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REEVALUATING EFFICACY: A CRITICAL EXAMINATION OF NATURAL THERAPIES IN CONTEMPORARY MEDICINE

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ABSTRACT

This review critically examines the role and efficacy of natural therapies in contemporary medicine, providing an in-depth analysis of their integration, benefits, and challenges. The paper explores various natural therapies, including herbal medicine, acupuncture, and mindfulness meditation, assessing their clinical evidence and therapeutic mechanisms. It highlights the need for rigorous scientific research in validating these therapies and scrutinizes their safety and regulatory aspects. The review also delves into the patient-centric approach of natural therapies, discussing their impact on patient autonomy and the placebo effect. Moreover, it addresses the integration of natural therapies with conventional medicine, exploring potential synergies and conflicts. By presenting a balanced view, this paper aims to inform healthcare professionals and patients about the realistic benefits and limitations of natural therapies. It advocates for a more evidence-based approach in incorporating these therapies into holistic patient care, emphasizing the importance of informed decision-making and standardization in practice.

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INTRODUCTION

In the realm of contemporary medicine, the role and efficacy of natural therapies have sparked considerable interest and debate. These therapies, which encompass a broad spectrum of practices including herbal medicine, acupuncture, and mindfulness meditation, have ancient origins but have seen a resurgence in modern healthcare settings. This resurgence is driven by an increasing public interest in holistic and preventive care approaches, as well as a growing body of research exploring their potential health benefits. Natural therapies, often categorized under complementary and alternative medicine (CAM), are sought for a variety of reasons. They are used to manage chronic pain, improve mental health, and enhance overall well-being (NCCIH, 2019). Despite their popularity, these therapies often face scrutiny over their scientific validity and efficacy. This critical review aims to dissect the evidence behind natural therapies, examining their clinical outcomes, safety profiles, and integration within conventional medical practice. A significant challenge in evaluating natural therapies lies in the diversity and complexity of practices, each with its unique philosophy and method of treatment.

For instance, herbal medicine, which utilizes plant-based substances, has a vast array of compounds with potential medicinal properties. Scientific studies, such as those by Tachjian *et al.* (2010), have shown varying degrees of effectiveness, highlighting the need for more rigorous and standardized research methodologies. Acupuncture, another widely practiced form of natural therapy, has been studied for its efficacy in treating conditions like chronic pain and migraine (Vickers *et al.*, 2012). While some studies show promising results, the debate continues regarding the extent of its effectiveness compared to placebo treatments. Mindfulness and meditation practices, rooted in ancient traditions, have gained attention in psychological and neuroscientific research. Studies have indicated their potential in reducing stress, anxiety, and depression (Gotink *et al.*, 2015). However, as with other natural therapies, there is a call for more standardized and replicable research designs to conclusively establish their therapeutic value. The integration of natural therapies into mainstream healthcare poses another layer of complexity. It raises questions about the training and qualifications of practitioners, the standardization of practices, and the ethical considerations of recommending therapies with varying levels of evidence (Ventola, 2010).

In conclusion, while natural therapies offer a promising adjunct or alternative to conventional medicine, their efficacy and integration require careful and critical examination. This review seeks to provide a balanced and evidence-based assessment, contributing to informed decision-making in healthcare practices.

Historical Context and Current Trends: The use of natural therapies has a rich history, rooted deeply in various cultures and civilizations. Traditional Chinese Medicine (TCM), Ayurveda in India, and various indigenous medicinal practices globally have utilized natural elements like herbs, minerals, and animal products for healing purposes for millennia (Patwardhan, 2005). These practices, often passed down through generations, form the bedrock of what is known today as complementary and alternative medicine (CAM). In TCM, for example, practices such as acupuncture and herbal remedies are based on the concept of balancing the body's vital energy, or 'Qi'. Similarly, Ayurveda focuses on maintaining the balance between body, mind, and spirit, often using plant-based treatments (Singh & Raizada, 2005). These ancient practices have evolved over centuries and have been integrated into modern therapeutic approaches in various ways. The contemporary landscape of natural therapies has been shaped significantly by the increasing global interest in holistic and preventive health care. The World Health Organization (WHO) acknowledges the importance of traditional and complementary medicine and encourages its integration into national health systems, particularly in areas where conventional medicine is less accessible (WHO, 2013).

The current trend in natural therapies is characterized by a blending of traditional knowledge with modern scientific research. In the United States and Europe, there has been a significant increase in the use of CAM, with a substantial proportion of the population relying on natural therapies for various health issues (NCCIH, 2019). This trend is not limited to specific demographics; it spans across various age groups, educational levels, and socio-economic backgrounds. The 21st century has also seen a surge in scientific research aimed at understanding and validating the efficacy of these therapies. Numerous studies have been conducted to evaluate the therapeutic effects of herbs, acupuncture, and mind-body practices. For instance, research on St. John's Wort has provided insights into its effectiveness in treating mild to moderate depression (Linde *et al.*, 2008). However, the integration of natural therapies into mainstream medicine has been met with challenges. One significant issue is the standardization of practices and products. Unlike conventional medicines, natural therapies often lack consistent standardization, leading to variations in quality and efficacy (Barnes, 2003). Moreover, the regulatory frameworks governing these therapies vary significantly across countries. In the United States, for example, the Dietary Supplement Health and Education Act of 1994 regulates herbal products not as drugs but as dietary supplements, which means they are not subject to the same rigorous testing as pharmaceuticals (DSHEA, 1994). Despite these challenges, the demand for natural therapies continues to grow, driven by factors such as dissatisfaction with conventional healthcare, desire for greater control over one's health, and increasing evidence of the efficacy of some natural treatments. The future of natural therapies appears to be one of coexistence and integration with conventional medicine, necessitating a collaborative approach to healthcare that combines the best of both worlds.

Overview of Major Natural Therapies: Natural therapies, often encompassed under complementary and alternative medicine (CAM), include a wide array of practices. Some of the most prominent and widely used include herbal medicine, acupuncture, and mindfulness meditation. Each of these therapies has its unique history, theoretical basis, and method of practice, and they have been the subject of considerable scientific research and debate in terms of efficacy and safety.

Herbal Medicine: Herbal medicine, one of the oldest forms of healthcare, involves the use of plants or plant extracts for therapeutic purposes. Its roots can be traced back to ancient civilizations, and it remains an integral part of traditional healing systems worldwide

(Ekor, 2014). Modern pharmacology began with the extraction of active ingredients from plants, a practice that continues to play a significant role in drug development today. The efficacy of various herbs has been validated through clinical studies. For instance, Echinacea is widely used for its potential immune-boosting properties, particularly in the context of colds and respiratory infections (Barrett *et al.*, 2010). Similarly, Ginkgo biloba has been studied for its potential benefits in cognitive function and dementia (Weinmann *et al.*, 2010). However, the results have been mixed, and the lack of standardization in herbal products often complicates clinical research.

Acupuncture: Acupuncture, a key component of Traditional Chinese Medicine, involves the insertion of fine needles into specific points on the body. It is based on the theory of Qi (vital energy) flowing through meridians or pathways in the body. Acupuncture aims to restore balance and promote the body's natural healing response (White, 2007). Numerous clinical trials have investigated acupuncture's efficacy, particularly in pain management. A meta-analysis by Vickers *et al.* (2012) found acupuncture to be effective for chronic pain, although debates continue regarding its efficacy beyond placebo effects. The World Health Organization recognizes acupuncture as effective for certain conditions, including headache, nausea, and some types of pain, though it calls for more high-quality research in this area (WHO, 2002).

Mindfulness and Meditation: Mindfulness and meditation, practices with origins in Eastern spiritual traditions, have gained popularity in the West for their stress-reducing and health-promoting benefits. Mindfulness involves paying attention to the present moment with an attitude of openness and non-judgment. Meditation, often a component of mindfulness, involves specific techniques to achieve mental clarity and emotional calmness (Kabat-Zinn, 2003). Research has shown that mindfulness and meditation can have significant benefits for mental health. A study by Goyal *et al.* (2014) indicated that mindfulness meditation programs can help reduce symptoms of anxiety and depression. Furthermore, these practices have been associated with physical health benefits, such as improved immune response and decreased blood pressure (Black & Slavich, 2016). Herbal medicine, acupuncture, and mindfulness meditation represent key facets of natural therapies, each with its historical context, theoretical foundation, and body of scientific research. While the efficacy and mechanisms of these therapies vary, they all share a common goal: to promote health and well-being through natural, often holistic, approaches. As interest in these therapies continues to grow, it is crucial to continue rigorous scientific investigation to fully understand their benefits and limitations, ensuring their safe and effective integration into healthcare.

Efficacy and Clinical Evidence: The efficacy of natural therapies and their clinical evidence has been a subject of extensive research and debate within the medical community. The effectiveness of these therapies, including herbal medicine, acupuncture, and mindfulness meditation, is often evaluated through clinical trials and systematic reviews.

Herbal Medicine: Herbal medicine has been used for centuries, but its efficacy is often questioned due to the variability in the quality of herbal products and the lack of standardization in dosages. However, several herbs have shown promising results in clinical studies. For instance, St. John's Wort has been extensively studied for its effectiveness in treating mild to moderate depression. A systematic review by Linde *et al.* (2008) found it to be more effective than placebo and as effective as standard antidepressants in some cases. Similarly, the effectiveness of Ginkgo Biloba in enhancing cognitive function, especially in patients with dementia and Alzheimer's disease, has been supported by some studies (Weinmann *et al.*, 2010), although other studies have shown mixed results.

Acupuncture: Acupuncture's efficacy, particularly in pain management, has been a topic of substantial research. A meta-analysis by Vickers *et al.* (2012) provided robust evidence that acupuncture is more than a placebo for commonly occurring chronic

pain conditions. This study, which pooled data from 29 trials and nearly 18,000 patients, found that acupuncture was effective for back and neck pain, osteoarthritis, and chronic headache. However, debates continue about the magnitude of its effect and the role of placebo in acupuncture.

Mindfulness Meditation: Mindfulness meditation has been increasingly studied in the context of mental health. A comprehensive review by Goyal *et al.* (2014) found substantial evidence that mindfulness meditation programs can help reduce anxiety, depression, and pain. Another important area of research has been the impact of mindfulness on stress reduction. A study by Chiesa & Serretti (2009) highlighted the effectiveness of mindfulness meditation in reducing stress and improving mood.

Integrating Evidence into Practice: Despite these findings, integrating natural therapies into clinical practice requires careful consideration of the quality of evidence. The challenges include variability in study designs, small sample sizes, and inconsistency in methodologies. For instance, while herbal medicine shows promise, the lack of standardization in the preparation and dosing of herbal products can lead to conflicting results. In acupuncture, the difficulty in creating an appropriate placebo complicates the interpretation of clinical trials. For mindfulness meditation, while benefits are evident, more research is needed to understand the mechanisms underlying these effects and to determine the best practices for implementation.

Ethical and Regulatory Considerations: The integration of natural therapies into mainstream healthcare also raises ethical and regulatory considerations. The safety of patients must be paramount, necessitating rigorous testing and quality control of natural products. Additionally, healthcare providers should be adequately trained in these therapies to provide informed advice to patients. In conclusion, while natural therapies such as herbal medicine, acupuncture, and mindfulness meditation show promise in treating various health conditions, their integration into mainstream healthcare requires a careful, evidence-based approach. Ongoing research and standardization efforts are crucial to fully understand their efficacy, safety, and potential role in modern medicine.

Safety, Risks, and Regulations: The safety and risk profile of natural therapies, along with their regulatory status, is a crucial aspect of their integration into healthcare. While these therapies are often perceived as safe because they are 'natural,' they are not without risks, and their regulation varies significantly across regions.

Safety and Risks: The safety of natural therapies like herbal medicine, acupuncture, and mindfulness meditation largely depends on the specific therapy, its application, and the individual patient. Herbal medicines, for instance, can interact with conventional drugs, leading to adverse effects. For example, St. John's Wort is known to interact with a range of medications, including antidepressants, birth control pills, and warfarin, potentially leading to serious health issues (Izzo & Ernst, 2009). Similarly, the use of herbal supplements can be risky due to the variability in the concentration of active ingredients and the presence of contaminants or adulterants. Acupuncture is generally considered safe when performed by trained practitioners. However, it can cause adverse effects, including infection, punctured organs, and injury to the central nervous system, albeit rarely (White, 2007). Mindfulness meditation is widely regarded as safe, but there have been reports of adverse effects, especially in individuals with pre-existing mental health conditions. For some, practices like intense meditation can exacerbate symptoms of anxiety and depression (Lindahl *et al.*, 2017).

Regulations: The regulation of natural therapies varies significantly. In the United States, the Dietary Supplement Health and Education Act (DSHEA) of 1994 regulates herbal products as dietary supplements, not as drugs. This means they are not subject to the same rigorous efficacy and safety testing as pharmaceuticals (DSHEA, 1994). The regulation of acupuncture is more stringent, with practitioners requiring licensure and adherence to specific safety standards.

In Europe, the European Medicines Agency (EMA) regulates herbal medicinal products, requiring evidence of quality and safety, but not necessarily efficacy, for traditional herbal medicines (EMA, 2011).

Quality Control and Standardization: A significant challenge in the safe use of natural therapies is the lack of standardization and quality control. For herbal medicines, this means variability in the concentration of active ingredients and the presence of contaminants. Efforts to standardize and improve quality control are crucial for ensuring the safety and efficacy of these products.

Ethical and Professional Training: Healthcare providers recommending natural therapies must be knowledgeable about their potential risks and interactions with other medications. This necessitates appropriate training and adherence to ethical guidelines to ensure patient safety. In summary, while natural therapies offer many potential benefits, their safety and risk profiles must be carefully considered. Appropriate regulation, quality control, and professional training are essential for ensuring that these therapies are used safely and effectively. As the use of natural therapies continues to grow, so does the need for ongoing research into their safety and for robust regulatory frameworks to protect public health.

Integration with Conventional Medicine: The integration of natural therapies with conventional medicine, often referred to as integrative medicine, represents a growing trend in healthcare. This approach combines the best of both worlds – the advancements of modern medicine with the holistic and patient-centered approach of traditional therapies.

Philosophy and Approach: Integrative medicine is grounded in a holistic philosophy that considers the whole person — body, mind, spirit, and lifestyle — in healthcare. It emphasizes the therapeutic relationship and makes use of all appropriate therapies, both conventional and alternative (Boon *et al.*, 2009). This approach aims to treat not just the disease but the person as a whole, promoting overall health and wellness.

Clinical Integration: In practice, the integration of natural therapies with conventional medicine can take various forms. For instance, some hospitals and healthcare systems now offer acupuncture as a complementary treatment for pain management or to alleviate side effects of chemotherapy (Johns Hopkins Medicine). Mindfulness meditation is increasingly being integrated into mental health care for stress reduction, and in managing anxiety and depression (Marchand, 2012).

Evidence-Based Integration: The key to successful integration is an evidence-based approach. For instance, the use of herbal medicine in conjunction with standard medical treatments requires careful consideration of potential drug-herb interactions and the evidence supporting the use of specific herbal remedies (Izzo & Ernst, 2009).

Challenges and Barriers: Despite the growing acceptance, integrating natural therapies into mainstream medicine faces challenges. These include differences in underlying philosophies, lack of standardized training for healthcare providers in natural therapies, and varying levels of evidence regarding the efficacy and safety of these therapies. Additionally, there is often skepticism among practitioners and patients, which can be a barrier to integration (Ventola, 2010).

Regulatory and Educational Aspects: Effective integration also involves regulatory and educational aspects. Healthcare providers need to be educated about natural therapies to guide their patients appropriately. This includes understanding when these therapies may be beneficial and recognizing their limitations and contraindications. Regulatory bodies also play a critical role in ensuring the safety and efficacy of integrated treatments.

Patient-Centered Care: Integrative medicine places a strong emphasis on patient-centered care. This approach respects the patient's preferences and values, ensuring that they are informed and

involved in their treatment decisions. It fosters a partnership between the patient and the healthcare provider, which is crucial for effective health management. The integration of natural therapies into conventional medicine offers a comprehensive approach to healthcare, one that combines the effectiveness of modern medicine with the holistic benefits of natural therapies. For this integration to be successful and beneficial, it must be evidence-based, patient-centered, and supported by appropriate education and regulation. As the healthcare landscape continues to evolve, integrative medicine is likely to play an increasingly important role in providing effective and holistic patient care.

Patient-Centric Care and Autonomy: The rise of natural therapies in healthcare is closely aligned with the principles of patient-centric care and autonomy, underscoring a shift in healthcare towards more personalized and participatory approaches. This paradigm emphasizes respecting patients' values, preferences, and needs, and involves them in all aspects of their care.

Empowering Patients: Patient-centric care in the context of natural therapies means empowering individuals to make informed decisions about their health and treatment options. This empowerment is rooted in the belief that patients should have a say in their healthcare, considering their unique circumstances, beliefs, and preferences. Such an approach can increase patient satisfaction, improve adherence to treatment, and enhance overall health outcomes (Barry & Edgman-Levitan, 2012).

Informed Decision Making: Key to patient-centric care is informed decision-making. Patients should have access to clear, relevant, and comprehensive information about different treatment options, including the benefits and risks of natural therapies. This is particularly important given the varying degrees of evidence supporting the efficacy and safety of these therapies. Providers have the responsibility to guide patients in understanding this information and making choices that align with their health goals and values.

Respecting Autonomy: Respecting patient autonomy means acknowledging the right of patients to make decisions about their own bodies and health, even if these decisions deviate from conventional medical advice. This respect is fundamental in integrative medicine, which often involves combining traditional and natural therapies with conventional treatments (Sulmasy, 2017).

Collaborative Care: A patient-centric approach also entails a collaborative relationship between the healthcare provider and the patient. This relationship is based on trust and communication and is essential for tailoring treatment plans that align with the patient's values and lifestyle. Providers must not only impart medical knowledge but also listen to and understand the patient's perspective (Epstein & Street, 2011).

Challenges: One challenge in implementing patient-centric care with natural therapies is ensuring that patients make choices based on accurate and reliable information. The abundance of misinformation, particularly online, about natural therapies can lead to uninformed or misguided decisions. Healthcare providers play a crucial role in mitigating this challenge by being knowledgeable and open-minded about natural therapies and guiding patients accordingly. In summary, patient-centric care and autonomy are pivotal in the context of natural therapies, emphasizing the importance of informed decision-making, respect for patient choices, and collaborative care. As the healthcare landscape evolves, these principles will become increasingly vital in ensuring that patients receive care that is not only effective but also aligns with their values and needs.

CONCLUSION

The exploration of natural therapies in the context of contemporary medicine presents a nuanced and complex picture. This review has critically examined the efficacy, safety, integration, and patient-centered aspects of natural therapies, including herbal medicine,

acupuncture, and mindfulness meditation. The overarching theme emerging from this analysis is the potential for these therapies to complement and enhance conventional medical practices, provided they are approached with a rigorous and evidence-based perspective. The growing interest in and use of natural therapies reflects a broader shift towards a more holistic, patient-centered approach in healthcare. This trend acknowledges the limitations of conventional medicine in addressing certain health issues and recognizes the value of integrating traditional and natural therapies. However, it also calls for caution and discernment. The efficacy of natural therapies varies, and while some have shown promising results in clinical trials, others require further research to establish their effectiveness and safety fully. Safety and regulation remain critical concerns. The natural origin of these therapies does not inherently guarantee safety, and the risks of adverse effects, interactions with conventional medications, and quality control issues need careful consideration. This underscores the importance of stringent regulatory frameworks and standardized practices in ensuring the safe and effective use of natural therapies. Patient autonomy and the shift towards patient-centric care play a crucial role in this landscape. Patients increasingly seek active participation in their healthcare decisions and are turning to natural therapies as part of this pursuit. This movement towards more personalized care not only empowers patients but also challenges healthcare providers to expand their knowledge and understanding of various therapeutic options, including natural therapies. In conclusion, natural therapies offer valuable possibilities for enriching and diversifying healthcare options available to patients. Their integration into conventional medicine should be guided by a balanced approach that weighs their benefits and risks based on solid scientific evidence. Moving forward, the collaboration between various healthcare disciplines, continuous research, and a commitment to patient-centered care will be key in harnessing the potential of natural therapies. This approach will not only enhance the quality and efficacy of healthcare but also respect the diverse needs and preferences of patients, ultimately contributing to more comprehensive and effective healthcare systems.

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