RESEARCH PAPER

A Bibliometrics Analysis on Digital Dermatoglyphic Patterns in Early Detection of Autism Spectrum Disorder

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Abstract
This bibliometric study examines global research trends in Digital Dermatoglyphic Patterns by analyzing publication volume, citation patterns, key contributors, and emerging themes in the field during the last decade using dimensions data set. This work offers a quantitative overview of the growth of the field, in terms of its most influential authors, collaborative networks, and leading publishing journals. A substantial increase in research output, with leading countries and institutions publishing key publications that provide a solid foundation for Digital Dermatoglyphic Patterns.
Active partnerships between countries and institutions are revealed by collaboration patterns, and the research landscape is shown to be highly networked and globalized. Dimensions data set represents a superb dataset, but the analysis of database exclusivity suggests that future work should include additional sources for a broader perspective. This study provides a useful resource for researchers and practitioners alike by charting the key developments and future directions in digital dermatoglyphic patterns in Early Detection of Autism Spectrum Disorder.

Keywords: Bibliometric Analysis, Psychology, Dimensions Database, Dermatoglyphic Patterns
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Introduction and Background of the Study

Dermatoglyphics is the term used to describe the systematic examination of fingerprints and the diverse patterns of skin ridges that are present on the hands, feet, and other parts of the human body. As these patterns are believed to be influenced by genetic factors and environmental conditions during fetal development, it is essential to analyze their variations [Prathap, L., Suganthirababu, P., and Ganesan, D et al. 2019]. Dermatoglyphics research provides significant applications and insights in a variety of fields, such as medical diagnosis, genetic counseling, and forensic science. For example, fingerprints can be utilized to identify suspects in criminal investigations due to the fact that each individual has a distinct fingerprint pattern.

A literature review is a section of a scientific publication that includes theoretical and methodological contributions that are pertinent to a specific issue, as well as existing knowledge, including significant findings. A review of the extant literature is the starting point for all scientific inquiries. It aids researchers in identifying gaps in their current understanding and encourages further research. It contextualizes an article within the framework of existing research by examining academic articles, books, theses, conference proceedings, and other pertinent materials related to a specific topic, study domain, or theory.

A literature review is the process of evaluating, integrating, analyzing, and examining academic materials that are relevant to a specific subject. This is a critical summary of the literature that is relevant to the selected domain. The reviews elucidate, encapsulate, assess, and delineate this literature. It establishes a theoretical framework for the investigation and facilitates the definition of its scope.

Research Gap

Based on the literature review, the majority of studies have attempted to investigate the dermatoglyphic and autism spectrum disorder separately; however, there is a scarcity of studies that have examined both variables simultaneously. The studies that have been assessed include both domestic and international research. However, there is a scarcity of research conducted in these areas within the Indian context. Between 2016 and July 2025, Dimension Analytics reported the publication of only 826 papers in the universe.

Table 1: Average Publication Per Year on "Role of digital dermatoglyphic patterns in early detection of autism spectrum disorder"

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	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total	Average
Publications Per Year (total)	22	21	12	16	14	220	494	11	11	5	826	82.6

Figure 1: Average Publication Per Year on "Role of digital dermatoglyphic patterns in early detection of autism spectrum disorder"

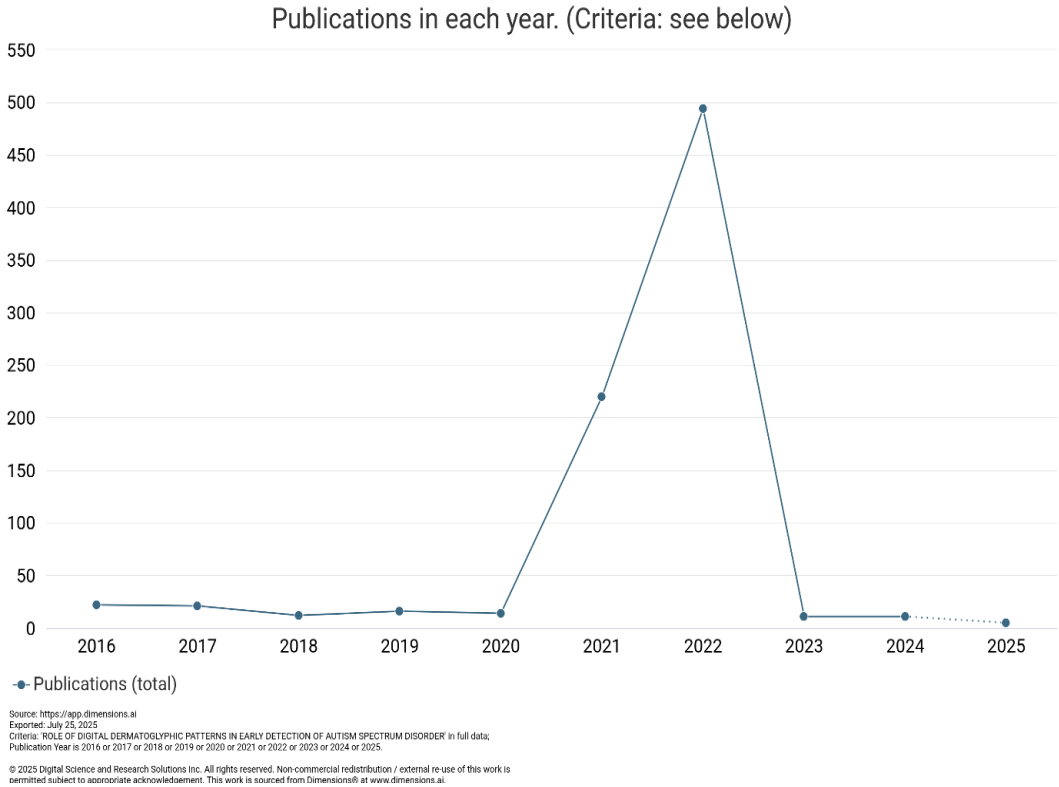


Figure 2.1: Average Publication Per Year on "Role of digital dermatoglyphic patterns in early detection of autism spectrum disorder"

In both Indian and international contexts, the evaluation demonstrated a deficiency in the function of digital dermatoglyphic patterns in the early detection of autism spectrum disorder, as indicated by the aforementioned table and figures. As a result, the current study is designed to rectify the substantial information gap that is evident in the existing literature.

METHODOLOGY

Data Acquisition and Analysis

Due to its comprehensive indexing of Dermatoglyphic publications, the Dimensions data set serves as the primary data source for this bibliometric analysis. The data were collected exclusively from dimensions in order to ensure that no significant publications were overlooked and that the dataset maintained a high quality.

Criteria for Data Selection

Keywords such as "Dermatoglyphics Pattern," "Digital Dermatoglyphics Pattern," and "autism spectrum disorder" were chosen in accordance with the most frequently researched areas in Dermatoglyphics. The following queries were conducted in the title, abstract, and keyword fields to identify the most pertinent publications for these keywords. Articles and reviews were the sole document categories considered, as they are the primary sources of research findings and the most comprehensive summaries in this field.

Bibliometric Analysis Techniques

The extracted data was analyzed using a combination of bibliometric indicators. In order to offer a multifaceted perspective on research trends, author productivity, and collaborative networks, these indicators were chosen:

Publication Count: The number of publications per year was used to monitor the growth patterns in Digital Dermatoglyphics Pattern research. The annual publication count offers insight into the periods during which research activity was at its highest, and these peaks may be associated with significant events in the finance sector.

Citation Analysis: The impact and influence of publications were evaluated through the use of citation counts. Foundational research in Digital Dermatoglyphics Pattern was identified as highly cited

works that reflect the research that guided subsequent studies and theoretical development. In order to emphasize publications that maintain a consistent academic impact, even within a restricted field, the average citation per document was determined. H-index: The h-index was employed to ascertain the productivity and impact of the author's work, which is assessed by the number of publications and citations received. This indicator enabled us to identify the most influential authors who have made significant contributions to the field over the past decade.

Network Map Country-wise Publication Analysis

The country-wise collaboration networks show the density of international connections and the regions with the most academic collaboration. The distribution of publications by country shows that developed countries are the most productive, although the role of developing countries is steadily increasing. This analysis brings out the fact that patterns in Digital Dermatoglyphics is an issue of international concern. As per the below mentioned figure 3 and 4, United States, China, UK, Australia and Canada are the top most countries for conducting the research in the field of digital dermatoglyphics.

Figure 3: Country-wise Publication Analysis

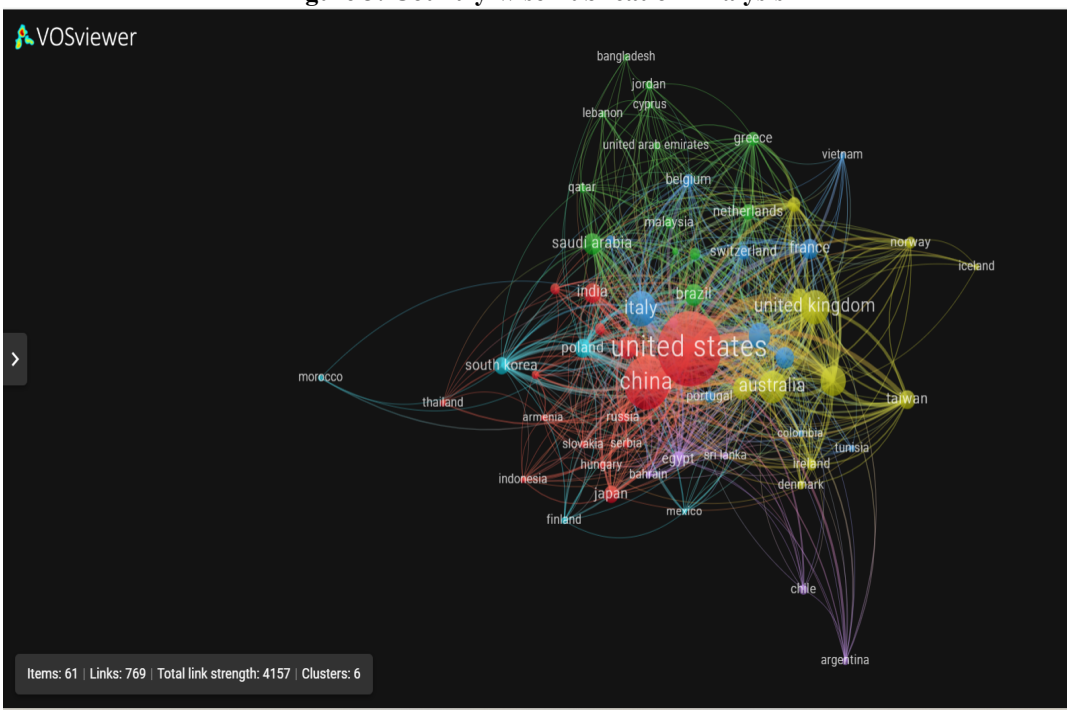
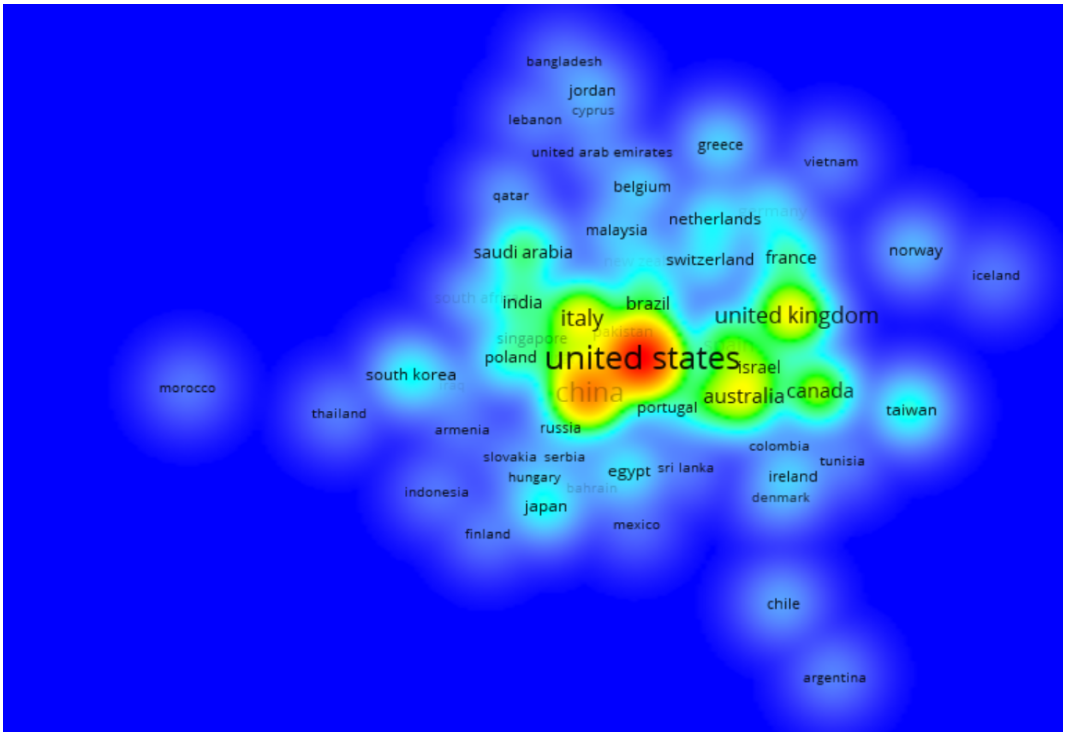


Figure 4: Country-wise Publication Analysis



Top Countries for Highest Citation: A network map highlights the inter-citation relationships of highly cited journals and demonstrates the integration of different perspectives into the research process. Historical analysis of the journals reveals the top-tier outlets in the field of dermatoglyphics and several more that concentrate on interdisciplinary studies covering the relationship between Digital Dermatoglyphic Patterns in Early Detection of Autism Spectrum Disorder. As per the table 2 and figure 5, USA is the first highest citation country and Canda is the second highest citation country for the working on Digital Dermatoglyphic Patterns in Early Detection of Autism Spectrum Disorder.

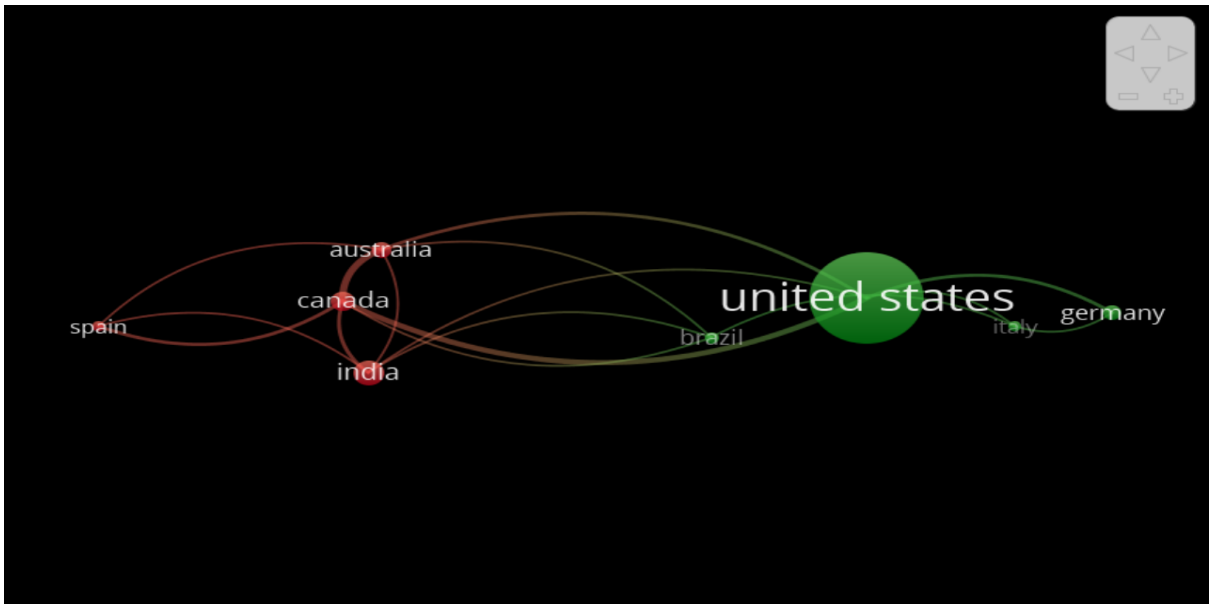
Table 2: Top Countries for Highest Citation

Create Map

Verify selected countries

Selected	Country	Documents	Citations	Total link strength
☑	canada	25	722	14
☑	australia	18	298	10
☑	united states	260	2027	10
☑	india	36	78	6
☑	brazil	12	107	4
☑	spain	10	108	4
☑	germany	16	101	3
☑	italy	10	231	3
☑	united kingdom	29	371	0

Figure 5: Top Countries for Highest Citation



Year-wise Published Documents The number of publications per year shows the growth of the field, and the spikes correspond to the major role of digital dermatoglyphic patterns in early detection of autism spectrum disorder. This analysis also shows how the research activity fits into global trends, which provides an understanding of the external factors that influence academic interest. As per the above-mentioned table and figure 1, between 2016 and July 2025, Dimension Analytics reported the publication of only 826 papers in the universe.

Conclusion

Geographic analysis of research output shows that the United States, United Kingdom, China, Canda and Australia are leaders in digital dermatoglyphic patterns in early detection of autism spectrum disorder research, which indicates significant academic in the field. Other countries are blessed with well-established research institutions and high levels of funding for both basic and applied research. On the other hand, emerging countries like India, Israel and Brazil are producing more research and are becoming more interested in the relevance of digital role of dermatoglyphic patterns in early detection of autism spectrum disorder landscapes. Additionally, this high regional diversity illustrates the flexibility of digital dermatoglyphic patterns in early detection of autism spectrum disorder as a field that can study general as well as specific aspects.

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