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Urban agriculture as a source of social capital in the Cape Flats of Cape Town

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ABSTRACT

This paper contributes to the debate on urban agriculture as a source of social capital amongst local communities in African cities through a case-study of Mitchells Plain, a low-income neighborhood in the Cape Flats region of Cape Town, South Africa. A mixed-methods approach, combining a questionnaire survey and in-depth interviews with urban gardeners, as well as interviews with officials was undertaken. The findings show that urban agriculture increases social interaction among urban gardeners and the community. They also show that non-governmental organizations and government actors are crucial in enhancing social interaction within the community. Therefore, these findings have implications for development practitioners who continue supporting and encouraging the uptake of urban agriculture by residents of Mitchells Plain.

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Social capital; interaction; urban agriculture; non-governmental organizations; Mitchells plain; Cape Town

1. Introduction

Urban agriculture has become a prominent feature of most Sub-Saharan African cities (Crush et al., 2011; Gallaher, Kerr, Njenga, Karanja, & WinklerPrins, 2013). This is largely due to the multi-functionality of the practice which enables it to 'be viewed and praised from a variety of locations for a variety of reasons' (McIvor & Hale, 2015, p. 727) such as its capacity to contribute to household food security by increasing dietary diversity and reduction of vulnerability against seasonal food shortages, waste recycling and promoting urban greenery (Smart, Nel, & Binns, 2015). However, Crush et al. (2011) concluded that only a few households in Southern Africa derived any significant source of income from the activity because of various issues such as prohibitive legislation and limited support from state institutions. Also, urban agriculture offers equally significant social benefits as well (Petit-Boix & Apul, 2018). From this view, urban agriculture is acknowledged as a significant means of improving social capital within communities (Kanosvamhira, 2019; McIvor & Hale, 2015). For instance, Gallaher et al. (2013) demonstrated that vertical gardening created an ideal social environment for gardeners in the informal settlement of Kibera in Nairobi (Kenya) to meet gardeners and foster social inclusion. According to Rakodi (2002), social capital involves the social resources people depend on when engaging in their livelihood activities. In other words, social capital can improve the ability of urban gardeners to access resources such as inputs, market information and pest management ideas ultimately improving urban agriculture output (Olivier & Heineken, 2017).

Most of the studies enhancing our understanding of urban gardening and social capital have been located in global North cities (Ghose & Pettygrove, 2014; Glover, 2004; Holland, 2004; Veen, Bock, Van Den Berg, Visser, & Wiskerke, 2016). This has helped improve our understanding of

critical issues such as guarding against the exclusionary elements of social capital, for instance, the formation of small cliques within existing groups (Ghose & Pettygrove, 2014; Kingsley & Townsend, 2006). However, most of these studies have largely focused on community gardens at the expense of home gardeners. Focusing on Southern Africa, most of the research on urban agriculture remains largely focused on food security and income generation (Schmidt, Magigi, & Godfrey, 2015). The majority of studies in this respect have highlighted the capacity of urban agriculture to contribute toward household food nutrition and income (Smart et al., 2015). Given the challenges militating against the success of urban agriculture, there is also a plethora of literature which has focused on factors which hinder the success of urban agriculture, for instance, the poor policy environment (Hampwaye, 2013).

Similarly, the literature on Cape Town, South Africa has largely focused on the economic benefits at the expense of the multi-dimensional benefits of urban agriculture (Battersby & Marshak, 2013; Slater, 2001). This has been due to the notion that urban agriculture in the global South is practiced largely for household food security and income generation. This, unfortunately, is not true. As a result, a dearth of information exists when it comes to examining the social benefits of urban agriculture (Olivier & Heineken, 2017). Focusing on policymakers, urban agriculture has been promoted through the same lens which upholds the economic benefits of urban agriculture. For instance, the now-defunct Cape Town Urban Agriculture Policy of 2007 was criticized due to its fixation on economic benefits at the expense of the non-material gains of the practice (Battersby & Marshak, 2013). As Battersby & Marshak (2013) have argued, the economic benefits of urban agriculture cannot be met if the other benefits of the practice are not integrated into policies crafted by policymakers. Only a few studies in Cape Town have indicated that the benefits of urban agriculture are far more nuanced although failing to make an explicit connection between urban agriculture and social capital development (Battersby & Marshak, 2013; Slater, 2001). Most notably Slater (2001) has drawn attention to the social benefits that women practising urban agriculture have gained from engaging in community gardening. Her study of women from the black townships of Langa, Lower Crossroads and Khayelitsha in Cape Town revealed that women engaged in urban gardening were able to find solace from the everyday household challenges they faced. This paper seeks to make a contribution to this recent discourse on the social benefits of urban agriculture by arguing how urban agriculture can simultaneously foster social capital development for the families of urban gardeners, urban gardening groups and the broader community in the Mitchells Plain, Cape Town.

2. Urban agriculture and social capital theory

Social capital theory was used as the analytical lens for this article because it enables the multi-dimensional nature of relationships among different groups to be dissected and examined. Bourdieu & Wacquant (1992, p. 119) define social capital as 'the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition'. On the other hand, Putnam regards social capital as the horizontal associations existing between people which foster cooperation for the mutual benefit of a defined group or community. Putnam's works show that he viewed social capital as a resource which could be exploited by groups in attaining additional resources. Accordingly, Putnam's theory became the dominant concept of social capital from which the three levels of social capital: bonding, bridging, and linking capital can be examined (Schaefer-McDaniel, 2004).

Woolcock (2001) defines bonding as the horizontal relationships which occur in a homogenous group, such as a family or a neighborhood. In this regard, bonding brings together individuals who are already acquainted with one another as they may share identities, history or similar views (Das, 2004). By contrast, bridging social capital attempts to link members of distant groups so as to enable the mobilization of external resources (Woolcock, 2001). According to this definition,

bonding capital manifests between people who do not know each other well enough to collaborate in activities, including basic livelihood strategies. As López-Gunn (2015, p. 1141) argues, bridging has the potential to trigger innovation impulses 'by increasing exposure to a wider range of information and resources'. For example, Gallaher et al. (2013) report that urban gardeners working in groups in Nairobi, Kenya improved their social capital when undertaking sack gardening activities. This interaction allowed gardeners to strengthen trust amongst themselves especially with respect to sharing ideas on crop production and labor activities, such that it strengthened their safety nets especially in times of economic distress.

Szreter & Woolcock (2004, p. 655) define linking as the social connections 'between people who are interacting across explicit, formal or institutionalized power or authority gradients in society'. The relationships generated by this form of social capital extend beyond the community and encompass institutions outside of the community borders. Woolcock (2001) argues that linking is a necessity in ensuring that the community can access vital resources such as information and access to training. Quite evidently, linking capital is applicable to communities where the resources required may not necessarily be found within the community borders hence the need to obtain them from elsewhere.

The importance of social capital as a facilitator of urban agriculture in African cities such as South Africa remains under-researched despite its importance (Olivier & Heineken, 2017). The limited recognition of the importance of social capital is largely due to the fact that it is intangible capital. Nevertheless, it is crucial for researchers to pay attention to this type of capital due to its contribution to the growth of urban agriculture in low-income urban spaces (Kanosvamhira, 2019). This is because urban agriculture has the potential to contribute toward the realization of Sustainable Development Goal 11 whose focus is on resilient and sustainable cities. It is in this context that Gallaher et al. (2013) argue that social capital, along with other forms of capital such as natural, human, physical and financial capital, is crucial for urban agriculture development. The importance of social capital lies in its potential to facilitate the accumulation of financial capital (Pretty & Ward, 2001). In this respect, the concept of social capital is seen as capable of improving developmental initiatives weaved by policymakers. As already aforementioned, urban agriculture policies rooted solely on economic considerations are not always sustainable because of their narrow outlooks (Battersby & Marshak, 2013; Slater, 2001). As Olivier and Heineken (2017) argue, NGOs play a vital bridging role by engaging in activities which facilitate urban gardeners to interact with other supporting organizations. Such platforms enable urban gardeners to interact, exchange ideas and establish beneficial communication amongst themselves. Nonetheless, Das (2004, p. 33) argues that Putnam's approach of the concept 'neglects the fact that pressing conditions can prevent people from exhibiting cooperative behavior including reciprocity'. In other words, political and economic conditions experienced by a community can be a hindrance to the development of social capital. Furthermore, the theory has been criticized for its potential to perpetuate exclusion (Mohan & Mohan, 2002). However, despite these limitations Holt (2008, p. 227) argues that it can be utilized to show 'the importance of broader socio-spatial contexts and relations to the embodiment of social capital within individuals'.

3. Methodology

A mixed-methods approach involving the use of a questionnaire survey, semi-structured interviews with urban gardeners and supporting actor representatives was employed for data collection which was conducted between April and October 2018. For the quantitative part of the study, a questionnaire survey administered through face to face interviews was employed to collect data from urban gardeners. The questionnaire was structured to collect their socio-demographic details, the manner in which they conducted their activities, the assistance they received and their interactions with their immediate family and community at large. Quantitative data were cleaned and inputted into the IBM Statistical Package for Service Solutions (SPSS) Version 25.0

for analysis and presented in the form of frequency tables. Access to the gardeners was gained through two of the main NGOs working in the community. The NGOs were informed of the research objectives and they provided access to active gardeners through their membership registers. An automated random sampling technique was employed after farm registers from the two NGOs were uploaded onto an excel spreadsheet. A total of 60 urban gardeners (30 from each NGO) were selected through this method. Contact details were provided by the NGOs to schedule the meetings with interested gardeners who were interviewed either at their place of residence, gardens or at the NGO garden sites.

The qualitative part of the study employed semi-structured interviews with the urban gardeners, two NGO representatives and a Senior Extension Officer from the Western Cape Provincial Department of Agriculture. A total of 20 face-to-face semi-structured interviews were conducted with gardeners in order to obtain a deeper appreciation of their experiences. The 20 urban gardeners were purposively selected based on individual responses provided during the questionnaire survey. Interviews lasted for 30–40 minutes, and for the most part were conducted at the homes of gardeners during workdays. Semi-structured interviews were also conducted with two purposively selected project officials of the major NGOs and the Senior Extension Officer from the Provincial Department of Agriculture operating in the area. The purpose of interviewing these informants was to identify the urban agriculture initiatives they promoted in the community and probe how these initiatives contributed to social capital development. Qualitative data from interviews were recorded, transcribed and analyzed through the examination of main themes, similarities, and differences in interviewee responses. Qualitative data were in most cases presented to augment quantitative data. Regarding urban gardener interviews, the individuality of the gardener quoted in each case was distinguished using a number ranging from 1 to 20, and an indication of the type of gardener (community or home gardener), sex and age range. For instance, the first male home gardener respondent between 50 and 59 years old would be identified as (M1HG ≥ 59). The age ranges used for the interviews were as follows: ≥29 (29 years and below), ≥39 (30–39 years), ≥49 (40–49 years) and ≥59 (50–59 years) and ≤60 (60 years and above). Before data collection commenced, an ethical clearance certificate (Ref Number: HS17/8/9) was obtained from the University of the Western Cape. Compliance with the ethical certificate ensured that anonymity, confidentiality, and consent of the research respondents were not violated throughout the course of the study.

4. Study area

The study was conducted in Mitchells Plain which is a large township in Cape Town ([Figure 1](#)). The township is located 20 kilometers from the city center and based on the last population census had a population of 310 485 residents (Statistics South Africa [StatsSA], 2013). Mitchells Plain was established in the 1970s under the provision of the Apartheid Group Areas Act of 1957 in an attempt to alleviate housing shortages in the city through the provision of housing based on one's race.

The township is located on a generally flat terrain that is characterized by sandy soils and receives winter rainfall ranging from 500mm to 700mm per annum. According to Haysom, Crush, and Caesar (2017) over 91% of the population is classified as low income and working class. Mitchells Plain faces several socio-economic challenges such as high unemployment and crime rates, overcrowding and limited access to public amenities. Non-Governmental Organizations (NGOs) and the Provincial Department of Agriculture have played a vital role in supporting residents engaged in urban agricultural activities at a household level in order to supplement household income and food security. Generally, the socio-cultural and economic conditions in Mitchells Plain are similar to those of several low-income urban gardening communities across the city of Cape Town and this makes the area a suitable research site.

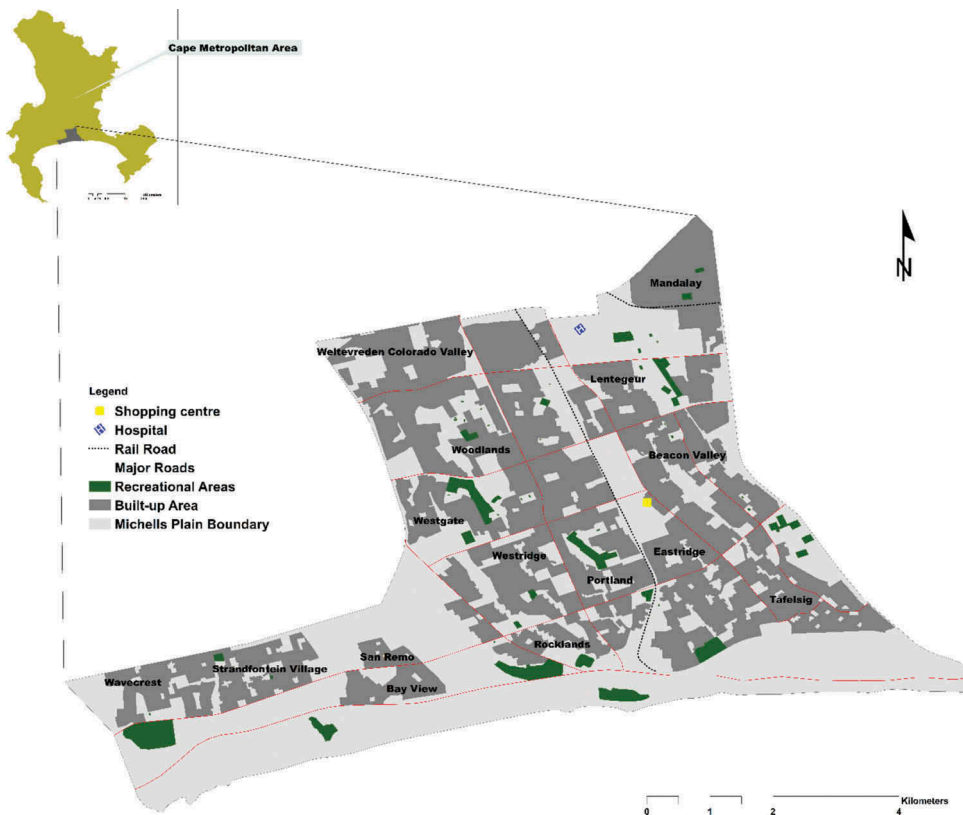


Figure 1. Mitchells plain map (Source: Authors, 2019).

5. Findings

5.1. Socio-economic characteristics of respondents

All of the 60 respondents were born in the Western Cape province and had been residing in different sub-areas of Mitchells Plain for a minimum of 5 years. The majority of the respondents were of the colored¹ race (98.33%) whereas only a single respondent belonged to the black racial group (1.66%). A total of 58.3% of the surveyed population were females. The elderly are the major partakers of urban agriculture as 38.8% of the respondents were above 60 years whereas 23.4% of the respondents were below the age of 40; 13.3% between 40 and 49 and 25% between 50 and 59. In terms of education, the survey results indicate that 43% of the respondents matriculated with only 13.3% going forward to pursue a college education. Primary school (grade 1 to 7) education was attained by 10% of the respondents while 23.3% of the respondents attained secondary education (grades ranging between Grade 8 to 12). A total of 40% of the respondents indicated that they were pensioners, 11.7% unemployed, 16.7% employed and 31.6% were self-employed. Additionally, it was discovered that the respondents' primary source of income came from their formal/informal jobs (41.7%), 18.3% from their spouses or relatives, and 40% from social grants, mostly in the form of State Old-Age pensions.

The respondents had been gardening all year in their backyards for an average of 7.85 years with one gardener having practiced urban farming for at least 40 years compared to 7 who have been farming for just a year. The major food items grown include tomatoes, carrots, spinach, butternuts, parsley, green pepper, brinjals and a variety of medicinal herbs such as lemongrass. The main motivations for gardening were social benefits (41%), health benefits (35.8%), environmental benefits

(19.8%) and financial benefits (3.3%). Most of those respondents (81.7%) revealed that garden produce was for household consumption compared to just 1.7% who sell and 16.7% who do both. Produce is largely sold over the fence although one community gardener conducted regular market weekends where all gardeners were allowed to sell their produce at a set fee.

5.2. Urban gardening and the household

The findings show that 63.3% of the respondents received direct assistance with urban gardening activities from household members. Although a large number of respondents received support from household members the extent of engagement varied. For instance, in reference to his backyard garden, one respondent explained that *'when I do not water, my wife waters using all the gray water (bath, shower, bathroom sink and washing machine water) ... she is part of the garden'* (M18CG \geq 59). Another female respondent stated that *'my brother is not a gardener but he helps in other ways [such as] making sure that I catch the gutter water'* (F2HG \geq 49). Such variations in the level of engagement were voiced repeatedly by the majority of the respondents. Conversely, a minority of respondents (36.7%) who reported not receiving support from household members provided various reasons to account for this. A few opined that they did not desire any disturbances in their gardens and hence preferred to conduct activities as individuals rather than groups. For some individuals, a lack of support in gardening activities from the household members was blamed on limited interest based on the perception that the activity was laborious and time-consuming. Others simply did not have the support, for example, referring to her household garden, one widowed gardener explained that *'I have got no children in the house so I must do everything [in the garden] on my own'* (F13CG \leq 60).

However, the findings from the in-depth interviews indicated that despite some members not being directly involved in the garden, interaction was fostered through other indirect means such as the consumption of meals which was usually done as a household unit. For example, one respondent lightheartedly indicated that *'my family is so lazy ... they just enjoy the meals'* (F9HG \leq 59). In another case, one female respondent indicated that *'when I see worms I have never seen before she (the daughter) uses her phone to look for solutions'* (F6HG \geq 59). In this instance, this provided a point of discussion between the mother and daughter.

Focusing on the four community gardeners identified, the in-depth interviews revealed that they did not receive much direct assistance from the household members and thus depended on voluntary assistance in the form of labor from the general community. One gardener reported that help from the community was irregular hence she had to employ three full-time workers to assist her with laborious activities such as planting, weeding and composting her garden project.

5.3. Urban gardeners and the local community

Respondents were asked if they were affiliated with any formal urban gardener organization, 93.3% indicated that they had no affiliation whatsoever. The few respondents who were affiliated to urban gardeners' organizations indicated that they benefited from such membership. For example, one respondent indicated that *'I am a member of the South African Food sovereignty campaign ... I benefit from attending their workshops and the meetings'* (F3CG \geq 59). Despite the limited affiliation to formal organizations and networks, the findings did show a strong presence of informal networking at a community level. This was seen through the constant interaction with fellow urban gardeners across Mitchells Plain. For instance, a total of 81.7% of those surveyed indicated that they had friends who are gardeners. Of this population, 98% of the respondents indicated that they exchanged information, inputs and garden produce with their friends. For information exchange, the main mode of communication was identified as face to face interactions (93.8%), compared to only 6.2% who utilized social media platforms such as Whatsapp Messenger² and text messaging (Table 1).

Table 1. Means of sharing information by age (N=48).

		Dominant means of information dissemination		Total
		Face to Face interactions	Media technology use	
Age	19 and below	3	0	3
	20–29 years	1	0	1
	30–39 years	7	2	9
	40–49 years	4	1	5
	50–59 years	12	0	12
	60 and above years	18	0	18
Total		45	3	48

Source: Field Survey, 2018.

Some gardeners relied on social media platforms such as WhatsApp to communicate with one another to overcome constraints such as physical distance from one another. For instance, one female community gardener indicated that *‘we created a WhatsApp group and in the group when you have any queries or if you want to try something or maybe you do not know about a crop, we help’* (F3CG≥59). In this regard, social media platforms enabled them to relay information including updates on upcoming workshops, new recipes, and pest management solutions. Nevertheless, not all gardeners had access to social media and in such cases had to rely on more traditional forms of communication especially face to face interactions.

Additionally, the interviews revealed that sharing transcended information dissemination to include sharing seeds, produce and labor. Some respondents recalled how they began interacting through input exchange with other gardeners as a result of their gardening activities. For instance, one respondent mentioned that *‘those roses at the back I got them from a gardener in (nearby) Colorado Park after they got manure from me’* (M15HG≥49). In this context, the provision of compost was crucial given the poor soil conditions in the Cape Flats area. Not surprisingly the recipient was grateful and continued providing various inputs to his fellow urban gardener. In another case, friends assisted one another by working in each other’s gardens. This was vividly illustrated when one respondent mentioned that:

Aunt Rose³ and those people we are still connecting like I was saying. For example, if you wanted something to be done at home we can meet as a group ... because we enjoy being together, they keep on asking when are we going to get together because everybody enjoyed that (F10HG≤60).

Interestingly, in-depth interviews detailed interaction between urban gardeners extended to the community. For instance, one gardener explained that *‘I give the crops to people around me, my neighbors and that lady there and then other two friends’* (F9HG≥60). One respondent expressed that the various plants in his garden attracted interest from passers-by along the street by stating that *‘people always see these different plants and they stop by the house to ask about it’* (M15HG≥49). Similarly, another gardener indicated that *‘every time I harvest, especially chilies there is always more and we give to other people, mainly neighbors’* (F5HG≥49). Expressed somewhat differently, a female home gardener explained that she used her agriculture knowledge to provide free training to the community on how to start basic gardening and prepare nutritious meals from garden produce. This is captured in the following extract:

I actually get people in here, 10 at a time and the whole idea is to teach them how to start a garden and I teach them how to plant, what to use ... and then I cook something from out of the garden because I think that is the best way to get people interested because all people eat (F2HG≥59).

The findings show that community gardens provide an important function of providing a space where gardeners and other residents are able to interact and grow crops for consumption and the market. For instance, one community gardener reported that she periodically conducts market days where gardeners are invited to erect stalls and sell vegetables to the community. Also, some gardeners periodically sell compost to fellow gardeners at affordable costs. Such activities offer urban gardeners in Mitchells Plain with an opportunity to be in constant interaction among

Table 2. Frequency at which community members received enquiries about urban gardening from prospective gardeners in the previous 6 months.

		Frequency	Percent
Valid	Frequently (three times or more a month)	17	28.3
	Occasionally (once or twice a month)	33	55.0
	Never	10	16.7
	Total	60	100.0

Source: Field Survey, 2018

themselves and with the broader community. During such engagements, urban gardeners freely share valuable information on a broad range of issues dealing with pest problems to marketing information. It is worth noting that such networking activities have helped to raise garden production levels and have also improved access to inputs and markets.

Based on the questionnaire survey, 55% of the urban gardeners reported occasionally receiving enquiries from prospective gardeners within the last six months (Table 2). A further 28% described the enquiries as frequent as opposed to just 16.7% who indicated that they have never received enquiries about urban gardening from the community. Moreover, it was clear that community gardeners are more likely to receive more enquiries as opposed to home gardeners possibly due to the accessibility and visibility of community gardens. For example, one community gardener mentioned that *'I have [had] over 100 people since 2016 that I have been in contact with that started their home gardens' (F3CG≥59)*. The above words from the urban gardener are indicative of the potential that community gardens present in the study area. There were several profound responses to the kind of enquiries respondents received from prospective gardeners. Out of the 50 respondents, 98% expressed keen desire to learn how to establish gardening projects compared to just 2% who were interested in discovering how they could obtain support to start gardening activities.

5.4. Influence of supporting organizations in enhancing social capital

The two NGOs, Soil for Life (SFL) and the Schools Environmental Education and Development (SEED) are the major non-state actors in Mitchells Plain and they have been operating in Cape Town for more than a decade. SEED is a small public benefits organization whose aim is to educate people on sustainable urban agriculture initiatives. It runs a 100 home gardeners program aimed at training and supporting home gardeners based on permaculture principles. Similarly, SFL assists existing and prospective gardeners through training programs designed to help them improve soil fertility through the application of organic manure and water conservation by watering of crops during times when evapotranspiration rates are low.

All the respondents reported membership with either SEED or SFL and in some instances with both organizations. Most of the respondents (71.7%) had come to know about the NGOs largely through a local newspaper advertisement or through word for mouth referrals as was the case with 21.7% of the respondents. The major services provided by the NGOs are relatively similar and include educating and training home gardeners on how to grow crops based on permaculture principles and water conservation. To showcase the impact of NGO training by the organization SEED, one respondent working as a nurse indicated how she integrated her acquired gardening skills to assist patients in her line of work:

What I like about SEED is (that it) taught me how to make different recipes (that are suitable for) diabetics and high blood pressure patients (F4HG≥49).

According to the interviews with the SFL NGO project coordinator, urban gardeners are provided opportunities to interact and forge relationships with one another during workshops that are periodically offered by the organization. For instance, the project coordinator indicated that the organization offered a health and wellbeing program which provided gardeners with knowledge on healthy food preparation and maintaining a healthy lifestyle. The location of SEED on public

land at a primary school in the community makes it quite accessible to the urban gardeners. According to the SEED official, this provided the school children with an opportunity to learn about gardening and healthy eating through educational tours to community gardens.

Similar to NGOs the Western Cape Department of Agriculture (DOA) plays a pivotal role in assisting urban gardeners across Cape Town, particularly community gardens. A total 3 of the 4 community gardeners reported receiving inputs such as an irrigation system, production tools and input seedlings from the department. Furthermore, the Provincial DOA provides training for urban gardeners which allows them to meet and interact with urban gardeners in Mitchells Plain and elsewhere in the generally food insecure Cape Flats region.

6. Discussion

The research findings established that there is significant household participation in urban agriculture activities within most gardening household units. Clearly, urban agriculture in Mitchells Plain acts as an activity which fosters interaction between household members thereby strengthening family ties. In accordance with the Social Capital analytical framework, this form of social network is termed bonding capital. A key study finding is that urban gardening presents a notable source of bonding capital among household members in Mitchells Plain. Not only does bonding capital serve as an alternative entry point through which household members can interact but it also increases the time spent together. This is crucial in the Mitchells Plain and Cape Flats context given that the area is plagued by substance abuse and considerable criminality (Hamdulay & Mash, 2011). Therefore, depending on the level of engagement, urban gardening increases social capital and can keep youngsters actively occupied in the garden with their parents or grandparents and thereby removing them from possible anti-social activities that have become pervasive within the community. Nevertheless, the study did not find that the youth were directly involved in urban gardening activities although there could have been involved in other indirect means such as cooking and consumption of produce as shown in the findings. In accordance with the current findings, previous studies have demonstrated that urban gardening reinforces household bonds in low-income areas of Cape Town (Olivier & Heineken, 2017; Slater, 2001).

One unanticipated and yet significant finding was that there were instances where home gardeners did not receive direct support from household members. In rare cases, gardeners strictly did not want any of their household members intervening in the garden as they regarded it as their 'sacred' zone. On the other hand, some gardeners reported that household members were generally not interested in directly assisting in gardening activities. This finding regarding a lack of general interest in gardening activities is consistent with the literature in the South African context which argues that gardening activities are perceived as rural and an old-fashioned livelihood strategy (Thornton, 2008) that is incompatible with the contemporary city lifestyle. From the surface, this suggests a low level of bonding capital, however, this is not necessarily the case as household members could be involved in other indirect ways in activities around harvesting and consumption of the produce presenting opportunities for bonding. Therefore, this indicates that bonding capital fosters household interaction in ways which transcend mere direct involvement in the garden.

Urban agriculture was seen to enhance bonding capital within the urban gardening community through the sharing of food, cooking recipes, good farming practices and marketing strategies. In terms of information dissemination, face to face interaction was the dominant form of interaction while the use of WhatsApp was also acknowledged as a way to counter the existing spatial constraints. As a result, loose informal networks are visible across the urban gardening community in Mitchells Plain. The importance of such groups is crucial since they contribute to linking capital. This is achieved when WhatsApp groups are used to communicate information on urban gardening activities offered by public institutions for instance training events.

Bridging capital is facilitated in situations whereby people in communities and towns are not well familiar with one another. The results of this study established that gardeners are able to foster bridging capital within the community. For a community member to start a garden they usually require assistance in the form of advice as well as resource provision (Gallaher et al., 2013). There were several testimonies where urban gardeners were approached by prospective gardeners who invited them to an urban agriculture workshop. In such cases, friendship was established or enhanced through urban agriculture-related activities. Additionally, urban agriculture was found to be a point of departure encouraging communication between urban gardeners and neighbors. This interaction extended to sharing of crops as well. In this instance, the interaction between the friends and neighbors is increased which strengthens bridging capital within the community. Such informal food exchanges can be seen to strengthen ties between the gardening community as well as neighbors and the general community. In other words, informal food exchanges offer an opportunity to improve food security and nutrition among members who know each other (Tevera & Simelane, 2014).

The gardeners themselves particularly the community gardeners, were found to contribute toward bridging capital within their community. Depending on the size of the community garden, such gardening spaces enable urban gardeners to host events such as market days where gardeners exploit the space to sell produce and interact with the community members. This made garden produce accessible to the general community at affordable prices. As a result, different community members are able to attend these market days, purchase produce and interact with other community members thereby enhancing the relationships in the community. This is indicative of the capacity of community gardens to attract members into garden spaces to purchase vegetables or make inquiries. That being said, home gardeners are equally significant in fostering bridging capital within the community. A significant number of urban gardeners indicated that they received requests from prospective gardeners from the community on how to engage in the practice. More so, some home gardeners utilize their private space to provide training on gardening and healthy cooking options for interested community members.

The findings of this study show how SFL and SEED have played a key role in instigating bridging capital in Mitchell Plain through conducting workshops that focus on different aspects of urban agriculture from accessing land for gardening, crop production including harvesting and marketing of produce. Workshops are advertised mainly through the local newspaper and interested members sign-up and attend the workshops. At these workshops, local gardeners from different social backgrounds converge with the common objective of learning how to garden. According to Schuller (2001), such group activities often attract like-minded people and this helps to facilitate dialog and bonding. Consequently, different individuals are able to find a common ground for interaction and the development of friendship amongst themselves. Also, these NGOs are accessible to the community members such that although the urban gardeners may have reduced financial resources the development of social relationships with such actors enables them to receive the necessary resources to continue urban agriculture activities. These findings generally concur with previous studies done elsewhere in the Cape Flats of Cape Town (Paganini, Lemke, & Raimundo, 2018) and done in other cities regarding the role of supporting actors. For instance, the study by D'Alessandro, Kobena, Hanson, and Kararach (2018) in Johannesburg showed that supporting actors commonly donated or subsidized garden infrastructure which enabled garden members to manage the urban gardening projects. Similarly, Olivier and Heineken (2017) and Kanosvamhira and Tevera (2019) report that NGOs have been crucial in the Cape Flats region in capacitating urban gardeners to continue gardening despite the harsh physical conditions in the area.

NGOs have been instrumental in establishing local informal networks. Urban gardeners from different sub-areas of Mitchells Plain have been able to maintain communication through face to face meeting and interactions via social media. Community members have formed social media groups through which they continue to communicate away from the actual workshops. In general, therefore, these informal networks continue to survive even after workshops conclude. In this respect, the influence of NGOs is crucial in strengthening bridging capital in the community. Similar results are reported by

Olivier and Heineken (2017), where it was noted that NGOs were able to formulate platforms which enabled the community members to engage and develop relationships. Although the Provincial DOA has assisted in extending the bridging it was notably to a lesser extent but at a larger scale compared to NGOs. For the few gardeners who were aware of the services offered by the DOA took advantage of the services, especially workshops conducted in various areas outside Mitchells Plain and thereby connecting urban gardeners from different areas of the Cape Flats region of Cape Town. Therefore, interaction is expanded to outside the community borders as opposed to NGOs where interaction is generally within the community. As a result, respondents are able to interact and develop relationships with individuals who share similar interests in other communities.

7. Conclusion

The research sought to examine the contribution of urban agriculture to social capital development amongst the community of Mitchells Plain. With reference to the theoretical lens, such interactions relate to bonding and bridging capital. A key finding of this study is the existence of a close relationship between social capital and urban agriculture which seems to be a pre-requisite for the successful engagement in urban agriculture activities and community development. This study provides insights into how home gardening awards an opportunity to enhance social capital both in the household and the community. The findings demonstrate that urban gardening, either as home or community gardening, has facilitated bonding and bridging capital in Mitchells Plain. However, the findings confirm that community gardens could be one of the more effective strategies to improve social cohesion due to increased visibility and space availability. Also, specific to the Mitchells Plain context, urban gardening projects which are located on public school land provide an opportunity to introduce urban agriculture to the young generation. This is crucial given the limited involvement of the youthful generation in urban agriculture activities across South Africa. This demonstrates that endeavors to support urban agriculture activities in similar communities need to be cognizant of issues of land availability for community garden development to increase the visibility of such practices in the community. As Crush et al. (2011) have argued, the urban poor hardly benefit from urban agriculture due to limited availability of land for gardening. Cognizant of this problem, policies that promote types of low-space gardens, such as home gardens are equally beneficial. From a broader perspective, the findings of this study have implications for understanding how urban agriculture is crucial in enhancing social capital in low-income neighborhoods in South Africa. This study has demonstrated how urban agriculture enables relationships to be initiated, nurtured and sustained within the community. Often relationships extend to informal food exchanges between urban gardeners and the general community which contributes toward household food security and nutrition. This research adds to our understanding of urban gardening and its capacity to serve as a starting point for engagement within households and amongst community members. A key recommendation is that supporting institutions need to continue promoting such practices despite the limited material gains from the activity.

Notes

1. The apartheid regime created a racially separated society. The term 'colored' is used to officially to refer to mixed-race people.
2. WhatsApp Messenger is a messaging service application that allows the sending of text messages, voice calls, images and documents through electronic devices such as mobile phones.
3. Not her real name.

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