

Brought to you by [INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA](#)

Scopus

[Back](#)

Research Trends and Thematic Evolution of *Salvadora persica* (Miswak) in Oral Health: A Bibliometric Analysis

[International Journal of Dentistry](#) • Review • Open Access • 2026 •

DOI: 10.1155/ijod/9050182

[Ahmad, Norfaezah](#)^{a,b}; [Fauzi, Muhammad Ashraf](#)^{c,d,e}; [Nadiyah, Nur Armidha](#)^f; [Mustapar, Nurulhasanah](#)^b; [Mohamad, Sharifah Nurul Akilah Syed](#)^f; [+1 author](#)^a Department of Prosthodontics, Kulliyah of Dentistry, International Islamic University Malaysia, Bandar Indera Mahkota, Kuantan, Pahang Darul Makmur, 25200, Malaysia[Show all information](#)

0

Citations

[View PDF](#)[Full text](#) [Export](#)[Save to list](#) [Document](#)[Impact](#)[Cited by \(0\)](#)[References \(33\)](#)[Similar documents](#)

Abstract

Aim: This study aimed to map the publication landscape, intellectual structure and thematic organisation of *Salvadora persica* (miswak) research in oral health using bibliometric analysis. **Methods:** The Web of Science (WoS) Core Collection was used to retrieve publications. Search terms were pre-determined on *S. persica* and oral health. The performance assessment was based on publication trends, high-productivity authors and countries, and the most-cited articles. Co-citation, bibliographic coupling and keyword co-occurrence analysis were carried out using VOSviewer to visualise intellectual structures and research themes. **Findings:** A total of 295 journal articles were included in the final dataset, with 3035 citations in total and 2795 excluding self-citations. The number of research outputs has grown significantly since 2014. The major geographical contributors

were Saudi Arabia, India and Egypt. Co-citation analysis showed that the intellectual structure of the field is anchored in references related to preventive dentistry, oral hygiene practices, periodontal health, phytochemistry and antimicrobial research. Four significant thematic groups were identified through bibliographic coupling and keyword searches: antimicrobial and antioxidant mechanisms; behavioural and preventive oral health practices; extract-based and clinical applications in dental caries management; and plaque control and gingival health outcomes. The clusters indicate that the literature is organised around traditional oral hygiene use, antimicrobial and phytochemical mechanisms, clinical oral health outcomes and natural product applications. Conclusion: The evidence base for *Salvadora persica* has evolved into a structured, multidisciplinary field. The literature increasingly frames miswak as a potential adjunct to conventional oral hygiene; however, bibliometric findings alone cannot establish clinical effectiveness. Copyright © 2026 Norfaezah Ahmad et al. International Journal of Dentistry published by John Wiley & Sons Ltd.

Author keywords

antimicrobial activity; bibliometric analysis; miswak; oral hygiene; *Salvadora persica*

Indexed keywords

EMTREE drug terms

antiinfective agent; antioxidant; natural product; phytochemical; plant extract; *Salvadora persica* extract; unclassified drug

EMTREE medical terms

antimicrobial activity; antioxidant activity; author; bibliometrics; citation analysis; dental caries; dental health; Egypt; gingiva; health outcome; human; India; mouth hygiene; nonhuman; phytochemistry; preventive dentistry; publication; Review; *Salvadora persica*; Saudi Arabia; scientific literature; thematic analysis; tooth plaque; Web of Science

Funding details

Details about financial support for research, including funding sources and grant numbers as provided in academic publications.

Funding sponsor	Funding number	Acronym
Ministry of Higher Education, Malaysia See opportunities by MOHE ↗	FRGS/1/2023/SKK11/UIAM/03/1	MOHE

Funding sponsor	Funding number	Acronym
Ministry of Higher Education, Malaysia See opportunities by MOHE ↗		MOHE
International Islamic University Malaysia See opportunities by IIUM ↗	CHAIN 24-010-0010	IIUM
International Islamic University Malaysia See opportunities by IIUM ↗		IIUM

Funding text 1

The authors would like to acknowledge the Ministry of Higher Education, Malaysia (Grant FRGS/1/2023/SKK11/UIAM/03/1) and International Islamic University Malaysia (Grant CHAIN 24\2010010\20100010). We acknowledge Melbourne Dental School, The University of Melbourne, Australia, for the research support.

Funding text 2

This work was funded by the Ministry of Higher Education, Malaysia (Grant FRGS/1/2023/SKK11/UIAM/03/1) and International Islamic University Malaysia (Grant CHAIN 24\2010010\20100010). Open access publishing facilitated by the University of Melbourne, as part of the Wiley \2014 The University of Melbourne agreement via the Council of Australian University Librarians.

Corresponding authors

Corresponding author	M.H. Arzmi
Affiliation	Department of Fundamental Dental and Medical Sciences, Kulliyyah of Dentistry, International Islamic University Malaysia, Bandar Indera MahkotaPahang Darul Makmur, Kuantan, 25200, Malaysia
Email address	mohdhafiz.arzmi@unimelb.edu.au

Abstract

Author keywords

Indexed keywords

Funding details

Corresponding authors

About Scopus

[What is Scopus](#)

[Content coverage](#)

[Scopus blog](#)

[Scopus API](#)

[Privacy matters](#)

Language

[日本語版を表示する](#)

[查看简体中文版本](#)

[查看繁體中文版本](#)

[Просмотр версии на русском языке](#)

Customer Service

[Help](#)

[Tutorials](#)

[Contact us](#)

ELSEVIER

[Terms and conditions](#) ↗ [Privacy policy](#) ↗ [Cookies settings](#)

All content on this site: Copyright © 2026 [Elsevier B.V.](#) ↗, its licensors, and contributors. All rights are reserved, including those for text and data mining, AI training, and similar technologies. For all open access content, the relevant licensing terms apply.

