

Title:

Behavioral Counseling Promotes Diet Quality and Reduces Cardiovascular Risk Factors in Residents of Rural Appalachia

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Rising Stars of Research and Scholarship Invited Student Poster Session 2

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Cardiovascular disease, Healthy Eating Index and HeartHealth

References:

LeFevre ML. Behavioral Counseling to Promote a Healthful Diet and Physical Activity for Cardiovascular Disease Prevention in Adults With Cardiovascular Risk Factors: U.S. Preventive Services Task Force Recommendation Statement Behavioral Counseling in Adults With Cardiovascular Risk Factors. *Annals of Internal Medicine*. 2014;161(8):587-593. Mozaffarian, D., Benjamin, E. J., Go, A. S., Arnett, D. K., Blaha, M. J., Cushman, M., . . . Turner, M. B. (2015). Heart Disease and Stroke Statistics—2016 Update. *Circulation*, 133(4).

Abstract Summary:

Residents of rural Kentucky are noted for their disproportionately high levels cardiovascular disease (CVD) and CVD risk factors. This presentation will overview CVD risk factors and Intensive self-management counseling intervention regarding CVD risk reduction.

Learning Activity:

LEARNING OBJECTIVES	EXPANDED CONTENT OUTLINE
The learner will be able to identify CVD risk factors.	Overview of CVD risk factors
The learner will be able to identify Heart Health Intervention modules.	Overview of Intensive self-management counseling intervention (HeartHealth Intervention) modules.

Abstract Text:

Introduction: Kentucky consistently ranks in the top ten for worst health outcomes in the U.S. Fifty four Kentucky counties are in Appalachia, the region with the nation’s worst social, environmental and health conditions. U.S. Preventive Services Task Force recommends that adults who are overweight or obese and have additional cardiovascular disease (CVD) risk factors be offered intensive behavioral counseling that includes a healthy diet to promote CVD prevention.

Purpose: To investigate whether an intensive self-management intervention for CVD risk reduction (HeartHealth) improved diet quality and risk factors in persons living in rural Appalachian Kentucky.

Methods: A sample of 719 adults (age 53±14 years, 74% female, 43±19 years living in Kentucky, 87% overweight or obese) with two or more CVD risk were enrolled in the 12-week HeartHealth intervention that included strategies to improve diet to promote CVD risk reduction. Diet quality was measured by

healthy eating index (HEI) calculated from food frequency questionnaires with higher HEI score indicating more healthy diets. The intervention was delivered in small groups using culturally appropriate approaches. Paired t-tests were used to compare HEI scores and CVD risk factors pre- and post-intervention.

Results: HEI total score increased 8% from 63.3 ± 11.6 to 68.5 ± 11.4 ($p < 0.005$). HEI scores for total fruit; whole fruit; total vegetable; legumes, orange and dark green vegetables; whole grain; and milk increased by 31%, 28%, 7%, 20%, 15%, and 3% ,respectively, post intervention when compared to the baseline ($p < 0.05$). Diet quality for saturated fat; and calories from solid fats, alcoholic beverages and added sugar also improved by 28% and 12%, respectively ($p < 0.005$). Total cholesterol, systolic blood pressure, and hemoglobin A1C levels decreased from 191.8 ± 37.8 to 187.5 ± 36.9 mg/dL, 128.7 ± 16.4 to 125.2 ± 15.6 mmHg, and 5.77 ± 0.96 to 5.70 ± 0.90 %, respectively ($p < 0.005$).

Conclusion: An intensive behavioral counseling intervention promoted a healthy diet and reduced CVD risk in overweight or obese adults living in a rural socioeconomically distressed environment.