Program ACTIVE II: Outcomes from a Multi-State Community-Based Depression Treatment for Rural and Urban Adults with Type 2 Diabetes

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Program ACTIVE II (R18DK092765) is a multi-state comparative effectiveness study of cognitive behavioral therapy (CBT) and community-based exercise on depression and glycemic outcomes in adults with major depressive disorder (MDD) and type 2 diabetes (T2DM) in USA.

Using a 2X2 factorial repeated measures RCT design, participants were randomized to: CBT (10 individual sessions), EXER (12 weeks of community-based exercise), CBT+EXER (10 individual CBT sessions and 12 weeks of concurrent exercise) or usual care (UC). Participants were recruited from 3 states using a community-engaged research (CEnR) approach. Community partners in mental health and exercise conducted interventions.

N=140 T2DM adults, mean age of 56 years (SD=10.7), 77% female, 71% White, 52% married and 34% completed high school or trade school were enrolled. At post-intervention, participants in all active intervention groups had 5.0-6.8 times higher odds of achieving full remission of MDD compared to UC ($p<0.03$). CBT, EXER and CBT+EXER demonstrated improved depressive symptoms to non-clinical levels ($p<.01$) and negative automatic thoughts ($p<.04$) compared to UC. CBT+EXER or EXER alone showed improved physical and diabetes-specific quality of life (QOL; $p=.01$) compared to UC. The CBT+EXER arm achieved a 1.3% higher improvement in HbA1c compared to UC ($p=.02$) after controlling for education and changes in diabetes medications for participants with a baseline A1c≥7.0%.

Program ACTIVE is a set of manualized interventions that has demonstrated clinically meaningful improvements in both depression and glycemic outcomes in adults with T2DM. These interventions enable behavioral health and exercise professionals to extend the availability of depression treatment options for T2DM patients in ways that are complementary to medical care.

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