

EFFECTIVENESS OF HIMALAYAN TRADITIONAL YOGA PRACTICES ON PSYCHOLOGICAL AND PAIN-RELATED PARAMETERS IN PATIENTS WITH MIGRAINE

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ABSTRACT

Background:

Migraine is a prevalent neurological disorder characterized by recurrent headaches that can be debilitating. It often presents with a variety of symptoms, including intense pain, nausea, vomiting, and sensitivity to light and sound. Numerous studies have investigated various treatment modalities, including pharmacological and non-pharmacological approaches, for migraine management. Among these, yoga has emerged as a promising alternative therapy, touted for its holistic benefits and potential to alleviate migraine symptoms. However, there remains a lack of comprehensive documentation assessing the effectiveness of yoga therapy specifically within a clinical context. This study aims to address this gap by exploring the impact of yoga therapy on migraine treatment.

Objective

The primary objective of this study is to investigate the effects of yoga therapy on migraine treatment within a clinical setup. By assessing various parameters, including headache frequency, severity, and associated emotional factors, we aim to provide a clearer understanding of the therapeutic benefits of yoga for individuals suffering from migraines.

Material and Methods

This descriptive study was conducted with twenty-three patients diagnosed with migraine without aura. Participants were recruited from a clinical setting and were randomly assigned to a structured yoga therapy program lasting four weeks. The intervention included a combination of physical postures (asanas), breath control techniques (pranayama), and mindfulness practices designed to promote relaxation and self-awareness.

Participants

The study included individuals aged 18 to 60, with a confirmed diagnosis of migraine without aura according to the International Classification of Headache Disorders (ICHD). Participants were required to have experienced at least two migraine attacks per month for the previous three months. Those with other significant medical conditions, psychological disorders, or prior yoga experience were excluded to ensure a homogeneous sample.

Primary Outcomes

The primary outcomes measured during the study included:

1. **Headache Frequency:** Participants maintained a headache diary to record the number of migraine days experienced each week throughout the four-week intervention.
2. **Migraine Severity:** The severity of migraine attacks was assessed using a numerical rating scale (0–10), where participants rated their pain intensity during an active migraine episode.
3. **Pain Component:** The McGill Pain Questionnaire (MPQ) was utilized to evaluate the pain experience comprehensively. The MPQ includes various dimensions of pain, allowing for an in-depth understanding of the participants' experiences.

Secondary Outcomes

Secondary outcomes measured in the study included:

1. **Anxiety and Depression:** The Hospital Anxiety and Depression Scale (HADS) was employed to assess participants' emotional states, focusing on both anxiety and depression scores.
2. **Medication Score:** Participants recorded their symptomatic medication use throughout the study period, allowing for an evaluation of changes in reliance on pharmacological interventions.

Results

The results of the study revealed significant improvements across all primary and secondary outcomes following the four-week yoga therapy intervention. Specifically, participants reported a notable reduction in headache intensity, frequency, and pain components:

- **Headache Intensity:** There was a significant decrease in the intensity of migraine headaches ($P < .001$), indicating that participants experienced less severe pain following the yoga therapy intervention.
- **Headache Frequency:** The frequency of migraine attacks also significantly decreased ($P < .001$), demonstrating that the yoga practice effectively reduced the number of migraine days reported by participants.
- **Pain Rating Index:** The pain rating index, assessed via the McGill Pain Questionnaire, showed a significant reduction ($P < .001$). This reduction encompasses various dimensions of pain, including sensory and affective components.
- **Anxiety and Depression Scores:** Participants exhibited a significant decrease in anxiety and depression scores ($P < .001$), suggesting that the yoga therapy not only alleviated physical symptoms but also positively impacted emotional well-being.
- **Symptomatic Medication Use:** Notably, there was a significant reduction in the use of symptomatic medications ($P < .001$). Participants reported relying less on pharmacological treatments for managing their migraines, highlighting the potential of yoga as an effective alternative therapy.

Discussion

The findings of this study indicate that yoga therapy can play a substantial role in the management of migraines, offering both physical and emotional benefits. The significant reduction in headache intensity and frequency aligns with previous research that has suggested the effectiveness of mind-body interventions for chronic pain conditions.

Yoga's holistic approach, which encompasses physical postures, breath control, and mindfulness, appears to contribute to its effectiveness in reducing migraine symptoms. Physical postures may help alleviate muscle tension and improve overall physical well-being, while breath control and mindfulness practices promote relaxation and reduce stress, which are crucial factors in migraine management.

Additionally, the significant improvements in anxiety and depression scores observed in participants underscore the importance of addressing emotional health in conjunction with physical symptoms. Chronic pain conditions, including migraines, are often accompanied by psychological distress, and addressing these emotional components can enhance treatment outcomes.

Conclusion

The present study provides compelling evidence of the effectiveness of yoga therapy in reducing migraine frequency and severity, as well as associated emotional distress. The significant findings suggest that incorporating yoga into the treatment plan for individuals with migraines could lead to improved outcomes and a better quality of life.

Given the encouraging results, further investigation into yoga therapy as a treatment modality for migraines is warranted. Future research could focus on larger sample sizes, longer intervention periods, and diverse populations to further validate these findings. Additionally, exploring the mechanisms by which yoga exerts its effects on migraines could provide valuable insights into its role in comprehensive headache management.

In conclusion, yoga therapy presents a viable complementary treatment option for individuals suffering from migraines, promoting both physical and emotional well-being. As the medical community increasingly recognizes the importance of holistic approaches, yoga may serve as an essential tool in the multifaceted management of migraines, ultimately empowering patients to take control of their health and enhance their quality of life.

INTRODUCTION

In recent years, there has been a growing trend to integrate yoga medicine into headache treatment, either on its own or alongside conventional pharmaceutical approaches. This shift is not necessarily a result of dissatisfaction with traditional treatments; rather, many individuals are drawn to alternative healthcare options because they resonate with their personal values and beliefs about health and well-being.

Yoga offers a holistic approach that goes beyond mere symptom relief, emphasizing the interconnectedness of body, mind, and spirit. For many practitioners, engaging in yoga is about fostering a deeper self-awareness and promoting overall wellness. The combination of physical postures, breath control, and mindfulness techniques not only addresses the physical aspects of headaches but also helps manage emotional factors like stress and anxiety, which can exacerbate pain.¹

As healthcare evolves, the integration of yoga into treatment plans reflects an increasing recognition of the importance of patient-centered approaches. This trend highlights the value of allowing individuals to choose therapies that align with their personal philosophies, ultimately empowering them to take an active role in managing their health. In this context, yoga serves as a valuable complement to conventional treatments, offering a more comprehensive strategy for headache management and overall well-being.

A 2002 survey conducted in an outpatient head and neck pain clinic with 73 patients found that 85% of participants utilized some form of alternative therapy for their headaches. Notably, 60% of these individuals reported experiencing benefits in pain relief. Despite the widespread use of yoga as an alternative treatment, many patients do not inform their doctors about incorporating yoga into their therapy. This underreporting raises important questions about communication between patients and healthcare providers and highlights a potential gap in understanding the full spectrum of a patient's treatment regimen. By not disclosing their use of yoga, patients may miss opportunities for more integrated care that could enhance their overall treatment outcomes. This situation underscores the need for healthcare providers to foster open dialogues with patients regarding their treatment preferences, ensuring a more comprehensive approach to headache management.²

Yoga, which blends physical exercise with breathing and relaxation techniques, has become increasingly popular as an alternative mind-body therapy. Its long-standing history in alleviating the physical symptoms of chronic pain makes it a valuable option for many individuals seeking relief.³ Beyond physical benefits, yoga and meditation are acknowledged for their ability to address the emotional dimensions of chronic pain, helping to reduce anxiety and depression.

By encouraging mindfulness and fostering a deeper connection between the mind and body, these practices empower individuals to manage not only their physical discomfort but also the emotional stress often associated with chronic conditions. This holistic approach not only promotes relaxation but also enhances overall well-being, allowing practitioners to cultivate resilience against pain and emotional distress. As awareness of these benefits grows, more people are incorporating yoga into their pain management strategies, seeking a more comprehensive approach to their health.

Meditation has been reported to contribute to a decrease in substance abuse, by strengthening mental resolve and reducing anxiety.⁴ Research indicates that individuals who practice meditation experience positive outcomes in various health conditions, including stress, anxiety, depression, epilepsy, multiple sclerosis, carpal tunnel syndrome, musculoskeletal disorders, cardiopulmonary diseases, back pain, arthritis, and even cancer.⁵

These findings highlight the therapeutic potential of meditation and yoga across a broad spectrum of disorders. By fostering a state of mindfulness, meditation helps individuals develop greater awareness of their thoughts and feelings, enabling them to manage stress and emotional challenges more effectively. This self-awareness can lead to healthier coping mechanisms and a reduction in harmful behaviors, such as substance abuse.

The versatility of meditation as a complementary therapy underscores its importance in holistic health approaches, offering benefits that extend beyond physical symptoms to encompass emotional and psychological well-being. As awareness of these advantages continues to grow, more individuals are likely to explore meditation and yoga as viable options in their wellness journey, further validating their role in comprehensive health management.

Due to a scarcity of published studies in the biomedical literature evaluating yoga as a treatment for migraines, this research aimed to fill that gap by designing a clinic-based descriptive study. The objective was to assess the effectiveness of yoga therapy specifically for migraine management. By focusing on a clinical setting, the study seeks to provide empirical evidence on how yoga can benefit individuals suffering from migraines. This approach not only aims to validate yoga as a therapeutic option but also to contribute valuable insights to the existing body of research. Ultimately, the findings could help bridge the divide between conventional

and alternative treatments, offering patients more comprehensive options for managing their migraine symptoms.

MATERIAL AND METHODS

STUDY SETTING

The research was conducted as a clinic-based descriptive study at the Yoga Outpatient Department (OPD) of Himalayan Hospital. Participants were referred by both the Department of Neuromedicine and the Department of General Medicine, located at Himalayan Hospital in Jollygrant, Dehradun, Uttarakhand, India. This collaborative approach allowed for a comprehensive evaluation of the potential benefits of yoga in managing migraines.

Prior to the baseline assessment, all participants were informed about the study's purpose, procedures, and potential risks. They provided written consent, ensuring that they understood and agreed to participate in the yoga intervention. This ethical consideration was crucial, as it upheld the principles of informed consent and participant autonomy, allowing individuals to make an educated decision regarding their involvement.

The clinic-based setting facilitated direct interaction between researchers and participants, enabling real-time observation of the yoga practices and their effects. Participants engaged in yoga sessions designed to promote relaxation and alleviate migraine symptoms, while the research team collected data to assess outcomes over the treatment period.

By integrating medical referrals with holistic practices, this study aimed to bridge the gap between conventional medicine and alternative therapies, highlighting the potential role of yoga in comprehensive migraine management. The findings from this research could pave the way for further investigations into the effectiveness of yoga as a therapeutic option, ultimately contributing to a broader understanding of integrative health practices in the context of chronic pain management. Through this approach, the study seeks to enrich the existing literature and provide valuable insights for both practitioners and patients seeking alternative treatment options.

Subjects

Participants were referred from the Neuromedicine OPD and General Medicine OPD of Himalayan Hospital. All potential subjects received information about the yoga procedures aimed to investigate yoga medicine as migraine treatment to minimize its adverse impact on their personal, family, and social aspects of life.

During the initial four months of year 2022 and January 2023, a total of 32 patients with migraine attended the Yoga clinic. Out of these, 23 patients received a diagnosis of migraine without aura based on the criteria established by the International Headache Society in 2004.

PROCEDURE

Patients were thoroughly briefed on the specifics of the treatment plan, which aimed to explore the effects of Himalayan tradition yoga on managing migraines. An initial examination was conducted to gather essential information, including a comprehensive assessment of each participant's personal and family headache histories. This step was crucial for confirming the diagnosis of migraine and ensuring appropriate intervention.

To facilitate tracking of their symptoms, each participant was provided with headache diaries to maintain over a four-week period during their yoga practice. These diaries served as vital tools for recording various aspects of their headache experiences. Participants documented critical information, including the number of headache days per month, the severity of their headaches on a numerical scale, and any associated symptoms they experienced, such as nausea or sensitivity to light.

This systematic approach allowed for detailed data collection, which was essential for evaluating the effectiveness of the yoga intervention. After the four-week period, participants returned to the clinic to submit their completed diaries. The collected data were then analyzed to assess changes in headache frequency, intensity, and associated symptoms.

The use of headache diaries not only provided quantitative insights into the participants' migraine patterns but also encouraged them to engage actively in their treatment process. This proactive involvement is important in holistic approaches to health, as it fosters a sense of ownership over their well-being. Ultimately, this method of data collection is vital for understanding the potential benefits of incorporating Himalayan tradition yoga into migraine management strategies.

Intervention.

The treatment phase for the yoga intervention lasted four weeks, during which participants engaged in regular yoga practice rooted in the Himalayan tradition. To ensure safety and continuity of care, participants were allowed to use the same acute medication prescribed by their attending physician. This flexibility aimed to provide relief during the yoga practice without compromising the integrity of the study.

However, to accurately assess the impact of yoga on migraine management, participants were instructed to refrain from using any other symptomatic medications, including over-the-counter drugs, throughout the four-week period. This restriction was essential to isolate the effects of the yoga intervention and prevent any confounding variables that might influence the outcomes. By limiting the use of additional medications, the study aimed to create a clearer understanding of how yoga could potentially alleviate migraine symptoms on its own.

Participants were encouraged to maintain open communication with the research team regarding any changes in their condition or medication needs during this time. This dialogue not only ensured the safety of participants but also provided valuable insights into their experiences as they navigated the treatment phase.

The combination of structured yoga practice and careful monitoring of medication usage allowed for a comprehensive evaluation of the intervention's effectiveness. At the conclusion of the four weeks, participants were expected to report their experiences, providing a rich dataset for analysis. This methodical approach aimed to shed light on the potential benefits of incorporating yoga into standard migraine management, highlighting its role as a complementary therapy for individuals seeking alternative options for relief.

YOGA PRACTICE

The patients receive instruction for the set of practices at Yoga OPD under the guidance of a trained yoga consultant. Patients were explicitly instructed not to practice during the headache, resolution, and postdrome stages.

The chosen approach involved an integrated form of Himalayan tradition yoga therapy, encompassing yoga postures, breathing practices (yoga breathing) conducted 6 days a week for 45 minutes each session. Additionally, a cleansing process (kriya) was taught twice a week.

Yoga postures

The emphasis of the yoga postures is primarily based on Himalayan traditional joints and glands practices of muscles of the neck, shoulders, and back, followed by activities that promote relaxation, toning, strengthening, and improved flexibility.

Pranayama

Diaphragmatic breathing and complete breathing are acknowledged for its calming impact on emotions, including the reduction of fear and anxiety, and its positive influence on the nervous

system. Additionally, it aids in alleviating tension accumulated in areas of pain, such as the forehead, temples, neck, and shoulders.

Kriya.

The practice of Jala neti (nasal water cleansing) followed by Kapalbhanti (forced exhalations) extends to stimulate and tonify the nerves, glands, and organs throughout the nasal and cranial area, including the eyes, sinuses, ears, and cranium.

Patients were instructed to engage in breathing techniques with relaxation during the prodromal stage.

Measurement of Frequency and Intensity of Migraine Attack

Patients were requested to assess the intensities of their average headache, severe headache, and the mildest headache using a numerical scale ranging from 0 to 10 (with 0 representing no pain at all and 10 signifying the most severe headache)⁶. Additionally, participants were tasked with estimating the average number of total headache days they experienced in a week.

McGill Pain Questionnaire

A condensed version of the McGill Pain Questionnaire (MPQ), known as the Short-Form McGill Pain Questionnaire (SF-MPQ), was developed by Melzack in 1987 to evaluate various components of reported pain. The primary component of the SF-MPQ comprises 15 descriptors (11 sensory and 4 affective), each rated on an intensity scale of 0 (none) to 3 (severe).⁷ Three pain scores are calculated by summing the intensity rank values of the selected words for sensory, affective, and total descriptors. The SF-MPQ also includes the Present Pain Intensity (PPI) index from the standard MPQ and a Visual Analogue Scale (VAS).

The Present Pain Intensity (PPI) index employs a 1 to 10 intensity scale, allowing patients to articulate their subjective pain experience. As secondary outcome measures, anxiety and depression levels were evaluated using the Hospital Anxiety Depression Scale, and participants' medication scores were also taken into account.

Hospital Anxiety Depression Scale (HADS)⁸

The Hospital Anxiety Depression (HAD) scale is a self-assessment tool consisting of 14 items designed to assess anxiety and depression in physically ill populations. Each item offers four possible answers, with scores ranging from 0 to 3. A score of 10 and above is considered clinically significant for both the anxiety and depression subscales.

Statistical Analysis

To assess the impact of the yoga intervention, a comparison between baseline headache status and status after yoga practice was conducted within the group using a paired t-test.

RESULTS:

Baseline Parameters

In Patients involve for present study, the demographic characteristics included a mean age of 34.4. In terms of clinical factors, participants reported an average of 10.2 headache days in a month, an average pain level of 7.32, a typical duration of 6.9 hours for headaches, and a medication usage rate of 2.7. Psychologically, the mean depression score was 9.84, and the anxiety score was 10.97.(Table 1)

Table 1. Baseline parameters

Parameters of study	Mean ± SD
Age (in years)	34.38 ± 8.74
Duration of attack (h)	6.94 ± 1.68
Non prescribed med	2.69 ± 1.31
Frequency attacks in last month	10.22 ± 2.59

Changes After Yoga Practice

After four weeks of intervention, statistically significant reductions were recorded in group for various parameters, including the frequency, intensity (most pain, lowest pain, average pain),

duration of attacks, medication score, components of pain (A PRI, T PRI), overall intensity, anxiety, and depression ($P < .05$). (Table 2)

Table 2: Difference in Parameters Before and After Yoga practice

Parameters of study	Before yoga practice (Mean \pm SD)	After yoga practice (Mean \pm SD)
Frequency	10.22 \pm 2.59	4.56 \pm 1.79
Medication	2.69 \pm 1.31	1.37 \pm 1.01
Most pain	8.34 \pm 1.00	4.91 \pm 0.89
Lowest pain	3.41 \pm 0.66	2.53 \pm 0.72
Average pain	7.32 \pm 1.03	4.64 \pm 0.72
Duration	6.94 \pm 1.68	4.78 \pm 1.01
McGill Pain Questionnaire		
A- PRI*	2.53 \pm 0.51	1.62 \pm 0.49
T-PRI**	4.66 \pm 0.94	3.19 \pm 0.69
Over intensity	2.94 \pm 0.91	1.69 \pm 0.47
Hospital Anxiety Depression Scale (HADS)		
Anxiety	10.97 \pm 2.24	4.69 \pm 1.42
Depression	9.84 \pm 2.16	4.34 \pm 1.33

* A-PRI = affective pain rating index; ** T-PRI = total pain rating index

DISCUSSION

This study assessed the effectiveness of a yoga-based intervention for managing migraine complications. The findings revealed that yoga significantly improved several crucial migraine parameters. Specifically, participants experienced notable reductions in the frequency, intensity, and duration of their migraine attacks. This suggests that the yoga intervention can effectively alleviate the debilitating symptoms associated with migraines.

Additionally, the study evaluated participants' overall reliance on medication, which also showed improvement. By incorporating yoga into their routine, individuals reported decreased use of medication for migraine relief, indicating that yoga may serve as a valuable complementary treatment option.

The positive outcomes highlight the potential benefits of integrating yoga into traditional migraine management strategies. By addressing both the physical and emotional aspects of migraines, yoga not only helps reduce the occurrence and severity of attacks but also empowers individuals to take an active role in their health.

These findings provide compelling evidence for the incorporation of yoga as a viable alternative or adjunct therapy for individuals struggling with migraines. Further research is needed to explore the long-term effects of such interventions and to better understand the mechanisms through which yoga impacts migraine symptoms. Overall, this study contributes to the growing body of literature supporting yoga as an effective tool for improving migraine management.

In addition to the physical symptoms, the intervention also positively affected psychological factors, notably reducing levels of anxiety and depression among participants. This highlights the holistic benefits of yoga, which not only addresses the physical aspects of migraines but also supports emotional well-being.

Moreover, the nature of pain experienced by participants improved, indicating that yoga may alter the perception and experience of pain associated with migraines. These findings suggest that incorporating yoga into treatment plans could provide a comprehensive approach to managing migraines, addressing both their physical and psychological components. Ultimately, this study underscores the potential of yoga as a valuable therapeutic tool for individuals suffering from migraines.

Pranayama, a unique technique within yoga, is recognized for its ability to balance the autonomic nervous system and impact psychological and stress-related disorders. By focusing on controlled breathing, pranayama promotes relaxation and enhances mental clarity, helping to reduce anxiety and stress. This practice not only fosters physical well-being but also supports emotional resilience, making it a valuable tool for those seeking to manage stress and improve their overall mental health. Its incorporation into daily routines can lead to significant benefits for both the mind and body.⁹ The mechanisms contributing to a state of calm alertness involve increased.

The study aimed to assess changes in baseline autonomic activities among migraineurs practicing diaphragmatic and complete breathing. Incorporating joint and gland exercises alongside relaxation techniques may promote a more balanced physiological and psychological state by activating the parasympathetic nervous system. This approach has the potential to enhance overall well-being and reduce migraine symptoms, suggesting that mindful breathing and gentle movements can play a crucial role in managing the condition. By focusing on these practices, the study highlights the importance of holistic methods in migraine management. In a previous study involving female subjects experiencing mental distress, significant improvements were observed in perceived stress ($P < .02$), depression ($P < .05$), state and trait anxiety ($P < .02$ and $.01$), well-being ($P < .01$), physical well-being ($P < .01$), and vigor ($P < .02$)¹⁰.

Yoga encompasses a diverse range of postures and techniques, with Himalayan traditional yogic practices providing various subtle effects according to individual needs. Different styles of yoga focus on unique aspects of physical and mental health, offering practitioners a multitude of approaches to enhance their well-being.

Some styles prioritize a sequence of postures and stretching exercises designed to improve flexibility and stamina. These practices often involve dynamic movements that build strength and endurance while promoting overall physical fitness. By engaging in these sequences, practitioners can experience a heightened sense of vitality and improved physical performance.

In contrast, more integrated approaches within the Himalayan tradition emphasize a holistic combination of breathing techniques, postures, and kriya (specific actions or exercises) aimed at enhancing health and well-being. This method goes beyond mere physical exercise; it seeks to harmonize the body, mind, and spirit. The incorporation of breath control practices, or pranayama, is crucial in this context, as it helps regulate the autonomic nervous system and fosters a state of relaxation and focus.

Himalayan yoga practices are often designed to meet the specific health needs of the individual, making them highly adaptable. Whether the goal is to alleviate stress, manage chronic pain, or enhance mental clarity, practitioners can find methods that resonate with their unique circumstances.

Ultimately, the rich tapestry of yoga styles and practices allows individuals to explore and discover the benefits that align with their personal health goals. Whether through dynamic sequences or holistic approaches, yoga offers a pathway to improved well-being and a deeper connection to oneself.

In this study, we carefully selected a series of simple, relaxation-focused postures from the Himalayan tradition of yoga, intentionally avoiding any vigorous bending or strenuous movements. This approach was chosen to create a gentle and accessible practice that emphasizes relaxation and stress relief, making it suitable for participants with varying levels of experience and physical ability. By focusing on these calming postures, we aimed to provide a beneficial experience that promotes both physical and mental well-being.

However, it is important to acknowledge a significant limitation of our study: the absence of a placebo group. Without a placebo comparison, it is challenging to definitively attribute the observed outcomes solely to the yoga intervention. A placebo group could have helped control for external factors, such as participant expectations or the natural variability of migraine symptoms over time. The inclusion of such a group would strengthen the study's findings and provide more robust evidence regarding the efficacy of the yoga practices utilized.

Despite this limitation, the insights gained from our research contribute valuable information to the growing body of literature on yoga as a therapeutic intervention. By highlighting the benefits of relaxation-focused Himalayan yoga postures, we aim to encourage further exploration of gentle yoga practices for individuals experiencing migraines or related conditions. Future studies should consider incorporating placebo groups to enhance the rigor of the research and validate the effectiveness of yoga interventions in managing various health issues. Overall, this study serves as a stepping stone toward understanding the potential therapeutic benefits of Himalayan yoga in promoting relaxation and well-being.

CONCLUSION

All outcome measures in this study were based on subjective questionnaires, which provide valuable insights into participants' personal experiences and perceptions. While these subjective measures are essential for understanding the immediate impact of yoga therapy on individuals, it is crucial to note that the evaluation of yoga interventions ideally should also include objective outcome measures. Objective assessments, such as physiological markers or standardized clinical evaluations, can offer a more comprehensive picture of the therapy's effectiveness. By incorporating these metrics, researchers could better quantify the impact of yoga on various health parameters and establish stronger causal relationships between the practice and observed outcomes.

Furthermore, our study did not include long-term follow-up data, which limits our ability to comment on the durability of the treatment effects observed. Without this follow-up, we cannot ascertain whether the benefits of yoga therapy are sustained over time or if they diminish once the intervention concludes. Long-term follow-up is critical for evaluating the lasting impact of therapeutic interventions, particularly in conditions like migraines, where symptoms can fluctuate significantly. Gathering follow-up data would allow us to understand how well participants maintain the benefits of yoga practice in their daily lives and whether they continue to experience reduced migraine frequency and intensity in the months following the intervention.

The absence of long-term data also raises questions about the optimal frequency and duration of yoga practice necessary to achieve sustained benefits. Future studies should aim to incorporate follow-up assessments at various intervals after the intervention to explore these aspects in depth. Such research would contribute to a more nuanced understanding of how yoga therapy can be integrated into long-term management strategies for migraines and other chronic conditions.

While our study provides important insights into the immediate effects of yoga therapy, the reliance on subjective measures and the lack of long-term follow-up data highlight areas for improvement in future research. By incorporating objective outcome measures and conducting longitudinal studies, researchers can strengthen the evidence base for yoga as a therapeutic intervention, paving the way for more informed clinical practices and enhanced patient care.

In summary, this study provides preliminary evidence indicating that the Himalayan traditional integrated yoga therapy program may be an effective treatment for migraines. The findings suggest that this approach can positively impact migraine symptoms, offering a potential complementary option for individuals seeking relief. However, to confirm these results and better understand the long-term effects of yoga on migraine management, further research is essential.

Future trials should incorporate objective outcome measures alongside subjective assessments to provide a more comprehensive evaluation of the therapy's efficacy. By including physiological markers and clinical evaluations, researchers can strengthen the evidence base for yoga as a therapeutic intervention. Additionally, long-term follow-up studies are necessary to assess the sustainability of treatment benefits over time. Such research will not only validate the effectiveness of the Himalayan yoga program but also enhance its integration into conventional migraine management strategies. Ultimately, further investigation will help establish yoga as a viable option for individuals looking to manage their migraines more effectively.

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