WISH4CAMPUS: Initial Investigation of Food Insecurity Prevalence and Outcomes at West Virginia University

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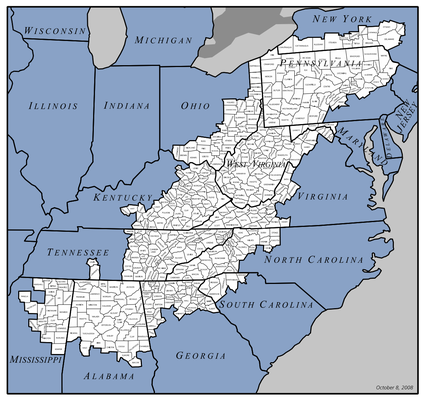
Introduction

- Food insecurity is defined as "limited availability of nutritionally adequate and safe foods or uncertain ability to acquire acceptable foods in socially acceptable ways''
- According to the United States Department of Agriculture (USDA), in 2013 food insecurity effected roughly 15% of the population
- Previous studies have shown food insecurity present in the college population at rates higher than the general population
- College-based food insecurity work is limited within the Appalachian region



Objective

- To measure the prevalence of food insecurity in students attending West Virginia University (WVU) as part of a multistate Appalachian collaboration
- To determine if food insecurity impacts self-reported health status in students
- To determine if food insecurity impacts coping strategies, money expenditure and academic progress

Methods

Survey Development
- 56 items, comprised 4 validated tools
- Food security classified using 10-item Household Food Security Module

Recruitment
- Emailed 1191 WVU professors in Fall 2016

Data Collection
- Qualtrics platform open to students until November 2016

Results

- 715 students (undergraduate n=505 and graduate n=134) students responded to the survey
- Respondents were predominately single (94%), Caucasian (89%), females (71%) with an average age 21 ± 4 years
- 37% of students (n=265) reported food insecurity (low or very low food security)
- Of 94 students reporting fair or poor health, 67% were classified as food insecure
- Food insecure students had higher BMI compared to food secure students

Results

Table 1: Summary Statistics (n=715)

Variable n (%)	Food Secure 450(63)	Food Insecure 265(37)
Gender		
Male	119(18)	68(11)
Female	302(47)	156(24)
Race		
White	351(58)	189(31)
Hispanic	13(2)	5(1)
African American	9(1)	9(1)
Asian	14(2)	3(1)
Biracial/Other	8(1)	3(1)
Home Region		
Midwest	33(5)	13(2)
Northeast	128(20)	74(11)
Southeast	248(38)	135(21)
Southwest	5(1)	0
West	9(1)	3(1)
Student Status		
Undergraduate	315(49)	184(29)
Graduate	102(16)	38(6)
Marital Status		
Single	396(61)	216(33)
Married	27(4)	9(1)
Employment Status		
Unemployed	166(27)	90(15)
Part time job	174(28)	100(16)
Full time job	27(4)	15(2)
Other	34(6)	9(1)
Age†	21.33±0.20	21.03±0.23
BMI†	24.72±4.83b	25.50±6.12lb
Health*		
Excellent/Good	366 (58)	171(27)
Fair/Poor	34(5)	60(9)

* Significant p-value <0.05 † trending toward significance p-value <0.08

Scale Descriptions

Coping Strategy Scale (CSS)
- 29 item scale
- Measures the coping strategies used by students to get food
- Higher scores represent using more coping strategies to get food

Money Expenditure Scale (MES)
- 8 item scale
- Measures money spent on items besides food
- Higher scores represent often spending food on items besides food

Academic Progress Scale (APS)
- 4 item scale
- Measures students self reported progress in school
- Higher scores represent better progress in school

Results

- Food insecure students showed lower academic progress scores and higher coping strategies and money expenditure scores. All significant by one way ANOVA

Coping Strategies
- Food insecure students display more coping strategies to acquire food
- p<0.0001

Money Expenditure
- Food insecure students spent more money on other items instead of buying food
- p<0.0001

Academic Progress
- Food insecure students showed lower progress toward graduation and class focus
- p<0.001

Conclusions

- This study reports that over 1/3 of students surveyed at West Virginia University were food insecure.
- These results suggest that food insecurity may attribute to poor self-reported health status and increased BMI.
- Further, food insecure students displayed more coping strategies, higher money expenditure and lower academic progress.

Collaborating Universities

1. Lanae Ball PhD, Appalachian State University
2. Diane Tidwell PhD, RDN, LDN, Mississippi State University
3. Carol Connell PhD, RDN, LDN, Southern Mississippi University
4. Maureen Berner PhD, University of North Carolina – Chapel Hill
5. Betsy Anderson Steeves PhD, RDN, LDN, University of Tennessee
6. Beth Wall-Bassett PhD, Western Carolina University

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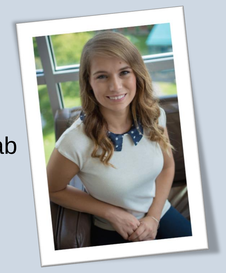

WestVirginiaUniversity.

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