

# Research Opportunities in the Area of Adults With Alzheimer's Disease and Related Neurocognitive Disorders

The American Occupational Therapy Association (AOTA) Evidence-Based Practice Project has developed a table summarizing the research opportunities for adults with Alzheimer's disease and related major neurocognitive disorders. The table provides an overview of the state of current available evidence on interventions within the scope of occupational therapy practice and is based on the systematic reviews from the AOTA Practice Guidelines Series. Researchers, clinicians, and students can use this information in developing innovative research to answer important questions within the occupational therapy field.

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Planning a research project requires consideration of many factors. Level of interest and knowledge in a specific area, access to appropriate participant populations, support of mentors and other researchers, and funding availability all help determine the focus of a future project. An additional component to be considered is whether adequate, up-to-date research has already addressed a topic; if sufficient evidence is available in a given core area, this area might not be the best choice for another research project.

The best research topic may be one in which either little research has been done or the research to date is insufficient, inconclusive, or mixed. In addition, when research conducted to date provides a low level of evidence and is of limited quality, additional high-quality research in the area is needed.

The "Research Opportunities Table in the Area of Adults With Alzheimer's Disease and Related Neurocognitive Disorders" provides an overview of the state of current available evidence on interventions within the scope of occupational therapy practice. The table is based on the systematic reviews from the AOTA Practice Guidelines Series. The table lists specific interventions and indicates either that the evidence to support the intervention is strong or that moderate, mixed, or few studies support the intervention and therefore the area is one for future research. Researchers, students, and clinicians can use this information in developing innovative research to answer important questions within the field of occupational therapy. Please refer to *Occupational Therapy Practice Guidelines for Adults With Alzheimer's Disease and Related Major Neurocognitive Disorders* (Piersol & Jensen, 2017) and the September/October 2017 issue of the *American Journal of Occupational Therapy* (Smallfield, 2017) for more information on the topic area and the systematic review process. To access the tables online and search for research opportunities in other practice areas, visit <https://www.aota.org/researchopportunitiesables>.

Researchers are also encouraged to enter their projects into AOTA's Researcher Database at <https://myaota.aota.org/research/>. This database provides AOTA with information such as relevant clinical settings and populations, *International Classification of Functioning, Disability and Health* level (World

## Research Opportunities Table in the Area of Adults With Alzheimer's Disease and Related Neurocognitive Disorders

| Intervention  | Strength of Evidence      |
|---|---------------------------|
| Interventions Designed to Establish, Modify, and Maintain ADLs, IADLs, Leisure, and Social Participation  |                           |
| ADL training or activity modification to improve or maintain ADL and leisure performance  | Strong evidence           |
| Dosage (frequency, duration, and intensity) of exercise-based interventions to improve or maintain ADLs, including functional mobility and sleep  | Area for future research  |
| Errorless learning and prompting strategies to improve DL performance   | Strong evidence           |
| Cognitive stimulation for enhanced social participation   | Strong evidence           |
| Montessori methods for enhanced performance in self-feeding   | Area for future research  |
| Spaced retrieval techniques for improved self-feeding   | Area for future research  |
| Individualized social activities to enhance sleep   | Area for future research  |
| Multicomponent interventions for improving or maintaining QOL   | Area for future research  |
| Cognitive training (i.e., practice of discrete cognitive tasks) and cognitive rehabilitation (i.e., strategy-based training for cognitive tasks) for improved occupational performance                      | Area for future research  |
| Multicomponent intervention to improve or maintain ADL performance  | Area for future research  |
| Occupation-based interventions for reducing problematic behaviors   | Area for future research  |
| Sleep education to improve sleep performance  | Area for future research  |
| Comprehensive rehabilitation to improve ADLs  | Area for future research  |
| Dosage for exercise-based interventions to improve or maintain ADLs   | Area for future research  |
| A variety of other interventions, including use of music, gardening, environmental modification, and outdoor activities, among others, for improving and maintaining occupational performance               | Area for future research  |
| Environment-Based Interventions to Improve Behavior and Perception and to Reduce Falls  |                           |
| Person-centered, individually tailored environment-based interventions for improving behavior during the duration of the intervention   | Strong evidence           |
| Rooms designed for the intended purpose (i.e., privacy and personalization of resident bedrooms and familiar ambience for living rooms and dining rooms) to improve behaviors                               | Strong evidence           |
| Monitoring devices for fall prevention used in the home   | Strong evidence           |
| Environmental interventions to compensate for perceptual changes rather than to change perceptual abilities   | Strong evidence           |
| Ambient music for improving behavior at times other than mealtimes  | Strong evidence           |
| Multisensory interventions (e.g., Snoezelen®) for short-term behavior improvements  | Strong evidence           |
| Concealed or painted doorknobs, murals on doors, or blinds or cloth barriers over doors to reduce exit attempts   | Area for future research  |
| Environmental design principles of murals and other art on walls, L-shaped corridors, and good visual access to important amenities (e.g., the toilet) for reducing disorientation and promoting engagement | Area for future research  |
| Environmental noise-level regulation to a moderate level for improving behavior   | Area for future reference |
| Environmental relocation (e.g., moving residents from a traditional nursing unit to an SCU) with no negative long-term effects on behavior  | Area for future research  |
| Ambient music to improve behavior during mealtimes  | Area for future research  |
| Bright light therapy to decrease behavioral disturbances  | Area for future research  |
| Proprioceptive sensory input (i.e., air mat therapy) to improve behavior  | Area for future research  |
| Functional task object availability in the environment to improve behavior  | Area for future research  |
| SCUs and other homelike environments assumed to be superior to traditional nursing homes for improving overall behavior   | Area for future research  |
| Wander gardens for improving behavior and reducing falls  | Area for future research  |
| Black tape grids or stripes on floor in front of doors to reduce exit attempts  | Area for future research  |
| Sensory devices worn by people with mild AD to facilitate way finding   | Area for future research  |
| Tinted lenses, prisms, and other optical devices for improving perception   | Area for future research  |
| Environmental modification without other concurrent fall-reduction strategies for preventing falls  | Area for future research  |
| Educational and Supportive Strategies for Caregivers to Maintain Participation in That Role   |                           |
| Multicomponent psychoeducational interventions for improved caregiver QOL, well-being, confidence, perception of burden, mental health, and self-efficacy   | Strong evidence           |
| Communication skills training, either alone or in combination with memory aid training, for caregiver QOL and well-being  | Strong evidence           |
| Cognitive reframing therapy for reducing caregiver anxiety, depression, and stress  | Strong evidence           |
| Mindfulness and stress reduction interventions, live or virtually, for improved caregiver mental health   | Strong evidence           |
| Professionally led support groups for enhanced caregiver well-being and QOL   | Strong evidence           |
| Multicomponent psychoeducational interventions for delayed nursing home placement   | Area for future research  |
| Case management by occupational therapy practitioners focused on both the client and the caregiver for promoting caregiver respite access   | Area for future research  |
| Family- or peer-led support groups for increasing QOL   | Area for future research  |

(Continued)

## Research Opportunities Table in the Area of Adults With Alzheimer's Disease and Related Neurocognitive Disorders (cont.)

| Intervention   | Strength of Evidence     |
|--|--------------------------|
| Physical activity and exercise program, in person and by telephone, for reduction in caregiver stress  | Area for future research |
| CBT caregiver interventions for practitioner–caregiver interaction for positive caregiver outcomes   | Area for future research |
| Web-based support groups for caregiver well-being and QOL  | Area for future research |
| Professionally led support group for enhanced caregiver competence   | Area for future research |
| Evidence-based program (Skills <sub>2</sub> Care <sup>®</sup> ; see <a href="http://www.jefferson.edu/university/health-professions/jefferson-elder-care/services.html">http://www.jefferson.edu/university/health-professions/jefferson-elder-care/services.html</a> ) successfully delivered by home-based occupational therapists and reimbursed by Medicare Part B | Area for future research |
| CBT delivered in person or by telephone to reduce caregiver depression and burden  | Area for future research |
| Leisure routines shared between client and caregiver to improve caregiver well-being   | Area for future research |

*Note.* AD = Alzheimer's disease; ADLs = activities of daily living; CBT = cognitive–behavioral therapy; DL = daily living; IADLs = instrumental activities of daily living; QOL = quality of life; SCU = special care unit.

Health Organization, 2001), funders (if any), and key words to help guide research advocacy and policy initiatives. ▲

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This work is based on the September/October 2017 issue of the *American Journal of Occupational Therapy* (Smallfield, 2017) and the *Occupational Therapy Practice Guidelines for Adults With Alzheimer's Disease and Related Neurocognitive Disorders* (Piersol & Jensen, 2017), all from the AOTA Evidence-Based Practice Project.

### References

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