

BIBLIOMETRIC ANALYSIS TREND CUPPING THERAPY TREATMENT INTERVENTIONS FOR HEALTH

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ABSTRAK

Terapi bekam salah satu intervensi pengobatan komplementer untuk kesehatan yang sudah ada sejak ribuan tahun. Penelitian ini memberikan informasi tentang trend topik penelitian masa depan terkait intervensi pengobatan terapi bekam untuk kesehatan tentang *low back pain*, *reduce pain* dan *migranie*. Analisis data dalam penelitian ini menggunakan bibliometrik. Pencarian data yang digunakan di Web melalui <http://app.dimensions.ai>. Jurnal atau data memiliki lebih dari 142 juta artikel dan dibatasi dari tahun 2020-2024, dengan menyaring data berbasis app.dimensions.ai yang berfokus pada bidang ilmu kesehatan, keperawatan, ilmu klinis, kesehatan masyarakat dan jenis artikel dalam publikasi. Data dianalisis menjadi peta bibliometrik menggunakan VOSviewer. Hasil identifikasi data melalui app.dimensions.ai terdapat 20.566 data tercatat, dengan mengurutkan berdasarkan jenis artikel dan jenisnya dari dokumen tersebut, hasil yang ditemukan sebanyak 2.062 artikel. Jumlah tertinggi publikasi trend intervensi pengobatan terapi bekam untuk kesehatan tentang *low back pain*, *reduce pain* dan *migranie* terjadi pada tahun 2022 dan terendah terjadi pada tahun 2021. Penelitian trend intervensi pengobatan terapi bekam untuk kesehatan tentang *low back pain*, *reduce pain* dan *migranie* dilakukan tidak hanya di bidang kesehatan sektor, kedokteran, keperawatan dan psikologi tetapi juga di bidang lain. Topik trend intervensi pengobatan terapi bekam untuk kesehatan adalah sebuah topik yang perlu dikembangkan lebih lanjut sebagai terapi komplementer untuk kesehatan. Saran bagi peneliti lain untuk memilih topik yang termasuk dalam visualisasi rendah untuk menemukan pembaruan penelitian.

Kata kunci: analisis bibliometrik, terapi bekam, intervensi kesehatan

ABSTRACT

Cupping therapy is a complementary medical intervention for health that has been around for thousands of years. This research provides information about trends in future research topics related to cupping therapy treatment interventions for health regarding low back pain, reducing pain and migraine. Data analysis in this research uses bibliometrics. Search for used data on the Web via <http://app.dimensions.ai>. Journals or data have more than 142 million articles and are limited from 2020-2024, by filtering data based on app.dimensions.ai which focuses on the fields of health sciences, nursing, clinical sciences, public health and the types of articles in publications. The data was analyzed into a bibliometric map using VOSviewer. As a result of data identification via app.dimensions.ai, there were 20,566 recorded data, by sorting based on the type of article and type of document, the results found were 2,062 articles. The highest number of publications on trends in cupping therapy treatment interventions for health regarding low back pain, reduce pain and migraine occurred in 2022 and the lowest occurred in 2021. Research on trends in cupping therapy treatment interventions for health regarding low back pain, reduce pain and migrancy was carried out not only in the health sector, medicine, nursing and psychology but also in other fields. The trending topic of cupping therapy treatment interventions for health is a topic that needs to be developed further as a complementary therapy for health. Suggestions for other researchers to choose topics that fall under low visualization to find research updates.

Keywords: *bibliometric analysis, cupping therapy, interventions for health*

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1. INTRODUCTION

Cupping is an ancient medical procedure that has been practiced for thousands of years ¹. Cupping therapy is an ancient traditional and complementary medicine practice ². Cupping therapy is a treatment method that has been passed down from generation to generation and developed based on developments in science. Cupping therapy uses a suction or vacuum method on the skin ³.

Cupping therapy is currently used in the treatment of various diseases ⁴. Cupping is a classic therapeutic method that has now reappeared and is now trending to be used by doctors to treat various disease complaints. Currently, many scientific studies in various countries around the world prove the effectiveness of this cupping therapy method. In several hadiths of the Prophet Muhammad SAW, specialization is given to the tradition of cupping treatment as one of the effective traditional healing therapies ⁵.

The cupping therapy technique utilizes the power of a vacuum created under a small container that is applied to the surface of the skin. This approach focuses blood and autologous healing agents in specific areas, stimulating metabolic activity, improving immune function and stabilizing blood biochemistry ⁶. Cupping can clean the blood flow in the human body. A detoxification (process of removing toxins) that has no side effects. Cupping can reduce pain, restore body function and give sufferers hope to seek recovery ⁷.

There is now increasing evidence regarding the potential benefits of cupping therapy in the treatment of diseases such as those associated with pain ². Cupping therapy is known to have several benefits such as reducing neck pain, low back pain and headaches, where pain is an unpleasant feeling and emotional experience caused by tissue damage in the body ³.

One alternative treatment to reduce low back pain is cupping therapy. The main principle of cupping therapy is to use negative pressure to attract toxins, free radicals in the blood, inflammatory cells, metabolic waste or Causative Pathological Substances (CPS), scarification in the form of removing the skin and eliminating CPS ⁸

The cupping therapy method will release toxins and oxidants accumulated in the body. In the human body, the skin is the largest organ, so many toxins collect in the skin. Cupping is able to clean dirty blood in the human body. Scientifically, cupping can be used for prevention and healing. Cupping can reduce the risk of heart disease and treat various diseases such as hypertension, migraines, carpal tunnel syndrome, stroke treatment and effectively improve the autonomic nervous system ⁹.

Research on current research topic trends related to cupping therapy treatment interventions for health is increasingly developing and needs to be updated or updated with the latest research information, so that the results can be used as a guide in the latest research or looking for information about the latest research can use bibliometric analysis. Bibliometrics can determine the quality and main topics of research in various publications. Bibliometrics makes it easier for researchers to find and obtain subjects that are rarely researched or subjects that are of greatest interest. Bibliometric analysis of research related to trends in cupping therapy intervention topics for health has never been carried out, so this research can be carried out to find current topics and trending issues related to these topics.

2. METHOD

There are different types of data analysis research designs: Bibliometric, Scientometric, Altometric, Cybermetric and Infometric¹⁰. Bibliometrics is a measurement or analysis of literacy using a statistical approach, so bibliometrics is very suitable for analyzing literacy, periodicals and research journals or the latest research trends¹¹.

Data-based research sourced online via the Web via <http://app.dimensions.ai> and filtered based on the year 2020-2024. Articles focus on the fields of health sciences, nursing, clinical sciences, and public health. The data obtained was analyzed using VOSviewer. The data for this research was compiled based on PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses)¹². Research data centers on biomedical and clinical sciences, clinical sciences, health sciences, human society, and biological sciences in 2020-2024.

Data sorting according to PRISMA has three stages, starting from identification, filtering and data processing. Data identification via Dimensi.ai contains 20,566 recorded data, by sorting it based on article type and document type and considering the publication year range from 2020-2024. The data found was 2,062 articles. An explanation based on the PRISMA diagram will be shown in Figure 1.

The data obtained will be analyzed using the VOSviewer application. VOSviewer is an application that can create and display bibliometric maps¹³. This type of analysis is used to create bibliometric maps based on text data.

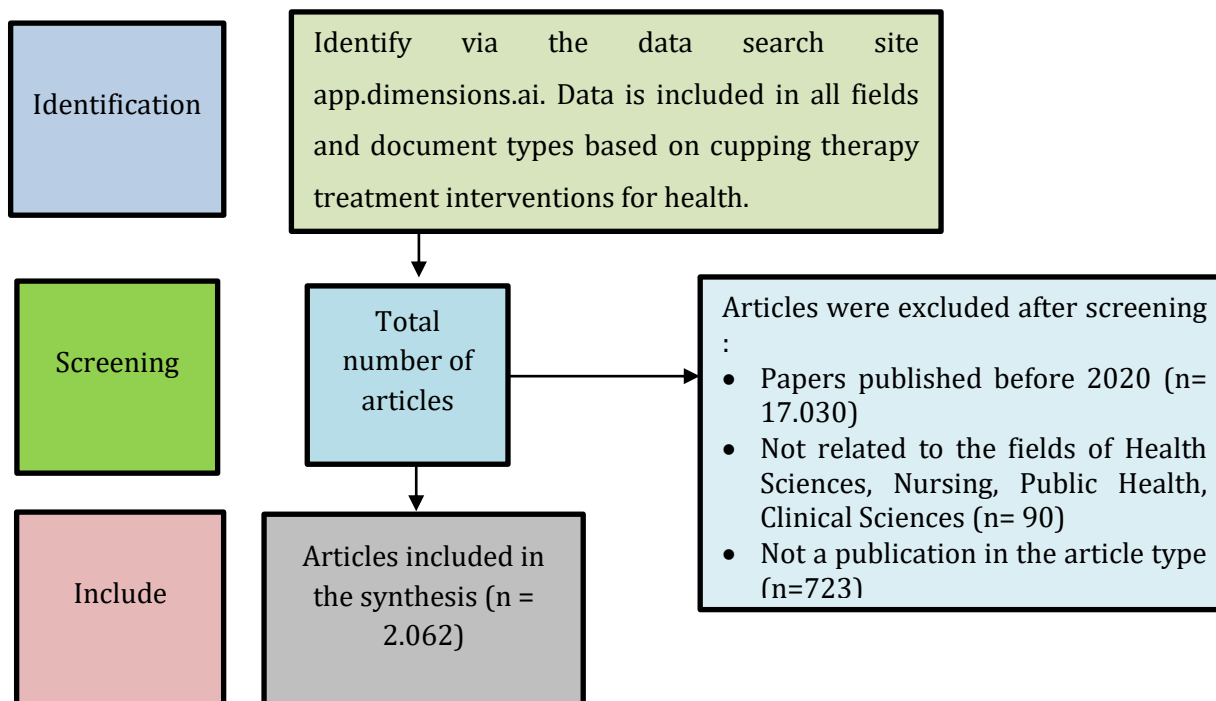


Figure 1. Stages in framework development

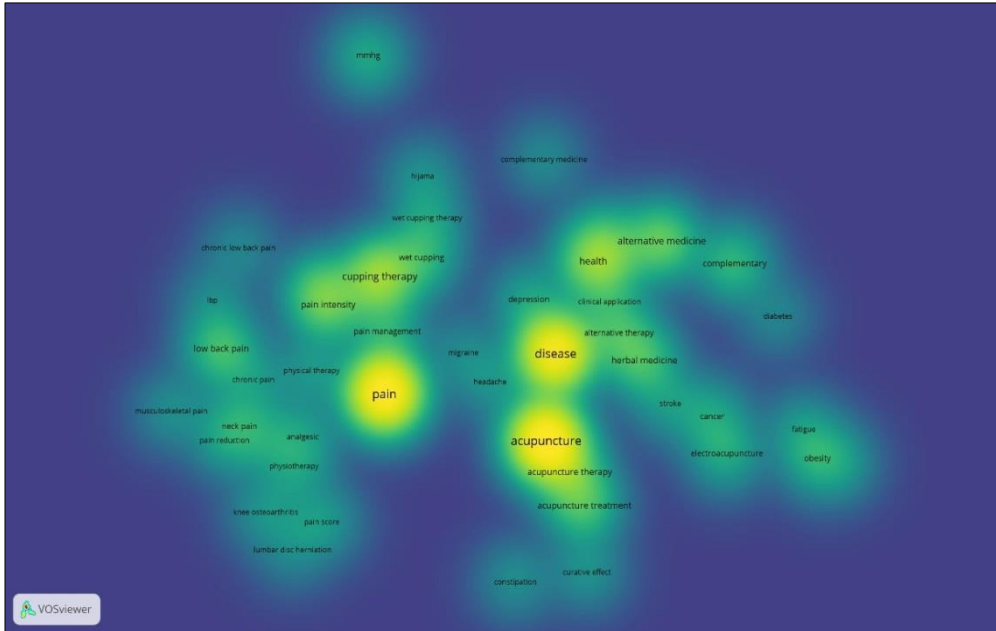


Figure 4. Density Visualization (VOSviewer).

Figure 2 shows research publication data on trends in cupping therapy treatment intervention research topics for health regarding low back pain, reducing pain and migraine. The data has a link strength of 1406, the number of links is 468, resulting in 48 items and 5 clusters. The data shows interrelated results which are explained by the items in the cluster, the red line depicts cluster 1 which consists of 13 items, the green line depicts cluster 2 totaling 11 items, the blue line depicts cluster 3 which consists of 10 items, the light green line depicts cluster 4 which consists of 7 items and the purple line depicts cluster 5 which consists of 7 items.

Figure 3 is a form of visualization of the latest research and related research variables. Figure 3 illustrates that the color yellow is related to current research subject trends, while greener or bluer colors are no longer trendy or popular in recent research.

Figure 3 | Current trends in cupping therapy treatment interventions for health in cases of low back pain, pain reduction and migraine.

4. DISCUSSION

Low back pain (LBP) is a symptom of pain that is a major health problem in several developing countries. As LBP occurs frequently, overcoming this symptom requires management that is easy to apply for everyone. Cupping is an alternative therapy method that can reduce pain and is easy to apply. Cupping is a procedure of making an incision in the skin and using a special glass cup to remove blood, lymph fluid and other fluids subcutaneously. The cupping mechanism will create a vacuum in the skin which then

causes the capillaries to burst. Then the skin of the local area turns red. The effect of cupping therapy in reducing pain is reported to be equivalent to an analgesic effect. In LBP, ischemia occurs which causes the presence of inflammatory mediators and pain mediators. This mediator will stimulate the pain nerve fibers so that pain occurs. When ischemia occurs, lactic acid accumulates in the tissue as a consequence of metabolism without oxygen. Cupping therapy will remove inflammatory mediators and pain mediators from the body resulting in decreased stimulation of pain nerve fibers. In addition, there is a release of the hormone β -endorphin which plays a role in reducing pain ¹⁴.

The effect of cupping therapy in reducing pain is reported to be equivalent to that of an analgesic. In low back pain, ischemia occurs which causes inflammation and pain mediators. This mediator will stimulate the painful nerve fibers, causing pain. When ischemia occurs, the resulting accumulation of lactic acid in the tissues increases from anaerobic metabolism. Cupping therapy will remove inflammatory and pain mediators from the body, resulting in decreased stimulation of pain nerve fibers. There is also the release of the hormone β -endorphin which plays a role in reducing pain ¹⁵.

Cupping therapy is a treatment method that has been passed down from generation to generation and developed based on scientific developments that use the method of suction or vacuuming the skin. Cupping therapy is known to have several benefits such as reducing neck pain, low back pain and headaches, where pain is an unpleasant feeling and emotional experience caused by tissue damage in the body. ³

Migraine is a common cause of primary headache disorders. Cupping is a traditional intervention often used to control pain including migraines. Cupping therapy has potential therapeutic effects in treating migraines ¹⁶. The cupping process stimulates the release of endogenous opioid peptides as endorphins which ultimately reduce pain. The result of painful stimulation of the periaqueductal gray matter, specific nuclei in the medulla, and the reticular formation are endogenous opiates. From the results, these three regions will form an analgesic system in the body, known as the descending analgesic pathway. Stimulation of periaqueductal gray matter will be responded to by specific nuclei in the medulla and reticular formation. Then the impulse will be transmitted through inhibitory interneurons in the dorsal horn of the spinal cord, this is where endogenous opiates such as endorphins, enkephalins and dynorphins are produced which will ultimately be released into the afferent nerve endings. This endogenous opium will bind to opiate receptors and will inhibit the release of substance P (pain related pathway) so that it will inhibit the transition of pain impulses along the ascending pain pathway. ¹⁵ The difference between Figure 3 and Figure 4 lies in the visualization of the data displayed. Figure 4 visualizes data saturation displayed via VOSviewer.

5. CONCLUSION

The highest publication of information on trends in cupping therapy treatment interventions for health occurred in 2022 and the lowest in 2021. Research on cupping therapy treatment interventions for health was carried out not only in the health, medicine, nursing and psychology sectors, but also in other fields. This is due to the use of data technologies, such as databases, artificial intelligence, and genetic analysis. Apart from these issues, research topic trends related to cupping therapy treatment interventions for health regarding low back pain, reduce pain and migraine will continue to develop in the

future. Recommendations for other researchers to choose topics that fall under low visualization to find research updates.

REFERENCES

1. Soliman Y, Hamed N, Khachemoune A. Cupping in dermatology: a critical review and update. *Acta Dermatovenerol Alp Pannonica Adriat.* 2018;27(2):103–7.
2. Aboushanab TS, AlSanad S. Cupping therapy: an overview from a modern medicine perspective. *J Acupunct Meridian Stud.* 2018;11(3):83–7.
3. Helisa GP. Manfaat Terapi Bekam Terhadap Penurunan Nyeri Pada Pasien: Literature Review. *J Med Utama.* 2022;4(01 Oktober):3171–7.
4. Al-Bedah AMN, Elsubai IS, Qureshi NA, Aboushanab TS, Ali GIM, El-Olemy AT, et al. The medical perspective of cupping therapy: Effects and mechanisms of action. *J Tradit Complement Med.* 2019;9(2):90–7.
5. Fajri N. Bekam Sebagai Alternatif Pengobatan Perspektif Sains dan Hadis. *Al-Tadabbur.* 2020;6(2):305–22.
6. Furhad S BA. Cupping Therapy - StatPearls - NCBI Bookshelf [Internet]. 2020. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK538253/>
7. Novsawindi E. Gambaran Pengetahuan Pasien Tentang Bekam Sunnah Yang Berkunjung Ke Pelayanan Kesehatan Komplementer Bengkulu. *J Vokasi Keperawatan.* 2022;5(1):38–47.
8. Iriawandani DS, Hidayati HB, Widada W, Purwandhono A, others. Cupping as An Effective Complementary Therapy to Reduce Chronic Low Back Pain in Medical Rehabilitation Subdivision Perkebunan Hospital Jember. *Int J Sci Adv.* 2021;2(6):990–4.
9. Amiruddin M, Syafitri LI, Rabbani A, Muthmainnah AK, Salsabila AT. The Benefits of Removing Dirty Blood with Traditional Cupping Treatment. In: *Proceedings of International Pharmacy Ulul Albab Conference and Seminar (PLANAR).* 2022. p. 60–8.
10. Chellappandi P, Vijayakumar CS. Bibliometrics, Scientometrics, Webometrics/Cybermetrics, Informetrics and Altmetrics--An Emerging Field in Library and Information Science Research. *Shanlax Int J Educ.* 2018;7(1):5–8.
11. Murugesu G V, Khalid SA, Shareef H. Bibliometric Analysis on Microbial Fuel Cell Research Trend in Electronic Engineering Perspective. *ASEANA Sci Educ J.* 2022;2(2):1–10.
12. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *Int J Surg.* 2021;88:105906.
13. Van Eck N, Waltman L. Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics.* 2010;84(2):523–38.
14. Ramadhian MR, Adha MIZ. Efek Analgesic Terapi Bekam Terhadap Kondisi Low Back Pain. *J Major.* 2017;6(2):39–43.
15. Putri RA, Hasina SN. Perbedaan Terapi Bekam dan Kompres Hangat terhadap Tingkat Nyeri Punggung Bawah pada Lansia. *J Keperawatan.* 2020;12(1):33–40.
16. Seo J, Chu H, Kim CH, Sung KK, Lee S. Cupping therapy for migraine: a PRISMA-compliant systematic review and meta-analysis of randomized controlled trials. *Evidence-Based Complement Altern Med.* 2021;2021:1–9.