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Abstract

Food insecurity, or the inability to consistently obtain the amount of food or quality of food necessary for one to live a healthy lifestyle, remains a relevant and often unnoticed issue that college students face. The purpose of this study is to understand how the different dimensions of college students' health are affected by food insecurity and to learn about what support or resources these students utilize and desire to help cope with their food situations. This study contains two components, including semi-structured interviews with the participants and a photovoice component. Through photovoice, participants take and submit photos that they feel represent how food insecurity impacts their health and their lives as college students. Analysis of the results focuses on detecting recurring themes of health effects derived from food insecurity as well as reported benefits and desires regarding resources intended for people, especially college students, facing food insecurity. Emerging themes consist of a lack of energy, missing out on wanted socialization, feeling the need to make unhealthy nutritional or health-related choices, and other health impacts. Patterns of a desire for a larger variety of food options and more advertising of resources available for food-insecure college students were also prominent.

Introduction and Background

Food insecurity, as defined by the United States Department of Agriculture, refers to lack of consistent access to enough food for an active healthy life and can include decrease in quality, variety, or desirability of the diet (Coleman-Jensen, 2018). The US Government Accountability Office composed a meta-analysis of 31 studies on food insecurity among college students. This research showed a wide range with 9% to over 50% of students being food insecure nationally (Governmental Accountability Office, 2018).

Food insecurity can impact physical, emotional, and behavior health. While there is limited comprehensive national research on the impacts of hunger on college students, in the general population food insecurity has negative impacts on behavioral, mental, and emotional health in (Helfin et al. 2005; Melchior et al. 2012), and in turn, poor health status can contribute to food insecure status (Tarasuk, 2013). Food insecurity may contribute to a downward spiral in a student's health, especially when combined with other stressors like pressure from school, work, and relationships.

Objectives

The purpose of this study was to understand how the different dimensions of college students' health are affected by food insecurity and to learn about what support or resources these students utilize and desire to help cope with their food situations. The study implications are vast and include the opportunity to raise awareness about the impacts of food insecurity on college students through their voice and their lens, allowing an in-depth view of food insecurity at ISU, and also an opportunity to formatively evaluate the progress of the food pantry.

Method

Sample

The study sought participants from students who access the School Street Food Pantry (logo shown to the right) and other students identified via a snow-ball sampling method as facing food insecurity. Recruitment took place through posters about the study that were available at the food pantry during the hours of 4-6 p.m. on Fridays when the pantry is open and Instagram posts. Interested students reached out to the researchers to sign up to participate via convenience sampling.



Study Design

Before student participants were contacted, study approval was sought from the ISU IRB. This study used a two-part qualitative approach through semi-structured interviews with participants as well as a photovoice component. Interviews took place via Zoom and lasted about half an hour to an hour long. The interviews have been and will be further analyzed by coding for key themes around impacts of food insecurity on health, academics, and other key factors. Regarding the photovoice component, it is an evidence-based, collective storytelling process that combines photography (sometimes videography) and social action. It empowers the participant to tell their story with meaningful expression through pictures (possibly video). Participants were instructed to photograph what they feel are their visual answers to the questions 1) How does food insecurity affect your health? and 2) How does food insecurity affect your life as a college student? For participating in the study, participants received a \$25 gift card to Walmart.

Results

This project took inspiration from Illinois State University's *Live Well with Eight at State* Program that compartmentalizes health into eight main dimensions. These dimensions include physical health, emotional health, environmental health, intellectual health, financial health, social health, spiritual health, and vocational health (Illinois State University, 2020). The *Live Well with Eight at State* dimensions were kept in mind when designing the project and analyzing the results. These dimensions interconnect to impact one's overall health, so these examples have been categorized but may relate to two or more of the dimensions of health. This study did not reveal any impacts on the spiritual health of college students facing food insecurity. Pictures and quotes from Photovoice submissions are used to represent the dimensions.

Financial Health



"Snacks are cheaper and save a lot more time than making a full meal. I know I am making a compromise on my health, but when money is tight, I need to do what I can to get by."

- ❖ Financial instability is the main cause of food insecurity
- ❖ Financial health is an overarching factor that impacts different dimensions of health
- ❖ Being a graduate student has impacts on financial health

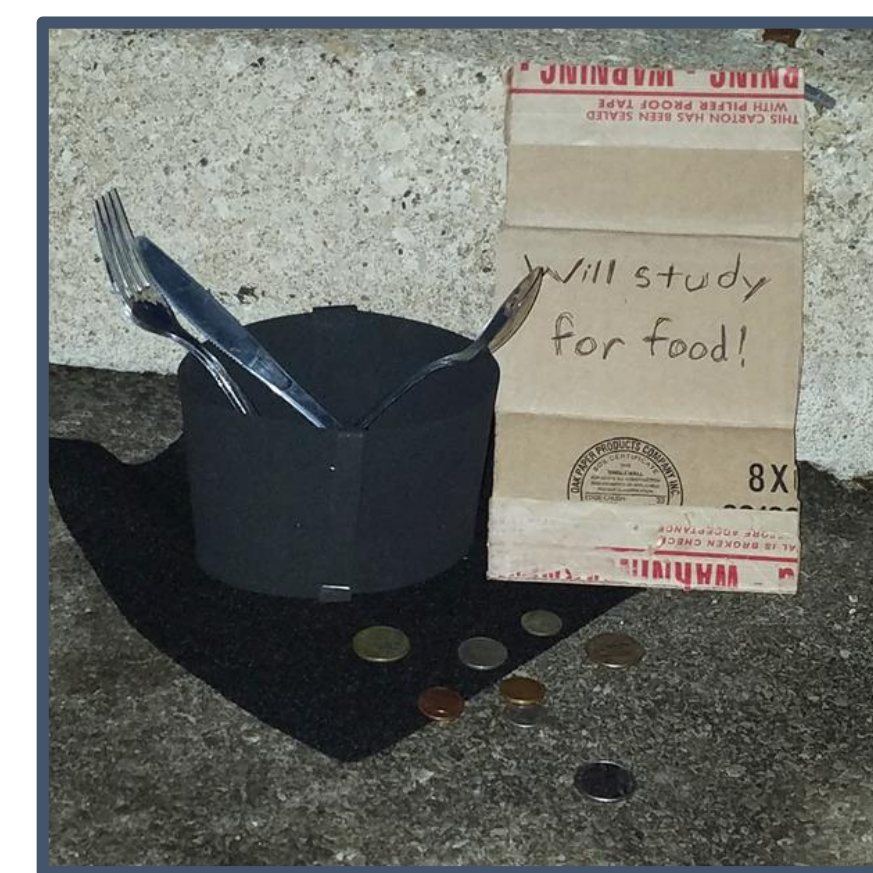
Physical Health



"While I know weight and health do not go hand-in-hand, in my life it is partly due to the price of .29 noodles and \$3 for fruits and vegetables."

- ❖ Headaches and nausea
- ❖ Fatigue, often leading to a sedentary lifestyle
- ❖ Difficulties maintaining weight
- ❖ Underconsumption of food/nutrients
- ❖ Frequent consumption of unhealthy foods
- ❖ Eating foods that cause illness/allergic reactions due to the affordable prices
- ❖ Avoiding healthcare appointments to save money

Intellectual Health



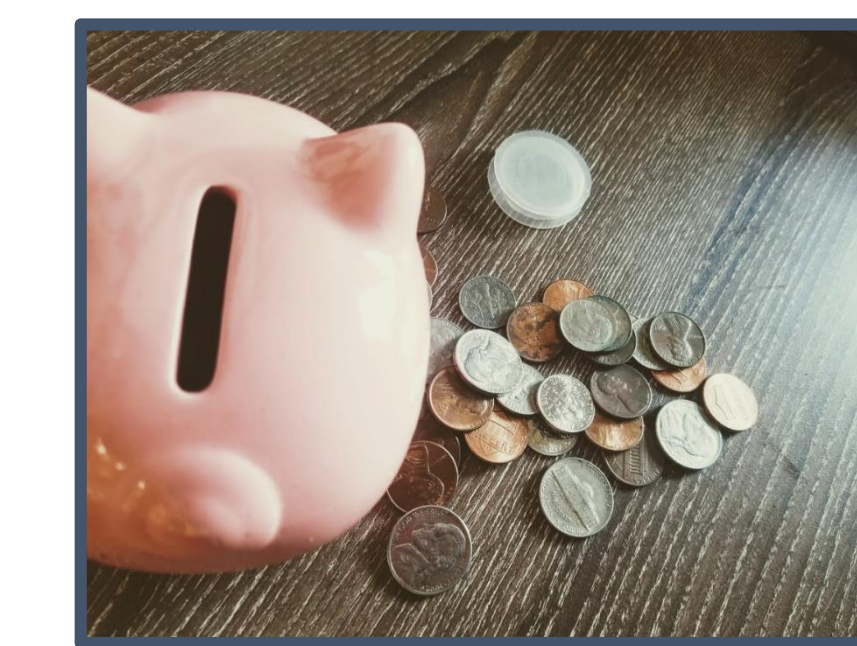
"Can't graduate if you don't study; can't study if constantly worried when your next meal will be."

- ❖ Inability to focus during class, often due to fatigue, hunger, or being distracted by food situations
- ❖ One participant discussed the inability to attend department-related events due to their financial situation and needing money for food



LIVE WELL
WITH
EIGHT at STATE

Social Health



"Food insecurity affects my life as a college student when it comes to going out with friends or ordering food. I am always counting my pennies, sometimes I even find myself paying for things in the change I have saved up."

- ❖ Inability to socialize regularly
- ❖ Negative feelings towards the need for plans to be made around them
- ❖ Disliking having to explain their situations
- ❖ Disliking having to choose between accepting financial help from friends and skipping meals/eating reduced portions

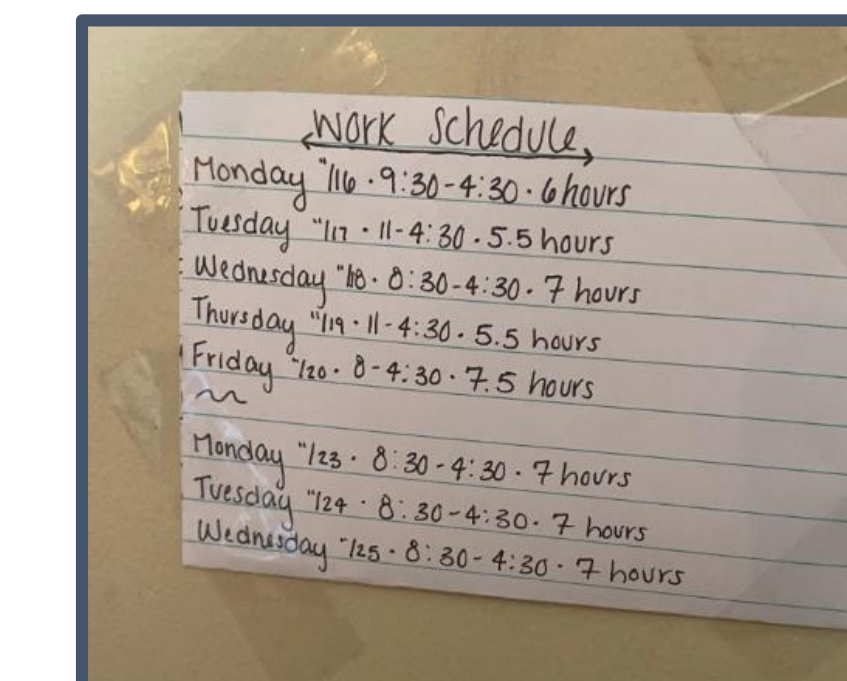
Mental & Emotional Health



"Eating the same foods can be boring and then cause binge eating"

- ❖ Stress, frustration, sadness, and embarrassment
- ❖ Being bored of food options
- ❖ Emotional numbness
- ❖ Inability to participate in certain self-care practices
- ❖ Pre-existing eating disorders affected and worsened

Vocational Health



"I have to work this much on top of going to school full time and another part time job just to make ends meet and make sure I can eat. This is what my college experience looks like –not parties."

- ❖ Working long hours on top of being a student in efforts to make enough money to buy food
- ❖ Not working enough hours for financial stability
- ❖ Working an extra job(s) to make enough money for food
- ❖ Difficult to make a living wage as a student

Environmental Health

- ❖ Food waste due to the affordability of bulk items
- ❖ Desire to start or return to a diet that feels healthier and benefits the environment
- ❖ Desire to buy local produce that is currently not affordable

Conclusion/Discussion

Preliminary analyses demonstrate health impacts of food-insecure college students in the dimensions of financial health, physical health, intellectual health, social health, mental and emotional health, vocational health, and environmental health. An unexpected finding from this project was the frequency of the inability to determine whether certain effects were caused or impacted by food insecurity or not. Phrases such as "I don't really know," "I'm not sure if this is related," and "I don't think this affects that," were often stated by participants when discussing health effects of food insecurity. We infer that this could be due to a lack of understanding of how food insecurity can affect the dimensions of health. Further studies would be needed to be conducted to examine this possibility.

We believe the ability of students to successfully have access to and use available resources is a tool that can help reduce the health impacts of food insecurity, specifically as a college student. Preliminary results help us to understand what resources available to college students facing food insecurity are known and being used by these students, what factors are helpful or could be improved related to resources, and how these students discovered these resources. Preliminary recommendations include:

Promotion of resources available for food-insecure students, especially through the utilization of:

- ❖ Social media
- ❖ Easy to find, campus-specific, online resources
- ❖ Redbird Life
- ❖ Health Promotion and Wellness website
- ❖ Posters, flyers, and sidewalk chalk on campus
- ❖ Encouraging awareness and advocacy about resources through word of mouth, specifically through RSO leaders and Professors
- ❖ Mention of resources in class syllabi

Implementation of methods that reduce the barriers that cause food-insecure students to not utilize resources available to them. Commonly noted barriers include:

- ❖ Long lines to use resources (especially problematic in the winter)
- ❖ Inconvenient time of resource availability
- ❖ Being unaware of resources that exist
- ❖ Being unsure of how to sign up for, apply for, or use resources
- ❖ Being unaware of the qualifications to use a resource
- ❖ Stigmas around getting help, resulting in feelings of shame and embarrassment
- ❖ Not having an ISU-specific food pantry, or (enough) ISU resources for food-insecure students

Encouragement and upkeep of helpful factors of resources for food-insecure students. Commonly noted helpful factors include:

- ❖ Free food and other available daily items (most notably, menstrual hygiene products)
- ❖ Letting pantry-users report their item-related needs to the pantry
- ❖ Friendly pantry staff
- ❖ A good partnership between ISU and community resources, especially the School Street Food Pantry

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