



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 TOPIC (CAT)

Focused Question

What is the effectiveness of educational and supportive strategies for caregivers of persons with dementia on the ability to maintain the participation in that role? (Contexts)

Clinical Scenario:

An estimated 5.2 million Americans of all ages have Alzheimer's disease (AD) in 2008 (Alzheimer's Association, 2008). By 2050, the number of people with AD in the United States is expected to grow to 13.2 million (Hebert, Beckett, Scherr, & Evans, 2001). The vast majority of people with dementia are cared for at home (Haley & Baley, 1999), although people with AD represent at least half of the 3.4 million nursing and assisted living facility residents (Ness, Ahmed, & Aronow, 2004).

In 2007, 9.8 million family members, friends, and neighbors provided 8.4 billion hours of unpaid care for persons with AD. This care is estimated to make an annual contribution to the nation valued at 89 billion dollars (Alzheimer's Association, 2008). About 60% of unpaid caregivers are wives, daughters, daughters-in-law, granddaughters, and other female relatives, friends, and neighbors. At any one time, 32% of family and other unpaid caregivers of people AD have been providing help for 5 years or longer, and 39% have been providing care for 1 to 4 years (Alzheimer's Association and National Alliance for Caregiving, 2004).

As the dementia progresses, caregivers provide more and more care, until they can no longer manage their caregiving responsibilities on their own. Caring for a person with AD is often very difficult, and carers have high rates of anxiety, stress, and burnout (Yaffe et al., 2002). Their life expectancy is reduced, and at least one third are depressed (Adams, 2008; Arlt et al., 2008; Kim & Schulz, 2008). Some families hire home care workers or place their loved ones in assisted living residences or nursing homes. One of the most salient variables affecting the occurrence and timing of institutional placement for persons with dementia is caregiver depression (Coehlo, Hooker, & Bowman, 2007). About 67% of people aged 65 and over who die from dementia do so in nursing homes within 1 year of their placement (Mitchell, Teno, Miller, & Mor, 2005).

Occupational therapy practitioners "recognize that health is supported and maintained when individuals are able to engage in occupations and in activities that allow desired or needed participation in home . . . and community life situations" (American Occupational Therapy Association [AOTA], 2002, p. 611). Thus, the focus and targeted end objective of occupational therapy intervention is engagement in occupation to support participation in context (AOTA,

2002). Caregivers are essential to helping the vast majority of people with AD to remain in their home or community contexts (Haley & Baley, 1999). Given the high levels of burden and distress, greater emphasis must be placed on developing services for caregivers of persons with dementia. Occupational therapy practitioners are very familiar with the needs, functional limitations, and difficult patient behaviors associated with AD. Therefore, occupational therapy practitioners need the research evidence to develop interventions that take the patient and caregiver into account as a unit. Further, these interventions must be directed at delaying institutionalization by enhancing caregiving skills and reducing caregiver burden and stress.

Summary of Key Findings:

Summary of Levels I, II, and III

- Evidence suggests that occupational therapy sessions that provide caregivers with education, problem solving, technical skills (task simplification, communication), and simple home modifications improve the patients' skills, decreases their need for assistance, and reduces behavioral occurrences (Gitlin, Hauck, Dennis, & Winter, 2005; Level I). Occupational therapy intervention produces caregiver benefits such as enhancement of skills, greater mastery, and self-efficacy, although subjective appraisals of burden is not affected (Gitlin et al., 2008, Level I). Primary caregivers of patients who receive occupational therapy feel significantly more competent than those who do not (Graff et al., 2006; Level I), and the effect remains significant beyond 12 weeks after intervention (Graff et al., 2007; Level I). The economic evaluation of occupational therapy services suggests it is a highly cost-efficient intervention (Graff et al., 2008; Level I).
- While evidence is limited, it appears that a combination of supportive and educational strategies tailored for specific needs is of most use to caregivers (Acton & Kang, 2001; Level I). Such interventions are more likely to have high social validity (extent to which the intervention was found to be helpful to caregivers; Schulz et al., 2002; Level I).
- Interventions that focus only on the behavior of the person with dementia, without addressing caregiving issues, may not be adequate for reducing caregiver distress. Caregivers who are educated in both behavior management and skills for coping with their own stress have significantly better outcomes for general well-being and depression (Burns, Nichols, Martindale-Adams, Graney, & Lummus, 2003; Level I).
- Strengthening caregivers' knowledge of AD, and ability to better understand and undertake their caregiving role, staves off increasing distress and improves caregiving attitude (Hepburn et al., 2005; Level I). Overall, caregiver interventions (education, patient involvement, stress management, training) have a modest but significant benefit for caregiver knowledge, psychological morbidity, coping skills, and social support (Smits et al., 2007; Level I). Social skills training to aid carers in interacting with the patient has a significant effect in delaying nursing home admission, but not in decreasing caregiver burden (Brodaty, Green, & Koschera, 2003; Level I). Caregiver interventions based on a stress and coping theory framework show a limited but positive association with caregivers having less emotionally enmeshed beliefs about caregiving roles and responsibilities, and improvements in burden and depression (Hepburn, Tornatore, Center, & Ostwald, 2001; Level I). Psychoeducation strategies combined with stress management skill development have a moderate effect on caregiver scores of depression, anger-hostility, fatigue, confusion, physical symptoms, anxiety-mood disorder, and suicidality-depression (Hosaka & Sugiyama, 2003; Level III). Lectures, readings, and discussion groups are effective in increasing caregivers' knowledge

about AD, but had limited effect on caregivers' depression or care recipient behavior (Kuhn & Mendes de León, 2001; Level III).

- Interventions that take place in the care recipients' homes have a positive effect on caregivers' sense of self-efficacy and ability to manage agitation (Huang, Lotus Shyu, Chen, Chen, & Lin, 2003; Level I).
- Technology-mediated support groups have a positive effect on caregiver psychological morbidity (Thompson et al., 2007; Level I). Telephone network interventions with social components were the most likely to show improvements on measures of caregivers' psychological well-being (Cooke, McNally, Mulligan, Harrison, & Newman, 2001; Level I; Winter & Gitlin, 2006; Level I). Weekly telephone conversations between caregivers and professionals providing monitoring and advice were relatively the most effective if measured by frequency of utilization. Respite calls in which a professional maintained a conversation with the patient while the caregiver had free time to attend to personal matters also had relatively high utilization, although most caregivers prefer in-person support meetings (Mahoney, Tarlow, Jones, Tennstedt, & Kasten, 2001; Level I). Telephone-based support groups appear to be equally effective for ethnically diverse dementia caregivers (Bank, Argüelles, Rubert, Eisdorfer, & Czaja, 2006; Level III).
- Current evidence does not demonstrate significant long-term benefits or adverse effects from the use of respite care for people with dementia or their caregivers (Lee & Cameron, 2004; Level I). Use of day care is effective in alleviating care-related stress, especially in regards to compatibility of family, job, and caregiving responsibilities. Further, it enhances caregivers' opportunity to take part in social and recreational activities (Schacke & Zank, 2006; Level II).
- Caregiver counseling and support groups that involve both the individual caregiver and the whole family have a positive effect on both caregiver depression and reaction to troublesome behavior, which are significant predictors of placement. Such programs, structured around psychological support, education, and skill building, may delay institutionalization by nearly 1 year (Mittelman, Ferris, Shulman, Steingberg, & Levin, 1996; Level I; Mittelman, Roth, Haley, & Zarit, 2004; Level I; Mittelman, Haley, Clay, & Roth, 2006; Level I). This type of intervention is also significantly associated with improved subjective sense of health of caregivers (Mittelman, Roth, Clay, & Haley, 2007; Level I). Although results indicate that caregiver education programs alone are insufficient to significantly improve caregiver psychological well-being, caregivers participate in support groups more if there is case management. Participation in support groups is associated with delay of institutionalization and death of the care recipient (Peacock & Forbes, 2003; Level I). The three highest ranked content topics by value to support group attendees were normal aging versus disease, respite voucher information, and practical ideas/legal forms (Curry, Walker, & Hogstel, 2006; Level III).

Summary of Levels IV and V

Not included in review.

Contributions of Qualitative Studies:

Not included in review.

Bottom Line for Occupational Therapy Practice:

Occupational therapy practitioners are committed to supporting people's engagement in occupations and activities that are meaningful. This engagement is most meaningful when done in the most natural context. Caregivers are an essential support for people with AD to stay in their home and communities longer. Occupational therapy interventions have the potential to benefit both caregivers and patients by helping them remain longer in their roles and contexts. Interventions that focus only on care recipient behavior, without addressing caregiving issues, may not be as adequate for reducing caregiver distress (Burns et al., 2003).

Occupational therapy practitioners must keep in mind that interventions for caregivers may affect some of the tasks or time spent, but the caregiver remains responsible for the care, and thus, the intervention is unlikely to change the caregivers' perception of responsibility. Therefore, lessening the burden may not be the best outcome to demonstrate the effectiveness of caregiver interventions. While the quality of evidence is limited, it appears that a combination of supportive and educational strategies is of most use to caregivers. Combined programs may improve some, but not all, aspects of functioning for caregivers and the person with AD (Smits et al., 2007). Rather than blanketing caregivers with a variety of interventions, these interventions should be implemented at the times they are needed, thus increasing the likelihood of better outcomes (Acton & Kang, 2001; Thompson et al., 2007). Collaboration with the caregiver in targeting problems is more likely to result in greater sense of self-efficacy than when only following prescribed interventions (Huang, Lotus Shyu, Chen, Chen, & Lin, 2003).

While intensive programs that involve the patients and their families and are modified according to caregivers' needs tend to be more successful (Brodaty, Green, & Koschera, 2003), enhancements to patient function also are likely to reduce the objective burden of caregivers as measured by time spent on caregiving. Occupational therapy practitioners should provide interventions in which the caregiver can see immediate results. Further, enhanced understanding of the patients' preserved strengths and how to adapt activities to capitalize on those enhanced strengths is helpful for caregivers' sense of mastery and success in their role (Gitlin et al., 2008). Benefits to the patient appear to be sustained when caregivers are trained to provide supervision to patients and when they are given individualized support (Graff et al., 2007).

Occupational therapy interventions for caregivers should include education, support, and provision of strategies to help caregivers manage their reactions to behavioral problems more effectively. This, in turn, can have a favorable impact on caregiver depression and patient nursing home placement (Mittelman, Roth, Haley, & Zarit, 2004). Informational sessions are useful to increase caregiver knowledge and confidence in their role. A basic occupational therapy plan for people with AD should include providing caregivers with information about progression of disease, referral to community resources, practical ideas for caregiving, and understanding of how the caregiving role is different from other family roles (Curry, Walker, & Hogstel, 2006; Hepburn, Tornatore, Center, & Ostwald, 2001). Psychoeducation is effective in increasing the knowledge of caregivers related to the progression of the disease and its symptoms (Kuhn & Mendes de León, 2001).

In addition to the traditional focus on caregiving skills, occupational therapy personnel should also focus on caregivers' appraisal of their own situation and skills (Hepburn et al., 2005). The inclusion of social and cognitive components appears to be relatively effective in improving

caregivers' psychological well-being (Cooke, McNally, Mulligan, Harrison, & Newman, 2001). Encouraging caregivers to strengthen their social support system for the long term should be a basic component of occupational therapy intervention (Mittelman, Roth, Clay, & Haley, 2007). Occupational therapy practitioners' psychosocial education well prepares them to serve as co-facilitators for emotional support groups, which are effective in reducing psychological morbidity of caregivers, increasing family cohesiveness, and delaying institutionalization (Bank, Argüelles, Rubert, Eisdorfer, & Czaja, 2006). As part of an interdisciplinary team, occupational therapy practitioners can focus particularly on the activity of daily living challenges faced by caregivers and assist them in identifying strategies with which they may feel and be successful. Assisting caregivers in developing basic relaxation skills through autogenic training aids can also help improve their well-being (Hosaka & Sugiyama, 2003). Occupational therapy practitioners should monitor caregiver depression and continually provide information about personal coping skills (Mittelman, Ferris, Shulman, Steingberg, & Levin, 1996).

Occupational therapy practitioners should provide information regarding the range of services available in the community. Current evidence is very limited and does not demonstrate any long-term benefits or adverse effects from the use of respite care for people with AD or their caregivers (Lee & Cameron, 2004). Participation in day care enhances caregivers' opportunity to take part in social and recreational activities. Use of adult day care is significantly effective in alleviating care-related stress, especially with regard to compatibility of family, job, and caregiving responsibilities (Schacke & Zank, 2006). At the same time, occupational therapy practitioners should recognize that use of day programs may alleviate some, but not all, aspects of caregiving stress (Mittelman, Haley, Clay, & Roth, 2006). Occupational therapy professionals also should be alert to circumstances where placement should be recommended to protect the caregivers' health and well-being.

Brief care interventions may be effective in reducing caregiver distress and burden in the long-term management of the dementia patient. This type of intervention can also be useful given the chronic, progressive nature of dementia, because it provides support to caregivers and assists them in differentiating progression of the disease from their own limited skills (Burns, Nichols, Martindale-Adams, Graney, & Lummus, 2003). Occupational therapy practitioners should consider enhancing their services with telephone-based support for caregivers as follow-up for in-home therapy. This type of brief support has been moderately effective for caregivers in rural areas where they do not have easy access to care centers (Bank, Argüelles, Rubert, Eisdorfer, & Czaja, 2006). A particular role for occupational therapy practitioners could be in providing advice and monitoring progress. Low tolerance for technological difficulties and the importance of person-to-person contact should be considered in setting up this type of program (Mahoney, Tarlow, Jones, Tennstedt, & Kasten, 2001). Occupational therapists also should consider participating in computer networks to provide consultations and recommendations. Such networks have been effective in increasing case management services for rural caregivers (Peacock & Forbes, 2003) and could increase the benefit caregivers and patients receive from occupational therapy. Telesupport groups appear to provide benefit mostly to older (65+ years) caregivers (Winter & Gitlin, 2006), and therefore occupational therapy practitioners may consider inclusion of such intervention as part of an overall program if it appears that the caregiver is relatively isolated and has greater need for social contact.

Postponement of institutionalization appears to be possible with very intense, multidimensional interventions that include heavy doses of counseling, support, and education. Occupational therapy can be an integral part of such intervention, particularly in regard to environmental interventions as well as behavior management and stress management training (Schulz et al., 2002). An in-home skills training program helps sustain caregiver affect; longer and more frequent professional contact and ongoing skills training may be necessary to maintain other clinically important outcomes such as reduced upset with behaviors (Gitlin, Hauck, Dennis, & Winter, 2005). Ten occupational therapy sessions given in the home over 5 weeks improve the daily functioning of patients with AD and diminishes the burden on caregivers (Graff et al., 2006). Occupational therapy is a highly effective and cost-efficient therapy for community-dwelling elders and their caregivers (Graff et al., 2008). Therefore, it should be advocated as a service included in all community health, primary care, and outpatient services for people with AD.

Review Process:

Procedures for the selection and appraisal of articles:

- Titles and abstracts of those articles retrieved from database searches were reviewed.
- Copies of titles and abstracts of retrieved articles were printed.
- Abstracts that appeared to match the criteria and question being addressed were marked for additional review.
- Full-text copies of articles that appeared to be relevant were located and printed for review.
- Based on this review, some articles were eliminated since they did not meet the criteria.
- Those articles meeting the criteria were selected for the evidence table and analyzed.

Inclusion Criteria:

- Published from 1987–2008
- Research participants were caregivers of persons with AD.
- Included an intervention focused on caregivers and that could be used by occupational therapy practitioners
- Meta-analyses or systematic literature reviews
- Related to educational and supportive strategies
- Written in English

Exclusion Criteria:

- Published prior to 1987
- Did not include an intervention
- Interventions were not specifically targeted to caregivers of people with AD.
- Level IV and V studies
- Qualitative studies

Search Strategy

Categories	Key Search Terms
Patient/client population	Caregivers, carers, helpers, family, Alzheimer's, dementia
Intervention	Education, psychoeducation, intervention, support, strategy
Comparison	Not searched
Outcomes	Depression, mental health, burden, longevity, knowledge

Databases and Sites Searched
Academic Search Premiere, AgeLine, CINAHL, Google Scholar, EBSCOhost, Medline, OT Search, PsycINFO, PubMed, ScienceDirect, Web of Science, Cochrane Library

Quality Control/Peer Review Process:

<ul style="list-style-type: none"> • The author developed an initial list of search terms; • Database searches were conducted using the list of terms; • A medical librarian reviewed the search strategies and results to improve them; • AOTA staff and project consultant reviewed results of the search and provided additional suggestions for search strategies; • Follow-up database searches were conducted 6 months later to make sure no new articles were missed; • An evidence table was completed with all selected articles; • AOTA staff and project consultant reviewed the evidence table and made suggestions for clarification and refinement; • The author completed the CAT; • AOTA staff and project consultant reviewed the CAT.
--

Results of Search

Summary of Study Designs of Articles Selected for Appraisal

Level of Evidence	Study Design/Methodology of Selected Articles	Number of Articles Selected
I	Systematic reviews, meta-analysis, randomized controlled trials	23
II	Two groups, nonrandomized studies (e.g., cohort, case-control)	1
III	One group, nonrandomized (e.g., before and after, pretest–posttest)	4
IV	Descriptive studies that include analysis of outcomes (single subject design, case series)	0
V	Case reports and expert opinion, which include	0

	narrative literature reviews and consensus statements	
	Qualitative studies	0
	TOTAL	28

Limitations of the Studies Appraised

Levels I, II, and III

Level I

- Pooling of effect of interventions evaluated by two or more different outcome measures may have provided ambiguous results (Acton & Kang, 2001; Schulz et al., 2002; Smits et al., 2007)
- Limited description of participants (Acton & Kang, 2001)
- Small sample size (Brodaty, Green, & Koschera, 2003; Burns et al., 2003; Curry, Walker, & Hogstel, 2006; Gitlin et al., 2005; Huang et al., 2003; Lee & Cameron, 2004; Mahoney et al., 2001; Winter & Gitlin, 2006)
- Heterogeneity of sample characteristics; non-representative/convenience sample (Brodaty, Green, & Koschera, 2003; Graff et al., 2006; Graff et al., 2007; Graff et al., 2008; Hepburn et al., 2001; Hepburn et al., 2005; Hepburn et al., 2001; Mittelman et al., 2004; Mittelman et al., 2006; Mittelman et al., 2007; Winter & Gitlin, 2006)
- Intervening factors (Burns et al., 2003)
- High attrition rates (Cooke et al., 2001; Hepburn et al., 2001)
- Lack of attention control group (Gitlin et al., 2008; Graff et al., 2006)
- All self-reported measures (Hepburn et al., 2005)
- Long-term effects not measured (Hepburn et al., 2001; Huang et al., 2003)
- Some members of control group received similar services (Mittelman et al., 1996; Mittelman et al., 2007; Peacock & Forbes, 2003)
- Imbalanced intervention and control groups or characteristics of groups not reported (Mittelman et al., 2006)
- Outcome measures not reported (Thompson et al., 2007)

Level II

- Characteristics of intervention and control groups not reported; high attrition rate and small sample size (Schacke & Zank, 2006)

Level III

- Small sample size (Bank et al., 2006)
- Convenience sample (Kuhn & Mendes de León, 2001)
- Not all components of intervention delivered to all participants (Bank et al., 2006; Hosaka & Sugiyama, 2003)
- Only self-reported data used (Bank et al., 2006)
- Outcome measures insensitive to change (Cooke et al., 2001)
- No baseline obtained for comparison (Cooke et al., 2001)

Articles Selected for Appraisal

Acton, G. J., & Kang, J. (2001). Interventions to reduce the burden of caregiving for an adult with dementia: A meta-analysis. *Research in Nursing & Health, 24*, 349–360.

Bank, A. L., Argüelles, S., Rubert, M., Eisdorfer, C., & Czaja, S. J. (2006). The value of telephone support groups among ethnically diverse caregivers of persons with dementia. *Gerontologist, 46*, 134–138.

Brodaty, H., Green, A., & Koschera, A. (2003). Meta-analysis of psychosocial interventions for caregivers of people with dementia. *Journal of the American Geriatrics Society, 51*, 657–664.

Burns, R., Nichols, L. O., Martindale-Adams, J., Graney, M. J., & Lummus, A. (2003). Primary care interventions for dementia caregivers: 2-year outcomes from the REACH study. *Gerontologist, 43*, 547–555.

Cooke, D. D., McNally, L., Mulligan, K. T., Harrison, M. J., & Newman, S. P. (2001). Psychosocial interventions for caregivers of people with dementia: A systematic review. *Aging & Mental Health, 5*, 120–135.

Curry, L. C., Walker, C., & Hogstel, M. O. (2006). Educational needs of employed family caregivers of older adults: Evaluation of a workplace project. *Geriatric Nursing, 27*, 166–173.

Gitlin, L. N., Hauck, W. W., Dennis, M. P., & Winter, L. (2005). Maintenance of effects of the home environmental skill-building program for family caregivers and individuals with Alzheimer's disease and related disorders. *The Journals of Gerontology. Series A, Biological Sciences and Medical Sciences, 60*, 368–374.

Gitlin, L., Winter, L., Burke, J., Chernett, N., Dennis, M., & Hauck, 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.

Graff, M., Adang, E., Vernooij-Dassen, M., Dekker, J., Jomsson, L., Thijssen, M., et al. (2008). Community occupational therapy for older patients with dementia and their care givers: Cost effectiveness study. *British Medical Journal, 336*, 134–138.

Graff, M. J. L., Vernooij-Dassen, M. J. M., Thijssen, M., Dekker, J., Hoefnagels, W. H. L., & Olde Rikkert, M. G. M. (2006). Community based occupational therapy for patients with dementia and their care givers: Randomized controlled trial. *British Medical Journal, 333*, 1196–1201.

Graff, M., Vernooij-Dassen, M., Thijssen, M., Deller, J., Hoefnagels, W., & Olde Rikkert, 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. *Journal of Gerontology: Medical Sciences, 62A*, 1002–1009.

- Hepburn, K., Lewis, M., Narayan, S., Center, B., Tornatore, J., Bremer, K., et al. (2005). Partners in caregiving: A psychoeducation program affecting dementia family caregivers' distress and caregiving outlook. *Clinical Gerontologist* 29, 53–69.
- Hepburn, K. W., Tornatore, J., Center, B., & Ostwald, S. W. (2001). Dementia family caregiver training: Affecting beliefs about caregiving and caregiver outcomes. *Journal of the American Geriatrics Society*, 49, 450–457.
- Hosaka, T., & Sugiyama, Y. (2003) Structured intervention in family caregivers of the demented elderly and changes in their immune function. *Psychiatry and Clinical Neurosciences*, 57, 147–151.
- Huang, H. L., Lotus Shyu, Y. I., Chen, M. C., Chen, S. T., & Lin, L. C. (2003). A pilot study on a home-based caregiver training program for improving caregiver self-efficacy and decreasing the behavioral problems of elders with dementia in Taiwan. *International Journal of Geriatric Psychiatry*, 18(4), 337–345
- Kuhn, D. R., & Mendes de León, C. F. (2001). Evaluating an educational intervention with relatives of persons in the early stages of Alzheimer's disease. *Research on Social Work Practice*, 11, 531–548.
- Lee, H., & Cameron, M. (2004). Respite care for people with dementia and their carers. *Cochrane Database of Systematic Reviews*, Issue 1. Art. No.: CD004396. DOI: 10.1002/14651858.CD004396. pub2.
- Mahoney, D. M., Tarlow, B., Jones, R. N., Tennstedt, S., & Kasten, L. (2001). Factors affecting the use of a telephone-based intervention for caregivers of people with Alzheimer's disease. *Journal of Telemedicine & Telecare*, 7, 139–148.
- Mittelman, M. S., Ferris, S. H., Shulman, E., Steingberg, G., & Levin, B. (1996). A family intervention to delay nursing home placement of patients with Alzheimer's disease: A randomized controlled trial. *Journal of the American Medical Association*, 276, 1725–1731.
- Mittelman, M. S., Haley, W. E., Clay, O. J., & Roth, D. L. (2006). Improving caregiver well-being delays nursing home placement of patients with Alzheimer disease. *Neurology*, 4, 1592–1599.
- Mittelman, M. S., Roth, D. L., Clay, O. J., & Haley, W. E. (2007). Preserving health of Alzheimer caregivers: Impact of a spouse caregiver intervention. *American Journal of Geriatric Psychiatry*, 15, 780–789.
- Mittelman, M. S., Roth, D. L., Haley, W. E., & Zarit, S. H. (2004). Effects of a caregiver intervention on negative caregiver appraisals of behavior problems in patients with Alzheimer's disease: Results of a randomized trial. *The Journals of Gerontology*, 59, 27–34.
- Peacock, S. C., & Forbes, D. A. (2003). Interventions for caregivers of persons with dementia: A systematic review. *Canadian Journal of Nursing Research*, 35, 88–107.

Schacke, C., & Zank, S. R. (2006). Measuring the effectiveness of adult day care as a facility to support family caregivers of dementia patients. *Journal of Applied Gerontology, 25*, 65–81.

Schulz, R., O'Brien, A., Czaja, S., Ory, M., Norris, R., Martire, L. M., et al. (2002). Dementia caregiver intervention research: In search of clinical significance. *Gerontologist, 42*, 589–602

Smits, C., de Lange, J., Droes, R., Franka, M., Vernooij-Dassen, M., & Pot, A. (2007). Effects of combined intervention programmes for people with dementia living at home and their caregivers: A systematic review. *International Journal of Geriatric Psychiatry, 22*, 1181–1193.

Thompson, C., Spilsbury, K., Hall, J., Birks, Y., Barnes, C., & Adamson, J. (2007). Systematic review of information and interventions for caregivers of people with dementia. *BMC Geriatrics, 7*, 18.

Winter, L., & Gitlin, L. N. (2006). Evaluation of a telephone-based support group intervention for female caregivers of community-dwelling individuals with dementia. *American Journal of Alzheimer's Disease & Other Dementias, 21*, 391–397.

References

Adams, K. (2008). Specific effects of caring for a spouse with dementia: Differences in depressive symptoms between caregiver and non-caregiver spouses. *International Psychogeriatrics, 20*, 508–520.

Alzheimer's Association. (2008). *2008 Alzheimer's disease facts and figures*. Chicago: Author.

Alzheimer's Association and National Alliance for Caregiving. (2004). *Families care: Alzheimer's caregiving in the United States, 2004*. Retrieved July 29, 2008, from <http://www.alz.org>

American Occupational Therapy Association. (2002). Occupational therapy practice framework: Domain and process. *American Journal of Occupational Therapy, 56*, 609–639.

Arlt, S., Hornung, J., Eichenlaub, M., Jahn, H., Bullinger, M., & Petersen, C. (2008). The patient with dementia, the caregiver and the doctor: Cognition, depression and quality of life from three perspectives. *International Journal of Geriatric Psychiatry, 23*, 604–610.

Coehlo, D., Hooker, K., & Bowman, S. (2007). Institutional placement of persons with dementia: What predicts occurrence and timing? *Journal of Family Nursing, 13*, 253–277.

Haley, W. E., & Bailey, S. (1999). Research on family caregiving in Alzheimer's disease: Implications for practice and policy. In B. Vellas & J. L. Fitten (Eds.), *Research and Practice in Alzheimer's Disease* (vol. 2, pp. 321–332). Paris: Serdi Publisher.

Hebert, L. E., Beckett, L. A., Scherr, P. A., & Evans, D. A. (2001). Annual incidence of Alzheimer disease in the United States projected to the years 2000 through 2050. *Alzheimer Disease & Associated Disorders, 15*, 169–173.

Kim, Y. & Schulz, R. (2008). Family caregivers' strains: Comparative analysis of cancer caregiving with dementia, diabetes, and frail elderly caregiving. *Journal of Aging and Health*, 20, 483–503.

Mitchell, S., Teno, J., Miller, S., & Mor, V. (2005). A national study of the location of death for older persons with dementia. *Journal of the American Geriatrics Society*, 53, 299–305.

Ness, J., Ahmed, A., & Aronow, W. S. (2004). Demographics and payment characteristics of nursing home residents in the United States: A 23-year trend. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, 59, 1213–1217.

Yaffe, K., Fox, P., Newcomer, R., Sands, L., Lindquist, K., Dane, K., et al. (2002). Patient and caregiver characteristics and nursing home placement in patients with dementia. *Journal of the American Medical Association*, 287, 2090–2097.

This work is based on the evidence-based literature review completed in July 2008 by René Padilla, PhD., OTR/L, FAOTA with contributions from Kathleen Bonifer, Pete Ferreri, Rochelle Gainer, Kerrie Ivey, and Kortney Kaczmarek who were doctoral students in the occupational therapy program at Creighton University at the time of this work.

CAT format adapted from a template provided by Dr. Annie McCluskey and freely available for use on the OT-CATS website (<http://otcats.com>).

For more information about the Evidence-Based Literature Review Project, contact the American Occupational Therapy Association, 301-852-6611, x 2052.



Copyright 2008 American Occupational Therapy Association, Inc. All rights reserved.
For personal or educational use only. All other uses require permission from AOTA.
Contact: copyright@aota.org