



AOTA Critically Appraised Topics and Papers Series
Alzheimer's Disease

**A product of the American Occupational Therapy Association's
Evidence-Based Literature Review Project*

CRITICALLY APPRAISED PAPER (CAP)

Focused Question

What is the evidence for the effect of interventions designed to establish, modify, and maintain activities of daily living (ADL), instrumental activities of daily living (IADL), leisure, and social participation on the quality of life, health and wellness, and client and caregiver satisfaction for persons with dementia?

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Graff, M. J. L., Vernooij-Dassen, M. J. M., Thijssen, M., Dekker, J., Hoefnagels, W. H. L., & Olde Rikkert, M. G. M. (2007). Effects of community occupational therapy on quality of life, mood and health status in dementia patients and their caregivers: A randomized controlled trial. *Journals of Gerontology (Medical Sciences)*, 62A, 1002–1009.

PROBLEM STATEMENT (JUSTIFICATION OF THE NEED FOR THE STUDY)

State the problem the authors are investigating in this study.

Occupational therapy interventions are designed to promote function in people with dementia living in the community, as well as to improve outcomes for their caregivers. However, there is not yet strong evidence to substantiate this belief.

RESEARCH OBJECTIVE(S)

List study objectives.

To evaluate the effectiveness of a community occupational therapy intervention. Primary outcomes of the study (patient function and caregiver sense of competence) were the focus of a different publication. This paper focused on secondary outcomes including client and caregiver health status, mood, quality of life, and sense of control.

Describe how the research objectives address the focused question.

The intervention provided is designed to promote function (described as daily living) of people with dementia. The outcomes of interest reported in this paper include quality of life and health status of clients with dementia and caregivers.

DESIGN TYPE:

Randomized controlled trial

Level of Evidence:

I

Limitations (appropriateness of study design):

Was the study design type appropriate for the knowledge level about this topic? *If no, explain.*

Yes

No

SAMPLE SELECTION

How were subjects selected to participate? Please describe.

Inclusion Criteria

- Participants were recruited through a memory clinic and a day clinic in a geriatric center in the Netherlands, if they met the following inclusion criteria:
- Aged 65 or older
- Diagnosed with mild to moderate dementia (based on DSM IV criteria)
- Living in the community
- Had a primary caregiver providing care at least once per week

Exclusion Criteria

- Geriatric Depression Scale score greater than 12
- People with severe behavioral or psychological symptoms
- People with severe illnesses (as judged by geriatrician)
- Those in whom occupational therapy goals could not be defined after comprehensive goal setting using goal settings instruments for occupational therapy goal setting (Occupational Performance History Interview-II OPHI-II, COPM) Canadian Occupational Performance Measure
- Those taking anti-dementia drugs for less than 3 months
- Caregivers with severe illness

Sample Selection Biases: *If yes, explain.*

Volunteers/Referrals

Yes

No

Attention

Yes People in the control group received no intervention during the trial; they received occupational therapy services at the end of the study.

No

Others (list and explain):

SAMPLE CHARACTERISTICS

N= 135

% Dropouts	15% at 6 weeks; 22% at 3 months		
#/ (%) Male	Clients:	#/ (%) Female	Clients:
	60 (44%)		75 (56%)
	Caregivers:		Caregivers:
	40 (30%)		95 (70%)
Ethnicity	NR		
Disease/disability diagnosis	Dementia		

NR = Not reported

Check appropriate group:

<20/study group	20–50/study group	51–100/study group <input checked="" type="checkbox"/>	101–149/study group	150–200/study group
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Sample Characteristics Bias: If no, explain.

If there is more than one study group, was there a similarity between the groups?

Yes	<input checked="" type="checkbox"/> Control group clients and caregivers were slightly younger; p values not reported.
No	<input type="checkbox"/>

Were the reasons for the dropouts reported?

Yes	<input checked="" type="checkbox"/>
No	<input type="checkbox"/>

INTERVENTION(S)—Included are only those interventions relevant to answering the evidence-based question.

Add groups if necessary.

Group 1

Brief Description	Occupational Therapy Intervention with people with dementia and their caregivers: four sessions focused on diagnostics and goal setting using the Occupational Performance History Interview, an ethnographic interview and the COPM; six sessions followed during which compensatory and environmental strategies were shared and reinforced with clients and caregivers.
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Setting	Clients' homes
Who Delivered?	Occupational therapists trained (80 hours) and with at least 240 hours experience offering the intervention.
Frequency?	10 visits over 5 weeks
Duration?	1 hour per visit

Group 2

Brief Description	Control Group – no occupational therapy intervention; usual care. After the study, control group participants were provided with the occupational therapy intervention.
Setting	N/A
Who Delivered?	N/A
Frequency?	N/A
Duration?	N/A

Intervention Biases: *Explain, if needed.*

Contamination

Yes

No

Co-intervention

Yes

No

Timing

Yes

No

Site

Yes

No

Use of different therapists to provide intervention

Yes

No

MEASURES AND OUTCOMES—Included are measures relevant to answering the focused question.

Name of measure:

Dementia Quality of Life Instrument (Dqol)

Outcome(s) measured (what was measured?):

Quality of life (administered to people with dementia and caregivers separately)

Is the measure reliable (as reported in article)?

Yes

No

NR

Is the measure valid (as reported in article)?

Yes

No

NR

How frequently was the measure used for each group in the study?

Baseline, 6 weeks (post intervention), 12 weeks (follow up)

Name of measure:

General Health Questionnaire (GHQ-12)

Outcome(s) measured (what was measured?):

Health status (people with dementia and their caregivers were evaluated separately)

Is the measure reliable (as reported in article)?

Yes

No

NR

Is the measure valid (as reported in article)?

Yes

No

NR

How frequently was the measure used for each group in the study?

Baseline, 6 weeks (post intervention), 12 weeks (follow up)

Measurement Biases

Were the evaluators blinded to treatment status? *If no, explain.*

Yes

No

Recall or memory bias *If yes, explain.*

Yes

No

Others (list and explain):

Limitations (appropriateness of outcomes and measures) *If no, explain.*

Did the measures adequately measure the outcome(s)?

Yes It appears that outcome measures were appropriate; although psychometric properties are not reported.

No

RESULTS

List results of outcomes relevant to answering the focused question

Include statistical significance where appropriate ($p < 0.05$)

Include effect size if reported

Clients with Dementia: At 6 weeks, statistically significant differences in favor of the intervention group for the overall ($p < .0001$; effect size 1.3) and all subscales of the Dqol ($p < .0001$; effect sizes ranged from 0.5 – 2.5). At 12 weeks, all differences continued to be statistically significant although some p values went up. Statistically significant differences in favor of the intervention group for health status ($p < .0001$; effect size 0.8 at 6 weeks; $p < .0001$, effect size: 0.7 at 12 weeks).

Caregivers: At 6 weeks, statistically significant difference in favor of the intervention group for overall quality of life scores ($p < .0001$), and all but one subscale (Negative affect). At 12 weeks, results were similar but two Dqol subscales were not significant (positive and negative affect). Statistically significant difference in favor of the intervention for health status of caregivers ($p < .0001$; effect size 1.3 at 6 weeks; $p < .0001$ effect size: 1.1 at 12 weeks).

Statistical analyses included a correction for multiple tests of significance.

Was this study adequately powered (large enough to show a difference)? *If no, explain.*

Yes

No

Were appropriate analytic methods used? *If no, explain.*

Yes

No

Were statistics appropriately reported (in written or table format)? *If no, explain.*

Yes

No

CONCLUSIONS

State the authors' conclusions that are applicable to answering the evidence-based question.

The authors conclude that the community occupational therapy intervention provided in individuals' homes was effective in improving the quality of life and health status of clients with mild to moderate dementia and their caregivers.

Were the conclusions appropriate for the Study Design (Level of Evidence)? *If no, explain.*

Yes

No

Were the conclusions appropriate for the statistical results? *If no, explain.*

Yes

No

Were the conclusions appropriate given the study limitation and biases? *If no, explain.*

Yes

No

IMPLICATIONS FOR OCCUPATIONAL THERAPY

This section provides guidance about clinical practice, program development, and other implications of the study findings as they relate to the focused question. The results of this study are very positive in demonstrating the effectiveness of a community-based occupational therapy intervention for people with mild and moderate dementia. The authors recommend that the

intervention be applied more broadly. Details about the intervention are available in another publication by the authors.¹ The intervention is based on client-centered principles and used a number of well-accepted approaches to gain clinical information about important occupational performance issues. One of the challenges of application more broadly may be related to the amount of training that was provided to the study therapists. It is not clear if that degree of training is required for implementation more broadly. Further, remuneration for the intervention may be challenging to receive in some countries; the authors note that community occupational therapy is publicly funded in the Netherlands, but this is not the case in all countries. The authors also note that the study participants were all recruited from a university-based medical center memory clinic; application to participants from other settings and sites would be worthwhile. However, the results suggest positive outcomes for people with dementia and their caregivers, with ten occupational therapy home visits. Cost-effectiveness evaluation may be a valuable next step in the application of this research.

¹ Graff, M. J. L., Vernooij-Dassen, M. J., Zajec, J., Olde Rikkert, M.G. M., Hoefnagels, W. H.L., Dekker, J. (2006). How can occupational therapy improve the daily performance and communication of an older patient with dementia and his primary caregiver? A case study. *Dementia*, 5, 503–32.

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For more information about the Evidence-Based Literature Review Project, contact the American Occupational Therapy Association, 301-652-6611, x 2052.



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