Prevalence of Obesity and Risk Factors for Metabolic Syndrome among Uninsured College Hispanic Students in El Paso Texas

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BACKGROUND

• Studies that research metabolic syndrome (MetS) risk factors among university students are few, especially among students who lack access to health insurance
• The risk factors of MetS depicted below are associated with cardiovascular and other chronic diseases1-2

Methods

• 150 uninsured Hispanic students were recruited at the University of Texas at El Paso from 2015-2017 for this study
• The following data were collected:
  • Socio-demographic information
  • Height, weight, waist circumference, and blood pressure
  • Total cholesterol, HDL, LDL, triglycerides, and glucose
  • Biomarker results were provided and interpreted on site and clinic referrals were made when advisable
• Prevalence values were calculated overall and by sex
• Logistic regression analyses investigated the association of age, sex, income, marital status, a recent medical checkup, and perceived health with being overweight/obese and MetS risk factors

RESULTS

• Mean age (SD) was 24 (5.3), mean BMI was 25.9 (4.8)
• There was a low prevalence for MetS (10%), but 60% had at least one metabolic abnormality and 23% two or more
• Logistic regression after adjusting for socio-demographics showed that:
  • Overweight/obesity was significantly associated (p=0.005) with:
    • Age (OR=0.12 p=0.021)
    • Being male (OR=1.21 p=0.019)
    • Fair or poor perceived health (OR=1.16 p=0.036)
  • Large waistline was significantly associated (p=0.001) with:
    • Fair or Poor perceived health (OR=2.21 p=0.001)
  • High blood pressure was significantly associated (p<0.01) with:
    • Being male (OR=2.38, p<0.01)
    • Never being married (OR=2.61, p=0.01)
  • High triglycerides was significantly associated (p=0.03) with:
    • Being male (OR=1.87 p<0.01)

CONCLUSIONS

• Early detection of metabolic risk factors is crucial for disease prevention
• In the student population from this study, the majority have at least one risk factor, and males were at higher risk than females
• College campuses provide a distinctive setting for targeted program development and risk factor detection
• Program development is needed to raise awareness among university students
• Further research to identify causes of risk factors among college students without access to healthcare is critical

REFERENCES


Fig. 1: Metabolic syndrome risk factors and their current diagnostic values
Fig. 2: Prevalence of metabolic syndrome risk factors (overall and by sex)
Fig. 3-6: Team of health professionals collecting the measurements