**How do students manage their eating habits on a campus often considered a food desert?**

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**Introduction**

Food deserts are places with limited access to affordable and nutritious food. It is an important topic discussion, because it affects students who reside on campuses, which are classified as food deserts. Campuses provide food that is convenient for most of the population. Usually, they would be in the form of fast food or basic dietary items which may not have enough nutrients. It impacts the academic performance of students as well as their physical and mental health (Dhillon et al., 2019). Food deserts affect a considerable percentage of first-year students as they are not accustomed to independent student life before. The organization which I considered as source for my research is University at Albany (SUNY).

The analysis through the theoretical and conceptual frameworks focuses on several aspects such as food consumption patterns amongst students, accessibility to healthy food, students coping mechanisms, impact on students` physical and psychological wellbeing and its influence on students` academic performance. Social Ecological Model (SEM), a well-known theoretical model that can address behavior at multiple levels of influence, is used in this study as a descriptive conceptual framework, not to predict outcomes or test hypothesis, but to clarify how above key factors connect each other and help inform on the challenges faced by students in food deserts.

Food deserts are typically in low-income and urban areas with limited access to fresh, nutritious food. Recently, studies suggested that schools, colleges, and universities students also face issues due to food deserts. But recent research has shown that problems of food insecurity have spread to college and universities, where students find it hard to access nutritious food. International students face challenges when they live at the University at Albany (SUNY Albany). For example, they face difficulties in accessing their cultural foods which are not available in local grocery stores (McMahon, 2020).

Campus food deserts are neither strictly a public health danger nor a great social threat. Students develop several challenges on (Aldaz et al., 2022; Dhillon et al., 2019) these campuses, such as problems with money, academic stress, and health conditions-all factors that make this a challenging time to practice healthy eating behaviors. Studies by showed that understanding how students navigate these complex environments constitutes one of the critical pieces in addressing key social inequities in health and educational outcomes. While food deserts are increasingly recognized as an urban issue, few original studies have been done with respect to how on-campus students orient themselves toward limited food access on a campus. In this light, the present study sought to contribute toward the filling of this gap by identifying those components and factors that involve students in disordered eating behavior and theoretical strategies for coping with food insecurity through using a descriptive conceptual framework.

**Situation to Self**

As both a student and a researcher, my motivation remains deeply rooted in understanding the influence that campus food deserts have on student welfare. The study will be informed by a constructivist paradigm with a view to grasping a uniquely subjective experience of students. It will seek to bring out how the students navigate the lived experiences of food insecurity with an adapted version of SEM as a conceptual framework considered proper for bringing structure to these complex interactions.

**Problem Statement**

College food deserts create a unique set of barriers in access to healthy food, which could be related to the eating behavior, health, and academic performance of students. The campus environment, although situated in urban contexts, presents a challenge to narrowed food options, economic limitations, absence of cooking facilities, and institutional policy. While a number of studies have conducted food deserts in an urban setting, such as (Crowe et al., 2018; Dhillon et al., 2019), little has been done to understand how college students navigate such barriers. This study hopes to fill such a gap and shall ascertain factors that affect consumption of food in SUNY Albany together with the coping strategies that students adopt (SUNY).

**Purpose Statement**

The present study will fill the gap through an exploratory-descriptive conceptual framework of college students' eating behavior and their coping mechanisms in campus food deserts. It is a qualitative-descriptive attempt to explain how students engage in healthy and unhealthy eating behaviors amidst the resource-poor environment of the campus while exploring individual, interpersonal, community, and policy antecedents of the same behaviors. In this context, eating management refers to the decisions, actions, and behaviors the students have adopted as a response to and while consuming food in the context of food security on campus.

**Significance of Study**

It is a study undertaken to explore how students survived and tolerated the campus food desert. It examines closely these behaviors for the strategizing of ways in which ways students can have access to and consume healthy foods within the constraints of finances and planning. The findings also provide a roadmap to implement targeted interventions, such as improved food policies, enhancement of campus nutrition, and increasing access to affordable groceries. These interventions represent a friendly food campus environment; most of them, however, focus on the physical and mental welfare of students in view of their academic performance. (McMahon, 2020; Wynne, 2014).

**Research Question**

How do students manage their eating habits on a campus often considered a food desert? This question investigates the adaptive behaviors and dietary practices students undertake when confronted with the limitations of a campus food desert.

**Definitions**

1) Food Desert- A area where a person has a limited access to health and nutritious food due affordable price or within any convenient distance (Pelletier & Laska, 2012).

2) Social Ecological Model (SEM)- A conceptual framework that outlines how behaviors are shaped through the interaction of factors at the individual, community, and policy level. It was used in this research as the conceptual framework explaining factors determining eating behavior of students (Pelletier & Laska, 2012).

3) Food Habits- Strategies, choices, and behaviors demonstrated by students while accessing yet consuming food in a food desert (Dhillon et al., 2019).

**Literature review**

**Conceptual or theoretical framework**

The Social Ecological Model serves as a conceptual framework from which this study was positioned. The SEM, introduced by Bronfenbrenner in 1977, has been applied widely in public health and social science research regarding how the interaction of factors at an individual, community, and policy level collectively shapes behavior. This in turn enriches the approach toward complex, multi-dimensional problems like those of food insecurity, where personal, environmental, and systemic factors will most likely interplay.

In the current study, SEM was used to determine what specific barriers students experience when trying to access healthy food within a campus food desert. For instance, Pelletier and Laska, 2012 concluded that institutional dining policy fails to meet nutritional and economic needs; hence, it reduces the motivation to maintain healthy diets. This study applied SEM to understand those crossing barriers and went further to offer practical ways of overcoming those individual and structural obstacles. The present study extends the use of SEM in campus-specific identification of food deserts and develops a more specific understanding on students׳ eating behaviors and coping strategies with a view to further promoting their health and well-being.

**Related Literature**

**Barriers to Access Food**

Major barriers to accessing healthy foods in food deserts are economic and logistic in nature. Crowe et al., 2018 exhibit that financial limitations considered with transportation means contribute highly to food insecurity in urban food deserts, just like the college student having a slim budget also has slim options when it comes to food alternatives that are accessible in the community. Further added by, (Antwi et al., 2024), the challenges faced by international students differ in that they include exploration of new food environments while the culturally known food might not be available within a campus radius. These barriers easily manifest themselves in a student-union setting such as SUNY Albany because while healthier food options might be provided, such food is normally out of reach for any student who would require three decent meals a day.

**Coping Mechanisms**

Students adopt coping mechanisms in addressing the problem of food insecurity which impact negatively on the quality of their diets. It was seen that the minority college students who resided in the food deserts managed to work around limitations to food access by consuming cheap and calorie-dense foods, skipping meals, and relying on family-provided meals. This was according to (Dhillon et al., 2019). (Deliens et al., 2014) stress factor, coupled with the time constraints and the easy accessibility of fast foods, shapes university students to poor nutritional choices. Until the reform agenda takes effect, these coping strategies bring forth the need for institutional remedies affecting both the availability and affordability of healthy food.

**Health Effects and Academic Performance**

Health and Academic Performance Food insecurity strongly affects students' health and academic performance. According to (Frndak, 2014), food insecurity effected the academic performance of New York school students. Their findings show that food insecurity affects performance adversely in core courses of academic math and science.

These studies have associated food insecurity with increased levels of fatigue, stress, and poor concentration-all elements that may stand in the way of students performing well academically. These, alongside the prevalence of food insecurity, are pointers to the need for interventions in ensuring that food challenges impinge as little as possible on students' physical and mental health and their performance.

**Policy and Structural Barriers**

Policies play a vital role in determining the students' level of food access and affordability. According to (Pelletier & Laska, 2012), campus dining policies fail to meet the financial and dietary needs of the students; a situation that calls for systemic change to ensure accessibility.

As (Widener & Shannon, 2014) have so aptly pointed out, research into the access to food needs to accept the aspects of time-food-service hours and students' schedules. The above structural inflexibility raises further questions with respect to the most appropriate path toward policy reforms that might answer a myriad of needs and preferences of a diverse student population.

**Research Gap**

Most studies have targeted the general population or urban communities but not college campuses, which are amongst the most unique food environments-those where healthy options exist but are often too expensive or unreachable for students because of economic or structural barriers. Besides, most literature rarely investigates the way students surmount these issues but more significantly, the coping mechanisms and adaptive behaviors developed to endure through them.

**Synthesis**

This present study, therefore, tries to fill this gap by exploring the lived experience of SUNY Albany students who are struggling with food insecurity, yet navigating the limited and costly food opportunities. This study also hopes to add to the literature being utilized to build institutional policies and interventions that will improve food security. Hence nurturing overall well-being and academic success among students.

**METHODS**

**Design**

Qualitative approach: Given the complexity and nuances of such phenomena as food insecurity, it would be a great enhancement to the field because, for instance, it will allow data collections that are incredibly detailed about behaviors and coping strategies among the lived experiences of students. For instance, (Crowe et al., 2018; Dhillon et al., 2019) have suggested a single instrumental case study design with the purpose of investigating how institutional policy manifests and amplifies the individual-level challenges within SUNY Albany. This unusual setting will have the research make both contextual and transferable recommendations when applied to similar settings in any campus.

**Setting**

SUNY Albany, a university setting with healthy food on the stage, is mostly inaccessible to a student who would seek three nutritious meals a day. Let us not forget, the economic alternatives to eating are more than limited, especially for international students, because, in addition to all obstacles, there are issues in accessing their cultural foods.

The campuses would be observed to understand the food availability, affordability, and variety in the campus dining halls, food courts, and convenience stores. They also consider the access and adequacy of grocery stores and food pantries on or off campus. Meal plans' structure and institutional policies and student dining policies will be reviewed for systemic barriers (Pelletier & Laska, 2012).

**Participants**

The study will involve 12–15 SUNY Albany students varied in their background to get a wide array of food access issues. Purposive sampling will be used in selecting participants to ensure the inclusion of individuals with direct and relevant experiences (Deliens et al., 2014). This will include students currently enrolled at SUNY Albany and obtaining their food from campus and/or off-campus nearby. It will not be available to those who have access to alternative food off campus or funding elsewhere. Participants will represent a range in demographic diversity and include a diverse set of ages 18-24 years old, sex, ethnicity, and classes first-year students through seniors.

**Procedure**

This research will be completed in a series of steps, first by acquiring an IRB review at SUNY Albany to make sure that it goes according to ethical guidelines. The methods of recruitment will include email, flyers, and word of mouth. Informed consent will be provided by all respondents in full understanding of the purpose of the research and of their rights. This is to be achieved through interviews, observation, and analysis of documents, described in more detail in the following sections.

**The Researcher’s Role**

I serve as the "human instrument" for collecting and analyzing data. Currently, as a graduate student working on the campus of SUNY Albany, I have contextual knowledge of the campus environment which helps me to better sympathize with the challenges of food accessibility. Biases will, therefore, be jotted down and replayed for neutrality using reflexivity. Findings will be validated by peer debriefing and member checks(Crowe et al., 2018). I will conduct interviews, visit campus dining facilities, and go through institutional policies. I will be following the ethical guidelines on confidentiality and informed consent.

**Data Collection**

Three main methods will be used for data collection: semi-structured interviews, observations, and document analysis. Semi-structured interviews, between 30 and 45 minutes each, will ask about participants’ eating behaviors, coping mechanisms, and perceptions of food access (Dhillon et al., 2019). Among the questions will be, “What challenges do you face in accessing affordable meals?” and “How do you navigate your dietary restrictions on campus? Campus dining halls and other food sources neighboring the campus will be visited to document food availability, pricing, and diversity through observation. Notes from the field will include information about the menu pricing and student engagements. The project will also analyze institutional policies, meal plan structures, and archival records to identify systemic barriers.

**Data Management Plan**

The data management plan describes how data will be collected, organized, stored, protected, analyzed, and shared during the research process. It ensures that the data remains accurate, sensitive, and available, and complies with ethical and institutional standards.

**Data Storage and Security**

Data security is of utmost concern. All data will remain on password-protected devices and backed up on a secure, encrypted external hard drive. I will also use a secure cloud storage service, such as OneDrive or Google Drive, as a second backup. The researcher and supervising faculty will have access to data, which is encrypted and uses strong passwords for protection. To ensure participants’ privacy and confidentiality their names will be replaced with pseudonyms, and consent forms will be maintained in a separate secured repository either physically or digitally (Widener & Shannon, 2014).

**Data Analysis**

The data analysis will begin with transcribing and organizing interview recordings and observation notes. Open coding will be applied to six identify common themes such as financial challenges and dependence on budget meals. Using axial coding, we will link coding through interconnected themes to broader categories (for example, coping strategies, health impacts). Thematic analysis will identify themes relevant to the research questions, such as “Financial Barriers” or “Dietary Adaptation Strategies.” Data from the interviews, observations, and document analysis will be triangulated to ensure reliability and validity (Deliens et al., 2014).

**Data Sharing and Publication**

Data cannot be shared or published that can identify any individual; therefore, all data released in reports, presentations, or other products will be anonymized. Identifiable details will be removed from participant interviews, and direct quotes will be examined to make sure they do not identify individuals. As per institutional guidelines, the raw data will be retained for 5 years post the completion of research study. That data will be securely cut afterwards, with paper documents shredded and digital files wiped out for good. If other researchers are interested in the data for future studies, they must make a formal request and sign strict confidentiality rules, according to SUNY Albany’s policies.

**Trustworthiness**

To provide the credibility and reliability of the study, strategies will be used. Credibility will be established through member checking, in which participants will review​ the findings to ensure accuracy. Dependability will be achieved through maintaining a detailed audit trail documenting the research process. By providing rich details about the campus context to aid transferability, the study will have the potential to allow other investigators to transfer findings to other prestigious campuses. To ensure confirmability, data triangulation such as reduction of researcher bias will be done that will help in increasing the objectivity of results (Aldaz et al., 2022).

**Ethical Considerations**

All participants will be assigned pseudonyms to ensure participant identities are protected in the research report. Demographic information will be reported in aggregate with respect to confidentiality, in either narrative or tabular form. Participation will be on a voluntary basis with informed consent obtained prior to data collection. Involving a diverse mix of individuals will facilitate discovering a wide range of experiences and coping strategies, thereby providing a more holistic understanding of food insecurity, and eating behaviors on a campus food desert.

**Conclusion**

While this study has focused on food insecurity on college campuses, growing into an issue with profound consequences for the health, academic outcomes, and well-being of students. The current research tries to meet the challenges mentioned in establishing the ways in which SUNY Albany students negotiate limited and costly access to healthy food. This study uses a qualitative case study approach and is informed by the Social Ecological Model (SEM) to identify the factors that influence students' dietary practices, their coping strategies, and their experiences within a campus food desert.

Through interviews, observations, and a careful analysis of institutional policies, this study sets out to make meaning of the challenges students confront with food insecurity and how they cope. The results will help identify actionable items that can lead to more campus dining options, better access to food, and better support systems in place for students. This study is not meant only to make SUNY Albany's food environment greater but also to ignite discussions and initiatives that, working together, will work to address food insecurity across many other college campuses.

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