

ADRC Participant Access Request

Access Request Goal

Goal - Formal request for ADRC data

Principal Investigator

Name	Kristen Allen Watts
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Title	Assistant Professor
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Institution	UAB
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Email	kristenallen@uabmc.edu (mailto:kristenallen@uabmc.edu)
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Phone	(205) 915-5704
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No Co-PI listed in survey

Study and Theme Details

Hypothesis

An intervention that targets physical activity, social support, and depression can improve glycemic control and reduce or prevent diabetes complication or the progression of cognitive dysfunction in Black older adults.

Specific Aims

AIM 1. Use intervention mapping to systematically adapt a standard DSMES intervention including elements of cognitive behavioral therapy for implementation among Black older adults with type 2 diabetes and mild cognitive impairment.

AIM 2. Conduct a single-arm pilot study of the adapted intervention in Black older adults with T2D and MCI to determine feasibility and acceptability.

Study related to Deep South Disparities

A customized intervention that improves physical activity, social support, and depression, and glycemic control with the goal of reducing or preventing diabetes complications and progression of cognitive dysfunction is needed for older Black adults living in the South. Black older adults are two times more likely to develop Alzheimer's Disease and 60% more likely to be diagnosed with and die from type 2 diabetes than whites. High incidence rates and poor health outcomes for comorbid health conditions, such as Alzheimer's Disease and type 2 diabetes, lead to disproportionate utilization of healthcare resources and economic burden among Black older adults. The proposed project has the potential to weaken associations from further complications from diabetes and developing Alzheimer's Disease. Study results will provide information on acceptability and feasibility for Black older adults with co-morbid type 2 diabetes and mild cognitive impairment. Future work will include evaluating potential mediators and moderators of the intervention's effects, as well as evaluating the most effective methods of intervention delivery and implementation.

Funding and IRB Details

Funding source - Not yet funded

IRB Contact - Not yet discussed project with IRB

Subject Sample Size and Profile

Sample size by cognitive ability

MCI	30
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Total N	30
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Additional inclusion/exclusion details

We plan to recruit study participants who meet the following criteria: Black, greater than or equal to 55 years old, diagnosis of type 2 diabetes, enrolled in the ADRC, and presence of mild cognitive impairment based on the neuropsychological test. Participants who meet this criterion will be recruited to complete qualitative interviews that will inform the intervention adaptation (AIM 1, estimated n=15) as well as participate in the pilot study of the adapted intervention (AIM 2, estimated n=15). Participants will be excluded if they are non-English speaking.

Racial minorities and other stratification

This study tests hypothesis on B/AA disparities or other race issues

Requested Resources

Human subject involvement

Study procedures

AIM 1: we plan to conduct qualitative interviews with type 2 diabetes and mild cognitive impairment to explore facilitators and barriers to diabetes self-management; thoughts attitudes, and beliefs (based on constructs from the cognitive behavioral theory) regarding the co-occurrence of diabetes and mild cognitive impairment; psychosocial risk and resilience (including social support) factors; and obtain participant perspectives on potential target behaviors for the intervention. During the interview, we will also ask participants about their preferences for setting, mode of delivery, and frequency of delivery for the intervention.

AIM2: Study participants for the pilot will complete questionnaires administered by trained study personnel at baseline containing measures such as sociodemographic, health status, diabetes severity, mental health history, depression and anxiety (e.g., diabetes anxiety and depression scale) [44], self-efficacy (e.g., perceived diabetes self-management scale) [45], and physical activity (e.g., Short Form 12) [46]. We will pilot the adapted intervention in a small sample (n=15) to determine feasibility/acceptability, to test recruitment/retention strategies, and to track completion rates from baseline to 6 months. Feasibility will be assessed based on 30% of eligible participants being willing to participate, retention through study completion $\geq 80\%$, and intervention attendance $\geq 75\%$. Acceptability will be assessed from positive post-intervention interviews. Specifically, we will conduct semi-structured interviews at follow-up study visit to gather perspectives on intervention content, appropriateness of intervention duration and frequency, barriers and facilitators to engagement and overall satisfaction. We will assess changes in HbA1c status, depression, and physical activity from baseline to 6 months as an exploratory aim

Study duration

3-4 months

Compensation

AIM 1: \$50; AIM 2: Participants will be compensated on an increasing scale to enhance retention; \$10/baseline, \$20/3 month assessment, \$30 for completion.

Statistical support

Statistician has already been consulted - Richard Kennedy, MD, PhD