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| ***2019 Western Political Science Association Conference*** |
| Community Gardens: The Elixir of All Maladies? |
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| ***Ashlie B. Delshad, Ph.D., Associate Professor, Department of Political Science, West Chester University*** |
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The objectives of this project are to investigate the range of social, economic, health and environmental effects of community gardens, as well as examine what factors enable and impede their success. The modern movement to erect community gardens began in the late 1970s, a time when policy changes reduced social services across the country, the economy was in decline, and the nation was experiencing increasing food insecurity in the wake of rising food price. Hence, gardens were a way of alleviating hunger. Since that time, the number of community gardens has grown exponentially as has the range of factors motivating their creation.

The largest organizational body for community gardens, the American Community Gardening Association (ACGA) estimates there are currently 18,000 community gardens in the United States and Canada. The ACGA’s definition establishes that a community garden “can be urban, suburban, or rural. It can grow flowers, vegetables or community. It can be one community plot, or can be many individual plots. It can be at a school, hospital, or in a neighborhood. It can also be a series of plots dedicated to ‘urban agriculture,’ where the produce is grown for a market (ACGA, 2008).” As this definition suggests, community gardens take a variety of different forms, and the proposed study will seek to gather information across a diverse set of gardens in varying locations and of varying sizes. The aim will be to examine how and to what extent gardens benefit the communities in which they operate. This includes determining if certain types of communities experience different types of benefits, and what impediments in the political realm prevent gardens from realizing their maximum potential. Ultimately, this project will contribute to multiple disciplines with an overlapping nexus of interest in community gardens, including: political science, criminal justice, urban planning, applied economics, sustainability and public health.

 Prior surveys conducted by the ACGA or researchers working with them have examined the perceived benefits of community gardens among gardeners, as well as growth in the number and diversity of gardens and the types of lands gardens are located on (Birky, 2009; Lawson, 2013). Their research reveals that gardens are seen to offer a wide range of benefits, some of the most commonly cited were: access to a means to produce food (99.7%), social engagement (99.5%), exercise (98.6%), environmental benefits (95.9%), and neighborhood revitalization (78.7%) (Lawson, 2013). They also found that gardens are most likely located in urban areas (78%), where growing spaces at homes is most limited, and that 48% of gardens were located on public land, 24% were on private lands, and 6% were on land with an unknown status in 2012 (Lawson, 2013). The land ownership finding is particularly salient, because gardens public, private, and undefined ownership land are highly vulnerable to displacement if/when the land becomes desirable for economic development (Englander, 2001; Lawson 2013). Only those on land owned by the garden or an affiliated organization or those with long-term, legally binding leases are highly secure. Lawson (2013) found that at least 30% of gardens that ceased operation from 2008-2012 closed because they lost their land; this number was much higher in the ten years prior. This is one issue I will examine in my research, particularly in the interview portion.

Other researchers have examined various social, economic, health, or environmental benefits of gardens, generally through case studies. Within the realm of social benefits, gardens stand to be an important space for building social capital, which can be defined as connections among individuals that cultivate norms of reciprocity and civic engagement (Putnam, 2000). Social capital is not just a good in and of itself, research tells us higher rates of social capital yield: lower crime rates (Putnam, 2000), greater levels of income equality (Kawachi et al., 1997), and improved community welfare and public health (Wilkinson & Pickett, 2009). Community gardens build social capital by bringing neighbors together in frequent face to face interactions over common interests and goals. The presence of a garden also encourages all members of the community to be outside more and as a result there are more people present and watching outdoors, which can deter crime (Englander, 2001; Kuo and Sullivan, 2001). Relatedly, many community garden projects target at risk youth and provide a safe space for them to take part in productive activities (Sherer, 2006). Through surveys and interviews, I examine a wide range of possible social outcomes for communities and individual gardeners, including social connectedness and community safety.

 A second and related set of positive consequences are in the economic realm. Gardens inherently amplify the aesthetic appeal of neighborhoods, and as a result stand to increase property values in the immediate vicinity. Researchers have calculated the overall boon the increases in property value yields in the form of city tax revenue; estimates suggest the benefit ranges from around $9,000 per garden in Milwaukee to as much as $750,000 per garden in New York City (Been and Voicu, 2006; Sherer, 2006). Increases in social capital brought by community gardens as discussed above has also been broadly found to promote economic growth. I will examine these benefits more closely in a wider range of geographical locations, and I will also look at individual level economic impacts such as reductions in the amount of money spent on groceries per household. The household level-impacts have not been cited in prior research and are especially of interest to me.

Community health is a third important area where gardens stand to make a difference. Most obviously, gardens expand access to healthy fruits and vegetables. In low-income, urban neighborhoods markets typically do not offer fresh produce. Such areas often fit the USDA’s definition of a food desert, which is, “at least 500 people and/or at least 33 percent of the census tract's population [resides] more than one mile from a supermarket or large grocery store (for rural census tracts, the distance is more than 10 miles) (Ver Ploeg et.al., 2012).” According to this definition, nearly 30 million Americans live in food deserts. Studies in Michigan found that less than 20% of food stores in low-income areas sold fresh fruits and vegetables, in these same areas households with a gardener were likely to eat as least one more serving of fruits and vegetables daily than households without a gardener (Alaimo et.al., 2008; Pothukuchi, 2003). Gardening is also considered a high to moderate intensity form of exercise leading to improved physical health, and multiple studies have documented that green spaces such as gardens provide a range of mental health benefits not only to those who directly work in the gardens, but to everyone in the community (Sherer, 2006; South et.al., 2018). I will delve more deeply into the physical and mental health benefits gardens provide through in-depth interviews with community garden leaders and surveys of community garden participants.

Environmental objectives are another key factor motivating the creation of community gardens. Scientists have conclusively linked serious environmental problems including water pollution, species extinction, and climate change to the production, transportation, consumption, and disposal of food and food related products. Community gardens can dramatically reduce the distance and time food spends in transit, mitigating carbon emissions from transportation and methane emissions from rotten food that is deposited into landfills. Grocery store produce typically travels approximately 1300 miles from the farm to the home kitchen (Pollan, 2008), and as much as half of conventional produce spoils during the process (Kloppenburg et.al., 1996). At present no data exists to document exactly how much of the food households in communities with gardens are gleaning from the gardens versus the grocery store; I will include data on these key variable in examining what environmental impact gardens are having.

Finally, despite the growth in the number of community gardens, many projects face obstacles to their success from the political realm due to zoning laws, unreliable land access and lack of funding. An additional objective of this project is to identify how successful gardens have overcome barriers and to determine how municipal governments can best support community gardens. Thus, in addition to disseminating this research throughout the relevant scholarly communities, the results of the study will be provided to the ACGA leadership as well as their members and to all gardens participating in the study to help inform the successful establishment of gardens moving forward.

**Research Methodology and Procedures**

This research project uses a mixed method approach involving two forms of data: 1) survey data from a sample of community gardeners across the United States, 2) site visits and in-depth interviews with community gardeners.

Survey:

The largest body of community gardeners, the American Community Gardening Association (ACGA), distributed my survey to their (10,000+) members through their electronic newsletter and social media. To increase the sample size and geographical representation of respondents, I also contacted a community gardening groups in at least one city in all fifty states and asked them to share the link to my survey with their participants and other community gardeners in their region.

The survey included a range of questions (see appendix for a list of questions) measuring the social, economic, health, and environmental benefits individuals taking the surveys and their communities have seen as a result of their community gardens, as well as their motivations for becoming community gardeners. The survey was administered electronically through Qualtrics from June of 2018-March of 2019.

Interviews:

To gain greater detail about the benefits of gardens and to examine the barriers or supports gardens face in their relationships with municipal governments, I visited gardeners in 10 cities/states across the US:

* Philadelphia, PA
* Detroit, MI,
* Chicago, IL
* St. Louis, MO
* Atlanta, GA
* Dallas, TX
* Denver, CO
* Salt Lake City, UT
* Portland, OR
* Los Angeles, CA

Data on garden presence and responsiveness from community garden leaders informed the selection of locations. Specifically, cities were selected to maximize variation in garden size, city size, geographic location, while also prioritizing cities that have numerous community gardens. These garden visits allowed me to connect directly with gardeners, see any visual impacts the gardens have made in the community, and in doing so obtain contextualized information that will provide a much richer account of the impact gardens have had in these communities.

Each interview lasted between 30-90 minutes. Some interviews included multiple community garden leaders, some also included participation by community garden plot holders who were not leaders. In total, I visited and conducted interviews at 48 gardens. Travel to all sites took place from August - November of 2018. All interviews were electronically recorded and are in the process of being transcribed.

Analysis

 The analysis presented in the next section will be based on preliminary analysis of the survey data. I will focus on answers to open and closed-ended questions about benefits garden participation has brought to respondents and their motivations for becoming community gardeners. I will briefly draw on some trends I observed during the interviews regarding political barriers and supportive partnerships; however, I am still in the transcription process and will not be able to draw much on the interview data at this time.

**Findings:**

 The findings below are preliminary results for the survey data indicating the perceived benefits and motivations for participating in community gardens. Overall, the survey had 286 respondents spread across 32 states and the District of Columbia, and 66% of gardeners were from urban garden locales. Additional demographic features of participants are as follows (see Tables 1.1, 1.2, and 1.3):

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| Table 1.1 |  |
| **Demographics (N=286)** |
| Female | 69.20% |
| White | 73.80% |
| B.A. Degree | 37.40% |
| Full-time Worker | 43.00% |
| Married | 46.50% |
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| Table 1.2 |  |
| **Age Bracket (N=286)** | **%** |
| Less than 18 | 0.4 |
| 18-21 | 1.2 |
| 22-30 | 12.3 |
| 31-40 | 21.8 |
| 41-50 | 14.8 |
| 51-60 | 17.3 |
| 61-70 | 18.9 |
| 71-80 | 13.2 |
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| Table 1.3 |  |
| **Income (N=286)** | **%** |
| Less than $20,000 | 6.9 |
| $20,000 - $39,999 | 17.7 |
| $40,000 - $59,999 | 16.0 |
| $60,000 - $79,999 | 17.7 |
| $80,000 - $99,999 | 10.0 |
| $100,000 - $119,999 | 12.1 |
| $120,000 - $149,999 | 5.6 |
| $150,000 or more | 13.9 |

Table 1.1 displays the percentages of respondents in the modal category for each variable; most respondents were white and female; a B.A. degree was the most common level of education, most gardener respondents were working full-time (though 22% were retired), and most were married. I included Tables 1.2 and 1.3 to show that respondents were from a wide range of age and income brackets. I find this particularly noteworthy, because although these gardeners are in different locations, it suggests community gardening is an activity attracting people of all ages and income backgrounds. This creates the potential for gardeners to interact with people not in their typical social circles and thereby build a broader network of social capital in their communities. While 73.8% of respondents were white, the relatively high percentage of non-white respondents also suggests there is a similar potential for diverse interactions across racial lines. In the following sections, I will hone in on results for questions specific to each category of community garden benefits: social benefits, economic benefits, health benefits, and environmental benefits; I will also address political barriers and municipal partnerships that support community gardens.

Social Benefits

Tables 2.1 and 2.2 below outline survey respondents’ thoughts on the social benefits their community garden has brought to themselves and their community. The closed-ended questions reveal widespread agreement on social benefits, with 78.9% of respondents agreeing or strongly agreeing that they feel more connected to their neighbors since they began growing at their community garden, and 86.3% agreeing or strongly agreeing that their neighborhood’s appearance has improved as a result of their community garden. Likewise, 65.7% cited a desire to become involved in their community as a motivation for participating in their community garden.

The open-ended comments reveal an even wider array of social motivations (see Table 2.2.) Many cite the friendships they have made with neighbors they had not previously met. Several also refer to important ways gardens help bridge racial and ethnic divides by bringing together individuals from different backgrounds, one wrote, “Our community garden is one of the most integrated institutions in our city, with great racial and cultural diversity…” Another noted the role that urban gardens can play in empowering black gardeners, promoting food sovereignty, and thereby helping to address overlapping racial and economic inequities in the current food system.

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| **Table 2.1 Social Benefits and Motivations of Community Gardeners** |
| *Since I began growing at my community garden…* | %Strongly agree | %Agree | %Neutral | %Disagree | % Strongly Disagree |
| I feel more connected to my neighbors | 38.2 | 40.7 | 18.7 | 2.5 | 0 |
| Neighborhood appearance has improved | 47.5 | 38.8 | 12.4 | 1.2 | 0 |
| *Why do you garden within your community garden?* | % Yes |  |  |  |  |
| To be involved in my community | 65.7 |  |  |  |  |

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| **Table 2.2 Social Benefits in Open-Ended Comments**  |
| It's been a wonderful experience in many different ways that goes far beyond growing flowers and vegetables. A sense of community, friendship, personal growth, communication skills, mental health therapy and infinite learning |
| I have been growing food for the past 7 years. In urban areas we have to have more urban farms to yield enough produce for communities who lack that choice. Also there needs to be a connection with black rural farmers and urban growers/farmers so that with growing food the African American community needs to see a representation of themselves in farming. It helps the community empower themselves and it helps to raise the next generation of farmers. Currently the uprising in urban farming, farmers markets, rural farming is white and black farmers and growers are being left out. The majority of the conferences are white, the funding goes to majority white farmers and growers. So until that is addressed we will continue to see food apartheid exist. Remember it is a system that has been put in place. |
| Our community garden is one of the most integrated institutions in our city, with great racial and cultural diversity. The garden is located on public parkland, so we are 'county sponsored' project. |
| The occasions we have had a group work party have been very positive. It has been a chance to meet some of our new immigrant neighbors we otherwise might never have met. |
| Community gardening is a great way to interact with neighbors and make high quality use of public space. This was my first year gardening in Utah, so there was a learning curve involved in what would grow and what plants needed. Overall it was a highly positive experience and I would recommend it to anyone!!  |

Economic Benefits

 Tables 3.1 and 3.2 below provide insights into the economic benefits of community gardens. Prior research on the economic benefits of community gardens focused on community level figures and property values, my survey questions provide new insights into individual-level benefits outside of property values. The findings indicate that almost half of respondents (46.4%) agreed or strongly agreed that they have been able to spend less money on groceries since they began producing their own vegetables in their community garden, and almost one-third (31.1%) are participating in their gardens in order to save money.

 The open-ended comments (see Table 3.2) indicate that the financial benefits of saving money on groceries extend beyond the immediate growers as many of the gardens donate produce to economically disadvantaged groups via shelters, food banks or other programs. The donation of produce is a multi-faceted benefit; it has an economic component, but it is also a social good because it connects gardeners with others in their communities who may have very different life circumstances and it provides health benefits by increasing access to fresh produce. Last, one gardener remarked that, “…The community garden also makes our city more attractive to potential residents,” a noteworthy example of community-level economic revitalization.

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| **Table 3.1 Economic Benefits and Motivations of Community Gardens**  |  |  |  |
| *Since I began growing at my community garden…* | %Strongly agree | %Agree | %Neutral | %Disagree | % Strongly Disagree |
| Money spent on groceries has decreased | 12.1 | 34.3 | 31.4 | 17.2 | 5 |
| *Why do you garden within your community garden?* | % Yes |  |  |  |  |
| To save money | 31.1 |  |  |  |  |

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| **Table 3.2 Economic Benefits in Open-Ended Comments** |
| Your survey hit on the main benefits of the community garden, healthy food, community, etc., however, the community garden also makes our city more attractive to potential residents. |
| It is wonderful to be able to donate produce to our community, the homeless and the Food Bank |
| Everything we grow is donated to a nearby Food Pantry. Given to needy. |

Health Benefits

 The potential health benefits of community gardens are wide-ranging and I used multiple questions to assess this classification of benefits (see Tables 4.1 and 4.2). The most obvious health benefit of community gardens is increased access to fresh produce; I found 61.2% of respondents indicated their community garden involvement has augmented the amount of fruits and vegetables in their diet, 63.6% also specified this was a key reason they chose to participate in their garden. Respondents indicated their community garden experience has had other physical health benefits, with 80.5% agreeing or strongly agreeing that gardening has increased their time outdoors, and 69% agreeing or strongly agreeing gardening has increased their physical activity. Similarly, 66.1% and 36.7% of respondents cited spending more time outdoors and getting more exercise respectively as reasons they chose to become community gardeners. The last form or health benefits I examined were mental health benefits; this had the highest rate of agreement with 94.6% of respondents agreeing or strongly agreeing that community garden participation had improved their mood, and 61.9% affirming they become a community gardener to relax or improve their mental health.

 The health benefits highlighted above were elaborated upon in open-ended feedback. One respondent noted that, “Access to good food is fundamental for health and well-being. Yet with industrial foods so prevalent many people have lost the past traditions of food that tastes delicious and is food for you. Community gardens are one way to help reintroduce people of all ages and backgrounds to real food.” Others noted that their neighborhoods were food deserts, making their gardens essential for providing accessing to fresh produce. Several also noted the mental health benefits they have received through community garden; one noting community gardening is “cheaper than therapy…”

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| **Table 4.1 Health Benefits and Motivations of Community Gardens**  |  |  |
| *Since I began growing at my community garden…* | %Strongly agree | %Agree | %Neutral | %Disagree | % Strongly Disagree |
| Increased produce consumption  | 25.8 | 35.4 | 22.9 | 11.7 | 4.2 |
| Increased time outdoors  | 36.9 | 43.6 | 13.7 | 5 | 0.8 |
| Increased physical activity | 27.7 | 41.3 | 22.7 | 7.4 | 0.8 |
| Improved mood | 52.9 | 41.7 | 4.5 | 0.4 | 0.4 |
| *Why do you garden within your community garden?* | % Yes |  |  |  |  |
| To increase access to health, fresh produce | 63.6 |  |  |  |  |
| To be outdoors | 66.1 |  |  |  |  |
| For exercise | 36.7 |  |  |  |  |
| For relaxation/mental health benefits | 61.9 |  |  |  |  |

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| **Table 4.2 Health Benefits in Open-Ended Comments** |
| Access to good food is fundamental for health and well-being. Yet with industrial foods so prevalent many people have lost the past traditions of food that tastes delicious and is food for you. Community gardens are one way to help reintroduce people of all ages and backgrounds to real food. Community gardens bring opportunities for community building, health and environmental benefits, and so much more!  |
| Community gardens have helped me through difficult life circumstances. |
| Cheaper than therapy, got me into eating healthy!  |
| Our garden is located in a food desert. While the gardeners themselves may have more means than others, we all volunteer to grow food in the center berms that we then sell via a weekly produce stand in the garden. Everything is $1/lb or less and we accept EBT. We've been growing for market for 12 years to make up for a lack of walkable grocery store. We host events and invite everyone to come. It's a true gathering space. |
| We generally live too far from where our food it grown. Having a community garden helps reverse that. |

Environmental Benefits

 The last classification of benefits I examined were environmental benefits (see tables 5.1 and 5.2). 47.6% of respondents say they became involved in their community garden to help the environment, and the vast majority (92.5%) agreed or strongly agreed that their community garden has improved the local environment. One of the core potential environmental benefits community gardens offer is helping to lower the carbon footprint of produce consumption by increasing the amount of produce consumed from local sources. While this is somewhat challenging to assess directly, the data reveal that 53.9% of respondents are obtaining 25% or more of the produce they consume from their community garden, and 24.4% reported that 50% or more of their produce comes from their community garden. This suggests community gardens are empowering their participants to grow a substantial portion of the produce they consume, drastically reducing the carbon intensive miles their produce travels.

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|  **Table 5.1 Environmental Benefits and Motivations of Community Gardens**  |  |
| *Since I began growing at my community garden…* | %Strongly agree | %Agree | %Neutral | %Disagree | % Strongly Disagree |
| The environment has improved | 53.7 | 38.8 | 7.4 | 0 | 0 |
| *How much of the produce you consume comes from your garden?* | *Less than 25%* | *Around 25%* | *Around 50%* | *Around 75%* | *100%* |
| Percentages for each option: | 46.1 | 29.60% | 16.50% | 6.20% | 1.60% |
| *Why do you garden within your community garden?* | % Yes |  |  |  |  |
| To help the environment | 47.6 |  |  |  |  |
| **Table 5.2 Environmental Benefits in Open-Ended Comments** |  |  |  |
| A community garden is also an opportunity to provide habitat to pollinators and beneficial insects. Our garden is edged in native plants to provide habitat. Our garden is a National Wildlife Federation's certified wildlife habitat and a certified Monarch Way Station. We hope that by doing this we are offering an example to the community. |
| I love being a part of our community garden. It gives me a feeling of being connected to the earth in a way that I would be unable to experience without the opportunity. I have gardened for most of my life but we recently moved to a condo where there is no space for us to have our own garden. Having our plot in the community garden has allowed us to continue gardening and to experience a deeper connection with the earth and with a beautiful community. It has also given us an opportunity to give back by donating some of our produce to local food banks and to work in the area in our garden in which food is grown for giving to local food banks. We are deeply grateful for the opportunity to be a part of our community garden! |
| Urban gardens have a chance to remove material from the waste stream such as leaves, wood chips, food waste compost does your garden support such efforts |

Open-ended comments reveal a range of additional environmental benefits. These benefits include broader outcomes such as helping individuals learn good stewardship practices and “connect to the earth.” More specific benefits that were cited include, “provid[ing] habitat to pollinators and beneficial insects,” and, “remov[ing] material from the waste stream such as leaves, wood chips, food waste compost…”

Political Obstacles and Variations in Support Services

Most of my research focused on the political barriers gardens face took place during the interviews and garden site visits; however, the open-ended comments in the surveys did reveal some information in this realm (see Table 6). The main items that came up here were the types of political barriers gardens face, one example is the costs imposed by gardens that are managed by local governments. One survey respondent noted, “The politics are very interesting - in past years we had a City Counsel very supportive, now the charge has increased from $10 a plot to $110 a plot in 8 years, with further increases expected. It is becoming more for either wealthy hobby gardeners or those who get scholarships since it gets difficult to afford gardening.” This is especially problematic given that the survey resulted present above indicate that individuals are gardening to increase their access to produce and to save money; this trend runs counter to those goals. A few other gardeners broadly noted the “political” nature of establishing gardens as being problematic. Gardeners in some of the cities with established non-profit organizations that assist a network of community gardens in overcoming barriers of cost and land access also mentioned the important role these organizations play (WCG refers to Wasatch Community Gardens, a non-profit in Salt Lake City, Utah; Gateway Greening is a non-profit in St. Louis, Missouri).

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| **Table 6 Political Barriers and Non-Profit Assistance in Open-Ended Comments**  |
| The politics are very interesting - in past years we had a City Counsel very supportive, now the charge has increased from $10 a plot to $110 a plot in 8 years, with further increases expected. It is becoming more for either wealthy hobby gardeners or those who get scholarships since it gets difficult to afford gardening. We still must buy compost, fertilizer, plants, etc.  |
| For many years I dreamed of starting a garden where I live. However, I find the whole experience very political |
| While I don't consider myself an activist, I actively pursued getting the community garden in my neighborhood. The enthusiastic response from new members brought change to the park where the garden was established. There was a sense of ownership of the park by the surrounding community, and the park was cleaned up by garden volunteers and an on-going campaign to keep eradicating graffiti continues after 6 years.  |
| I love what WCG does for our community! Thanks! |
| St. Louis has a wonderful gardening community nurtured by Gateway Greening. I had not encountered this in other cities where I've lived. |

While I do not have the full interview data to present as transcription is ongoing, I will provide a few insights based on the information I gleaned during the interviews. First, the political issues voiced by the survey respondents featured prominently in the interviews as well. One of the other problems several garden leaders frequently mentioned was unreliable land access (Philadelphia, Detroit, Salt Lake City); leases are often short-term or non-existent, which means gardens can be closed at the will of the municipality or private land owner. In some areas gardens have been erected on abandoned lots, in many instances they are encourage to beautify vacant areas and are allowed to exist for many years; however, at some point the municipality sales the land, often in a sheriff sale auction, and the gardeners are not made aware of the sale until it has commenced and they have no recourse. Unreliable water access and a lack of tax abatements for private landowners that allow gardeners to use their space were other frequently cited issues.

In comparison, some cities (e.g., Chicago, Portland, Denver) have formed supportive relationships with their local governments and may serve as useful examples for collaborations in other contexts. In many of these instances, municipal government offices, most often parks and recreation departments, help manage the logistics such as handling garden plot fees and plot sign-ups. Several interviewees also mentioned their cities had set aside land for community gardens in their long-term comprehensive city land-use plans. Other cities provided free water access to community gardens; this took several forms. In some places, the city collaborated with non-profits to install water lines and spigots for use in the gardens (Denver, Salt Lake City). In several other places (e.g., Chicago, Philadelphia) community gardens have cisterns, which individual gardeners can draw from to water their beds; garden leaders periodically fill these reservoirs by tapping into fire hydrants (the city provides them special access to do so).

Last, some communities (e.g., Salt Lake City, Philadelphia, Denver) have non-profit organizations devoted to supporting a network of community gardens in their city. It is worth noting that in these cities such organizations do not support all community gardens; most often they have been a key ally for gardens serving low-income populations. These non-profit organizations engage in varied activities: helping with fundraising to support the gardens, helping to manage garden financial accounts and collect plot fees, offer free training on organic growing, and a small number (e.g., Philadelphia) offer free garden supplies including seedlings, seeds, and organic pest management supplies.

**Implications and Next Steps:**

The survey data summarized in the findings above indicate (and reinforce findings from prior research) that community gardens offer a myriad of benefits to the communities in which they exist. These benefits include: connecting neighbors and bridging social divides; helping individuals save money on groceries and improve the desirability of their community; serving as a space for environmental education and stewardship; increasing access to fresh produce and improving the physical and mental health of residents.

The next steps I will pursue in this project are completing the transcription of interviews from garden leaders and drawing more on the insights they offer regarding the benefits their gardens have yielded. I will also use the interviews to produce a more refined assessment of the barriers and/or positive collaborations gardens have faced in dealing with local governments. Based on the general trends I presented above regarding these barriers and collaborations, there is considerable potential to draw from examples that have resulted in community garden empowerment to inform and improve other current and future community garden projects. Relatedly, given the potential to achieve the community level benefits gardens stand to provide, a strong case can be made for local governments to adopt the practices of municipalities who have embraced and supported community gardens.

\*\*This is obviously a very preliminary draft – I welcome any feedback on the current content and thoughts on future work using this data.

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**Survey Questions:**

Which of the following best describes your role in your community garden?

Garden leader/manager

Garden member actively growing in the garden

Garden member not actively growing in the garden

How long have you been affiliated with your community garden?

A month or less

One month to a year

One to three years

Three to five years

Five to ten years

More than ten years

Is this your first experience gardening in a community garden?

Yes

No

Overall, how long have you been gardening?

A month or less

One month to a year

One to three years

Three to five years

Five to ten years

More than ten years

Which of the following best describes the growing season in your community garden?

Summer only

Three season gardening (Spring, Summer, Fall)

Four season/year-round gardening

Other

Which state is your garden located in? (list all states)

How would you describe the community where your garden is located?

Rural

Suburban

Urban

Other

On average how often do you participate in the community garden during an average week during your region’s growing season?

Less than 1 time a week

1-2 times a week

3-4 times a week

5-6 times a week

More than 6 times a week

How much of the produce that you consume comes from your community garden?

Less than 25%

Around 25%

Around 50%

Around 75%

100%

Please rate your level of agreement with the following statements (strongly agree, agree, neutral, disagree, strongly disagree):

* The amount of produce I consume has increased since I began growing produce at my community garden.
* The amount of money I spend on groceries has decreased since I began growing produce at my community garden.
* The amount of time I spend outdoors has increased since I began growing produce at my community garden.
* The amount of physical activity I engage in has increased due to my work in my community garden.
* Working in my community garden makes me feel more connected to my neighbors.
* Working in my community garden improves my mood.
* Having a garden in my community improves the appearance of my neighborhood.
* Having a garden in my community improves the environment.

Why do you garden within the community garden? (Please choose the top 5 reasons from the below list and rank them in the order of importance with 1 being the top reason you garden and 5 being the least important reason you garden.)

\_\_\_\_\_For fun (as a hobby)

\_\_\_\_\_To grow extra produce or flowers for personal use

\_\_\_\_\_To make money by growing and then selling produce or flowers

\_\_\_\_\_To save money by growing produce and flowers rather than purchasing them

\_\_\_\_\_To have access to healthy, fresh produce

\_\_\_\_\_To help the environment

\_\_\_\_\_To be involved in the community

\_\_\_\_\_To be around specific individuals

\_\_\_\_\_To be outdoors

\_\_\_\_\_For exercise

\_\_\_\_\_For relaxation/mental health purposes

\_\_\_\_\_Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Which age bracket do you fall into?

Less than 18

18-21

22-30

31-40

41-50

51-60

61-70

71-80

81+

Which of the following best describes your gender identity?

Male

Female

Transgender

Other

Which of the following best describes your racial identity?

White

Black

Hispanic

Asian

Native American

Middle Eastern

Multi-Racial

Other

What is the highest level of education you have completed?

Less than high school

High school graduate

Some college

2-year (Associates) degree

4-year (Bachelors) degree

Graduate degree

Which of the following categories does your annual household income fall within?

less than $20,000

$20,000 - $39,999

$40,000 - $59,999

$60,000 - $79,999

$80,000 - $99,999

$100,000 - $119,999

$120,000 - $149,999

$150,000 or more

How many children (minors under the age of 18) currently reside with you?

1

2

3

4

5+

Which of the following best described your current marital status?

Single

In a relationship, but unmarried

Married

Divorced

Widow or Widower

Other

Which of the following best describes your current employment status?

Full time worker

Part time worker

Full time homemaker or parent

Retired

Unemployed

Disabled

Do you currently receive assistance through SNAP (Supplemental Nutrition Assistance Program)?

Yes

No

Do you currently receive assistance through TANF (Temporary Aid to Needy Families)?

Yes

No

Do you currently receive food assistance through any other programs?

Yes

No

In the last 12 months, were you ever hungry but didn’t eat because there wasn’t enough money for food?

Yes

No

Do you consider yourself to be an environmentalist?

Yes

No

Do you consider yourself to be an activist?

Yes

No

If you are a leader in your community garden and you would be willing to speak further about your garden over the phone or in person, please provide your contact information in the space provided below:

If you have any other comments or thoughts that you would like to express about your community gardening experience or community gardening in general please do so here:

**Interview Questions:**

1) What is your role in your community garden?

2) What has motivated you to be involved in your community garden?

3) Overall, how would you describe the physical aspects of your community garden?

4) Overall, how would you describe the purpose of your community garden?

5) How is your community garden organized and managed?

6) How does someone go about gaining access to use the garden?

7) How would you describe the individuals who participate in your community garden?

8) How would you describe the neighborhood where your community garden is located?

9) Can you please provide me with a history of the community garden (including major and minor events, growth, changes, etc.)?

10) What obstacles has the garden faced (in its initial development and since then) and how were these obstacles overcome?

11) What, if any, obstacles is your garden currently facing?

12) Who owns and funds the garden and has (how has) this relationship steered the garden’s development?

13) What types of crops are grown in the garden?

14) To the best of your knowledge how/by whom are the crops grown in your garden used (by gardeners themselves, donated, etc.)?

15) How do you feel that your garden impacts the gardeners who use the space?

16) How do you feel that your garden impacts the community in which the garden is located?

17) Do you feel that your garden has impacts that extend beyond your community?

18) Do you have any other comments or information that you would like to express?