



**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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 Gitlin, L. N., Winter, L., Burke, J., Chernett, N., Dennis, M. P., & Hauck, W. W. (2008). Tailored activities to manage neuropsychiatric behaviors in persons with dementia and reduce caregiver burden: A randomized pilot study. *American Journal of Geriatric Psychiatry, 16*, 229–239.

**PROBLEM STATEMENT (JUSTIFICATION OF THE NEED FOR THE STUDY)**

State the problem the authors are investigating in this study.

Activities are identified as a potentially useful non-pharmacological intervention for people with dementia. However, most of the research has been involved residents of nursing homes, with small sample sizes, and non-experimental designs. This study used a randomized design with people living with dementia in the community with caregivers.

**RESEARCH OBJECTIVE(S)**

List study objectives.

To evaluate the effectiveness of the Tailored Activity Program (TAP), which was designed to:

- Reduce behavior disturbances in people with dementia
- Enhance patient engagement
- Reduce caregiver burden
- Improve caregiver mastery, self-efficacy and use of communication and simplification strategies.

The study also examined differences in outcomes for caregivers experiencing depression compared to those not experiencing depression.

Describe how the research objectives address the focused question.

The activity intervention was tailored based on individual needs and always was placed in the context of a goal at the occupational level. Most activities were in the area of leisure although some were more focused on activities of daily living, instrumental activities of daily living and social participation (personal communication, L. Gitlin, January 5, 2009). The outcomes

measured in the study relevant to the focused question were quality of life for the people with dementia and the acceptability of the intervention (a proxy for client and caregiver satisfaction). Other outcomes measured were focused on disturbing behaviors, caregiver burden and confidence.

**DESIGN TYPE:**

Randomized controlled pilot study

**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**

Dementia patients:

- Were English speaking
- Had a physician diagnosis of dementia or a MMSE score of less than 24
- Able to feed self
- Able to participate in at least two self-care activities

Caregiver:

- Were English speaking
- At least 21 years of age
- Lived with the patient with dementia
- Provided at least four hours of daily care

Reported the patient with dementia had boredom, sadness, anxiety, agitation, restlessness or trouble focusing on a task.

**Exclusion Criteria**

Dementia patients were excluded if they:

- Had schizophrenia, bipolar disorder or dementia secondary to head trauma
- Had a MMSE score of 0 and were bed bound or non-responsive

Caregivers were excluded if they:

- Were involved in another study
- Were seeking nursing home placement
- Were terminally ill, in active cancer treatment or if they had been hospitalized 3 or more times in the past year.

Sample Selection Biases: If yes, explain.

Volunteers/Referrals

Yes  Participants were recruited through media announcements and social service mailings; thus volunteer bias may be present.

No

Attention

Yes  Control group participants were put on a waiting list and received no attention intervention; they received the TAP intervention at the end of the four month study period and outcomes were measured again for them at that point.

No

Others (list and explain):

**SAMPLE CHARACTERISTICS**

N= 60

% Dropouts

#/ (%) Male

#/ (%) Female

Ethnicity

Disease/disability diagnosis

Check appropriate group:

<20/study group	20–50/study group <input checked="" type="checkbox"/>	51–100/study group	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  No significant differences between patients or caregivers were identified on any demographic characteristics.

No

Were the reasons for the dropouts reported?

Yes

No

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

Add groups if necessary.

Group 1

Brief Description	Tailored Activities Program (TAP): Based on initial assessment and interview, three activities were identified for each participant with dementia, and a written Activity Prescription was developed. Activities were developed to match the individual’s capabilities and decrease environmental demands. Each activity was introduced separately; caregivers were instructed in activity plan implementation. Once mastered, caregivers received instruction on generalizing strategies and how to grade activities with future functional decline.
Setting	Homes of people with dementia and their caregivers
Who Delivered?	Occupational Therapists
Frequency?	6 home visits (90 minutes each); 2 telephone contacts (15 minutes each)
Duration?	Four months

Group 2

Brief Description	Wait list control
Setting	Homes of people with dementia and their caregivers
Who Delivered?	No intervention
Frequency?	No visits
Duration?	Four months (at the end of the four month intervention, participants in the control group were offered the intervention)

Intervention Biases: *Explain, if needed.*

Contamination

Yes

No

Co-intervention

Yes  There is no mention of efforts to monitor or avoid co-intervention; medication use might be of particular concern but less so for quality of life outcomes than behavioral outcomes.

No

Timing

Yes

No

Site

Yes

No

Use of different therapists to provide intervention

Yes  It is not clear how many interventions were involved in the study; nor is there any description of the training they received.

No

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

Name of measure:

Quality of Life – AD Scale

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

Caregiver perceptions of life quality of participants with dementia

Is the measure reliable (as reported in article)?

Yes

No

NR

NR = Not reported

Is the measure valid (as reported in article)?

Yes

No

NR

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

Baseline and four months

Name of measure:

Unnamed

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

Acceptability of TAP (interventionists' ratings of patient activity engagement, patient participation in activities; caregiver ratings of usefulness of the intervention; caregivers' indications of positive effect; interventionists' ratings of caregiver understanding of strategies and use of recommended activities).

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?

Once after the final intervention

Measurement Biases

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

Yes

No

Recall or memory bias *If yes, explain.*

Yes  Acceptability of TAP is measured only once at the end of the intervention; interventionists rated the degree to which patients were engaged in the activities.

No

Others (list and explain):

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

Did the measures adequately measure the outcome(s)?

Yes  For the two outcome measures relevant to this focused question, the outcome measures are adequate. A standardized patient/client satisfaction questionnaire might have been more reliable but would not have been able to provide intervention-specific information.

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

Quality of Life: no significant differences were found in change in quality of life ratings between people with dementia in the intervention and control group ( $p = 0.095$ ).

### Acceptability of TAP

- 69.6% of the patients were reported as being engaged “very much”
- only 6.5% refused participation
- 84.8% of the caregivers indicated that the intervention was very useful
- 89.1% of the caregivers indicated that the intervention had a positive effect
- 100% of the caregivers demonstrated understanding of strategies somewhat or very much
- only 2.2% did not use recommended activities

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

Yes

No  The sample size was not justified with power analysis; power of the study not reported.

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 main effects found in this study were related to outcomes that were behavioral in participants with dementia and reductions in objective burden in caregivers (although subjective burden was not reduced). Results in these primary outcomes were positive. As well, the authors conclude that TAP was well tolerated by people with dementia and their caregivers who were able to understand and implement the strategies.

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 suggest that an intervention that tailors activities to the individual strengths and interests of people with dementia is accepted by people with dementia and their caregivers; caregivers also reported that the intervention had a positive effect. Although quality of life outcomes were not demonstrated to be positively affected in the intervention group compared to the control group after four months, other behavioral and caregiver outcomes suggested positive preliminary findings. The intervention is grounded in client-centered occupational therapy practice, with emphasis on activity analysis and modification. Its focus was primarily on leisure activities, which have received very little attention for people with dementia living in the community. Information is not provided in the article about the specific training provided to the interventionists; this would be helpful when considering whether the positive satisfaction results warrant its wider adoption and study. The authors note that with positive behavioral outcomes, the intervention may be reimbursable under Medicare guidelines. Since the intervention has not yet been tested in a randomized design with attention control, and long term quality of life and health outcomes have not been measured, the TAP is certainly worth further exploration and study.

This work is based on the evidence-based literature review completed by Lori Letts, PhD, OT Reg. (Ont.), Julie Berenyi, BSc (OT), OT Reg. (Ont.), Mary Edwards, MHSc, OT Reg. (Ont.), Kathy Moros, BHSc (OT), OT Reg. (Ont.), Colleen O'Neill, BSc (OT), OT Reg. (Ont.), Colleen O'Toole, MSc (OT), OT Reg. (Ont.), and Colleen McGrath, MSc (OT), OT Reg. (Ont.)

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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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