

# A Worldwide Scoping Review on the Use of Complementary, Alternative and Integrative Medicine in Children with Epilepsy

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## Abstract

This worldwide scoping review aims to comprehensively explore the utilization of Complementary, Alternative and Integrative Medicine (CAIM) in children with epilepsy. Epilepsy, a neurological disorder characterized by recurrent seizures, presents challenges in management and treatment. CAIM offers a diverse range of therapeutic options beyond conventional medicine, including herbal remedies, acupuncture, dietary interventions, and mind-body practices. Understanding the global landscape of CAIM use in pediatric epilepsy is crucial for healthcare providers, policymakers, and caregivers to make informed decisions about treatment strategies. Through a systematic review of literature, this paper synthesizes current evidence, identifies gaps in research, and discusses implications for clinical practice and future research directions.

**Keywords:** Complementary medicine • Alternative medicine • Epilepsy

## Introduction

Epilepsy is one of the most prevalent neurological disorders affecting children worldwide, characterized by recurrent seizures due to abnormal brain activity. Despite advancements in conventional medical treatments such as Antiepileptic Drugs (AEDs) and surgical interventions, a substantial proportion of children with epilepsy continue to experience seizures, medication side effects, and impaired quality of life. This has led many patients and caregivers to explore Complementary, Alternative and Integrative Medicine (CAIM) as adjunct or alternative therapies. CAIM encompasses a broad spectrum of healthcare practices and therapies that lie outside the realm of conventional medicine. These include herbal remedies, acupuncture, chiropractic care, dietary supplements, yoga, meditation, and various mind-body interventions [1].

While some CAIM modalities have been studied extensively in adults with epilepsy, there is a paucity of literature focusing specifically on their use in pediatric populations. This scoping review aims to fill this gap by examining the global landscape of CAIM utilization in children with epilepsy. By systematically synthesizing existing literature, we seek to identify prevalent CAIM modalities, assess their efficacy and safety, explore patient and caregiver perspectives, and highlight areas for future research and clinical integration. Understanding the scope and trends of CAIM use in pediatric epilepsy is essential for healthcare providers, researchers, and policymakers to optimize patient care and outcomes [2].

## Literature Review

Studies from diverse geographical regions have reported varying rates of CAIM utilization among children with epilepsy. Factors influencing CAIM use include cultural beliefs, accessibility to conventional care, dissatisfaction with mainstream treatments, and perceived effectiveness of CAIM modalities.

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**Received:** 04 March 2024, Manuscript No. aim-24-133152; **Editor Assigned:** 06 March 2024, PreQC No. P-133152; **Reviewed:** 19 March 2024, QC No. Q-133152; **Revised:** 23 March 2024, Manuscript No. R-133152; **Published:** 30 March 2024, DOI: 10.37421/2327-5162.2024.13.487

Commonly used CAIM modalities in pediatric epilepsy include herbal supplements, dietary modifications (e.g., ketogenic diet), acupuncture, yoga, and mindfulness-based interventions.

Limited high-quality evidence exists regarding the efficacy of CAIM in managing pediatric epilepsy. Some CAIM modalities, such as specific herbal supplements and ketogenic diet, have shown promise in reducing seizure frequency or improving seizure control [3].

Safety concerns related to CAIM include potential herb-drug interactions, variability in product quality, and lack of standardized practices. Qualitative studies highlight diverse perspectives among patients and caregivers regarding CAIM use. While some report positive experiences and perceived benefits, others express skepticism or concerns about the safety and efficacy of CAIM. Understanding patient preferences and values is crucial for shared decision-making and personalized care planning. Methodological limitations, including small sample sizes, lack of randomized controlled trials (RCTs), and heterogeneity of CAIM interventions, hinder conclusive assessments of CAIM efficacy. Research gaps exist in exploring long-term outcomes, cost-effectiveness, mechanisms of action, and integration of CAIM into mainstream pediatric epilepsy care [4].

## Discussion

The findings from this scoping review underscore the complex landscape of CAIM use in children with epilepsy. While CAIM offers potential adjunctive or alternative therapeutic options, several challenges and considerations must be addressed. The need for rigorous clinical trials and high-quality research to evaluate CAIM efficacy and safety in pediatric epilepsy. Collaboration between conventional medical providers, CAM practitioners, and researchers to facilitate evidence-based practice and knowledge exchange [5].

Emphasizing shared decision-making and communication between healthcare providers, patients, and caregivers regarding CAIM use. Recognizing individual preferences, cultural beliefs, and values in tailoring holistic care plans. Ensuring informed consent, monitoring for adverse effects, and addressing potential interactions between CAIM and conventional treatments. Advocating for standardized practices, quality control, and regulatory oversight in the CAIM field. Exploring models of integrative care that combine evidence-based CAIM interventions with conventional treatments within multidisciplinary healthcare teams. Promoting dialogue, education, and collaboration among healthcare professionals, researchers, policymakers, and CAM practitioners [6].

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## Conclusion

In conclusion, this worldwide scoping review provides a comprehensive overview of the use of Complementary, Alternative and Integrative Medicine (CAIM) in children with epilepsy. While CAIM offers diverse therapeutic options and is widely utilized by patients and caregivers, evidence regarding its efficacy and safety in pediatric epilepsy remains limited. Future research efforts should focus on conducting well-designed clinical trials, addressing methodological challenges, exploring patient-centered outcomes, and promoting collaborative approaches to integrate CAIM into mainstream pediatric epilepsy care. By bridging gaps in knowledge and practice, healthcare providers can better support the holistic needs of children with epilepsy and optimize their quality of life.

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## Acknowledgement

None.

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## Conflict of Interest

None.

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**How to cite this article:** Kim, David. "A Worldwide Scoping Review on the Use of Complementary, Alternative and Integrative Medicine in Children with Epilepsy." *Alt Integr Med* 13 (2024): 487.