Landmark Publications on Sudden Infant Death Syndrome: A Bibliometric Analysis

R. G. Menezes1*, M. S. Usman2, M. M. Memon2
T. J. Siddiqi2, M. Madadin1

1Department of Pathology
College of Medicine
King Fahd Hospital of the University
Imam Abdulrahman Bin Faisal University
Dammam, Eastern Province
Saudi Arabia

2Dow Medical College
Dow University of Health Sciences
Karachi, Sindh
Pakistan

* Corresponding author: Prof. Ritesh G. Menezes MD, Department of Pathology, College of Medicine, Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia; +96 6508160375 (voice); mangalore971@yahoo.co.in; rgmenezes@iau.edu.sa.

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ABSTRACT: Sudden infant death syndrome (SIDS) is a poorly understood disorder, and its pathophysiology and risk factors remain unclear. Research in the area is the key to combating the pervasive prevalence of this fatal disorder. We sought to identify the top 50 articles concerning SIDS and study their bibliometric characteristics to gain an insight into the research trends in this area. Using the Scopus database, two independent reviewers conducted a literature search using a predefined search string. Results were arranged according to the citation count, and the top 50 relevant articles were selected. No time restrictions were set, and all types of articles were included. A detailed analysis was carried out to identify the trends and characteristics of the top 50 articles. The top 50 articles were published between 1972 and 2011, with the most productive 5-year interval being 1991–1995. These 50 papers accumulated a total of 13,703 citations (median = 236 citations per paper); among these, about 9% were self-citations. The citations received by these core papers seemed to decline post-2009. The top 50 articles were published in 21 different journals, with Pediatrics contributing the most (n = 15). US authors were listed for 60% of the articles (n = 30). None of the articles originated from Asian authors. Our manuscript highlights the characteristics of impactful articles on SIDS – and this can act as a directive for researchers aiming to publish on this topic. Bibliometric parameters suggest a decreasing research interest in the field of SIDS, which is concerning, and efforts should be made to promote research. Furthermore, the lack of influential research from Asian authors is also troubling. Funding should preferably be directed toward Asian researchers to bridge the gap in knowledge.

KEYWORDS: Bibliometric analysis, citations, SIDS, sudden infant death syndrome, sudden unexpected death in infancy.

INTRODUCTION

Sudden infant death syndrome (SIDS) remains one of the most intriguing mysteries in medicine. The US National Institute of Child Health and Development defines this syndrome as “the sudden death of an infant under one year of age, which remains unexplained after a thorough case investigation, including performance of a complete autopsy, examination of the death scene, and review of the clinical history” [82]. Although the pathophysiology of SIDS remains elusive, several risk factors have been identified, including the prone sleeping position [10,11,29,73], sleeping on the same bed as parents [12], higher ambient temperatures [5,72], and the reduced use of pacifiers [31]. The identification of these risk factors in conjunction with worldwide campaigns has led to a decline in the incidence of SIDS by almost 50% [46]. Despite this, SIDS still remains the leading cause of mortality among infants aged between 1 month and 1 year in developed countries [26,27,54,77]. The persistence of SIDS is worrisome, and experts believe the disorder is unlikely to be completely eliminated until the causative mechanisms are better understood [52]. Therefore, continued research interest in this area is essential. In order to better understand research trends in the field of SIDS, we decided to conduct a bibliometric analysis.

Bibliometric analysis is a technique that examines the frequency and trends of citations in the published literature. In the current study, we sought to employ this method to identify the 50 most impactful articles on SIDS and study their characteristics. This can provide an insight into the overall research trends in this field. Additionally, citation analysis can help identify the most influential investigators and institutions in this field, as well as areas that warrant increased research attention [50]. This information can help funding agencies effectively guide their limited resources. For example, it has been recommended that research grants should be awarded to investigators with extremely high citation counts [55]. Although this point of view is controversial [83], it appears to be the simplest method to determine worthy candidates. Evidence-based medicine suggests that staying in touch with research is valuable for practicing physicians; therefore, by compiling a list of the most noteworthy articles on SIDS, we aimed to provide pathologists and pediatricians with a resource that allows them to easily evaluate the key research work in this area.

I. METHODS

The online database Scopus (Scopus Library database, Elsevier, www.scopus.com) was used to obtain a list of the 50 most-cited articles on SIDS. Scopus has been shown to incorporate a greater number of journals and articles than other databases, proving to be a suitable choice for citation analyses [15]. A search was performed by two


71. Seglen PO: Citation rates and journal impact factors are not suitable for evaluation of research; Acta Orthop Scand 69:224; 1998.


78. Usman MS, Siddiqi TJ, Khan MS, Fatima K, Butler J, Manning WJ, Khosa F: A scientific analysis of the 100 citation classics of valvular heart disease; Am J Cardiol 120:1440; 2017.


**ABOUT THE AUTHORS**

Ritesh G. Menezes; M.S. Usman
M. M. Memon; T. J. Siddiqi
M. Madadin

Ritesh G. Menezes received his Bachelor of Medicine/Bachelor of Surgery (MBBS) from Kasturba Medical College (Mangalore, India), an MD from Kasturba Medical College (Manipal, India), and a Diplomate of the National Board (DNB) from the National Board of Examinations (New Delhi, India). Menezes is currently a professor of pathology at the College of Medicine at Imam Abdulrahman Bin Faisal University (formerly University of Dammam) in Dammam, Saudi Arabia.

Menezes has previously served as professor and head of the Department of Forensic Medicine and Toxicology at Employees State Insurance Corporation (ESIC) Medical College and Post Graduate Institute of Medical Science and Research and Model Hospital (Government of India) in Bangalore, India. He is a competent forensic practitioner, an effective teacher, and a passionate researcher with research and teaching interests in forensic pathology, clinical forensic medicine, disease pathogenesis, suicidology, toxicology, medical ethics and law, medical education, epidemiology, and global health. He has more than 200 publications in PubMed indexed journals including Nature, and The Lancet, with more than 4,000 citations as indicated by Google Scholar. He has also contributed five invited chapters published in the Encyclopedia of Forensic and Legal Medicine (Elsevier; 2016).

Menezes is on the editorial boards of the Journal of Forensic and Legal Medicine (the official journal of the Faculty of Forensic and Legal Medicine of the Royal College of Physicians, UK), Forensic Science International: Reports, Nepal Journal of Epidemiology, and the Egyptian Journal of Forensic Sciences, and is an academic editor.
of *PLoS One*. He has reviewed papers for more than 30 scientific journals indexed in PubMed or Science Citation Index Expanded including *Medicine Science and the Law, Burns, Clinical Anatomy, BMC Medical Education, BMC Public Health, Science and Engineering Ethics, Human and Experimental Toxicology, The Lancet Global Health*, and *The Lancet Infectious Diseases*.

Muhammad Shariq Usman received his medical education from Dow University of Health Sciences (DUHS) in Karachi, Pakistan. He is currently part of the Department of Medicine at DUHS.

Usman has substantial experience in clinical research. His areas of expertise include systematic reviews, metaanalyses, and bibliometric and scientometric analyses. He has published more than 50 articles in PubMed indexed journals, including *The Lancet, Nature, JAMA Network Open, Lancet Neurology, Nature Medicine, Endocrine, Journal of Forensic and Legal Medicine, Journal of the American College of Cardiology*, and *American Journal of Cardiology*. Usman has also contributed to practice-changing guidelines in the field of cardiology and a chapter published in *Essentials of Autopsy Practice: Reviews, Updates & Advances* (Springer; 2019).

Muhammad Mustafa Memon received his medical education from Dow University of Health Sciences (DUHS) in Karachi, Pakistan. He is currently part of the Department of Medicine at DUHS.

Memon has a keen interest in medical research and is on the path to becoming an academic physician. His specific areas of interest include systematic reviews, metaanalyses, and clinical trials. He has published 15 articles in PubMed indexed journals, including *European Journal of Heart Failure, European Journal of Preventive Cardiology, International Journal of Cardiology, American Journal of Cardiovascular Drugs*, and *Chest*.

Tariq Jamal Siddiqi received his medical education from Dow University of Health Sciences (DUHS) in Karachi, Pakistan. He is currently part of the Department of Medicine at DUHS.

Siddiqi’s research interests include health promotion, clinical trials, and quality improvement. He has worked with the National Institute of Cardiovascular Diseases (Karachi, Pakistan), where he managed national research projects that focused on improving the outcomes in patients with acute coronary syndrome. His collaborations with the Institute for Health Metrics and Evaluation at the University of Washington (Seattle, WA) have led to the implementation of improved health policies across the world. He has published more than 40 articles in peer-reviewed renowned journals including *The Lancet, Nature, Journal of American College of Cardiology, Nature Medicine, The Lancet Neurology, JAMA Network Open, and Journal of Forensic and Legal Medicine*.

Mohammed Madadin received his MBBS from King Faisal University, Dammam, Saudi Arabia, and his MD from the Saudi Commission for Health Specialties, Dammam, Saudi Arabia. Madadin is an associate professor of forensic medicine, chairman of the Department of Pathology, and vice dean for Academic Affairs at the College of Medicine at Imam Abdulrahman Bin Faisal University (Dammam, Saudi Arabia).

Madadin was an overseas forensic pathology fellow at the Victorian Institute of Forensic Medicine (Melbourne, Australia) and an adjunct lecturer at Monash University in Australia (Monash, Australia). He has keen interests in medical education, research, and development of the practice of forensic pathology and clinical forensic medicine in Saudi Arabia and the Middle East. He has been assigned different academic and scientific tasks in medical journals, scientific conferences, committees and councils, both nationally and internationally.

Madadin’s contribution to the scientific literature, include publications in various prestigious journals such as *Forensic Science International, Nature Biotechnology, Nature Medicine, Injury Prevention, JAMA Oncology, Forensic Science Medicine and Pathology*, and *Science and Engineering Ethics*. He has also contributed chapters published in reference books and textbooks in the fields of forensic pathology and toxicology.