Association of dysfunctional eating with metabolic risk factors for cardiovascular disease in Latinos

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Abstract

Background: Latinos bear a high burden of nutrition-related cardiovascular disease (CVD) risk factors. Dysfunctional eating behaviors (emotional eating, uncontrolled eating, and cognitive restraint of eating) may influence metabolic CVD risk factors but little is known about this relationship in Latinos. Objective: To examine associations between dysfunctional eating behaviors and metabolic risk factors for CVD.

Methods: Latino individuals were recruited from a community health center. Participants completed standardized interviews (i.e., demographics, Three Factor Eating Questionnaire (TFEQ)-R19/21, Stress Scale-10) and anthropometric measurements. Data on diagnosis of type 2 diabetes, hypertension and hyperlipidemia were abstracted from medical records. Statistical analysis included multivariable logistic regression analysis for the association of eating behaviors with metabolic CVD risk factors.

Results: A total of 578 participants (51% female, 67% DC) aged 21-84 were included in this analysis. Controlling for age, sex, education and pre-existing stress, higher emotional eating (hEE) was associated with greater odds of obesity (OR=2.47, 1.34, 2.64) and diabetes (OR=1.00, 1.74, 2.36). High uncontrolled eating (hUE) was associated with obesity (OR=2.0, 1.2, 2.7) and diabetes (OR=1.0, 1.5, 1.7), high cognitive restraint (hCR) was associated with greater odds of obesity (OR=1.94, 1.06, 2.32), diabetes (OR=1.0, 1.5, 1.9), and hyperlipidemia (OR=1.0, 1.7, 2.4). Lastly, hEE, hUE, and hCR were significantly associated with higher rates of the metabolic CVD risk factors (hEE=1.0, 1.3, 1.6, hUE=1.0, 1.3, 1.6, hCR=1.0, 1.3, 1.6). Conclusion: Interventions that target eating behaviors may facilitate reduction of metabolic CVD risk factors and health disparities in CVD among Latinos.

Results (continued)

Discussion and Conclusion

• Dysfunctional eating behaviors were associated with metabolic risk factors for CVD in this sample of Latino men and women residing in the U.S.

• Consistent with other studies in European (6-8) and female (11) samples, hEE was associated with obesity. In addition, studies in European populations showed that disinhibition (a scale from the original TFEQ that contains EE, CR and restrained eating) is positively associated with diabetes (12,13), providing indirect support for our finding of EE and diabetes.

• The observed positive association between hUE and obesity is consistent with studies of female (11) and European populations (15). Our study also confirms previous findings of no association between hUE and diabetes (7).

• In our sample, CR was associated with higher odds of obesity, diabetes and hypercholesterolemia as well as consistent with prior studies in all female samples (8,11) and European populations (9, 12, 13).

• EE, UE and CR may influence CVD risk factors by affecting food selection. hEE has been associated with greater intake of palatable foods (16), which may contribute to development of these risk factors. hUE has been associated with greater intake of calories and fats (16) and thus may contribute to obesity through a positive energy balance. Lastly, under certain conditions, such as when distracted, individuals with hCR engage in greater caloric intake (17), which also may contribute to obesity and other CVD metabolic risk factors.

• Identifying modifiable behavioral targets for CVD risk prevention is critical to mitigate ethnic disparities in CVD. Additional studies are needed that focus on the association between dysfunctional eating behaviors and the development of risk factors for CVD, and that test modifications for both.