According to the USDA, in 2015 food insecurity impacted roughly 17% of the population with higher rates reported in the college population.

The objective of this study was to measure the prevalence and characteristics of food insecure students attending West Virginia University.

Methods

Surveys were emailed to 1191 professors at WVU to reach students during Fall 2016 semester.

A 56-item tool, developed by an Appalachian Multistate Collaborative, assessed food insecurity in college students.

Food security was classified using the USDA Household Food Security Module which separated individuals into 4 categories (high, marginal, low, and very low food security).

Results

The 692 students who responded were predominately white (94.3%), single (71.0%) with an average age 21.3 ± 4.0 SD. Students were spread across all academic years with the majority being full time (97.5%), freshman (23.7%) or seniors (23.5%) with an average GPA of 3.4 ± 0.5. Of the population, 36.6% (n=253) reported food insecurity.

Investigation of food secure and insecure students for sociodemographic variables showed significant associations between food security status and academic year, self-reported health status, and housing (all p < 0.05), as seen in Figure 1.

Food insecure students had higher weight (161.1 ± 39.8 lb) compared to food secure students (155.8 ± 35.4 lb) with a higher proportion categorized as obese that trended towards significance (p=0.06).

Discussion

This study reports that over 1/3 of students surveyed at West Virginia University were food insecure.

A majority of the food insecure population came from the Northeast and Southeast regions.

Food insecurity had increased association with students after their freshman year and those who lived off campus.

Food insecure students had worse health and academic outcomes and more likely to be categorized as obese compared to food secure students.

To promote wellbeing of all students, institutions must investigate the impact of these differences on the quality of life and academic success of food insecure students.

Interventions to improve food security status for all students should be developed for those most at risk, including students after freshman year and those living off campus.

Conclusion

These results represent a sample of food insecure and food secure college students in Appalachia.

Results suggest that food insecurity may attribute to poor academic outcomes in students.

Food Insecurity by Region

Figure 2: Food Insecurity Prevalence by Region

West (n=12) 25% Food Insecure

Midwest (n=48) 32% Food Insecure

Northeast (n=206) 39% Food Insecure

Southwest (n=5) 0% Food Insecure

Southeast (n=393) 38% Food Insecure

Food Insecure Students (n=253, 36.6%)

Food Secure Students (n=439, 63.4%)

Figure 1: Comparison of Food Secure and Insecure Student Characteristics

* Significant differences p<0.05; †Trending toward significance p<0.07

Human Nutrition and Foods, WVU Davis College – School of Agriculture, 2WVU School of Medicine; School of Public Health

Rebecca L. Hagedorn BS
Makenzie L. Barr BS, Melissa D. Olfert DrPH, RDN
1Human Nutrition and Foods, WVU Davis College – School of Agriculture, 2WVU School of Medicine; School of Public Health

Acknowledgement:
NIH NIGMS grant T32 GM081741