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Training Area Agencies on Aging Case Managers to Improve Physical Function, Mood, and Behavior in Persons with Dementia and Caregivers: Examples from the RDAD-Northwest Study

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Abstract

The Reducing Disability in Alzheimer's Disease (RDAD) program has been shown to be an effective tool for teaching caregivers strategies to improve mood, behavior, and physical function in persons with dementia. This paper describes how RDAD has been translated and implemented for use by Area Agencies on Aging (AAA) case managers across Washington and Oregon. Modifications to the original RDAD program as part of its community translation included decreasing the number of in-person sessions while preserving all educational content; involving caregivers in exercise activities for themselves as well as acting as exercise coaches for care-receivers; and enrolling persons with cognitive impairment due to mixed etiologies. This paper describes these changes and their rationale, the challenges faced by community agencies recruiting for and delivering evidence-based programs, and illustrates the actual RDAD implementation process through several brief case examples. Case examples also illustrate how RDAD-Northwest can be useful with care-receivers with a range of cognitive impairment severity, family caregiving situations, and levels of mood and behavioral challenges.

Keywords

exercise; dementia; caregiving; translational research

INTRODUCTION

There is mounting evidence that the benefits of regular physical activity extend not only to healthy older adults, but also to persons with cognitive impairment. Exercise programs for persons with dementia (PWD) increase participants' strength and physical function (Telenius, Engedal, & Bergland, 2015), reduce risk for falls (Burton et al., 2015; Chan et al., 2015), improve ability to perform activities of daily living (ADLs) (Forbes, Forbes, Blake, Thiessen, & Forbes, 2015), enhance mood (Adamson, Ensari, & Motl, 2015), and slow

progression of cognitive decline by addressing underlying contributing vascular, inflammatory, and metabolic factors associated with cognitive frailty (Öhman, Savikko, Strandberg, & Pitkälä, 2014; Panza et al., 2015). There are also indications that participation in regular intense exercise can reduce health and social service care costs for the PWD (Pitkala et al., 2013), and improve psychological well-being for caregivers (Orgeta & Miranda-Castillo, 2014).

There are challenges with implementing exercise programs for persons with dementia, however. Many programs have been developed for implementation in nursing homes, but have not been used in community settings (Telenius et al., 2015). Other programs have been primarily developed for persons with mild cognitive impairment who are able to participate in an exercise intervention independently or with limited guidance (Wang et al., 2014). Still others are delivered in group format at community exercise centers, which may be inaccessible to caregivers and care-receivers who live in geographic regions where such centers are locally unavailable (Schwenk et al., 2014). Almost all programs involve training by professional exercise therapists, which further limits their widespread accessibility and dissemination. Finally, a variety of physical health factors such as dizziness and history of falls limit exercise participation among community dwelling persons with dementia (Stubbs et al., 2014).

RDAD (Reducing Disability in Alzheimer's Disease) is an evidence-based exercise program for community-dwelling persons with dementia and their family caregivers (Teri, Logsdon, & McCurry, 2005) that addresses many of these challenges. Family members learn to guide care-receivers in an individualized in-home exercise program that includes balance/flexibility, strengthening, and aerobic exercise components (Teri et al., 1998). Persons at any stage of dementia may benefit from RDAD, and exercises are tailored to the unique physical, cognitive, and behavioral status of the participant (Logsdon, McCurry, & Teri, 2005). Caregivers are taught a set of core behavioral strategies that include dementia education, training in effective communication, A-B-C (activator-behavior-consequence) problem-solving strategies, use of pleasant events to reduce dementia-related mood and behavioral disturbances, and assistance in strategies to improve their own emotional well-being and reduce their reactions to challenging behaviors (Teri, Logsdon, & McCurry, 2008). In the original randomized trial (Teri et al., 2003), RDAD interventionists were health care professionals (a physical therapist and social worker), and enrollment was limited to persons with dementia who met criteria for possible or probable Alzheimer's disease. Results from that trial indicated that RDAD improved physical function in PWDs, reduced depression, and also reduced institutionalization due to behavioral disturbances (Teri et al., 2003).

In 2012, a translational investigation was initiated to implement RDAD in Washington and Oregon States in partnership with ten Area Agencies on Aging (AAAs). Clinical staff/case managers at the AAAs in this ongoing translation effort (henceforth called RDAD-NW) were trained to deliver RDAD-NW to PWDs and caregivers in their caseload, and persons with a variety of dementia diagnoses were eligible to participate. This paper describes the program as it was implemented, including modifications that were made based upon feedback from AAA partners. It also discusses the challenges faced by community agencies

recruiting for and delivering evidence-based programs, and illustrates the actual RDAD implementation process through several brief case examples.

METHOD

RDAD-NW Participants

Consistent with the original RDAD trial and the Ohio translation studies, RDAD-NW care-receivers were required to be 60 years or older, have a diagnosis of dementia, be ambulatory (able to walk across a room with or without an assistive device) but physically inactive (exercising less than 150 minutes/week), and have a family caregiver who could oversee the daily exercise program. However, the RDAD-NW study excluded care-receiver dementia subtypes that directly impact physical mobility (e.g., Parkinson's disease, multiple sclerosis), both for safety reasons and because the RDAD program was not designed to address the unique physical challenges of these conditions.

RDAD-NW Case Manager “Coaches”

A minimum of two case managers at each AAA who had experience working with cognitively impaired older adults and family caregivers were trained to deliver RDAD-NW to clients in their family caregiver support program. RDAD-NW case manager interventionists were referred to as “coaches” to reflect their assistive role teaching and monitoring the individualized exercise program with care-receivers and caregivers. Coaches initially participated in a 16-hour in-person group training that included observation of videos (Teri & Huda, 2004, revised 2010), didactic training, discussion of actual and hypothetical cases, role playing of behavioral components and in vivo practice of exercises. This was followed by at least one training case in which sessions were audio-recorded and reviewed by expert trainers to monitor treatment fidelity, including exercise training safety. Following successful completion of the training case, sessions continued to be audio-recorded and were reviewed at random by RDAD-NW trainers.

Recruitment

The original intent was for RDAD-NW participants to be recruited from existing caseloads of collaborating AAAs. Ultimately, AAAs expanded recruitment to include outreach to community health care providers and faith communities, newspaper and radio ads, presentations at retirement centers, health fairs, and dementia support groups, and articles in caregiver and senior newsletters. Some AAAs, particularly those in counties with smaller populations covering large geographic areas, had more difficulty identifying and enrolling eligible dyads. The UW research team worked closely with these sites to develop recruitment resources (e.g., flyers describing RDAD, PowerPoint presentations), and to brainstorm strategies for disseminating information about program availability.

RDAD-NW Intervention

The original RDAD protocol included 12 in-home sessions over 9 weeks, and 3 monthly follow-up calls to maintain gains. In RDAD-NW, this schedule was modified to be nine in-home sessions over six weeks, followed by four monthly phone calls (Table 1). This change made the RDAD-NW program more compatible with the duration of other Washington and

Oregon AAA caregiver services, and ultimately more sustainable by reducing travel time and expense for case managers driving long distances to participants' homes, particularly in rural counties. All content from the original protocol was preserved and the total amount of contact time was similar, just consolidated into fewer sessions.

At each RDAD-NW session, both caregivers and care-receivers met with the study coach to learn and practice the daily exercise routine. Details about the RDAD intervention and exercises have been previously published (Teri et al., 2008; Teri et al., 1998; Teri et al., 2012). In the RDAD-NW study, caregivers were asked to learn and practice the daily exercises along with care-receivers (rather than merely helping care-receivers do them). This change from the original protocol was made to increase caregiver buy-in to the program, to facilitate making the exercises a pleasant event that the dyad participated in together, and to enhance health and well-being in caregivers who were themselves often physically inactive or frail.

In each session, coaches also met with caregivers for some time privately to ensure that they could talk freely without frequent interruptions and to discuss behavioral management issues without concern about being disrespectful to the care-receiver. Caregivers were taught ways in which the core behavioral components of RDAD-NW (realistic expectations, communication, A-B-C problem-solving, and pleasant events) could be used to support care-receiver exercise participation, as well as to address any dementia-related mood or behavioral challenges that arose between sessions. For example, if a care-receiver was refusing to exercise, caregivers were taught to identify the "A"—activators that preceded the "B"—target behavior (exercise refusal), and to observe the "C"—consequences or interpersonal/environmental responses that followed the refusal. Common activators and consequences included caregiver communication style (e.g., being "bossy" when directing the care-receiver to exercise, or arguing with the care-receiver when she refused), and caregiver unrealistic expectations that care-receivers should be able to remember and practice the exercises without caregiver guidance. At each session, caregivers and coaches would brainstorm a plan for modifying activators or consequences during the following week (e.g., the caregiver using a pleasant tone of voice and facial expression when encouraging the care-receiver to exercise, or linking the exercise to some enjoyable activity). The plans were then modified and adjusted as needed throughout the treatment period.

Assessment Measures

Care-receiver cognitive function was assessed by trained AAA staff at baseline using the Mini-Mental State Examination (MMSE) (Folstein, Folstein, & McHugh, 1975). Other assessment measures were collected by UW research staff before and after RDAD-NW sessions ended. Assessments paralleled those from the original randomized trial (Teri et al., 2003), but were shortened to allow telephone-administered data collection. Caregivers rated their own and the care-receiver's physical function using two subscales from the Medical Outcome Study Short Form (SF-36) (Physical Functioning, Role Functioning-Physical subscales) (Stewart, Hays, & Ware, 1988); number of restricted activity days during the past 2 weeks (Wagner, LaCroix, Grothaus, & Hecht, 1993); and the number of days participants walked or engaged in moderate intensity exercise for at least 30 minutes in the past week.

Caregivers also rated the frequency of care-receiver depressive behaviors and their reaction to these behaviors using the Revised Memory and Behavior Problem Checklist (RMBPC) (Teri et al., 1992); their own depression on the 20-item Center for Epidemiological Studies Depression Scale (CES-D) (Radloff, 1977); and the care-receiver's quality of life using the Quality of Life-Alzheimer's Disease (QOL-AD) scale (Logsdon, Gibbons, McCurry, & Teri, 1999).

Two hundred fifty-five care-receiver/caregiver dyads were enrolled in the RDAD-NW study. Care receivers were significantly older, more physically frail on the SF-36 physical functioning subscale, and had more severe depression symptoms reported on the RMBPC than in the original trial (Table 2). Greater numbers of RDAD-NW caregivers were also adult children.

CASE STUDIES

The following cases reflect the actual implementation of the RDAD-NW program by community AAA consultants. The cases were selected by UW trainers to reflect the experiences of different AAA coaches, different caregiving situations (e.g., spousal vs. adult child caregivers), different levels of physical function and cognitive impairment in the PWD, and differences in treatment response. The names and personal details of all participants have been edited to protect their privacy.

Case 1

Mr. Adams, a 68 year old, African American high school graduate, lived with his 46 year old unmarried son, Tom, and Tom's two young adult children. Mr. Adams had a MMSE score of 12/30, indicating moderately severe dementia. Mr. Adams' additional medical conditions included a history of heart disease, high blood pressure, depression, osteoarthritis, and back pain. Tom initially requested information and education about dementia, as he knew little about its progression or the problems encountered by individuals with dementia and those who care for them. In Session 1, the Coach gave him the booklet, "Understanding Alzheimer's: A guide for families, friends, and health care providers" (Teri & Schmidt, 1993), which she referred back to for information throughout the course of the intervention. Tom found this booklet to be particularly useful in helping him develop more realistic expectations of what his dad was able to do.

RDAD exercises—In Sessions 2-4, the consultant introduced the balance, strengthening, and endurance exercise program. Prior to starting the RDAD-NW intervention, both Mr. Adams and Tom were engaging in some form of aerobic exercise on average only one day a week; at the end of treatment they were exercising together four days/week. Tom was particularly delighted to report that when they traveled to visit extended family over the holidays, his dad was now strong enough to get off and on the toilet by himself, which made assisting him much easier.

Behavioral tools—Tom also reported that using the A-B-Cs helped him solve some of his most vexing caregiving problems. His father had been prone to appearing at family functions without clothes on, and this behavior was reduced by working to identify and modify (A)

activators for his father undressing. Tom also learned to be more pleasant and calm in redirecting and assisting his father back into clothes when the behavior did occur. At the end of treatment, Mr. Adams' depression frequency scores on the RMBPC were decreased (baseline mean score = 1.8, post-treatment mean = 1.4) and ratings of his quality of life were increased (baseline mean = 26, post-treatment mean = 31), and Tom's distress over his dad's depressive behaviors (reaction) was reduced (baseline and post-treatment mean RMBPC depression reaction scores = 0.9 and 0.4, respectively). Tom's depression scores on the CESD had dropped from 14 at baseline to 10 at post-treatment. Tom said, *"I cannot stress how much this program has helped me. It saved our family's sanity. (Coach) is so good at what she does."*

Case 2

Mrs. Brown, an 80 year homemaker lived with her 85 year old husband in a rural area of Washington State with few caregiving resources. Mrs. Brown had a MMSE score of 16/30, indicating moderate dementia severity. She also had a history of high blood pressure, osteoarthritis, and chronic migraine headaches which left her physically debilitated. After caring for his wife over several years of gradual cognitive and functional decline, Mr. Brown felt overwhelmed by his situation. He expressed concern about his wife's isolation and lack of exercise, and doubted that he was doing a good job of caring for her.

RDAD exercises—Because Mr. Brown was concerned about his wife's inactivity, he was very interested in learning the exercise program. In particular, Mr. Brown wanted his wife to be able to physically manage the multiple levels in their home. The RDAD-NW Coach trained Mr. and Mrs. Brown in her weekly visits to the home, and then Mr. Brown trained several paid caregivers who helped care for his wife at night and when he was sleeping or away. Prior to starting the RDAD-NW program, Mrs. Brown had no history of participating in physical activity programs but she took to the exercises right away. She enjoyed the opportunity to do something new and was very motivated to learn to do the exercises properly. Because Mrs. Brown saw the exercises as a fun activity, she wanted to do them every day, and often would remind her husband and the paid caregivers that it was time to exercise. By the end of treatment she was exercising six days/week. Her husband commented that his wife's physical abilities and energy were greatly improved; for example, at baseline Mr. Brown reported that his wife was restricted most days in her usual physical activities around the house; at post-treatment, Mr. Brown reported there had been no days that she had activity restrictions.

Behavioral tools—Mr. Brown was a motivated, organized individual who had his set way of doing things. As his wife's dementia progressed, he became increasingly annoyed at things his wife "didn't do correctly." A major area of friction between them was Mrs. Brown's compulsive behaviors. At bedtime, she would spend long periods of time straightening the pillows and sheets, and turning down the comforters and blankets, which caused delays getting to bed that were very frustrating for her husband. She would also become fixated on cleaning chores around the house such as emptying garbage cans and picking up items from the floor. The RDAD-NW coach talked with Mr. Brown about how the dementia disease process impacts behavior and the importance of having realistic

expectations of what she was able to do. He learned to “pick his battles” and to focus on issues of care and safety, rather than her preoccupation with household chores.

Mr. Brown also learned to observe his wife’s behaviors using the A-B-Cs. He modified (A) activators by moving his wife’s bedtime to earlier in the evening and then allowing her to go through her bedtime routines at her own pace before he came to bed. This reduced his frustration level and made things easier for both of them. Mr. Brown changed “C” consequences by ignoring his wife’s cleaning behaviors during the day and not commenting critically when she engaged in them inappropriately. After several weeks, he noticed that his wife seemed happier and commented that it even seemed that her memory was better. At the end of treatment, Mrs. Brown’s depression ratings on the RMBPC were decreased (baseline and post-treatment mean scores = 2.3 and 1.2, respectively), quality of life was increased (baseline and post-treatment mean scores = 32 and 38, respectively), and Mr. Brown’s reaction to her depression were reduced (baseline and post-treatment mean scores = 0.9 and 0.1, respectively). Mr. Brown’s own depression on the CESD also dropped from 10 to 6 between baseline and post-treatment, respectively. He said, *“This program has made a world of difference for both my wife and me. I can’t say which of us has benefitted more. I felt overwhelmed with my wife’s care before this. I don’t feel that way now. I am more balanced and even when things go sideways, I have the skills I need to get through. Every minute that UW spent developing this program was worth it.”*

Case 3

Mrs. Crisp was an 80 year divorced woman who had lived with her 57 year old daughter, Connie, for several years. Mrs. Crisp had an MMSE score of 15/30, indicating moderate dementia severity. Mrs. Crisp’s osteoarthritis had impacted her mobility and she was not sleeping well, but was otherwise in good physical health.

When the program started, Mrs. Crisp and Connie were not getting along and their relationship was spiraling downward. Mrs. Crisp had been a highly independent professional woman in her younger years. As her memory problems worsened, she had become increasingly bored and restless. She would ask Connie repeatedly during the day, “What can I do to help?” When left alone for a short while, she would start engaging in some activity like cleaning the kitchen which inevitably was not done correctly and caused Connie more work than if her mother had not done anything at all, further increasing the tension between them.

RDAD exercises—Mrs. Crisp had been an avid walker in the past and still paced often throughout the day. As a consequence, Connie was not particularly interested in the RDAD aerobic exercises. She was interested, however, in her mom practicing the balance and strengthening routines to reduce her risk for falls. Learning the exercises was initially challenging both because of the strained mother-daughter relationship and Mrs. Crisp’s painful arthritis. The Coach worked with the dyad creating a classroom-like setting where they were equals as “students” whose job it was to learn and help each other. This created a more positive working relationship between the two as they worked on their exercise goals together. Due to Mrs. Crisp’s arthritis, some exercises had to be modified. For example, the

hip abduction exercise was modified by reducing the range of motion of the leg extension. They did fewer repetitions of exercises that needed modifications in the beginning and increased at a slower different pace than exercises which were not initially uncomfortable. At the end of treatment, both Connie and her mother were exercising six days per week, and Mrs. Crisp's scores on the physical function subscale of the SF-36 had improved (baseline mean score = 60; post-treatment mean score = 75).

Behavioral tools—Over the course of treatment, Connie identified a number of behavioral challenges she was experiencing with her mother that were well suited to an A-B-C problem-solving approach. The RDAD communication strategies were particularly useful in this situation. Connie learned to talk to her mother without getting emotional or upset, and to treat Mrs. Crisp “like a normal person” again instead of talking down to her. Mrs. Crisp's depression was reduced (baseline and post-treatment RMBPC frequency = 1.7 and 1.2, respectively), and her quality of life ratings greatly improved (mean QOL-AD baseline and post-treatment scores = 29 and 41, respectively). Connie's CESD depression scores dropped from 23 at baseline, indicating severe levels of depression, to 0 at post-treatment, and her reaction to her mother's depression also declined (RMBPC baseline mean reaction score = 1.2; post-treatment mean score = 0). Connie reported that her blood pressure, which had been elevated at baseline, dropped into the normal range. She said, *“The visits with (coach) were wonderful. Things improved by at least 90%. I was skeptical of the exercises but they have been amazing. And the counseling was so helpful.”*

Case 4

Mr. Johnson, a 70 year old, Caucasian high school graduate, lived alone, but had daily assistance from his 32 year old daughter in law, Amy. Mr. Johnson had an MMSE score of 23, indicating early dementia. Mr. Johnson's additional health problems included gout which limited his activity. His wife had passed away suddenly a year before, and since that time Amy had taken over caregiving responsibilities in addition to caring for her two year old son. Having been thrust into a caregiver role shortly after becoming a parent, Amy had many questions about dementia and how to best help Mr. Johnson.

RDAD exercises—Prior to his wife's death, Mr. Johnson had been very active, attending exercise groups at the local senior center, walking in a nearby park, and helping tend to their expansive yard and garden. Now his exercise consisted of mowing the lawn and an occasional ride on his stationary bicycle at home. Mr. Johnson welcomed the RDAD-NW coach's visits and practiced all exercises each session. By the end of treatment, Mr. Johnson was doing the RDAD exercises on a nearly daily basis and was riding his stationary bicycle five days a week. In addition, Mr. Johnson had resumed attendance at the Senior Center exercise class two days a week. The success of participation in the RDAD-NW program, however, had not been without its challenges.

Behavioral tools—Although Mr. Johnson was happy to exercise with the RDAD-NW coach, initially he was not very interested in exercise on the days when the coach was not there. Amy would go over to Mr. Johnson's home daily to attempt to do the exercises with him, but he would only do some stretching or no exercises at all.

Using the A-B-Cs, Amy observed some patterns in Mr. Johnson's participation. He seemed to more open to the exercises in the morning, rather than the afternoon or evening. Mr. Johnson had always been a morning person and changing their exercise time to the morning (changing the "A" activator) helped with his participation. Amy also observed that Mr. Johnson wasn't much for talking with her (and according to the son, he had never been much of talker) but he would talk with his grandson the entire time he was there. Amy asked Mr. Johnson to help her 'teach' his grandson the exercises. He immediately engaged with this pleasant event and from that day forward they exercised together.

To encourage Mr. Johnson to participate in an aerobic activity, Amy would put on a video for him and his grandson to watch together. Watching a video while riding the stationary bicycle became the normal routine for exercising, so even when Amy and the grandson could not be there, he would exercise to the video by himself or in the company of other visitors.

With Mr. Johnson's increase in physical and social activity, Amy noticed a difference in his overall mental health. At the end of treatment, Mr. Johnson's depression ratings on the RMBPC were decreased (baseline mean = 1.4, post-treatment mean = 1.3), and ratings on the QOL-AD increased (baseline mean = 26, post-treatment mean = 33). Amy was also less distressed over her father in law's depressive behaviors (reaction) (baseline and post-treatment mean RMBPC depression reaction scores = 0.9 and 0.2, respectively), and her own depression scores on the CESD dropped from 22 at baseline to 17 at post-treatment. As a result of the changes in her father in law (and herself), Amy felt more comfortable with his care and functioning and planned to return to part-time teaching during the next school year. Amy said, *"(Coach) was wonderful. So patient, positive, and really enjoyable. My dad loved him. Thank you so much for the study."*

LESSONS LEARNED

As can be seen from these cases, the RDAD-NW program was successful in helping cognitively impaired older adults improve their physical function following an individualized exercise program. It also provided caregivers with tools to alter their own communication and interactions in ways that positively impacted their relatives with dementia. Both the care-receiver and caregiver benefitted from participation in increased pleasant events (including exercising) and fewer aversive altercations. Although these benefits were observed in the original RDAD randomized trial using professional staff, this study shows that AAA case managers can also be trained to deliver the intervention to benefit clients in their state caseloads.

These cases illustrate the diversity of problems and the creativity needed by coaches, even following a manualized treatment approach. A variety of factors can influence the implementation and success of both behavioral and exercise interventions. RDAD-NW yielded clinically meaningful improvements in care-recipient physical activity and function, reductions in depression, and improvements in quality of life. Caregiver depression and reactivity to care-recipient behaviors also improved as a result of treatment. What is good for persons with dementia can be equally good for family members who love and support them,

and RDAD-NW offers the double benefit for addressing physical needs of care-receivers as well as mood and behavior challenges more commonly targeted in caregiver education programs.

The cases presented in this article were selected because they illustrate a range of caregiving situations, care-receiver physical limitations, severity of mood and behavioral disturbances at baseline, and treatment response. In each of these cases, a committed, involved caregiver was essential to success; unfortunately, not every person has such a caregiver. Although Mr. Johnson and Amy were able to benefit from the RDAD-NW program, some persons with dementia with more severe cognitive impairment who live alone would not be appropriate candidates for an individualized, in-home exercise program with no oversight to ensure exercises were done safely. In other cases, caregivers themselves are too physically frail or disinterested in exercise to be good “exercise buddies” who can facilitate regular exercise practice. For these individuals, other strategies may be needed. As seen in the case of Mr. and Mrs. Brown, the use of paid or surrogate caregivers (e.g., family members, or involved neighbors or friends) to assist with exercise practice can be a valuable supplement to the RDAD-NW program when a primary caregiver is unable to assume that role.

There are key implications for social work practice. Social workers (and other allied health and case management professionals) are often the first, and at times only, point of contact for family member struggling with the challenges of caring for a loved one with dementia. As such, social workers are in a unique position to provide a variety of resources and support in addressing these challenges. These cases illustrate that social workers and other non-medical professionals can deliver a physical activity component, in addition to the behavioral and social components, of an intervention program to caregivers and persons with dementia. RDAD-NW is an accessible and complimentary program for social work practitioners.

There are important clinical delivery issues to consider when implementing an exercise training program with cognitively impaired individuals and caregivers. Safety is first and foremost. The RDAD-NW exercise program was developed for use with cognitively impaired older adults, but it is wise to encourage potential clients to talk to their physicians before starting any new exercise routine, including RDAD-NW. Clinicians also need to be trained to teach caregivers how to do the exercises properly, how to guide frail or cognitively impaired individuals safely, and how to modify exercises as needed to accommodate range of motion limitations, balance concerns, pain, or other physical issues that impact exercise practice. Clinicians interested in offering RDAD-NW should contact the authors about possible training opportunities and access to the manualized treatment materials.

Empirical evaluation of the RDAD-NW is in process. When the results of the ongoing trial are available they will provide further information regarding the effectiveness of RDAD-NW dissemination in AAAs across Oregon and Washington States, and the care-receiver and caregiver factors that may moderate physical and behavioral outcomes. Nevertheless, it is clear that this approach can work well with caregivers and care-receivers who want to participate and with AAA case managers who can follow the treatment protocol while using their own clinical flexibility and skills within its guidelines.

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Table 1

Outline of RDAD-NW treatment session schedule and content

Session 1 (Week 1)	Exercise Behavior management	Overview and rationale for exercise program Overview of behavior changes in dementia
Session 2 (Week 1)	Exercise Behavior management	Warm-up/cool-down and balance exercises Assign exercise log Realistic expectations and learning to observe behaviors
Session 3 (Week 2)	Exercise Behavior management	Introduce strengthening exercises, review exercise log Practice warm-up/cool-down and balance exercises Introduction to the A-B-Cs of behavior Monitor A-B-Cs using A-B-C card
Session 4 (Week 2)	Exercise Behavior management	Introduce endurance exercises, review exercise log Practice warm-up/cool-down, balance, and strengthening exercises Communication skills Monitor A-B-Cs using A-B-C card
Session 5 (Week 3)	Exercise Behavior management	Practice exercises, review exercise log Developing a behavior change plan
Session 6 (Week 3)	Exercise Behavior management	Practice exercises, review exercise log Creating a safe home environment Introduction to pleasant events
Session 7 (Week 4)	Exercise Behavior management	Practice exercises, review exercise log Good nutrition for dementia Creating a pleasant event plan
Session 8 (Week 5)	Exercise Behavior management	Practice exercises, review exercise log Coping with caregiving
Session 9 (Week 6)	Exercise Behavior management	Practice exercises, review exercise log Generalizing and maintaining skills
Sessions 10-13	Monthly telephone calls to review exercise and behavior management components, problem-solve obstacles to continued exercise practice, and address new caregiving concerns.	

Table 2

Comparison of participant baseline characteristics, RDAD-NW translation study versus original RDAD randomized trial (RCT) data

Variable	RDAD-NW (n = 255)	RCT (n = 153)
Care receivers		
Age (<i>M, SD</i>)	81.3 (7.7)	77.8 (6.9) **
Gender		
Female	125 (49)	63 (41)
Male	130 (51)	90 (59)
Ethnicity		
White, non-Hispanic	222 (87)	136 (89)
Asian or Pacific Islander	11 (4)	4 (3)
Black, non-Hispanic	9 (3)	13 (8)
Hispanic	10 (4)	0
Native American	3 (1)	0
Relationship to Caregiver		
Spouse	161 (63)	122 (80)
Parent	74 (29)	9 (6) **
Other	20 (8)	22 (14)
Mini-Mental State Examination (<i>M, SD</i>)	15.6 (7.1)	16.8 (7.1)
RMBPC Depression, frequency (<i>M, SD</i>)	1.5 (0.4)	0.7 (0.7) **
MOS SF-36 Physical Functioning (<i>M, SD</i>)	43.0 (30.1)	67.7 (24.9) **
MOS SF-36 Physical Role (<i>M, SD</i>)	58.1 (37.0)	65.0 (35.9)
Restricted Activity Days (<i>M, SD</i>)	0.9 (3.3)	0.5 (2.2)
Quality of Life (<i>M, SD</i>)	31.4 (6.0)	—
Caregivers		
Age (<i>M, SD</i>)	68.7 (12.4)	70.1 (12.8)
Gender		
Female	190 (75)	107 (70)
Male	65 (25)	46 (30)
Ethnicity		
White, non-Hispanic	217 (86)	133 (87)
Asian or Pacific Islander	10 (4)	6 (4)

Variable	RDAD-NW (n = 255)	RCT (n = 153)
Black, non-Hispanic	11 (4)	12 (8)
Hispanic	11 (4)	1 (1)
Native American	3 (1)	1 (1)
Center for Epidemiological Studies Depression Scale (<i>M, SD</i>)	12.9 (9.1)	N/A
RMBPC Depression, caregiver reaction (<i>M,SD</i>)	0.6 (0.6)	N/A

Notes. RDAD-NW = RDAD program; RCT = original RDAD randomized controlled trial (Teri et al., 2003); RMBPC = Revised Memory and Behavior Problem Checklist; Values are expressed as percentages unless otherwise indicated. N/A = not available in RCT

*
 $p < .05$;

**
 $p < .001$