

# Prevalence of Elevated BMI and Blood Pressure Among Miami Health Fair Attendees: A MedSWISH Community Screening Study

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## Background

Hypertension and obesity are leading modifiable risk factors for cardiovascular morbidity and mortality, yet control rates remain suboptimal across the United States. In Miami-Dade County, underserved populations experience disproportionate barriers to preventive care and chronic disease management. Healthy People 2030 Leading Health Indicators (LHIs) emphasize the importance of improving hypertension control and reducing obesity as national health priorities. Medical Students Working to Improve Society and Health (MedSWISH) is a student-led organization that aims to address these needs by providing free health screenings, health education, and referrals for long-term care to community members at health fairs throughout Miami-Dade County.

## Objective

Assess the prevalence of elevated body mass index (BMI) and blood pressure (BP) among adult attendees of Miami neighborhood health fairs and identify priority leading health indicators (LHIs) for targeted intervention.

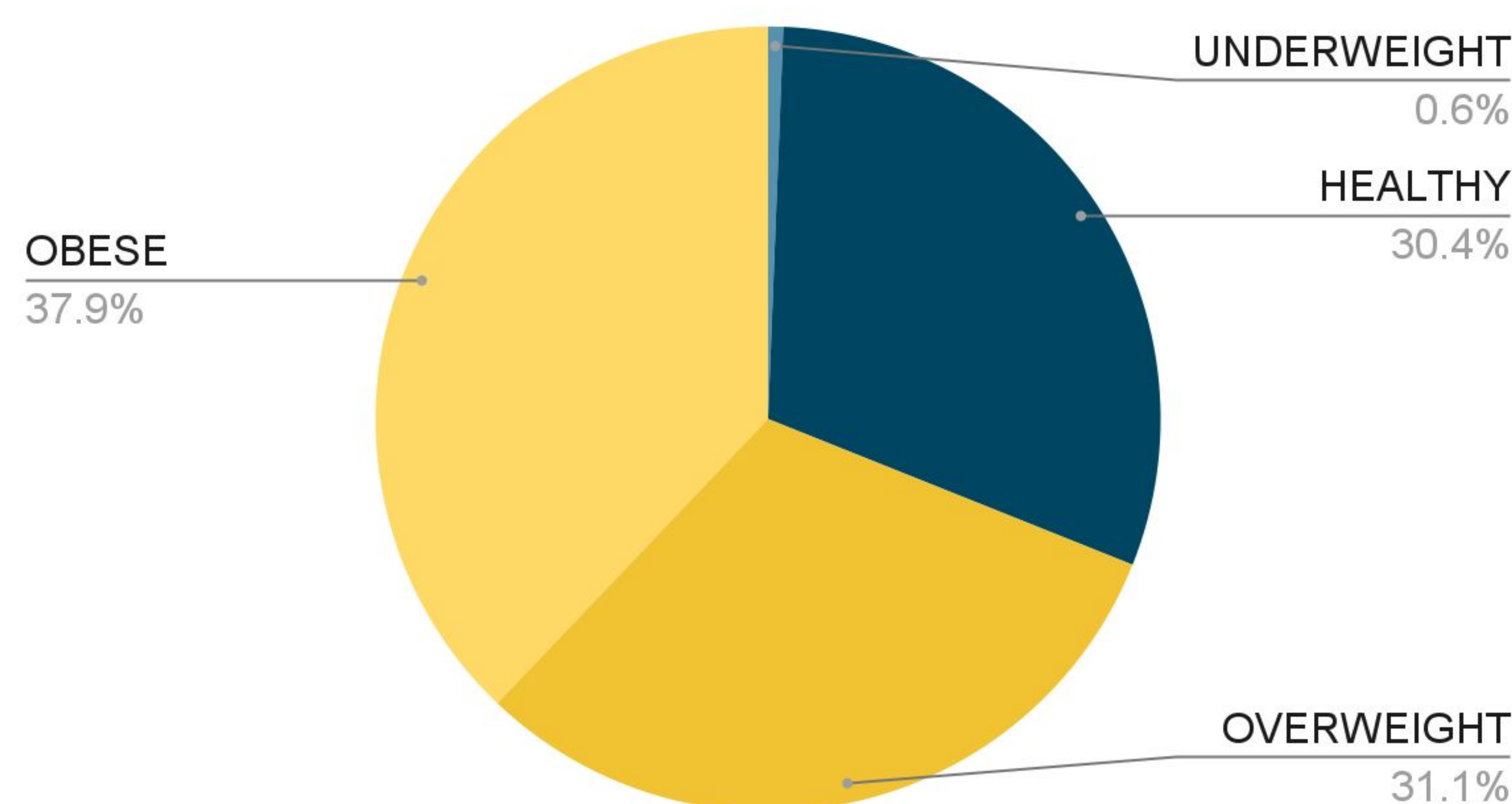


Figure 1: This pie chart shows the distribution of BMI among the 161 health fair attendees from April 2023 to May 2025

## Methods

**Study Design:** Cross-sectional study

**Sample:** 161 adults attending MedSWISH-led health fairs between April 2023 and May 2025.

- Individuals with missing data on key health indicators were excluded.

### Key Health Indicators

#### Body Mass Index (BMI):

- Categorized according to the National Institute of Health (NIH) guidelines (underweight: <18.5, healthy weight: 18.5-24.9, overweight: 25-29.9, obesity:  $\geq 30$ )

#### Blood Pressure (BP):

- Elevated BP was defined as systolic BP  $\geq 140$  mm Hg or diastolic BP  $\geq 90$  mm Hg.

Screenings were conducted under an IRB-approved protocol from Florida International University.

## Results

- Participants had an average age of 53 years and a mean BMI of 28.8 kg/m<sup>2</sup>
- Among them, 31.1% were overweight, and 37.9% were obese.
- The mean systolic BP was 136.1 mmHg, and the mean diastolic BP was 79.3 mmHg; of which 57.8% had an elevated BP

## Conclusions

Findings reveal a high prevalence of elevated BMI and BP among attendees, with 68.9% being overweight or obese and 57.8% having an elevated BP. These findings underscore the need for targeted education and resources to address these LHIs. Future efforts should focus on developing culturally tailored interventions to enhance health outcomes in Miami's diverse communities.



Figure 2: A medical student volunteer at a community health fair taking a manual BP of one of the community members.

## Acknowledgements

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