

iCAHE JC Critical Appraisal Summary

Journal Club Details

Journal Club	DomCare
JC Facilitator	Tim Walsh
JC Discipline	Multi-disciplinary

Clinical Scenario

What does the evidence show about has gardening as an activity been used to bring older persons living in the community together to promoting healthy ageing & to build supportive communities?

Review Question/PICO/PECO

- P** Community Living Older Adults (>65), including CALD Communities
- I** gardening activities
- C** No intervention or other home based service [without gardening]
- O** Increased Social Contact – e.g. no of contacts & no of people/month; improved Health & Wellbeing; improved Quality of Life; reduced loneliness

Article/Paper

Chen,T & Janke, M 2012 , 'Gardening as a potential activity to reduce falls in older adults', Journal of aging and physical activity' , Vol. 20, pp. 1-31

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: Cross-sectional study

Journal Club Meeting on: 26 June 2012



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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 impact of participation in gardening on falls risk, balance and gait speed measures in older adults.</p>
2	✓			<p>Was relevant background literature reviewed?</p> <p>Yes, the authors reported previous studies done on falls risk factors, general health benefits of gardening, and health benefits of exercise.</p> <p>To date, there hasn't been any research done examining the relationship of gardening and falls risk in elderly population; hence the justification for 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>The study used a cross sectional research design. A cross sectional study examines the relationship between diseases (or other health-related characteristics e.g. falls risk, balance, gait speed) and other variables of interest (e.g. gardening) as they exist in a defined population at one particular time (i.e. exposure and outcomes are both measured at the same time). It can establish associations between variables (e.g. gardening and risk of falls). Therefore, this research design is appropriate for the aims of this study.</p>
4	✓		✓	<p>Sample size N= 3,237</p> <p>Was the sample described in detail?</p> <p>The study reported that individuals 65 years and older were selected for the study. Most of the participants were women, and predominantly White. Other characteristics were reported in Table 1.</p> <p>Was the sample size justified?</p> <p>No power calculation was done.</p>

5		<p>What outcome measures were used and what is the frequency of them being used?</p> <p>Balance - full tandem tests, semi tandem tests were used to measure static balance</p> <p>Gait - The timed walk test was used to assess gait speed. This was measured in seconds and the participants were asked to walk 2.5 metres up and down twice.</p> <p>Falls – The participants were interviewed on the number of falls in the last two years.</p> <p>Chronic conditions –The participants were asked if they had been diagnosed with any of the following: high blood pressure, diabetes, cancer, lung disease, heart disease, stroke or arthritis.</p> <p>Gardening – The participants were questioned on the number of hours they spent gardening or doing yard work. Those spending less than 1hr/week on gardening were classified as non gardeners and those spending atleast 1 hr/week or more on gardening were termed as gardeners.</p> <p>Functional limitations - The participants were asked if they had difficulty performing functional activities such as walking several blocks, getting up from chair, climbing stairs, stooping, reaching their arms above shoulders, pulling and pushing objects, lifting weights and walking.</p> <p>Socio-demographic characteristics - Age, gender, race and education were included in this category.</p> <p>Were the outcome measures reliable? Were the outcome measures valid?</p> <p>Good to excellent reliability and predictive validity were reported for the balance tests.</p> <p>Validity and reliability of the other tests were not reported.</p>
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7	✓		<p>Were the results reported in terms of statistical significance?</p> <p>All data were analysed using SPSS 16.0.</p> <p>Independent t-tests and chi square were used to determine whether there are differences in balance, gait speed, functional limitations, chronic conditions and falls incidence between gardeners and non-gardeners.</p> <p>Regression analysis was carried out to examine the relationship between gardening and physical function.</p> <p>Logistic regression was done to determine if gardening activity is predictive of their performance on balance tests and incidence of falls.</p> <p>Clinical importance was reported?</p> <p>Journal club to answer</p> <p>Drop outs were reported?</p> <p>NA</p>
8	✓		<p>The conclusions were appropriate given the study methods and results?</p> <p>Main results</p> <ul style="list-style-type: none"> • Gardening is associated with better health status in terms of chronic conditions and functional limitations reported by older adults. • Gardening was a predictor of performance in balance tests and gait speed. • Gardening may potentially decrease the risk of falls through its effect on health status, balance and gait speed.

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