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A Qualitative Study of an Urban Community Garden: Creating Healthier Neighborhood Environments

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A QUALITATIVE STUDY OF AN URBAN COMMUNITY GARDEN: CREATING HEALTHIER
NEIGHBORHOOD ENVIRONMENTS

by

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DEDICATION

To my grandmothers, Margaret McGlammery Stanton and Martha Mowry Workman.

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There are so many people that have supported me, encouraged me, and helped me in this process. Without each of them, completing my dissertation seems like it would have been impossible. From the librarian who enthusiastically helped me find newspaper articles about this community to my friends and family who encouraged me on my most challenged days, so many people integral people on this journey. While “thank you” does not begin to describe the depths of my gratitude and appreciation, it is my humble offering.

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To the participants and supporters of the community garden, I offer my appreciation for welcoming me into your community, sharing your stories with me, and giving me the privilege of sharing them with others. In addition, I express my gratitude to the *Healthy Environments* team and CEC staff including Drs. Stacy Smallwood and Ronald Pitner. Thank you for sharing days with me in meetings, gardening with me, and enriching my experience with your thoughtful insights and skilled community organizing.

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ABSTRACT

Neighborhoods influence population level health; the places where people live, work, and grow are an essential setting for health promotion interventions. In efforts to create healthier neighborhood environments, there is a movement to better understand neighborhood social characteristics. The neighborhood social environment potentially includes social relationships (as well as trust and cohesion), networks, norms, and the resources that may be generated from relationships. In addition, more work is needed to learn about how people may become engaged in neighborhood initiatives. Community gardens are a 1) potential strategy to promote health at community and individual levels 2) mechanism to involve community members in working together to create healthier neighborhood environments, and 3) lens through which to understand these social processes within the neighborhood environment.

This qualitative study utilized an ethnographic approach to understand the social processes of community members being engaged in an urban community garden. Data, including field notes and in-depth interviews, were collected over an eighteen-month period. An inductive analysis was used to detect emergent themes. Results identified facilitators, opportunities, and roles related to community engagement in this community garden. Facilitators of engagement included neighborhood leadership, a community-academic partnership, and the physical garden space. These facilitators resulted in a variety of opportunities for community engagement in the garden, which created multiple

ways for people to participate including the roles of gardener, partner, fundraiser, supporter, and leader. In addition, the community garden facilitated social interactions and was a tool for neighborhood leaders to advocate for social and economic development in their neighborhood. The community garden served as a safe community gathering space where neighbors assembled and worked together, as well.

This study broadens the existing knowledge on the potential social benefits of community garden spaces and illustrates the complex interactions between our physical and social environments. Moreover, this research informs our understanding of the community engagement process in gardens and provides an example of how community-academic partnerships can be formed to extend the reach of interventions. Finally, this work illustrates multiple ways for people to be involved in community gardens beyond gardening.

PREFACE

In 2009, a group of neighborhood leaders began working together to plan and develop a community garden. They set out to develop a community garden to address concerns about their neighborhood including a lack of social and economic development, the presence of vacant and blighted lots, and the absence of social interaction among neighbors. By the next year, this group of neighbors had secured land owned by a local church and began growing fresh food. In the years that have passed since, additional land has been procured to expand the garden and a variety of partners and community residents been engaged. Together, this diverse group has made significant accomplishments towards establishing a successful community garden. This is the story of people working together to grow food and fellowship in an urban neighborhood in the Southeastern United States.

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LIST OF ABBREVIATIONS

CEC..... Community Empowerment Center

IHCG..... Inman Heights Community Garden

CHAPTER 1

INTRODUCTION

The notion of health itself is complex, as indicated by the World Health Organization's definition: "*Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*" (World Health Organization, 1948). Given the complexities of health, it is reasonable that our understanding of how to create and maintain optimum health for all people remains a challenge.

There are numerous factors that influence our physical, mental, and social health. While individual level factors including lifestyle habits and genetic predispositions influence health, we now know health is significantly shaped by our physical and social contexts (Institute of Medicine, 2003). Accordingly, public health gives emphasis to population level approaches. As informed by social-ecological models, the population health approach considers individual behaviors within immediate and distal contexts and seeks to understand how physical and social environmental influences shape health (Bronfenbrenner, 1979; McLeroy, Bibeau, Steckler, & Glanz, 1988).

Addressing public health problems within the social-ecological framework focuses attention on both individual and environmental factors as targets for health promotion interventions, including interpersonal, organizational, community, and public policy factors. The multitude of factors that affect health creates a complex web to

understand as we all work towards creating equitable opportunities for people to achieve optimum health on all dimensions.

Health happens in places (Poland, Krupa, & McCall, 2009). As a result, a strong focus has emerged on the places we live, work, and grow, including neighborhood environments, and the ways in which they influence health. Evidence exists confirming that neighborhood environments influence population and individual level health outcomes (Diez Roux & Mair, 2010; Miller, Pollack, & Williams, 2011). However, the mechanisms through which neighborhood characteristics influence health are not well understood.

As a result, there is a movement to better understand the ways in which neighborhood environments shape health. This has highlighted a lack of knowledge about the factors beyond the physical characteristics of an environment, collectively referred to as the social environment. There is little consensus on the components of the social environment, the ways that those social characteristics operate within neighborhoods, and the ways in which neighborhood social factors ultimately influence health (Yen & Syme, 1999). Therefore, more work is warranted to explore social characteristics within the neighborhood setting.

The neighborhood social environment “includes the quality of relationships—such as trust, connectedness and cooperation—among neighborhood residents” (Braveman, Cubbin, Egerter, & Pedregon, 2011). In addition, the social environment may also include social capital, which has been used to describe the resources generated from social relationships with others (Lin, 1999), safety, and collective efficacy, which

indicates the presence of social cohesion among neighbors that brings them together to address shared concerns (Sampson, Raudenbush, & Earls, 1997).

Community gardening has recently become a popular public health intervention strategy that addresses both physical and social elements of neighborhood environments. Many benefits associated with community gardening have been identified ranging from promoting healthy behaviors, increasing food security, encouraging social interaction, and creating healthier communities (Alaimo, Packnett, Miles, & Kruger, 2008; Draper & Freedman, 2010; Firth, Maye, & Pearson, 2011; Teig et al., 2009; Wakefield, Yeudall, Taron, Reynolds, & Skinner, 2007). However, the ways that community gardens can enhance the social environment (potentially including social relationships and features of those relationships including connectedness, cooperation, and trust) are not well known.

Community gardens provide a strategy both to examine and to improve neighborhood social environments and ultimately, health. Specifically, community gardens are a 1) potential strategy to promote health at community and individual levels 2) mechanism to involve community members in working together to create healthier neighborhood environments, and 3) lens through which to understand these social processes within the neighborhood environment. This study utilized an ethnographic approach to understand the social processes of community members being engaged in an urban community garden.

Specific Aim 1: To analyze the ways that community members are engaged in an urban community garden.

Involving community members to play an active role in developing and implementing strategies to address health problems is a recommended approach to improving public health (Israel, Schulz, Parker, & Becker, 1998). There are multiple ways that people might get involved in community activities; some of the ways people may get involved through, may be more visible than others. For example, some may choose to work “behind the scenes”. Moreover, learning more about what facilitates community engagement is a continuing challenge. Establishing a more comprehensive concept of the ways people become involved in community initiatives may result in more effective strategies to engage others. As a result of this process, we may be more successful in engaging a wide range of community participants and therefore, boost efforts to create healthier neighborhood environments and improve the health of all people.

Specific Aim 2: To explore the role of community garden space in the neighborhood social environment.

Exploring perceptions of the social environment from the participant perspective is an initial step toward understanding how neighborhood social environments shape health. While community gardens are physical spaces, they may promote social interaction, the development of new relationships and networks, and facilitate working with others towards common goals. More investigation is needed into the ways that participating in community initiatives (such as a community garden) may contribute to the neighborhood social environment, particularly from the perspective of community members. This work aims to explore community member’s perceptions of the neighborhood social environment through the lens of a community garden. Although

beyond the scope of this research, this work is an essential step towards understanding how neighborhood social environments shape health, as well as the ways to create health-promoting neighborhood environments.

CHAPTER 2

LITERATURE REVIEW

Improving the Neighborhood Environment as a Population Level Approach to Health Promotion

A social-ecological perspective recognizes that the individuals exist in complex systems of environmental factors that span across interpersonal, community, and structural levels of society; these factors shape our behaviors over time (Bronfenbrenner, 1979; D. A. Cohen, Scribner, & Farley, 2000; McLeroy et al., 1988). Consequently, we must consider the individual within a broader context of social, economic, and political factors and address them in addition to the individual. Addressing structural and environmental level influences is a key to creating sustainable solutions for health equity, which is one of the greatest public health challenges faced today (Thomas, Quinn, Butler, Fryer, & Garza, 2011).

Broadly, health outcomes follow a clear social and economic gradient (Link & Phelan, 1995; Marmot, 2005). A recent examination of distal or ‘upstream’ factors revealed the profound influence of physical, social, and economic conditions that shape health (Gehlert et al., 2008; Williams, Costa, Odunlami, & Mohammed, 2008). The social, educational, and economic opportunities we are afforded, our access to resources and services, and our exposures to stressors and toxins all influence health. To maximize health promotion efforts, strategies are needed to address the ‘root causes’ of these differences- the broader social, economic, and political factors (Krieger, 2001).

These factors are often referred to as the *social determinants of health*: the conditions in which people live, grow, and work (Wilkinson & Marmot, 2003). Therefore, there is a need to consider inequities in power, money, and resources within a framework that informs our understanding of health and “shift the focus to the causes of the causes” (Marmot, 2012, p. 2033). Addressing these distal factors has implications for increasing social cohesion and improving population health (Kawachi & Kennedy, 1997). The importance of the social determinants of health has been recognized by the World Health Organization, as well as the United States Department of Health and Human Services (Irwin & Scali, 2010; Solar & Irwin, 2010; U.S. Department of Health and Human Services, 2013). In particular, the latest release of *Healthy People 2020* added a goal specific to the social determinants of health; this goal is to create social and physical environments that promote good health for all. To advance progress towards this goal, an accompanying ‘place based’ model was proposed identifying five key social determinants of health including: education, neighborhood & built environment, economic stability, health and health care, and social and community context (U.S. Department of Health and Human Services, 2013). This model highlights the importance of identifying spaces, situations, or contexts to understand the how the social determinants of health play out, which can inform amenable penetration or leverage points for change.

In the short term, focusing on specific contexts may provide a more pragmatic strategy to address the ‘causes of the causes’, which is a lofty and long-term goal. One potential context to identify and understand how inequities shape health is the neighborhood environment, as social conditions and policies may directly influence the quality of a neighborhood environment, and subsequently, the health of its residents.

Through efforts to create healthier places for people to live, work, and grow, we can begin to address inequalities in power, money, and resources.

Concentrated Disadvantage: The Need to Create Healthier Neighborhood Environments

Neighborhoods- the *places* we live, work, and grow in shapes our health and can have dramatic effects on quality of life, as well as life span (Braveman et al., 2011; Diez Roux & Mair, 2010; Miller et al., 2011). A significant body of literature exists that demonstrates a positive relationship between health and the quality of neighborhood environments (Kawachi & Berkman, 2003). Neighborhood characteristics have been associated to mortality, self-rated health, chronic diseases, health behaviors, and mental health (Clark et al., 2011; Curry, Latkin, & Davey-Rothwell, 2008; Do et al., 2007; Messer, Laraia, & Mendola, 2009; Sorensen et al., 2007; Stronegger, Titze, & Oja, 2010; Wight, Cummings, Karlamangla, & Aneshensel, 2010).

Importantly, the places that people live are not entirely a matter of choice; social, economic, and political conditions affect where people live and the quality of those places. Therefore, the neighborhood environment is an important setting to understand. Broad social and economic characteristics play out in a continuum of advantage and disadvantage, termed by sociologists as social stratification (Lenski, 1966). Neighborhoods are patterned by social and economic disadvantage; that is, those of similar social advantage tend to congregate around others of similar status- termed place stratification or geographic isolation (Sampson, Morenoff, & Gannon-Rowley, 2002). Social and economic disadvantage in neighborhoods can be assessed by poverty level or extent of residential segregation in that area. The social and historical context of the

United States plays an important role in understanding how neighborhoods are structured and subsequently, how resources are allocated and health is shaped. While covert in many cases now, it has only been a few decades since and the policies and practices of discrimination and racism against African Americans overtly separated groups of people into neighborhoods based on socially constructed ideas. The historical segregation of neighborhoods continues to shape where people live and many neighborhoods in the United States remain racially segregated.

Policies and structural practices in the post-slavery era have continued to implicitly exclude African Americans from purchasing homes, participating in government housing programs, and obtaining bank loans, thus exerting power and forcing separate existences (Bell & Lee, 2011). Consequently, African Americans are disproportionately segregated, as compared to other racial/ethnic groups (Massey, Rothwell, & Domina, 2009). This segregation of racial and ethnic minority populations into resource poor neighborhoods is considered a form of institutionalized racism (Brondolo, Gallo, & Myers, 2009) and results in concentrated poverty.

African Americans are overrepresented in geographic areas with concentrated poverty (Bishaw, 2011; Lindberg et al., 2010). Living in socially and economically deprived neighborhoods has been associated with poorer overall health, as concentrated poverty results in higher crime rates, poorer educational opportunities, poor housing conditions, and limited access to resources, services, and employment opportunities (Doubeni et al., 2011; The Brookings Institution, 2013).

The idea that people's basic needs must be met before they can focus on higher level developmental tasks is well established (Maslow, 1954). When individuals and families lack access to resources, have insufficient housing, are food insecure, and live in unsafe neighborhoods, their ability to achieve and maintain optimal health is severely compromised. Innovative strategies that acknowledge these inequities and that focus on modifiable factors are needed (Kumanyika, 2012).

The characteristics of a neighborhood environment, including access to goods, services, and resources, have the potential to promote or impair health (Cohen, Scribner, & Farley, 2000). Patterns of social and economic disadvantage and associated social problems including violence, crime, social and physical disorder are readily observable within neighborhood environments (Sampson et al., 2002). For example, neighborhoods of low socioeconomic status are more likely to experience violence including child abuse and intimate partner violence (Cunradi, Caetano, Clark, & Schafer, 2000; Freisthler, Merritt, & LaScala, 2006). Moreover, residing in a violent neighborhood is related to increased risk for chronic diseases such as cancer, diabetes, stroke, and asthma, as well as higher rates of substance abuse, physical inactivity, poor mental health, and unhealthy eating (Carver, Timperio, & Crawford, 2008; S. L. Johnson et al., 2009; Kilpatrick et al., 2003; Mair, Roux, & Galea, 2008; Wright et al., 2004).

While difficult to fully disentangle, the characteristics of a neighborhood environment can be dichotomized into physical and social. Physical or 'built' environmental characteristics describe the resources in our physical surroundings; they are those that are built, man-made, or are naturally occurring such as housing quality, traffic, facilities, and community resources including sidewalks, recreation centers, green

spaces, grocery stores, or health care facilities (Lovasi, 2012; Srinivasan, O'Fallon, & Deary, 2003). In addition, issues related to environmental health and sustainability including air pollution, water quality, and exposures to toxins and harmful substances contribute to our physical environments.

The literature related to the physical neighborhood environment and health is more robust than that of the social environment. An increasing evidence base links access to and availability of physical amenities to better health and health behaviors (Müller-Riemenschneider et al., 2013; Sarkar, Gallacher, & Webster, 2013). A recent systematic literature review on the relationship between the physical environment and health demonstrated that more walkable neighborhoods were associated with a host of positive health outcomes including increased physical activity, increased social capital, lower overweight, lower reports of depression, and less reported alcohol abuse (Renalds, Smith, & Hale, 2010).

In contrast, some physical neighborhood characteristics can have negative influences on health (D. A. Cohen et al., 2000). Neighborhood physical disorder or incivilities include the presence of graffiti, litter, abandoned cars, dilapidated housing, vandalism, and other signs of deterioration including vacant lots (Sampson & Raudenbush, 1999). The broken windows theory posits that physical incivilities cause residents to feel susceptible to crime and violence, resulting in social withdrawal from their communities (Wilson & Kelling, 1982). In turn, this withdrawal can result in a spiral down effect, heightening disorder because of the lack of monitoring and involvement from neighbors. For example, a recent study established the relationship between high

levels of physical incivilities, high rates of crime, low rates of community concern, and perceived neighborhood safety (Pitner, Yu, & Brown, 2012).

One salient physical environmental characteristic to this research is the presence of vacant lots. The presence of unused and blighted spaces has been associated with poorer health and premature death, as well as higher rates of crime in neighborhoods including violence, drug sales, and other illegal activities (Cohen et al., 2003; Spelman, 1993; Wei, Hipwell, Pardini, Beyers, & Loeber, 2005). Vacant and blighted lots impact the social environment, as they may deteriorate relationships between residents, attract crime, and create fear, anxiety, and stigma for residents (Garvin, Branas, Keddem, Sellman, & Cannuscio, 2013).

Leveraging Neighborhood Context for Health: Focusing on the Social Environment

One potentially modifiable focal point is the neighborhood social environment, as there are leverage points that have the potential to improve health at the population level (Diez Roux & Mair, 2010). Many of elements of the neighborhood social environment are interrelated with the physical neighborhood environment; however, they have their own unique influences on population health (Bleich, Thorpe, Sharif-Harris, Fesahazion, & LaVeist, 2010; Thorpe, Brandon, & LaVeist, 2008). Understanding neighborhood social environments is challenging, as these factors are not readily observable as physical or 'built' characteristics.

The neighborhood social environment “includes the quality of relationships—such as trust, connectedness and cooperation—among neighborhood residents” (Braveman et al., 2011). Broader social features including social position and

neighborhood organization shape the extent to which social relationships are developed, as well as the quality of those relationships (House, Umberson, & Landis, 1988).

Depending on the way a neighborhood is organized, social interactions may be promoted or hindered. The extent to which people develop and maintain relationships, engage with one another, and leverage resources from those interactions is likely a result of

“surrounding social structures, how people fit into social structures, and the economic realities they present” (Gehlert et al., 2008, p. 344; Pearlin, 1989). For example, in a study of urban dwelling African American families, concentrated poverty hindered the development of social relationships (Rankin & Quane, 2000).

A growing evidence base indicates that neighborhood social environments have strong influences on health (Gidlow, Cochrane, Davey, Smith, & Fairburn, 2010; Jia, Moriarty, & Kanarek, 2009; LaVeist, Pollack, Thorpe, Fesahazion, & Gaskin, 2011; Veitch et al., 2012). For example, neighborhood social attributes including exposures to crime, disorder, violence, and lack of access to health promoting goods, services, and relationships all have potentially detrimental effects on health (Cohen, Davis, Lee, & Valdovinos, 2010). Neighborhood attributes including socioeconomic deprivation cause stress, which is associated with “wear and tear on physiological systems” via allostatic load (McEwen, 1998; Schulz et al., 2012). However, the social interactions individuals form within their neighborhood environments are important, as they may mitigate the physiological effects of stress (Brenner, Zimmerman, Bauermeister, & Caldwell, 2013).

The neighborhood social environment has the potential to increase risk for poor health, but notably, also can be enhanced to promote health. The positive association between the presence of social relationships and an individual’s health is well

documented in the literature. The ways in which social relationships influence health are broad and include physiological, psychological, and behavioral mechanisms (Umberson & Montez, 2010). For example, a relationship may provide social support for health behaviors such as physical activity (i.e. walking clubs) or smoking cessation. In addition, the development of social relationships and networks may foster trust, cohesion, a sense of community, empowerment, and safety (Ross & Jang, 2000; Speer, Jackson, & Peterson, 2001; Ziersch, Baum, MacDougall, & Putland, 2005). Therefore, strategies to create neighborhood social environments that promote the creation and maintenance of social relationships are needed to enhance the health of its residents.

Elements of the neighborhood social environment including social relationships, connectedness, cooperation, trust, safety, place attachment, and creating an overall sense of community can contribute to healthy communities and individuals (Baum, Ziersch, Zhang, & Osborne, 2009; Franzini et al., 2009). Interactions among neighborhood residents may also lead to a exchanges in information and resources (i.e. 'social capital'), as well as a sense of their ability to affect change through collective efficacy (Coleman, 1988; Sampson et al., 2002). Thus, the social environment may also include social capital (resources derived from those relationships with others), collective efficacy (the connections and shared belief among neighbors that they can come together to address common concerns), and social stressors (violence/safety) (Lin, 1999; Sampson et al., 1997).

There is an increasing body of work that is exploring the connection between social capital, resources derived from social ties and networks (Lin, 1999), and various health outcomes including lower all-cause mortality, lower rates of self-reported poor

health, and better mental health status (Kawachi, Kennedy, & Glass, 1999; Lochner, Kawachi, Brennan, & Buka, 2003). In addition to the individual level health benefits, social capital has been proposed as a potential leverage point to improve the neighborhood social environment via the creation of shared norms and values, increasing community resources, and creating communities where people feel safe, trusting, and connected with their neighbors (Woolcock & Narayan, 2000). Social capital may also promote resilience by reducing the impact of negative forces, even in the face of risk factors (Cohen et al., 2010).

A more detailed and contextualized understanding of the social environment is needed, as it is broad, complex, and dynamic. With the literature reviewed in this section, we can see that there are a variety of ways that research has worked to understand social influences on health and within the context of neighborhoods. However, continued exploration is needed so that we can move towards a better understanding of neighborhood social environments and in time, improve measurement and data collection of these factors (Institute of Medicine, 2010). Our inability to accurately capture or measure the neighborhood social environment comprehensively is, in part, challenged by the complex historical and cultural contexts in our environments. Building an understanding of the neighborhood environment from community member's perspectives, as well as the ways that social assets are cultivated, may contribute to a larger conceptual base in the literature. As we better define neighborhood social environments, future research can explore how neighborhood social factors interact to influence health behavior and health outcomes in populations (Yen & Syme, 1999).

There are recognized strategies that can be used to engage and mobilize neighborhood residents to improve their neighborhood social environments (Schulz et al., 2011). These approaches can potentially prevent violence, foster cohesion, promote civic engagement, improve neighborhood environments, and ultimately improve health (Cohen et al., 2010). Engaging community members to focus on community assets can leverage social processes, including social capital, as well as potentially address social stressors including crime and disorder (Woolcock & Narayan, 2000). A recent study indicated that perceived safety and cohesion plays a role in health and further, these differences could be attenuated if levels of social capital or cohesion increased (Baum et al., 2009). Therefore, rather than focusing on negative characteristics of neighborhoods, it may be beneficial to engage community members to focus on the assets in their communities and work together to improve neighborhood environments.

Community Engagement: Working With Community Members to Create Healthier Neighborhood Environments

Working with community members, rather than on, to develop and implement strategies to address health problems is a recommended approach to improving public health (Israel et al., 1998; Wallerstein, 1999). Over time, several approaches have been developed to engage community members in working with representatives from academic institutions. Several terms exist to describe research approaches to involving community members in the research process including community-based participatory research, community-based research, action research, participatory action research, and empowerment evaluation (Fetterman, 2002; Kemmis & McTaggart, 2005; Minkler & Wallerstein, 2010).

While there are many terms used to describe approaches to working with community members to improve public health, they all fit within a community-engaged research approach. *Community-engaged research* is defined as “the process of working collaboratively with and through groups of people affiliated by geographic proximity, special interest, or similar situations to address issues affecting the well-being of those people” (Centers for Disease Control and Prevention, 1997, p. 9). Community engagement focuses on the active involvement of the groups or individuals who are likely to benefit from the program in some or all aspects of the process. Importantly, community-engaged research is not a methodology. Rather, it is a framework to approach community health development that recognizes and builds upon community strengths to develop context specific, real world solutions to public (health) problems. Inherent in the community-engaged research paradigm is the notion of control; a defining characteristic of this approach versus other research methodologies is the “location of power” (Cornwall & Jewkes, 1995, p. 1667).

The community-engaged research paradigm emphasizes relationship building, partnership, cooperation, collaboration, and commitment and acknowledges that health behaviors occur in a complex system of physical and social environments. By involving local people, their perspectives, and priorities, the effectiveness of health promotion initiatives may be enhanced. In addition, the community-engaged research paradigm aligns well with the idea that addressing social and economic factors, or the ‘root causes’ will maximize health promotion efforts (Krieger, 2001).

“Community” can be defined as a diverse group of people who are somehow connected through social ties, shared interests, and engage in collective action

(MacQueen et al., 2001). While the concept of “community” has evolved with technology, this work will assess community according to geographic location. In addition, it is important to point out that, while a community has some common connection, the group is rarely homogeneous. Rather, communities are often comprised of diverse groups of people, which have both positive and negative implications. For example, multiple perspectives bring more potential solutions to community problems; however, many perspectives can create challenges to the development of mutual goals.

The community-engaged research paradigm is interdisciplinary; it draws from the social sciences, as well as movements related to community organizing, community development, and social justice. The roots of community-engaged research can be traced to the work of Freire, who encouraged and empowered local communities to identify their problems, assess the social and historical root causes of these issues, and develop strategies to address them (Freire, 1970). This philosophy of empowerment has been applied to the field of public health through the promotion of community-engaged research approaches (Wallerstein & Bernstein, 1988).

While the goals and strategies associated with these approaches may be different, similarities in the underlying principles have been observed including building on strengths and resources within the community, promoting capacity building, emphasis on locally relevant, systems level perspectives, and a balance between research and action (Israel et al., 1998). Recently, these concepts were classified broadly under the label of community-engaged research (Westfall et al., 2009).

Regardless of the nuanced differences of different community-engaged approaches, there are multiple benefits. Most importantly, in the context of addressing the ‘root causes’ of health determinants, a community-engaged approach recognizes the strengths, resources, and connections among local actors and integrates them to improve the health of communities. In addition, community-engaged research can improve the design and implementation of interventions, shift power and decision making into communities, promote translation of research, and result in mutual benefit for all parties involved (Wallerstein & Duran, 2010). Understanding systems level changes in local contexts is essential to informing the translation between public health research and practice (Westfall et al., 2009). Furthermore, through identifying the needs and adapting strategies to fit the perspective of community members, the likelihood of adoption, implementation, and sustainability is increased.

Moreover, community-engaged research has the potential to positively influence the neighborhood social environment as community members work together towards common goals. Convening community members to improve their neighborhood environments has the potential to encourage social interaction, civic engagement, community empowerment, and reduce rates of mistrust and violence. A recent review confirmed these relationships, as well as the relationship with community engagement and other social determinants of health including housing, employment, education, income, and crime (Popay et al., 2007). Thus, community-engaged strategies are a promising approach to building healthier neighborhood environments.

However, there are challenges to community-engaged research. Developing partnerships between academic and community partners takes time and balance. This

paradigm can assume that community people have the interest, skills, and capacity to assess problems and implement solutions. Research partners must acknowledge that time, effort, and resources may need to be invested to help people develop the skills they need to effectively implement strategies. Further, evaluating community based efforts is challenging; a model has been proposed for evaluating community-engaged research (Lasker & Weiss, 2003) and it is important to understand how community-engaged efforts play out in different community contexts.

Community engagement can be thought of as a process. The level of active involvement, collaboration, and participation from community members may vary over time (Handley et al., 2010). In addition, the process of community engagement may vary on other dimensions including the setting or context of the initiative, the strength and functionality of the partnership between the community and researchers, and the intensity, or degree to which community members interact with one another.

Furthermore, it is important to consider who or what facilitates the community-engaged initiative, as community-engaged research has traditionally transpired with researchers approaching community members to implement new initiatives based on a mutual goal. The majority of literature published on community engagement documents this process from the perspective of researchers, which has produced an understanding of community engagement mostly from the academic perspective (Bruning, McGrew, & Cooper, 2006). Learning about this process from the perspective of community members may provide information on facilitating community engagement, which would likely boost our success in creating healthier neighborhood environments, and ultimately, improving individual and population health.

Community Gardening as a Mechanism to Engage with Community Members to Create Healthier Neighborhood Environments

Understanding how community-engaged interventions may influence the neighborhood social environment is an understudied area. Community gardens are a potential way to engage community members and organize people in intervening on their neighborhood physical and social environments for community development and health promotion (Armstrong, 2000). In addition, community gardens are also a setting in which to conduct community-engaged research and understand how a garden may contribute to neighborhood social environments. Empowering individuals to take ownership of their neighborhoods and participate in a process of organizing, planning, and implementing a garden can have multiple, lasting impacts on health. However, in order for community gardens to be sustainable endeavors, community engagement and ownership is essential (Raja, Born, & Russell, 2008).

A community garden can be defined in many ways depending on what is grown, who participates and is served, how it is structured, and its geographic location (rural, urban, suburban). One of the most concise definitions of community gardens describes them as “any piece of land gardened by a group of people” (American Community Gardening Association, 2013). While community gardens may appear to be different, there are core components that identify a community garden including shared responsibility, access to all members involved, and being geographically located in a shared community space. Currently, it is estimated that there are approximately 18,000 community gardens in the United States and Canada (American Community Gardening Association, 2013).

Community gardening as a public health strategy has recently emerged, but sharing spaces to grow food in communities is not new. There are several examples of community gardening throughout the history of the United States. During the Depression Era of the 1920s, economic hardships and food insecurity drove families and communities to come together to grow food. After World War II, people came together to plant 'victory gardens'. However, as the United States became economically and technologically prosperous in the next few decades, the value of growing one's own food dwindled. Homegrown foods have been replaced with industrially produced convenience and labor saving prepackaged and processed foods.

Benefits of Community Gardens: Promoting Healthy Behaviors and Outcomes

As recognition of our changing food systems and the obesity epidemic has grown, acknowledgment of the importance of locally grown and sustainably produced foods has increased. However, the benefits of community gardens span beyond access to healthy foods; a variety of health promoting processes have been documented in community garden research. A 2010 review of community gardening research indicated that there are numerous benefits to community gardening including health benefits (mental, physical, and dietary); youth education, employment, and skill development; food security; economic development; use and preservation of land; crime prevention; leisure and recreation; neighborhood beautification; social interaction/cultivation of relationships; cultural preservation and expression; and community organizing and empowerment (Draper & Freedman, 2010). A more recent review affirmed these

findings and also described benefits regarding environmental sustainability, environmental justice and increased biodiversity (Guitart, Pickering, & Byrne, 2012).

One of the most noted benefits of community gardening is the creation of health promoting behaviors. Community gardens hold potential for multiple benefits ranging from increasing access to fruits and vegetables, promoting physical activity, and encouraging psychosocial wellbeing (Austin, Johnston, & Morgan, 2006; Carney et al., 2012; Castro, Samuels, & Harman, 2013; Zoellner, Zanko, Price, Bonner, & Hill, 2012). Gardening promotes fruit and vegetable consumption and physical activity, two of the most significant behaviors related to chronic disease prevention. Participation in community gardening has demonstrated an increase in consumption of fresh fruits and vegetables among children and adults (Heim, Stang, & Ireland, 2009; Litt et al., 2011). In a study of community gardening among adults residing in urban areas, those who participated in community gardening were 3.5 times more likely to consume fruits and vegetables at least 5 times daily (Alaimo et al., 2008). Other studies have demonstrated similar results in increasing consumption of fruits and vegetables in community garden participants (Johnson & Smith, 2006). Community gardens also have potential to positively influence the home and family food environment. For example, a recent study of a children's garden resulted in significant increases in fruit and vegetable requests from children, availability of fruits and vegetables in the home, and fruit and vegetable consumption among parents (Heim et al., 2009).

Another product of participation in community gardens is an opportunity for physical activity. Gardening is considered a light to moderate physical activity (United States Department of Health and Human Services, 2008) and thus, the garden provides a

place to be active. Among a sample of community gardening participants, increased physical activity was cited as one of their perceived benefits of their involvement (Wakefield et al., 2007). In addition to physical health benefits, mental health benefits have been demonstrated among community gardening participants (Austin et al., 2006; Grabbe, Ball, & Goldstein, 2013). Community gardens may also benefit individuals in helping to maintain a healthy body weight. In a study of community gardeners in Utah, those who participated in gardening had significantly lower body mass indexes than those who did not participate in gardening (Zick, Smith, Kowaleski-Jones, Uno, & Merrill, 2013). Thus, community gardens are a promising neighborhood level strategy to promote healthy lifestyles.

In addition to those benefits, community gardens have the potential to bring people together, promote social interaction, encourage social organization, facilitate working with others towards common goals, and shape healthier neighborhood environments (Flachs, 2010; Okvat & Zautra, 2011; Teig et al., 2009; Wakefield et al., 2007). Community gardens may also increase collective efficacy, create or enhance social ties and networks, and/or create health promoting social norms (Glover, 2004; Kingsley & Townsend, 2006; Teig et al., 2009). For example, participants from community gardens have reported increased social ties, which act as a “social lubricant” for the development of social capital in communities (Glover, Parry, & Shinew, 2005, p. 450). Community gardens also facilitated interracial relations between members of a community in a midwestern town (Shinew, Glover, & Parry, 2004). Further, a qualitative study among community gardeners indicated benefits of social integration including shared responsibilities and the development of social relationships (Macias, 2008).

Community gardens may also have the potential for increasing perceptions of neighborhood safety.

Understanding the ways in which people are engaged in community initiatives may improve our success in designing effective strategies to create healthier neighborhood environments, and ultimately, improving the health of all people. However, more work is needed to understand the potential of community gardens and how a community-engaged framework might apply to the development, implementation, and evaluation of the impact of such spaces (McCormack, Laska, Larson, & Story, 2010). Exploring how individuals and groups are involved in a community garden via a community-engaged research process, as well as how they perceive a community garden to contribute to the neighborhood social environment are the key foci of this study. Accordingly, this research will explore the social processes related to community members being involved in an urban community garden.

CHAPTER 3

METHODS

This chapter will provide a description of how I came to conduct this research, the methods I used to gather my data, and the reflective and analytical processes I used to interpret the information I collected. My research is interdisciplinary, drawing from my training as a health educator and social scientist, but uses a qualitative methodology rooted in anthropology, ethnography. Ethnography is a “scientific approach to discovering and investigating social and cultural patterns and meaning in communities, institutions, and other social settings” (Schensul, Schensul, & LeCompte, 1999, p. 1). My use of ethnographic methodology is characterized by my extended time spent in the community (eighteen months), the detailed notes I recorded during this time, and the in-depth interviews I conducted with the people I met in the field. I used field notes and interview data, as well as personal email correspondence and local news articles to document the role of this community garden in the neighborhood and the social processes that resulted from community members being involved.

My goal was to develop a detailed, contextualized story of this particular community garden- the physical space, the people involved, and the processes and activities that ensued when people came together to grow food and fellowship, terms community members used to describe their time in the community garden. This ethnography chronicles this process, the setting in which it took place, the characters I encountered, and the lessons learned during my field experience in this community

garden. I systematically used participant observation and in-depth interviewing techniques to understand the complexities of what it means to be involved in the community garden from the perspective of participants, as well as to learn how the presence of the physical garden space shapes the lived experiences of community members. These data were used to address the two primary aims of this study:

Specific Aim 1: To analyze the ways that community members are engaged in an urban community garden.

Specific Aim 2: To explore the role of community garden space in the neighborhood social environment.

The intent of ethnographic research is to observe, record, and analyze a culture or phenomenon; the ethnographer observes what people do and why before attempting to ascribe meaning to those observations (Schensul et al., 1999). However, to fully understand what is seen, we should interpret the meaning of our observations (Wolcott, 1999). “Thick description” calls for a highly detailed description of the context in which behaviors and interactions occur so that we can interpret what our observations mean in that time, setting, environment, and/or circumstance; the detailed description allows the scientist to understand the observations and consider all of the possible meanings, based on the context (Geertz, 1973). Thus, a “thick description” describes the observations, but also situates the observed within context; this generates deeper understanding and interpretation. As a result, we may be better able to understand what observations mean within that specific culture or setting. For example, in this community garden, I observed people gardening in an in-ground plot, as well as in raised bed boxes. You could simply

deduct that people garden in two different spaces. However, a thick description of the setting and social dynamics will contribute our understanding of *why* people garden in those two different spaces.

Ethnography, as a research approach, is an inherently personal venture (LeCompte, 1999). As Cassell describes, “the interaction is the method; the ethnographer is the research instrument” (Cassell, 1980, p. 36). One of the hallmarks of ethnography is participant observation. My field notes were taken in the spirit of participant observation, which is the practice of observing, recording, and analyzing patterns of social interaction and the use of the garden space. Participant observation is a paradigm or framework for working in the field rather than a technique or set series of steps (Crane & Angrosino, 1992). My approach, or framework, to conducting this research draws from a philosophy of “working *with* people and communities, rather than *on* them” (Wallerstein, 1999). Combining ethnography with a community-based research approaches has been called “the perfect union” (McQuiston, Parrado, Olmos, & Bustillo, 2005, p. 210). Thus, my methodology emphasized the development of relationships and active participation in the setting of interest.

I worked to emphasize my active role in participant observation. I chose this approach because I recognized that in order to more fully understand how community garden participants viewed the garden, as well as their neighborhood social context, I had to be there. Ethnographers spend time in the field, participating in activities with the population of interest to develop an in depth understanding of the setting or culture of study (Emerson, 2001). I began my field experience as an outsider, not knowing any community members. Over time, I worked to develop a presence in the community and

took part in events and activities. I wanted to develop this presence in the community to help understand what the observed behaviors and activities meant in this particular context.

Another key feature of the ethnographic method is the attempt to give voice to participants; in other words, to reflect participant or resident's perspectives. I strive to offer an emic, or inside, perspective into the lived experiences of the individuals involved with the community garden. Wolcott describes ethnography as a 'way of seeing' (Wolcott, 1999); in my role as a participant, I was working to change the way that I as an outsider was seeing by interacting and developing an understanding of the ways that the participants experienced the garden. As a result, I worked with community members on a regular basis to plan and organize community garden planning meetings, put together events in the garden, and facilitate connections in the community for resources including compost, plants, tools, and learning opportunities. In addition, sometimes I simply spent time in the garden sitting with people and talking or tending to the garden.

Through the relationships I have developed with the people involved with the community and the time I spent with them, I seek to give an account of the views, perspectives, and experiences in our time together. I feel that this is exemplified by the community association president's introducing myself and the CEC director at an Inman Heights Community Association meeting, saying, "*well, they [the director and I] aren't guests anymore*" (from Field Notes, February 15, 2012).

While my active participation and involvement in the community did help me gain a more 'inside' perspective, the participant observation approach I took towards my

research contributed to a blurred point of view. By being present in the community for an extended time, my own perspectives evolved and changed because of my involvement. For example, social interactions that I initially saw as peculiar may have become commonplace over time as I got to know the people and their ways of interacting in this setting.

However, I will always remain an outsider to some extent in this community. While I did become a member of the community garden, I remained an outsider in the overall neighborhood because of my limited interactions with people outside of the garden. I also recognize that my own personal characteristics and social position shaped how I developed relationships, experienced the setting, and the roles and responsibilities that I took on during my tenure in the field. As the medium for gathering information, I recognize that I am different from the participants in many ways. As a result, this may have influenced how people interacted with me and the information I collected; people may have acted differently when I was around.

I see the world from the viewpoint of a white, educated woman. I am a South Carolina native and have resided in the South for my entire life. Therefore, my consciousness is shaped by the experiences of racism I've encountered throughout my life. In short, I have white guilt; I am highly sensitive to how the history of the South shapes race relations and has predisposed me to privilege.

Perhaps as a result of my life experiences, I see the world from a social justice and feminist perspective; that is, I believe that groups of people have been oppressed in society based on their gender, racial/ethnic identity, social class, and/or sexual identity

and as a result, have experienced disadvantages. The multiple identities we all have intersect to create complex, unique persona; when that persona is constructed of one or more minority identities (i.e. woman, person of color, gay/lesbian, etc.) the opportunity to reach one's full potential is compromised (Weber & Fore, 2007).

In this work, I tried to balance the ways that my outlook shapes my perspective with my goal to gather the insider perspective. In this effort, I have tried to remain mindful throughout my experience with this community garden, the neighborhood it is in, and the people who participate in the garden. That is, I frequently "checked myself" to think about my own preconceived notions, assumptions, and reactions to the experiences that I encountered during this process. I often recorded these reflections in memos as a way to document how my own worldview was shifting as a result of the process, as well as to consider on how I was interpreting the experience. I asked myself questions including, "who am I?", "what are my roles?", "what am I doing?", and "what do people think about me?" Ultimately, my identity evolved as I represented many roles and responsibilities throughout my involvement with the community garden. As my perspectives changed and developed, I thought about how my new position as an active member of the community garden shaped my experience.

Setting

This research was conducted in an urban, predominantly African American neighborhood in a Columbia, South Carolina. The neighborhood has a public housing community, Candler Grove¹, as well as an adjacent residential community, Inman

¹ The name of this community has been changed to a pseudonym.

Heights². The median household family income for this census tract is \$12,098; the median income for this zip code is \$32,479 (United States Census Bureau, 2013). Census tract data indicate that this neighborhood is 94.4% minority populations and that 63.6% of residents live under the poverty line (United States Census Bureau, 2013). In addition, this a high proportion of homes in this neighborhood renter occupied units (82.1%) in comparison to owner-occupied units (17.9%) (United States Census Bureau, 2013).

This neighborhood has a long history as part of the City; interestingly, it was a white neighborhood in the mid-nineteenth century, but at some point became an African American neighborhood:

“The Inman Heights community was originally a part of the City’s first suburb, which was originally a predominantly white neighborhood established in 1855. By 1913, the Inman Heights neighborhood was no longer a part of the historic district, but it is unclear when it broke off. The transition of this neighborhood illustrates important patterns in the shift from biracial coexistence in the late nineteenth century to the practice of strict racial segregation common to the early twentieth century urban centers.” Personal Email Communication with Inman Heights Community Association, June 11, 2013

Context of the Study

In the fall of 2011, I began working with members of this urban African American community to ‘grow’ a community garden. I became involved with the community through the *Healthy Environments* Study, a community-engaged research

² The name of this community has been changed to a pseudonym.

study in the University of South Carolina's College Of Social Work. The overall goal of the *Healthy Environments* Study was to work with community members to create healthier, safer neighborhood environments. The study was a partnership between the University of South Carolina's College Of Social Work, the local public housing authority, and community residents. With funding from the Kresge Foundation, the *Healthy Environments Study* aimed to achieve its goal through a three phase process: 1) a community engaged assessment using the Photovoice methodology, 2) a Community Empowerment Center (CEC) to assist residents in developing and implementing community generated, community level, and community engaged interventions, and 3) a follow up Photovoice assessment.

Phase one (June 2010-July 2011) of the *Healthy Environments Study* utilized the Photovoice methodology (Wang & Burris, 1997) to assess, identify, and understand community member's concerns. The Photovoice method engages community members in a process of taking photographs and using them to generate critical dialogue about what they observe. Adults and children from the local community participated in this process and it resulted in five central themes: collective efficacy, social capital, place attachment, collective action, and community development (Freedman, Pitner, Powers, & Anderson, 2012). This formative data, while not used directly in this research, informed my own work in this community, as it identified the existing concerns and hopes of residents.

Phase two of the *Healthy Environments Study* (August 2011-February 2013) was implementation of a Community Empowerment Center (CEC), which served as a resource center to help community residents develop and implement community level

interventions. The CEC was located in a Candler Grove Public Housing Community apartment and had a very small staff (one full time staff member and three part time graduate students). Three community interventions were developed by residents and funded by the CEC. The programs, selected via an independent review committee, included a food bank, an exercise program and soup kitchen, and a community advocacy program. Throughout the process, CEC staff provided technical assistance to community members as they planned and implemented their community-level interventions.

My research occurred during phase two of the *Healthy Environments* study; a community garden was proposed in the original Kresge Foundation grant as a demonstration project of the community-level interventions. When the grant proposal was written, the principal investigators were planning to work with another, nearby public housing community. This community did not have a community garden and the principal investigators of the study planned to install one as a project to demonstrate processes for engaging residents in community-level change interventions. After the grant was awarded, the local housing authority asked that the program be implemented in the Candler Grove Public Housing community instead. As work was begun in Candler Grove community, the research staff learned that the adjacent community, Inman Heights, had already developed a community garden.

Entering the Field

My first experience in the Inman Heights and Candler Grove neighborhoods was in September 2011. I had heard about Candler Grove Public Housing Community before, but even though these neighborhoods are less than one mile from my own home, I had

largely ignored them. What I did know, though, was that a *Gang Land*³ episode was filmed about the neighborhood and it had a dangerous reputation. Just as I did, many people in and outside of the neighborhood identify it by its troubled history, documented in local news reports on issues with gangs, violence, and drugs. For example, a 2006 news article was published about the community with the headline “*Candler Grove residents fear gang, drug-related violence in their area*” (Kuenzie, 2006). However, the community’s advocacy efforts to stimulate neighborhood growth and development were also documented in the news, with a story titled “*Neighborhood lobbying for change*” (Beam, 2011).

So, on that September evening I entered the community for the first time to attend an event celebrating the opening of the CEC, which had just opened in the Candler Grove Public Housing community. I was not sure what to expect- I was excited to meet new people, but nervous to be outside of my comfort zone. I drove up to the local park where the event was to be held. The park has a recreation center, a swing set, a gazebo, and some green space; it is surrounded by a tall chain link fence that is locked after hours. CEC staff had tied some balloons to the fence, which contributed to the festive atmosphere.

The park is just a few blocks off of a busy street in town. As I drove up and arrived at the park, I saw the Candler Grove Public Housing Community just up the street. The Candler Grove Public Housing Community is an institutional looking complex of two story brick apartment buildings. Opened in 1941, they are some of the

³ *Gangland* is a television documentary series produced by The History Channel that tells the stories of some of America's most notorious street gangs.

oldest public housing units around town. Window air conditioning units jut out of the buildings and clotheslines dot the outdoor landscape. Litter is scattered throughout and there is some grass between the concrete walkways, but no “landscaping”.



Figure 3.1: Candler Grove Public Housing Community [source: (Columbia Housing Authority, n.d.)]

The Inman Heights community is adjacent to Candler Grove Public Housing Community. The two communities are so close together that some consider them to be one entity, rather than two separate communities. From the outside, the readily observable difference between the communities is that Candler Grove is public, apartment style housing and Inman Heights is made up mostly of single family style homes. However, once you begin talking with people (especially residents of Inman Heights), you’ll learn that they are socially distinct.

Candler Grove is a public housing community; residents tend to be of very low income, mostly female, and typically do not interact with Inman Heights residents. In addition, many Inman Heights residents attribute the concerns they have about their neighborhood to stem from Candler Grove residents. Candler Grove is known around the City as one of the most dangerous and violent communities, as news reports often detail stories of gang activity, gun violence, and drug dealing. In early 2010, a man was beat to death in Candler Grove (Monk, 2010). More recently, a newspaper article reported that thirty-one alleged gang members were arrested, many of which were from Candler Grove (Monk, 2012). One community member described his/her concerns about their community...” *[I am part of] a group that just wants this to become a neighborhood that has a good reputation again. We do not want it to be, "oh, you have gangs and drugs all over that neighborhood, which is what you hear. When you think of our street, you think bloods (gangs) or drugs. We want to get away from that."* Interview with an Inman Heights Resident

Importantly, one of the main goals of the CEC was to bring together residents of the Inman Heights and Candler Grove communities. In Inman Heights, neighbors often sit on their porches and there is persistent foot traffic- bus riders walking home from work, people carrying groceries, and the occasional child bouncing a basketball headed to the local park. The Inman Heights neighborhood has an active community association with strong leadership.

In 2009, a group of members from the community association initiated an effort to start a community garden in their neighborhood “to foster a sense of community, promote a healthy lifestyle, and bring attention to the needs and assets of the neighborhood”

(Draper, 2010). Concerned by lack of development in their neighborhood, as well as a lack of social cohesion among neighbors, the community association members approached the City of Columbia about planting a garden on two city-owned lots in the neighborhood. These lots had been long vacant, after the city tore down dilapidated houses on them and did not redevelop them (as Inman Heights community members assumed they would). Working through the city system to secure permission to garden on the land took time. In the interim, a group of representatives from the Inman Heights Community Association secured an adjacent lot owned by a neighborhood church. These individuals were the founding members of the Inman Heights Community Garden (IHCG); they planted their first garden on the church-owned plot in the spring of 2010.

“The Inman Heights Community Association has a written agreement with the church that allows the use of the lot for gardening. The terms of the agreement indicate that they may garden on the lot as long as the church has no use for the space (i.e. developing the lot). The Inman Heights Community Association is required to maintain the lot and has agreed to return it in the condition it was in when they began using it if the church decides to develop the land for other purposes.” Personal communication with Inman Heights Community Association President, Email, June 6, 2013

The garden was a traditional, in-ground row style garden where neighbors worked together to grow vegetables and shared in the harvest. Community members named this garden the Liberty Garden.

“The original in-ground garden was named the Liberty Garden when the Inman Heights Community Garden was first started, after the most prominent street in the neighborhood

during the early 1900's.” Personal Email Communication with Inman Heights Community Association President, June 11, 2013

Over time, this community garden’s name evolved to the Inman Heights Community Garden (IHCG). In the early summer of 2010, the garden was awarded a small grant from a statewide obesity prevention coalition. By mid-summer of 2010, the City had approved the use of the two additional lots for gardening. The two lots are owned by the City’s Housing Development office.

“The Inman Heights Community Association has a verbal agreement with the City, which provides the 2 garden lots, access to water, and an overhead light. In turn, the Inman Heights Community Association agrees to manage gardening activities, including collaborations. While the community gardeners maintain the lots, the City usually sends a crew out every month for landscaping services. The Inman Heights Community Association’s liaison, the Senior Assistant City Manager helped to negotiate the terms of the community garden and ultimately reach an agreement with the City for the use of the land.” Personal communication with Inman Heights Community Association President, Email, June 6, 2013

These developments with IHCG were documented in the local media (Draper, 2010; Cruse, 2010). The Inman Heights Community Association’s relationship with ESMM SC also connected them with a new partner, Homeless Helping Homeless (HHH). Homeless Helping Homeless is a local organization that aims to change the negative stereotypes about the homeless and to create ways for the local homeless population to give back to their community. Being a small city, the ESMM SC representative heard

about HHH and connected them with the Inman Heights community over their shared interest in community gardening. As a result, HHH played a significant role in cleaning and preparing the two city owned lots for gardening. Homeless Helping Homeless was also integral in developing a partnership between the community garden and the Square Foot Gardening Foundation. The Square Foot Gardening Foundation promotes a method of gardening in raised beds and played an instrumental role in the construction of raised bed garden boxes on the two city-owned garden lots.

Currently, the IHCG continues to occupy the three adjacent lots; one owned by the local church and two owned by the City (Fig 3.2). The church-owned lot houses an in-ground garden while the city-owned lots house raised bed gardens. These lots are juxtaposed between a busy city street and a residential, side street that leads into the neighborhood. The rest of the side street is dotted with single family style homes. Just a few blocks up from the community garden is the Candler Grove Public Housing complex.

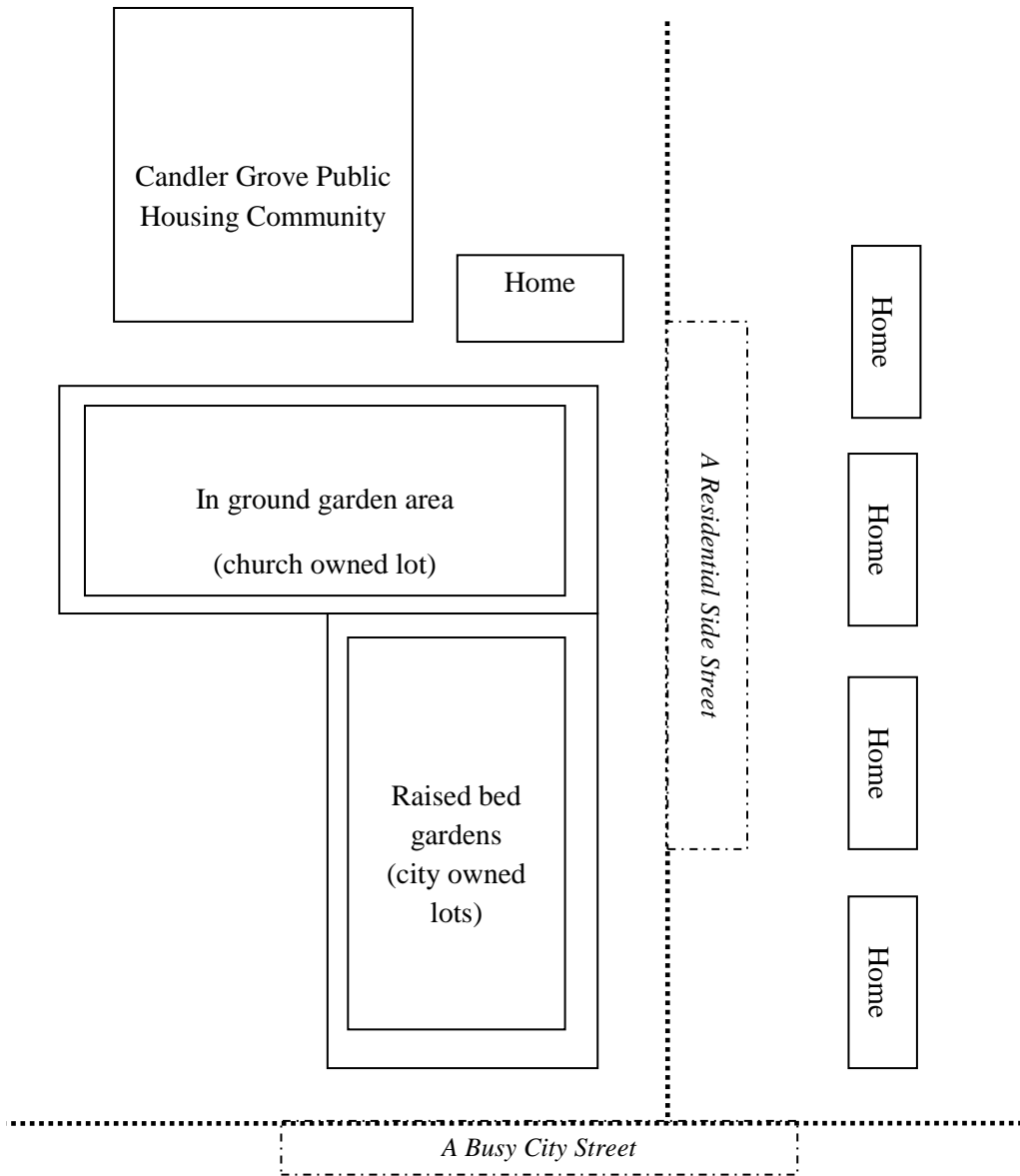


Figure 3.2: Map of Inman Heights Community Garden

Research Relationship

In October 2011, CEC staff partnered with interested Inman Heights and Candler Grove residents to form a community garden planning committee. The CEC's director was instrumental in recruiting interested community members to attend the initial community garden planning meeting, as he had already developed a group of community contacts. The initial community garden planning committee meetings were advertised with flyers, at other CEC events (including the September, 2011 Kick-Off event), and through word of mouth. The CEC director and I also attended neighborhood association meetings to let community members know about the planning meeting.

In addition, in November 2011, the CEC sponsored a field trip to see two community gardens in a neighboring state; six community members attended this field trip. After the initial meeting and field trip, CEC staff hosted another planning meeting in late November. In this meeting, Inman Heights community leaders said that their community garden "*was open to everyone*"; thus, this community garden planning committee decided to partner with the Inman Heights Community Garden (IHCG) and build upon this existing community asset. The IHCG was planned, developed, and implemented by residents of the Inman Heights community.

The planning committee led the expansion of the existing Inman Heights Community Garden and focused on working together to get more community members involved in the garden. Over the next year and a half, I spent approximately three to four hours per week working with community members to organize the garden and encourage people to participate. I had multiple roles throughout the process including leader,

gardener, organizer, and friend. For example, I led community garden planning meetings, organized garden events, and maintained a vegetable garden in a raised bed.

During that time, I developed relationships with key community partners and began a process of working with them to plant the garden, acquire tools and resources (including plants and seeds), and harvest the vegetables grown. I also planned and facilitated the majority of planning committee meetings. The planning process was guided by a series of steps including a visioning activity, the field trip to see community gardens in another state, and regular meetings. During this time, I also participated in many activities including planning and facilitating garden planning meetings, helping to organize and host community events, gardening, fundraising, and providing support.

In addition to tasks and responsibilities related to growing a community garden, I had a keen interest in building relationships with community members. So, I went to community association meetings, supported other causes in the neighborhood, and participated whenever I could. There is no substitute for being present and taking part in the setting or phenomena of interest, so I joined in, contributed, and shared in the process (Wolcott, 1999).

[Participant response to my question... 'How would you describe my role?']: “I will tell you what I am more pleased about... It has been more as a participant. It is easy, given our relationship... It would be easy for you to sit there and watch. But still, you are involved. That makes a really big differencethey see people from the outside, especially people who are related and associated with the academic environment... They see them as studying. And they're like, "what is the benefit?" So, being actively involved

makes a big difference. And that is something that most people would not expect. We would expect you to sit down and record.” Interview, Inman Heights Resident

I struggled with my identity and role throughout the process. According to LeCompte, the ethnographer will assume several roles throughout the field experience; further, the connections we develop with participants is dependent upon how we present ourselves (i.e. ‘presentation of self’) and other individual characteristics including appearance, social skills, and behaviors (M.D. LeCompte, 1999). I attempted to present myself more as a participant, friend, or gardener than a researcher. I felt uncomfortable with the label of ‘researcher’, knowing the history of white, privileged, academics coming into poor, minority neighborhoods. I did not want to inadvertently place myself into that identify by saying I was a researcher. However, I did reveal myself as a doctoral student seeking to conduct my dissertation research in the garden. This is not to say that I was dishonest about my researcher role, but I placed great emphasis on developing meaningful relationships and trusted that my researcher role would find its place within that context.

While some scholars might propose that I should have revealed my primary role to be a researcher, I felt more comfortable and authentic with a primary ‘identity’ that focused on developing relationships with people and getting to know the community and having a secondary role as a researcher. However, without a clear sense of “who” I was or “what” I was doing, it was often difficult to define what exactly my role was. Was I responsible for making sure people attended events in the garden? Was I responsible for the success of people’s crops? In the end, I came to realize that my role (as a ‘researcher’) was to capture the experiences of the people I was working with and to

document the growth of the community garden- both in the sense of growing participation among community gardeners, as well as the growth of plants, flowers, and vegetables in the garden. I attempted to do this with my observations, which were systematically recorded in field notes, and conversations which were obtained through semi-structured in-depth interviews.

Participants

This study was approved by the University of South Carolina's Institutional Review Board. The study population included individuals who have been involved with the Inman Heights Community Garden in some way. Participants were residents of both the Candler Grove Public Housing Community, as well as the Inman Heights area. In addition, other participants reside outside of the neighborhood, but were involved in the garden through community partnerships or an interest in gardening. Selection techniques for in-depth interviews are described later in this chapter.

Data Sources

Field Notes

In my time working with the Inman Heights Community Garden (IHCG) between October 2011 and March 2013, I collected a set of sixty-two (62) detailed field notes. Each time I had an experience in the garden or with people from the garden, I recorded notes. As previously discussed, I placed great emphasis on the *participant* part of the observation during my time in the field. Rather than sitting back and taking notes, I actively participated in meetings, garden work days, and socializing with other gardeners.

Thus, my field notes document my experiences in working with people in the community, as well as in garden.

The experiences and settings that I documented in my field notes include planning meetings, descriptions of time spent in the garden, and other occasions in which I met with and worked with community members and partners. Additionally, I recorded details about social interactions I had with others and those that I observed around planning and implementing the garden. In these descriptions, I noted key actors and events that occurred in the garden. For example, I noted who attended each meeting or event, who was involved in planning events, and the social dynamics I observed while present at each event. I documented how people interacted with one another, the groups that people assembled in, who came to the garden together, etc. I also took note of social exchanges (i.e. conversations, body language, and actions) between gardeners. For example, over time I observed people arguing in the garden, as well as people happily spending time together around a table in the garden.

Community members sometimes saw me taking notes around them, but this was mostly in planning meetings and I was doing so as an active participant in the meeting (i.e. I was not recording observational field notes). Thus, I was making to-do lists rather than writing observational notes about the situation at hand. I chose this approach in efforts to truly be an active participant, rather than an observer. Instead, I returned to my home or office following each experience with the community garden and wrote my observational field notes. I strove to be very systematic in this process of recording field notes after each experience, whether it was a planning meeting, a garden workday, or a community event.

Interviews

In the spring of 2013, I invited people who had been engaged with the garden in some way (n=20) to participate in an interview to share their experiences with me. I conducted fourteen (14) in-depth interviews with garden participants, partners, supporters, and other key actors. To recruit interview participants, I used purposive selection techniques including maximum variation and snowball sampling (Patton, 2001). I was purposive because I was interested in understanding the variety of experiences people had with the garden. Thus, I invited a diverse group of individuals who had been involved with the garden in some way to participate in interviews.

I used these sampling techniques to reflect the range of engagement, as well as in experience. This approach was intended to help describe individual experience with the community garden, but also to detect common or shared dimensions within those experiences. For these reasons, I interviewed participants who represented a range of participation in the garden, beyond just having a garden plot. For example, I interviewed community stakeholders, key leaders, and garden supporters (i.e. people who did not garden but attend community garden events, etc.).

I developed a semi-structured interview guide to use with each interview participant, as well as a timeline activity (Appendix A). In these interviews, I began by asking a series of questions about their neighborhood: how they came to live in the neighborhood, what they like about their neighborhood, and what they dislike. I then transitioned into asking participants to tell me their stories of the community garden.

To elicit participant's stories, I shared with them a garden timeline template, which I constructed based on key events I knew of or had experienced in the garden. I then asked them to 'illustrate' their stories by drawing, writing, talking about, or otherwise denoting important events on a timeline marked with key events in the community garden's history. The timeline activity was designed to let interview participants' stories about the community garden to emerge. As the interview continued, I used a set of questions and prompts to explore each community member's experiences and perspectives in the community garden. Sample interview questions are shown in Table 3.1.

Table 3.1 Sample Interview Questions

Concept	Sample questions
Entering the garden/becoming part of the garden	<ul style="list-style-type: none"> • Tell me about how you first became involved with the garden. • How did you find out about the garden? • Have you invited anyone else? • Even if you have not invited anyone, how would you invite them (what would you say)? • What did you hope for when you started gardening
Social groups/networks	<ul style="list-style-type: none"> • Who were some of the key people or groups (formal or informal) involved? • What were/are their roles in the garden (i.e. what do they do)? • Please tell me about groups (or cliques) of people involved in the garden.
Social interactions	<ul style="list-style-type: none"> • How do the people and groups involved in the garden interact with each other?
Neighborhood/community benefits	<ul style="list-style-type: none"> • How do you think the garden has changed or contributed to the community? • What is the role of this garden in the community? • What are the benefits of having the garden in the community? • What are challenges or problems of having the garden in the community?

Interviews were conducted in the location of the participant's choice; I conducted interviews in a variety of locations including the community garden, in the Community Empowerment Center, a local church, and at local cafés and restaurants. Each individual was provided \$15 to honor the time they gave to participate in an interview. Interviews lasted between thirty minutes and two hours. Each interview was tape recorded and subsequently transcribed. Seven of the interviews were transcribed by a qualified transcriptionist. I transcribed the remaining half of the interviews using Dragon's Naturally Speaking voice recognition software. All interview transcripts and field notes were entered into the organizing software for qualitative data Dedoose.

Analysis

I analyzed my data in an iterative, multi stage process that involved ongoing collection of notes and interviews, analysis, reflection. As my collection of field notes grew, I often went back and reviewed them from the beginning. Since I was working with people from the garden on a weekly basis, the instances and happenings documented in my field notes were often already on my mind. My time in the field continued and I persisted in taking notes about the scene, space, and dynamics I encountered. I wrote about and reflected on the physical growth of the garden, but more so about the relationships I was developing with the participants and the interactions I was observing or participating in with others.

My notes document the evolution of the garden, as well as my growth as a participant researcher. Over time, themes began to emerge from my notes. These themes were a reflection of my writing and thinking, as well as the evolution of the garden. As

the garden continued to grow and change, I continued to write about it. This process of participating in, writing, and thinking about the garden continued through the fall and winter months of 2012. I used my field notes to develop a narrative about how community members and partners worked together in the garden. In other words, my field notes documented processes and activities associated with people being engaged in the garden. My field notes were also used to describe the community context of the garden and the surrounding neighborhood, including the local history and background of the community.

The ongoing experiences I had in the community garden created a dynamic reflection process wherein my research questions were refined as I made new connections, discoveries, and strengthened my relationships with community members. My time in the field allowed me to shape research questions that were relevant to me, as well as the community context. From the beginning of my experience with this community garden, I knew I would eventually conduct in-depth interviews with people involved in the garden. In the Spring of 2013, I began the process of conducting those interviews.

While I was collecting interview data, I began identifying preliminary themes. I wrote these memos on paper at first, but eventually organized them into a Microsoft Word document. I also wrote summaries after each interview that included the main points, questions, ideas, and general thoughts on how it went. Throughout this process, my understanding of the garden setting and actors, as well as my relationships and perspectives continued to evolve. Often, I would look back into my field notes to understand how the garden had grown and developed.

As I conducted more interviews, I began creating an open code list drawing from both field notes and interviews. This preliminary, informal analysis of data continued as I finished conducting interviews. Throughout this process, I generated several memos to collect my thoughts and developing ideas. I asked myself questions including: 1) What are similar themes I hear as I interview people? 2) What new information am I learning? 3) How do the perspectives of people differ?

To begin formally analyzing interview data, I listened to audio recordings of each interview while following along reading the transcripts in the qualitative analysis software Dedoose. I used this technique to ensure that all data was captured in the transcripts, but also to begin familiarizing myself with the data. Per Clarke (2005), I spent time “digesting and reflecting” data before beginning the formal coding process (Clarke, 2005). As I thought about the data, I wrote memos to record developing ideas and emergent themes. In preparing to code my interview data, I also began developing a codebook. As I thought of a code or way to categorize my data, I began recording those words or statements in a Microsoft Word document. I also sometimes wrote these ideas onto scraps of paper, which I later transferred into my developing codebook.

Then, I moved into a more formal coding process. I coded all of my interviews using the preliminary codebook I had developed during the ‘digesting of my data’ phase. During my initial pass through the interview data, a committee member and I open coded two transcripts independently. After our individual review, we gathered to discuss and compare our interpretations of themes and coding categories. Based on these discussions, I continued to refine my codebook, review my interview data, and record emergent ideas in memos.

I completed one full pass through coding my interview data; as I continued through the process of reading and coding my interviews, I began to identify topics and ideas as emergent themes and subthemes. I recorded these thoughts, ideas, and emergent themes throughout the coding process in memos. After my initial pass at coding the entire set of interviews, I had developed a list of emergent themes. I used this preliminary list of emergent themes to focus my analysis and reviewed my data using the constant comparison technique (Glaser & Strauss, 1967). As I continued to read and review the data, connections between categories emerged; thus some initial codes evolved into axial codes (Creswell, 2006).

I completed a second pass of coding my interview data and finalized my codebook. In this process, I pulled reports on parent codes and looked for themes within; I then re-organized within as child codes. Codes included: benefits, community concerns, community engagement, gardening method, role of the garden in the community, social interaction, sharing, space, leadership, my role, community meeting place, sense of community, everyone is welcome, ownership, attention from the city, and challenges in the garden (Appendix B). I continued to read, re-read, code, and think about my data until participant responses, concepts, themes became repetitive or redundant (i.e. saturation) (Glaser & Strauss, 1967). To begin the writing process, I extracted quotes and excerpts of text into a data matrix to organize my synthesis of the data.

Disseminating Results and Eliciting Feedback from Community Members

After completing the analysis and drafting my results, I returned to a subset (n=5) of community members that participated in interviews to my results. I focused the presentation of my results around the two major aims of my study and utilized elicitation techniques recommended for ethnographic research (Schensul, LeCompte, Nastasi, & Borgatti, 1999)

For my first aim, I used note cards to display the ways people were involved with the garden, both from my observations and their perspectives from interviews. I accompanied the note cards with a few questions to elicit conversation about their own involvement with the garden and how they saw others to be involved. In addition, I presented a synthesis of the timeline that I had everyone complete during the interview process and asked for feedback. Finally, I presented participants with a visual to illustrate the multiple benefits of the garden to the neighborhood environment described by interview participants.

This second meeting with community members served two objectives, 1) to ensure my interpretation of their thoughts and ideas was accurate) and 2) to share results of my study with those who participated in it. Member checking is said to enhance the quality of data and ensure accuracy, credibility, validity, and transferability of the information (Lincon & Guba, 1985). I used a short discussion guide (Appendix C) to structure this discussion, which was developed based on findings from field notes and in-depth interviews and was focused on my two main study aims. Information gathered from these meetings guided my interpretations of the data and the development of my

final narrative. Informal member checking also occurred throughout the field experience via observations and casual conversations, which were captured with field notes.

Ultimately, the information gathered from member checking activities was used to inform the final interpretation of study findings.

CHAPTER 4

RESULTS

This chapter will provide results of my study, dividing into two manuscripts. The first manuscript, A Community-Engaged Approach to Growing an Urban Community Garden, is formatted for The Journal of Contemporary Ethnography. The second manuscript, The Role of a Community Garden on Social Factors in an Urban Neighborhood Environment, is formatted for Health and Place.

4.1 A COMMUNITY-ENGAGED APPROACH TO GROWING AN URBAN COMMUNITY GARDEN⁴

⁴ Workman LM, Freedman D, Saunders RP, Jones SJ, Simmons DS. To be submitted to *Journal of Contemporary Ethnography*

Abstract

Background: Neighborhoods influence population health; the places where people live, work, and grow are an essential setting for health promotion interventions. Working with residents to create healthier neighborhoods is a recommended approach and broad principles exist to guide community-engaged initiatives. The process of community engagement may play out differently depending upon the setting, issue, or players involved. That is, the roles and activities related to this initiative may look different depending on context.

Objectives: This study seeks to understand the process of community engagement through the lens of an urban community garden.

Methods: Observations and in-depth interviews were used to document the process of community engagement in a community garden. Based on data collected, we developed a timeline to illustrate the sequence of events and identified themes emerging from this timeline.

Results: Themes around community engagement included 1) facilitators of engagement, 2) opportunities for engagement, and 3) roles and activities for involvement. Facilitators of engagement included neighborhood leadership, a community-academic partnership and the physical garden space. These facilitators resulted in a variety of opportunities for community engagement in the garden, which created multiple ways for people to participate including the roles of gardener, partner, fundraiser, supporter, and leader.

Conclusions: This research informs our understanding of the community engagement process in gardens. This work provides an example of how community-academic partnerships can be formed to extend the reach of interventions and illustrates multiple ways for people to be involved in community gardens beyond gardening.

THE GARDEN MEMBERS [ARE VERY IMPORTANT TO THE GARDEN]....BECAUSE WITHOUT THEM, I CAN'T SAY THERE WOULD BE A GARDEN.... I THINK... WHAT IS A GARDEN WITHOUT COMMUNITY GARDEN MEMBERS?" CHERELLE, CANDLER GROVE RESIDENT

Introduction

As our understanding of the determinants of health has evolved, it has become clear that a sole focus at the individual level is an insufficient strategy for health promotion. Health behaviors are shaped by both physical and social contexts, including the places that people live, work, and grow (Institute of Medicine, 2003). The places, environments, or settings in which we live --commonly referred to as *neighborhoods*-- influence population health (Diez Roux & Mair, 2010; Miller, Pollack, & Williams, 2011). Neighborhood environments provide or restrict access to health promoting goods, resources, and services including places to be physically active and access to healthy foods. Neighborhoods may promote health by reducing injuries, improving air and water quality, decreasing mental health stressors, and strengthening social structures. Thus, creating or enhancing neighborhood environments to promote health for all people through context-relevant, community-based solutions is broadly recommended (Wallerstein & Duran, 2010).

Actively involving neighborhood residents and stakeholders in developing and implementing strategies to address community concerns is recommended; it acknowledges that behaviors occur in a complex system of physical and social environments and that involving local people, their perspectives, and priorities can enhance effectiveness of our efforts to improve public health. As such, approaches to

health promotion must focus on working *with* communities, rather than *on* them (Israel, Schulz, Parker, & Becker, 1998; Wallerstein, 1999). A community-engaged approach emphasizes relationship building, partnership, cooperation, collaboration, and commitment. Community-engaged research is defined as “the process of working collaboratively with and through groups of people affiliated by geographic proximity, special interest, or similar situations to address issues affecting the well-being of those people” (Centers for Disease Control and Prevention, 1997, p. 9).

In much of the literature, community engagement is documented from the researcher perspective, resulting in an understanding of community engagement informed mostly by an academic perspective (Bruning, McGrew, & Cooper, 2006). Community-engaged research has traditionally taken the approach of researchers approaching community members to implement new initiatives based on a mutual goal. Understanding how this process happens from the perspective of community participants may provide information to facilitate engagement, which may enhance our success in creating healthier neighborhood environments and ultimately, improving individual and population health.

A community garden provides an ideal setting to understand the process of community engagement and the ways in which people participate in community-based initiatives. Community gardens provide 1) a mechanism to involve community members in working together to create healthier neighborhood environments, and 2) lens through which the process of community engagement may be understood. This study describes one story of community engagement illustrated within an urban community garden.

Setting and Methods

An ethnographic approach was used to understand the process of community engagement in an urban community garden including the roles and activities taken on by community members, stakeholders, and academic partners. Data, including field notes and interview data⁵, were collected from October 2011 to March 2013. In addition, personal email correspondence and local news articles were used to verify key dates and events in the garden. The University of South Carolina Institutional Review Board approved this study.

This research was part of a larger, community-engaged research project in a neighborhood located in a mid-sized city in the Southeastern United States. An integral phase of the research involved the formation of a Community Empowerment Center (the CEC)- a resource center located within this urban, predominantly (94.4%) African American neighborhood. The neighborhood includes two communities: Candler Grove, a public housing apartment complex and Inman Heights, an adjacent residential area of single family style homes. Few residents in the neighborhood own their homes (17.8%) and 63.6% of residents live under the poverty line (United States Census Bureau, 2013).

This neighborhood is known among the City as one of the most dangerous and violent communities with news media reports often detailing stories of gang activity, gun violence, and drug dealing. Community residents echo these issues; Marguerite, an Inman Heights homeowner, described, *“I would say [I am part of] a group that just wants this to become a neighborhood that has a good reputation again. We do not want it*

⁵ Names have been changed to pseudonyms.

to be, 'You have gangs and drugs all over that neighborhood...' Which is what you hear. When you think of [our neighborhood], you think bloods (gangs) or drugs. We want to get away from that.'

In addition to community concerns about gangs and drugs, residents expressed concerns about safety, the presence of vacant lots, and an overall lack of resources and development in the neighborhood. Cameron, a young African-American mother, lives in the Candler Grove public housing community. She described her concerns, *"Hearing different things...about gang activities...I was concerned for my safety...I have kids, you know, so I was concerned for them and their safety."* Marguerite shared her aversion to the abundant vacant lots in the community, *"I do not like all of the empty lots.....the lack of life on those empty lots...no homes, no families, no tax base ."* Lionel, a leader in the Inman Heights Community Association, described the poor condition of the community park, *"Look at the park...how can you say that you want to attract people? Pieces of playground equipment [are broken]...the sand in the sandbox has not been changed...the sprinkler won't work...they don't even have a water fountain that works."*

As we began working in the neighborhood, a group of key leaders—Lionel, Mac, and Marguerite invited us to join the community garden they started in late 2009. Lionel, Mac, and Marguerite are all long-time residents of the Inman Heights neighborhood and are active members of the community association. The CEC formed a partnership with these leaders in the fall of 2011 around the mutual goal of getting more people involved in this community garden.

Over eighteen months, the lead author recorded a set field notes to document the process of working with community members to plan, develop, and implement strategies to engage people in their urban community garden. Field notes were collected after each experience in the field (average 3-4 hours per week). In addition, twenty (20) individuals who had been involved with the community garden in some way were invited to participate in in-depth interviews. To recruit interview participants, purposive selection techniques including maximum variation and snowball sampling were used (Patton, 2001). This approach was used to understand the variety of experiences people had with the garden. Participants who represented a range of participation in the garden, beyond just having a garden plot, were recruited. Fourteen (14) participants consented and were interviewed. All interviewees were provided a monetary incentive (\$15); individuals who did not participate in interviews declined participation, had moved, or were unable to participate due to extenuating circumstances.

The interview process used a timeline activity wherein participants were asked to tell their story of the community garden by drawing, writing, talking about, or otherwise denoting important events on a garden timeline template. The timeline activity was designed to encourage interview participants to describe their perspectives about and experiences with the community garden. As the interview participants constructed their timelines and narratives, a semi-structured interview guide was used to focus the discussion on people's experiences in the community garden. The guide included questions about how they became involved with the garden, the ways that they were involved, and the role of the garden in their neighborhood; a complete interview guide is

available upon request. All interviews were recorded, transcribed verbatim by either the lead author or a qualified transcriptionist.

An inductive approach to analysis was used, guided by the constant comparison technique (Glaser & Strauss, 1967). The analysis was an iterative, multi-stage process that involved comparing, contrasting, coding, and reflecting on our data as we collected it over the eighteen-month period. The on-going analysis of observational field notes informed the subsequent set of in-depth interviews, including the development of the interview sampling frame and interview guide.

Analysis of interview data began with a simultaneous review of all audio recordings and interview transcripts with the qualitative analysis software Dedoose (SocioCultural Research Consultants, 2013). This process led to open coding all interviews with a preliminary codebook developed from observational field notes. During this process, two research team members open coded two transcripts independently; after individual review, the two team members gathered to discuss and compare interpretations of themes and coding categories. A list of emergent themes was developed to focus the analysis and remaining transcripts were reviewed. A second pass of coding was completed and a finalized codebook was developed.

Results

Overview

A comprehensive timeline was developed based on field notes and interview data. This meta-timeline was created with dates and key events observed by the lead author

and/or described by interview participants; email correspondence and media sources were used to confirm these dates. This comprehensive timeline identified the sequence of key garden events, as well as two key phases: a neighborhood leadership development phase and a community-academic partnership phase. Three themes related to community engagement emerged from the timeline: 1) facilitators of engagement, 2) opportunities for engagement, and 3) roles and activities for involvement (Fig. 4.1). Facilitators of community engagement included neighborhood leadership, a community-academic partnership, and the physical garden space (i.e. the transformation of a vacant lot into a green space). These were identified based on crescendos in participation and involvement over time and linking it to concurrent events and activities in the community garden. These facilitators resulted in a variety of opportunities for community participation in the garden (beyond gardening), enabling people to take on specific roles and activities such as gardener, supporter, fundraiser, partner, and leader. Finally, we reflect on some challenges of community engagement and implications for future research.

Facilitators of Community Engagement

Neighborhood Leaders Envision a Garden to Engage and Bring Attention to Their Community

In 2009, Lionel, Mac, and Marguerite initiated an effort to start a community garden as a place to address community concerns about the lack of social cohesion among neighbors, as well as the lack of social and economic development in their community. Notably, this garden was not begun primarily for food. Lionel is a leader in the Inman Heights Community Association. He is very engaged in his community, as

well as with city politics, as he frequently attends city hearings and speaks with elected officials. Lionel is a middle-aged African American man, born and raised in the community. He almost always wears a smile, jeans, and a button down shirt; he was one of the founding members of the community garden and remains an integral leader. He described why he saw a need for the community garden in his neighborhood:

“You have got seniors who are afraid of young people, young people not liking when the seniors call police on them. Anyway, there was no interaction. And so with this community garden, everybody can come.....whether you own, whether you rent. And hopefully, people will get to talking.....The other reason with the garden is that it was an opportunity to highlight the lack of will from the city to do anything about all of these lots... We have about 30 vacant lots in our community. They bought these properties and tore down the houses and left the lots vacant. They promised that within six months they would start building, but that took place in 2002. So, when the garden started it was 2009 or so. So...it was an opportunity, or I would like to say... To kind of embarrass them...”

Emily, a young white social worker, was an early supporter in the development of the garden. She reflected on the two reasons why the community leaders started the garden...

“It seemed like there was a lot of animosity between renters and owners, as well as older people and younger people. I would say those are the two groups he [Lionel] talked about wanting to bring together as a community.....he also felt

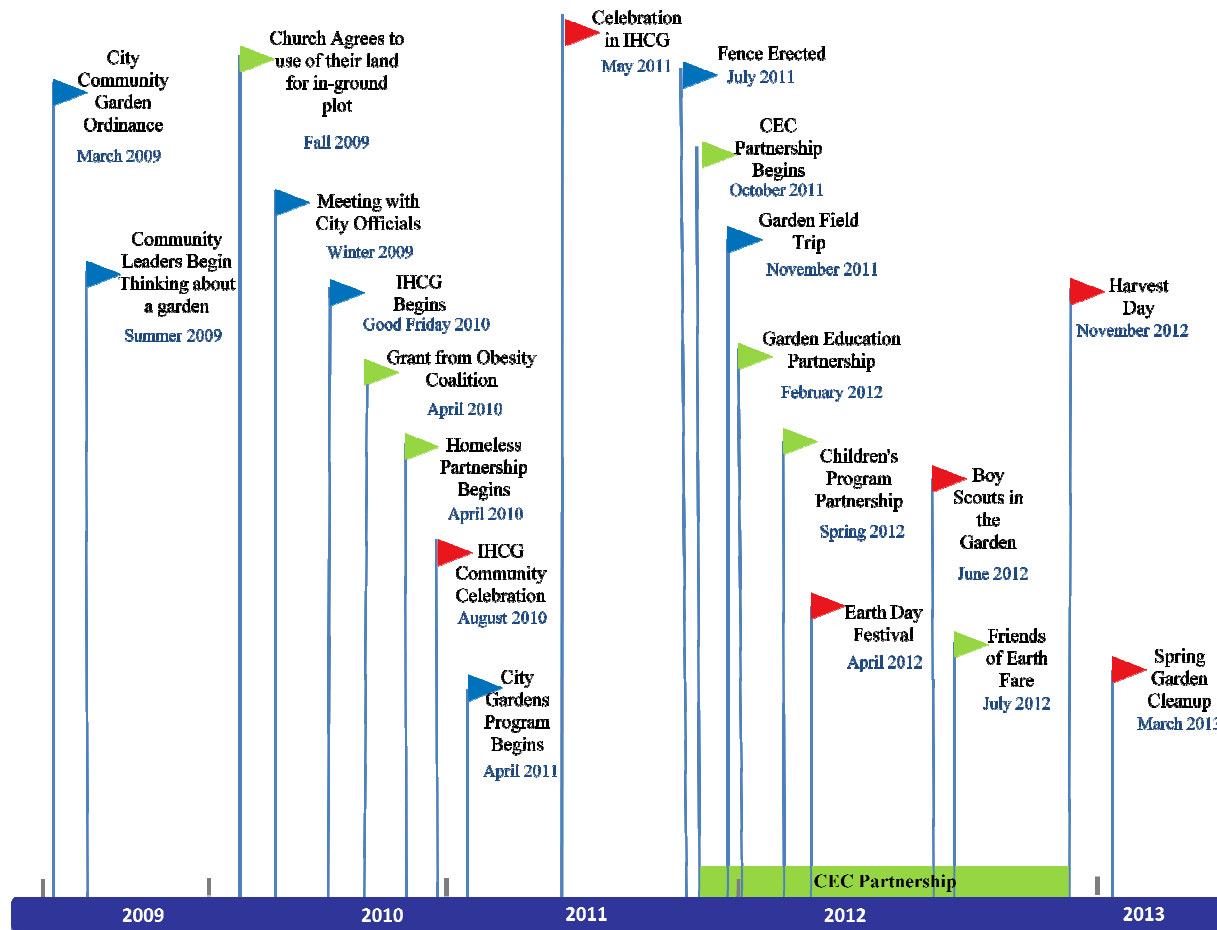


Figure 4.1: Key Events in the Development of a Community Generated Garden

that their community was discriminated against and that city did not give them what they needed...he felt like it was in large part because of the view that people had of a black community. So he wanted... to have something positive in the community so that outside people..."

Fueled by these concerns, Lionel, Mac, and Marguerite developed partnerships with the City and a neighborhood church to gain access to land for the garden. They first approached the City about planting a garden on two vacant city-owned lots in the neighborhood, but working through the City system to secure permission to garden on their land took months. So, they worked with a neighborhood church to secure an adjacent lot. Lionel, Mac, and Marguerite were the founding members of the Inman Heights Community Garden (IHCG); they planted their first garden, a traditional, in-ground row style garden, on the church-owned in the spring of 2010.

Soon after, the community garden obtained a small grant from a statewide obesity prevention coalition to support their garden. The relationship with the statewide obesity coalition connected the garden with a local homeless advocacy group. The homeless advocacy group aimed to empower the homeless in giving back to their community. Men and women who were currently homeless participated in the garden, as well as community activists who were interested in helping the homeless. The homeless advocacy group became a strong partner in the garden and contributed significant resources, manpower, and also garnered attention to the garden because of their own mission and community involvement. A local newspaper featured a story on the community garden, providing media attention to the community about their grassroots development. By the middle of summer 2010, the City had approved the use of the two

additional lots, owned by the City's Housing Development Office, for gardening based on verbal agreement between the Inman Heights Community Association and the City.

Neighborhood leaders worked to integrate the idea of community engagement into the vision and mission of the garden. They actively sought out involvement from both neighborhood residents and community partners with a message that, “*everyone is welcome.*” For example, community-wide events were held in the garden to attract neighborhood residents to the garden; Lionel, Mac, and Marguerite also frequently invited people to join in the garden. Cherelle is an enthusiastic, young African American resident of Candler Heights Public Housing community. She seems very interested in being involved with just about everything and is always willing to participate in community events. Cherelle described how she heard that the garden was open to everybody who wanted to be involved....

“[They said that] they had a garden, it's open to the community, it's open to everyone. It's not just limited to members and anyone could come out and be a part of the garden. They didn't have a lot of equipment, but what they had they were willing to share.”

Transforming a Vacant Lot into Green, Garden Space to Facilitate Community Engagement

The land that the garden rests on was previously vacant. The lots were vacant because almost ten years prior, the City tore down dilapidated, abandoned houses that were on these lots. The City had planned to rebuild homes on those lots, but that redevelopment did not happen. Wanting to do something the blighted space, neighborhood leaders conceived the idea of transforming the vacant lots into a

community garden. The garden is located on a busy city street and is highly visible to the community and passers-by. Lionel explained how the physical presence and visibility of the community garden in the neighborhood provided an important cue for community member involvement:

“Because of that location...some people would pass through the neighborhood...and they became interested. One of the guys who used to run the fish market down there, he stopped on a number of occasions before he came out and finally got a box.”

The garden space has many physical items that facilitated social interactions. For example, garden furniture (i.e. tables, chairs and benches) provided a place for gardeners and supporters to rest and socialize. Sharron, a middle aged African American woman who lives within eyesight of the garden, described how she would sometimes see people using the garden space:

“Sometimes they'll just sit there... I really didn't know them. I watched them...they wasn't bothering, they were just sitting there. And when they have the butterflies and the sunshine, it was pretty... and they just go out there to stop. It seems like some of them were coming off the bus and you know they have to walk to catch the bus.”

In summary, from 2009 to mid 2011, or before the “community-academic partnership phase”, neighborhood leaders partnered with the City and a local church to obtain vacant land that they transformed it into a garden. In addition, they acquired a grant to support development of the garden and held community events in the garden (as

shown in Figure 4.1). All of these activities, partnerships, and events created additional ways for people to get involved in the garden, though more participation from community members was still desired.

*The Development of a Community-Academic Partnership around a Mutual Goal:
Facilitating Increased Community Engagement*

In the fall of 2011, a community-academic partnership was formed over a mutual goal of getting more people involved with the garden. A central piece of the partnership was a University-led Community Empowerment Center (CEC), which served as a resource center and provided technical assistance to community members to build capacity for increasing community engagement and promoting community-level change. This phase is highlighted on the timeline with a band labeled “CEC Partnership” (Fall 2011-Spring 2013) (Figure 4.1). At the beginning of the partnership, the CEC collaborated with garden leadership (Lionel, Mac, and Marguerite) to facilitate a series of garden planning meetings. These meetings, primarily facilitated by the first author, included residents and community partners, and focused on organizing the community garden, fostering existing relationships with community partners and stakeholders, and getting more people involved. Activities included a community visioning exercise to prioritize goals for the garden (Johnson, Freedman, Joosten, & Duke, 2011), a field trip to visit two community gardens in an adjacent state (including one located in a public housing community), planning for the upcoming gardening seasons, and planning community events such as an Earth Day celebration, a Fall Harvest Day celebration, and garden workdays. Mac is a middle aged African American man and has lived in Inman Heights for many years. He works closely with Lionel and Marguerite through the community association and always seems ready to get to work in the garden. Mac

remarked that the CEC helped to organize the garden and get more community members involved:

“Y'all really got us started bringing in more people....and really getting us more organized.”

In addition, the CEC facilitated the development of several new connections between the community garden and other community partners including a gardening education group, a local grocery store, and the University's sustainable living institute. In addition, the CEC was instrumental in introducing a planning committee structure to the garden, acquiring essential resources (shed, plants, and chairs), and providing grant writing technical assistance (to acquire a grant to fund a garden Harvest Day). As a result of these activities, more opportunities were created for neighborhood residents to become involved in the community garden. Mac said, *“Let's just say the CEC is the best [thing that has happened to] this community in a long time. That's something that we had needed.”*

Creating Opportunities for Community Engagement

The sequence of activities and facilitators identified in the timeline (Figure 4.1) created more opportunities for people to become involved with the community garden. The majority of community members did not come into the garden seeking out their respective roles. People came to meetings, events, or the garden and found their role based on the available opportunities and their own interests. Ken, a middle aged African American man, became involved with the community garden when he heard a story about the CEC on the television. Ken runs a garden advocacy and education organization and

became a valued community partner, as he provided approximately twenty hours of gardening education and technical assistance in the community garden. He explained that getting people involved in the garden and helping them find their place is sometimes a challenge:

“That is the challenge ... there are some roles that have to be assumed, they cannot be assigned. And I could come through [as a leader], right in the very beginning the formulation of the gardening team or the gardening club. Who is going to do what? Here is what needs to be done and, we are going to do it. We may not have to meet on every occasion but we know what needs to be done and we are going to do it.”

Gardening was the most apparent way people could and did become involved with the garden, but over time other roles and activities beyond gardening emerged. These additional roles and activities included leader, supporter, fundraiser, and community partner (Figure 4.2), described in more detail below.

Gardener

Many individuals participated in the most apparent form of engagement: gardening by planting flowers, herbs, and vegetables and consequently spending significant amounts of time in the garden. Matthew, a retired military veteran, is an African American man who volunteers in the community with a children’s afterschool program. He became involved with community garden when he brought some of the children from his program down to participate in children’s gardening activities.

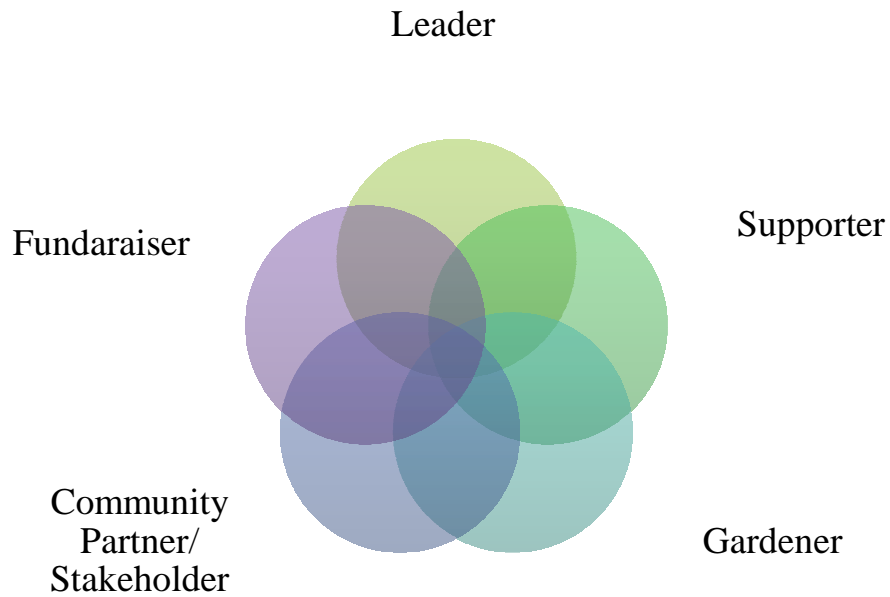


Figure 4.2: Roles Observed in an Urban Community Garden

Matthew described his enjoyment of participating in gardening:

“It took me back to my childhood....because we had a garden in our yard and I just remembered picking cucumbers off the vine and eating it right there without washing it off.”

There were two methods of planting offered in the garden: raised beds and traditional, in-ground garden. Implications of different gardening methods are discussed later in this paper.

Fundraiser

Funding and resources were essential to developing and sustaining this community garden, as it did not charge for space, sell produce, or participate in any other activities that generated funds. One gardener acquired and sold fruit trees to the

surrounding community as a fundraiser for gardening materials. Sharron described how she and her neighbor, another gardener, led fundraising efforts for the community garden. They sold pies and raffle tickets to raise money for the garden. Sharron told me how she enjoyed this other role with the garden:

“I also liked doing the fundraising... we had to do it for the money. [Another resident] would just go up to people and say, "I'm having this ...it's called a [community] garden and you are welcome to come but I need some money," and they would just hand her \$20....that's how we got about \$700 in the garden because she raised some money!”

Supporter

Some people chose not to garden, but came to the garden to participate in community events or to enjoy the scenery and company of others. In this way, they supported the presence of the garden and in turn, participated in a community-wide effort. Being present at the garden, or just ‘hanging out’ is a form of community engagement and it sends positive messages about the garden space. For example, observing other people in the garden might convey to community residents that the garden is a safe space where they can have friendly interactions with neighbors. Veronica, an African American woman, is the community gardens manager in the City Parks and Recreation Office; she is responsible for managing community gardens across the city. She is a fervent advocate for this community garden and sees the multiple benefits the garden brings to this community. In an interview, she explained how the

garden is a space that community residents can enjoy, even if they don't garden, "So, even though they are not involved in the garden, it is still that meeting place."

Garden supporters may tell others about the garden, but may never interact with the physical garden space in any other way. This form of support for the community garden is essential to promoting community engagement, as others may hear about the garden and become involved through these supporters.

Leaders

Over time, several individuals had leadership roles in the garden. Some individuals, including Lionel, Mac, and Marguerite, were formally identified in this role (i.e. as neighborhood association leader or community garden manager), but others informally assumed leadership roles and tasks without assuming the label of 'leader'. These outside leaders included the lead author of this study and members of one partnering organization (a local homeless advocacy group). Leadership activities in and outside of the community garden included: organizing and managing garden activities; developing, articulating, and maintaining a mission and vision for the garden; sustaining enthusiasm for the garden; serving as a representative for the garden; facilitating conflict resolution in the garden; and planning garden events.

Lionel, a leader in the community association, developed the idea of the garden and led initial efforts to secure land for the garden, promote the garden across the city, and served as a liaison between the City and this community garden. In the role as the City liaison, Lionel facilitated communication between the garden and the city, acquired resources for the garden including water, a drip irrigation system, recycling bins, and a

sign (prior to CEC involvement). Lionel was a community-wide leader, which brought many additional responsibilities. Therefore, as the garden grew, the organizational structure of the garden evolved; Mac and Marguerite assumed the role of garden managers. Many people continued to view Lionel as an overall leader and commented that he was very important, even though he was not an ‘official’ leader in the garden (as the garden managers were). Matthew, the children’s afterschool program volunteer, shared his view on Lionel’s importance and involvement in the community:

“Oh, without him there wouldn't have been a community garden I don't believe...Lionel was always there. I can't remember a time when I came through that he wasn't there. I had just moved here and a lot of times I'd just be riding around and trying to figure out where I am in the city and be like, "Oh, I came from this direction and here I am." I'd come from a different direction and then here [he] is!”

Mac and Marguerite’s responsibilities as garden managers included acquiring resources for the garden, organizing community garden workdays, supporting individual gardeners with questions or concerns, and recruiting new garden members. Lionel, Mac, and Marguerite worked as a team and other gardeners remarked that they “*spoke with one voice*” and worked together very well. Other interview participants described the leadership team as very important to the success and sustainability of the garden. Matthew described how important they were:

“[The leadership team], they are very, very important. I cannot imagine the garden being the success it has without them. Or that it would continue without their involvement.”

As time went on, roles evolved and adjustments were successfully implemented. For example, one of the garden managers asked to reduce responsibilities and the other manager became the sole individual who oversaw the garden, and developed into a skilled visionary, leader, and organizer. Cameron, the young single mother who lives in Candler Heights Public Housing Community, began participating in the garden in the Fall of 2012. She heard about the garden from someone who lived outside the community and was put into contact with Lionel. In an interview, Cameron reflected on Mac’s enthusiasm and leadership skills:

“Mac keeps it going. So, he is the most important asset...because Lionel will kind of be like ‘let’s get it together, let’s do this, and let’s do that, let’s plan, let’s talk.’ But, Mac is going to be like ‘look, I have to go, I have to do it.’ You know? He is a let’s get it done now person.”

The lead author of this study also assumed a leadership role in the garden when the community/academic partnership began; these roles included facilitating meetings, securing garden resources, and managing communications. At times, this created uncertainty among garden participants about who made decisions, who the contact person was, and who was responsible for what. This was due, at least partially, to the fact that the roles were undefined; as a team, we did not explicitly delineate roles and responsibilities. Fortunately, the lead author had developed very good working

relationships with the garden leaders and over time worked these issues out. For example, we learned that tasks had to be assigned; when planning for the Harvest Day celebration began, roles and responsibilities were outlined and agreed upon at the beginning of the process.

Community Partnerships with Key Stakeholders

As previously discussed, the role of community partners and stakeholders was essential to this garden. The community garden developed several community partnerships over time that provided integral resources including supplies, technical assistance, and guidance. Partners included the City, a neighborhood church, a local homeless advocacy group, an obesity prevention coalition, a gardening education organization, a local grocery store, the University's sustainable living institute, and the CEC. Each partnership with the community garden was unique; partners became engaged at different times and had varying contributions and roles.

These partnerships were integral in creating additional opportunities for community members to take on new garden roles. Community partners contributed to the garden in a variety of ways that were vital to the garden's success and sustainability by providing resources including land, water, landscaping services, compost, technical assistance and education, labor, and entertainment at community events. Partners also took on additional roles over time including gardener, leader, fundraiser, and supporter.

Challenges to Community Engagement

There were a variety of ways that people were involved with the garden, but this was not a linear, straightforward process. The garden brought community members

together and gained attention to the community, but not without some challenges. Most challenges were addressed and resolved because of skilled garden leadership, but the challenges around creating and maintaining community engagement, reconciling different partner's senses of ownership and power, and the conflict that ensued were considerable.

The involvement of community members ebbed and flowed based on a variety of factors including the season, the presence of supporting community partners, and the extent to which people knew about the community garden. Throughout the life of the community garden, engaging a wide range of people remained a challenge. Some attributed this to the extreme Southeastern heat and others noted that everyone might not be aware of the community garden being open to everyone. Cameron talked about how, even though she had driven by the garden many times, she did not know that she was welcome to join the garden:

“Yeah, I think that some people do not know about it.... Like me, I did not know. I guess, until I got involved. I did not go...but, I did not know who to see about it. So I guess people just don't know. They see it and they don't know the purpose.”

As previously discussed, community involvement in the garden varied over time in that some people were more engaged than others, people were engaged in different ways, and both of the dynamics varied over time. This may have been due in part to community members' belief that gardening was the only way for them to participate. For example, some individuals were highly involved in the planning meetings at the beginning of our partnership but their participation dropped off as the gardening season

began. Other community members, when invited to participate in the community garden, were not interested. One gardener called this group of people the “*naysayers...*” In an interview with Cherelle, an active gardener and community member, she discussed the challenge of getting people involved:

“Community participation [is a challenge].... I just feel like, I don't know if they're just not interested or don't want to participate and I'll give some the benefit of the doubt and say they just don't know.”

Bonnie is a quiet, middle-aged woman, but always warm and willing to help out wherever she can. She is a long-time resident of the Inman Heights neighborhood. Bonnie described the need for community participation to make a successful community garden and better neighborhood:

“Yes, I think we can do it, but we need to work together. But you know, some people don't want to participate...some people, I think they just don't care. It just doesn't matter to them. And, some people, when they find out work is involved, they don't want to.”

Ultimately, we must acknowledge that every single resident of the community will not become involved in community gardens. However, engaging community members is continuous process of working to involve people and keep them engaged. Also, challenges are inherent when a variety of community partners come together to implement an initiative. One challenge specifically observed in the community garden was conflict over space. There was conflict over who gardened where, as well as over

sharing of that space (i.e. this box is mine, rather than this box is ours). Cherelle, with her community-oriented personality, shared her view of community gardening:

“You should be willing to share ...you can't be conceited and be like, "I, I, I..." There's no "I" in "team" and I think it takes a team. One man can't do it all alone and that's how I feel about the garden and those isolated few people...have the ability to hinder the gardenBecause [they] really push people away and make people disinterested in participating.”

The leadership in the community garden was particularly skilled at managing conflict, resolving tension, and refocusing community members on the ultimate goals of the garden: to bring people together. Veronica, the City garden's manager, worked closest with Lionel; she reflected on his leadership skills:

“Lionel is the type...that is going to try to always do the right thing and work with you... Which is what a community garden is all about. He realizes that his way is not the only way...he is the type of leader that wants other people to step up and do things, he encourages it.”

Discussion

Expanding the Concept of Community Engagement in Community Gardens

This study illustrates that there is more than one pathway to being involved in a community garden. Those who aren't interested in 'gardening' may find a meaningful way to become engaged in community gardens through roles such as fundraiser, supporter, partner, and leader. More opportunities for involvement can result in more

people being involved, illustrating an expansion beyond the traditional, concrete roles and activities associated with gardening. In addition, some people have been involved in multiple ways (i.e. gardener + fundraiser); also, roles sometimes exhibited permeable boundaries (e.g., some people moved in and out of different roles or became more or less engaged over time).

This study tells a story of one community garden, how it began, and subsequently, the processes of getting more people involved including the roles and responsibilities taken on. While other studies have examined how community gardens influence social relationships in community gardens (Glover, 2004; Tieg, 2009), this study analyzes the process of community engagement. For example, some people in this garden were already connected to one another through friendships or other group associations (i.e. the community association). However, other people who became involved in the garden did not know anyone and got to know their neighbors as a result of being involved in the garden. This work contributes one story of a community garden and the ways that people were observed being involved; hopefully, this work will inform future research by illustrating that there are potentially multiple pathways to engagement in community gardens.

Community engagement is an important element in the process of creating healthier neighborhood environments (Popay, 2007). Residents working together to develop initiatives and collective goals to address community concerns is a social process in itself, which may yield new connections and networks, access to additional resources, and the development of social norms of community participation. This study illustrates that community gardens are one mechanism to promote community engagement.

Further, the process of community engagement in this garden did result in changes in the neighborhood social environment; these results are described in another manuscript (Workman, et al., under review).

Reflecting on the Penetration Point for Academics to Partner with Communities

The community-academic partnership was formed two years after the community garden was established; the partnership contributed to further development of the initiative. This finding prompts reflection about the role of community-based researchers in the process of community engagement, who often assume the role of “initiators”. In this example, a group of community members had developed the initiative before we approached them; the researcher role in this initiative was to work with the community towards the mutually established goal of getting more people involved in this garden. It appears that our partnership with this community helped to expand the reach of their existing initiative (Glasgow, Vogt, & Boles, 1999). We worked together to involve residents beyond those who were already involved and helped disseminate the message that the garden was open to everyone.

This work provokes some consideration about when and how we engage with communities. Traditionally, academic initiatives in communities have taken the approach of starting new initiatives to examine their efficacy, rather than thinking about long term impacts and sustainability (Shediac-Rizkallah & Bone, 1998). However, joining existing initiatives and advancing them through community-academic partnerships may have greater potential to enhance sustainability due to higher level of community-buy-in. This community’s foundation of capacity, leadership, and initiative pre-dated our entry into

the community; though, the CEC collaboration resulted in new community partnerships and the creation of more opportunities for neighborhood residents to get involved. This approach of working with an existing initiative to expand it, rather than creating something new, strengthened and supported community-wide adoption of the existing initiative. Therefore it is likely that we, as researchers, can depart without concerning about derailing what was built. Though, the current policies supporting implementation of ‘evidence-based interventions’ by funding agencies do not lend well to partnering with existing, community-generated programs or developing evidence for external validity (Green & Glasgow, 2006). Perhaps an equally effective use of research funding is to work towards strengthening efforts that are already taking place in communities.

Future research should continue to consider what it means to involve community members in initiatives in a “real world” context. Furthermore, researchers may not always initiate community-engaged research. In this study, the community-academic partnership was one facilitator of community engagement; however, strong neighborhood leadership came first and was the most integral, on-going factor for getting more neighborhood residents involved with this garden. Our ability to facilitate increased community engagement would not have been possible without the prior work of community members and the pre-existing relationships they had with community partners. Although this study describes community-academic partnership, the lessons learned may also apply to other non-academic groups who have interest in working with communities such as state and local health departments.

While we have highlighted several contributions of this study, it does have limitations. Our data does not represent the perspective of all community members, as

residents who were not involved with the community garden were not included in the sample. Also, these results may not be generalizable to other communities because of the relatively small scale of this research. Finally, we must acknowledge that it is impossible to completely disregard bias in interpreting this story.

However, we used a systematic methodology to provide a detailed description of this process that is grounded in the perspective of community participants. This work contributes to our understanding of community engagement in community gardens, and potentially in other settings. This work contributes to an understanding of *how* people engage, or the myriad of ways people can engage in their communities. Furthermore, it may broaden our understanding of community engagement in a context-specific and practical manner. While these examples of community engagement are specific to the community garden setting, it can inform our understanding of how people engage in community level interventions, as well as the ways in which a community/academic partnership can facilitate engagement.

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4.2 THE ROLE OF A COMMUNITY GARDEN ON SOCIAL FACTORS IN AN URBAN NEIGHBORHOOD ENVIRONMENT⁶

⁶ Workman LM, Saunders RP, Freedman DA, Jones SJ, Simmons DS To be submitted to *Health and Place*

Abstract

Introduction: Neighborhood social environments span ecological levels and may include social interactions, safety, and sense of community. Social factors are important in determining the quality of a neighborhood, as well as the health of individuals living in those neighborhoods. Community gardens may increase availability of fruits and vegetables and ultimately, consumption, but they may also have more intermediate outcomes related to health including fostering social interactions and cultivating resources from social connections.

Methods: This qualitative study explores the role of a community garden on social factors in an urban neighborhood environment. Field notes and in-depth interviews were used to explore the role of the garden in the neighborhood environment with individuals who were involved.

Results: Results indicate that the community garden facilitated social interactions and was a tool for neighborhood leaders to advocate for social and economic development in their neighborhood. In addition, the community garden served as a safe community gathering space where neighbors assembled and worked together.

Discussion: This study broadens the existing knowledge on the potential social benefits of community garden spaces and illustrates the complex interactions between our physical and social environments.

“IN THIS GARDEN, PEOPLE ARE EATING VEGETABLES, SOCIALIZING, THEY'RE COMING DOWN AND MAYBE SHARING IDEAS AND THINGS AND IF THAT GARDEN DIED, THOSE THINGS MIGHT DIE WITH IT.” MATTHEW, INMAN HEIGHTS COMMUNITY GARDEN PARTICIPANT

Introduction

There is significant interest in determining how neighborhood environments shape behaviors and health, as the places we live have dramatic effects on quality of life, as well as life span (Braveman, Cubbin, Egerter, & Pedregon, 2011). Neighborhoods are unique, complex microsystems shaped by local history, socio-economic status, and demographic composition; they are a reflection of differences in social and economic opportunities (Bronfenbrenner, 1979). The social and economic characteristics of neighborhoods have been linked to mortality, self-rated health, chronic diseases, health behaviors, and mental health (Clark et al., 2011; Stronegger, Titze, & Oja, 2010; Wight, Cummings, Karlamangla, & Aneshensel, 2010; Messer, Laraia, & Mendola, 2009; Curry, Latkin, & Davey-Rothwell, 2008; Do et al., 2007; Sorensen et al., 2007).

The characteristics beyond broad social and economic factors (i.e. socioeconomic status and race/ethnicity) that operate within neighborhood contexts are not adequately differentiated and there is no consensus in the literature delineating neighborhood social factors. Understanding the characteristics that operate within neighborhood environments is a key challenge; it is an essential step towards gaining the ability to empirically associate specific neighborhood factors to health and then address them (Yen & Syme, 1999). That is, we must distinguish *what* is happening within neighborhood environments so that we can determine *how* neighborhood environments influence health. As such, delineating social factors within the neighborhood environment, as well as

determining how to create health-promoting neighborhood environments are key public health challenges.

Growing research in the area of socio-ecological approaches to health has highlighted a need to address social and political environments (Golden & Earp, 2012). There is significant need for knowledge about the factors beyond the physical characteristics of an environment, collectively referred to as the social environment. More is left to learn about factors comprising the neighborhood social environment; gathering formative data is essential before we can fully understand the ways those factors ultimately influence health.

Therefore, more work is warranted to explore social characteristics within the neighborhood setting. The neighborhood social environment “includes the quality of relationships—such as trust, connectedness and cooperation—among neighborhood residents” (Braveman et al., 2011). In addition, the social environment may also include the resources generated from those relationships with others, described by many as social capital (Lin, 1999). Other studies that have explored the social environment have assessed a variety of concepts including neighborhood safety and collective efficacy, which is indicated by the shared belief among community members that they can come together address common goals (Sampson, Raudenbush, & Earls, 1997).

Engaging and mobilizing neighborhood residents to improve their neighborhood social environments is a recommended strategy for health promotion (Schulz et al., 2011). Community-engaged approaches can potentially prevent violence, foster cohesion, promote civic engagement, improve neighborhood environments, and

ultimately improve health (Cohen, Davis, Lee, & Valdovinos, 2010). Engaging community members to focus on community assets can enhance the neighborhood social environment and potentially address problems including crime and disorder (Woolcock & Narayan, 2000).

Community Gardens: A Lens In Which to Explore the Neighborhood Social Environment

Increasingly, community gardening is being utilized as a public health strategy that addresses both physical and social elements of neighborhood environments. The potential benefits of community gardening are broad and range from promoting healthy behaviors, increasing food security, encouraging social interaction, and creating healthier communities (Alaimo, Packnett, Miles, & Kruger, 2008; Draper & Freedman, 2010; Firth, Maye, & Pearson, 2011; Guitart, Pickering, & Byrne, 2012; Teig et al., 2009; Wakefield, Yeudall, Taron, Reynolds, & Skinner, 2007). However, the ways that community gardens can enhance the social environment (e.g., social relationships, connectedness, cooperation, and trust) are not well known.

Community gardens provide a strategy to examine and explore neighborhood social environments and potentially improve their health promoting qualities. Community gardens are 1) a potential strategy to promote health at community and individual levels 2) a mechanism to involve community members in working together to create healthier neighborhood environments, and 3) a lens through which to understand the neighborhood health social environment. Considering how community members perceive their neighborhood social environment is a formative step to creating health promoting neighborhood environments. This study aimed to discover how supporting,

working with, having, and keeping a community garden (that is, the *role* of a garden) may contribute to the neighborhood social environment, particularly from the perspective of community members.

Methods

We used ethnographic methods, including observational field notes and in-depth interviews⁷, to explore participant's perceptions of the role of a community garden in their neighborhood social environment (both in terms of social interactions, as well as the impact on the broader neighborhood setting). This work was done in an urban, predominantly African-American neighborhood in a mid-sized city in the Southeastern United States. This neighborhood is of low income (median household family income = \$12,098) and includes a public housing apartment complex, as well as an area of single family style homes (US Federal Financial Institutions Examination Council, 2013). Further description of this community is provided in another manuscript (Workman, et al., under review). The University of South Carolina Institutional Review Board approved this study.

Data Collection

Field notes (n=62) were collected over from October 2011 to March 2013 to document activities and interactions in this garden. In March-April 2013, we recruited individuals to participate in in-depth interviews using maximum variation and snowball sampling techniques. Fourteen (14) of twenty (20) invited participants were interviewed (response rate=70%); these participants reflected a range of experiences and perspectives

⁷ Names have been changed to pseudonyms.

related to their involvement with the community garden. All interviews took place in a location selected by to each participant (i.e. the garden, local cafes, libraries, and community centers), were facilitated by the lead author, and ranged between thirty minutes and two hours. All participants provided consent and were provided a monetary incentive (\$15) for their participation. A timeline activity and corresponding semi-structured interview guide was used to understand participant’s perspectives about the role of the garden; additional details on this standardized interview process are reported in another paper (Workman et al., under review). The semi-structured interview guide included questions about the ways that they were involved, social interactions in the garden, and the ways that they saw the garden to contribute to the neighborhood (Table 4.1). All interviews were recorded and transcribed verbatim by either the lead author or a qualified transcriptionist.

Table 4.1. Sample Interview Questions

Concept	Sample questions
Entering the garden/becoming part of the garden	<ul style="list-style-type: none"> • How did you become involved with the garden? • How did you find out about the garden? • What did you hope for when you started gardening?
Social groups/networks	<ul style="list-style-type: none"> • Who were some of the key people or groups (formal or informal) involved? • What were/are their roles in the garden (i.e. what do they do)? • Please tell me about groups of people involved in the garden.
Social interactions	<ul style="list-style-type: none"> • How do the people and groups involved in the garden interact with each other?
Neighborhood/community benefits	<ul style="list-style-type: none"> • How do you think the garden has changed or contributed to the community? • What is the role of this garden in the community? • What are the benefits of having the garden in the community? • What are challenges or problems of having the garden in the community?

Analysis

Given our aim to explore residents' perceptions of the role of the garden in their neighborhood, we saw an inductive approach as the most appropriate analytical technique. The constant comparison method was used to systematically examine data (Glaser & Strauss, 1967; Strauss & Corbin, 1998). Field notes were continuously analyzed as they were collected, wherein the lead author documented experiences in writing, then examined, compared, contrasted, coded, and reflected upon the observations. A preliminary analysis of field notes was used to begin generating a codebook, based on ideas and themes that emerged throughout the process. In addition, this participant observation stage informed the in-depth interview phase of data collection including the development of interview sampling frame and the development of interview tools.

Analysis of in-depth interviews began with a simultaneous review of all audio recordings and interview transcripts (listening while reading). Then, all interviews were open coded using the preliminary codebook that was developed during the field notes analysis phase. During the initial assessment of the interview data, two research team members open coded two transcripts independently. After the individual review, the two coders met to discuss and compare interpretations of themes and coding categories. Based on these discussions, the codebook was refined, remaining interview data was reviewed, and emergent ideas and themes were recorded in memos. After an initial pass at coding the entire set of interviews, a list of emergent themes was developed; these emergent themes were used to focus the analysis. Analysis continued until participant

responses, concepts, themes became repetitive or redundant (i.e. saturation) (Glaser & Strauss, 1967).

Results

Results indicate that, from the perspective of those involved in the garden, this urban community garden contributed to the neighborhood social environment in several ways by 1) fostering interpersonal interactions and relationships, 2) serving as a community meeting place, and 3) acting as a mechanism for community advocacy to promote social and economic neighborhood development. This community garden brought community members together because of their shared interest in participating in their community and working together to grow food and fellowship. In addition, we explore some challenges related to community gardening, as they relate to the neighborhood social environment. Each theme is discussed in more detail below.

Community Garden Space Creates Multiple Benefits for the Community

Fostering Interpersonal Social Interactions and Relationships

Community leaders initiated this community garden as a way to bring people together, particularly people from groups who had traditionally not interacted much in this neighborhood- young and old, as well as renters and owners in the neighborhood. Participants frequently described that they enjoyed the social interaction that they had when they went to the garden. Bonnie, a middle aged African American woman who has lived in the neighborhood for years, was invited into the garden by Mac, the garden manager. Bonnie, who is quiet, but always very warm and kind, described how the garden has helped her form new friendships:

“I think that if it wasn’t for the garden, we wouldn’t be where we are today. You know, like friends. We would be in our own worlds...[the garden] brings us together.”

Within the social interactions that occurred in the garden, new connections with neighbors were created. Veronica, the City’s community gardens manager spoke about how she saw this garden bringing together people, which was a goal of the community leaders when they started this garden:

“I just feel like it has brought people together that normally would not come together. Cross generations, cross cultures... all ages, all cultures coming together at that garden.”

Participants reported they got to know neighbors they had previously only seen in passing. As a result, participants described that they felt like they were developing relationships and building a sense of community among one another. Marguerite, one of the community garden leaders and a long-time resident of the neighborhood, talked about how she really got to know neighbors when they started gardening together:

“I have lived here almost 20 years... And we [only] spoke, "hey, how are you doing", but once we started gardening out here....we got an opportunity to meet a lot of people in the community.... really get to know them... So, it was good... It felt like community, people starting to care about the people more, and even people who did not live here.”

Lionel, a leader in the community association and original member of the garden, made a similar comment, discussing how the garden gave people a space to come together, participate in a shared activity, and subsequently, get to know each other:

“The fact that different folks from different areas... Some of the people from around here in our neighborhood have never had any real contact with each other...even if they are just taking a break from gardening in their boxes, you know they have the opportunity to talk with each other. To become familiar with each other.”

In addition, the social interactions created within the garden space resulted in additional benefits for participants including opportunities to share and learn from one another. Those interviewed reported that they shared many things in the garden including food, knowledge and ideas, as well as an overall enthusiasm for being involved in their community. The garden gave many individuals in the neighborhood an opportunity to get involved in their community. Importantly, gardening was not the sole way to become involved in the community garden. Residents found ways to involve themselves with the community garden, even if they weren't gardening, by sharing other talents and skills including fundraising, teaching, leading, acquiring resources, and spreading the word about the garden (Workman et al., under review). Cherelle, a young woman who lived in the public housing community, was an enthusiastic garden participant. She described how participating in the garden seemed to bring people together over their common interest in gardening:

“I think that it's brought some community members closer together because they found their common interests whereas others may feel as if they have nothing in common, nothing they could do.”

Lionel expressed many concerns about the neighborhood including...”*violence, gang activity, open air sale of drugs, and absentee landlords....*” He and other participants saw the garden as a place to come together and discuss community concerns as they worked alongside one another in the garden. Matthew is a middle-aged African American man. He is a retired military veteran who volunteers in the community with an afterschool program for children; he talked about conversations he had in the garden with residents about their community concerns:

“I would come back in the evenings and meet some of the community residents. For the most part, they were long-term residents in the neighborhood, very concerned about the safety of the neighborhood and were very happy that the garden was there.”

The Significance of (Green) Space: A Community Meeting Place

The community garden is a physical space; while it is geographically located on the edge of this community, it serves as a central meeting place for residents. Community garden participants described the garden as a “*community meeting*” or “*gathering place*”, “*central office*”, and an “*outside social club.*” Many activities have taken place in the garden, beyond growing flowers and food. People come to the garden to spend time with their neighbors and enjoy nature, even if they are not gardening.

Over the course of our time in the field, multiple community events were held in the garden including an Earth Day celebration, an educational day with a local Boy Scouts troop, and a Harvest Day celebration. Several of these community events were well attended by community members (i.e. >20 people), many of whom were never observed using the garden space before.

This community garden is a place where participants report that they gather and “*fellowship.*” People in the community spend time enjoying the space, even if they aren’t gardening. For example, some community members met at the garden to make plans for another project that they were working on. Marguerite, an active community garden participant, lives across the street from the garden. She reported that the garden is a space where she always feels people can visit:

“We wanted to have a nice place for people to come. ... it is a community meeting place. You could have a birthday party for your child... You know, we would like more people to come out and help out.”

Veronica, the City’s garden manager, shared her perspectives on the community garden as a community gathering place. She described that the garden was a place for people to meet, get to know one another, and participate in their community, even if they weren’t ‘gardeners’:

“You know, having a place to meet. It is extremely important in a community like [this]...it is like the cool hangout spot.... You know, with the sandbox for the children, the sitting area the shade, and it just being in a central location...It gives hope when you see someone else out there. You know, what if there are

children who need a place to go. And there's an adult out there that gives an opportunity for that child to stop by with the children's garden. And, no one is running them out. You know. So, I think it has given them a meeting place, a meaningful meeting place where they can get their exercise... eat well. Socialize and work out their differences in positive ways.”

Matthew, the after-school program volunteer, described in an interview that he often saw people spending time together in the community garden:

“It became a ...place to meet socially. Even if they weren't doing any gardening and I happen to ride by, I'd pull over and they'd be sitting there under the tree there with the table.”

In addition to serving as a community gathering space, interview participants described how the garden provides a place of respite. It was described as a “*peaceful place*”. One interview participant, who could see the garden from his/her home, described seeing community residents stopping to rest in the garden as they walked home from a nearby bus stop. Cherelle discussed that the garden was a place to escape from the violence, fighting, and bad language that she encountered around her home:

“The garden is... an outlet...from the immediate environment...for me, even though it's just a walk down the street it was very different from just being right outside my door....[the garden] was peaceful...It's an outlet from drama, it's a place to go and relax.”

As previously discussed, crime and safety are significant concerns in this community. Garden participants expressed that the garden helped to address those

concerns by providing a space to gather with one another. Participants described that they felt that the garden was a safe place to spend time in the community with neighbors. Also, residents saw that in the process of being present in the outdoors, they were creating a sense of security within their community. These feelings of increased security came via a sense of togetherness. Veronica shared an experience in visiting this community garden and noticing how residents being outside created a ‘lookout’ in the neighborhood and contributed to a sense of security:

“It is a meeting place for that community. A safe meeting place. It was like better than homeland security. There is always someone out in the garden and every time I went over there, somebody always stuck their head out of the house and spoke. So you know, it really brought the people together....I do not know the statistics exactly. But, I feel like the crime has gone down because there are more people out. You know, the more people that are out in the community... Of course the crime is going to go down.”

Community Garden as an Advocacy Tool to Promote Social and Economic Neighborhood Development

While community leaders created this community garden to bring neighborhood residents together, they also started the garden to bring attention to their community. As previously described (Workman et al., under review), a large part of this community garden is situated on two lots owned by the City, which were previously vacant, blighted spaces. Lionel, a visionary who initiated the idea of developing the community garden, explained how the garden brought attention to his community:

“It has highlighted the community. You know,... all of the problems that we have had in the community. The lawlessness, the absentee landlords, the neglect by the city, all of that... Some of that has started changing. We have gotten more attention from law enforcement. Having the garden there made it easier to highlight those problems.”

Community leaders maintain that they still ultimately want homes built on the lots where the garden presently stands, but see the garden as a tool for political advocacy. Veronica, in her position as the City’s manager of all community gardens, served as a liaison for Lionel and other City departments; as a result, she was involved in communications about his vision and desire for development in his neighborhood.

“It was a vacant lot and I know that they initially wanted some homes on that lot. But, I remember Lionel saying, “if we cannot have homes, we want a garden.”

This particular garden was on the forefront of the community gardening movement across the City, as it was the first in the area; after the development of this garden, the City created a community gardening program in the City Parks and Recreation office. Presently, the City has a variety of gardens across the city with plots available for leasing by individuals and families. Veronica, mentioned earlier in this paper, was hired as the City’s community gardens manager when the program began. This grassroots generation of an innovative, positive community level program by community leaders was ultimately a way for them to advocate for their own community. As a result of the community leaders’ initiative to start a community garden in their neighborhood and the resulting growth of this innovation across the entire City, this

community created a way to bring attention to their community. Consequently, the garden was ultimately a mechanism for political advocacy and social action. Ken, a community partner who provided gardening education and technical assistance in this garden, discussed how having this community garden allowed residents to show their desire for resources and development:

“I think it is a visible... It demonstrates, the community's interest in doing something positive for the community. With gardening, there are other things that could be done, but sometimes you cannot do it all.”

Lionel, a community leader, shared that, as he had planned, the garden gave him a platform to discuss additional need in his community:

“The garden.... it's kind of the gift that keeps giving to ... You get the produce from the garden, but you get the attention. You know, we have had some news articles... The news articles give us a chance to talk about some other stuff...”

Challenges of Gardening in Shared Spaces

While there are many positive aspects related to gardening in a communal space, there are also challenges inherent to many people working in and sharing one space. Some of the challenges related to ownership and social interaction in this garden are described in another manuscript (Workman et al., under review). One challenge specific to social interactions, though, was the way that this garden was designed. Specifically, separate in-ground and raised-bed areas affected community member's interactions while working in this garden. At the top of the hill, behind a fence, is an in-ground garden. It was started first and is mostly tended by founding members of the garden. In another

area, there are raised-bed boxes, which were built on the two adjacent city lots after the City approved the use of their land. The two spaces are proximate but are separated by a fence, obstructing interactions between in-ground and raised-bed gardeners.

Some participants also pointed out that raised bed gardening is an individual activity, with everyone gardening in their own food in each box, resulting in fewer opportunities for raised-bed gardeners to work together. Nevertheless, many raised-bed gardeners found time to fellowship when taking breaks, proudly sharing how their vegetables or flowers were growing or just resting at tables and benches around the garden.

In contrast, in-ground gardeners worked together to prepare land, plant vegetables, maintain the plot, and monitor growth and share one collective harvest, which facilitated greater levels of social interaction throughout the process. In-ground gardening is a more cooperative, shared style of gardening. Lionel thoughtfully noted that the different styles of growing had implications for a deeper level of community engagement because in-ground gardening resulted in opportunities to get to know one another better, share ideas and concerns about the community, and build relationships:

“Now me personally, I am not as big a fan of [raised-bed] gardening because it is just you and maybe one other person in a box. But, in the first year, in the in ground, it would be like everybody was working together and basically, they got to know each other...[A neighbor] got involved....she got the opportunity to express her opinions on other stuff that was going on in the community. You know, there were a number of people who came out and then some folks would

tell me, "You know, I haven't even seen her... I didn't even know her." To me.... that was a big benefit."

One negative aspect of in-ground gardening was the amount of garden maintenance needed to keep the garden free of weeds. The Square Foot Gardening method uses raised beds and it is touted as a low maintenance, high output/yield method of gardening (Bartholomew, 2005); raised bed gardening is also a popular method suggested for beginning community gardens (American Community Gardening Association, 2013).

Discussion

This study contributes to a growing body of literature establishing community gardens as viable health promotion strategy through their importance as physical spaces that promote social interactions, development of new relationships, networks and partnerships, and facilitate working with others towards common goals (Firth et al., 2011; Glover, 2004; Kingsley & Townsend, 2006; Ohmer, Meadowcroft, Freed, & Lewis, 2009; Teig et al., 2009; Twiss et al., 2003; Wakefield et al., 2007). In addition, this study builds the case for gardens as a mechanism for community development and advocacy. This benefit is documented less often, though the implications for addressing the social determinants of health via community gardens as a mechanism for community development are evident. This study illustrated similar results to a study in western Australia in which a community garden was used as a way to generate political empowerment and develop a relationship between this community and their local government (Stocker & Barnett, 1998).

In addition, this work illustrates the multi-level nature of the neighborhood social environment from the lens of a community garden. This study reinforces what is known about the interpersonal elements of the neighborhood social environment, as this community garden positively impacted social interactions and the resulting sense of connectedness, cooperation, and trust (Braveman et al., 2011). These interpersonal social environmental characteristics served as a mechanism that created social linkages between the community and outside entities (i.e. bonding and bridging social capital, respectively) (Putnam, 2001) and mobilized community members to advocate for broad community change including social and economic development.

The interactions that took place in the community garden resulted in sharing of common community concerns and ideas for addressing them. As a result, the community garden influenced the social environment at a broader level, in addition to cultivating interpersonal interactions. As described in another paper about this study, these results are aligned with the goals set forth by the group of neighborhood leaders who started this garden (Workman et al., under review). This points to the possibility that community gardens may be a tool that community residents can use to push the tide towards addressing the social determinants of health by improving access to quality housing, education, and employment opportunities.

This work illustrates the complexity of neighborhood environments, demonstrated by the physical and social environments interaction. For example, the presence of a blighted, vacant lot was the impetus for the creation of this community garden. Moreover, the importance of the physical garden space was integral to facilitating many of the social interactions noted as benefits by study participants. The garden space served

as a safe, community meeting place for residents to come together, get to know each other better, and share.

Other neighborhood level intervention strategies, such as the development of parks and other green spaces, may yield similar benefits (Groenewegen, van den Berg, Maas, Verheij, & de Vries, 2012). The potential to create shared, common spaces in neighborhoods for people to gather is not limited to community gardens. Other strategies, such as parks, may not require the level of engagement and maintenance that community gardens do, as participants are required to visit almost daily to maintain the growth of the garden. In communities where residents do not desire this level of commitment and maintenance, a park may be a more viable solution to green space development. However, in contrast, the idea of commitment and the need to constantly maintain gardens is part of what facilitates social interactions and cohesion. Ultimately, community gardens should be seen as only one element of the overall process of creating health promoting neighborhood environments. While community gardening is a desirable activity for many neighborhood residents, having other opportunities for people to engage in their communities is also imperative.

While this study is not about the food-related benefits of community gardens, when considered in the context of other environmental intervention strategies, the benefit of increasing access to healthy foods, physical activity, and even weight control (Litt et al., 2011; Wakefield et al., 2007; Zick, Smith, Kowaleski-Jones, Uno, & Merrill, 2013) documented in community garden research situated with other social environmental benefits demonstrates the viability of community gardens as an valuable environmental health promotion strategy. Based on these results, we recommended the development

and preservation of community gardens as a strategy for enhancing neighborhood environments and overall community development. These recommendations are congruent with those put forth by the Community Guide for improving housing quality via neighborhood beautification and improving neighborhood living conditions through enhancing neighborhood cohesion and social support systems (Anderson, Scrimshaw, Fullilove, & Fielding, 2003). Ultimately, community gardens have the potential to help neighborhoods move towards broader social change and address differential social and economic opportunities within their neighborhoods.

Strengths and Limitations

This methodology, including purposive sampling, does not represent the perspective of all community members (including those who are not involved with the community garden); however, it provides a rich contextual description that informs our understanding of neighborhood social environments in similar communities. Also, the methodology used in this study has facilitated the collection of context specific information from the participant perspective. While our methodology provides rich data from participants' perspectives, it is also dependent on the interpretation of the researchers. Therefore, we must acknowledge that completely eliminating the bias inherent to this process is unlikely.

Given the complexities related to understanding structural and environmental level influences on health, a rich and detailed description of this urban community garden provides formative evidence regarding the role of a community garden in shaping a neighborhood social environment. The findings from this study may be useful in informing the contribution a community garden can make to neighborhood environments

and the ways that community residents perceive the garden and their neighborhood social environment.

Conclusion

The role of community gardens in neighborhood social environments is multifaceted. This work contributes to the development of a more robust knowledge base of neighborhood social environments. Further, it validates evidence regarding the multitude of benefits from community gardens.

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CHAPTER 5

DISCUSSION

In this experience, I have explored how a garden can contribute to a neighborhood social environment. Throughout, I have learned about social processes (including the development of social relationships and interactions) and the process of academic partners engaging with community members from the lens of a community garden setting. Through my work with the leaders of this neighborhood and our community-academic partnership, I discovered the importance and utility of community-generated initiatives. The abilities of neighborhood leaders as community organizers and tenacious advocates for their neighborhood proved to be an important learning experience for me as a budding community-based researcher. My belief about the value of garden space for healthier neighborhood environments was affirmed, but I also witnessed firsthand how neighborhood leaders got more people involved in their community.

In this chapter, I will present a brief overview of the major findings of this study, consider how this work relates to existing literature on neighborhood social environments and health, and the utility of community gardens to help neighborhood residents affect change. Lastly, I will reflect on how this study may inform future community engaged research initiatives, as well as the implications for policy and practice.

Summary of Major Findings

The overall focus of this study was to understand the social processes of community members being engaged with an urban community garden. Using an ethnographic approach, I sought to understand these processes from the perspective of participants with participant observation and in-depth interviewing techniques with two specific aims; one regarding community engagement and a second regarding the role of the garden in the neighborhood social environment.

Specific Aim 1: To analyze the ways that community members are engaged in an urban community garden

Results for this aim are presented in manuscript one, *A Community Engaged Approach to Growing a Community Garden*. Three main themes around community engagement were identified in this setting through the development of a comprehensive timeline: 1) facilitators of engagement, 2) opportunities for engagement, and 3) roles and activities for involvement. Three main facilitators of engagement were neighborhood leadership, the CEC community-academic partnership, and the physical garden space; these led to opportunities and events, which created multiple roles in the garden for community participants beyond gardening including the specific roles of gardener, partner, fundraiser, supporter, and leader.

These results contribute to knowledge about the community engagement process in the setting of community gardens. By developing a chronological timeline that identified a key sequence of events in the community garden, I was able to gain insight into *what happened* to create opportunities for people to become involved and find

specific roles to take action. Using the timeline, I identified two key phases of development in the garden: a neighborhood leadership phase and a community-academic partnership phase. Within these phases, I identified key events and activities (including garden workdays, celebrations, and the development of new partnerships) that led to the creation of opportunities for community participants to take on roles in the garden. This method of assessing key events in the community garden with a timeline led to a better understanding of *how* community engagement happened in this garden.

Over time, as well, roles and responsibilities evolved as people's involvement ebbed and flowed. For example, people were involved with the community garden at a variety of commitment levels (e.g., gardener or leader versus supporter). In addition, some participants took on more than one role or changed from one to another. Having multiple ways for people to be involved may have kept some people engaged, as they could find a new role if they grew tired of the one they began with.

These findings add to the utility of gardens as a mechanism for community engagement, but also conceptually grow the way we think about community-engagement. In other settings or initiatives, we can think beyond traditional roles and responsibilities to create ways for people to get involved in neighborhood development. For example, the roles of 'fundraiser', 'partner', 'leader', and 'supporter' could transcend into other neighborhood clubs, groups, or organizations working towards similar goals.

Finally, this study provides an example of how community-academic partnerships can be formed with existing, community-generated initiatives and that academics may aid in extending the reach of community-generated programs. The partnership formed

between this garden and the CEC occurred two years after its inception. Before the CEC began working with the garden, neighborhood leaders had made significant progress in acquiring the land and resources they needed and beginning a successful initiative. This community had already initiated the garden and had the capacity and leadership to start it; therefore, essential elements for adoption of interventions including of buy-in and ownership were already present. As guided by the principles of community-engaged research, we must always find out what is already going on in the community. In our partnership, we were able to focus energy towards our mutually established goal of getting more people involved, as the infrastructure for participation (i.e. the physical garden space) was already developed. Ultimately, this process served as a medium for social interactions and relationships and improving the quality of those interactions (trust, cooperation, and connections). These social processes, including community-engagement, are important pathways to promoting community development (Gittel & Vidal, 1998).

Historically, academics have largely focused on developing interventions for communities and testing their efficacy rather than thinking about long term impacts and sustainability (Shediac-Rizkallah & Bone, 1998). More training and emphasis on partnership development and process improvement to expand existing initiatives in communities might be beneficial to researchers and practitioners as we think beyond our role as ‘initiators’ of health promotion initiatives. In this example, our partnership was able to facilitate new community partnerships and create more opportunities for community participants to get involved, which hopefully increases the likelihood of this garden’s sustainability after our partnership has subsided.

Specific Aim 2: To explore the role of community garden space in the neighborhood social environment.

Results for aim two are presented in a second results manuscript, *The Role of a Community Garden on Social Factors in an Urban Neighborhood Environment*. Findings indicated that this community garden contributed to this neighborhood in several ways including fostering interpersonal interactions and relationships, serving as a safe community gathering place, and providing a way for neighborhood leaders to advocate for social and economic development in their community. As a result, my findings illustrate that community gardens have the potential to shape the neighborhood social environment at multiple levels and are a useful strategy to enhance neighborhood environments and promote health. My results affirm studies about community gardens as spaces that promote social interaction and relationship building, sharing, working together towards common goals (collective efficacy), and the development of a sense of community (Firth, Maye, & Pearson, 2011; Glover, 2004; Kegler, Painter, Twiss, Aronson, & Norton, 2009; Kingsley & Townsend, 2006; Ohmer, Meadowcroft, Freed, & Lewis, 2009; Teig et al., 2009; Twiss et al., 2003; Wakefield, Yeudall, Taron, Reynolds, & Skinner, 2007).

This community garden created a quality public space for this community; other studies related to the creation of public spaces have shown a positive association with sense of community, unaffected by the frequency of use (Francis, Giles-Corti, Wood, & Knuiman, 2012). This points that this community garden may have positive effects for the entire community, beyond for those who participate in the garden. Other intervention strategies may have similar effects including community centers, green spaces and parks, farmers markets and other environmental level initiatives. For example, findings from a

recent study suggested that parks may encourage the development of social ties (Każmierczak, 2013) and that community meeting spaces, in general, have positive impacts on well being and social interaction (Cattell, Dines, Gesler, & Curtis, 2008).

In comparison with other environmental intervention strategies, such as parks, other green spaces, and farmers markets, some similar benefits may be observed largely due to the fact that all of these strategies create potential to bring neighbors together (Groenewegen, van den Berg, Maas, Verheij, & de Vries, 2012). As such, we can acknowledge that while there are a multitude of benefits associated with community gardens, they are only one part of an entire health promoting environment. While I documented several roles that individuals can take on within a garden beyond 'gardening, a limited group of people will likely be interested and engaged with a community garden initiative. Community gardens require significant maintenance and commitment; for those communities that do not desire this level of commitment or simply are not interested in gardening, other strategies are needed to get additional people involved in their communities, as all of these efforts will contribute to healthier neighborhood environments.

In addition to having community gathering spaces where people feel that they can go and do something positive, gardens also provide fresh food, opportunities to share, potential to work together, and the collective process of growing something together, both in terms of food and flowers, as well as the community. For the participants in this study, the garden was not primarily about food; however, when considering our efforts to create health promoting neighborhood environments, community gardens and other settings have been shown to increase fruit and vegetable consumption, promote physical

activity, and support healthy body weights (Litt et al., 2011; Wakefield et al., 2007; Zick, Smith, Kowaleski-Jones, Uno, & Merrill, 2013). Thus, in considering all of the documented social and physical environment benefits in tandem, community gardens are a valuable health promotion strategy.

This study shows that community gardens can engage and empower community residents to affect change and promote community development, which has been documented in the literature less often. Exceptions include a similar study that documented the way in which a garden was used in Australia as a means to initiate advocacy and community development (Stocker & Barnett, 1998). Another study documented that, when compared to more affluent neighborhoods, community gardens in low income neighborhoods were four times more likely to lead to addressing other neighborhood concerns because of community organizing facilitated through the community garden (Armstrong, 2000).

Given the results of this study, the development and preservation of community gardens to enhancing neighborhood environments and overall community development appears to be a useful strategy. These recommendations are congruent with those put forth by the Community Guide for improving housing quality via neighborhood beautification and improving neighborhood living conditions through enhancing neighborhood cohesion and social support systems (Anderson, Scrimshaw, Fullilove, & Fielding, 2003). Lastly, community gardens have the potential to help neighborhoods move towards broader social change and address differential social and economic opportunities within their neighborhoods.

Implications for Research and Practice

Utility of Community-Engaged Research

This study highlights the importance of conducting community-engaged research and academics developing partnerships with neighborhoods. Working with community members and attaching importance to community-generated solutions is essential to creating healthier neighborhood environments. However, current funding mechanisms still do not equitably support community-based research. There is a disconnect between the push for implementation of ‘evidence based interventions’ and the absence of contextual information to develop evidence for external validity (Green & Glasgow, 2006). Community-engaged research has increased capacity in public health research to translate evidence from highly controlled trials into practical settings and promote external validity (L W Green, 2001; Miller & Shinn, 2005; Wallerstein, Yen, & Syme, 2011). Working with community participants to build their local capacity as we work to develop an understanding of the context may increase the likelihood of sustainability for the current initiative, as well as future initiatives (as some capacity will already be built).

The challenge of developing and implementing sustainable approaches to neighborhood development has been highlighted in the literature (Israel et al., 2006). Integrating health promotion initiatives within existing resources and systems is vital to promoting sustainability (Altman, 2009). This study shows how researchers might partner with existing initiatives to increase the likelihood of sustainability and also increase ownership, buy-in, capacity, empowerment, and maximum resource utilization. When these characteristics are present, at least in some part, the likelihood that such

programs will be maintained or sustained is greatly increased. Furthermore, the development of facilitators for sustainability (capacity building, empowerment, etc.) may also address the social determinants of health and balances of power. Though, this would require academics to seek out opportunities to build on existing initiatives rather than searching for opportunities to create new initiatives.

As evidenced by the partnership developed within this community between neighborhood leaders and the local church, communities can develop linkages within their own neighborhoods to begin creating healthier neighborhood environments, which is a suggested step towards sustainability provided in the literature (Alexander et al., 2003). In situations where funding is hard to come by or local government does not provide resources to create safe gathering spaces, communities can partner with local schools or other community organizations to develop these linkages.

Value of Interdisciplinary Research

The utility of my methodology in documenting the social processes in this community garden, as well as the neighborhood context illustrates the value of interdisciplinary work. An interdisciplinary approach allows us to see from new perspectives and draw on the expertise developed across the social sciences. This study addresses a public health issue with interdisciplinary approaches to community-based work informed from the fields of public health, social work, and anthropology; ethnography was particularly well suited for developing detailed, contextualized data to address my research aims. Ethnography and other qualitative methods should be used to explore the complex web of factors in neighborhoods that emerge when we utilize

ecological models.

Quantitative evidence, including social epidemiological data, can provide essential evidence on relationships between exposures to risks or resources and subsequent health outcomes. Though, the complex nature of health calls for detailed information to complement quantitative approaches; community-engaged researchers can facilitate translation of this knowledge into specific contexts. Understanding context is essential to determining how life experiences shape health and what those experiences mean for health (J. Green & Britten, 1998). More collaboration is needed between researchers with interests in social determinants of health, including social epidemiologists and community-engaged researchers, as each field brings expertise that may contribute to the development of conceptual frameworks that draw on theories and methods from across disciplines (Wallerstein et al., 2011).

The methodology used in this study gave voice to residents of a community that has been largely ignored; therefore, this approach is appropriate from a social justice perspective. Similar efforts should continue, as the results of my study illustrated that while this community has its share of problems, the people who live there can rally effective solutions to address them (Morgan & Ziglio, 2007; Sharpe, Greaney, Lee, & Royce, 2000). Community-engaged researchers can support this process by providing technical assistance, capacity building, and resources. If I had not used the detailed, immersive methodology I did, I may not have learned essential lessons from this story including the importance of community-engaged research and the value of community-generated solutions.

Importance of Understanding Health and Social Processes in Place

The findings of my study confirm the importance of social and community context as an important contributor to the social determinants of health in “place” (Poland, Krupa, & McCall, 2009). This work highlights the importance of considering health within a setting and further, the critical importance of working people working together to create healthier neighborhood environments. Efforts to create health promoting neighborhood environments should continue to utilize a social ecological model that considers individuals within the complex contexts of interpersonal, organizational, community, and public policy factors to understand how health is shaped ‘in place’ over time. The social ecological model informed this work, as it shaped the perspective in which I approached the research and guided me toward exploring the social factors within neighborhoods. In addition, it moves forward the idea that devising neighborhood/place-based strategies is an important step in addressing the social determinants of health and that community gardens are one potential strategy to address these determinants.

The importance of understanding and addressing context has been highlighted as a critical challenge in improving translation of research into practice (Glasgow & Emmons, 2007). This study focused on understanding neighborhood context and the process of community engagement. Understanding these processes in real world settings will aid in an understanding of how initiatives happen, so we can contextualize our observations, which may improve translation of research into practice.

Significance of the Neighborhood Social Environment: Working Towards a Conceptualization

Literature conceptualizing the neighborhood social environment proposes that it includes the following characteristics: social relationships, connections, and cohesion; social norms; community engagement/civic participation; and social stressors (safety/violence) (Braveman, Cubbin, Egerter, & Pedregon, 2011; Diez Roux & Mair, 2010; U.S. Department of Health and Human Services, 2013). In addition, these 'core' social environmental characteristics that operate in neighborhoods may result in other social processes. Therefore, concepts such as social capital (the resources embedded in social networks) and collective efficacy (social cohesion that brings neighbors together to address shared concerns) are also part of the neighborhood social environment (Lin, 1999; Sampson & Graif, 2009; Sampson, Raudenbush, & Earls, 1997). These social characteristics may change throughout time depending interactions with other factors within the environment; notably, interactions with neighborhood physical features may alter social characteristics (Bronfenbrenner, 1979).

My study sought to understand the social environment through the setting of a community garden; social environmental concepts that emerged included social interactions, the development of relationships and networks, community engagement, and working together towards common goals. My results affirm that the social environment spans multiple levels of the social-ecological model from interpersonal (social interactions, relationships), to organizational (social networks), and to broader level change (advocacy for social and economic development). In the space of a community garden, opportunities to meet neighbors interact and build relationships with them, and to become part of a group that is focused on community participation are all characteristics

previously suggested to comprise the neighborhood social environment. Interacting and participating in such a group with fellow neighborhood residents may result in changing social norms about community participation, though this was not documented in my study. These results build on the work of Bronfenbrenner and others who proposed that environmental-level influences shape the contexts in which we develop over time; in this case, social environments in neighborhood settings (Bronfenbrenner, 1979; McLeroy, Bibeau, Steckler, & Glanz, 1988). Thus, if community engagement continues in this garden over time, it may create a social norm of participation in the community.

In addition, my results correspond to the model developed in correspondence with the *Healthy People 2020* social determinants of health goal, which is to create social and physical environments that promote good health for all. To advance progress towards this goal, an accompanying ‘place based’ model was proposed identifying five key social determinants of health including: education, neighborhood & built environment, economic stability, health & health care, and social and community context (U.S. Department of Health and Human Services, 2013). This model highlights the importance of identifying spaces, situations, or contexts to understand the how the social determinants of health play out, which can inform amenable penetration or leverage points for change; moreover, it explicitly identifies social and community context as a key area of focus (Fig 5.1).

My work identifies important elements (social interactions, development of relationships, etc.) within social and community context in this specific setting- a community garden. This work also illustrates the complex interaction between physical



Figure 5.1: Healthy People 2020 Framework to Approach the Social Determinants of Health

and social characteristics in neighborhoods. As illustrated in study results, the physical garden space was an impetus for the creation of social interactions. In other words, all of the social processes observed (community engagement and subsequent social interactions, etc) occurred ‘in place’. These findings, in relation to the importance of the community garden as a community gathering place, illustrate the interaction between social and physical environmental interactions, as the space gave people a place to come together and get to know each other. This also confirms the HP2020 social determinants of health model, as the ‘neighborhood and built environment’ is an identified key area.

Continued work in this area is needed to inform conceptualization of neighborhood

social environments. Understanding details about the complex context of neighborhood environments from the perspective of the people who live in those places is a key step to identifying pertinent social environmental factors. The exploratory and descriptive nature of qualitative studies will inform future conceptual models and potentially, the development of an environmental index to comprehensively measure the neighborhood social environment. While I have emphasized the importance of local context to shaping neighborhood social environments, continued exploration may aid in the development of a knowledge base that would identify contextual elements of neighborhoods or other settings and quantify or classify them. This qualitative exploration of neighborhood social environments in a community garden setting provides contextual evidence that could potentially contribute to an inventory of characteristics to measure.

The land this garden rests on was once a vacant lot—the importance of the vacant lot is has implications for the physical and social environments. Symbolically, the garden represents the vast lack of social and economic development in this community. Lawson, a community garden researcher from the field of landscape architecture and urban planning, describes that community gardens are not seen as a viable community development option among city planners, as they are temporary (Lawson, 2004). However, in this community, neighborhood leaders saw this ‘temporary’ solution of a community garden as a way, if only for a short time, to do something with the blighted, vacant lots. In addition, vacant lots can send social messages about the quality of neighborhoods including safety, crime, and other characteristics of disorder, as described in broken windows theory (Wilson & Kelling, 1982).

Eventually, in this story, neighborhood leaders got what they had planned for-

positive attention to their community. However, neighborhood leaders are still working towards their ultimate goal for the neighborhood, which is social and economic development. According to neighborhood leaders, new homes are needed in the neighborhood; they want diversity, both in terms of race/ethnicity and socio-economic status, as they don't want to be a 'black' neighborhood or a 'poor neighborhood'. Drake describes that community gardeners have recently become key actors in community advocacy, but until their gardens are developed into something other than a garden, they are still 'vacant space' (Drake & Lawson, In press). While gardens are a 'step in the right direction' because they bring attention to the neighborhood and built capacity, social interactions, and other positive changes, they are not the ultimate goal of those seeking development. True development, for many in this neighborhood, means breaking ground on new homes to create a diverse, mixed-income community. Thus, community gardens are a strategy to move towards social and economic development, including the re-development of vacant lots in neighborhoods. In addition, as evidenced in this study, gardens can be used as a tool for advocacy and the promotion of community development.

Implications for Policy

While this work is mainly descriptive, there are some implications for policy that can be drawn from this study. Given that vacant lots detract from health promotion in neighborhood environments, local and city governments have a responsibility to support ordinances and support the 'greening' of these spaces, if infrastructure and resources allow. As stated by Dr. Jonathan Fielding, Chair of the United States Community Preventive Services Task Force, "We can't achieve what we want without looking at

education, jobs, public health infrastructure, recognizing that poverty is a poison...it can't just be left to public health. We need to have elected leaders think about the health implications of what they do — tax policy, mass transit, agricultural subsidies — we need people in all sectors to be thinking about health implications” (Krisberg, 2009, p. 3). Moreover, decision makers should engage community residents to gather their input on what is needed in their communities. This study has demonstrated the value of community-engaged research, as well as qualitative approaches to understand complex issues. Engaging with and building capacity among community residents to advocate for their neighborhoods and equitably receive resources to empower entire communities to improve neighborhood environments is needed. In addition, qualitative data can play an important role in informing decision-making and advocating for healthier community environments (Jack, 2006). For example, city government could consider holding focus groups with community residents to gather their suggestions. Finally, utilizing community-engaged research approaches to inform policy is recommended, as it is well balanced between action and research (Minkler, 2010). For example, continuing to explore the neighborhood environment via community-engaged research approaches and illustrate the importance of healthy environments is essential; by working with and through communities, we can provide evidence of the need for social and economic development in neighborhoods to get at the "causes of the causes".

Future research

This study has incited additional ideas for further inquiry, as it reinforced the importance of the social environment to neighborhood health. Accordingly, we should continue to use qualitative methods including ethnography, case studies, and focus

groups, to study how the social environment operates in different neighborhood settings. Findings could be compared to see if the role of the social environment plays out differently in other neighborhood settings. Systematic exploration of the social environment in similar settings such as farmer's markets or community centers could contribute to a more robust conceptualization of the neighborhood social environment.

In addition, I propose exploration of the process of community engagement in other gardens using a similar methodology. Understanding if and how findings would replicate would inform both the knowledge about the process of community engagement, as well as the additional roles and activities that are taken on in other community gardens. Finally, more research is needed on community gardens from a multilevel perspective that captures the physical, social, and economic impacts of these places to illustrate how they might further shape neighborhood environments. A multi-level perspective, including measures of individual (i.e. fruit and vegetable consumption, physical activity, mental health status) and interpersonal levels, as well as social and physical environmental influences on health in other communities is needed. As we move towards a better conceptualization of the neighborhood social environment, existing quantitative measures of social capital, collective efficacy, and other 'upstream' social factors might be improved and adapted for use to shed further light on the role of gardens in neighborhoods. In addition, longitudinal studies of longer duration than eighteen months may inform how community gardens impact the neighborhood social environment over time.

Community Dissemination

Dissemination of my study results are important to share lessons learned and to contribute to additional efforts in community-engaged research approaches. I remain in contact with neighborhood leaders as a community garden supporter. Also, congruent with principles of community-engaged research, I met with a subset of interview participants (n=5) to share the results of my study. After I completed my analysis and had drafted my results manuscripts, I developed a set of materials to share my results with community members and gather their feedback on the accuracy of my interpretations (Appendix C). I used several tools organized around my two study aims to share my results, as well as elicit feedback. To share results around Aim 1, I presented a complete timeline, as well as a stack of note cards labeled with the roles I observed people taking on in the community garden. I used a set of questions to prompt responses from participants including, “In what ways do these roles and activities describe how you were involved in the garden?”, “What other roles and activities do I need to include?”, “What else should I add to make this story more complete?” To share results of Aim 2, I created an infographic with selected quotes to illustrate the role of the garden in the neighborhood social environment. I used a set of questions to get feedback on this tool, as well, including, “To what extent do the picture and the quotes capture how the garden has affected the neighborhood?”, “To what extent do the picture and the quotes show all of the ways the garden has influence the neighborhood?”

This sharing and feedback process gave participants an opportunity to hear the results of my study and to provide feedback the accuracy of my interpretations. Results of this processes verified my interpretations, as all who participated in this process agreed

with my findings. For example, one participant re-emphasized the importance of the garden as a place to interact with neighbors and build relationships. In another case, a participant helped me to correct a date in my timeline that was slightly inaccurate. Otherwise, participants were pleased with the results of the study and seemed to enjoy the opportunity to learn about my findings. In addition to the value of ensuring the credibility of my data and interpretations, these meetings provided an opportunity to discuss future plans and ideas for the community garden with participants.

In addition to sharing my results with the community, I plan to share them with the academic community. I have formatted my two results papers for publishing in two peer reviewed journals; one of the journals I have selected is focused on community-engaged research and I am considering inviting community residents to write an accompanying piece on their experiences in working with academic partners. To further disseminate the results of my study, I plan to participate in conference presentations specific to neighborhoods, health, and the social environment at both practice and research oriented conferences.

Strengths and Limitations

This study does not represent all members of this community; the purposive sampling techniques I used only captured community members who were involved with the garden in some way. In addition, the analysis of my data and conclusions I have drawn are my own interpretations. However, I did share my results with a subset of community members to gather their input on my results and to ensure that my interpretations were congruent with theirs. Others may have interpreted this story

differently and I must acknowledge that bias—inherent to the experiences and life I have lived- is almost impossible to completely eliminate. However, I made efforts to ‘check myself’ and consider the ways with which I was seeing this story unfold and often discussed it with community residents and other members of the research team.

A key advantage of this study is the rich, highly contextualized data resulting from the ethnographic methodology I used. Also, my methodology was systematic and could be replicated by others in similar settings. I used this systematic methodology to collect rich contextualized data that begins to answer “how” and “why” neighborhood social environments operate from the neighborhood resident perspective. Therefore, this work contributes to a formative understanding of the neighborhood social environment and the ways a community garden may aid in the creation of healthier neighborhood environments. Community garden provides an ideal setting to understand how community engagement happens; also the community garden is an ideal setting to develop our understanding of characteristics of the neighborhood social environment, as it is a physical space that promotes social interaction, working together, and sharing space. Finally, the methods I used were well suited for studying group behavior in the specific setting of a community garden.

Conclusions

As presented in Chapter Two, broad social and economic factors determine where people live and the conditions that they live in. Concentrated poverty and racial segregation create neighborhood environments that are detrimental to health; it is not a coincidence that these two factors so often coincide, given the history of race relations in the United States and especially the Southeast. Therefore, the issue of disadvantaged

neighborhoods is a social justice issue. Doing our part to improve neighborhoods is a critical matter in public health. Until we can create healthy places for people to grow, live, and prosper in, our efforts will be, at best, mediocre.

However, it is a challenge. With so many complex factors, where do you begin? Building new, quality schools, creating mixed income communities to draw down stark disadvantage, and bringing economic development to neighborhoods are long-term goals—but these are not traditionally “public health” issues. Based on the experiences as a participant observer in a community-engaged study, I recommend efforts to expand our partnerships across sectors (including planning, education, etc.) and continue to develop a broader understanding of the determinants of health. For example, to continue to build healthier places for people to live, work, and grow, we need to expand the cadre of partners we approach these issues include public policy, planning, education and jobs as essential pieces to addressing the social determinants of health. In addition, we must continue to evolve our approaches to promoting health and utilize community-engaged research to work with communities to support creation of healthier neighborhoods, wherever residents are on a spectrum of capacity, empowerment, and leadership.

In the short term, focusing on specific contexts, such as neighborhood environment, may provide a more pragmatic strategy to address the ‘causes of the causes’, which is a lofty and long-term goal. Continuing to identify and understand how inequities shape health from the perspective of people who live in specific ‘places’ (i.e. neighborhoods) is key, as social conditions and policies may directly influence the quality of a neighborhood environment, and subsequently, the health of its residents.

While it is distal, this work moves the tide towards health equity, as it is evidence

of how social processes resulting from a community garden may be leveraged into places that promote health for all people. As evidenced in this study, part of the solutions lie within the neighborhoods that want to improve. This community garden was established by community members; learning more about this that process, as well as experiencing our subsequent partnership to get more people involved expands knowledge around community engagement. I am hopeful that as a field of community-based researchers, we can help to facilitate the creation of community-generated solutions and work to expand their reach and sustainability for healthier places for people to live, work, and grow.

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APPENDIX A – INTERVIEW GUIDE

Introduction

To begin the interview, I will briefly introduce myself, tell the participant about the interview, and the purpose of my research. We will then complete a consent form and I will ask if there are any questions.

Before we get started, I'd like to share a little bit of information about myself and why I am interested in this project. I'm a doctoral student at the Arnold School of Public Health at the University of South Carolina studying community health development. I'm interested in this project because I want to help make healthier neighborhood environments. I am also interested in understanding your experiences, because I enjoy gardening. This interview should last about an hour, but could last as long as an hour and a half.

Interview Process

To guide participants through the interview, I will use a set of warm up questions, followed by a timeline activity. This activity will allow participants to tell me their story of the garden using the tool of a timeline drawn on a sheet of paper. This activity will serve as a record from the interview and will be strategy to elicit responses from interview participants who may not communicate as well verbally.

Warm Up Questions to Understand Participant's History in the Neighborhood:

- How long have you lived here?
- What brought you to this neighborhood?
- What do you like about your neighborhood?
- Dislike?

Then, I will begin the timeline focused interview:

Here is a timeline. Please tell me the story of the garden from your perspective by adding details to this timeline about things that are important to you. Please draw, write, describe, or otherwise create symbols that represent important events, occasions, or things that happened in the garden including when you first learned about it and when you became involved with it. Think about this from your earliest experience in the garden to the most recent. You can either take a few minutes to get your timeline started or you can tell me about the significant events and experiences as you add them.

Prompts to guide the timeline activity while people tell their story:

- Tell me about how you first became involved with the garden.
- How did you find out about the garden?
- Where you invited before by someone else?
- Where you invited before but did not decide to come?
- Have you invited anyone else?
 - If no, why not?
 - Even if you have not invited anyone, how would you invite them (what would you say)?
- What did you hope for when you started gardening?
 - Why did you decide to start gardening?
- Please tell me about who else participated in that (event or activity).
 - Who were some of the key people or groups (formal or informal) involved in that?
 - What organization does that person represent (officially or unofficially)?
 - How did they get involved in the garden?
- What were/are their roles in the garden (i.e. what do they do)?
 - What about their role(s) in the larger community?
 - How important was that individual (or group) to the garden?

- It seems that this person (or group) was very important for the garden then; I would like to hear more about that.
- How involved is this person (or organization) in the garden?
- Please tell me about groups (or cliques) of people involved in the garden.
 - When did these form?
 - What effects did/do these seem to have on others were are or were involved in the garden? On progress in the garden?
 - Which of these groups do you feel that you are a part of?
- How do the people and groups involved in the garden interact with each other?
 - Describe communication in the garden setting. What about communication outside of the garden setting?
 - How does everyone get along?
 - What do you think about the reasons for this (for getting along or not getting along)?
 - Do you think the gardeners trust each other? Do you feel like you can depend on other gardeners?
- How do you think the garden has changed or contributed to the community?
 - What is the role of this garden in the community?
 - What are the benefits of having the garden in the community?
 - Challenges or problems of having the garden in the community?

Other Questions to Wrap up the Interview:

- What do you think will happen to the garden when the CEC and the other people from the University are not involved?

- What would you want to know from the people in the community who are not involved in the garden?
- Tell me about other community activities you are involved with.

APPENDIX B –CODE BOOK

Code	Description	Example from Text
Community Concerns	Problems/issues in the community	<i>Hearing different things, you know, about gang activities and I was concerned for my safety and I have kids you knows so I was concerned for them and their safety. Safety issues.</i>
<u>Child Codes</u> <ul style="list-style-type: none"> ▪ Violence/gangs/danger/crime/drugs ▪ Trash/litter ▪ Vacant Lots ▪ Renters & Owners ▪ Vandalism ▪ Safety ▪ Health issues 		
Working together	Cooperating as a team in the garden	<i>[It was] very team oriented, I did not see segmented tasks were, "this is my responsibility, this is yours." Everyone was looking at the garden as a whole.</i>
Healthy Behaviors	Garden promotes healthy lifestyles	<i>I also use it as a fitness tool. So, I was hoping that I might lose a few pounds and gain some muscle here or there.</i>
Benefits of Having Garden in Community	Positive aspects of having a garden	<i>You could save money.... you know exactly what you are eating, It is physical, so you are getting the physical activity from it. And, the social part is always good. Even for the kids, they enjoy it.</i>
<u>Child Codes</u> <ul style="list-style-type: none"> ▪ Knowledge ▪ A peaceful place ▪ Enjoying nature 		

Rules	Guidelines for conduct in the garden	<i>So, the guidelines are just there to keep everyone on one accord.</i>
Resources	Things needed to keep the garden going	<i>The resources to make the land level, get the soil, get the fencing, their signs, their sitting area, their shed. All of that comes right from the community.</i>
Children	Young people involved in the garden.	<i>We have one young lady, I forget her name, one of the kids, she was very, very excited about the garden</i>
Leadership	Managing the garden and providing direction	<i>He will say "hey look, we This going on. Or, we need to do this"....he is going to be out there doing whatever needs to be done. He has put in a lot of hours.</i>
Gardening Method	The way people grow crops in the garden	<i>The people that wanted to do gardening in the community were much more comfortable with the idea of a row garden than they were with the beds.</i>
<u>Child Codes</u>		
<ul style="list-style-type: none"> ▪ In ground ▪ Raised Beds 		
Food	Fruits and vegetables yielded from the garden	<i>[We wanted the] garden so everybody can have fresh veggies</i>
<u>Child Codes</u>		
<ul style="list-style-type: none"> ▪ Access to fresh foods ▪ Food is expensive ▪ Learning the skill of growing food ▪ Passing down traditions 		
Role of the Garden in the community	Impacts of having the garden	<i>Like I said, there's just so many negative things happening in that community that, you know, just being a shining light or something positive. It's like [just watching things] sprout that are alive and beautiful and producing.</i>

Sharing	Contributing and allocating equally	<i>People might be sharing information, produce from the garden. All of those things can add value to people's lives.</i>
<u>Child Codes</u> <ul style="list-style-type: none"> ▪ Food ▪ Space ▪ Ideas ▪ Power ▪ Knowledge 		
My Role	Tasks and responsibilities taken on	<i>You have been... I am going to say the strategic planner.</i>
Space	The physical area of the garden	<i>You could improve the land through the use of a community garden</i>
Ownership	Sense of right to the garden	<i>He is territorial about other people coming in</i>
Community meeting place	A space where neighbors come together	<i>It is a landmark. In news and meeting place, a gathering place. A place to relax... I will come out here and just, with my book and just sit back and read for a while.</i>
Everyone is welcome	Mantra of garden leaders	<i>Anything you want to do in the garden to make it better, come on! We won't deny nobody.</i>
Hopes	Expectations for participating in the garden	<i>To bring the community together, everybody just coming to one spot, fellowship and planting. And like I said, you know, meeting your neighbors. Especially if we get the kids involved, and have something for the kids to do and [bring the elderly out], you [gonna find a partner] in the community. You know, talking.</i>
Sense of Community	Feeling of unity among neighbors	<i>Since day one it felt like family.</i>
Attention from the city	Bringing awareness to the community	<i>Look at what can we do to spread the positive gains around Columbia.</i>
Fellowship	Social interaction	<i>It's become an area for socializing.</i>

	among participants	
Challenges in the Garden	Issues or problems	<i>Keeping interest and maintaining interest... And on occasion, some people have wandered through and decided to pick everything that they saw because we did not have locks in 12 foot fences, but we did not want to have locks and 12 foot fences.</i>
<u>Child Codes</u>		
<ul style="list-style-type: none"> ▪ Conflict ▪ Rifts ▪ Sharing Space ▪ Sharing credit ▪ Sharing vegetables ▪ Decision making ▪ Power struggles ▪ Communication ▪ Fence/gate/lock 		
Trailblazers	Pioneers of the gardening movement in the City	<i>All of these community gardens started coming. But, we were the first. We were grandfathered in. We are not under the auspices of the other gardens. Except that we get free water. We do not have to charge for plots... Different things that we are allowed since we're doing it before they started. You know, implemented the citywide program. So we were kind of the Trailblazers.</i>
Pre garden engagement	Activities that took place to get the garden started	<i>We actually started working on it even though nothing might have been on the ground.... even before we started preparing the plot we had been working, initially with [the] City...to allow us to obtain these plots...</i>
Community Engagement	Descriptions of how people were involved	<i>Well, I just heard you talk about it at the CEC meeting and I was just excited about that and wanted to help and I wanted to learn and I wanted to keep getting to know people. I just thought it was a great thing!</i>
Partners	Community	<i>It was to bring people together, not just people</i>

	stakeholders who contributed or supported the garden	<i>in the community, but people from other communities and other groups. He had envisioned that people from other communities and other neighborhoods and other groups would come in and be a part of the garden.</i>
<u>Child Codes</u>		
<ul style="list-style-type: none"> ▪ CEC ▪ Back to Eden ▪ Friendship Baptist Church ▪ City of Columbia ▪ Earth Fare ▪ Square Foot Gardening ▪ Lyon Street Community Association ▪ Gonzales Gardens/CHA ▪ Prosperity Project ▪ ESMM ▪ HHH 		
Supporter	People who come to the space, but don't garden	<i>They have come out on a couple of occasions and have sit out and enjoyed the festivities with us. And they have said positive things, even though they may not have come out and gotten their hands dirty</i>
Non human actors	Items in the garden that bring people together	<i>[They] left right after the meeting to price a tool shed!</i>
Fundraising	People who helped raise funds for the garden	<i>He had come up with this idea... he had a way to buy fruit trees inexpensively. So he bought this whole truckload of fruit trees and on that day, we had them lined up on the road down there and they were for sale. And the idea was that we would sell plants, which would then pay for other fruit trees for the garden. Cities through trees here in the garden came off of that truck. I'm not sure how that ever came out.</i>
Community Engagement Benefits	Positive aspects of getting people involved in the garden	<i>It's going to bring the community together, everybody just coming to one spot, fellowship and planting.</i>

APPENDIX C – RESULTS SHARING DISCUSSION GUIDE

Thank you for agreeing to participate in this feedback session. I am excited to share the results of my study with you and hear your thoughts on my interpretations. I will present the results in two sections. The first section will describe the ways that people were involved with garden. The second section will describe the role of the garden in your neighborhood.

Aim 1: Analyze ways people were involved with the garden.

Activity 1: Present timeline to show meta synthesis of the ‘story’ of the garden **including key events.**

The timeline describe facilitators of engagement, which included:

- Leadership
 - LSCG: A community generated garden initiated by LSCA to...
 - Bring attention to their community
 - Bring people together (young and old; renters and owners)
 - The “garden is open to anyone” A grant was obtained from ESMM SC & a partnership was developed with a local homeless advocacy group, HHH
- CEC Partnership
 - In 2011, we formed a community/academic partnership to get more people involved.
- Physical presence of the garden

Questions about Timeline

- What do you think about the timeline?
 - Probe: Do you agree with the things I saw as facilitators of engagement (i.e. the things that created opportunities for more people to get involved)?
- In what ways is it accurate? In what ways is it not accurate?
- Please name any major or minor events that are not there.
- What else should I add to make this story more complete?

Roles and Activities in Garden (Presented on Note cards)

- Leader
- Fundraiser
- Supporter
- Gardener
- Community Partner/Stakeholder

Questions about Ways Community Members Were Involved in the Garden

- In what ways do these roles and activities describe how you were involved in the garden?
- What about other people...?
- What other roles and activities do I need to include?

Aim 2: Role of the Garden in the Neighborhood

Activity 2: Use illustration to show how participants said LSCG has affected the neighborhood.

- To what extent do the picture and the quotes capture how the garden has affected the neighborhood?
 - Accurate?
- To what extent do the picture and the quotes show all of the ways the garden has influence the neighborhood?
- What else should I add to make this story more complete?
 - What, if anything, should be removed?
- What else do you know about the garden as a part of the neighborhood?

Garden contributes to neighborhood social environment.....

1. Fostering interpersonal interactions and relationships
2. Serving as a community meeting place
3. Acting as a mechanism for community advocacy to promote social and economic neighborhood development