

Does Metabolic Syndrome Prevalence Differ in College Students with or without Disability?

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Background

One in four people in the United States have a disability.¹ The disabled community could be considered the largest minority population in the nation.² People with disabilities are more likely than any other racial or ethnic groups to experience poor health status, avoidable chronic conditions, and higher death rates when compared to the general population.²⁻⁷ The health status of the disabled community is understudied. It is particularly important to study people with disabilities that are 18-24 years old because they are at a vulnerable point in their lives as they often experience rapid changes in their environment and new responsibilities.

Metabolic syndrome (MetS) and its criteria can be used to evaluate the early risk and progression of chronic disease because its link to diabetes mellitus, cardiovascular disease, and many types of cancer. Quantifying MetS prevalence among those with and without a disability may identify possible unequal risk of chronic conditions.

Purpose

To characterize the prevalence of metabolic syndrome (MetS) and its criteria in students with and without a disability.

Metabolic Syndrome Criteria⁸

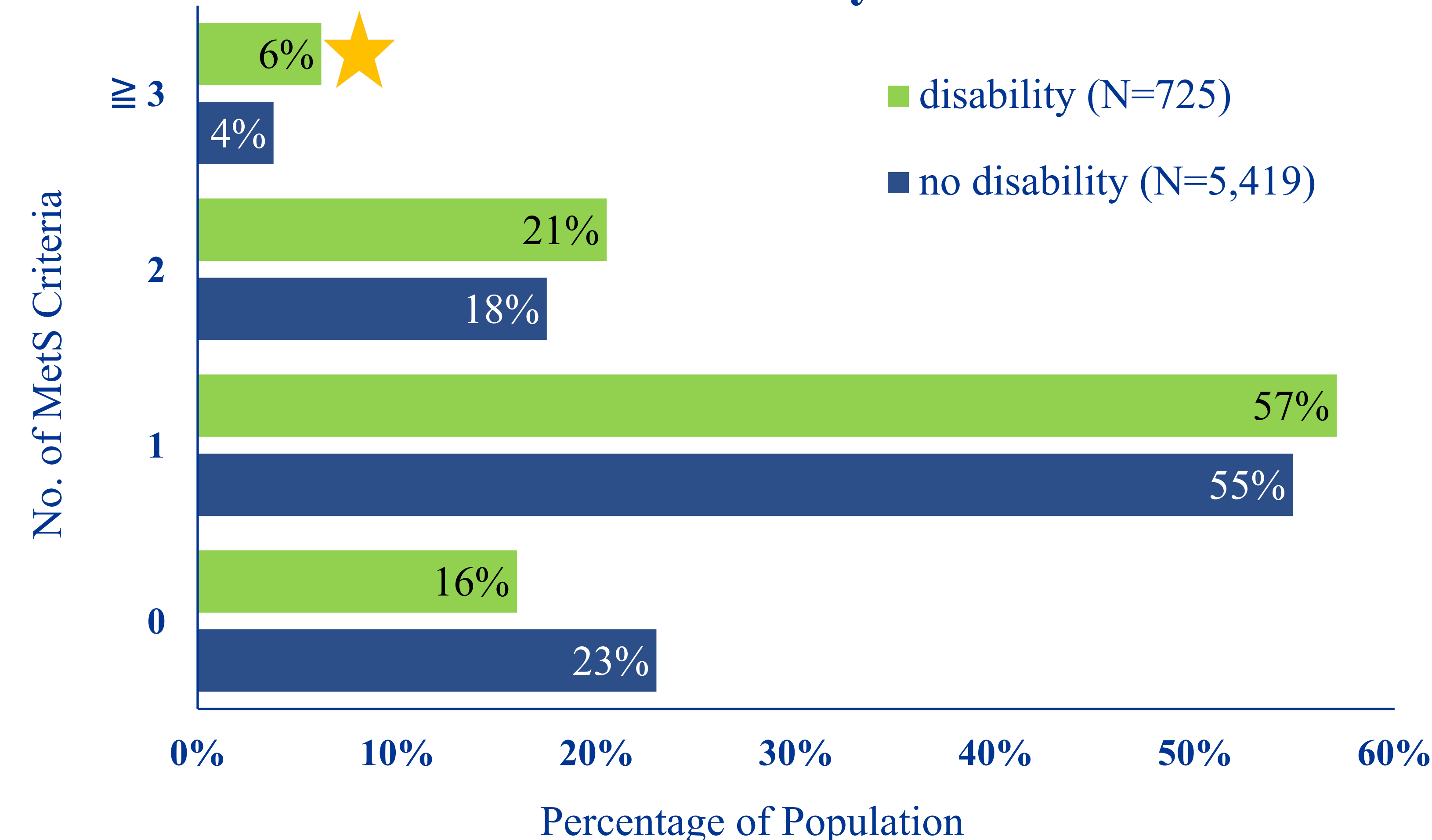
Criteria	Men	Women	Method
Waist Circumference	>102cm	>88cm	Gulick at iliac crest
Triglycerides	≥150mg/dL	≥150mg/dL	fingerstick
High Density Lipoprotein	<40mg/dL	<50mg/dL	fingerstick
Blood Glucose	≥100mg/dL	≥100mg/dL	fingerstick
Blood Pressure	≥130 or ≥85mmHg	≥130 or ≥85mmHg	automated cuff

Methods

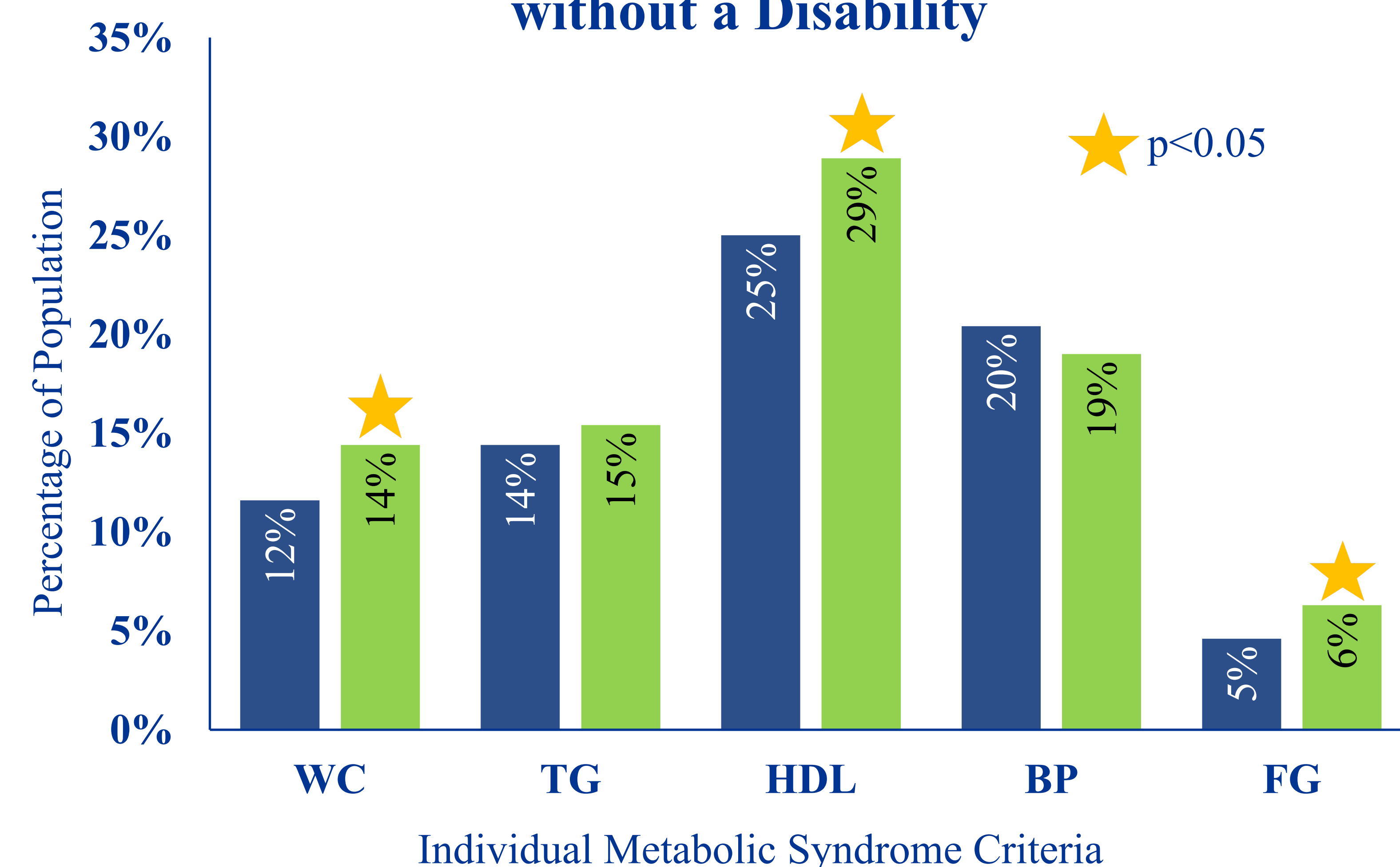
- Data were collected from the ongoing cross-sectional data between 2008-20 from the College Health and Nutrition Assessment Survey (CHANAS)
- Five individual criteria of MetS were evaluated after a 12-hour overnight fast; ≥3 criteria met the definition of MetS⁸
- Disability status identified via an online questionnaire by an affirmative response to at least one of two items based on limited activities and use of specialized equipment.
- Chi-square analyses were used to identify differences in the prevalence of MetS and its criteria among students with and without a disability.
- Logistic regression was used to predict odds of MetS; age, BMI, physical activity, alcohol consumption, gender, smoking status, race, and disability status served as covariates.

Results

No. of MetS Criteria in College Students with vs without a Disability



Individual Criteria of MetS in College Students with vs without a Disability

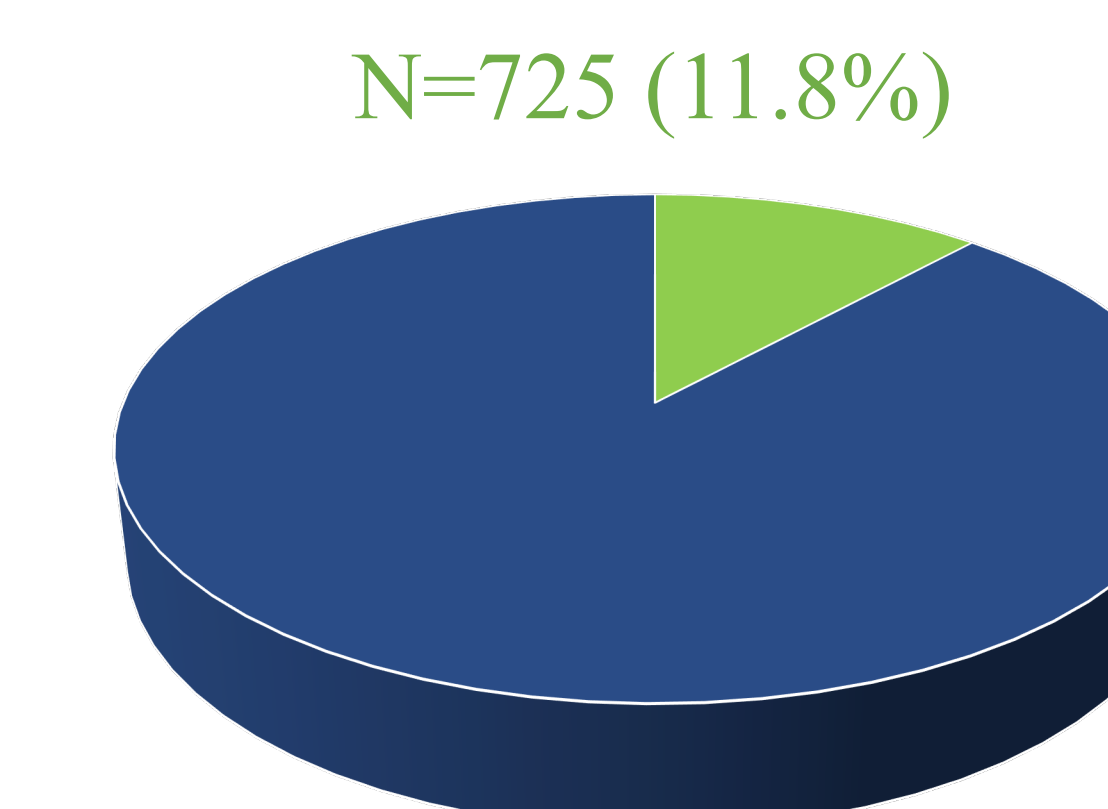


Demographics

	No Disability (N=5,417)	Disability (N=725)
Age (years)	18.9 (±1.1)	19.0 (±1.2)
Gender (female)	68.8%	74.0%
Race (white)	94.3%	91.7%
Caloric Intake (kcal/day)	2008 (±707)	1914 (±730)
BMI (kg/m ²)	23.4 (±3.5)	23.9 (±4.2)
Physical Activity (steps/day)	9962 (±3575)	9350 (±4260)
Alcohol Intake (drinks/day)	5 (±14)	5 (±15)
Smoking Status (yes)	6.5%	10.2%

Disability Status

Percentage of College Students Reporting Disability



“Are you limited in any activities because of physical, mental, or emotional problems?”
and/or
 “Do you now have any health problems that require you to use specialized equipment such as a cane, wheelchair, a specialized bed, or a specialized telephone?”

Key Findings

- MetS was higher among students with a disability compared to those without (6.2% vs. 3.8%, p=0.003).
- WC, HDL, and FPG metabolic syndrome criteria presented modestly higher in the disabled population compared to their non-disabled counterparts: WC (14.4% vs. 11.6%, p=0.023), HDL (28.9% vs. 25%, p=0.017), and FPG (6.3% vs. 4.6%, p=0.042).
- Logistic regression indicates similar odds of MetS for students with a disability after inclusion of covariates (OR: 1.05 CI: 0.7-1.7, p=0.83), compared to students without a disability.

Conclusion

College students with disabilities may have a greater risk for metabolic syndrome compared to students without a disability due to confounding lifestyle factors.

Future Implications

Results may inform organizations on campus to better direct targeted health promotion campaigns and inspire further research on the health status of students with a disability.

References

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