

iCAHE JC Critical Appraisal Summary

Journal Club Details

Journal Club	Alzheimer's SA
JC Facilitator	Rajiv Chand
JC Discipline	Multidisciplinary

Clinical Scenario

What evidence is there to support the use of alternative therapies in improving the cognition of clients with dementia or cognitive impairment?

Review Question/PICO/PECO

- P clients with mild cognitive impairment
- I alternative therapies such as meditation, yoga etc
- C other intervention
- O improved cognition or prevention of dementia

Article/Paper

Innes, KE, Selfe, TK, Brown, CJ, Rose, KM, Heisterman, AT 2012, The effects of meditation on perceived stress and related indices of psychological status and sympathetic activation in persons with Alzheimer's disease and their care givers: A pilot study, *Evidence –based Complementary and Alternative Medicine*, 2012: Article ID 927509.

Please note: due to copyright regulations CAHE is unable to supply a copy of the critically appraised paper/article. If you are an employee of the South Australian government you can obtain a copy of articles from the [DOHSA librarian](#).

Article Methodology: Pre- Post Study Design

Journal Club Meeting on: July 20, 2012



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Allied Health Evidence

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Ques No.	Yes	Can't Tell	No	Comments
1	✓			<p>Was the purpose stated clearly?</p> <p>The aim of the study was to examine the effects of an 8-week meditation program on perceived stress, sleep, mood in patients with Alzheimer’s disease and their caregivers.</p>
2	✓			<p>Was relevant background literature reviewed?</p> <p>Yes, the authors reported previous observational studies and clinical trials supporting the positive effects of meditation on Alzheimer’s disease patients and their caregivers.</p> <p>To date no studies have looked into the effectiveness of a structured meditation program on patients with Alzheimer’s disease and their caregivers, hence the justification of the current study.</p>
3	✓			<p>Describe the study design. Was the design appropriate for the study question? (e.g., for knowledge level about this issue, outcomes, ethical issues, etc.)</p> <p>This is a pilot, pre- post study design, which can be considered appropriate in addressing the research objectives.</p> <p>A pilot study is a small experimental study aimed to gather information prior to a large trial in order to improve the trial’s quality and efficiency. It is useful in determining deficiencies in the design of the experiment which can be addressed before time and resources are expended on large trials. Thus, the results of a pilot trial can help to guide the effective use of limited (financial and nonfinancial) resources essential for a successfully performed trial. A pilot study also permits testing of the hypothesis that leads to testing more precise hypothesis in the main study/trial.</p> <p>As a pilot study is small, it can only provide limited information on the magnitude of outcomes. Therefore results on effectiveness should be interpreted with caution.</p>

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4	✓		<p>Sample size N= 12</p> <p>Was the sample described in detail?</p> <p>Community living adults with Alzheimer’s disease and their caregivers were selected for study. They were recruited by means of newspaper advertisements, flyers and brochures distributed in the medical offices and other public places.</p> <p>The participants varied from 48 to 85 years of age; seven were females and five were males. Detailed description of the participants was reported in table 1.</p> <p>Was the sample size justified?</p> <p>✓ No power calculation was done.</p> <p>Ethics approval was obtained from the University of Virginia institutional review board. All participants provided informed consent.</p>
5	✓		<p>What outcome measures were used and what is the frequency of them being used?</p> <p>Several outcome measures were used and included the following:</p> <p>Perceived stress –measured using perceived stress scale , positive and negative affect scale</p> <p>Stress hardiness- Dispositional Residence Scale</p> <p>Sleep quality – General Sleep Disturbance Scale</p> <p>Mood and affect – Profile of Mood and Affect</p> <p>Self-compassion – Self compassion Scale</p> <p>Cognitive status- Memory Functioning Questionnaire</p> <p>Heart rate, blood pressure and measures of sympathetic activation were recorded using an automated blood pressure monitor.</p> <p>The outcomes were measured twice: at baseline and after 8 weeks of treatment.</p> <p>Were the outcome measures reliable? Were the outcome measures valid?</p> <p>Yes, the validity and reliability of the outcome measures were reported in the article.</p>

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6	✓		<p>Was the intervention described in detail?</p> <p>All the participants underwent 30 - 45 minutes of in-person meditation training. They were also given an 11-minute meditation CD and an illustrated instruction sheet for home sessions. Participants were instructed to meditate twice a day for 8 weeks.</p> <p>Contamination was avoided?</p> <p>N/A</p> <p>Co intervention was avoided?</p> <p>No co-interventions were reported in the study.</p>
7	✓		<p>Were the results reported in terms of statistical significance?</p> <p>Yes, statistical analysis was carried out and results were reported in terms of P values. T tests, chi squares were performed to evaluate differences between the characteristics of patients and their caregivers.</p> <p>Statistically significant improvements were noted in perceived stress, memory function and systolic blood pressure over the eight week period. Minor changes were noted in sleep and mood scores.</p> <p>No statistically significant improvement was found in self-compassion and stress hardness.</p> <p>Clinical importance was reported?</p> <p>Journal club to answer</p> <p>Drop outs were reported</p> <p>There were two drop outs reported in the initial two weeks of the study.</p>
8	✓		<p>The conclusions were appropriate given the study methods and results?</p> <p>Main results:</p> <p>The study concluded that meditation has a positive effect on decreasing perceived stress, improving mood, memory and sleep in adults with Alzheimer’s disease and their care givers.</p> <p>Limitations of the study:</p> <ul style="list-style-type: none"> • The study included a small sample size , limited power • The study cannot be generalized to a large population as the included population was non-Hispanic and white • No follow up was carried out and the study was short term, hence long term benefits cannot be reported. • The study did not include a control group