

Do scientists still believe in mindfulness meditation for pain therapy? a bibliometric analysis regarding meditation trends for therapy from 1946 To 2022



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ABSTRACT

Background: Pain medication with meditation has been practiced for a long time. Multiple meta-analyses have shown whether meditation is ineffective for treating pain, but there does not appear to be enough information for researchers to draw firm conclusions. At the same time, the trend of just using meditation as a pain therapy is still apparent in the search results for documents related to this subject.

Method: We collected the Scopus database of meditation as a pain therapy and then performed a quantitative analysis using Biblioshiny and VOSviewer software.

Results: The quantitative analysis's findings show the use of meditation as a pain therapy technique. Researchers continue to trust in the clinical benefits of mindfulness meditation in pain management, despite several studies showing the limited effect of meditation as a pain therapy. Many methods have been utilized to modify mindfulness meditation in recent studies.

Conclusion: Due to mounting clinical evidence supporting its efficacy, researchers are increasingly turning to mindfulness meditation as a kind of pain management.

Keywords: *bibliometric, biblioshiny, vosviewer, mindfulness meditation, pain therapy.*

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INTRODUCTION

A psychologically related practice called meditation tries to improve focus and emotional control. The method of meditation has been around for thousands of years and is particularly popular in groups connected to specific religious sects or religions. Nearly all world religions and philosophical systems regard meditation as a kind of worship. Meditation practices have been studied and shown to have clear neurobiological benefits as technology in neurophysiology and imaging develops.¹

Dealing with neuropsychiatric illnesses, including Stress and depression, has been demonstrated to benefit greatly from meditation. There is already a ton of evidence in this situation in robust meta-analysis studies. However, it has only been possible to demonstrate that meditation significantly affects pain therapy. There was little correlation between mindfulness meditation and pain management. The author employed for the meta-analysis has

several flaws; thus, no firm conclusions can be formed. As a result, the author also expects that there will be more RCT studies.¹⁻³

Given the preceding, this begs the issue of what sorts of meditation have thus far been popular. To find out, we performed research in the form of bibliometric analysis. Considering that the Scopus database is a reliable resource that is widely accessible from around the globe, research is conducted using this database. To the best of our knowledge, there has yet to be a bibliometric study that mainly looks at the different types of meditation before determining which ones are the most popular for pain management.³

There are numerous forms of meditation, all of which have the potential to be therapeutic, making them intriguing to research. Utilizing the Biblioshiny and Vosviewer programs, we conducted a quantitative analysis using bibliometrics and a qualitative investigation utilizing Scopus documents connected.

METHODS

Study Design

This study is a cross-sectional study that used the data obtained from a third-trimester pregnant woman who experienced back pain. The design of this study used a pre-test-post-test design by giving warm ginger compresses to prove the effectiveness or not of warm ginger compresses in reducing back pain in third-trimester pregnant women.

We conducted research on October 2, 2022 and searched the Scopus website for the following keywords :

(TITLE-ABS-KEY (**meditation**) AND TITLE-ABS-KEY (**pain**)) AND (LIMIT-TO (PUBSTAGE, "final")) AND (LIMIT-TO (DOCTYPE, "ar")) AND (LIMIT-TO SUBJAR TO (SUBJAREA, "PSYC")) OR LIMIT-TO (SUBJAREA, "NURS") OR LIMIT-TO (SUBJAREA, "HEAL") OR LIMIT-TO (SUBJAREA, "NEUR") OR LIMIT-TO (SUBJAREA, "SOCP") OR LIMIT-TO (SUBJAREA, "BIOC") OR LIMIT-TO (EXACTKEYWORD,

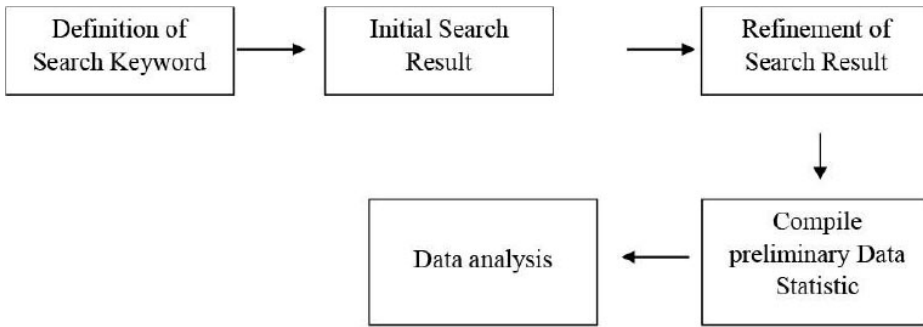


Figure 1. Five phases of bibliometric analysis.¹

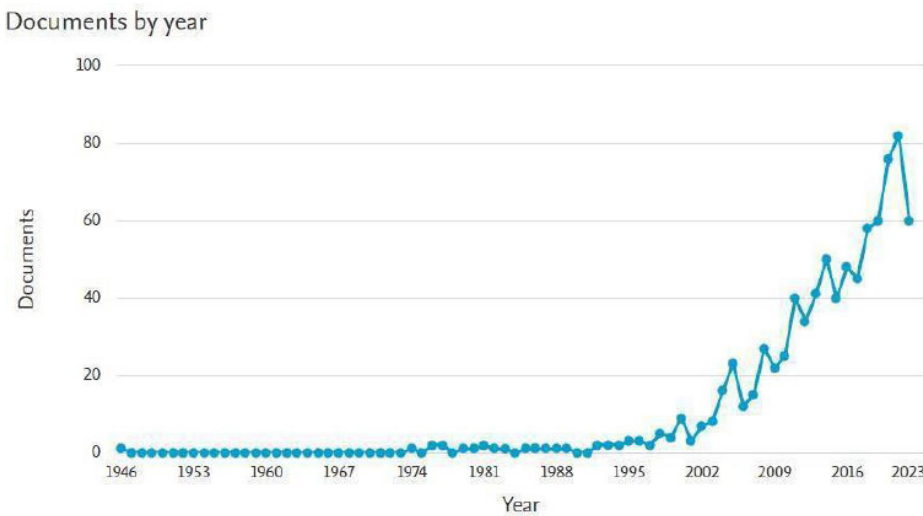


Figure 2. Document by Year.

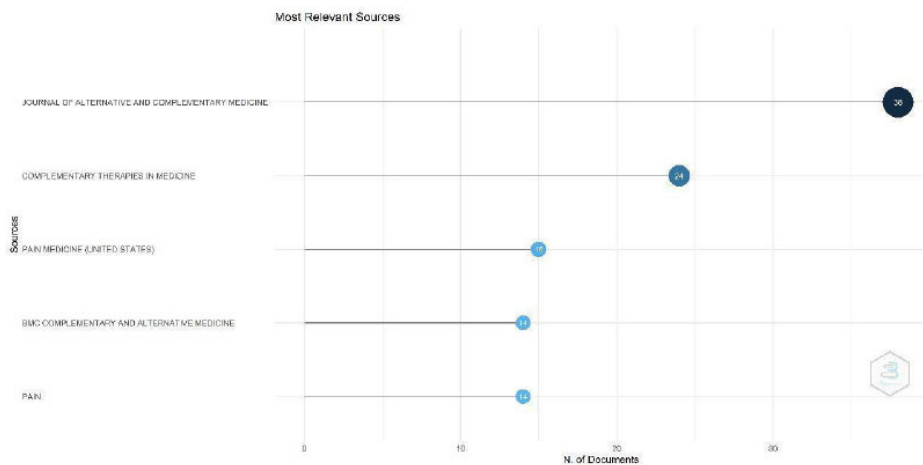


Figure 3. Most Relevant Sources Most Relevant Authors.

“Meditation”) OR LIMIT-TO (EXACTKEYWORD, “Article”) OR LIMIT-TO (EXACTKEYWORD, “Female”) OR LIMIT-TO (EXACTKEYWORD, “Adult”) OR LIMIT-TO (EXACTKEYWORD, “Male”) OR LIMIT-TO (EXACTKEYWORD, “Priority Journal”) OR LIMIT-TO (EXACTKEYWORD, “Yoga”)

The manuscript titled contains the earliest papers dating back to 1946. The oldest manuscript is Examinations, meditations on a painful theme, written by Robert.² While the latest script was in 2022. This search resulted in 841 documents which were then stored in.RIS and .bib files. Then analyzed using the Biblioshiny and Vosviewer applications.³

RESULTS

Quantitative Analysis

Documents by Year as of 2022

There has been a dramatic increase in the number of documents describing meditation as a pain therapy, so this trend is expected to continue through 2023.

Journals That Publish the Most Relevant Sources

There are 38 papers on meditation-based pain management in the Journal of Alternative and Complementary Medicine. This journal is located in the USA with an H- index of 94 and an SJR 2021 of 0.58. Since 1995, Scopus has included this journal in its index under the topic of complementary and alternative medicine. Published by Mary Ann Liebert Inc., this journal, Complementary Therapies in Medicine, which now has 24 publications on meditation as a pain treatment, is in second place. This American journal has a 69 H-index and a 0.62 SJR 2021. Since 1993, Scopus has included this journal in its index. Churchill Livingstone serves as the publisher. Pain is the journal that is currently in third place (Figure 3).

Day MA has written 14 documents about meditation as a form of pain management, which is the most of any author. Clinical Journal of Pain, Journal of Pain, Contemporary Clinical Trial, Pain Medicine (USA), Pain, BMJ Open, Trials, Journal of Alternative and Complementary Medicine, BMC Complementary and Alternative Medicine, Journal of Pain and Symptom Management, Supportive Care in Cancer, International of Yoga Therapy, and Complementary Therapies in Medicine are among the publications where the writing has appeared.

Jensen MP is the author with the second-highest number of documents, with 13. The Clinical Journal of Pain, Journal of Pain, Contemporary Clinical Trial, Pain Medicine (USA), Pain, and BMJ Open all feature his writings. Zeidan F, with 13 documents, is the author with the third-highest number of records. His papers are published in the Journal of pain, Contemporary Clinical Trial, Pain. (Figure 4).

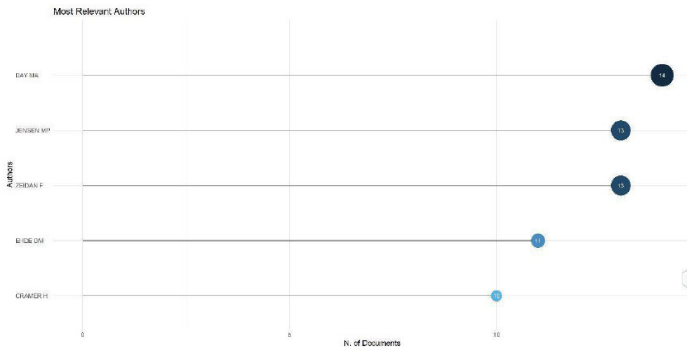


Figure 4. Most Relevant Authors.

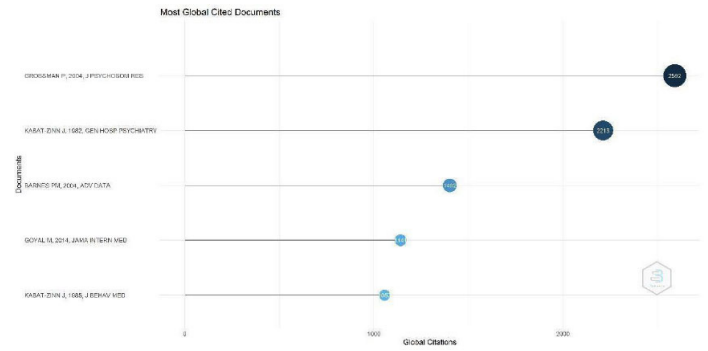


Figure 5. Most Global Cited Documents.

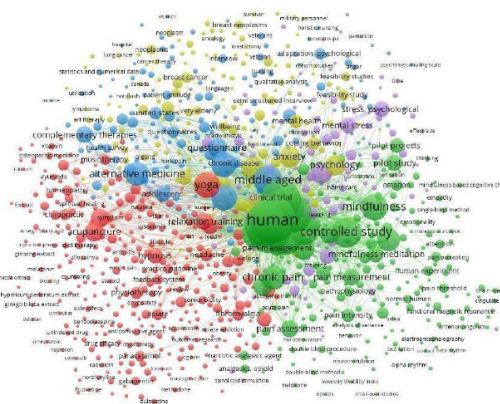


Figure 6. Network Visualization.

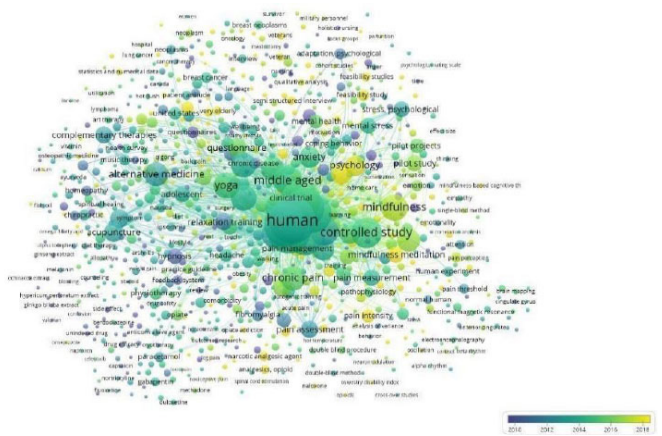


Figure 7. Overlay Visualization.

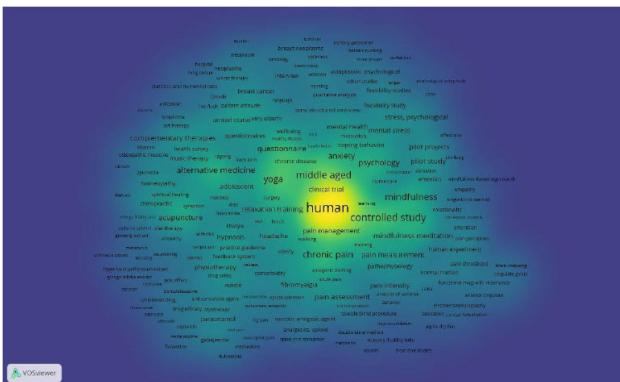


Figure 8. Density Visualization.

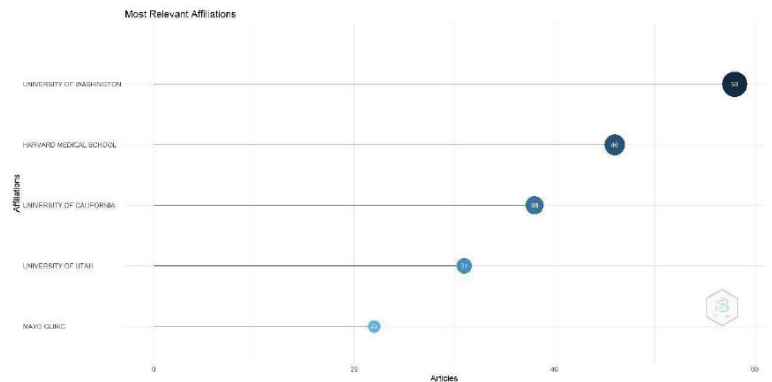


Figure 9. Most Relevant Affiliations.

Most Global Cited Documents

The article by Grossman P, published in 2004 in the Journal of Psychosomatic Research, has received 2592 citations, making it the document with the highest global citation count. Mindfulness-based Stress Reduction and Health Benefits are the titles of this document analyses of analysis.

The second text, prepared by J. Kabatt-Zinn and published in General Hospital Psychiatry in 1982, has tip-top condition citations. The document's title is An Outpatient Program in Behavioral

Medicine for Chronic Pain Patients Based on the Practice of Mindfulness Meditation: Theoretical Consideration and Initial Results.

With a total of 1402 citations, Barnes PM's third paper appeared in Advance Data in 2004. The title of this publication is Complementary and Alternative Medicine Use Among Adults: United States, 2002.

Network visualization

Results are obtained using the VOS viewer application, as shown in the Network

Visualization image. The image shows five colors which are 5 clusters. (Figure 6).

Overlay Visualization of Scopus Database using Vosviewer

The yellow Overlay visualization shows a cluster that has been widely studied approaching 2018. (Figure 7).

Density visualization

It can be seen in the image Density visualization areas, areas colored yellowish green are areas of research that are still lacking in the amount of research, while

Documents by funding sponsor

Compare the document counts for up to 15 funding sponsors.

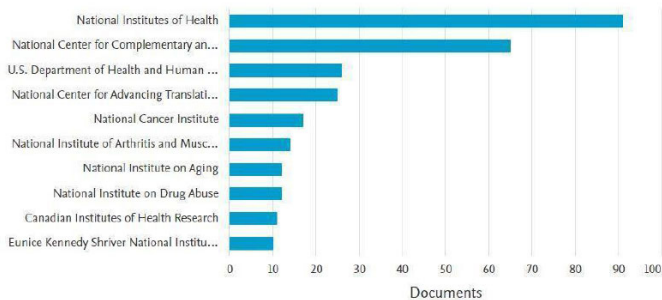


Figure 10. Documents by funding sponsor.

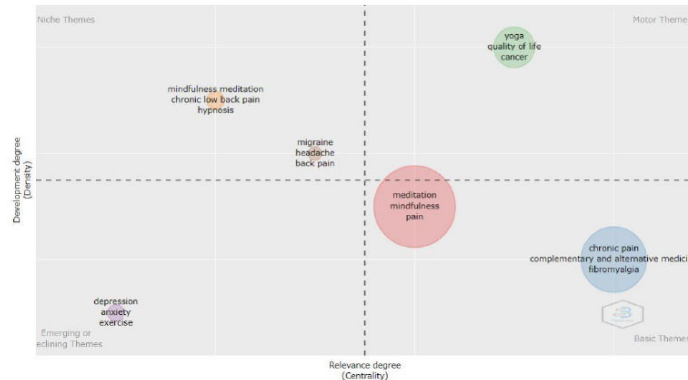


Figure 11. Thematic Map

areas colored yellow are areas that are already saturated with research. (Figure 8)

Most Relevant Affiliations

The three universities producing documents related to mediation for pain therapy are the University of Washington, then Harvard Medical School, and the University of California. (Figure 9)

Documents by funding sponsor

The top three research funders in the field of meditation for therapy are the National Institute of Health Science, the National Center for Complementary and Integrative Health and the U.S. Department of Health and Humans The institutions that fund research in this field are well-known institutions in terms of their credibility, so it can be concluded that research in the field of meditation for pain therapy is a very important area of research. (Figure 10).

Cluster Analysis

By using the VOS viewer application, 5 clusters related to Scopus documents were obtained based on the keywords used, namely (Table 1):

Cluster 1 Yoga, Acupuncture and Massage
Cluster 2 Human, Meditation, Humans
Cluster 3 Major Clinical Study, Aged and Alternative Medicine

Cluster 4 Quality of life, depression and anxiety

Cluster 5 Randomized controller trial, procedure, and Stress psychological

Thematic Map

By using the keyword “Author’s Keywords” in the Thematic Map section of the

Biblioshiny application, it can be seen in the upper left quadrant, namely Niche Themes, indicating that Mindfulness Meditation is in a position in the field of research which has begun to show largenumber and continues to grow in terms of research documents. (Figure 11)

Qualitative Analysis

Summarized documents related to therapy

The types of meditation we gathered from the Scopus documents we acquired are listed in Table 2 as follows. Analysis of Different Meditations’ Qualitative Content. 437 documents were found when the keyword “meditation” was used. These articles solely cover meditation in general terms as it relates to pain management. The term “mindfulness meditation,” which is used for both acute and chronic pain management, is mentioned in 130 papers. Additionally for a variety of different sorts of pain.

Although doing nothing is difficult for many individuals, meditation is the art of calm and tranquility. There are numerous methods to meditate, but Sahaj Samadhi uses charged, ethereal sounds (mantras) to achieve a deep state of relaxation. As part of the program, each participant will receive a unique mantra and instruction on how to use it for meditation. The mantra becomes how to access the highest states of awareness.

The course covers meditation techniques based on individual mantras and meditation principles. Knowing what causes mental disturbances, how to treat them, and how certain meals impact your ideas and mind.

Integrated Amrita Meditation Technique

Is a methodology that blends meditation with a number of other practices. Amapacana (using digestive aids), srasana (using laxatives), and snehana (using In additional to a diet that included an early dinner and particular dietary recommendations like avoiding potatoes, brinjal, raw salads, green peas, chickpeas, soybeans, lentils, and curds during the hospital stay, boiled vegetables were also encouraged to be included in the patient’s diet. It is practiced continuously for twenty days using the Integrated Amrita Meditation Technique. The exercises and yoga postures in each 20-minute IAM session are followed by a 20-minute period of meditation. The method incorporates breathing, sound, movement, and visualization. When purgatives and medications were administered, these procedures were avoided.⁴

It is a method that combines meditation with several other techniques. Along with a diet that comprised an early meal and particular dietary instructions like avoiding potatoes, brinjal, raw salads, green peas, chickpea, soybeans, lentils, and curds throughout the hospital stay, amapacana (usage of digestives), srasana (laxatives), snehana (therapy for inducing unctuousness), and bha a (treatment for nourishing. bodily tissues) were used. For twenty days, the Amrita Meditation Technique was integrated. The exercises and yoga postures in each 20-minute IAM session are followed by a 20-minute period of meditation. The method incorporates breathing, sound, movement, and visualization. When purgatives and medicated enemas were administered, these procedures were avoided.⁴

Integrated Meditation and Exercise Therapy

Twenty days were spent integrating the Amrita Meditation Technique. The exercises and yoga postures in each 20-minute IAM session are followed by a 20-minute period of meditation. Movement, breath, sound, and vision are all incorporated into the approach. During the time when purgatives and medicinal enemas were used, these practices were avoided. The instructions for meditation at home were the same as those in a clinic. Participants engaged in 30 minutes of moderately intense treadmill walking activity right after their meditation. Each participant's resting heart rate (HR) and age were utilized to determine an HR that matched a 50% heart rate reserve (HRR) before the first exercise session.⁵

Mantram meditation experienced teachers provided Mantram meditation to families on a few different days each week. Parents, interpreters, and family members frequently took part as well. An expert meditation instructor instructed and led the Mantram while an MP3 player was playing the soundtracks from RaMaDaSa, Guru Ram Das, and I Am. Dr. Joseph Michael Levry donated these soundtracks. These Mantram are traditionally used to foster resilience, tranquility, and self-worth. In order to reduce stress and promote relaxation and attention, Mantram was interspersed with mudras (hand gestures) and gentle breathing techniques (left nostril breathing, lengthy exhalations, alternate nostril breathing). The meditation teacher spent an average of thirty minutes with each patient.⁶ Internal secular meditation The four internally focused secular expressions that participants in the Internal Secular Meditation could choose from were "I am content," "I am glad," "I am good," and "I am pleased." Participants in the external secular meditation group had a choice of four.⁷

Externally Focused Secular Meditation "Grass is green," "Sand is soft," "Cotton is fluffy," and "Cloth is smooth" are all Externally Focused Secular Meditation metaphors. For 30 days, the participants were instructed to meditate for 20 minutes each day. Participants in the relaxation technique learned to tension and release

different muscle groups in their bodies. 20 No meditation was made available to the relaxation group phrase. One of the optional phrases offered within their randomly assigned meditation type was chosen, and it was repeated during practice. The participants were instructed to use the phrase as a focal point during their meditation, practice daily 20-minute sessions of meditation for 30 days, and keep daily headache diaries.⁷ An intensive meditation retreat lasts for ten days. Formerly, CAM therapy was applied. Learning to meditate, according to 35% of respondents, would improve their health, while 49% claimed it would reduce stress. 39% of respondents indicated that they would be interested in participating in the 10-day intensive meditation retreat.⁸⁻¹¹ Qi-gong exercises. Qigong is an ancient Chinese healthcare system that integrates physical postures, breathing techniques, and focused intention. Two Chinese words combine to form the word "Qigong" (Chi Kung). The term "qi" (pronounced "chee") is typically understood to describe the vital energy that permeates everything in the universe. The second word, "Gong," is a skill that is developed by consistent practice. It is pronounced, "gung." Qigong refers to the cultivation of energy. It is a system that people use to maintain their health, cure themselves, and become more vital. Using a particular form (the "Dance of the Phoenix") created in the previous pilot study specifically for patients with fibromyalgia, a Chinese master of this discipline taught the Qigong.¹²

Slow deep breathing meditation is manipulating breathing rate directly to pain ratings.¹³⁻¹⁶ Relaxation Response Meditation (RRM) namely a method of meditation with a relaxation response used so far in irritable bowel syndrome is proven to reduce pain.¹⁷ Brief meditation training is a short meditation training during a 3-day training session.¹⁸

Jyoti meditation is a method for managing and shifting focus from the physical body and its sensations, from emotions, and from thoughts, to a place of relaxation within the organism. A stationary sitting position, mantra repetition, and visual focus with closed eyes are all components of jyoti meditation. Utilizing the mantra can assist

in controlling distracting and potentially intrusive thoughts. Participants were required to recite silent mantras that they had chosen for themselves and were only known to themselves. The mantra should have a positive connotation or meaning in relation to the overall personal or spiritual backdrop and should not imply suffering. The subjects were told to close their eyes, put their thoughts aside, and focus on the stillness between their eyes and behind their forehead while reciting the mantra. They were also instructed to focus on what they could see in the darkness and on developing visions. The method had been taught by meditation masters for a long time. Participants in the weekly open meditation class practiced the technique for 15 minutes, gradually increasing that to 30 minutes. The remaining 45 minutes were spent in meditation, after which they could discuss any issues they may have encountered while using the technique and how to deal with chronic pain. The doctors advised their patients to meditate for 15 to 30 minutes a day whenever they had free time at home.¹⁹

EcoMeditation combines elements of four empirically proven techniques with evidence-based practices: the quick coherence method for controlling the heartbeat. EFT, neurofeedback, mindfulness meditation, and rate variability. Therefore, EcoMeditation is independent of any spiritual philosophies or orientations and doesn't require training or practice beforehand.

The first step is to visualize the breathing in and out of the center of the chest; second, to slow breathing to six seconds on each inhale and six seconds on each exhale; third, to apply acupressure to acupoints associated with relaxation; fourth, to relax the tongue on the roof of the mouth; fifth, to notice the volume of space within the body, particularly between the eyes; and sixth, to recall a figure with positive emotional associations, such as a guide or a mentor. program for meditation on the Sacred Name. The authors' adaptation of Eknath Easwaran's 20 Passage Meditation served as the foundation for the spiritual intervention program used in this study. The modified Holy Name Meditation Program was divided into five modules. New participants were guided in choosing

their “Holy Name” (or “Holy Word”) from a list of spiritual words, phrases, or passages during the initial session. They were also given orders on how to practice spiritual discipline. After that, they were instructed to recite the Holy Name aloud throughout the day whenever they felt it was appropriate, not just during their designated meditation time. Participants in session 2 worked on reciting the Holy Name to practice transforming unfavorable emotions like fear and rage into favorable ones. Participants in session three gained relaxation skills. Participants in session 4 worked on one-pointed attention in order to maintain their attention on the task at hand and avoid thought diffusion in order to achieve a calm mind. Participants in session 5 received instruction on how to use each of these skills in daily life while reciting the Holy Name. Each session lasted 50 minutes and was broken down into the following segments: a 30 minute didactic lecture, 10 minutes of question and answer time, sharing of meditation stories followed by 10 minutes of practice, and 10 minutes of question and answer time.²⁰

For either outpatient or inpatient cancer treatment, a researcher met with each participant privately once a week. Participants were required to complete a weekly assignment by keeping a daily journal of their Holy Name recitations and any experiences related to those reflections.²¹ Stress-reduction through meditation is supposed to be used to deliver the 6-week, 2-hour MBSR (BC) program. A user manual and instructions on how to use it were given to the participants. The advantages of the conventional MBSR(BC) program can now be obtained with flexible delivery. To meet the needs of BCS, MBSR(BC) was developed by introducing self-regulation meditation techniques for symptom management and stress reduction. It was modified from Zinn’s 8-week program. Participants were required to complete a weekly assignment by keeping a daily journal of their Holy Name recitations and any experiences related to those reflections.²¹ In addition, participants received a physical manual to help them learn the formal and informal meditation techniques. The following are some instances of official meditation

techniques: There are four types of meditation: (1) sitting contemplation (awareness of bodily sensations, thoughts, and emotions while focusing on the breath); (2) having to walk meditation (awareness of walking activity); (3) body scan (observing bodily sensations from the tips of the toes to the top of the head while focusing on the breath); as well as (4) gentle Hatha yoga with an emphasis on the breath (postures and stretches that strengthen awareness, posture and flexibility). Every day, the participants were told to practice both formally and informally for 15 to 45 minutes, recording their practice time. A lab assistant called the participants once a week to remind them to access the weekly modules on the iPad and to answer any questions or concerns they might have had.²²⁻²⁴

Samadhi Meditation, also known as Sahaj Sahaj Samadhi Meditation (SSM), is a standardized and manualized meditation program that is taught in public spaces by trained non-clinical meditation instructors. The programs are run by and the teacher certification is supervised by Art of Living (AOL), a worldwide non-profit charitable organization active in 150 nations. Teachers are required to complete a rigorous teacher preparation program and at least 1200 hours of individual SSM practice. The community’s method for learning SSM is The Art of Meditation, a 6-hour course spread out over three days with no prerequisites. Along with its proven clinical effectiveness for a number of conditions, meditation has advantages as a potential population health intervention.²⁵ Consumers can use the calm app as a meditation tool on their smartphones. On their phone, the participant downloaded the app. The calm app provided a brief experiential practice as well as basic, educational information for those who were unfamiliar with meditation. The Daily Calm was a fresh and unique collection of meditations that the app provided every day. Between 10 and 12 minutes long, each day’s meditation had a different theme (such as practicing kindness, patience, love, and gratitude, for example). Users had the option of selecting any meditation from the app’s library. The Calm app also offered breathe bubble, sleep stories, calm body, and calm

music, as well as background scenes. Researchers received usage information for each study participant from Calm.²⁶ Spiritual meditation refers to meditation done in a religious setting. Participants in the Spiritual Meditation group had the choice of one of four meditative, spiritual phrases:

- “God is peace.”
- “God is joy.”
- “God is good.”
- “God is love” to let participants use the phrase that best fits their spiritual system.

Participants in the spiritual meditation group had the option to substitute another word for “God” if they felt that it better reflected the essence of their spirituality. An individual performed the song “Mother Earth.”^{21,27} Buddhism-related Invocation Buddhism places great emphasis on meditation in order to cultivate the qualities of mindfulness, concentration, and insight that make up the third division (Samadhi or Dhyana) of the Noble Path. A state of awareness of internal events in the present moment without judgment or efforts to control, suppress, or react to them is known as mindfulness, or Sati, in the tradition of traditional Buddhist practices. Breathing exercises, sitting or walking meditation, or concentrating on different body parts are a few of these mindfulness techniques that are based on the body, while others are based on feelings. Both good and bad emotions are accepted, but one chooses to let them go like clouds in the sky rather than wallowing in them. The most well-known form of meditation, Anapanasati, or “mindfulness of breathing,” requires silently and steadily focusing on the breath as it enters and leaves the body. After observing how the mind wanders to thoughts, emotions, or physical sensations, the practitioner gently returns the focus to breathing (like pain or muscle tension). It differs from pranayama in that it only involves observation of the breath and does not involve controlling or regulating it. This method of attention training enhances understanding and acceptance of the reality we are currently experiencing. Numerous studies using sizable sample sizes have found a strong correlation between practice of mindfulness and improved perceptions

of health and wellbeing. These meditation techniques have been used by psychologists and psychiatrists as useful stress-reduction tools to help manage a variety of medical conditions, such as anxiety and depression. The therapeutic advantages of these mindfulness meditation techniques with psychological awareness, healing, and well-being have been incorporated by many modern Buddhist meditation teachers while trying to keep these practices secular. Meditation affects all cognitive processes, including emotion regulation, sensory integration, attention, cognition, and memory. The insula and anterior cingulate cortex changes associated with mindfulness practices have been studied in neuroimaging studies.^{24,28,29}

Love and kindness introspection by western psychologists are becoming more and more interested in compassionate meditation as a traditional meditation technique with a significant role in Buddhism and a ton of practical application potential. Nevertheless, there is a type of meditation that promotes compassion. This type of compassion, which differs from Liu et al is a kind of undivided, unconditional goodwill toward all sentient beings. In LKM, a lot of emphasis is placed on cultivating the noble attitudes of “compassion,” “appreciative joy,” and “acceptance” toward all sentient beings. The terms “appreciation,” “acceptance,” and “compassion” are used to describe respect for the success or happiness of others, serenity or composure, and compassion for the disadvantaged. When one is having a bad day at work or in life, LKM can instantly make them feel better, and regular LKM practice helps with long-term mood regulation.³⁰

There are three main methods of compassion meditation. In the Pali language, loving-kindness meditation is referred to as metta. Through the practice of metta, one learns to cultivate positive feelings (wishes for happiness, peace, and harmony) toward oneself, a loved one, a stranger, a person with whom one has a challenging relationship, and ultimately toward all beings. One specifically remembers those people’s suffering and the desire for them to be free from it during compassion meditation (karuna, in Pali). By breathing in the suffering

of others and breathing out relief and a joyful, loving, and healing energy in their direction, Tonglen is a different kind of compassion meditation (in Pali). Taking into consideration all of these distinctions and connections. Keeping all these distinctions and relationships in mind, let’s look at how these meditation techniques impact empathy.^{18,20,31,32}

A method of focused meditation (Jyoti meditation). Jyoti meditation is a method for managing and shifting focus away from the physical body and its sensations, from emotions and thoughts, and toward a calm or peaceful area within the body. Participants were advised to repeat a personal mantra aloud in silence to help them deal with any distracting or ruminative thoughts that may arise. A mantra should have a good connotation or meaning depending on the general personal or spiritual background. The participants were instructed to close their eyes as they chanted the mantra. Stop thinking and direct your attention to the still spot in-between your eyes. Jyoti meditation was chosen because it is simple to learn and can be practiced without additional physical requirements. The method was well-known to the meditation instructors. Participants in the weekly meditation class practiced the technique for 15 minutes, gradually increasing that to 30 minutes. They then had the chance to discuss their experiences with the meditation technique and share opinions. Patients were urged to practice for 20–30 minutes at home daily.^{5,7,11,29,33,34}

To speculate on possible complementary, additive, or synergistic effects of this combined neurostimulation and behavioral intervention, transcutaneous vagal auricular nerve stimulation, and slow breathing. The reviews and meta-analyses listed in Table 1 provide readers with a more thorough description of the state of the art in slow breathing and taVNS. The author is aware of no studies that have looked at the long-term effects of taVNS combined with slow breathing, but it is important to note that research on the many therapeutic uses of taVNS and slow breathing is still in its early stages. Therefore, rather than being a suggestion for clinical use, the clinical applications discussed here should only

be viewed as a brief review that may offer guidelines for future research.³⁵

Tai Chi sessions lasting an hour each, twice a week for six months, made up the Community-Based Meditation intervention. An instructor with formal training in Tai Chi meditation taught a variety of breathing, balance, flexibility, concentration, calming, and stress-reduction exercises.³⁶

Zen meditation focuses primarily on using seated meditation to practice cultivating mindfulness. Zen practitioners sit during periods of meditation. Silently in a chair or on a cushion without moving. Zen meditation typically concentrates on awareness of the breathing pattern to develop mindfulness. Beginners begin by counting their breaths, but more experienced practitioners, known as Shikantaza, sit with a focus on the present moment (including the breath). Koan study is another Zen method that is employed in some traditions. Koans are illogical sayings that resemble riddles. During meditation, practitioners concentrate on a particular koan to solve it. Koan’s study aids in perspective change from an ego-based worldview, among other things. This might make it.

Easier to perceive something when using the psychological mechanisms of mindfulness (see discussion below). In addition to frequently available opportunities for sitting together in brief meditation sessions, Zen centers typically offer various services for community practitioners. These usually consist of talks on Zen and meditation and short to extended meditation retreats.^{16,24,37} Mindfulness-Yoga CBT is an 8-week program that combines mindfulness meditation, yoga, and cognitive Behavior therapy.^{23,38}

Heartfulness Meditation is a technique in that the participants were given meditation instruction from a heartfulness preceptor (trainer) who had received training. Before thinking about the presence of divine light in their hearts, the preceptor would ask the participant to calm down. The participant was asked to return to the initial idea—the presence of divine light in one’s heart—and to treat any additional thoughts as unwanted guests. According to the preceptor, heartfulness

meditation induces a meditative state in a person and is said to work on yogic transmission (pranahuthi). The preceptor asked the students to begin meditating, and they did so for 30 to 40 minutes before the intervention was over.³⁹

MBM comes in many forms, one of which is transcendental meditation (TM). It involves repeating nonreligious mantras to calm the mind and bring it to a state of transcendental consciousness through silence. Other mantra-based meditations (OMBM) like Benson relaxation, Jyoti meditation, clinically standardized meditation (CSM), and ACEM meditation are also included in this MBM group. (2) Walking meditation (awareness of walking activity); (3) sitting meditation (awareness of bodily sensations, thoughts, and emotions while focusing on the breath).^{40,41} Qigong Mind-Body Exercise is also referred to as moving meditation.⁴²

Brief EcoMeditation is an emerging, non-drug meditation technique that can be learned in a single day. This innovative method of meditation comes from the Whole Energy Lifestyle (WEL) collection of skills for improving communication and relationships with others. The Quick Coherence Technique for controlling heart rate variability (HRV), Emotional Freedom Techniques (EFT; see Research. EFTuniverse.com), mindfulness meditations, and neurofeedback are some of the techniques that EcoMeditation draws on.⁴³

Meditation Instruction This kind of meditation follows guidelines from an app or a trainer. Beginners frequently use guided meditation when practicing their meditation techniques. It is typical for instructors to first discuss the mind before beginning to guide students through meditation and how to use it in daily life.^{5,34,44}

DISCUSSION

We have conducted quantitative and qualitative studies regarding the types of meditation trending in research. Mindfulness meditation based on Bibliometric studies is the most popular type of meditation worldwide, with an increasing number of research documents. Mindfulness meditation is effortless and unrelated to any particular religion or

belief so that everyone can do it without resistance. Neurophysiology-based brain studies have proven that mindfulness meditation affects pain. Research shows that parts of the brain, namely the insular cortex and anterior cingulate cortex and experience change when someone does mindfulness meditation.⁴⁵⁻⁴⁸ Increasing attention when doing mindfulness meditation makes patients with acute and chronic pain ignore the sensation of pain that occurs and not make judgments and increases the level of acceptance of the pain they experience. Mindfulness meditation has also been shown to stabilize emotions.

As the number of studies related to the neurobiology of mindfulness meditation increases, there are also more studies trying to prove whether mindfulness meditation is proven to reduce pain in acute and chronic pain patients. There are mixed results in our inventory of multiple studies in the form of literature reviews and meta-analyses with various research weaknesses that have yet to prove the effects of mindfulness meditation. The evidence is not convincing enough to state that mindfulness meditation has little or no effect, making the number of studies in this field even more numerous because experts also consider various findings related to the neurobiology of mindfulness meditation which show beneficial results for pain therapy.

A systematic review and meta-analysis of mindfulness-based interventions for acute pain has been conducted. There is weak evidence for pain threshold and moderate evidence that MBIs can increase pain tolerance. However, there isn't enough high-quality data to support using MBIs in clinical or experimental settings to lessen pain intensity or distress. One study from Seven RCTs that were eligible for inclusion—38 in total—reported on safety found low-quality evidence in 30 RCTs that suggests practicing mindfulness causes a modest decrease in pain compared to all types of controls. The effects on depression symptoms and quality of life were statistically significant. In conclusion, while mindfulness meditation reduces the symptoms of depression and pain and enhances the quality of life, more thorough, rigorous, and large-scale RCTs are required before it can be determined

with certainty how effective mindfulness meditation is for treating chronic pain.⁴⁹

A study by Gu et al,²² involving 315 patients from 10 randomized controlled trials and 1 controlled clinical trial were included in the analysis. Stress management based on conscious awareness significantly decreased the frequency and severity of headaches. Compared to data from the control group, there was a 0.67 standard mean difference (95% confidence interval: 1.24 to 0.10). In a subgroup analysis of various meditation techniques, mindfulness-based stress reduction was found to significantly affect pain intensity ($P = 0.000$). A significant positive effect was also seen after an 8-week intervention ($P = 0.000$). As a promising treatment, mindfulness meditation may help patients experience less severe pain. For patients with primary headaches, mindfulness meditation practitioners may be a good complementary and alternative treatment option.

From the above, it can be concluded that until now, there has not been a single convincing study regarding the effects of mindfulness meditation on pain because there are still many weaknesses in the research method. Our limitation in this bibliometric research is in terms of keywords. Other researchers may get different things if they use different keywords than those used in this study.

Our studies show that meditation, especially mindfulness meditation, is one method of pain therapy that remains a trend in future research. We predict that this type of meditation will continue to be researched because it is easy for patients. As technology advances and the number of documents, there are possibilities in the future, new combinations related to pain therapy between mindfulness meditation and other synergistic therapies.

CONCLUSION

Due to mounting clinical evidence supporting its efficacy, researchers are increasingly turning to mindfulness meditation as a kind of pain management.

DISCLOSURE

Author Contribution

AYS collects data, processes and analyzes and prepares manuscripts. RV edits and

searches data related to art therapy for psychoneuroimmunology.

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Conflict of Interest

There is no conflict of interest for this manuscript.

Ethical Consideration

This research does not use living creatures, so it does not require permission from the Ethics committee.

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Table 1. The Results of Cluster Analysis.

No	Cluster	Most Frequent Word	Keyword
1	Cluster 1	Yoga (253) Acupuncture (139) Massage (128)	Acetylsalicylic acid (10) Activities of daily living (16) Acupressure (19) Acupuncture (139) Acupuncture therapy (15) Addiction (7) Alcohol (6) Alcohol consumption (7) Allergy (6) Allopathy (7) Alpha tocopherol (6) Alternative therapies (5) Amfebutamone (6) Amitriptyline (15) Amnesia (6) Analgesic agent (42) Antibiotic agent (6) Anticonvulsive agent (20) Antidepressant agent (23) Anti-inflammatory agent (5) Anxiety disorder (50) Anxiolytic agent (6) Aromatherapy Arthralgia (24) Arthritis (15) Ascorbic acid (10) Asthma (12) Autogenic training (13) Ayurveda (17) Backache (27) Behavior therapy (31) Benzodiazepine (9) Benzodiazepine derivative (10) Beta adrenergic receptor blocking agent (5) Biofeedback (22) Biofeedback, psychology (5) Bleeding (6) Blood pressure (13) Buprenorphine (6) Calcium (6) Cam (5) Capsaicin (9) Cardiovascular disease (14) Case report (38) Celecoxib (6) Cerebrovascular accident (8) Child (39) Chinese medicine (23) Chiropractic (42) Chiropractic manipulation (7) Chiropractor (8) Chronic fatigue syndrome (7) Citalopram (5) Clinical assessment tool (5) Clinical feature (14) Clinical practice (26) Clinical trial (topic) (5) Clonidine (6)

No	Cluster	Most Frequent Word	Keyword
			Codeine (10)
			Cognitive defect (6)
			Cognitive therapy (77)
			Comorbidity (25)
			Computer assisted tomography (5)
			Confusion (5)
			Constipation (24)
			Consultation (14)
			Corticosteroid (9)
			Coughing (6)
			Counseling (9)
			Crohn disease (6)
			Cryotherapy (10)
			Cultural factor (6)
			Cyanocobalamin (6)
			Cyclobenzaprine (6)
			Cyclooxygenase 2 inhibitor (5)
			Cystitis, interstitial (5)
			Daily life activity (31)
			Delirium (6)
			Dementia (6)
			Diabetes melitus (15)
			Diabetic neuropathy (6)
			Diarrhea (12)
			Diazepam (5)
			Diet (14)
			Diet supplementation (21)
			Diet therapy (23)
			Dietary supplement (7)
			Disease association (19)
			Disease classification (5)
			Disease course (7)
			Disease duration (23)
			Disease exacerbation (7)
			Disease severity (52)
			Dizziness (12)
			Drowsines (13)
			Drug abuse (5)
			Drug dependance (9)
			Drug efficacy (16)
			Drug megadose (6)
			Drug safety (8)
			Drug withdrawal (5)
			Duloxetine (13)
			Dysmenorrhea (8)
			Echinacea extract (5)
			Educational status (17)
			Electrocupuncture (10)
			Electromyography (5)
			Epilepsy (5)
			Evidence based medicine (24)
			Evidence-based medicine (9)
			Exercise (95)
			Falling (8)
			Feedback system (38)

No	Cluster	Most Frequent Word	Keyword
			Fentanyl (6)
			Fever (5)
			Fibromyalgia (59)
			Fibromyalgia impact questionnaire (5)
			Fish oil (10)
			Fluoxetine (7)
			Foot pain (5)
			Garlic extract (6)
			Gastrointestinal disease (6)
			Gastrointestinal symptom (8)
			Gender (7)
			Ginkgo biloba extract (7)
			Ginseng extract (7)
			Glucosamine (5)
			Guided imagery (42)
			Headache (60)
			Headache disorders (5)
			Health care cost (20)
			Health care organization (6)
			Health practitioner (10)
			Heart arrhythmia (5)
			Heart failure (5)
			Heart infarction (6)
			Heart palpitation (8)
			Herbaceous agent (36)
			Herbal medicine (46)
			Homeopathic agent (5)
			Homeopathy (41)
			Hospital patient (5)
			Human immunodeficiency virus infection (11)
			Hydromorphone (8)
			Hydrotherapy (9)
			Hypericum perforatum (9)
			Hyperpnea (5)
			Hypertension (26)
			Hyperthermic therapy (13)
			Hypnosis (91)
			Ibuprofen (16)
			Imagery (19)
			Incidence (7)
			Inflammation (11)
			Injury (6)
			Internet (17)
			Interstitial cystitis (8)
			Irritability (7)
			Irritable colon (21)
			Kinesiotherapy Knee pain (14)
			Leg pain (6)
			Lidocaine (15)
			Lifestyle (17)
			Lifestyle modification (16)
			Long term care (7)
			Lorazepam (5)
			Magnetotherapy (6)
			Manipulative medicine Massage (128)

No	Cluster	Most Frequent Word	Keyword
			Medical cannabis (7)
			Medical care (7)
			Medical education (15)
			Medical history (7)
			Medical research (12)
			Medical society (10)
			Medicinal plant (7)
			Melatonin (11)
			Mental disease (13)
			Methadone (13)
			Mineral (10)
			Minimally invasive surgery (5)
			Mood disorder (9)
			Morphine (18)
			Multiple sclerosis (17)
			Multivitamin (6)
			Muscle relaxant agent (14)
			Musculoskeletal disease (9)
			Music therapy (42)
			Myalgia (12)
			Myofascial pain (6)
			Naproxen (5)
			Narcotic agent (9)
			Nausea (35)
			Nausea and vomiting (5)
			Need assessment (5)
			Nerve block (5)
			Neuralgia (9)
			Neuroleptic agent (7)
			Neurologic disease (6)
			Neuropathic pain (24)
			Nociceptive pain (5)
			Non insulin dependent diabetes melitus (8)
			Nonhuman (15)
			Nonsteroid antiinflammation agent (33)
			Noradrenalin (5)
			Nortriptyline (9)
			Obesity (13)
			Occupational therapy (6)
			Omega 3 fatty acid (6)
			Omeprazole (5)
			Opiate (50)
			Opiate addiction (13)
			Opioid-related disorders (10)
			Osteoarthritis (17)
			Osteopathic manipulation (5)
			Osteopathic medicine (19)
			Osteoporosis (6)
			Outcomes research (10)
			Outpatient (11)
			Oxycodone (16)
			Pain clinic (6)
			Pain clinics (5)
			Pain, postoperative (13)
			Paracetamol (39)

No	Cluster	Most Frequent Word	Keyword
			Paresthesia (6)
			Parkinson disease (6)
			Patient controlled analgesia (6)
			Patient counselling (11)
			Patient education (44)
			Patient referral (13)
			Pediatrics (7)
			Perioperative period (5)
			Peripheral neuropathy (5)
			Pethidine (6)
			Physical examination (8)
			Physical therapy modalities (5)
			Physician (23)
			Physiotherapy (56)
			Phytotherapy (8)
			Pilates (8)
			Placebo (20)
			Postherpetic neuralgia (5)
			Postoperative pain (26)
			Practice guideline as topic (35)
			Pregabalin (13)
			Prescription (16)
			Prevalence (37)
			Primrose oil (6)
			Probiotic agent (8)
			Pruritus (12)
			Psychotherapy (61)
			Public health (7)
			Rash (7)
			Reflexology (13)
			Rehabilitation medicine (5)
			Reiki (22)
			Relaxation training (104)
			Rest (9)
			Review (18)
			Rheumatoid arthritis (16)
			Risk assessment (15)
			Risk benefit analysis (8)
			Risk factor (15)
			Risk reduction (8)
			S adenosylmethionine (5)
			Schizophrenia (5)
			School child (5)
			Sedation (11)
			Sedative agent (6)
			Seizure (7)
			Selenium (5)
			Self help (7)
			Self medication (6)
			Serotonin noradrenalin reuptake inhibitor (5)
			Serotonin uptake inhibitor (10)
			Sertraline (5)
			Sexual dysfunction (7)
			Short form 12 (8)
			Shoulder pain (10)

No	Cluster	Most Frequent Word	Keyword
			Side effect (14)
			Skin disease (5)
			Smoking (9)
			Social aspect (5)
			Social media (7)
			Spinal cord stimulation (5)
			Spiritual healing (19)
			Steroid (9)
			Stroke (6)
			Substance-related disorder (7)
			Suicidal ideation (5)
			Support group (15)
			Surgery (10)
			Symptom (22)
			Symptomatology (9)
			Systematic review (topic) (7)
			Tai chi (43)
			Thermotherapy (6)
			Thorax pain (15)
			Topiramate (5)
			Touch (7)
			Traditional medicine (9)
			Tramadol (16)
			Transcutaneous nerve stimulation (13)
			Treatment (7)
			Treatment indication (7)
			Treatment planning (14)
			Tricyclic antidepressant agent (20)
			Unclassified drug (13)
			Unindexed drug (11)
			United Kingdom (10)
			Unspecified side effect (7)
			Utilization review (13)
			Valerian (6)
			Vegetarian diet (5)
			Vertigo (6)
			Vitamin (18)
			Vitamin D (9)
			Vitamin supplementation (13)
			Vomiting (15)
			Weight gain (6)
			Withdrawal syndrome (6)
			Workplace (5)
			Xerostomia (11)
			Yoga (253)

No	Cluster	Most Frequent Word	Keyword
2	Cluster 2	Human (791) Meditation (672) Humans (607)	Acute pain (13) Adolescents (5) Adult (524) Adverse effects (6) Affect (21) Alpha rhythm (7) Amygdaloid nucleus (6) Analgesia (144) Alagesics, opioid Analysis of variance (12) Anterior cingulate (11) Anticipation (5) Arousal (6) Article (679) Attention (34) Audio recording (5) Autonomic nervous system (8) Autoregulation (5) Avoidance behavior (6) Beck depression inventory (15) Behavior (10) Beta rhythm (5) Blood (5) Body image (6) Body movement (7) Body position (9) Body posture (5) Body weight (7) Brain (28) Brain cortex (6) Brain function (16) Brain mapping (12) Brain region (7) Breathing (22) Breathing rate (11) Brief pain inventory (14) C reactive protein (13) Case-control studies (5) Catastrophization (7) Catastrophizing (17) Central nervous system (9) Cerebral cortex (7) Chronic low back pain (18) Chronic pain (221) Cingulate gyrus (8) Clinical article (147) Clinical assessment (18) Clinical outcome (20) Cognition (48) Cold pressor test (5) Comparative study (53) Consciousness (8) Controlled study (348) Convalescence (6) Correlation analysis (5) Cortisol (6)

No	Cluster	Most Frequent Word	Keyword
			Cost benefit analysis (7)
			Cross-over studies (5)
			Crossover procedure (7)
			Diagnostic imaging (10)
			Diastolic blood pressure (8)
			Disability (29)
			Disability evaluation (15)
			Double blind procedure (22)
			Double-blind method (13)
			Eeg (7)
			Electroencephalogram (11)
			Electroencephalography (13)
			Electrostimulation (6)
			Emotion (48)
			Emotion regulation (11)
			Emotional disorder (5)
			Emotionality (14)
			Emotions (21)
			Empathy (16)
			Endorphin (6)
			Episodic migraine (5)
			Evaluation study (6)
			Female (575)
			Fmri (9)
			Functional assessment (8)
			Functional disease (7)
			Functional magnetic resonance imaging (16)
			Functional neuroimaging (5)
			Gray matter (5)
			Heart rate (22)
			Heart rate variability (12) Heat (8)
			Hippocampus (6)
			Hot temperature (5)
			Human (791)
			Human experiment (40)
			Humans (607)
			Hydrocortisone (13)
			Image processing, computer-assisted (6)
			Imagery (psychotherapy) (11)
			India (8)
			Insula (14)
			Interleukin 6 (6)
			Intermethod comparison (12)
			Interoception (6)
			Intervention study (21)
			Joint mobility (7)
			Knee osteoarthritis (15)
			Low back pain (83)
			Magnetic resonance imaging (18)
			Male (472)
			Mcgill pain questionnaire (6)
			Meditation (672)
			Memory (8)
			Mental disorders (9)
			Mental function (12)

No	Cluster	Most Frequent Word	Keyword
			Metabolism (5)
			Middle aged (313)
			Migraine disorders (21)
			Mindfulness (266)
			Mindfulness based cognitive therapy (8)
			Mindfulness meditation (103)
			Mindfulness-based cognitive therapy (9)
			Mindfulness-based stress Models, psychological (5)
			Mood (25)
			Muscle training (5)
			Music (10)
			Naloxone (8)
			Narcotic analgesic agent (47)
			Neuropsychology (6)
			Nociception (52)
			Normal human (30)
			Nuclear magnetic resonance (22)
			Numeric rating scale (19)
			Opioids (6)
			Oscillation (7)
			Osteoarthritis, knee (9)
			Oswestry disability index (5)
			Oxygen (7)
			Pain (306)
			Pain assessment (114)
			Pain catastrophizing (8)
			Pain catastrophizing scale (14)
			Pain intensity (66)
			Pain management
			Pain measurement (101)
			Pain perception (12)
			Pain severity (29)
			Pain threshold (35)
			Patient education as topic (13)
			Perception (18)
			Physical performace (5)
			Physiological stress (15)
			Pilot pojects (78)
			Pilot study (98)
			Placebo effect (5)
			Prediction (6)
			Prefrontal cortex (11)
			Priority journal (233)
			Psychologic assessment (10)
			Psychological model (5)
			Psychophysics (7)
			Psychophysiology (18)
			Quantitative analysis (8)
			Quantitative sensory testing (5)
			Randomized controlled trial (195)
			Range of motion (7)
			Range of motion, articular (7)
			Regression analysis (8)
			Rehabilitation (11)

No	Cluster	Most Frequent Word	Keyword
			Relaxation techniques (17)
			Respiration (8)
			Saliva (5)
			Secondary analysis (8)
			Self report (49)
			Self-regulation (5)
			Sensation (10)
			Single blind procedure (20)
			Single-blind method (13)
			Skill (9)
			Social behavior (5)
			Social psychology (14)
			Somatization (5)
			Somatosensory cortex (9)
			Spinal cord injuries (6)
			Spinal cord injury (7)
			State trait anxiety inventory (10)
			Stress (52)
			Systolic blood pressure (8)
			Task performance (7)
			Thalamus (7)
			Therapy (32)
			Thermal stimulation (7)
			Theta rhythm (5)
			Thinking (10)
			Time factor (7)
			Time factors (23)
			Training (20)
			Transcendental meditation (14)
			Transcranial direct current stimulation (6)
			Transformed migraine (5)
			Treatment outcome (188)
			Treatment response (28)
			Undergraduate student (5)
			Virtual reality (9)
			Visual analog scale (32)
			Young adult (99)

No	Cluster	Most Frequent Word	Keyword
3	Cluster 3	Major Clinical Study (244) Aged (234) Alternative medicine (217)	Adaptation, psychological (48) Adaptive behavior (22) Adolescent (95) African American (11) Age (21) Age distribution (6) Age factors (9) Aged (234) Aged, 80 and over (49) Aging (9) Alternative medicine (217) Anger (12) Anxiety disorders (6) Attitude (6) Attitude of health personal (11) Attitude to health (30) Australia (16) Australian (5) Back pain (10) Breathing exercise (59) Buddhism (13) Buddhist (7) Caucasian (7) Child, preschool (11) Chronic disease (46) Chronic obstructive lung disease (6) Communication (8) Complementary and alternative medicine (27) Complementary and integrative health (5) Complementary therapies (106) Cross-sectional studies (43) Cross-sectional study (55) Data collection (6) Demography (22) Depressive disorder (6) Doctor patient relation (10) Education (20) Endometriosis (6) Epidemiology (23) Ethnicity (7) Ethnology (5) Evaluation (5) Evidence based practice (15) Experience (7) Faith healing (6) Family (11) General practice (5) General practitioner (8) Government (8) Health (13) Health behavior (25) Health belief (5) Health care (8) Health care access (13) Health care facility (7) Health care personnel (34) Health care planning (7) Health care quality (14) Health care survey (9) Health care surveys (13) Health care utilization (24) Health center (9)

No	Cluster	Most Frequent Word	Keyword
			Health insurance (13)
			Health knowledge, attitude, practice (13)
			Health personnel (7)
			Health personnel attitude (9) Health promotion (11)
			Health service (8)
			Health status (45)
			Health surveys (9)
			Heart disease (5)
			Holistic health (10)
			Holistic nursing (9)
			Hospital (7)
			Income (5)
			Information processing (13)
			Integrative medicine (49)
			Interpersonal communication (12)
			Interview (30)
			Japan (5)
			Knowledge (9)
			Logistic models (6)
			Longitudinal studies (12)
			Longitudinal study (16) Major clinical study (244)
			Medicinal decision making (5) Medical practice (12)
			Medical specialist (5)
			Methodology (44)
			Middle age (6)
			Mind-body medicine (5)
			Mind-body relations (metaphysics) (10)
			Musculoskeletal pain (19)
			Nurse (7)
			Nurse attitude (6)
			Nurse practitioner (5)
			Nursing (15)
			Nursing home (6)
			Older adults (6)
			Pain, intractable (6)
			Palliative care (17)
			Palliative therapy (15)
			Patient acceptance of health care (18)
			Patient assessment (6)
			Patient attitude (33)
			Patient participation (8)
			Personel experience (14)
			Philosophy (12)
			Physician attitude (5)
			Physiotherapist (10)
			Population research (6)
			Preschool child (7)
			Prevalence (37)
			Primary health care (13)
			Primary medical care (21)
			Program evaluation (12)
			Psychiatric status rating scales (7)

No	Cluster	Most Frequent Word	Keyword
			Psychologic test (5)
			Psychological aspect (68)
			Psychological distress (6)
			Psychological rating scale (6)
			Psychological well being (15)
			Psychologist (5)
			Psychometrics (7)
			Qualitative (5)
			Questionnaire (139)
			Race (5)
			Referral and consultation (5)
			Religion (79)
			Religion and psychology (7)
			Rheumatic disease (5)
			Scoring system (21)
			Sex difference (11)
			Sex factors (6)
			Short form 36 (13)
			Social status (9)
			Socioeconomic factors (13)
			Socioeconomic (12)
			Spiritual care (6)
			Spirituality (28)
			Standard (6)
			Statistical model (6)
			Statistical significance (6)
			Statistic (12)
			Statistic and numerical data (18)
			Statistic, nonparametric (5)
			Tai ji (5)
			Teaching (5)
			Tension (5)
			Terminal care (9)
			Total quality management (6)
			United states (64)
			United states department of veterans affairs (5)
			Utilization (10)
			Utilization review Veteran (22)
			Veterans (21)
			Veteran health (10)
			Women (5)
			Women's health (9)

No	Cluster	Most Frequent Word	Keyword
4	Cluster 4	Quality of life (208) Depression (194) Anxiety (165)	Acupuncture analgesia (7) Adverse outcome (5) Ambulatory care (7) Antineoplastic agent (21) Anxiety (165) Art therapy (18) Body mass (13) Breast cancer (45) Breast tumor (16) Breathing exercise (15) Canada (8) Cancer (30) Cancer adjuvant therapy (5) Cancer chemotherapy (17) Cancer fatigue (8) Cancer pain (38) Cancer palliative therapy (8) Cancer patient (41) Cancer recurrence (5) Cancer staging (9) Cancer surgery (11) Cancer survivor (19) Cancer survivors (9) Cancer therapy (12) Caregiver (11) Caregivers (7) Childhood cancer (5) China (5) Cohort analysis Cohort studies (7) Colorectal cancer (8) Combined modality therapy (12) Complementary medicine (14) Complication (41) Conceptual framework (5) Content analysis (7) Coping (6) Coping behavior (62) Coronavirus disease 2019 (8) Covid-19 (8) Dancing (5) Death (10) Depression (194) Descriptive research (10) Digestive system cancer (5) Distress syndrome (43) Dyspnea (18) Emotional stress (15) Employment status (6) Expectation (9) Exploratory research (10) Fatigue (87) Feasibility studies (31) Feasibility study (50) Global health (5) Happiness (7) Head and neck cancer (8) Health care need (6) Healthy lifestyle (6)

No	Cluster	Most Frequent Word	Keyword
			Holistic care (5)
			Hospital anxiety and depression scale (21)
			Hot flush (10)
			Human relation (7)
			Integrated health care system (10)
			Integrative oncology (8)
			Leisure (44)
			Leukemia (5)
			Lung cancer (11)
			Lymphedema (6)
			Lymphoma (7)
			Magnesium (5)
			Malignant neoplasm (7)
			Marriage (11)
			Mastectomy (5)
			Medical information (6)
			Menopause (6)
			Mental health (70)
			Metastasis (7)
			Military personnel (7)
			Morbidity (6)
			Mortality (7)
			Multimodality cancer therapy (10) Neoplasm (22)
			Neoplasms (37)
			Neuropathy (7)
			Nutrition (8)
			Observational study (16)
			Oncology (8)
			Organization and management (10) Outpatient care (9)
			Pandemic (8)
			Pandemics (6)
			Pathology (12)
			Patient satisfaction (56)
			Personal satisfaction (6)
			Personalized medicine (6) Physical well being (6) Posttraumatic stress disorder (17) Pretest posttest design (5) Prospective studies (25)
			Prospective study (34)
			Prostate cancer (6)
			Psychoeducation (14)
			Psychological well-being (17)
			Psychology (156)
			Psychosocial care (10)
			Psychosocial intervention (5)
			Psychotherapy, group (6)
			Qigong (22)
			Qualitative analysis (19) Quality of life (208)
			Quality of life assessment (6) Retrospective studies (9)
			Retrospective study (14)
			Sample size (9)
			Satisfaction (13)
			Self-care (5)

No	Cluster	Most Frequent Word	Keyword
			Semi structured interview (29) Sleep disorder (49)
			Sleep initiation and maintenance disorders (8)
			Social interaction (17)
			Social isolation (6) Social support Soldier (6)
			Spiritual therapies (6)
			Stress disorders, post-traumatic (6) Survey and questionnaire (61) Survivor (9)
			Survivors (13)
			Symptom assessment (5)
			Telehealth (8)
			Telemedicine (12)
			Thematic analysis (11)
			Very elderly (28)
			Videoconferencing (5)
			Walking (15)

No	Cluster	Most Frequent Word	Keyword
5	Cluster 5	Randomized controlled trial (195) Procedures (155) Stress, psychological (96)	Acceptance and commitment therapy (8) Adverse event (8) Analgesic (9) Birth (6) Bothersomeness (5) Burnout (7) California (5) Center for epidemiological studies depression scale (5) Cesarean section (6) Childbirth (5) Children (5) Clinical effectiveness (58) Clinical evaluation (5) Clinical protocol (16) Clinical trial (78) Cognitive behavioral therapy (49) Cognitive-behavioral therapy (6) Community care (6) Comparative effectiveness (16) Compassion (5) Conservative treatment (8) Controlled clinical trial (45) Cost effectiveness analysis (13) Decision making (6) Drug use (12) Effect size (8) Empowerment (5) Fear (19) Focus groups (6) Follow up (100) Follow-up studies (28) Group therapy (12) Health care delivery (18) Health care system (11) Health education (18) Health program (26) Home care (19) Hospital admission (12) Hospitalization (14) Inflammatory bowel disease (7) Intention to treat analysis (12) Interview as topic (10) Irritable bowel syndrome (11) Job stress (6) Labor (5) Labor pain (10) Language (8) Likert scale (14) Major depression (6) Mbsr (12) Medline (6) Mental stress (94) Meta analysis (17) Mhealth (5) Mindfulness based stress reduction (26) Mobile application (11) Mobile applications (9) Mobile phone (5) Motivation (19) Multicenter study (13)

No	Cluster	Most Frequent Word	Keyword
			Muscle relaxation (24)
			Neck pain (21)
			Outcome assessment (88) Outcome assessment (health care) (11)
			Parturition (5)
			Patient care (27)
			Patient compliance (37)
			Patient health questionnaire 9 (5)
			Patient safety (21)
			Pelvic pain (12)
			Pelvis pain syndrome (9) Perceived stress scale (14) Physical activity (48)
			Physical capacity (7)
			Pittsburgh sleep quality index (8) Pranayama (6)
			Pregnancy (20)
			Prevention and control (19) Procedures (155)
			Program feasibility (5)
			Psychometry (11)
			Randomized controlled trial (195) Randomized controlled trial as topic (45)
			Rating scale (27)
			Rct (5)
			Relaxation (17)
			Relaxation therapy (16)
			Remission (6)
			Research design (15)
			Safety (9)
			Self care (55)
			Self concept (27)
			Self efficacy (8)
			Self-management (8)
			Stress reduction (6)
			Stress, psychological (96)
			Systematic review (29)
			Teacher (5)
			Thematic analysis (11)
			Time (9)
			Videorecording (5)

Table 2. Qualitative Analysis of Various Medications.

No	Types of Intervention	Amounts of Documents
1	Meditation	437 documents
2	Mindfulness Meditation	130 documents
3	Intensive meditation	3 documents
4	Transcendental meditation	8 documents
5	Meditation based program	1 document
6	Meditation based stress reduction	1 document
7	Relaxation response meditation	2 documents
8	Mindfulness Meditation plus Qigong movement	1 document
9	Loving kindness Meditation	5 documents
10	Buddhist Meditation	6 documents
11	Compassion meditation	4 documents
12	Spiritual meditation	4 documents
13	Internal Focused Secular Meditation	2 documents
14	Externally Focused Secular Meditation	2 documents
15	Guided meditation	19 documents
16	Mindful Zen meditation	1 document
17	Brief meditation training	1 document
18	Matram meditation (Mantra Meditation)	5 documents
19	Community based meditation	2 documents
20	Jyoti Meditation	1 document
21	Meditation-CBT	19 documents
22	Slow deep breathing meditation	1 document
23	Eco meditation	2 documents
24	Holy name meditation	2 documents
25	Consumer based meditation	2 documents
26	Combination sitting and walking meditation	1 document
27	Brief Eco Meditation (one day Eco meditation)	1 document
28	Sahaj Samadhi Meditation	1 document
29	Moving Meditation	1 document
30	Integrated Meditation and Exercise Therapy	1 document
31	Heartfulness Meditation	1 document
32	Integrated Amrita Meditation Technique	1 document
33	Combined Respiratory Gated Auricular Vagal Afferent Nerve Stimulation and Mindfulness Meditation	1 document