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

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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, Eating Disorders Examination-TEDE-R, Stress Scale-10) and anthropometric measurements. Data on diagnosis of type 2 diabetes, hypertension and hyperlipidemia were obtained from medical records. Statistical analysis included multivariate logistic regressions. **Results:** A total of 578 participants (51% female, 67% Dominican, ages 21-84, were included in this analysis. Controlling for age, sex, education and perceived stress high emotional eating (EE) was associated with greater odds of obesity (OR=2.47 (1.74, 3.24) and diabetes (OR=1.80 (1.07, 3.01)). High uncontrolled eating (uEE) was associated with obesity (OR=2.16 (1.34, 3.47) and high cognitive restraint (CR) was associated with greater odds of obesity (OR=2.55 (1.84, 3.46), diabetes (OR=1.78 (1.04, 3.09)) and hyperlipidemia (OR=1.92 (1.17, 3.14)). Lastly, uEE, uEE and high CR were significantly associated increasing the number of metabolic CVD risk factors (RR=1.39 (1.09, 1.79); RR=2.14 (1.04, 1.42); RR=1.45 (1.24, 1.69), respectively). **Conclusion:** Interventions that target eating behaviors may facilitate reduction of metabolic CVD risk factors and health disparities in CVD among Latinos.

**Background**

- Latinos are the largest and fastest-growing ethnic minority in the U.S., constituting a fifth of the U.S. population.
- Latinos bear a high burden of CVD risk factors with 80% of men and 71% of women having at least one risk factor (2). Compared to non-Latino Whites, Latinos are at disproportionally higher risk for CVD given their higher rates of obesity and diabetes (3).
- The elevated CVD risk among Latinos has important implications given anticipated limitations in future health care resources (4).
- Dysfunctional eating behaviors (emotional eating (EE), uncontrolled eating (UE) and cognitive restraint (CR)) have been associated with metabolic CVD risk factors among Latinas (5).

**Methods**

- **Participants** to examine associations between dysfunctional eating behaviors (EE, UE and CR) and metabolic risk factors for CVD, including obesity, diabetes, hypertension and hyperlipidemia in a sample of Latinos in the northeast U.S.
- **Participants** included 353 women and 225 men ages 18-84 from the University of Massachusetts Medical School.

**Results**

- **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, EE was associated with obesity.** In addition, studies in European populations showed that dysinhibition (a scale from the original TFEQ that contains EE and uEE) have been associated with diabetes (12,13), providing indirect support for our finding of EE and diabetes.
- The observed positive association between uEE and obesity is consistent with studies of female (11) and European populations (15). Our study also confirms previous findings of no association between uEE and diabetes (7).
- In our sample, CR was associated with higher odds of obesity, diabetes and hypercholesterolemia also 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.** EE has been associated with higher intake of palatable foods (16), which may contribute to development of these risk factors. NUE 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 CR engage in greater caloric intake (17), which also may contribute to obesity and other metabolic CVD risk factors.
- **Identifying modifiable behavioral targets for CVD risk prevention is critical to mitigate ethnic disparities in CVD.** Additional studies are needed that formally examine the association between dysfunctional eating behaviors and the development of CVD risk factors, and that test modifications for both.