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Research paper

The Science of Self: A Bibliometric and Pragmatic Analysis of Yoga, Meditation, And Wellbeing in The Contemporary Scientific Landscape

Pallabi Mukherjee [1] *, Ankita Sharma [2], Vinita Ramchandani [2], Tarika Nandedkar [1]

[1] Associate Professor, IPS Academy, Institute of Business Management and Research, Indore, M.P.
[2] Assistant Professor, IPS Academy, Institute of Business Management and Research, Indore, M.P.
**Corresponding author E-mail: pallabimukherjee@ipsacademy.org*

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Abstract

The research paper uses bibliometric analysis to analyze worldwide trends of yoga and meditation research between the years 2010 and 2025. With citation and co-citation analysis, the paper establishes top authors, nations, and repeating patterns. Results reveal consistent growth in publications, highest between 2020–2022, spurred by post-COVID health consciousness and India's 2020 National Education Policy to encourage indigenous knowledge systems. Holger Cramer, Romi Lauche, and Linda Carlson are noted influencers. The U.S. and India rank highest in the quantity of research produced, with common keywords including mindfulness, mental health, and quality of life. Thematic mapping identifies "quality of life," "mindfulness," and "depression" as key themes, confirming this research landscape's persistent utility in improving well-being. Future research could be directed toward upcoming themes, including relaxation training and systematic review studies.

Keywords: *Yoga; Meditation; Bibliometric Analysis; Vos-Viewer; Biblioshiny; Quality of Life; Mindfulness*

1. Introduction

Meditation and yoga are ancient practices that have existed for centuries to encourage physical and mental wellness. The traditions, originating in Indian mysticism, spread across the globe and are universally accepted today. Yoga has often been practiced as an inclusive method of maintaining wellness because it involves physical posture (asanas), breathing (pranayama), and meditation (Gothe 2016). A central component of most yoga systems, meditation focuses on attention and concentration and offers a way for individuals to cultivate inner peace and awareness (Dada R 2015). The greater volume of research on meditation and yoga during the past decade has highlighted its numerous health benefits. Research works in these fields report, ongoing practice can boost physical well-being, reduce stress levels, enhance mental abilities, and promote emotional well-being. In addition, the wide recognition that yoga and meditation can enhance mental well-being by reducing the effects of trauma, despair, and anxiety is increasing and is often complementary and alternative to medicine (Dobos G 2013).

This research landscape is not limited to a single discipline and provides a roadmap to holistic life and growth in an individual's life. Researchers from different domains and fields like philosophy, science, management, economics, psychology, and medicine practice yoga and even study this research concept to analyze its profound benefits on health in every way, including physical, mental, and emotional health. Both yoga and meditation can reduce stress and improve life's quality (Gothe et al, 2016). Scholarly works in medicine have found significant impact on the heart, pain, and immunity (Cramer et al., 2013). Anxiety and depression can also be cured by these practices (Hofmann et al. 2010). The integration of this research concept into different disciplines proves that they are relevant in every field, and researchers of all kinds study and practice these vital tools to lead a significant life.

Evidence of yoga in early times was found from "Harappan seals" showing figures in postures that are seated, showing yoga poses of modern times. Yoga was hence practiced as a component of spiritual or religious rituals (White, 2009). Ancient Indian scripture written around 1500 BCE, the "Vedas" provided a proper growth of yoga as a philosophical and spiritual system. The foundation for later yogic practices is laid by the Rigveda (c. 1500 BCE), which explicitly mentions meditation and hymns to the gods. Techniques for meditation and control of breathing are also present in the Atharvaveda (Feuerstein, G. 2003). The philosophical texts called the Upanishads, which constitute the final part of the Vedas, are a radical shift towards contemplation and meditation. They focus on the concepts of Atman, or the personal soul, and Brahman, or the universal soul, and explore ways of uniting the two through intense meditation and self-consciousness. The Yoga Sutras of Patanjali, purportedly written between the second and fourth centuries BCE, are the foundational text of classical yoga.

Many factors, such as the increase in mindfulness practices, scientific validation, social media influence, and widespread health trends, have increased yoga's popularity. Yoga has been made more popular because of the bigger cultural shift towards holistic well-being and wellness. This includes mental well-being and wellness as well as physical fitness. A multidimensional practice that targets the mind and the body is yoga, and through practice, people seek ways to enhance their overall health. According to studies, yoga enhances mental clarity, lowers stress levels, and enhances quality of life in addition to enhancing physical health by boosting strength, flexibility, and balance (Cramer et al., 2013). People may customize their practice to suit their own requirements thanks to its variety of styles and intensities (Sherman, 2017). The mindfulness aspect of yoga is a major contributor to its increasing popularity. Yoga is an effective tool for emotional equilibrium and relaxation in a world where stress, anxiety, and mental illness are on the increase. Research indicates that yoga can assist individuals with stress, anxiety, and depression (Kabat-Zinn, 1990).

By means of breathing exercises and mindful postures—a quality that is increasingly valued in modern society—it encourages a contemplative state. Yoga's popularity is also boosted by scientific studies that confirm its effectiveness in improving health outcomes, such as enhanced mental acuity, pain control, and cardiovascular health. Chronic pain can be controlled through the practice of yoga, enhancing flexibility, and reducing the risk factors associated with cardiovascular diseases (Ross & Thomas, 2010). Yoga's popularity in clinical and everyday life can be traced to the growing body of evidence proving its health benefits. The popularity of yoga has also grown as a by-product of its adoption into corporate wellness programs. Based on studies on corporate wellness, yoga makes employees feel better mentally, experience less burnout, and enjoy their jobs more (Cox et al., 2014). It has become increasingly popular as a consequence of this trend, among both people and in the workplace.

Yoga's popularity is also enhanced by scientific studies that attest to its effectiveness in promoting health outcomes such as better mental acuity, pain control, and heart health. Research has established that yoga can assist in managing chronic pain, reducing flexibility restrictions, and reducing the risk factors associated with cardiovascular diseases (Ross & Thomas, 2010). Consistent with ancient teachings of mental clearness and balance in emotions, yoga can decrease depression (Nivetha et al. 2019). The Indian belief of mind and body in sync with Indian Knowledge that advocated the connection between mind and body promotes the advantage of practicing yoga and along with meditation, to reduce stress (Telles et al. 2013).

2. Review of literature

Yoga and meditation are ancient methods that have been the subject of much attention in modern research because of their numerous mental, emotional, and physical benefits. Both methods have evolved through time from traditional methods. The following literature review highlights significant findings regarding the benefits of these two. Research consistently demonstrates that yoga enhances muscular strength, endurance, and flexibility. In a study conducted by Cramer et al. (2013), after numerous weeks of regular exercise, the flexibility and muscular strength of the participants were significantly increased. Yoga has also been proven to enhance cardiovascular well-being by reducing blood pressure and pulse rate. Ross and Thomas (2010) concluded and remarked that cardiovascular well-being can be promoted through yoga following a review of various yoga interventions. The research landscape has been found in a variety of studies to alleviate stress and anxiety. Kabat-Zinn (1990), in his research on mindfulness-based stress reduction (MBSR), illustrated that the meditation helped to lower the anxiety levels of patients with long-term stress by a large margin. Bibliometric exploration conducted on domains of Sahaj Yoga Meditation, mainly analysing the co-occurrence between concepts, shows multifaceted aspects, including gender, population, along with the most popular yogic keywords (Choudhary 2024).

A study by Goyal et al. (2014) indicates that meditation and yoga are potent interventions for anxiety and depression. They conducted a review of studies on mind-body therapies and identified strong evidence in favour of the effectiveness of yoga in enhancing mental health outcomes. Zeidan et al. (2010) examined cognitive functioning and mindfulness and discovered that even short-term meditation could enhance attention and concentration. Lazar et al.in 2025 studied employing MRI scans and determined that extensive meditation practice was associated with increased grey matter in areas of the brain involved with memory, also this was true for emotions and learning. Based on a study by Chong et al. (2011), yoga helped cancer patients to control treatment side effects such as anxiety, pain, and fatigue.

Yoga therapies also improved the mental well-being and life quality of cancer survivors. Many organizations have incorporated these concepts as part of their wellness programs. Workplace wellness programs improved employees' overall well-being and decreased stress, according to a study by Cox et al. (2014). Mindfulness meditation, these therapies with some scientific evidence behind them, are interesting paths to emotional control, especially for adolescents or anyone with several anxiety disorders.

The next part of the review of literature circles around specifically the authors who have the maximum number of works and are mostly cited using the Scopus database. Various symptoms, including stress, anxiety, and depression, are alleviated with yoga therapy. The impact of yoga on work-related burnout and stress has largely been investigated in a preventive context. When contrasting yoga with passive controls in general, meta-analyses revealed no differences in the level of burnout. Yoga enhanced perceived stress compared to inactive controls (Cramer 2024). Remission rates and anxiety were the primary objectives, and secondary endpoints were safety, quality of life, and depression (Cramer & Lauche, 2018). Yoga is not something that healthy people should be discouraged from practicing. Before practicing yoga, anyone with severe acute or chronic illness should consult a physician (Cramer, Ostermann, Dobos, 2018). A study conducted by Cramer, Sibbritt, D Adams, and Lauche in 2015 clearly exhibited that yoga injuries or injuries due to yoga practices are not associated with balanced practices. Hence, falls while practicing are not associated with severe injuries. However, a systematic review study on case reports and case studies conducted by Cramer et al. in 2013 suggests that there have been minor injuries among people, and yoga is essentially not without risk, but there is no reason to discourage yoga, as it is for the greater good.

3. Objective

The primary objective of the paper is to understand and conduct a bibliometric analysis on the selected theme. The research questions revolve around finding influential work in this area.

1) To find the most influential authors with top citations and publications in yoga and meditation.
2) To find which are the leading countries that have done the most research in this area
3) To find the most common keywords and citation network in this area.
4) Establish Bradford’s law and Lotka’s Law in this area.
5) Create a Collaborative World Map and Thematic Map to identify connections and gaps.

4. Research methodology

4.1. Collection of data

The profound effects of meditation and yoga on physical, emotional, and mental well-being have attracted a great deal of research interest. Based on research, these methods can reduce stress, enhance mental well-being, enhance physical health, and enhance cognitive functioning. Gothe et al. (2016) studied the effect of yoga and meditation on individuals' overall health and well-being. The study also elaborates that there is excellent potential for establishing studies in these areas. The study states that to understand the mechanisms behind these practices and their long-term benefits, further rigorous, large-scale trials are needed. It also speaks about the necessity to examine the potential of these wellness tools within diverse populations, including patients with chronic disease. The bibliometric analysis is conducted by extracting data from the Scopus database. Data is available from 1965, and a considerable number of studies have been continuously presented since then. However, the study has been considered since 2010. The first search was conducted using the word Yoga, and we had 17,305 publications. We have considered the title, abstract, and keywords in the search. Then we searched particularly for "Yoga and Meditation" and got 339 publications, which were limited to the study. We then conducted the study with "Yoga" and "Meditation" and had 4298 studies. Finally, we set the limit of years from 2010 to 2025, and finally, we received 3628 papers.
PRISMA is for short-term prevention and recovery information system for monitoring and analysis. Its network can be seen in Figure 1. It assists us in identifying the screening criteria that we use, the way we narrowed down the articles, and finally includes studies and materials. Documents are being scrutinized in order to be included in the study. 3628 research papers that meet the following selection criteria have been identified in the Scopus database: year, keyword, and topic area. Finally, the search was limited to only English documents, and the final screened and included documents were 3530. The reason for the inclusion of only English documents is the lack of proficiency in multiple languages; reviewing and interpreting non-English articles can compromise accuracy and consistency. Moreover, including papers in different languages can introduce variability in terminology, structure, and thematic interpretation, affecting the integrity of keyword co-occurrence analysis or thematic mapping. Also highest number of documents were in the English language.
These papers were selected according to the above-mentioned criteria. We have included articles, books, book chapters, conference papers, and many more in the study. Roughly, data was extracted from 2158 articles, 61 books, 257 book chapters, 99 conference papers, 86 editorials, 58 letters, 83 notes, 694 reviews, 8 errata, 2 conference reviews, and 24 short surveys.

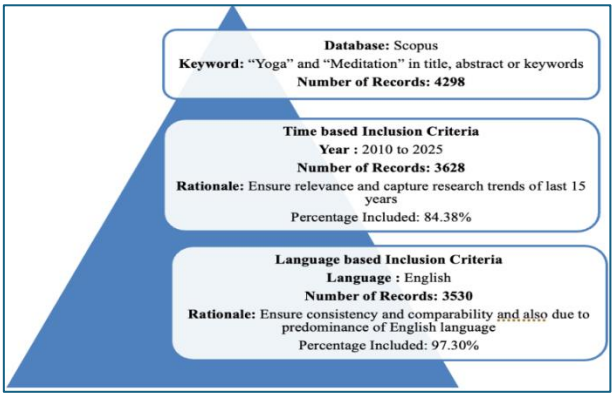

Fig. 1: PRISMA Flowchart.

Source: Authors' Contributions.

5. Methodology

The present study was done with the help of VOS-Viewer software for bibliometric analysis and Biblioshiny using R Studio. It aids scholars in uncovering knowledge gaps and enables us to find the most important authors on a given topic (Aria and Cuccurullo 2017). The use of the bibliometric approach has become increasingly widespread in recent years. It can be used to undertake systematic reviews of the literature, which form the backbone of any quality study. It also assists nations that need such studies and assists us in determining the research that has been done on a given subject in a particular nation. Assisting researchers in understanding secondary data and previous research is important to resolving this research problem.

6. Result analysis and interpretation

Published research papers on "yoga" and "meditation" are collected through mining Elsevier's Scopus database. As indicated in Figure 1, 3530 research publications were made over fifteen years. This part utilizes numerical equations to delineate the database that was used for bibliometric analysis or an earlier study on this area. Figure 2 shows how steadily the publication of our chosen research theme has increased over the years, especially after 2018, as the increase moves beyond the trend. The trend kept increasing after 2020 and reached its highest in 2022, as those were the years after COVID-19, and individuals had realized the value of overall health. Hence, the popularity of yoga, along with meditation, is visible in the trend of publications. Also, the new education policy 2020 in India advocates the promotion of the Indian Knowledge system, where yoga forms an extremely important component (Chandran 2020).

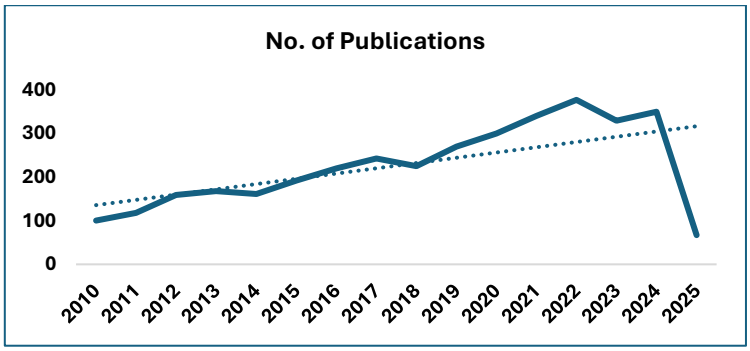

Fig. 2: Trend of Publication in Chosen Area.

Source: Authors' Contribution.

Table 1, along with Figure 3, shows prominent authors in this area. The author with the highest citation is Holger Cramer with 2317 citations, followed by Romi Lauche and Linda Carlson with 1838 and 1563 citations. Gustav Dobos, Rima Dada, Heather Greenlee, and Lorenzo Cohen have 1563, 1403, 1164, and 1124 citations with links 253, 125, 59, and 127 links. Jost Langhorst, Karen Mustian, and Gary Deng have 1066, 976, and 975 citations with link strengths of 109, 14, and 61. However, the other top-cited authors are Helen Lavretsky, Satbir Khalsa, Crystal Park, Karen Sherman, and Rebecca Irwin. Figure 4 shows the author citation network.

Table 1: Prominent Authors with Large Documents

Author	Documents	Citation	Total Link Strength
Cramer, H	55	2317	395
Lauche, R	28	1838	305
Carlson, Le	14	1563	74
Dobos, G	20	1403	253
Dada, R	22	1164	125
Greenlee, H	6	1124	59
Cohen, L	22	1123	127
Langhorst, J	16	1066	109
Mustian, Km	7	976	14
Deng, G	5	975	61
Lavretsky, H	18	950	28
Khalsa, Sbs	18	920	48
Park, Cl	11	884	71
Sherman, Kj	8	882	4
Irwin, Mr	5	877	21

Source: Authors' Contribution.

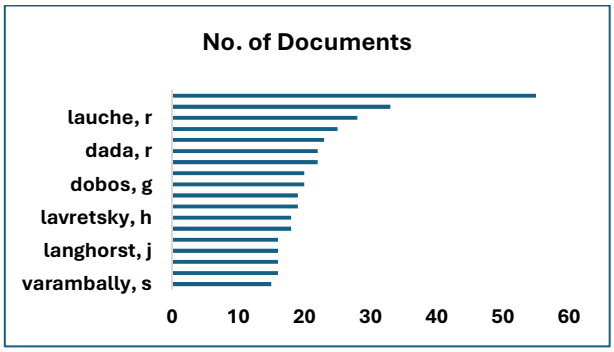

Fig. 3: Prominent Authors.

Source: Authors' Contribution.

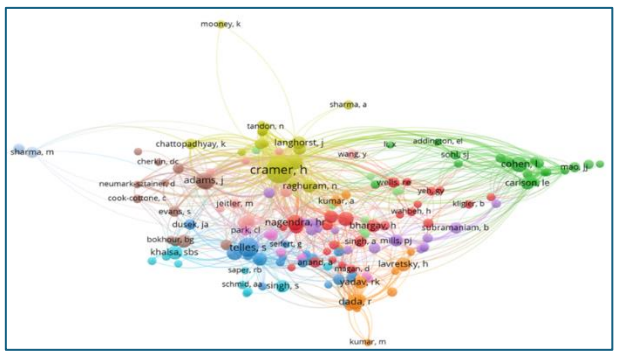

Fig. 4: Citations Network of Authors.

Source: Authors' Contribution.

We found 2010 to 2025 records, listed by year and source. Table 2 and Figure 5 show the important sources. The highest number of publications for the Journal of Complementary Therapies in Medicine is 98, with citations 1997. There are 97 articles in the Journal of Alternative and Complementary Medicine with 3316 citations. International Journal of Yoga Therapy has 90 articles with 760 citations, and Complementary Therapies in Clinical Practice has 68 articles with 1692 citations. International Journal of Public Health Environmental Research has 42 articles with 552 citations. These were the highest-profile publications within the research landscape. Figure 6 shows the author network. The colour codes show the authors who work together and are connected.

Table 2: Documents and Their Source with the Highest Citations

Source	Documents	Citations
Complementary therapies in medicine	98	1997
Journal of alternative and complementary medicine	97	3316
International Journal of Yoga Therapy	90	760
Complementary therapies in clinical practice	68	1692
International journal of environmental research and public health	42	552
integrative cancer therapies	41	905
Explore	37	489
supportive care in cancer	35	538
bmc complementary and alternative medicine	33	1247
evidence-based complementary and alternative medicine	33	1514
frontiers in psychology	32	983
plos one	31	1108
journal of integrative and complementary medicine	27	71
journal of therapies in health and medicine	26	225
frontiers in human neuroscience	23	1058
journal of ayurveda and integrative medicine	21	165
Mindfulness	18	721
Religions	15	93
frontiers in public health	14	80
routledge handbook of yoga and meditation studies	13	39

Source: Authors' Contribution.

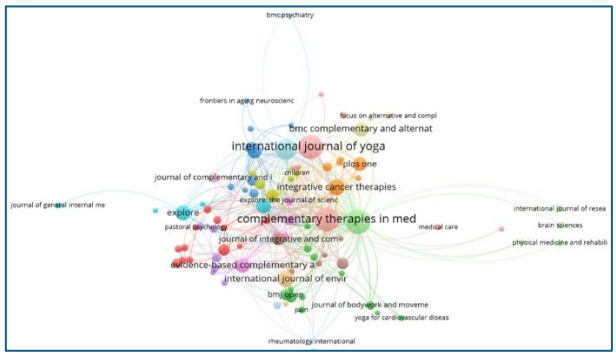

Fig. 5: Source/ Journal with Highest Documents Published.

Source: Authors' Contribution.

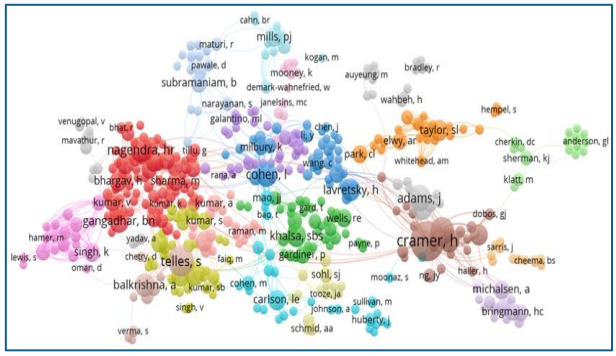

Fig. 6: Author Wise Publication and Author Network

Source: Authors' Contribution.

Figure 7 shows that the United States has the most publications of articles on yoga and meditation, at 1,506 publications, and also the highest number of citations worldwide, at 42,798. India is second, with 755 publications and 8,624 citations, followed by Australia in third place, with 211 publications and 5,286 citations. The United Kingdom is in fourth position, with 209 articles and 6,131 citations, followed by Canada and Germany, with 176 and 162 articles and 4,875 and 5,457 citations, respectively. China is in seventh position, with 104 articles and 1,959 citations. Brazil, Italy, and the Netherlands are also included in the top ten, with 78, 63, and 51 articles, and 1,578, 2,522, and 2,242 citations, respectively. The network analysis revealed six country-specific clusters. The first cluster comprises 20 countries: Bangladesh, India, Nepal, New Zealand, Oman, Sri Lanka, and many more. The second cluster comprises 15 countries: Finland, Iran, Kazakhstan, Norway, the Russian Federation, Slovakia, Spain, Sweden, Turkey, the UAE, and many more. The third cluster has 7 countries: Belgium, France, Hungary, Ireland, Israel, Thailand, and the United Kingdom. The fourth cluster has 7 countries: Austria, Germany,

Greece, the Netherlands, Portugal, Switzerland, and Vietnam. The fifth cluster has five countries: Canada, Croatia, Italy, Mexico, and the United States. Finally, the sixth cluster has 3 countries: Australia, Denmark, and Slovenia.

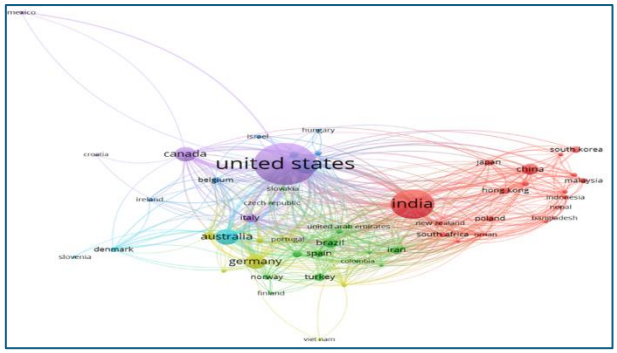

Fig. 7: Country-wise Network.

Source: Author's Contribution.

We conducted an analysis on co-occurrence that is based on keywords and specifically those of the authors, and found principal clusters in the study were seven in number, as shown in Figure 8. The analysis exhibits that "Yoga" occurs 994 times and "meditation" 617 times under author keywords, both having the highest overall linkages. Some other important keywords are mindfulness (355), stress (173), and depression (158). Complementary and alternative medicine (135), anxiety (131), mental health (115), and quality of life (108) also rank high. The terms integrative medicine, cancer, COVID-19, and exercise are referred to 95, 93, 85, and 80 times, respectively, signifying the impact of COVID-19 on yoga, meditation research, and perhaps even their practice. Other words, such as systematic review, complementary therapies, complementary medicine, spirituality, acupuncture, physical activity, pain, and well-being, occur 80, 79, 76, 74, 66, 65, 55, and 55 times, respectively. From the keyword network, gaps in the studies can be seen. Keywords such as Ayurveda, hypertension, burnout, relaxation, mindfulness meditation, and stress management still provide considerable scope for future investigation. Researchers are able to use keyword network diagrams to reveal areas of research that are still underdeveloped. Figure 8 shows the keyword network, Figure 9 shows the word cloud, and Figure 10 shows the tree map, respectively. The word cloud in Figure 9 also shows that the prominent words are yoga, meditation, humans, middle-aged, female, adult, male, quality of life, depression, mindfulness, anxiety, alternative medicine, and many more. The tree map in Figure 10 shows the most important keywords associated with yoga, with percentages of their degree and importance.

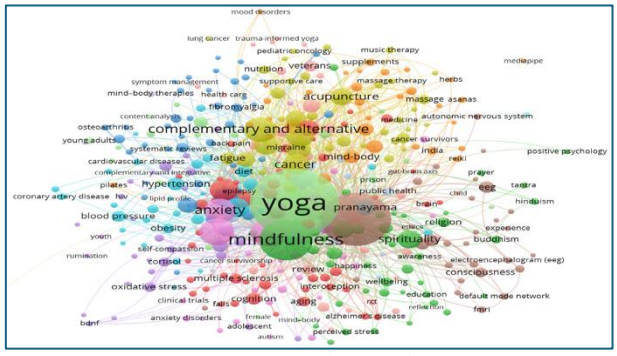

Fig. 8: Keyword Network.

Source: Author's Contribution.

Fig. 9: Word Cloud.

Source: Authors Contribution.

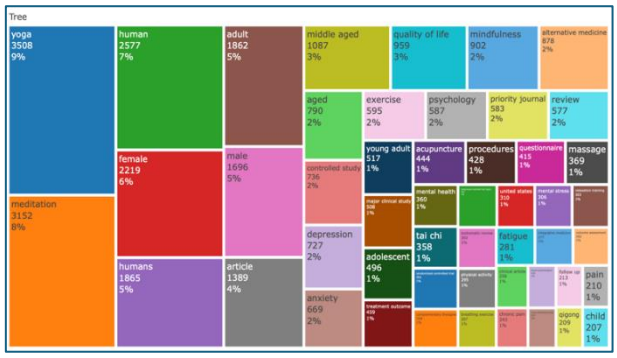

Fig. 10: Tree Map.

Source: Author's Contribution.

Figure 11 illustrates the documents grouped by organizations or universities, with the Department of Internal and Integrative Medicine at the University of Duisburg, Germany, having the most documents. The second position is occupied by the Faculty of Health at the University of Technology in Sydney, Australia, followed by the Benson-Henry Institute for Mind-Body Medicine at Massachusetts General Hospital, USA, and the Department of Physiology at the All India Institute of Medical Sciences in New Delhi, India.

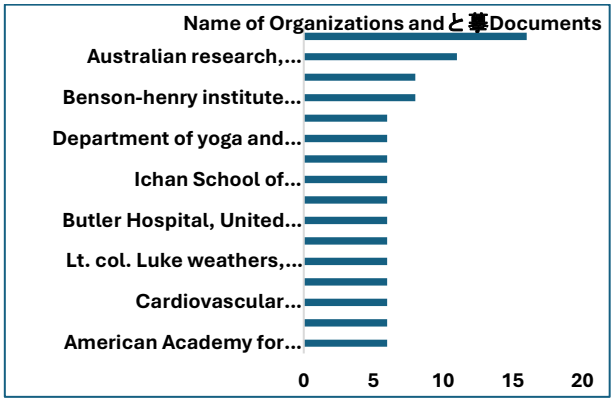

Fig. 11: Keyword Network.

Source: Author's Contribution.

Samuel C Bradford formulated Bradford's law in 1934 says that usually a small number of journals can account for many publications on a particular topic. Usually, there are three zones: the first zone defines core journals where a larger number of publications on a particular topic is there and the journal number is less; similarly, the secondary zone journals, where a large group publishes fewer documents; and the peripheral journals in zone three, where a large group of journals will only publish a small number of articles.
In this study, we have used Bradford's law using the Biblioshiny tool to identify the key journals in this area in Figure 12.

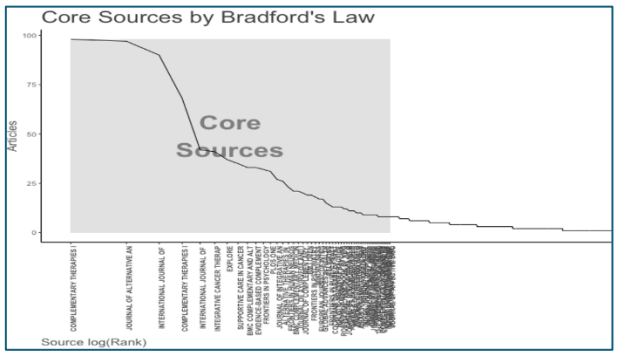

Fig. 12: Bradford's Law Clustering.

Source: Author's Contribution.

In zone 1, there are the top 53 journals with publications ranging from 98 to 8; in zone 2, there are 397 journals, and in zone 3, there are 1158 journals with just 1 publication. As a researcher, a study meant to be done on yoga and meditation overall can revolve around the first 53 journals.

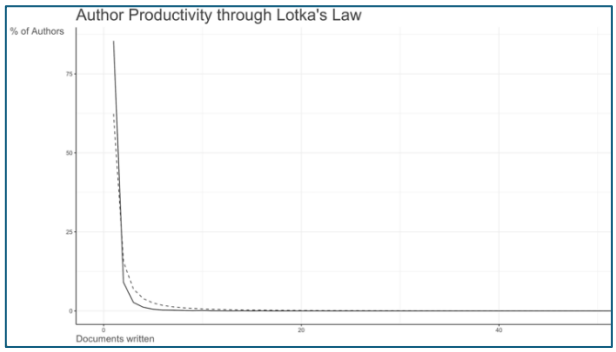

Fig. 13: Lotka's Law and Author Productivity.

Source: Author's Contribution.

Lotka's Law suggests that the authors producing a specific number of articles follow a specific mathematical pattern. Authors making n number of contributions in a particular area of study are probably $1/n^2$ of the ones who just make one contribution. In short small number of authors may contribute or publish a larger number of papers; however large number of authors may publish a very small number of papers, like one or two, in a specific area. The productivity of authors can be analysed through this law and the key contributors. In our study, 1 author has written as many as 55 papers, and 9720 authors have written only 1 paper. Few authors have written up to 30 documents. Hence, as a researcher, it can be ideal to take into consideration research conducted by those authors to improve productivity.

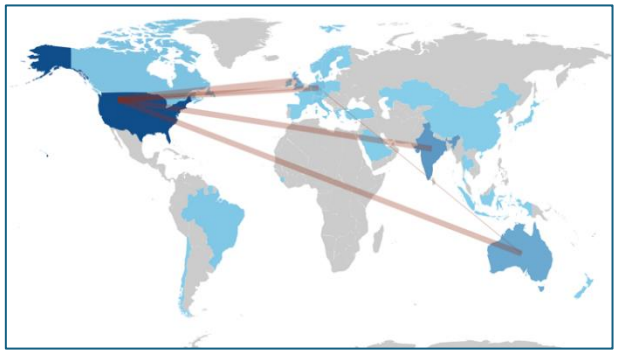

Fig. 14: Collaboration World Map.

Source: Author's Contribution.

Figure 14 shows a world map with collaborations in this area of study. Collaborative maps often help to understand and investigate the distribution and interactions of publications geographically. It is seen that the USA has significant collaborations with India, Australia, and the United Kingdom. The USA has maximum collaborations with the United Kingdom, after that it has maximum collaborations by India, Germany, and Australia. The USA has moderate collaboration with Belgium. Australia and Germany have also collaborated along with the Netherlands, which has collaborated with Germany and the United Kingdom.

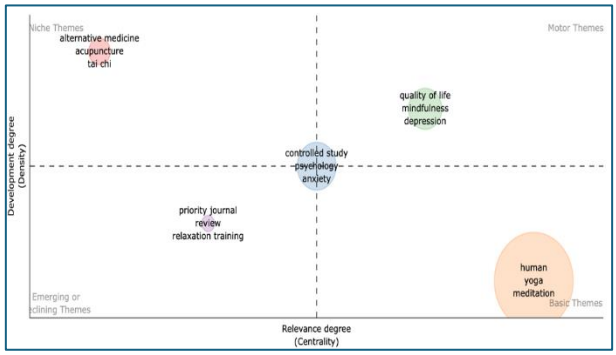

Fig. 15: Thematic Map.

Source: Author's Contribution.

Finally, the thematic map elaborates on the themes that are emerging or declining, creating another gap analysis for the researcher. It represents spatial data related to the theme. Niche themes in this area are alternative medicine, acupuncture, and tai chi. This indicates these are well-developed yet peripheral areas of research. These are dense but still have less influence or importance as compared to motor themes, which in our case are quality of life, mindfulness, and depression. These are the most developed and crucial themes high in centrality and density. Core concepts in studies of these wellness tools that are shaping this field are these motor themes. Physical, emotional, and social well-being are all included in the broad concept of quality of life, which is commonly analyzed in connection with the therapeutic advantages of yoga and meditation. With roots in both Western psychological frameworks and Eastern contemplative traditions, mindfulness acts as a link between cognitive-behavioral therapies and spiritual practice. Empirical research evaluating the effectiveness of

these methods in managing mental health frequently centers on depression as a clinical concern. These motor themes collectively constitute the fundamental conceptual underpinnings of current yoga and meditation research. Their popularity is a reflection of an increasing interest across disciplines in incorporating traditional wellness practices with conventional psychological and medical perspectives. The basic themes that are core and foundation of this field of study are human, yoga, and meditation, and the emerging or declining themes with low centrality and centrality are priority journal, review, and relaxation training. Also most influential themes are psychology and anxiety.

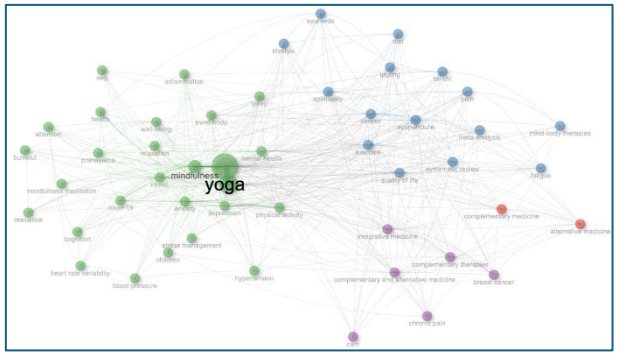

Fig. 16: Thematic Depth Through Co-Occurrence Network.

Source: Author's Contribution.

The co-occurrence network links terms that are often used together in the SCOPUS dataset author keywords. When things are linked more strongly, they happen together more often. The size of a node probably tells you how central it is, like its degree or betweenness centrality. The words "yoga" and "mindfulness" stand out the most. The Walktrap clustering algorithm finds groups of people who are connected in the network. It shows these groups of people as groups of different colours. Each group represents subgraphs that are closely related to each other because of their themes.

The analysis of the community finds four main themes. Yoga and mindfulness are the main focus of the green cluster. It has words like "stress," "anxiety," "mental health," "cognition," and "COVID-19." These words show that the focus is on mental health and physical signs. The blue cluster shows different types of complementary and alternative medicine (CAM). It has words like "ayurveda," "qigong," "tai chi," "acupuncture," "pain," "cancer," "fatigue," and "quality of life." This group also has terms that are based on facts, like "systematic review" and "meta-analysis." Integrative medicine and long-term illnesses are the main focuses of the purple cluster. It has words like "breast cancer," "chronic pain," "complementary therapies," and "CAM." The red cluster seems to show a difference between "complementary medicine," "alternative medicine," and "fatigue." This could be a basic or defining part of CAM.

The main words "Yoga," "Meditation," and "Mindfulness" are all very similar. Researchers frequently examine them concurrently. "Yoga" and "Mindfulness" emerge as dominant hubs with high centrality, linking diverse research communities—especially those exploring mental health, stress management, and CAM. Their bridging role underscores the dataset's strong focus on the therapeutic applications and interdisciplinary relevance of these practices. Mental health apps help people deal with stress, anxiety, and depression. Mindfulness links "Pain" and "Cancer" to holistic medicine. It stresses mind-body approaches in medical settings. Integrative Medicine brings together traditional and alternative treatments. Complementary and alternative medicine also has a part to play in this. The themes cover a wide range of subjects.

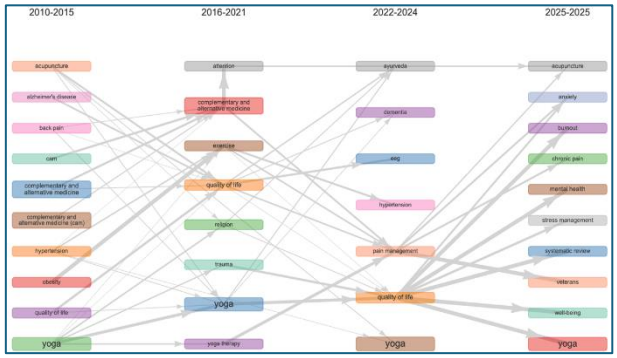

Fig. 17: Thematic Depth through Thematic Evolution.

Source: Author's Contribution.

Over time, topics change, and they demonstrate dynamic transitions in thematic emphasis within the research field. Yoga is still a common theme and is important at all times. Then it goes to "yoga therapy." Finally, it goes back to a broader use. This shows that it can be used with other types of therapy and that it can change to fit different needs. CAM is still an important theme. It is clear from the very beginning and stays that way through later stages. There are common themes in the quality of life. It remains important at all stages. Some subjects become more popular while others become less popular. This change shows how research priorities change over time. Acupuncture is present in the initial phase. Then it goes away. Finally, it comes back in the last period. Attention, exercise, and religion become more important in the middle stages. But they start to fade away later on. The rise in stress management and mental health topics in 2025 shows what people are worried about right now.

From 2010 to 2015, acupuncture was a big deal. It grew a lot and was very important. It's important to meditate, do yoga, and be in the moment. They look simple because they are still growing up. There were fewer discussions about therapy and obesity. CAM was a big deal from 2016 to 2021. Chronic pain started to matter more during this time. Yoga-related themes stayed at the centre. Yoga therapy became more focused. Trauma became less important. Ayurveda and Tai Chi had a big impact from 2022 to 2024. On the other hand,

dementia, aging, and new technologies like EEG and machine learning stayed in a low-development and central area. By 2025, acupuncture, anxiety, stress management, and chronic pain had all become very popular subjects. It was still important to do yoga, meditate, and be aware of the present moment. Themes like mental health, conditions after COVID-19, and veterans came up, but it was hard to tell where they were going.

These observations underscore the enduring significance of yoga, meditation, and mindfulness. They imply that researchers continue to be intrigued by their therapeutic possibilities. CAM's job changes. It slowly moves toward integrative medicine. These changes show that people have different ideas about alternative healthcare. There has been more and more interest in mental health in the last few years. This trend shows problems with health around the world. It makes you wonder how CAM and yoga research deal with these issues.

7. Conclusion

By means of bibliometric analysis, researchers can determine the most cited authors, countries, institutions, funding agencies, and words in the literature of a particular subject. This provides researchers with an opportunity to analyze contemporary trends and patterns in the subject of interest. For academics, it forms a basis for the construction of new theoretical models and statistical methods. Over the past decade, bibliometric analysis has gained significant popularity, with numerous studies published on its use. It simplifies the understanding of key aspects of any research topic. In this study, we used citation and co-citation analysis to identify the leading authors and countries involved in this research.

The analysis began with identifying the trend of increase or decrease in publications from 2010 to 2025. The trend in publications on yoga and meditation kept increasing and reached its momentum in 2020, and reached its highest in 2022. Those were the years after COVID-19, and individuals had realized the value of overall health. The new education policy 2020 in India advocates the promotion of the Indian Knowledge system, where yoga forms to be an extremely important component (Chandran 2020). Influential authors in this field were found, and popular authors had as many as fifty publications. Some of the influential names in this field are Holger Cramer, Romi Lauche, Linda Carlson, Rima Dada, and Gustav Dobos. The citation network shows an association between the top authors as well.

The United States of America and then India take the lead in this research, while Australia, the UK, and Germany also show significant contributions. The most used keywords, after yoga and meditation, are mindfulness, stress, depression, anxiety, mental health, quality of life, integrative medicine, cancer, and COVID-19. The ancient practices of yogic wellbeing remain relevant today in influencing people's lives by improving both physical and mental well-being, alleviating stress, anxiety, and depression, and ultimately enhancing quality of life.

Countries that have documents together are the United States of America along with United Kingdom, India, Australia, and Germany. The collaborative world map in the study presents this fact. Also thematic map shows scopes, gaps, and important themes in this study. The most developed and crucial themes in this study are Quality of life, mindfulness, and depression. These are the motor themes and exactly the essence of the study. Since the introduction of India's National Education Policy 2020, yoga and meditation have been promoted through a variety of channels and are acknowledged as essential elements of the Indian Knowledge System. This is in line with the WHO Global Traditional Medicine Strategy 2025–2034, which promotes the integration of evidence-based traditional practices, such as yoga, into national and international health frameworks in order to promote holistic well-being. The studies revolving around our research landscape are also basic themes that contain humans, psychology, and anxiety. There might be scope to study themes like relaxation training, where research papers can be developed elaborating different ways to promote a relaxed living. Moreover, more review studies on this area also have scope for future researchers.

8. Future direction

Future studies should focus on the neurobiological and psychophysiological aspects of yoga, mindfulness, and anxiety. The present dataset relies on these themes. Neuroscience and contemplative practice combine effectively. This approach shows promise. Researchers investigate how yoga and meditation alter brain circuits. These activities help people manage stress. They build emotional strength and improve attention (Tang et al., 2015). Neuroimaging studies investigate changes in brain regions. Researchers examine the prefrontal cortex, amygdala, and insula. Individuals who have practiced yoga and mindfulness meditation for a long time are included in the research. Researchers might develop particular hypotheses. They might be able to connect relaxation training to autonomic balance. They could assess the effectiveness of yogic breathwork, including pranayama, on heart rate variability, cortisol concentrations, and vagal tone. Interdisciplinary designs can improve these kinds of studies. They can include biofeedback, clinical psychology, and the use of computer models to study psychophysiological signals. This method guarantees strong measurement and a wider impact on translation (Streeter et al., 2012). There is a compelling rationale for undertaking systematic reviews and meta-analyses. These should concentrate on populations that are inadequately researched, including adolescents, the elderly, and trauma survivors. The objective is to delineate the impacts of integrated mind-body interventions on well-being, cognitive function, and quality of life. PRISMA rules must be followed for these reviews. They should look at how different outcomes vary with gender, cultural background, and the length of the intervention. This method will help create policies that are open to everyone and help people learn how to do things on a larger scale.

References

[1] Chandran, A. (2020). Yoga and its integration in higher education in India: A national perspective. *Journal of Yoga and Traditional Knowledge, 4*(2), 113-120.

[2] Chong, C. S., Tsunaka, M., Chan, E. P., & Lee, P. W. (2011). Effects of yoga on stress management in healthy adults: A systematic review. *The Journal of Alternative and Complementary Medicine, 17*(1), 1-9.

[3] Choudhary, R. (2024). The scholarly landscape of Sahaja Yoga Meditation and meditation studies: A bibliometric analysis. *International Journal of Physical Education & Applied Exercise Sciences*, *10*(1), 5–12.

[4] Cox, C., Easteal, P., & Pearson, S. (2014). Yoga and workplace wellness: A review of the literature. *Workplace Health & Safety, 62*(12), 515-522.

[5] Cramer, H., Lauche, R., Anheyer, D., Pilkington, K., de Manincor, M., Dobos, G., & Ward, L. (2018). Yoga for anxiety: A systematic review and meta-analysis of randomized controlled trials. *Depression and Anxiety, 35*(9), 830-843. https://doi.org/10.1002/da.22898

[6] Cramer, H., Lauche, R., Haller, H., & Dobos, G. (2013). Yoga for health: A systematic review of the literature. *The Journal of Alternative and Complementary Medicine, 19*(5), 420-428.

[7] Cramer, H., Ostermann, T., & Dobos, G. (2018). Injuries and other adverse events associated with yoga practice: A systematic review of epidemiological studies. *J Sci Med Sport, 21*(2), 147-154. https://doi.org/10.1016/j.jsams.2017.08.026

[8] Cramer, H., Sibbritt, D., Adams, J., & Lauche, R. (2016). The association between regular yoga and meditation practice and falls and injuries: Results of a national cross-sectional survey among Australian women. *Maturitas, 84*, 38-41. https://doi.org/10.1016/j.maturitas.2015.10.010
[9] Cramer, H., Lauche, R., Haller, H., & Dobos, G. (2013). Yoga for improving health-related quality of life, mental health and well-being. *Journal of Alternative and Complementary Medicine, 19*(7), 567-575.
[10] Dada, R., & Ghosh, D. (2015). Yoga and meditation as a therapeutic intervention in oxidative stress and oxidative DNA damage to paternal genome. *Journal of Clinical & Diagnostic Research, 9*(4), LC04-LC08.
[11] Dobos, G., et al. (2013). Adverse events associated with yoga: A systematic review of published case reports and case series. *PLOS ONE, 8*(10), e75815.
[12] Dobos, G., et al. (2012). Yoga as a complementary treatment for depression: A systematic review and meta-analysis. *BMC Complementary and Alternative Medicine, 12*, 71.
[13] Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research, 133*, 285-296.
[14] Feuerstein, G. (2003). *The Yoga Tradition: Its History, Literature, Philosophy, and Practice*. Hohm Press.
[15] Garg, G., Shamshad, M., Gauhar, N., Tabash, M. I., Hamouri, B., & Daniel, L. N. (2023). A Bibliometric Analysis of Fintech Trends: An Empirical Investigation. *International Journal of Financial Studies, 11*(2), 79. https://doi.org/10.3390/ijfs11020079
[16] Gothe, N. P., Pontifex, M. B., Hillman, C. H., & McAuley, E. (2016). The impact of yoga training on physical and mental health in a nonclinical population: A meta-analysis of randomized controlled trials. *The Journal of Alternative and Complementary Medicine, 22*(9), 665-675.
[17] Gothe, N. P., Pontifex, M. B., Hillman, C. H., & McAuley, E. (2016). A meta-analysis of the effects of yoga on cognition and quality of life in healthy adults. *Psychology of Sport and Exercise, 18*, 180-191.
[18] Gothe, N. P., Pontifex, M. B., Hillman, C. H., & McAuley, E. (2016). The influence of yoga on human cognition and well-being: A systematic review of the literature. *Journal of Physical Activity and Health, 13*(1), 1-10.
[19] Goyal, M., et al. (2014). Meditation programs for psychological stress and well-being: A systematic review and meta-analysis. *JAMA Internal Medicine, 174*(3), 357-368.
[20] Hofmann, S. G., Sawyer, A. T., Witt, A. A., & Oh, D. (2010). The efficacy of cognitive behavioral therapy: A review of meta-analyses. *Cognitive Therapy and Research, 34*(5), 427-440.
[21] Kabat-Zinn, J. (1990). *Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness*. Delta Publishing.
[22] Lazar, S. W., et al. (2005). Meditation experience is associated with increased cortical thickness. *NeuroReport, 16*(17), 1893-1897.
[23] Nivetha, A., Prasanna, S., & Saravanan, S. (2019). Effects of yoga and meditation on anxiety and depression: A review. *International Journal of Yoga and Allied Sciences, 8*(2), 21-26.
[24] Patanjali. (2000). *Yoga Sutras* (Swami Sivananda, Trans.). Divine Life Society.
[25] Ross, A., & Thomas, S. (2010). The health benefits of yoga and exercise: A review of comparison studies. *The Journal of Alternative and Complementary Medicine, 16*(3), 3-12.
[26] Schröter, M., Cramer, H., & Haller, H. (2024). Yoga as potential therapy for burnout: Health technology assessment report on efficacy, safety, economic, social, ethical, legal, and organizational aspects. *Current Psychiatry Reports*. https://doi.org/10.1007/s11920-024-01516-1.
[27] Sherman, K. J. (2017). Yoga and health: An overview of the evidence. *International Journal of Yoga, 10*(2), 77-84.
[28] Streeter, C. C., Gerbarg, P. L., Saper, R. B., Ciraulo, D. A., & Brown, R. P. (2012). *Effects of yoga on the autonomic nervous system, gamma-aminobutyric-acid, and allostasis in epilepsy, depression, and post-traumatic stress disorder*. Medical Hypotheses, 78(5), 571–579. https://doi.org/10.1016/j.mehy.2012.01.021
[29] Tang, Y.-Y., Hölzel, B. K., & Posner, M. I. (2015). *The neuroscience of mindfulness meditation*. Nature Reviews Neuroscience, 16(4), 213–225. https://doi.org/10.1038/nrn3916
[30] Telles, S., Singh, N., & Balkrishna, A. (2013). Yoga and mental health: A review. *Indian Journal of Psychiatry, 55*(2), 85-93.
[31] White, D. G. (2009). *The Yoga Sutra of Patanjali: A Biography*. Princeton University Press.
[32] Williams, K., Day, K., Tsolis, R., & Anderson, D. (2009). Effectiveness of yoga for chronic low back pain: A systematic review of the literature. *Journal of Alternative and Complementary Medicine, 15*(9), 975-983.
[33] Zittoun, C., Garbous, W., Raffin, H., & Gusso, G. (2022). Shiatsu: A complementary medicine for the relief and verbalization of trauma. *Encephale, 48*(9), S56-S60. https://doi.org/10.1016/j.encep.2022.08.008.