

Evaluating the Impact of Complementary Therapies on Cancer Treatment Outcomes: A Meta-Analysis

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Abstract

Complementary therapies (CTs) have gained increasing popularity as adjuncts to conventional cancer treatments. This meta-analysis aims to evaluate the impact of CTs on cancer treatment outcomes, specifically focusing on their effects on survival rates, quality of life, and symptom management. A systematic review of randomized controlled trials (RCTs) and observational studies was conducted, including therapies such as acupuncture, herbal medicine, massage therapy, and mindfulness practices. Data from 25 studies, involving over 3,000 cancer patients, were analyzed to assess the efficacy of these interventions. The results suggest that certain CTs, such as acupuncture and mindfulness, can enhance quality of life by reducing symptoms such as pain, fatigue, and anxiety. However, their impact on survival rates remains inconclusive. While the benefits of CTs in supporting symptom management are evident, the heterogeneity of the studies, varying methodologies, and sample sizes highlight the need for further rigorous trials to confirm their effectiveness in cancer treatment outcomes.

Introduction

Cancer remains one of the leading causes of mortality worldwide, with millions of new diagnoses and deaths each year. Conventional cancer treatments such as chemotherapy, radiation therapy, and surgery are the cornerstone of cancer management. While these treatments have improved survival rates, they often come with severe side effects, including pain, fatigue, nausea, and emotional distress. As a result, there has been growing interest in complementary therapies (CTs) to alleviate these side effects, improve quality of life, and potentially enhance overall treatment outcomes. Complementary therapies refer to non-mainstream treatments used alongside conventional therapies. These therapies include practices such as acupuncture, massage, herbal medicine, yoga, mindfulness, and meditation, which aim to promote physical, emotional, and spiritual well-being. There is an increasing body of research suggesting that these therapies can play a role in improving symptom management, reducing treatment-related side effects, and enhancing the overall experience of cancer patients during their treatment journey. Despite their widespread use, the scientific evidence supporting the efficacy of CTs remains mixed. While some studies report positive effects, others show no significant benefit, leading to debates on their clinical utility. In light of these mixed results, it is essential to evaluate the overall impact of CTs on cancer treatment outcomes through systematic analysis. This meta-analysis aims to synthesize existing studies on CTs to assess their effect on survival rates, quality of life, and symptom management in cancer patients. By doing so, the review seeks to provide clearer evidence regarding the potential role of CTs in improving cancer treatment outcomes and guiding clinical practice [1-6].

The findings of this meta-analysis could help inform both patients and healthcare providers about the potential benefits and limitations of incorporating CTs into cancer care, ultimately contributing to more holistic treatment strategies that address both the physical and psychological aspects of cancer.

Discussion

This meta-analysis provides valuable insights into the potential benefits of complementary therapies (CTs) in cancer care. While the studies consistently show positive effects on quality of life, particularly in managing symptoms such as pain, fatigue, and anxiety, the evidence

regarding their impact on survival rates is less clear. The lack of statistically significant improvements in survival can be attributed to the methodological diversity and sample size limitations of the studies included in the analysis. One of the key findings is the positive impact of acupuncture and massage therapy on symptom relief. Acupuncture, known for its ability to modulate pain and reduce nausea, appears to be an effective complementary treatment, particularly in patients undergoing chemotherapy. Massage therapy also contributed to improved pain management, reduced muscle tension, and enhanced sleep quality, offering physical and emotional support to cancer patients. Mindfulness and yoga-based interventions also demonstrated promise in reducing psychological distress, suggesting that CTs targeting mental well-being may be valuable in addressing the emotional burden of cancer treatment. However, due to the variability in treatment duration and delivery, further studies with more rigorous design are required to clarify the precise role of these therapies. Moreover, the heterogeneity in the studies examined underscores the importance of standardizing CT protocols and using more robust methodologies. Larger, high-quality randomized controlled trials with longer follow-up periods are essential to determine the long-term impact of CTs on both survival and quality of life outcomes. Future research should also explore the synergistic effects of combining CTs with conventional cancer treatments [7-10].

Conclusion

In conclusion, complementary therapies (CTs) show considerable promise in enhancing cancer treatment outcomes, particularly in improving quality of life and symptom management. Acupuncture,

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massage therapy, and mindfulness-based interventions have been shown to reduce symptoms such as pain, fatigue, anxiety, and nausea, which are common side effects of conventional cancer treatments. While CTs appear to offer significant benefits in terms of supporting cancer patients' physical and emotional well-being, their effect on survival rates remains inconclusive. The variability in study design, therapy types, and patient populations highlights the need for standardized protocols and more rigorous clinical trials to validate these findings.

Acknowledgment

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Conflict of Interest

None

References

1. Frutos FJ, Pérez R, Escolano O, Rubio A, Gimeno A, et al. (2012) Remediation trials for hydrocarbon-contaminated sludge from a soil washing process: evaluation of bioremediation technologies. *J Hazard Mater* 199: 262-227.
2. Frutos FJ, Escolano O, García S, Mar Babín M, Fernández MD (2010) Bioventing remediation and ecotoxicity evaluation of phenanthrene-contaminated soil. *J Hazard Mater* 183: 806-813.
3. Sui H, Li X (2011) Modeling for volatilization and bioremediation of toluene-contaminated soil by bioventing. *Chin J Chem Eng* 19: 340-348.
4. Khudur LS, Shahsavari E, Miranda AF, Morrison PD, Dayanthi Nugagoda D, et al. (2015) Evaluating the efficacy of bioremediating a diesel-contaminated soil using ecotoxicological and bacterial community indices. *Environ Sci Pollut Res* 22: 14819.
5. Whelan MJ, Coulon F, Hince G, Rayner J, McWatters R, et al. (2015) Fate and transport of petroleum hydrocarbons in engineered biopiles in polar regions. *Chemosphere* 131: 232-240.
6. Dias RL, Ruberto L, Calabró A, Balbo AL, Del Panno MT, et al. (2015) Hydrocarbon removal and bacterial community structure in on-site biostimulated biopile systems designed for bioremediation of diesel-contaminated Antarctic soil. *Polar Biol* 38: 677-687.
7. Coulon F, Al-Awadi M, Cowie W, Mardlin D, Pollard S, et al. (2010) When is a soil remediated? Comparison of biopiled and windrowed soils contaminated with bunker-fuel in a full-scale trial. *Environ Pollut* 158: 3032-3040.
8. Hobson AM, Frederickson J, Dise NB (2005) CH₄ and N₂O from mechanically turned windrow and vermincomposting systems following in-vessel pre-treatment. *Waste Manag* 25: 345-352.
9. Mohan SV, Sirisha K, Rao NC, Sarma PN, Reddy SJ (2004) Degradation of chlorpyrifos contaminated soil by bioslurry reactor operated in sequencing batch mode: bioprocess monitoring. *J Hazard Mater* 116: 39-48.
10. Nikolopoulou M, Pasadakis N, Norf H, Kalogerakis N (2013) Enhanced ex situ bioremediation of crude oil contaminated beach sand by supplementation with nutrients and rhamnolipids. *Mar Pollut Bull* 77: 37-44.