

Engaging Youth in Food Systems Issues: Approaches to Youth Development and Empowerment

J. E. Niewoehner-Green¹, A. M. Bowling², K. Rinehart³

Abstract

Food systems are considered social-ecological systems, wherein people are interconnected to the social and natural environment. Issues that arise in food systems are inherently complex and require critical awareness of production, access, consumption, and nutrition. Everyone is an actor in the food system, including youth, and encouraging them to become problem-solvers, change agents, and leaders can support a more sustainable food system. To explore how youth are engaging in food systems issues, we interviewed program leaders who include food system topics in their curricula to understand if and how they are empowering youth to engage and address related challenges. Through a collective case study, we identified one convergent theme related to the role of PYD in programming. However, there was more case divergence wherein three themes describe how intentional empowerment approaches support youth development, how youth are viewed and supported as leaders, and in what ways programs are educating about food systems issues. Recommendations include moving past community service to community engagement in food systems issues and conducting research on youth's perceived ability to address these issues.

Article History




Received: September 9, 2024

Accepted: April 9, 2025

Published: April 30, 2025

Keywords

food security; youth community engagement; SDG 2: Zero hunger

-
1. Jera E. Niewoehner-Green, Associate Professor, The Ohio State University 2120 Fyffe Rd., Columbus, OH 43210, niewoehner-green.1@osu.edu,  <https://orcid.org/0000-0002-0340-1956>
 2. Amanda M. Bowling, Associate Professor, The Ohio State University 2120 Fyffe Rd., Columbus, OH 43210, bowling.175@osu.edu,  <https://orcid.org/0000-0002-2526-725X>
 3. Kameron Rinehart, Assistant Professor, Austin Peay State University Henry St. Clarksville, TN 37040, rinehartk@apsu.edu,  <https://orcid.org/0000-0002-4510-6306>

Introduction

Food systems are considered a social-ecological system that are comprised of activities such as agricultural and food production, processing and packaging, distribution and retail, and consumption (Berkes et al., 2003; Ericksen, 2008). Issues relating to this system include the governance and economics of food production, food waste, sustainability, and the impact of food on health (University of Oxford, n.d.). Everyone regardless of their connection to agriculture is an actor in the food system, whether they are a producer or consumer, including youth. Some youth practitioners consider that youth becoming problem-solvers, change agents, and leaders is critical for bringing forth food system changes (Kwan, 2014; USAID, n.d.; Yeboah, 2018). Despite students in the U.S., receiving less than eight hours of nutrition education per year (CDC, 2023), other forms of food education are increasing during school hours such as school gardening, cooking classes, and agricultural education. Nonformal education programs (e.g. 4-H, after school programs, community non-profits) may also promote healthy living and food literacy (Renwick & Powell, 2019; Smelkova, 2015). More recently, the United States Department of Agriculture (USDA) hosted a dialogue with youth on sustainable U.S. food systems wherein participants emphasized the need for early childhood nutrition education, agricultural education, policies that helped achieve food equity, and technologies to improve food distribution (USDA, 2021). This dialogue indicates youth are aware of food systems issues and have ideas to address them. Community-based organizations and youth programs such as 4-H can offer programming to educate and engage youth on food system issues but there is a dearth of literature on how such programs are doing so.

The focus on food and nutrition is contextually important for our research because Ohio ranked 44th out of 50 states in 2023 for health value, indicating that residents are less healthy and spend more on healthcare than in most other states (Akah et al., 2023). Further, while Ohio is near the national average (11.8%) of food insecurity (USDA, 2023) this translates to 1,391,290 of residents, of which 386,430 are children (Hunger Network in Ohio n.d.). This investigation could help identify and disseminate key strategies which program leaders are using to engage and empower youth in food system issues.

Conceptual/Theoretical Lens

We utilized a conceptual and a theoretical lens which allowed us to contextualize the youth experience through positive youth development approaches and youth empowerment, while allowing for emergence of data through the perspective of youth program leaders.

Positive Youth Development

Positive Youth Development (PYD) is a prosocial approach that focuses on youth's strengths and promotes positive outcomes through building positive relationships, providing opportunities to engage with their peers, families, organizations, and communities, and supporting psychological, emotional physical, and emotional development (Hamilton et al., 2004). PYD programs strive to develop youth's healthy habits such as engaging in physical

activity and maintaining mental health (Roth & Brooks-Gunn, 2003). PYD programming can also positively influence youths' willingness to engage in their community and complex issues. Christens and Zeldin (2018) assert youth community engagement can promote positive youth development as well as strengthen community leadership and create a self-sustaining cycle of participation. Additionally, PYD programs can be catalysts for youth environmental action where they create local changes related to food systems, community gardens, water quality, and urban development (Schusler, 2013).

Youth Empowerment

Empowerment can be understood as a value orientation for practical application, such as youth programming, as well as a theoretical model for understanding how individuals exert control and influence over decisions that affect their lives (Perkins & Zimmerman, 1995; Rappaport, 1987; Zimmerman, 2000). For youth, empowerment theory, like PYD, views them as assets and resources for their community rather than community problems (Holden et al., 2005). Thus, empowering youth through engagement in decision making and problem solving allows them to play meaningful roles in their communities (Charbonneau et al., 2014). Further, empowerment can be an important element in human development (Christens & Peterson, 2012). Particularly, when youth perceive having influence over policies and practices in their social sphere and community, this can act as an important indicator for behavioral and developmental outcomes (Chiessi et al., 2010; Peterson et al., 2011).

Empowerment is best operationalized within a context to understand the process by which youth become active participants around an issue. Youth empowerment research related to food systems and health is limited but has indicated that youth empowerment approaches for obesity prevention can influence attitudes and perceptions for healthy eating and food choices (Lewis et al., 2018; Muturi, et al., 2018). And through community gardening, supporting youth empowerment can improve self-esteem, sense of belonging, nutrition, food security, and environmental awareness (Fulford & Thompson, 2013). Thus, empowerment approaches connected to food system issues impacting youth can shape attitudes and influence action.

Purpose and Research Questions

We aimed to learn how Ohio PYD programs engage youth in activities related to the food system. Our central research question was: In what ways are adult practitioners empowering youth to address food systems issues? One sub research question refined our investigation: What are the opportunities and challenges for engaging youth participants in food system issues?

Methods

For this qualitative study we used a collective case design (Stake, 1995; Yin, 2018) that employed purposive sampling with the bounded system of out-of-school time Ohio PYD programs. We began this study following Stake's (1995) more emergent approach to collective

cases, however after the initial data analysis round we shifted to follow a more prescriptive approach to align our theoretical lens with the data analysis (Yin, 2018). We approached the research through a constructivist lens, where we believed people construct their own understanding of reality (Lincoln & Guba, 1985). Additionally, we bracketed our biases to allow for data emergence. As former PYD practitioners and participants, it was necessary to acknowledge how these experiences could influence our perceptions.

To aid in purposively sampling youth programs, we sent a questionnaire to youth programs throughout Ohio. The questionnaire gathered information on the inclusion of food security, healthy living, and/or gardening/urban farming in their curricula, program leader information, and youth demographics. From the questionnaire data, we identified four types of programs: (a) general PYD program, (b) food security, and (c) healthy living (d) and/or gardening/urban farming. We purposely sampled a total of nine programs which represented multiple program types, youth age ranges including a collegiate organization (as the participants are considered to still be developing), population density areas, and program sizes and scopes (see Table 1).

Table 1

Description of Sampled PYD Programs (n = 9)

| Program Type | Program Category | Population Density | Annual Organizational Reach |
|----------------------------|-----------------------------|--------------------|---------------------------------|
| 4-H | Healthy Living | Urban | 6,000 – 12,000 youth |
| 4-H | Gardening/Urban Agriculture | Urban | 2,000 – 3,500 youth |
| FFA | Healthy Living | Rural | 400 – 500 youth |
| College Organization | Gardening/Urban Agriculture | Rural | 10 – 60 youth/community members |
| Community Based Non-profit | Food Insecurity | Urban | 40 – 500 youth |
| Community Based Non-profit | Positive Youth Development | Urban | 20,000 – 30,000 youth |
| Community Based Non-profit | Food Insecurity | Rural | 500 – 1,000 youth |
| Community Based Non-profit | Food Insecurity | Rural | 1,000 – 1,500 youth |
| Community Based Non-profit | Positive Youth Development | Urban | 30 – 70 youth |

Data were collected through one-on-one, virtual, semi-structured interviews with program leaders. We developed an interview protocol guided by conceptual and theoretical lenses. An example interview question was, “Do your programs help engage youth and address food insecurity issues within the community?” The interviews lasted between 34 and 79 minutes, were recorded, and transcribed verbatim. Interview field notes were also gathered. The interview data served as the primary data source and field note data served as an ancillary data source. Additionally, two member checking interviews which followed a different interview protocol were conducted following an initial review of the emerging data.

Data were analyzed using a three-stage coding process (Stake, 1995). We initially approached the data utilizing In Vivo Coding, taking words and phrases from the interview transcripts (Saldaña, 2021). These codes were then organized by program into emerging categories. The categories were examined across youth programs, then grouped into emerging themes which

captured the various ways in which food systems topics were integrated into programs. Although this provided some insights into program structure and topics, it did not appear to reveal the program leader's perspectives or approaches to youth development and empowerment. We undertook a second round of coding, first by reviewing the initial codes, then revisiting the transcripts and Zoom recordings as needed. For this round of coding, we intentionally used the theoretical lens and employed process coding. This approach to coding reflects the action-interaction occurring when persons act in pursuit of a goal or addressing a problem (Corbin & Strauss, 2015; Saldaña, 2021). Coding in this way identified the PYD and empowerment activities that supported youth's understanding and engagement in food systems and their community. To validate the findings, we triangulated the semi-structured interviews, field notes, and member checking interviews, used thick, rich descriptions, audit trail, peer reviews, member checks, negative case analysis, and researcher positionality (Creswell & Poth, 2018).

Findings

Within the sampled cases, case convergence emerged related to the use of PYD principles and practices as foundations for the youth programs. However, much of the emerging findings focused on how the cases diverged from each other. Cases differed in how they approached empowerment, engaged youth as leaders, and how their programs addressed food system issues.

Case Convergence

Findings indicated programs shared a similar underlying focus which guided the programmatic strategies and offered programming. The underlying focus centered upon the integration of PYD principles and practices into their programs.

Program Foundation Built on PYD Principles and Practices

Regardless of program focus, participants, or how they addressed food system issues, the program leaders discussed the practices they used as foundational aspects of their programs. While not always specifically identified by participants as such, these foundational practices align with PYD principles and practices. To begin, program leaders spoke of youth as assets and how they were valuable members of their community. As one program leader said "I truly believe these kids are born with everything they need from the get-go. I think it's just a matter of finding, you know, giving them the tools to lead and giving them the opportunities to lead and problem solve." Some of the approaches used by participants to support youth development included age specific programming, maintaining appropriate youth to adult ratio, creating a safe place for youth to feel engaged and welcomed, and building trust between youth and adult leaders. Through PYD practices and education, program leaders hoped to inspire youth participants to become engaged to make a difference.

Case Divergence

Although all programs incorporated PYD into their programming, the approaches to teaching about and engaging in the food system diverged. The following themes describe how programs included food system education for youth and to what extent they viewed youth as actors in their local food system.

Intentional Empowerment Approaches

Four of the nine youth programs intentionally engaged in empowerment approaches related to food systems issues. These approaches included engaging youth in decision-making and problem-solving, promoting reflection on their influence on policies and procedures (within the program and the community), creating space to learn about and reflect on critical issues in their community, and equitable power sharing within programming. Program leaders supported youth's civic engagement and aimed for active participation in understanding community issues, dynamics, and political processes. As one leader from a community-based program that served low-income urban youth said:

If our students aren't engaged in the political process now, they're not exposed to it and they will not be our future congressmen our future school board leaders...they need to make their voices heard, so that it's not just people who are affluent making decisions. But it's someone who understands the perils of their community being engaged in those decision-making capacities.

This program utilized participatory methods with their youth such as creating asset maps of the communities and discussing community issues and incidents and teaching about different ways to engage in collective action.

Another urban community-based youth program in a different city was intentional about equitable power sharing. They see youth as members of their team and felt that it was important to work on solving problems relevant to their youth. The program leader shared that when working with students and their classroom teachers during the summer:

We do not train teachers to stand over children and get them to do things. We train teachers and children to work together to solve problems that are relevant to the student and [it's] important to the educator that they have outcomes tied to them. The whole power dynamic shifts and that's why we have teachers in with students during our summer institutes and teachers in with students during our summer programs, because teachers need to learn in this world.

This program challenged the traditional 'teacher as expert' model by creating spaces where students could be co-investigators on issues and were not given answers, rather they were empowered to seek them.

A final example of intentional empowerment approaches was shared by an urban/peri-urban 4-H program. Through both critical reflection and exploring youth's perceptions of their influence on policy, the program aimed to support their development as problem-solvers and advocates,

especially around issues related to food and agriculture. The program leader shared that when participating in 4-H:

...they may learn about a community garden or a farmers' market or they may learn about a community that does not have access to fresh food and hopefully to take action.... A plan of action to advocate for to, to write letters for to address county councils and city councils. [We've] taken them down to the statehouse to advocate on issues that are important to them. And really getting them to understand why this should be important to them.

Overall, these four programs created spaces for youth to learn about: issues occurring in their communities, how those issues were impacting them and their families, and skills that would help them to address them on the community level. The five programs not discussed above did encourage community engagement through service projects but lacked the intentional incorporating of empowerment practices to allow youth to feel like actors and change agents within their community to address food security issues.

Youth as Leaders

Another case divergence was how program leaders saw youth as leaders or were intentionally developing their leadership skills. Leadership can be an outcome of both PYD and empowerment approaches. Five of the 9 program leaders discussed youth as leaders and approached programming with leadership development in mind. A program leader stated, "We all view them as leaders... kind of constantly encouraging an environment of, like, we believe in you, whatever it is that you know, you think and you feel and want to do, you have our full support." Another participant stated that "We see our youth as being tomorrow's leaders. We often tell our kids that they need to get involved, that they can make a difference." Both statements are reflected in the empowerment approaches that these programs utilized to increase civic engagement.

Other programs explicitly cite how they were developing leadership skills. For some, it was getting the adults to step back and let youth take the lead. As one 4-H educator explained, "Junior Fair Board is another where the youth are leaders...it's kind of a youth led organization." The FFA advisor also described how:

We work really hard to never be the sage on the stage, we're the guide on the side. That's not our job; our job is to grow leaders to understand how to put together programming to empower others and advocate for agriculture and for hunger and for all aspects of leadership.

Another program leader discussed not only how to support leadership, but also followership: Find your collaboration style. We identify and they self-identify the leaders. If you are a leader, great, then we are going to give you the skills to lead. If you're a follower, great, we're going to give you critical thinking skills.

It should be noted that not all the programs that used intentional empowerment approaches were the same that cited youth as leaders and focused on leadership development explicitly.

This indicates that there can be an overlap in empowerment and leadership, but they are not necessarily synonymous.

The divergent cases did not have a lack of youth leader positions, as most of them had leadership teams and/or committee systems. Where they differed was the absence of describing youth as having leadership capacity and the discussing intentional development of leadership skills.

Engagement in Food Systems Issues

All programs had some type of food and/or nutrition programming and many program leaders mentioned the use of hands-on and project-based learning, including raised garden beds, community gardens, and cooking classes. Through these experiences, youth learned about food production, how they could produce food, and proper methods to prepare fruits and vegetables. However, not all programs had direct links to food security, a problem that affects most of the communities in which they worked.

Four programs did not include specific food security curriculum but the reasoning behind that varied across the sample. One program leader shared the perspective that youth of certain ages were not mature enough to discuss food systems issues. Another program leader told us "We haven't had any direct or, I should say like outright conversations about food access and addressing it as an issue." This program leader informed us they like to leave food insecurity and community issues "open to interpretation" for youth instead of having a direct conversation. For one organization it was due to their capacity for teaching the topic and for another it was not a topic they felt comfortable discussing.

For those that did include food security, it was incorporated into their programming in various ways. It may be providing education on hunger both locally or globally or teaching curriculum about food security specifically. One urban program emphasized the interdisciplinary and interconnected nature of food systems issues by describing curriculum they had developed with a local high school:

We helped develop curriculum around design challenges that deal with food scarcity, food security, food science and water scarcity because all four of those belong together. Those interact with the other learning labs [human health and development, engineering and problem analysis, energy, and digital] ...because all of those had something to do with either the logistics, the growing, the technology, or the sense of socio economic and legal components of food justice and food security.

Within a rural high school classroom, the agricultural educator and FFA advisor has continued efforts to include food systems issues in her curriculum and has partnered with elementary educators local food banks and Extension educators in her community. The educator's project-based learning approach incorporates local needs so that students can describe food insecurity and develop strategies to address it. This participant expressed that "...as we continue to move forward, I think food insecurity, food deserts, and food production. All of that has to be at the core of who we are, because that is what keeps peace in this world, in our country."

Discussion and Recommendations

To begin, we would like to acknowledge the transferability of the study's findings. While not generalizable, the findings can be transferred to similar situations as we purposively sampled a variety of programs which represent different urban and rural locations, after school, community based or extracurricular programs, and food and/or health-based programming. We concluded that regardless of program type or location, all the adult practitioners were intentional about incorporating a foundation of PYD. It was clear that PYD practices were central to the functioning of the programs, as an intentional approach is crucial for supporting the development of a youth participant (Hamilton et al., 2004). The use of PYD practices and principles within these programs can help support positive outcomes for the youth participants (Hamilton et al., 2004).

While the programs shared the use of PYD practices and principles, they differed in how they approached empowerment, youth leadership, and food system issues. Just under half of the adult practitioners incorporated empowerment approaches within their programming. While the participants did not specifically reference empowerment related literature, research, or theory they were intentional in acknowledging and letting youth voices drive program decisions. Their efforts reflect several dimensions from Jennings et al.'s (2006) youth empowerment theory such as critical reflection on interpersonal and sociopolitical processes, equitable power-sharing between youth and adults, and engaging youth in decision-making and problem-solving. Utilizing these approaches can aid in increasing youth's understanding of issues in the food system, shape their attitudes with food and influence action to support change in systems (Fulford & Thompson, 2013; Lewis et al., 2018; Muturi, et al., 2018; Zimmerman, 2000).

Further, over half of the adult practitioners viewed youth as leaders and intentionally developed their leadership skills. Youth leadership has been described as an empowerment-based conception that incorporates youth inspiration and mobilization of people to address societal issues (Kahn et al., 2009) and effect positive change (Harris & Beckert, 2019). However, much of the literature focuses on youth leadership *development*, that is, what adults can do to develop youth as leaders, rather than seeing them as agents of change. This is an important tension as our findings also indicated that programs may see leadership development as more of specific skill-building rather than also including aspirational aspects of how to engage in broader change processes.

We concluded that all programs had some type of food and/or nutrition programming with many focusing on food production and preparation. Just under half of the programming did not focus on food security due to a belief that their participants were too young to engage in the topic, a lack of time to address these types of issues, and a lack of efficacy in the adult practitioner to teach it. Those who did teach food security acknowledged and built programming to allow for youth to explore the complex, interdisciplinary nature of food system issues (Berkes et al., 2003). Both rural and urban communities in Ohio experience food

insecurity, which was apparent in our findings with several programs citing that they were situated in food insecure areas. Considering this is a pervasive issue that will require action and local and state levels and that it is a systemic issue requiring understanding of cause and effect, educating and involving youth about food security and nutrition can encourage civic engagement, activism, and informed dialogue within their communities.

Several recommendations for practice can be made from the findings and youth empowerment literature. To begin, it is recommended that regardless of program type or focus to build a foundation on PYD to create a culture focused on viewing youth as assets and meeting the basic needs of youth. Next, adult practitioners should intentionally incorporate both youth leadership development and empowerment practices broadly to increase awareness of systemic issues and prepare youth to engage in them. Programs in this study incorporated various methods that may lead to youth empowerment. Models can present questions to assess levels of youth participation within a program and determine the levels of control youth and adults have in decision-making, program planning, and issue identification (Shier, 2001). The TYPE Pyramid from Wong et al. (2010) takes the idea of shared youth-adult control further by presenting how intergenerational linkages might be considered on a continuum from adult control to youth control, with pluralistic shared control considered optimal for youth empowerment. By intentionally considering and incorporating a youth empowerment model within their program planning, program leaders could further impact youth's motivation and ability to address complex issues within the food system.

Further, activities that address food systems issues can go beyond community service and extend to community engagement. Although canned food drives are an important part of addressing community needs, this activity does not push youth to consider the systemic issues that drive community needs. For example, canned food drives may not address what foods might be culturally appropriate, nutrient dense, and/or sustainable for recipients. One-time volunteer or service activities also may not connect youth meaningfully to policy makers or community organizations working on systemic change. Programs in this study that engaged in empowerment approaches uplifted youth voices in community by partnering with other community organizations, participating in service-learning or project-based learning and attending community meetings. Future research in this area should continue to investigate how youth programming is engaging and empowering youth to act on food system issues by measuring youths' perceived level of ability to address these issues. Instead of being viewed as a program participant, youth can be seen as problem solvers, volunteers, and change-makers in their communities. Additionally, future research can evaluate program leaders' knowledge levels of youth empowerment frameworks and models and their ability to incorporate them into their programs. Finally, community and/or youth led action research allows youth to have a voice in exploring the food systems issues in their community as well as providing actionable outcomes driven by community need. This process can include community mapping of the food system and outreach activities such as podcasts and community-shared infographics on food security and nutrition.

Acknowledgments

This research was supported by the College of Food, Agricultural and Environmental Sciences SEEDS Research Program at The Ohio State University.

Portions of this research were presented at the 2021 North Central American Association for Agricultural Education Conference in Columbus, OH.

<https://aaea.wildapricot.org/resources/Documents/North%20Central/2021Conference/2021NorthCentralResearchProceedings.pdf>

Author contributions: **J. E. Niewoehner-Green** – formulation of overarching research goals, design of methodology, qualitative data, analysis, writing of manuscript including revisions and final publication draft. **A. B. Bowling** - formulation of overarching research goals, design of methodology, qualitative data, analysis, writing of manuscript including revisions. **K. Rinehart** – data collection, data analysis, writing of draft manuscript.

References

- Akah, H., Wiselogel, N., Almasi, C., & Bush Stevens, A. (2023). *2023 Health value dashboard*. Health Policy Institute of Ohio. <https://www.healthpolicyohio.org/our-work/publications/2023-health-value-dashboard>
- Berkes, F., Colding, J., & Folke, C. (2003). *Navigating social–ecological systems: Building resilience for complexity and change*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511541957>
- CDC. (2023, January 10). *Healthy eating learning opportunities and nutrition education*. CDC Healthy Schools. https://www.cdc.gov/school-nutrition/education/?CDC_AAref_Val=https://www.cdc.gov/healthyschools/nutrition/school-nutrition-education.htm
- Charbonneau, D. R., Cheadle, A., Orbé, C., Frey, M., & Gaolach, B. (2014). FEEST on this: Youth engagement for community change in the king county food and fitness initiative. *Community Development*, 45(3), 240–251. <https://doi.org/10.1016/j.adolescence.2018.08.001>
- Chiessi, M., Cicognani, E., & Sonn, C. (2010). Assessing sense of community on adolescents: Validating the brief scale of sense of community in adolescents (SOC-A). *Journal of Community Psychology*, 38, 276–292. <https://doi.org/10.1002/jcop.20364>
- Christens, B. D., & Peterson, N. A. (2012). The role of empowerment in youth development: A study of sociopolitical control as mediator of ecological systems' influence on developmental outcomes. *Journal of Youth and Adolescence*, 41, 623–635. <https://doi-org.proxy.lib.ohio-state.edu/10.1007/s10964-011-9724-9>

- Christens, B. D., & Zeldin, S. (2018). Community engagement. In: R. J. R. Levesque (Ed.) *Encyclopedia of adolescence* (pp. 682-692). Springer. <https://doi.org/10.1007/978-3-319-33228-424>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design choosing among five approaches* (4th ed.). SAGE Publications, Inc.
- Corbin, J., & Strauss, A. (2015). *Basics of qualitative research*. Sage.
- Ericksen, P. J. (2008). Conceptualizing food systems for global environmental change research. *Global Environmental Change*, 18(1), 234–245. <https://doi.org/10.1016/j.gloenvcha.2007.09.002>
- Fulford, S., & Thompson, S. (2013). Youth community gardening programming as community development: The Youth for EcoAction program in Winnipeg, Canada. *Canadian Journal of Nonprofit & Social Economy Research*, 4(2), 56–75. <https://doi-org.proxy.lib.Ohio-state.edu/10.22230/cjnsr.2013v4n2a145>
- Harris A., & Beckert T. (2019). Leadership emergence through volunteerism: A case study of late adolescent exemplars. *Journal of Leadership Education*, 18(2), 110–125. <https://doi.org/10.12806/V18/I2/R9>
- Hamilton, S., Hamilton, M., & Pittman, K. (2004). Principles for youth development. In S. Hamilton, & M. Hamilton (Eds.), *The youth development handbook: Coming of age in American communities* (pp. 3–22). Sage Publications, Inc.
- Holden, D. J., Evans, W.D., Hinnant, L.W., & Messeri, P. (2005). Modeling psychological empowerment among youth involved in local tobacco control efforts. *Health Education & Behavior*, 32(2), 264–278. <https://doi.org/10.1177/1090198104272336>
- Hunger Network in Ohio. (n.d.). *These numbers have faces*. <https://www.hungernetOhio.com/understand-hunger>
- Jennings, L. B., Parra-Medina, D. M, Hilfinger-Messias, D. K., & McLoughlin, K. (2006) Toward a critical social theory of youth empowerment. *Journal of Community Practice*, 14(1–2), 31–55. https://doi.org/10.1300/J125v14n01_03
- Kahn, L., Hewes, S., & Ali, R. (2009). *Taking the lead: Youth leadership in theory and practice*. The Young Foundation. <https://youngfoundation.b-cdn.net/wp-content/uploads/2012/10/Taking-the-Lead-October-2009.pdf?x83233>
- Kwan, A. (2014) Youth Food Activism. In P. B. Thompson & D. M. Kaplan (Eds.) *Encyclopedia of food and agricultural ethics* (pp. 1850–1856). Springer. https://doi.org/10.1007/978-94-007-0929-4_431

- Lewis, R. K., Lee, F. A., Brown, K. K., LoCurto, J., Stowell, D., Maryman, J., Lovelady, T., Williams, G., Morris, D. M., & McNair, T. (2018). Youth empowerment implementation project evaluation results: A program designed to improve the health and well-being of low-income African-American adolescents. *Journal of Prevention & Intervention in the Community, 46*(1), 28–42. <https://doi-org.proxy.lib.Ohio-state.edu/10.1080/10852352.2018>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publications.
- Muturi, N., Kidd, T., Daniels, A. M., Kattelman, K. K., Khan, T., Lindshield, E., Zies, S., & Adhikari, K. (2018). Examining the role of youth empowerment in preventing adolescence obesity in low-income communities. *Journal of Adolescence, 68*, 242–251. <https://doi.org/10.1016/J.ADOLESCENCE.2018.08.001>
- Perkins, D. D., & Zimmerman, M. A. (1995). Empowerment theory research and application. *American Journal of Community Psychology, 23*(5), 569–579. <https://doi.org/10.1007/BF02506982>
- Peterson, N. A., Peterson, C. H., Agre, L., Christens, B. D., & Morton, C. M. (2011). Measuring youth empowerment: Validation of a sociopolitical control scale for youth in an urban community context. *Journal of Community Psychology, 39*, 592–605. <https://doi-org.proxy.lib.Ohio-state.edu/10.1002/jcop.20456>
- Rappaport, J. (1987). Terms of empowerment/exemplars of prevention: Toward a theory for community psychology. *American Journal of Community Psychology, 15*, 121–148. <https://doi.org/10.1007/BF00919275>
- Renwick, K., & Powell, L., (2019). Focusing on the literacy in food literacy: Practice, community, and food sovereignty. *Journal of Family and Consumer Sciences, 111*(1), 24–30. <https://doi.org/10.14307/JFCS111.1.24>.
- Roth, J. L., & Brooks-Gunn, J. (2003). What exactly is a youth development program? Answers from research and practice. *Applied Developmental Science, 7*(2), 94–111. https://doi.org/10.1207/S1532480XADS0702_6
- Saldaña, J. (2021). *The coding manual for qualitative researchers*. Sage.
- Schusler, T. M. (2013). Environmental action and Positive Youth Development. In M. C. Monroe & M. E. Krasny (Eds.), *Across the spectrum* (pp. 93–115). North American Association for Environmental Education.
- Shier, H. (2001). Pathways to participation: Openings, opportunities, and obligations. *Children and Society, 15*, 105–117. <https://doi.org/10.1002/chi.617>

- Smelkova, L. (2015). *Food education in America*. Center for Science in the Public Interest. Washington, DC. https://kiesel.ucdavis.edu/Food_education_report_Dec2015.pdf
- Stake, R. E. (1995). *The art of case study research*. Sage Publications
- United States Agency for International Development (USAID). (n.d.). *Youth power: What works in youth and agriculture, food security, and nutrition*. <https://www.youthpower.org/what-works-youth-and-agriculture-food-security-and-nutrition>
- United States Department of Agriculture (USDA). (2021). *Dialogue summary: Youth voices in sustainable U.S. food systems*. <https://www.usda.gov/sites/default/files/documents/Youth-Dialogue-Summary-USDA.pdf>
- United States Department of Agriculture (USDA). (2023). *Food security in the U.S.: Key statistics and graphics, 2022*. Economic Research Service. <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-u-s/key-statistics-graphics/#map>
- University of Oxford. (n.d.). *What is the food system?* Oxford Martin Programme on the Future of Food. <https://www.futureoffood.ox.ac.uk/what-food-system>
- Wong N. T., Zimmerman, M. A., & Parker, E. A. (2010). A typology of youth participation and empowerment for child and adolescent health promotion. *American Journal of Community Psychology*, 46, 100–114. <https://doi.org/10.1007/s10464-010-9330-0>
- Yeboah, F. K. (2018). Youth for growth: Transforming economies through agriculture. *Global Food Security Report*. The Chicago Council on Global Affairs. https://www.thechicagocouncil.org/sites/default/files/report_youth-for-growth_20180322.pdf
- Yin, R. K. (2018). *Case study research and application: Design and methods* (6th ed). Sage.
- Zimmerman M. A. (2000). Empowerment theory. In J. Rappaport J., & E. Seidman (Eds.), *Handbook of community psychology* (pp. 43–63). Springer. https://psycnet.apa.org/doi/10.1007/978-1-4615-4193-6_2

© 2025 by authors. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).