27, 2026, corresponding to the date of the bibliometric search.

Journal impact factor (JIF) values were obtained from Clarivate's Journal Citation Reports (JCR), accessed on October 27, 2026. The impact factors corresponded to the 2025 JIF values reported in the 2026 edition of the JCR.

The country of origin of each publication was determined based on the institutional affiliation of the corresponding author, as reported in the bibliographic record. For publications involving authors from multiple countries, only the corresponding author's country was considered for country-level classification, thereby assigning each publication to a single country and avoiding double counting.

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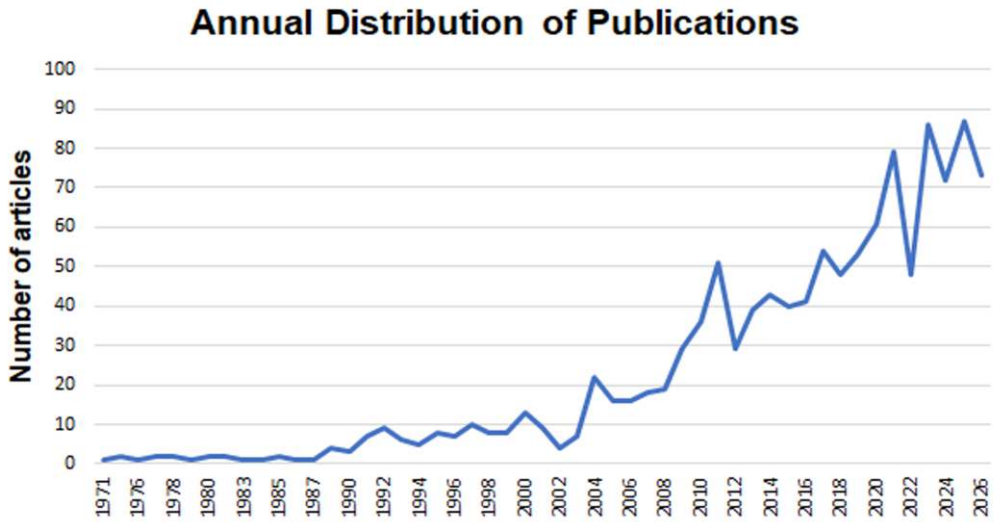
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Extracted data were compiled and analyzed using descriptive statistics. Citation metrics and frequency distributions were calculated using Microsoft Excel® and presented through tables and graphical representations to summarize the main bibliometric indicators.

3. Results

The initial search query yielded a total of 1,187 records indexed in the Web of Science (WoS) Core Collection. The retrieved publications ranged from 1971 to 2026. The highest publication output occurred in the year 2025 (87 articles, 7.33% of total output), whereas the lowest annual output was observed in 1971 (1 article, 0.08% of total output), as detailed in Figure 1.

Figure 1. Annual distribution of published articles on pediatric facial trauma between 1971 and 2026



It should be noted that the data for 2026 represent a partial publication year, as the bibliometric search was conducted on October 27, 2026. Therefore, the number of publications recorded for 2026 should not be directly compared with the totals of previous complete years.

Regarding the document types indexed in the Web of Science, the literature on pediatric facial trauma was predominantly composed of original research articles, while also incorporating specialized publication formats such as review articles (172 records, 14.49%), case reports (148 records, 12.47%), meeting abstracts (60

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records, 5.05%), clinical trials (15 records, 1.26%), and editorials (12 records, 1.01%). In terms of publication language, 1,165 articles (98.15%) were published in English, followed by 9 in Spanish (0.76%), 9 in unspecified languages (0.76%), 6 in French (0.51%), 5 in German (0.42%), 2 in Korean (0.17%), 2 in Turkish (0.17%), and 1 in Portuguese (0.08%).

The sum of the language-specific record counts exceeded the total number of retrieved publications because Web of Science language classifications are not necessarily mutually exclusive. Therefore, individual records may contribute to more than one language category, resulting in a cumulative frequency greater than the total dataset of 1,187 records.

With respect to Web of Science subject categories, publications were primarily concentrated within "Pediatrics" with 896 articles (75.48%), "Surgery" with 627 articles (52.82%), and "Dentistry, Oral Surgery & Medicine" with 517 articles (43.56%), as shown in Table 1. Web of Science subject categories were analyzed using a multiple-assignment approach, as individual publications may be indexed under more than one subject category. Consequently, the sum of category-specific record counts may exceed the total number of retrieved publications (n = 1,187), and the cumulative percentages may exceed 100%. Percentages were calculated using the total number of retrieved records as the denominator.

Table 1. Distribution of published articles by Web of Science subject categories.

Web of Science Subject Category	Record Count (n)	Percentage (%)
Pediatrics	896	75.48%
Surgery	627	52.82%
Dentistry, Oral Surgery & Medicine	517	43.56%

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Pathology	464	39.09%
Neurosciences & Neurology	432	36.39%
Orthopedics	300	25.27%
Anatomy & Morphology	275	23.17%
Public, Environmental & Occupational Health	210	17.69%
Radiology, Nuclear Medicine & Medical Imaging	207	17.44%
Health Care Sciences & Services	192	16.18%
Others*	2,455	206.79%*

*Note: Percentages sum to over 100% because individual records may be assigned to multiple Web of Science subject categories simultaneously. The "Others" category includes 95 remaining subject categories with fewer than 190 articles each (n < 192).

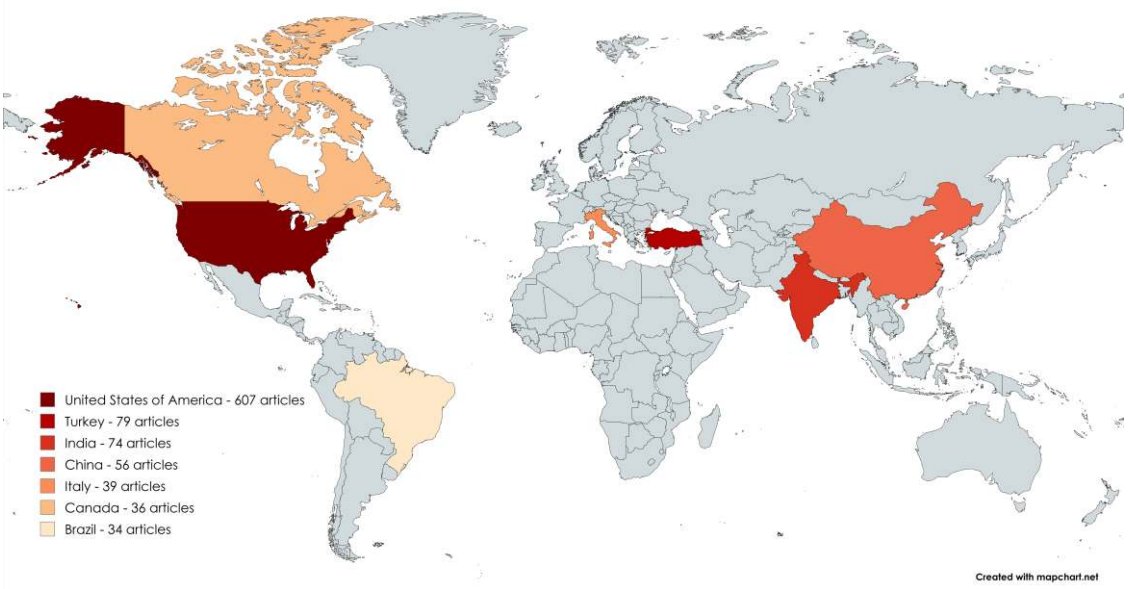
Several countries contributed to the global scientific output on pediatric facial trauma. The United States of America led international production with 607 articles (51.14%), followed by Turkey (79 articles, 6.66%), India (74 articles, 6.23%), China (56 articles, 4.72%), Italy (39 articles, 3.29%), Canada (36 articles, 3.03%), and Brazil (34 articles, 2.86%), as summarized in Figure 2.

Figure 2. Geographic distribution of published articles on pediatric facial trauma by country of origin (n = 1,187). The United States of America led international production (51.14%), followed by Turkey (6.66%), India (6.23%), China (4.72%), Italy (3.29%), Canada (3.03%), and Brazil (2.86%).

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Regarding publication venues, the scientific journal *Journal of Craniofacial Surgery* published the highest number of articles (315 articles, 26.54%), followed by *Journal of Oral and Maxillofacial Surgery* with 106 articles (8.93%), *Dental Traumatology* with 66 articles (5.56%), *International Journal of Pediatric Otorhinolaryngology* with 47 articles (3.96%), and *Pediatric Emergency Care* with 33 articles (2.78%), as demonstrated in Table 2.

Table 2. Scientific journals and the number of articles published on pediatric facial trauma.

Scientific Journal	Record Count	Percentage (%)
Journal of Craniofacial Surgery	315	26.54%
Journal of Oral and Maxillofacial Surgery	106	8.93%
Dental Traumatology	66	5.56%
International Journal of Pediatric Otorhinolaryngology	47	3.96%
Journal of Cranio-Maxillofacial Surgery	44	3.71%

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Child's Nervous System	41	3.45%
Pediatric Emergency Care	33	2.78%
Facial Plastic Surgery	33	2.78%
Journal of Trauma-Injury Infection and Critical Care	32	2.70%
Plastic and Reconstructive Surgery	30	2.53%
The Laryngoscope	30	2.53%
Otolaryngology–Head and Neck Surgery	28	2.36%
Craniomaxillofacial Trauma & Reconstruction	26	2.19%
The American Surgeon	24	2.02%
Annals of Plastic Surgery	18	1.52%
Cureus Journal of Medical Science	18	1.52%
Oral and Maxillofacial Surgery Clinics of North America	18	1.52%
American Journal of Emergency Medicine	18	1.52%
British Journal of Oral and Maxillofacial Surgery	18	1.52%
Facial Plastic Surgery Clinics of North America	13	1.10%
Journal of Maxillofacial and Oral Surgery	13	1.10%

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Journal of Pediatric Surgery	12	1.01%
Pediatrics	12	1.01%
Ophthalmic Plastic and Reconstructive Surgery	9	0.76%

Following the broad mapping of the general literature, a focused bibliometric analysis was conducted on the top 10 most-cited articles indexed in the Web of Science "Core Collection" to evaluate the landmark literature in pediatric facial fractures.

Regarding the scientific journals that published the most-cited articles on pediatric facial fractures, the journal *Journal of Oral and Maxillofacial Surgery* published 3 articles (30.00%), followed by Facial Plastic Surgery with 1 article (10.00%), *Child Abuse & Neglect* with 1 article (10.00%), *Journal of the American College of Surgeons* with 1 article (10.00%), *Ophthalmology* with 1 article (10.00%), *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontics* with 1 article (10.00%), *Plastic and Reconstructive Surgery* with 1 article (10.00%), and *RadioGraphics* with 1 article (10.00%), as shown in Table 3.

Table 3. Scientific journals and the number of articles published among the top-cited articles on pediatric facial fractures.

Scientific Journal	**Record Count**	**Impact factor**	**Percentage (%)**
Journal of Oral and Maxillofacial Surgery	3	2.5	30.00%
Facial Plastic Surgery	1	2.3	10.00%

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Child Abuse & Neglect	1	3.7	10.00%
Journal of the American College of Surgeons	1	3.5	10.00%
Ophthalmology	1	10.9	10.00%
Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontics	1	1.2	10.00%
Plastic and Reconstructive Surgery	1	3.8	10.00%
RadioGraphics	1	6.2	10.00%

The oldest scientific article among the most-cited list on pediatric facial fractures was published in 1990, with the majority of papers published in 2000 (3 articles, 30.00%), 2005 (2 articles, 20.00%), and 2008 (2 articles, 20.00%), as presented in Table 4.

Table 4. Number of articles published per year among the top-cited articles on pediatric facial fractures.

Publication Year	Record Count	Percentage (%)

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2000	3	30.00%
2005	2	20.00%
2008	2	20.00%
1990	1	10.00%
1993	1	10.00%
2004	1	10.00%

All ten publications selected for the detailed bibliometric analysis were published in English. The most frequent document type was original research article (8 articles, 80.00%), followed by proceeding papers (2 articles, 20.00%), review articles (1 article, 10.00%), and editorial materials (1 article, 10.00%). Document-type classifications were not mutually exclusive; therefore, individual publications could be assigned to more than one document category, and the cumulative frequencies exceeded the number of selected publications.

The most frequently addressed thematic categories were "Dentistry, Oral Surgery & Medicine" (4 articles, 40.00%), followed by "Surgery" (3 articles, 30.00%), and "Family Studies" (1 article, 10.00%), alongside "Ophthalmology" (1 article, 10.00%), "Otorhinolaryngology" (1 article, 10.00%), "Psychology, Social" (1 article, 10.00%), "Radiology, Nuclear Medicine & Medical Imaging" (1 article, 10.00%), and "Social Work" (1 article, 10.00%), as shown in Table 5.

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Table 5. Web of Science subject categories of the ten most-cited publications on pediatric facial and maxillofacial trauma.

Web of Science Category	Record Count	Percentage (%)
Dentistry, Oral Surgery & Medicine	4	40.00%
Surgery	3	30.00%
Family Studies	1	10.00%
Ophthalmology	1	10.00%
Otorhinolaryngology	1	10.00%
Psychology, Social	1	10.00%
Radiology, Nuclear Medicine & Medical Imaging	1	10.00%
Social Work	1	10.00%

The article entitled "Maxillofacial injuries in the pediatric patient" (2000) was the most-cited paper with 306 citations, followed by "Craniomaxillofacial trauma in children: a review of 3,385 cases with 6,060 injuries in 10 years" published in 2004 with 258 citations, and "Pediatric facial fractures: evolving patterns of treatment"

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(1993) with 245 citations. The complete ranking of the top-cited articles is presented in Table 6.

Table 6. The top-cited articles on pediatric facial fractures, listed in descending order of citation count.

First Author (Year)	**Article Title**	**Journal Title**	**Total Citations**
Haug, R.H. et al. (2000)	Maxillofacial injuries in the pediatric patient	*Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontics*	306
Gassner, R. et al. (2004)	Craniomaxillofacial trauma in children: a review of 3,385 cases with 6,060 injuries in 10 years	*Journal of Oral and Maxillofacial Surgery*	258
Posnick, J.C. et al. (1993)	Pediatric facial fractures: evolving patterns of treatment	*Journal of Oral and Maxillofacial Surgery*	245
Imahara, S.D. et al. (2008)	Patterns and outcomes of pediatric facial fractures in the United States: a survey of the National Trauma Data Bank.	*Journal of the American College of Surgeons*	244

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Ferreira, P.C. et al. (2005)	Retrospective study of 1251 maxillofacial fractures in children and adolescents	*Plastic and Reconstructive Surgery*	172
Egbert, J.E. et al. (2000)	Pediatric Orbital Floor Fracture: Direct Extraocular Muscle Involvement	*Ophthalmology*	168
Eppley, B.L. (2005)	Use of resorbable plates and screws in pediatric facial fractures	*Journal of Oral and Maxillofacial Surgery*	167
McGraw-Wall, B.L. et al. (1990)	Facial fractures in children	Facial Plastic Surgery	152
Naidoo, S. (2000)	A profile of the oro-facial injuries in child physical abuse at a children's hospital.	*Child Abuse & Neglect*	143
Alcalá-Galiano, A. et al. (2008)	Pediatric Facial Fractures: Children Are Not Just Small Adults	*RadioGraphics*	141

4. Discussion

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Pediatric facial fractures can cause severe functional and aesthetic sequelae, directly impacting physical, psychological, and social development in growing patients. Therefore, bibliometric studies are crucial to mapping knowledge production and guiding clinicians toward evidence-based management. The present study aimed to perform a bibliometric analysis of scientific articles on pediatric facial fractures, evaluating both general trends and the most-cited landmark literature.

Bibliometric analyses play a fundamental role in assessing the scientific landscape of a specific topic, identifying research trends, knowledge gaps, and priority areas for future investigation, as well as mapping influential authors, institutions, and journals (Shekhani et al., 2017; Mourão et al., 2024; Tahim et al., 2016). In pediatric facial trauma, this methodological approach is particularly relevant due to the unique challenges associated with pediatric growth stages and the psychological impact of facial injuries (Roth et al., 2021; Tyagi and Marwah, 2024).

Regarding database selection, comparative studies demonstrate that Web of Science (WoS) provides enhanced data quality control due to strict journal indexing criteria, despite covering fewer total journals than Scopus or Google Scholar (Bakkalbasi et al., 2006; Kulkarni et al., 2009). Therefore, WoS was selected to capture high-impact publications on pediatric facial trauma. Citation counts provide an indicator of scholarly attention and visibility, although they do not necessarily reflect methodological quality, scientific validity, or clinical relevance.

In the general bibliometric profile, the publication timeline spans from 1971 to the present, with a notable increase in annual output observed in recent years. This expansion reflects growing interest in pediatric trauma management and specialized surgical protocols (Nane et al., 2022; Meyers et al., 2020). The vast majority of retrieved papers were published in English, which aligns with international standards aimed at maximizing scientific reach and citation frequency (Di Bitetti and Ferreras, 2017).

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Furthermore, the publication count for 2026 reflects only the records indexed up to October 27, 2026. Consequently, any apparent reduction in scientific output during this year should be interpreted cautiously, as it may reflect incomplete annual coverage rather than an actual decline in research activity.

Journal impact factor and overall citation performance remain key indicators of publication prestige and visibility (Rawat, 2014; Zupanc, 2014). In this analysis, publications were distributed across specialized journals in oral and maxillofacial surgery, plastic surgery, and pediatrics. Differences between total publication volume and overall citation density per journal underscore the importance of evaluating both raw productivity and citation impact metrics (Oh and Lim, 2009).

Geographically, the United States accounted for the largest proportion of publications in the retrieved dataset. However, aggregate citation counts by country were not assessed in the present study. Therefore, the findings support conclusions regarding geographical publication output but do not establish country-level leadership in citation impact.

Qualitative thematic analysis of the top-cited papers revealed that the most frequently addressed subject was "epidemiology, injury patterns, and surgical management of craniomaxillofacial trauma", demonstrating the scientific community's focus on refining clinical guidelines, diagnostic imaging, and surgical fixation modalities in pediatric populations. The top-cited landmark study, authored by Haug et al. (2000), provided comprehensive foundational concepts regarding injury mechanisms and treatment protocols in growing children.

An important consideration when interpreting citation-based rankings is the influence of publication age. Older articles have had more time to accumulate citations, which may favor their position among the most-cited publications. Consequently, the predominance of earlier studies in the present ranking should not necessarily be interpreted as evidence of greater scientific relevance or methodological quality compared with more recent publications. Although citation normalization by publication year could reduce this temporal bias, the present study

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intentionally employed absolute citation counts to identify the most frequently cited publications within the retrieved dataset. Therefore, the potential influence of publication age should be considered when interpreting these findings.

Although citation counts are widely used to assess the academic visibility and influence of scientific publications, they should not be interpreted as direct indicators of methodological quality, level of evidence, or clinical relevance. Highly cited articles may receive substantial attention for various reasons, including their historical importance, methodological contributions, or controversial findings. Conversely, recent studies with rigorous methodologies may have accumulated relatively few citations. Therefore, the present bibliometric ranking reflects citation frequency rather than the scientific validity or clinical superiority of the selected publications. No formal methodological quality assessment or risk-of-bias evaluation was performed.

This study presents inherent limitations related to bibliometric methodologies, such as not excluding self-citations (direct, co-authorship, or institutional). Future investigations could implement advanced network metrics to assess self-citation impact and evaluate long-term citation dynamics across expanding databases.

This study has several limitations that should be considered when interpreting its findings. First, the analysis was restricted to the Web of Science Core Collection, potentially excluding relevant publications indexed exclusively in other databases. Second, the search strategy prioritized the term "pediatric" and did not explicitly incorporate alternative expressions such as "paediatric," "child," "children," or "adolescent," which may have limited the retrieval of relevant studies.

Third, the detailed analysis was restricted to the ten most-cited publications, selected according to absolute citation counts, which may favor older articles that have had more time to accumulate citations. Additionally, citation frequency does not necessarily reflect methodological quality, level of evidence, or clinical relevance, and no formal critical appraisal of the selected publications was performed. Finally, the bibliometric data represent a specific point in time, and the publication counts for 2026 were incomplete because the database search was conducted on October 27, 2026.

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These limitations should be considered when interpreting the observed publication patterns and citation-based rankings.

5. Conclusion

This bibliometric analysis characterized the scientific literature on pediatric facial and maxillofacial trauma indexed in the Web of Science Core Collection, with particular emphasis on the ten most-cited publications. The findings highlighted patterns in publication frequency, geographical distribution, journal representation, and citation counts, providing an overview of scientific production and visibility in this research field. The citation-based ranking identified publications that have received substantial academic attention; however, citation frequency should not be interpreted as a direct indicator of methodological quality, level of evidence, or clinical applicability. Furthermore, the influence of publication age and the limitations of the search strategy should be considered when interpreting these findings. Overall, this study provides a descriptive perspective on the bibliometric characteristics of pediatric facial trauma research and may support future investigations into the development and dissemination of scientific knowledge in this area.

Declarations

Conflict of interest: The authors declare no conflict of interest.

Data availability statement: The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

AI use declaration: During the preparation of this study, the authors used Grammarly® to assist with grammar correction and language clarity. The authors reviewed and edited the suggestions as needed and take full responsibility for the final content of this publication

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