

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 ₂ Care [®] ; see http://www.jefferson.edu/university/health-professions/jefferson-elder-care/services.html) 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. ▲

Acknowledgments

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.

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