Food Justice is Health Justice: Benefits and Barriers to Connecting Student-Run Free Clinics with Student-Run Organic Gardens

Hana Baig, *Department of Biology*
Abby Choy, *Department of Biology*
Arushee Sangani, *Department of Biology*
Marc Debay, *M.D., M.P.H., Ph.D. School of Medicine*
Daniel Novak, *Ph.D., School of Medicine*

ABSTRACT

Food deserts in low-income and underserved communities pose a significant challenge to accessing healthy, affordable food, leading to poor health outcomes for residents. This project aimed to address this issue by examining the benefits and barriers that arise from connecting a student-run community garden (SRCG) with student-run free health clinics (SRFCs) to provide low-income patients with access to sustainable food and nutritional education. Using a case study research model, the study focused on investigating the organizational structure and potential mismatches between the two kinds of student-run systems. Birnbaum's Higher Education Organization Framework (1992) was utilized to analyze how loosely and tightly coupled organizations can affect the success of collaboration. Vignettes were developed based on participants' observational experiences, and lessons were derived from fields and discussions with participants. The study identified several organizational barriers that complicated the relationships between student-run organic gardens and student-run free clinics. The SRCG was a loosely coupled organization with little centralized cybernetic control, and the lack of organizational structure in SRCGs made it challenging to use SRFCs as outlets for providing fresh food to patients in the free clinics. Although connecting SRCGs and SRFCs shows promise for increasing food access and promoting health, the study found that it remains challenging to use gardens as food production systems without creating a more cybernetically controlled structure in the SRCGs. By analyzing the benefits and barriers that arise from connecting these two organizations, this project sheds light on the potential of student-led initiatives to address health disparities and promote sustainable food systems in underserved communities.

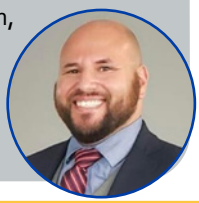
KEYWORDS: Food Insecurity, Community Garden, Free Clinics, Student Run, Cybernetic, Anarchic

FACULTY MENTOR - Dr. Marc Debay, School of Medicine

Dr. Debay is a health sciences associate clinical professor of family medicine for the University of California, Riverside School of Medicine and director of the UCR Family Medicine Residency Program. He is board certified in both family medicine and preventive medicine. His interests include comprehensive patient-centered primary care, program evaluation and quality improvement, and global health education of physicians and other health professionals.

FACULTY MENTOR - Daniel Novak, School of Medicine

Dr Novak is an assistant professor in the Department of Social Medicine, Population, and Public Health and director of scholarly activities. His research focuses on cutting-edge educational technologies to support professional development. He came to UCR from the Keck School of Medicine at USC, where he was an instructional designer at the Center for Innovative Medical Education and Technology and an assistant professor of clinical medical educ.



Hana Baig

Hana Baig is a fourth-year Biology major who currently studies how student-run community gardens and student-run free health clinics can work together to provide low-income patients with sustainable access to food and nutritional education. Funding for this project is provided by the UCR Chancellor's Research Fellowship. Currently, she is the president of Gardening Club, Vice-Chair of the Student Health Advisory Council, and a Dr. Eugene A. Moynier Scholar. After graduating, she hopes to pursue medicine with an emphasis in Public Health.

Arushee Sangani

Arushee Sangani is a third-year Biology major. As Research Officer in the Inland Empire Street Medicine Free Clinic, she is interested in investigating the potential for connecting free clinics and community gardens to better support the patient populations she works with. She will be pursuing a career as a physician.

Food Justice is Health Justice: Benefits and Barriers to Connecting Student-Run Free Clinics with Student-Run Organic Gardens

INTRODUCTION

This project focuses on the integration of a student-run free health clinic with a student-run community garden, aiming to provide low-income residents with access to fresh produce and nutritional education. The partnership between student-run organic gardens and student-run free clinics can help ensure that low-income communities have the knowledge to make use of these resources. However, connecting these organizations can be challenging due to their different structures. This study examines the University of California, Riverside's R'Garden, and the Inland Empire Street Medicine (IESM) free clinic, using Robert Birnbaum's organizational framework theory to classify them as anarchic and cybernetic organizations, respectively. The R'Garden provides a space for growing fresh produce and is characterized as anarchic, while IESM aims to increase access to healthcare and is highly cybernetically controlled. The study explores the potential benefits and difficulties of connecting these two initiatives with different organizational structures.

The Inland Empire Street Medicine Free Clinic and the R'Garden began their partnership to address food insecurity in the Inland Empire region of California, specifically in Riverside. Food insecurity in Riverside is a prevalent issue affecting many individuals and families. According to a data dashboard from the Riverside County Community Health Assessment, which provides information on food insecurity rates and associated health outcomes in Riverside County, the food insecurity rate in Riverside County is 16.3%, which translates to over 240,000 individuals. This rate is higher than the national average of 10.5%. The problem of food insecurity is particularly acute in low-income communities and neighborhoods which have fewer grocery stores in comparison to neighborhoods of wealthier non-minorities (Berg and Murdoch, 2008; Powell et al., 2006; Block et al., 2008; Larson et al., 2009; Deener, 2017). With limited access to affordable, nutritious food, many residents in these areas face challenges in accessing healthy food options due to factors such as a lack of transportation, limited grocery store options, and a lack of income to purchase healthy foods. These barriers make it difficult to maintain a healthy diet leading to poorer health outcomes (Chung and Myers, 1999; Freedman, 1991; Hendrickson et al., 2006). These areas of High Poverty/Low Access (HPLA) are plagued with chronic illnesses such as heart disease, diabetes, obesity, and hypertension; the prevention of which depends on a proper diet. This mismatch between food availability and dietary needs puts these communities in a vulnerable position. Progress towards remedying this injustice and reducing health disparities begins with creative partnerships, such as connecting community gardens with patient clinics.

THEORETICAL FRAMEWORK

Birnbaum's cybernetic theories offer a comprehensive framework for understanding the functioning and organization of complex systems, particularly within the context of higher education institutions. This theoretical perspective focuses on the interconnectedness, communication, and feedback loops that exist within systems, emphasizing their adaptive nature and ability to respond to changes in the environment.

At the core of Birnbaum's cybernetic theories are two fundamental concepts: tight coupling and loose coupling. Tight coupling refers to strong interdependence and close communication between components of a system, leading to a higher degree of coordination and control. In contrast, loose coupling represents a more flexible and autonomous relationship between components, allowing for greater adaptability and resilience in the face of change.

Birnbaum also contrasts cybernetic and anarchic organizations, which represent two distinct approaches to organizing and managing complex systems. Cybernetic organizations emphasize tight coupling, strong interdependence, and close communication between

components, resulting in a higher degree of coordination and control. They often involve hierarchical structures and clear communication channels, allowing for efficient decision-making and resource allocation.

In contrast, anarchic organizations are characterized by loose coupling, where components have more autonomy and flexibility, leading to a greater capacity for adaptation and resilience. Anarchic organizations typically lack a formal hierarchy, and decisions are made through a collective process that encourages participation and diversity of perspectives. While cybernetic organizations are well-suited for stable environments where predictability and control are paramount, anarchic organizations tend to thrive in more dynamic and uncertain contexts, where adaptability and responsiveness are crucial for success.

The R'Garden can be classified as an anarchic organization based on its structure and characteristics. Anarchic organizations are characterized by a lack of formal hierarchy or authority, with power and decision-making distributed among all members. The R'Garden fits this description because it is an open space for students, faculty, staff, and community members to grow fresh produce, with no central authority or hierarchy controlling the organization. The R'Garden operates with a shared decision-making process and consensus-based decision-making structure, with all members having equal input and authority in the organization's decisions. The organization relies on a self-organizing system that allows members to take on tasks and roles based on their skills and interests, without a central authority controlling or assigning tasks. Furthermore, the R'Garden operates as an open community space, with no formal membership or registration process, and no official leaders[1]. This creates an inclusive environment where all members feel valued and empowered to participate in the organization's decision-making process.

The Inland Empire Street Medicine Free Clinic can be classified as a cybernetic organization based on its structure and characteristics. IESM's highly cybernetic structure is evident from its focus on providing healthcare services to low-income individuals experiencing homelessness in the Inland Empire. The organization relies on close collaboration between medical professionals, student volunteers, and medical students to provide comprehensive care to its patients. Additionally, IESM's hierarchical structure, with physicians and medical students serving as the primary decision-makers, further reinforces its cybernetic classification.

In the context of connecting student-run community gardens and student-run free clinics, Birnbaum's cybernetic framework provides a valuable lens for examining the interactions, communication, and adaptation within complex systems. By applying these concepts to the study of higher

1 While such forms exist on their website, R'interns do not have access to those forms and informally create new ones for limited audiences

Food Justice is Health Justice: Benefits and Barriers to Connecting Student-Run Free Clinics with Student-Run Organic Gardens

education institutions or other organizations, researchers can gain a deeper understanding of the underlying dynamics that drive decision-making, resource allocation, and overall performance. Using this framework, this study explores the potential benefits and difficulties of connecting student-run community gardens and student-run free clinics, despite differences in their organizational structures. Moreover, this framework can help identify areas for improvement and suggest strategies for enhancing adaptability, efficiency, and resilience within these systems.

STUDENT-RUN COMMUNITY GARDENS AND FREE CLINICS

Community and student-run gardens are an increasingly popular means of promoting healthy eating habits and providing fresh, locally-grown produce, as evidenced by studies such as Hume et al. (2022). Such gardens have the potential to improve access to fresh, nutritious food in low-income communities and provide numerous benefits to both gardeners and community members. In addition to promoting social interactions and networks, community gardens also have the potential to increase the cohesiveness of the community and improve overall well-being. Student-run gardens provide opportunities for hands-on learning experiences and leadership development for students. However, managing and sustaining these gardens can be challenging due to limited resources, administrative control, and seasonal variability, as noted by Jacobs and Kinzie (2012). It is important to consider organizational factors and sustainability to ensure long-term success. Despite these challenges, community and student-run gardens have been successful in promoting healthy eating habits, community engagement, and environmental sustainability, making them an important component of food systems and community development.

Student-run free clinics (SRFC) have become an essential part of healthcare provision for low-income and uninsured populations in the United States. As Holmqvist et al. (2012) highlights, SRFCs were founded in the early 1960s as a means of providing affordable community-based healthcare services. Typically, medical students staff these clinics under the supervision of licensed healthcare providers and operate on a voluntary basis. By providing free or low-cost healthcare services, SRFCs address the significant gap in healthcare access for underserved populations. Research indicates that SRFCs have a positive impact on health equity and improve health outcomes for low-income and uninsured populations. Birs et al. (2016) found that SRFCs reduce emergency room visits and hospitalizations among their patient populations. Additionally, SRFCs provide preventative care and early intervention for chronic conditions, leading to better patient outcomes (Holmqvist et al., 2012). However, the student-run nature of these clinics may create issues around supervision, liability, and regulatory compliance, which require careful management to ensure patient safety. This can lead to power imbalances, limited input from non-physician volunteers, difficulties working within short timelines, and potential limitations in decision-making processes.

Student-run free clinics (SRFC) and student-run community gardens (SRCG) have the potential to work together to address issues of food insecurity and healthcare access for low-income populations. SRCGs can provide fresh produce to SRFCs, improving the availability of nutritious food for patients, and creating a healthier community. Additionally, the social interactions and networks promoted

by SRCGs can lead to increased community engagement and a sense of well-being for SRFC patients. However, both organizations face limitations in terms of stability and sustainability. While SRCGs have an anarchic approach to organization, with little centralized cybernetic control, SRFCs have developed highly cybernetically controlled systems to ensure regulatory compliance and patient safety. These differences in organizational structure may create challenges in collaboration and communication between the two groups and may limit the input of non-physician volunteers in SRFC decision-making processes. Nevertheless, through effective collaboration and communication, these two organizations can work together to create a healthier and more sustainable community.

METHODOLOGY

This case study utilizes an exploratory design that relies on qualitative experiences throughout a 12-month (June 2022-June 2023) project period (Creswell, 2013; Creswell, 2014). Due to the ongoing nature of the partnership between the student-run free clinic (IESM) and the student-run community garden (R'Garden), this study only reflects key moments of particular events over the 12-month period. To analyze the organizational mismatches that occur when goals align, Birnbaum's Higher Education Organization Framework (1998) was used. This theoretical framework was used to analyze the implementation and organizational structures within the two organizations using qualitative methods such as content analysis and thematic analysis to identify themes and patterns that emerge from the data. The case study research model was used to examine organizational assets and challenges associated with connecting two kinds of student-run systems: student-run community gardens and student-run free clinics. Vignettes[2] were developed based on this author's observational experiences during the implementation of a partnership between these two organizations. This author was able to observe this partnership by initiating the collaboration through their leadership positions in the Inland Empire Street Medicine and Gardening Club, which is affiliated with R'Garden.

2 Vignettes are short stories that describe a specific moment in time

Food Justice is Health Justice: Benefits and Barriers to Connecting Student-Run Free Clinics with Student-Run Organic Gardens

FINDINGS

Theme 1: Harmony

Initiating and planning collaborations between organizations can be a complex and challenging process, particularly within student-led groups. Differences in organizational structures, goals, and cultures can create significant hurdles that must be addressed before any meaningful partnership can be formed. Such challenges may arise from competing priorities, lack of resources, and conflicting communication channels. Additionally, limited experience and capacity in managing collaborative projects may also be a barrier for student-led groups. Without proper planning and coordination, partnerships can easily fall apart due to misunderstandings, misaligned expectations, and lack of commitment. Therefore, it is crucial for organizations to establish clear objectives, allocate resources effectively, establish open communication channels, and develop a comprehensive project plan to ensure successful collaboration. Despite these challenges, successful collaborations can have a significant positive impact on the organizations involved and their communities. By building on each other's strengths and overcoming weaknesses, organizations can achieve more together and create sustainable solutions to complex problems. The power of synergy is a key factor in the success of any partnership and can be harnessed through effective communication, mutual respect, and shared goals. The partnership between Street Medicine and R'Garden is a powerful example of how collaboration can create meaningful change. Although the two organizations had different missions, they recognized the potential benefits of working together. In this vignette, we see how these two organizations with distinct missions came together to achieve a common purpose and make a positive impact in their community. By leveraging each other's strengths and resolving each other's weaknesses, they were able to achieve more together than they could have on their own. This experience explores the power of synergy and how it can be harnessed to build successful partnerships between organizations.

Vignette 1: Avocados

With the onset of summer, crops at the R'Garden had visibly begun to thrive. As a result, an opportunity for collaboration between the Inland Empire Street Clinic and the R'Garden arose. Inland Empire Street Medicine's partnership with R'Garden was a promising collaboration that aimed to bring together two organizations with distinct missions to achieve a common purpose. However, as with any partnership, the logistics of the collaboration needed to be carefully planned and coordinated to ensure its success. The Street Medicine board members volunteered to help with the avocado harvest, which was the first project the two organizations decided to work on together. To make the harvest a success, they had to coordinate with one of the R'Garden interns to plan the logistics for the harvest. This involved setting a date, organizing transportation, and ensuring that everyone knew what was expected of them. On the day of the harvest, the R'Garden team showed the Street Medicine

volunteers how to pick avocados and transport the harvested produce back to the clinic. The Street Medicine team worked closely with the R'Garden interns to learn the most efficient way to harvest the fruit. They were able to pick a significant amount of avocados and transport them back to the clinic's fridge. The avocados turned out to be a popular addition to the clinic's resources and became an added source of nutrition for the patients. Moreover, the R'Garden team was able to distribute its products more widely in the community.

The success of this collaboration demonstrates the power of synergy when two organizations with different structures and goals come together to achieve a common purpose. By harnessing each other's potential and resolving each other's drawbacks, Street Medicine and R'Garden were able to achieve more together than on their own. This example illustrates how proper planning, effective communication, and mutual respect can overcome the challenges of initiating and planning collaborations between organizations, particularly within student-led groups.

Theme 2: Communication

The success of any partnership hinges on effective communication and a reliable supply of resources. In this vignette, "Corn," it is revealed how an unexpected lock on a community garden prevented a group of volunteers from accessing the produce they had picked, resulting in a lost opportunity for the community clinic. The incident underscores the need for consistency and reliability in communication to ensure successful partnerships. Additionally, there was a lack of clarity regarding who should be contacted in case of any setbacks or unexpected situations during the event. The failure to communicate about the lock prevented the volunteers from accessing the produce, which highlights the importance of accountability in effective coordination.

Vignette 2: Corn

During the summer, the student leaders from Inland Empire Street Medicine and R'Garden were working together to plan and execute clinics. As part of their partnership, the Street Medicine team contacted the R'Garden interns to arrange for products to be picked and used at the clinic. After coordinating and setting a date to pick corn, the Street Medicine team arrived at the garden, picked the produce, and asked for permission to pick it up on the day of the clinic. The R'Garden interns agreed, and everyone confirmed the plan was in place. However, on the day of the clinic, the Street Medicine team found a lock preventing them from accessing the produce. They had not been informed of the lock and could not get in touch with the R'Garden intern who had the passcode. The lock had been added to prevent people from picking from each other's plots, which is a valid concern. However, putting a lock on the garden without informing those who need to access it prevents people from coming in. As a result, the Street Medicine team could not use the produce they had picked.

This experience highlights the importance of communication and accountability in successful partnerships. In this situation, we see that the collaboration between the two organizations hit a roadblock due to a lack of communication about the lock and failure to provide the passcode in a timely manner, resulting in wasted effort and resources. The Street Medicine team had volunteered their labor to pick the produce, but due to external factors beyond their control, they were unable to use it. Both parties need to be aware of the expectations and responsibilities of the other to ensure that they are working towards a common goal. Furthermore, the unreliable supply due to external factors such as the lock can lead to frustrations and difficulties in maintaining a successful partnership. Consistency and reliability in communication are essential to ensure that both parties can work together effectively toward their shared goal. Without proper communication and accountability, partnerships can easily fall apart due to misunderstandings and misaligned expectations. Therefore, it is crucial for organizations to establish clear objectives, allocate resources effectively, establish open

communication channels, and develop a comprehensive project plan to ensure successful collaboration.

Theme 3: Coordination

Coordinating activities and events in a student-run environment can be a complex and challenging process, particularly when different groups have conflicting schedules and priorities. In this vignette, we see how a hierarchical structure within a cybernetic organization (SRFCs) making a unilateral decision led to a mismatch in decision-making that affected the success of receiving produce from R'Garden. This situation highlights the importance of effective communication, collaboration, and consideration of different schedules and priorities to prevent similar mismatches in the future. It also sheds light on the difficulties of navigating various systems and structures within a student-run environment.

Vignette 3: Carrots

Two weeks prior to the scheduled clinic, the student leaders of the SRFC decided to reschedule the clinic to an alternative date. However, they were unaware that this decision would conflict with R'Garden's schedule. The R'Garden was unable to accommodate the clinic on that day due to undergraduate finals, causing a mismatch in scheduling. Despite the scheduling conflict, the SRFC proceeded with the rescheduled date, which fell on the weekend before undergraduate finals, creating an even greater scheduling conflict for undergraduate volunteers.

As many volunteers had planned beforehand to not attend the clinic due to upcoming finals, this resulted in fewer undergraduate volunteers for the SRFC. The medical students had to compensate for our absence, performing tasks that were typically the responsibility of undergraduate volunteers. Unfortunately, due to the short notice, communication with R'Garden was not possible. The R'Garden interns were also having finals, making it impossible to obtain fresh produce from them. As a result, the SRFC had to purchase produce from a grocery store and use a few leftover carrots.

This situation highlights the crucial role of effective communication, collaboration, and consideration of various schedules and priorities to prevent conflicts in the future. It emphasizes the importance of inclusive planning and decision-making that considers the needs and perspectives of all stakeholders for a successful outcome. Moreover, it underscores the potential negative impacts of a hierarchical decision-making structure in such organizations. This is particularly true when decisions are made unilaterally, without proper consideration for other groups within the system.

Theme 4: Evolution

The R'Garden has long operated under an anarchic structure, where decisions are made through a collective process with minimal hierarchy. However, this structure has led to gaps in leadership and funding issues, which have prevented the garden from expanding and improving its facilities. The absence of a clear hierarchy and decision-making process has led to difficulties in obtaining the necessary resources to expand and improve the garden's facilities. Without clear leadership, it can be challenging to identify funding opportunities and connect with key partners in the community. These gaps in funding and leadership limit R'Garden's ability to achieve its goals and promote sustainable agriculture and food justice in the community. Institutional structures that are cybernetic can offer valuable guidance and support for organizations operating within them, providing resources, funding, and connections to other stakeholders in the community. The R'Garden is an anarchic structure focused on promoting sustainable agriculture and food justice in their community. By utilizing the resources and support provided by more cybernetically structured groups such as the Center for Healthy Communities (CHC) and the Riverside University Health System (RUHS), the R'Garden can augment its capacity to identify funding opportunities and connect with key partners in their community. Additionally, partnering with the use of cybernetic organizational

structures allows the R'Garden to track their progress and effectiveness over time, and adjust their operations as needed to meet emerging challenges and evolving community needs.

This vignette highlights the importance of utilizing cybernetic organizational structures to support and enhance the work of community organizations. To address these issues, the R'Garden has recently introduced a referendum that seeks to provide consistent funding and redistribute responsibilities through new positions and committees. This move would enable the garden to become more tightly coupled and cybernetic, allowing for better organization and inter-organizational collaboration. In this vignette, we see how the referendum was initially met with challenges, persevered, and is paving the way for a more effective approach to addressing food insecurity.

Vignette 4: Radishes

Prior to the study, the R'Garden was advocating for a student referendum to address funding gaps that resulted in leadership issues. This advocacy lasted for a year and made significant progress. I learned more about the referendum during the project from a College of Natural and Agricultural Sciences (CNAS) senator. The senator believed in community gardens, especially in Riverside, where food insecurity is a concern. The referendum was nearly complete, but it faced barriers due to politics within the Associated Students of UCR (ASUCR). A graduate student who had been advocating for the referendum fell ill, which slowed its progress as there was no one else from the R'Garden working on the referendum.

The CNAS senator met with R'Garden representatives, past senators, ASUCR Pro Staff, and the CNAS Executive Committee to push the referendum. The entire committee, including the Dean of CNAS, unanimously supported the referendum. However, the Dean later sent a memo stating that they would only offer technical support and would not handle the R'Garden's finances, which was a significant obstacle. The R'Garden faced additional challenges, including a delay in formal voting in the referendum instructions due to the Judicial Branch's inability to reach a quorum. Nonetheless, the referendum was approved a week later, meeting two-thirds of the Senate's approval.

Introducing this referendum is a step forward for R'Garden's facilities and faculty in evolving a cybernetic structure. With consistent funding, they will be able to expand their resources for improving the garden's services, and administrative positions will be added to distribute responsibilities. A committee will also be formed to facilitate outreach, communication, and inter-organizational collaboration. Although the process of advocating for this referendum required a considerable amount of time, all parties involved expressed satisfaction that it can now proceed toward combating food insecurity. The R'Garden's commitment to evolving its structure and securing the resources it needs will bolster its mission to combat food insecurity in the community. This experience demonstrates how resilience, cooperation, and strategic planning can drive meaningful change within an organization and the broader community it serves.

Food Justice is Health Justice: Benefits and Barriers to Connecting Student-Run Free Clinics with Student-Run Organic Gardens

CONCLUSIONS

The findings of this project demonstrate the potential benefits of connecting student-run community gardens with student-run free health clinics to address food insecurity in low-income and underserved communities. Through the utilization of their respective strengths and addressing each other's weaknesses, the collaboration between R'Garden and Street Medicine demonstrates how these organizations can work together towards a common purpose of improving the health outcomes of underserved populations.

The paper highlights the importance of aligning structures, values, and governance to create a functional relationship between SRFCs and SRCGs, as well as recognizing and respecting each other's differences and working towards a shared goal. Effective communication is crucial to ensure successful collaboration.

Different values can also create tensions, but by recognizing and respecting each other's values, organizations can find common ground and work towards a mutually beneficial relationship. The study highlights gaps in leadership, communication, and accountability that can hinder the success of collaborations between organizations. However, the benefits of synergy demonstrated through the collaboration of Street Medicine and R'Garden show how two organizations with different structures and goals can achieve a common purpose by capitalizing on each other's strengths and compensating for each other's weaknesses.

One of the primary themes that emerged in the analysis was the gap in leadership and accountability. In many cases, the leaders of SRFCs and SRCGs may have different ideas about the goals and direction of their organizations, leading to misunderstandings and a lack of shared vision. This gap in leadership can also lead to a lack of accountability, as each organization may be focused on its own priorities rather than the success of the partnership.

Another theme that emerged was the importance of communication. Effective communication is essential to ensure that both parties can work together effectively toward their shared goal. Without proper communication, partnerships can easily fall apart due to misunderstandings and misaligned expectations. Therefore, it is crucial for organizations to establish clear objectives, allocate resources effectively, establish open communication channels, and develop a comprehensive project plan to ensure successful collaboration.

Despite these challenges, the analysis also identified several benefits of partnership between SRFCs and SRCGs, including the power of synergy. Collaboration can demonstrate the power of synergy when two organizations with different structures and goals come together to achieve a common purpose. Another benefit of collaboration is the opportunity for both organizations to learn from each other. SRCGs can teach SRFCs about sustainable food practices, while SRFCs can teach SRCGs about the importance of food security and access. By sharing knowledge and resources, both organizations can expand their impact and create positive change in their communities.

The study's limitations call for further research and data analysis to provide a more comprehensive understanding of the patient impact and the relationships between SRFCs and SRCGs. A quantitative analysis could provide a more comprehensive understanding of the patient impact and the relationship between the two organizations, by collecting data on various factors, such as the number of patients served, the frequency of visits, the types of services provided, and the overall health outcomes of patients who received care through the collaboration between the R'Garden and Street Medicine clinic. This data could be compared to data collected before the collaboration started, as well as data from patients who received care or services from either organization independently. Other quantitative measures could include analyzing the cost-effectiveness

of the collaboration, such as the amount of money saved by providing preventative care to patients who might have otherwise needed more expensive interventions. Surveys could also be conducted to collect data on patient satisfaction with the care they received, as well as their experiences with the collaboration between the two organizations.

The positive impact of this collaboration suggests that other student-run organizations can learn from this model and apply it to their own initiatives aimed at addressing community needs. This approach can also serve as a model for partnerships between grassroots organizations and cybernetic institutions, such as government agencies, to address complex societal issues. Ultimately, this project provides valuable insights into the potential of student-run organizations to positively impact their communities and the importance of collaboration in achieving their goals.

ACKNOWLEDGMENTS

I would like to acknowledge and express my sincere gratitude to several individuals and organizations who have played an essential role in making this project a reality. First and foremost, I would like to extend my heartfelt thanks to my faculty mentors, Dr. Debay and Dr. Novak. Without their guidance, expertise, and unwavering support, this project would not have been possible. Their constant encouragement and valuable feedback throughout this process has enabled me to grow both as an individual and as a researcher. I would also like to express my appreciation to the Inland Empire Street Medicine Free Clinic for their support in this project and for inspiring me to undertake this research. I am grateful to the R'Garden for their participation in the success of this project. Furthermore, I would like to acknowledge the UC Riverside Undergraduate Education Chancellor's Research Fellowship for funding my project, which has allowed me to bring this research to fruition. Finally, I want to thank everyone who has helped me in this project, including my peers, friends, and family. Their unwavering support and encouragement has been invaluable throughout this journey. I am grateful for all their contributions, and I cannot thank them enough.

All images used in this article were taken by Hana Baig.

Food Justice is Health Justice: Benefits and Barriers to Connecting Student-Run Free Clinics with Student-Run Organic Gardens

REFERENCES

Beaulac J, Kristjansson E, Cummins S. A systematic review of food deserts, 1966-2007. Prev Chronic Dis. 2009 Jul;6(3):A105. Epub 2009 Jun 15. PMID: 19527577; PMCID: PMC2722409.

Birnbaum, R. (1988). How colleges work: The cybernetics of academic organization and leadership. San Francisco: Jossey-Bass.

Birs A, Liu X, Nash B, Sullivan S, Garris S, Hardy M, Lee M, Simms-Cendan J, Pasarica M. Medical Care in a Free Clinic: A Comprehensive Evaluation of Patient Experience, Incentives, and Barriers to Optimal Medical Care with Consideration of a Facility Fee. Cureus. 2016 Feb 19;8(2):e500. doi: 10.7759/cureus.500. PMID: 27014534; PMCID: PMC4803534.

Creswell, J. W. (2013). Qualitative Inquiry & Research Design: Choosing among Five Approaches (3rd ed.). Thousand Oaks, CA: SAGE.

Creswell, J. W. (2014). Research design: qualitative, quantitative, and mixed methods approaches. 4th ed. Thousand Oaks, California, SAGE Publications.

"Food Insecurity Rate." *SHAPE Riverside :: Indicators :: Child Food Insecurity Rate :: County : Riverside*, SHAPE, https://www.shaperivco.org/indicators/index/view?indicatorId=2108&localeId=270.

Holmqvist M, Courtney C, Meili R, Dick A. Student-Run Clinics: Opportunities for Interprofessional Education and Increasing Social Accountability. JRIPE, 2012. DOI: https://doi.org/10.22230/jripe.2012v2n3a80

Hume C, Grieger JA, Kalamkarian A, D'Onise K, Smithers LG. Community gardens and their effects on diet, health, psychosocial and community outcomes: a systematic review. BMC Public Health. 2022 Jun 23;22(1):1247. doi: 10.1186/s12889-022-13591-1. PMID: 35739494; PMCID:PMC9229094.

Jacobs BA, Kinzie J. Enhancing sustainability campuswide. Wiley 2012. ISBN: 978-1-118-40565-9.

Simpson SA, Long JA. Medical student-run health clinics: important contributors to patient care and medical education. J Gen Intern Med. 2007 Mar;22(3):352-6. doi: 10.1007/s11606-006-0073-4. PMID: 17356967; PMCID: PMC1824759.

Whitacre PT, Tsai P, Mulligan J. National Research Council (US). The Public Health Effects of Food Deserts: Workshop Summary. Washington (DC): National Academies Press (US); 2009. Available from: https://www.ncbi.nlm.nih.gov/books/NBK208019/ doi: 10.17226/12623.