Does depression affect outcomes in a clinical trial of a self-care cardiovascular disease risk reduction intervention conducted in a socioeconomically austere environment?

Authors:
D K Moser¹, ML Chung¹, T A Lennie¹, ¹University of Kentucky, College of Nursing - Lexington - United States of America,

Topic(s):
Risk Factors and Prevention - Other

Citation:
European Journal of Cardiovascular Nursing (2017) 17 (Supplement), S70

Funding Acknowledgements:
PCORI

Background: People living in rural Appalachian Kentucky have the highest rates of cardiovascular disease (CVD) risk, morbidity and mortality in the United States. Despite the marked CVD disparities seen in this area, efforts directed toward CVD risk reduction and prevention are limited. No intervention studies to date have considered the effect of the high rate of depression in this population on CVD risk reduction efforts.

Objective: To determine whether depression modifies the effect of an individualized, culturally appropriate, self-care CVD risk reduction intervention (HeartHealth) compared to referral of patients to a primary care provider for usual care on the following CVD risk factors: tobacco use, blood pressure, lipid profile, body mass index, depressive symptoms, and physical activity levels.

Methods: The study protocol and intervention were developed with a community advisory board that consisted of lay community members who were part of the targeted population, business owners, local government officials, church leaders, and healthcare providers. In this randomized trial, we enrolled 352 individuals living in Appalachia who were at high risk for CVD by virtue of having two or more CVD risk factors. The intervention was delivered in person to groups of 10 or fewer individuals over 12 weeks. Depression was measured using the PHQ-9. The HeartHealth intervention was designed to provide participants with successful self-care skills appropriate to CVD risk reduction while reducing barriers to risk reduction found in austere rural environments, and addressing the high rate of depression in the population. The targeted CVD risk factors were measured at baseline and 4 and 12 months post-intervention.

Results: More individuals in the intervention group compared to the control group met their lifestyle change goal (50% vs 16%, p<0.001), and the presence of depression at baseline did not modify this relationship. The intervention produced a positive impact on objectively measured systolic blood pressure, diastolic blood pressure, total cholesterol, high density lipoprotein, body mass index, smoking status, and self-reported depressive symptoms. Compared to the control group, improvement was seen at 4 months in these risk factors and the positive changes were maintained through 12 months. There were no differences seen across time by group in low density lipoprotein or triglyceride levels. The presence of depression at baseline did not modify the effect of the intervention.

Conclusion: Interventions like HeartHealth that focus on self-care of CVD risk factors and that address the presence of depression with active coping strategies are effective in medically underserved, socioeconomically distressed rural areas with high rates of depression.