

Fitriani ND

AI Maternal and Neonatal Bibliometric Analysis



AI Maternal and Neonatal



Artikel 1



Universitas Muhammadiyah Semarang

Document Details

Submission ID

trn:oid::1:3170813386

Submission Date

Mar 3, 2025, 5:46 AM GMT+7

Download Date

Mar 3, 2025, 6:02 AM GMT+7

File Name

ARTIKEL_PUBLISH_AI_MATERNAL_AND_NEONATAL_BIBLIOMETRIC_ANALYSIS.pdf

File Size

557.2 KB

10 Pages

5,512 Words

31,633 Characters

10% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.





Filtered from the Report

- Bibliography
- Quoted Text




Exclusions

- 12 Excluded Sources
- 5 Excluded Matches

Match Groups

-  **27 Not Cited or Quoted 9%**
Matches with neither in-text citation nor quotation marks
-  **0 Missing Quotations 0%**
Matches that are still very similar to source material
-  **0 Missing Citation 0%**
Matches that have quotation marks, but no in-text citation
-  **0 Cited and Quoted 0%**
Matches with in-text citation present, but no quotation marks

Top Sources

- 7%  Internet sources
- 8%  Publications
- 2%  Submitted works (Student Papers)

Integrity Flags

0 Integrity Flags for Review

No suspicious text manipulations found.

Our system's algorithms look deeply at a document for any inconsistencies that would set it apart from a normal submission. If we notice something strange, we flag it for you to review.

A Flag is not necessarily an indicator of a problem. However, we'd recommend you focus your attention there for further review.

Match Groups

- 27 Not Cited or Quoted 9%**
Matches with neither in-text citation nor quotation marks
- 0 Missing Quotations 0%**
Matches that are still very similar to source material
- 0 Missing Citation 0%**
Matches that have quotation marks, but no in-text citation
- 0 Cited and Quoted 0%**
Matches with in-text citation present, but no quotation marks

Top Sources

- 7% Internet sources
- 8% Publications
- 2% Submitted works (Student Papers)

Top Sources

The sources with the highest number of matches within the submission. Overlapping sources will not be displayed.

1	Publication	Fitriani Damayanti, Zulvi Wiyanti, Satria Pranata, Ariyani Lutfitasari. "Labour pain...	2%
2	Internet	ijalsr.org	2%
3	Internet	www.medrxiv.org	2%
4	Internet	mmcalumni.ca	1%
5	Publication	Adhi Surya Nugraha, Danang Satria Nugraha. "Oral traditions as a fount of ethno...	<1%
6	Internet	journal.unimma.ac.id	<1%
7	Publication	Tan Yigitcanlar. "Urban Artificial Intelligence - A Guidebook for Understanding Co...	<1%
8	Internet	archrazi.areeo.ac.ir	<1%



Artificial Intelligence (AI) in Maternal and Neonatal: Bibliometrics Analysis

Fitriani Nur Damayanti¹, Erna Kusumawati¹, Siti Istiana¹, Zulvi Wiyanti², Sinar Pertiwi³

¹ Department of Midwifery, Universitas Muhammadiyah Semarang, Indonesia

² Department of Midwifery, Universitas Prima Nusantara Bukittinggi, Indonesia

³ Department of Midwives, Tasikmalaya Polytechnic of Health Ministry of Health, Indonesia

*Corresponding Author's Email: sandeepoddar@lincoln.edu.my

Abstract

Background: Artificial intelligence (AI) is a branch of computer science that focuses on creating devices and models that replicate human insights. As the global community strives to ensure maternal and neonatal health and well-being, AI offers insights that can shape the future of maternal and neonatal healthcare and bring us closer to reviewing the current state of maternal and neonatal health with bibliometric analysis.

Methods: This study aims to determine the citation trends, quantity of artificial intelligence articles in the maternal and neonatal field, and future directions for the research theme. This study uses the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) research method. The reviewed articles were analyzed using the VOS viewer application.

Results: This study yielded the following findings. First, the number of publications and the number of citations on the topic of AI in maternal and neonatal has increased exponentially from year to year. Second, there are 104 items, 4 clusters on the topic of AI in maternal and neonatal. Third, the trend of research related to AI in maternal and neonatal focuses on infection, association, review, development. Fourth, research topics related to AI in maternal and neonatal suggested are topics that have a low density category, namely pandemic, artificial intelligence, parents and safety.

Conclusion: The integration of AI holds immense potential to revolutionize maternal and neonatal health. Research findings can help related researchers to identify trends and novelties AI in maternal and neonatal and recommend directions for further research.

Keywords: AI, Bibliometric, Maternal, Neonatal

Introduction

Artificial intelligence (AI) (Hassani *et al.*, 2020) is a branch of computer science that focuses on creating devices (Mapari *et al.*, 2024) and models that replicate various human insights (McAdams & Green, 2024). These models can perform different assignments (Chen *et al.*, 2020), counting learning (Cope *et al.*, 2021), considering (Garvey *et al.*, 2022), and arranging (Hussain & Al-Turjman, 2021), among others (McAdams *et al.*, 2022). AI-based techniques for creating approaches to move forward maternal and neonatal wellbeing (Owusu-Adjei *et al.*, 2024).

Maternal health relates to women's health during pregnancy (Bodunde *et al.*, 2023), childbirth (Silva Rocha *et al.*, 2022), and postpartum (Damayanti *et al.*, 2020). Good perinatal health complements and helps neonatal progress within the first month of life after birth (Ramakrishnan *et al.*, 2021). Perinatal health is defined as the state of well-being during the twenty-second week of pregnancy (or development) (Henry *et al.*, 2022) and the seventh day after birth (Maulana *et al.*, 2023). Appropriate care amid this period is basic to construct a sound establishment for the child (Pammi *et al.*, 2022),

Received on :20th October 2024; Revised version received on :13th January 2025; Accepted: 19th January 2025

which is related to a sound childhood and adulthood (Shrivastava *et al.*, 2023). The first few weeks of a baby's life following perinatal care are referred to as the neonatal period (Tzitoridou-Chatzopoulou *et al.*, 2024).

As the global community strives (Fuller *et al.*, 2023) to ensure maternal and neonatal health and well-being (Medjedovic *et al.*, 2023), AI is emerging (Alkhodari *et al.*, 2023) as a powerful ally in this noble endeavor (Damayanti *et al.*, 2020). AI-driven mortality prediction status (Adegboro *et al.*, 2022), offers insights that can shape the future of maternal and neonatal healthcare (Aninanya *et al.*, 2022) and bring us closer to the goal of ensuring maternal and neonatal health (Yasrebinia & Rezaei, 2024). By bibliometric analysis reviewing the current state of the evolution (Zyoud *et al.*, 2022) and structure of artificial intelligence technology (Ahmad *et al.*, 2022) in maternal and neonatal health care (Berg *et al.*, 2022), the technology can be used to optimize operational processes (Sibanda *et al.*, 2024).

Over time, there has been a lack of interest in the topic of artificial intelligence (AI) in maternal and neonatal worldwide. As in (Akhmad Fauzy & Supandi, 2022) And (Prabowo *et al.*, 2023), this intriguing information can be looked through Google Patterns by writing the catchphrase: manufactured insights in maternal and neonatal. For illustration, a look from By choosing a web search, January 2004 to Eminent 2024 was covered, and all categories yielded the data shown in Figure 1. The data was collected on December 13, 2024.

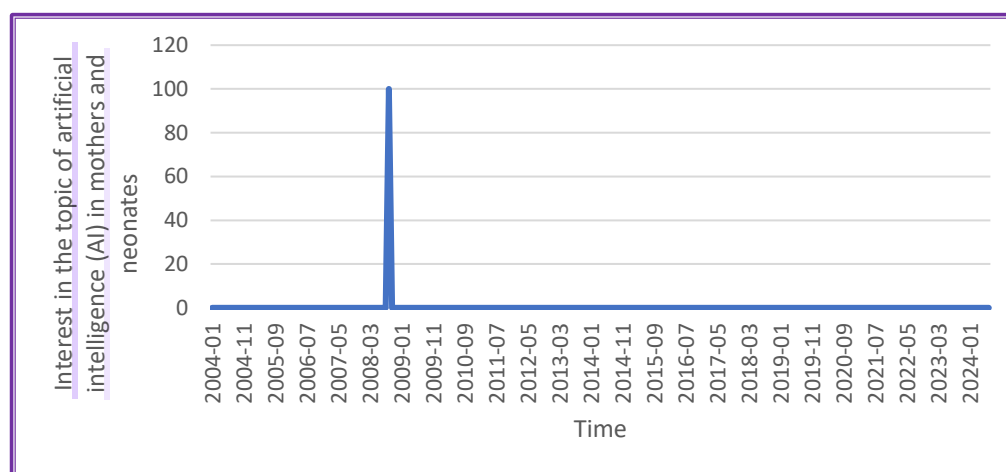


Figure 1. Interest in the subject of artificial intelligence in maternal and neonatal (Data source: Google Trends)

The information outlines the common intrigued in fake insights in maternal and neonatal. On the other hand, analysts who need to investigate artificial insights in maternal and newborns need more information particularly, for illustration of logical distributions within the frame of logical articles and scientific seminar procedures on the subject of manufactured insights in maternal and neonatal. Therefore, data on the topic of artificial insights into maternal and newborns within the shape of logical articles is exceptionally essential.

Researchers need to know about new developments and trends in artificial intelligence for mothers and newborns in the future. This is an issue that comes up with researchers. Nevertheless, there is currently no bibliometric analysis of articles on artificial intelligence in the fields of maternal and neonatal to identify trends and innovations. The present study aims to address two key research questions: (1) What is the trend of publications on the subject of artificial intelligence in mothers and newborns and (2) What is the pattern of citations on the subject? artificial intelligence in expectant mothers and babies, (6) How does the subject of artificial intelligence in mothers and newborns relate to network visualization, (7) how the publication clusters on the topic of artificial intelligence in maternal and newborn reviewed from the co-occurrence, (8) how the overlay visualization on the topic artificial intelligence in maternal and newborn, (9) how is the density visualization on artificial intelligence in maternal and newborn.

The bibliometric investigation may be a measurably based approach to inquiry that visualizes the commitments of scholastic education and changes in inquiries about hotspots (Fu *et al.*, 2023). Bibliometric examination makes a difference in analysts to recognize developing ranges and future headings of the inquiry about space with the assistance of visualization devices (Lam *et al.*, 2022). Bibliometric investigation has been utilized by different creators to assess information hypotheses recorded within the Scopus database (Lam *et al.*, 2022), to evaluate immigration and environmental degradation (Anuar *et al.*, 2022), and to investigate trends in artificial intelligence research in maternal and neonatal (Zhang *et al.*, 2022). In this way, the bibliometric examination may be a logical and quantitative strategy for evaluating distributed articles, which can offer assistance analysts to in discovering improvement patterns, overhauls, and hotspots of certain inquiries about, giving an improvement in future investigations for analysts (Soytas, 2021).

This study aims to ascertain the trend of citations, the quantity of artificial intelligence articles in the field of maternal and neonatal, and the future directions for research themes. Topics related to artificial intelligence in maternal and neonatal are still rare so it is necessary to find novelty artificial intelligence in maternal and neonatal through bibliometric analysis.

Method

Bibliometric analysis is more suitable for quantitative analysis that spreads research papers, terms, and keywords in determining research trends (Syros *et al.*, 2022). In addition, bibliometric analysis is a research method used in knowledge and information libraries. To evaluate research performance (Pahwa *et al.*, 2022). Bibliometric analysis is very important in evaluating the impact of studies where studies are ranked based on the citations received (Page *et al.*, 2021).

The collection database was searched for publications on AI in maternal and neonatal. The search strategy involved the following keywords: "AI" OR "maternal" OR "neonatal" OR "AI in maternal" OR "AI in neonatal" OR "AI in maternal and neonatal" in the title. The type of language and literature were not limited during the retrieval process.

On August 13, 2024, information was retrieved from <https://app.dimensions.ai/>. The Preferred Reporting Items for Meta-Analyses and Systematic Reviews (Page *et al.*, 2021) method was used to extract articles from the database using PRISMA, with "app.dimensions.ai."

The stages in PRISMA include identification, screening, and inclusion. During Stage 1 (Identification), 84,626 records were detected from dimensions.ai, considering each key term search for obstetrics policy, specifying "document type: articles and proceedings," and including "all data published in the years 2010 to 2023." In Stage 2 (Filtering), the "title, abstract" option was selected for each term search. Finally, in Stage 3 (Inclusion), the sample was refined, resulting in 41,538 records accessible for further analysis.

The ris records were imported into VOS viewer. After that, co-authorship investigation, citation investigation, co-citation investigation, and keyword co-occurrence examination were carried out to reveal the relationship between the most analysts, what sources are usually cited by researchers, and the most themes of world (or global) issues, compared to other bibliometric reflections in the fields of natural science and social obligations. The strategy for co-occurrence investigation is as follows. (1) The type of information is selected with the option to create an outline based on the test information. This alternative is chosen to form an outline of co-occurrence based on content information. (2) The information source is chosen with the information alternative learned from the reference supervisor notes. The supported note types are RIS, EndNote, and RefWorks. (3) The note type is chosen as RIS. (4) The area from which the terms will be extracted is chosen with the unique title and area options, ignoring the organized unique name and copyright articulation. (5) The calculation strategy is chosen with the full count alternative. (6) The limit chosen for the least number of occurrences of a term is 10. Out of 9194 terms, there are 244 terms that meet the limit. (7) The number of terms is as follows. For every 173 terms, a relevance score will be calculated. Based on this score, the most relevant terms will be selected. The default option is to select 60% of the important terms. The number of terms to be

selected is 104 terms.

Results

The search from 2010 to 2023 yielded 41,538 scientific article publications. Number of publications artificial intelligence in maternal and neonatal per year is presented in Figure 2.

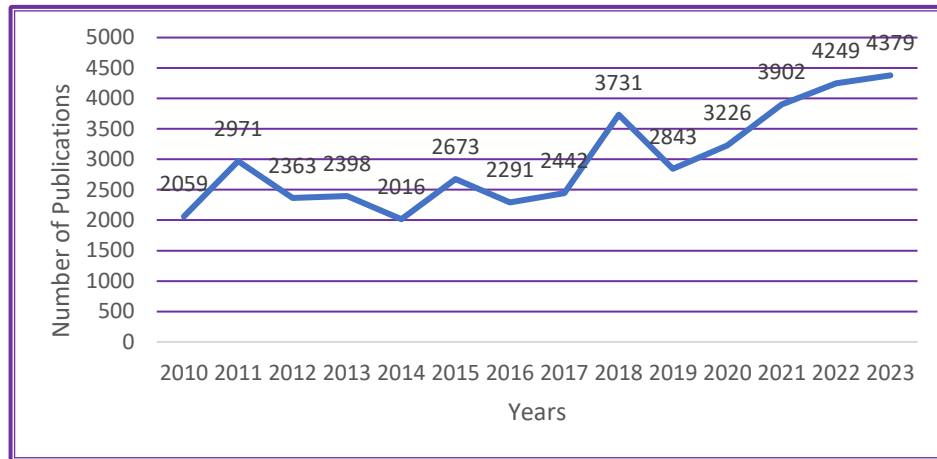


Figure 2. Number of publications on artificial intelligence in maternal and neonatal from 2010 to 2023 (source: <https://app.dimensions.ai/>)

Number of citations artificial intelligence in maternal and neonatal from 2010 to 2023 as many as 1,444,089. The number of citations per year is presented in Figure 3. The highest improvement happened in 2023, with an increase of 237062 published articles. Meanwhile, the lowest increase happened in 2010 with an increase of only 1558 article.

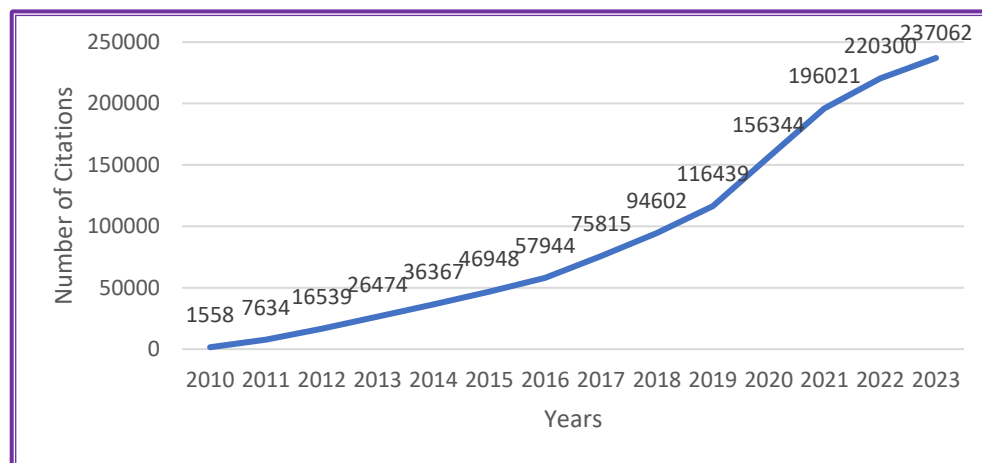


Figure 3. Number of citations for the topic of artificial intelligence in maternal and neonatal from 2010 to 2023 (source: <https://app.dimensions.ai/>)

The network visualization is a line connecting two items indicates that they appear together in the Title and Abstract of a given article. Conversely, the absence of a connecting line signifies that the two items do not co-occur in the Title and Abstract.

As shown in Figure 4, the visualization includes 104 terms, grouped into 4 clusters, with 4553 connections and a total link strength of 29331.

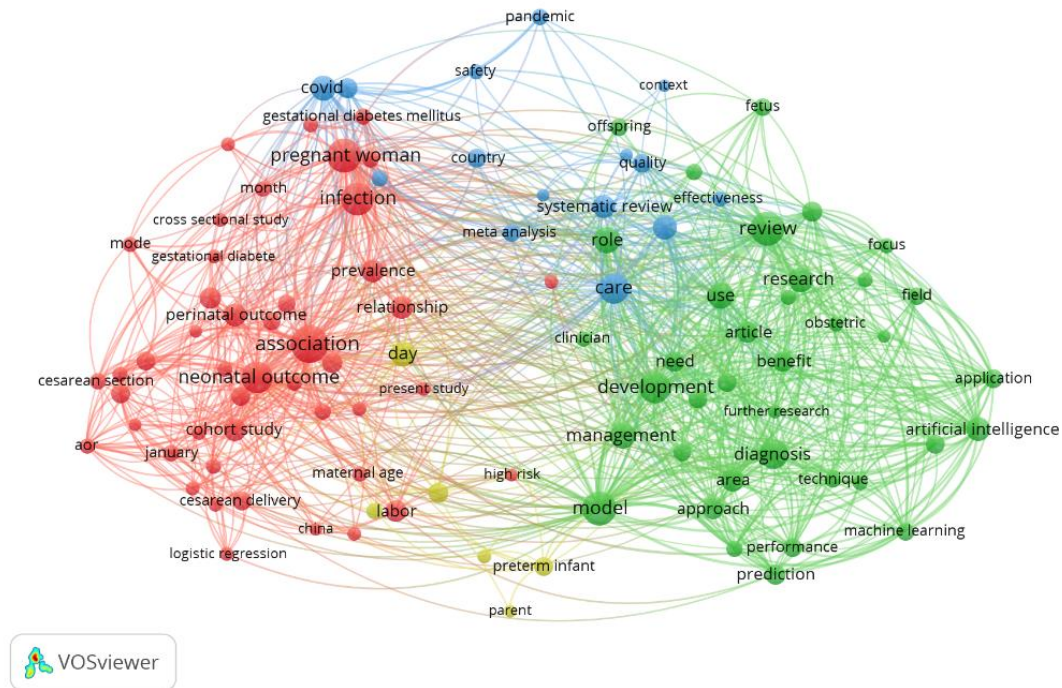


Figure 4. Network visualization (source: VOS viewer and <https://app.dimensions.ai/>)

VOS viewer also provides map overlay visualization. Figure 5 presents the overlay visualization of 104 terms. VOS viewer provides an overlay map visualization to analyse trends based on keywords like “AI in maternal and neonatal” from 2010 to 2023 publications, focusing on studies related to AI maternal and neonatal aspects. In the overlay visualization shown in Figure 5, the yellow nodes indicate keywords that are currently of significant research interest. For instance, recent studies emphasize trends in AI maternal and neonatal topics, highlighting their relationships and areas of focus in research. There are two clusters formed out of the 4 clusters.

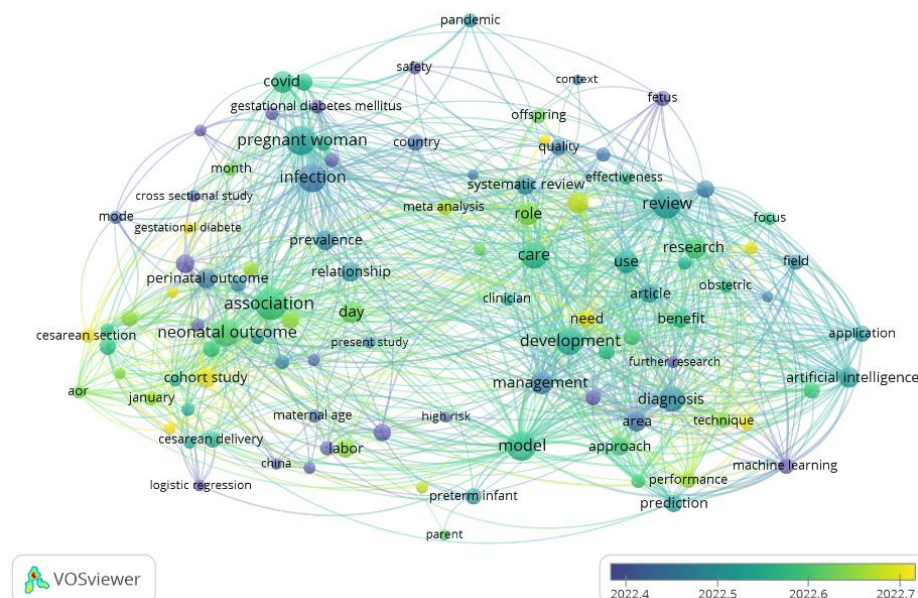


Figure 5. Overlay visualization (source: VOS viewer and <https://app.dimensions.ai/>)

Density visualization of these 104 terms are presented in Figure 6. Visualization density with lots of items there are several items, among other things infection, association, review, development. Some items with colored knots yellow means have lots made a topic in publication journals before. So, the

Discussion

The smallest number of citations occurred in 2010 with 1,558. Meanwhile, the largest citation occurred in 2023 with 237,062. Meanwhile, the average citation was . The research data reveals that, out of 41,538 publications, the publication entitled "Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019" (Collaborators *et al.*, 2020) is the most cited. Journals indexed by reputable indexers will be highly cited by other authors. As a result, this article might be consulted when researching the subject of synthetic intelligence in mothers and babies.

39

there were 104 terms, 4 clusters, 3,479 joins, and an interface quality of 9,119. Much research has been done on artificial intelligence in maternal and neonatal. Therefore, the novelty for researchers on the topic of artificial intelligence in maternal and newborn further research can be obtained through research on terms that are not directly connected, for example, preterm infant and parent.

Artificial intelligence (Sitek *et al.*, 2022), profound learning, chance forecast, computerized well-being, telemedicine, wearables, versatile healthcare, and cloud computing stay prevailing inquiries about subjects in 2016-2022 (Ahmad *et al.*, 2022).

Of the 104 terms grouped into 4 clusters, cluster 1 (46 terms), cluster 2 (37 terms), cluster 3 (15 terms), and cluster 4 (6 terms). In more detail, these clusters are presented in Table 1 Table 1 Clusters for artificial intelligence in maternal and neonatal topics (Source: Vos viewer)

Cluster	Number of items	Cluster member items
1	46	Admission, adverse neonatal outcome, adverse outcome, adverse pregnancy outcome, AOR, association, BMI, cesarean delivery, cesarean section, China, chorioamnionitis, cohort, cohort study, confidence interval, control, cross sectional study, December, GDM, gestational diabetes, gestational diabetes mellitus, high risk, higher risk, incidence, infection, January, labor, live birth, logistic regression, maternal age, membrane, mode, month, neonatal outcome, odds ratio, perinatal outcome, preeclampsia, pregnancy outcome, pregnant woman, pregnant women, present study, prevalence, relationship, retrospective cohort study, retrospective study, vaginal delivery, weeks gestation.
2	37	Accuracy, application, approach, area, article, artificial intelligence, benefit, clinician, detection, development, diagnosis, fetus, field, focus, further research, importance, limitation, literature, machine, machine learning, management, mechanism, model, need, obstetrics, offspring, paper, performance, prediction, prevention, PubMed, research, review, role, screening, technique, use.
3	15	Care, child health, context, country, covid, effectiveness, intervention, meta analysis, middle income country, pandemic, quality, safety, SARS CoV, still birth, systematic review.
4	6	Day, low birth weight, neonatal intensive care unit, NICU, parent, preterm infant.

To track the progress of research titles about artificial intelligence in maternal and neonatal settings, an overlay visualization (Figure 5.) offers an analysis based on the keyword artificial intelligence in maternal and neonatal from 2010 to 2023. The yellow phrase indicates that the keyword is of current research interest based on Figure 5 overlay visualization map (Lam *et al.*, 2022). Therefore, the research trend on artificial intelligence in maternal and new born currently focusing on terms in yellow, such as infection, association, review, and development.

AI and robotic technologies in healthcare (De Togni *et al.*, 2024) are used for early diagnosis (Zhou *et al.*, 2023), decision-making (Kermani *et al.*, 2023), research (Pedró, 2019), treatment (Wang *et al.*, 2019), education (Sapci & Sapci, 2020), and health maintenance (Li *et al.*, 2023). The utilization of AI to screen and make strides in maternal well-being amid different stages of pregnancy, labor, and postpartum. Opportune administration of different maternal well-being issues, including preterm birth, premature delivery, gestational diabetes, heart infection, and postpartum sadness, can offer assistance in diminishing maternal mortality rates (Khan *et al.*, 2022).

Density visualization (Figure 6.) appears a visualization of the term thickness level demonstrated by color. Blue color demonstrates tall thickness whereas yellow color shows moo thickness. Tall thickness implies that the subject has been broadly utilized in past considers whereas low density implies that the subject is still seldom utilized in past studies. Therefore, the subject inquiry is related to artificial insights in maternal and neonatal. The prescribed subjects are those that have a moo visualization thickness.

Conclusion

This bibliometric analysis explored the trends and advancements in AI applications in maternal and neonatal health using the Dimensions.ai database from 2010 to 2023. Findings revealed a steady increase in publications and citations, reflecting growing interest in this field. Using VOS viewer, thematic relationships were identified, highlighting key topics such as infection, review, technological development, and midwifery policies. Emerging areas with significant potential include pandemic preparedness, artificial intelligence applications in maternal safety, and parental roles in neonatal care. The study also identified leading authors, influential journals, collaborative networks, and the contributions of countries and institutions to the field, offering a comprehensive understanding of current research directions.

The integration of AI holds immense potential to revolutionize maternal and neonatal health. Predictive analytics can anticipate preterm births and neonatal infections, enabling early interventions, while AI-driven decision support systems assist healthcare providers in labor management and neonatal care. Practical applications include optimizing NICU resources, improving maternal-fetal monitoring through wearable devices, and supporting pandemic preparedness. Future research should focus on addressing ethical concerns, ensuring equitable access to AI technologies, and improving data privacy and quality. Additionally, studies exploring AI's integration into midwifery policies, its role in emergencies, and longitudinal evaluations of real-world implementation can provide actionable insights to advance maternal and neonatal healthcare globally.

Conflict of Interest

The authors declare that there is no conflict of interest.

Acknowledgment

The authors would like to extend their sincere gratitude to the Universitas Muhammadiyah Semarang for their continued support and provision of research facilities.

References

- Adegboro, C. O., Choudhury, A., Asan, O., & Kelly, M. M. (2022). Artificial intelligence to improve health outcomes in the NICU and PICU: a systematic review. *Hospital Pediatrics*, 12(1), 93–110. <https://doi.org/10.1542/hpeds.2021-006094>
- Alkhodari, M., Xiong, Z., Khandoker, A. H., Hadjileontiadis, L. J., Leeson, P., & Lapidaire, W. (2023). The role of artificial intelligence in hypertensive disorders of pregnancy: towards personalized healthcare. *Expert Review of Cardiovascular Therapy*, 21(7), 531-543. <https://doi.org/10.1080/14779072.2023.2223978>
- Aninanya, G. A., Williams, J. E., Williams, A., Otupiri, E., & Howard, N. (2022). Effects of computerized decision support on maternal and neonatal health-worker performance in the context of combined implementation with performance-based incentivisation in Upper East Region, Ghana: a qualitative study of professional perspectives. *BMC Health Services Research*, 22(1). <https://doi.org/10.1186/s12913-022-08940-0>
- Anuar, A., Marwan, N. F., Smith, J., Siriyanun, S., & Sharif, A. (2022). Bibliometric analysis of immigration and environmental degradation: evidence from past decades. *Environmental Science and Pollution Research*, 29, 13729–13741. <https://doi.org/10.1007/s11356-021-16470-1>
- Berg, M., Mwambali, S. N., & Bogren, M. (2022). Implementation of a three-pillar training intervention to improve maternal and neonatal healthcare in the Democratic Republic of Congo: a process evaluation study in an urban health zone. *Global Health Action*, 15(1). <https://doi.org/10.1080/16549716.2021.2019391>
- Bodunde, E. O., Buckley, D., O'Neill, E., Maher, G. M., Matvienko-Sikar, K., O'Connor, K., ... & Khashan, A. S. (2023). Pregnancy and birth complications associations with long-term adverse maternal mental health outcomes: a systematic review and meta-analysis protocol. *HRB Open Research*, 6(3). <https://doi.org/10.12688/hrbopenres.13660.3>
- Chen, L., Chen, P., & Lin, Z. (2020). Artificial intelligence in education: A review. *IEEE Access*, 8, 75264-75278. <https://doi.org/10.1109/ACCESS.2020.2988510>
- Cope, B., Kalantzis, M., & Sears-Smith, D. (2021). Artificial intelligence for education: Knowledge and its assessment in AI-enabled learning ecologies. *Educational Philosophy and Theory*, 53(12), 1229–1245. <https://doi.org/10.1080/00131857.2020.1728732>

- Damayanti, F. N., Absori, A., Wardiono, K., & Rejeki, S. (2020). The Evidence-Based Midwife Professionalism. *Indian Journal of Forensic Medicine & Toxicology*, 14(3). 1913-1917. <https://doi.org/10.37506/ijfimt.v14i3.10699>
- Damayanti, F. N., Absori, A., Wardiono, K., & Rejeki, S. (2020). The comparison of midwives professionalism in Indonesia and England. *Journal of the South India Medical Association*, 12(1), 4–9. <https://doi.org/10.26555/novelty.v14i2.a25748>
- De Togni, G., Erikainen, S., Chan, S., & Cunningham-Burley, S. (2023). Beyond the hype: 'acceptable futures' for AI and robotic technologies in healthcare. *AI & Society*, 39(4), 1–10. <https://doi.org/10.1007/s00146-023-01659-4>
- Fauzy, A., Suparman., & Supandi, E. D. (2022). Signal Modeling with IG Noise and Parameter Estimation Based on RJMCMC. *Mathematics and Statistics*, 10(6), 1285 – 1292. <https://doi.org/10.13189/ms.2022.100614>
- Fu, Z., Lv, J., Gao, X., Zhang, B., Li, Y., Xu, X., ... & Song, Q. (2023). Research trends and hotspots evolution of cardiac amyloidosis: a bibliometric analysis from 2000 to 2022. *European Journal of Medical Research*, 28(1). <https://doi.org/10.1186/s40001-023-01026-5>
- Fuller, S., Kuenstler, M., Snipes, M., Miller, M., & Lutgendorf, M. A. (2023). Obstetrical health care inequities in a universally insured health care system. *AJOG Global Reports*, 3(3). <https://doi.org/10.1016/j.xagr.2023.100256>
- Garvey, K. V, Thomas Craig, K. J., Russell, R., Novak, L. L., Moore, D., & Miller, B. M. (2022). Considering clinician competencies for the implementation of artificial intelligence–based tools in health care: findings from a scoping review. *JMIR Medical Informatics*, 10(11). <https://doi.org/10.2196/37478>
- Gulzar Ahmad, S., Iqbal, T., Javaid, A., Ullah Munir, E., Kirn, N., Ullah Jan, S., & Ramzan, N. (2022). Sensing and artificial intelligent maternal-infant health care systems: a review. *Sensors*, 22(12). <https://doi.org/10.3390/s22124362>
- Hassani, H., Silva, E. S., Unger, S., TajMazinani, M., & Mac Feely, S. (2020). Artificial intelligence (AI) or intelligence augmentation (IA): what is the future? *Ai*, 1(2). 143-155. <https://doi.org/10.3390/ai1020008>
- Henry, C., Saffaran, S., Meeus, M., Bates, D., Van Laere, D., Boylan, G., Boardman, J. P., & Sharkey, D. (2022). Application and potential of artificial intelligence in neonatal medicine. *Seminars in Fetal and Neonatal Medicine*, 27(5). <https://doi.org/10.1016/j.siny.2022.101346>
- Hussain, A. A., & Al-Turjman, F. (2021). Artificial intelligence and blockchain: A review. *Transactions on Emerging Telecommunications Technologies*, 32(9). <https://doi.org/10.1002/ett.4268>
- Kermani, F., Zarkesh, M. R., Vaziri, M., & Sheikhtaheri, A. (2023). A case-based reasoning system for neonatal survival and LOS prediction in neonatal intensive care units: a development and validation study. *Scientific Reports*, 13(1). <https://doi.org/10.1038/s41598-023-35333-y>
- Khan, M., Khurshid, M., Vatsa, M., Singh, R., Duggal, M., & Singh, K. (2022). On AI approaches for promoting maternal and neonatal health in low resource settings: a review. *Frontiers in Public Health*, 10. <https://doi.org/10.3389/fpubh.2022.880034>
- Khosravi, M., Zare, Z., Mojtabaeian, S. M., & Izadi, R. (2024). Artificial intelligence and decision-making in healthcare: a thematic analysis of a systematic review of reviews. *Health Services Research and Managerial Epidemiology*, 11, <https://doi.org/10.1177/23333928241234863>
- Laghari, M. A., Siddiqui, A., Channa, S. P., Laghari, Z. A., Memon, H. A., Sahito, S., Dehraj, M. A., Hussain, S. (2024). Integration of Artificial Intelligence (AI) to revolutionize the learning opportunities: a review. *Migration Letters*, 21(S14), 283–289. Retrieved from: <https://migrationletters.com/index.php/ml/article/view/11199>
- Lam, W. H., Lam, W. S., Jaaman, S. H., & Lee, P. F. (2022). Bibliometric analysis of information theoretic studies. *Entropy*, 24(10). <https://doi.org/10.3390/e24101359>
- Li, T., Zeng, Y., Fan, X., Yang, J., Yang, C., Xiong, Q., & Liu, P. (2023). A bibliometric analysis of research articles on midwifery based on the web of science. *Journal of Multidisciplinary Healthcare*, 16, 677–692. <https://doi.org/10.2147/JMDH.S398218>
- Mapari, S. A., Shrivastava, D., Dave, A., Bedi, G. N., Gupta, A., Sachani, P., ... & Pradeep, U. (2024). Revolutionizing Maternal Health: The Role of Artificial Intelligence in Enhancing Care and Accessibility. *Cureus*, 16(9). <https://doi.org/10.7759/cureus.69555>
- Maulana, F. I., Lestari, D., Purnomo, A., & Carrollina, D. (2023). Applied artificial intelligence in healthcare research with bibliometric approach. *AIP Conference Proceedings*, 2865(1). <https://doi.org/10.1063/5.0183065>
- McAdams, R. M., & Green, T. L. (2024). Equitable Artificial Intelligence in Obstetrics, Maternal–Fetal Medicine, and Neonatology. *Obstetrics & Gynecology*, 143(5), 627-632. <https://doi.org/10.1097/aog.0000000000005563>
- McAdams, R. M., Kaur, R., Sun, Y., Bindra, H., Cho, S. J., & Singh, H. (2022). Predicting clinical outcomes using artificial intelligence and machine learning in neonatal intensive care units: a systematic review. *Journal of Perinatology*, 42(12), 1561-1575. <https://doi.org/10.1038/s41372-022-01392-8>
- Medjedovic, E., Stanojevic, M., Jonuzovic-Prosic, S., Ribic, E., Begic, Z., Cerovac, A., & Badnjevic, A. (2023). Artificial intelligence as a new answer to old challenges in maternal-fetal medicine and obstetrics. *Technology and Health Care*, 32(3), 1273-128. <https://doi.org/10.3233/thc-231482>

- Owusu-Adjei, M., Ben Hayfron-Acquah, J., Gaddafi, A.-S., & Frimpong, T. (2024). An AI-based approach to predict delivery outcome based on measurable factors of pregnant mothers. *medRxiv*, 2024-06. <https://doi.org/10.1101/2024.06.07.24308404>
- Özkaya, M., & Körükcü, Ö. (2024). Trend of artificial intelligence in nursing from 2004 to 2024: a bibliometric analysis based on web of science. *Journal of Innovative Healthcare Practices*, 5(2), 67–77. <http://dx.doi.org/10.58770/joinihp.1481083>
- Pammi, M., Aghaeepour, N., & Neu, J. (2022). Multiomics, artificial intelligence, and precision medicine in perinatology. *Pediatric Research*, 93(2), 308–315. <https://doi.org/10.1038/s41390-022-02181-x>
- Pedró, F., Subosa, M., Rivas, A., & Valverde, P. (2019). Artificial intelligence in education: Challenges and opportunities for sustainable development. *Unesco*, 46 pages. <https://doi.org/10.54622/fahima.v3i2.350>
- Prabowo, A., Suparman, S., Li, C. S., Janan, D., & Damayanti, T. D. (2023). The effect of reading literacy to mathematics comprehension of elementary school students in Indonesia and Malaysia, *International Journal of Evaluation and Research in Education (IJERE)*, 12(1). 546-554. <http://doi.org/10.11591/ijere.v12i1.25714>
- Ramakrishnan, R., Rao, S., & He, J. (2021). Perinatal health predictors using artificial intelligence: A review. *Women's Health*, 17. <https://doi.org/10.1177/17455065211046132>
- Sapci, A. H., & Sapci, H. A. (2020). Artificial intelligence education and tools for medical and health informatics students: systematic review. *JMIR Medical Education*, 6(1). <https://doi.org/10.2196/19285>
- Shrivastava, R., Singhal, M., Gupta, M., & Joshi, A. (2023). Development of an artificial intelligence–guided citizen-centric predictive model for the uptake of maternal health services among pregnant women living in urban slum settings in India: protocol for a cross-sectional study with a mixed methods design. *JMIR Research Protocols*, 12. <https://doi.org/10.2196/35452>
- Sibanda, K., Ndayizigamiye, P., & Twinomurizi, H. (2024). Industry 4.0 technologies in maternal health care: bibliometric analysis and research agenda. *JMIR Pediatrics and Parenting*, 7. <https://pediatrics.jmir.org/2024/1/e47848/citations>
- Silva Rocha, E. da, de Morais Melo, F. L., de Mello, M. E. F., Figueiroa, B., Sampaio, V., & Endo, P. T. (2022). On usage of artificial intelligence for predicting mortality during and post-pregnancy: a systematic review of literature. *BMC Medical Informatics and Decision Making*, 22(1). <https://doi.org/10.1186/s12911-022-02082-3>
- Sitek, A., Seliga-Siwecka, J., Płotka, S., Grzeszczyk, M. K., Seliga, S., Włodarczyk, K., & Bokinić, R. (2022). Artificial intelligence in the diagnosis of necrotising enterocolitis in newborns. *Pediatric Research*, 93(2), 376–381. <https://doi.org/10.1038/s41390-022-02322-2>
- Soytas, R. B. (2021). A bibliometric analysis of publications on COVID-19 and older adults. *Annals of Geriatric Medicine and Research*, 25(3), 197-203. <https://doi.org/10.4235/agmr.21.0060>
- Tzitiroidou-Chatzopoulou, M., Orovou, E., & Zournatzidou, G. (2024). Digital Training for Nurses and Midwives to Improve Treatment for Women with Postpartum Depression and Protect Neonates: A Dynamic Bibliometric Review Analysis. *Healthcare*, 12(10). <https://doi.org/10.3390/healthcare12101015>
- Vos, T., Lim, S. S., Abbafati, C., Abbas, K. M., Abbasi, M., Abbasifard, M., ... & Bhutta, Z. A. (2020). Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *The Lancet*, 396(10258), 1204-1222. [https://doi.org/10.1016/s0140-6736\(20\)30925-9](https://doi.org/10.1016/s0140-6736(20)30925-9)
- Wang, C., Zhu, X., Hong, J. C., & Zheng, D. (2019). Artificial intelligence in radiotherapy treatment planning: present and future. *Technology in Cancer Research & Treatment*, 18, <https://doi.org/10.1177/1533033819873922>
- Yasrebinia, S., & Rezaei, M. (2024). Artificial intelligence for predicting neonatal mortality in post-pregnancy: a systematic review. *Eurasian Journal of Chemical, Medicinal and Petroleum Research*, 3(1), 81–87. <https://doi.org/10.5281/zenodo.20231109>
- Zhang, Y., Lim, D., Yao, Y., Dong, C., & Feng, Z. (2022). Global research trends in radiotherapy for gliomas: a systematic bibliometric analysis. *World Neurosurgery*, 161, 355–362. <https://doi.org/10.1016/j.wneu.2022.02.001>
- Zhou, Y., Zhu, K., Zhang, X., Zhu, Z., Jiang, L., Xing, L., Xu, B., Ai, T., Liu, Q., Zhao, R., Xu, X., Chen, J., & Zhang, Z. (2023). Clinical features, diagnosis, and treatment of congenital and neonatal tuberculosis: a retrospective study. *Neonatology*, 121(1), 81–88. <https://doi.org/10.1159/000534786>
- Zyoud, S. H., Al-Jabi, S. W., Shahwan, M. J., & Jairoun, A. A. (2022). Global research production in neonatal abstinence syndrome: A bibliometric analysis. *World Journal of Clinical Pediatrics*, 11(3), 307–320. <https://doi.org/10.5409/wjcp.v11.i3.307>