

UNDERSTANDING THE IMPACT OF MICROENTERPRISE ON COMMUNITY

CAPACITY DEVELOPMENT

A Thesis

by

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## ABSTRACT

In the summer of 2018 the non-profit, Just Like My Child Foundation (JLMC) contracted four graduate students to conduct a monitoring and evaluation project on the community level impact of a female empowerment program in Luwero, Uganda. During their time in country, the researchers conducted their own personal research on the impact of a dairy goat microenterprise program called the Livelihood Project. The purpose of this study is to understand how the Livelihood Project influenced community capacity development through the development of human, social, and financial capital. The Livelihood Project was completed in partnership with JLMC, Heifer International, and the local hospital. The Livelihood Project provided a loan of dairy goats and seeds, along with the relevant training to families infected/affected with HIV/AIDS. To understand the impact of the Livelihood Project, four participant's homes were visited and a total of 26 semi-structured interviews were conducted. From the responses, the researchers concluded that human capital developed as participants increased their knowledge, skills, and abilities. Social capital increased as participants family's incomes increased. Increased incomes increased family's access to medicine and school. The researchers concluded that teaching agriculture can be used as a method to teach other intrapersonal skills such as commitment and time management. Because of this, NGOs and other development organizations should invest in an agricultural vocational school to help increase opportunities for individuals to learn technical agriculture skills and other life skills. Further, the increased social capital in the community created an

environment conducive to starting cooperatives. The researcher suggests that companies invest in and partner with foreign cooperatives as a form of foreign aid. Finally, the researcher concluded that as financial capital increased, the quality of life of the participants improved as they had access to more resources. The researcher suggests the farmers create community lending programs to help reach the poorer community members who did not meet the qualifications to participate in the livelihood project.

## DEDICATION

This work is dedicated to my family. Specifically, my grandfather who passed away as I was writing. His consistent pursuit of knowledge and love of cows continues to inspire and shape me. My mom and dad for believing in me, answering my late-night phone calls, and never for one moment doubting me. My brothers for their quiet but constant support. My friends who walked alongside me at Texas A&M on campus and from a distance. The people of Luwero, Uganda who welcomed me. Finally, to all the women who came before me, the trailblazers who paved the way for me to be able to attend school and pursue my passion, you never stopped fighting for me and inspire me to keep fighting for all who will come after.

“You may write me down in history  
With your bitter, twisted lies,  
You may trod me in the very dirt  
But still, like dust, I'll rise.  
...  
Just like moons and like suns,  
With the certainty of tides  
Just like hopes springing high,  
Still I'll rise  
...  
Out of the huts of history's shame  
I rise  
Up from a past that's rooted in pain  
I rise  
I'm a black ocean, leaping and wide,  
Welling and swelling I bear in the tide.  
Leaving behind nights of terror and fear  
I rise  
Into a daybreak that's wondrously clear  
I rise  
Bringing the gifts that my ancestors gave,  
I am the dream and the hope of the slave.  
I rise  
I rise  
I rise.”  
-Maya Angelou (1978)

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## CONTRIBUTORS AND FUNDING SOURCES

### **Contributors**

This work was supervised by a thesis committee consisting of Dr. Manuel Piña Jr. and Dr. Robert Strong of the Department of Agricultural Leadership, Education, and Communications in the College of Agriculture & Life Sciences, and Dr. Silva Hamie of the Department of International Affairs at the Bush School of Government and Public Service.

The data analyzed for Chapter IV was provided in partnership with Mitchell Baker of the Department of Agricultural Leadership, Education, and Communications in the College of Agriculture & Life Sciences, Darienne Davis, and Marcus Jenkins both of the Department of International Affairs at the Bush School of Government and Public Policy. All other work conducted for the thesis was completed by the student independently.

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This work was made possible in part by the Just Like My Child Foundation, as part of an ongoing, contracted evaluation research project in October 2017-December 2018, including two months, June and July, in Uganda.

## NOMENCLATURE

AIDS	Acquired Immunodeficiency Syndrome
ARV	Antiretroviral Therapy Drugs
BPP	Boy Power Project
CCF	Community Capitals Framework
CLV	Community Legal Volunteer
Garden	A person's plot of land, usually at their home but not always
GPA	Girl Power Advocate
GPP	Girl Power Project
HIV	Human Immuno-deficiency Virus
JLMC	Just Like My Child Foundation
Livelihood Project	Dairy goat microenterprise project completed in partnership with Heifer International and Just Like My Child Foundation in Luwero District, Uganda.
LC1	Local Chair Person, the elected leader of the village
NGO	Non-governmental organization

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## CHAPTER I

### INTRODUCTION

#### Uganda

Uganda is a peaceful country in an unstable region. To the west the Democratic Republic of Congo is in an ongoing civil war. To the north, South Sudan is also in a state of unrest, resulting in 3.5 million refugees, many of who currently live in the Bibi Bibi refugee camp on the northern Ugandan border (Akumu, 2018). The road to peace was not straight or easy for Uganda. A dark history of violence contributes to many of the challenges Uganda faces today, but also demonstrates the resiliency of the people.

While never fully colonized, Uganda remained under British control from 1894 to 1962. In 1962, Uganda gained full independence through a gradual transfer of power (Commonwealth, 2019). During this time, under British governance, cotton emerged as a major export. Later, in the 1920s coffee and sugar production began, bringing economic prosperity as prices rose after World War II (Commonwealth, 2019). Milton Obote maintained power from 1962 to 1971, when a military coup led by Idi Amin took power. What followed was an eight-year authoritarian reign (Kaufman, 2003). It is estimated that between 100,000 and 300,000 Ugandans died during his reign (Ullman, 1978). Amin declared himself president for life and invaded Tanzania in 1978 (Commonwealth, 2019). During this conflict the capital of Uganda, Kampala, was taken by the Tanzanian forces and Amin fled. After Amin's rule, in the wake of a devastated country,

tumultuous elections occurred and civil and bush wars broke out all across the country as Yoweri Museveni's party, the National Resistance Army rose to power.

These bush wars specifically impacted the Luweero Triangle in central Uganda. The Luweero Triangle is composed of three districts including the Luwero District, Nakaseke District, and Nakasongola District. Located approximately 40 miles north of Kampala along the Gulu highway, the Luweero Triangle was the location of extreme guerilla warfare from 1981 to 1986. The Ugandan Bush War between the National Resistance Army led by Yoweri Museveni and the sitting leader Milton Obote and his army, the Uganda National Liberation Army, resulted in the death of an estimated 200,000 people in the Luweero Triangle (Gargan, 1986). Over 30 years later the region is still healing as they build back from the destruction and loss of life. Museveni currently serves as the leader of Uganda, although his continued tenure is controversial. Some Ugandans feel Museveni has reached the end of his time as their leader, while others view him as the leader who saved them from the terror of Idi Amin (T. Davis, personal communication, June 2018). Decades of violence resulted in massive destruction and loss of life, another contributor to the loss of resources in Uganda was the appearance of HIV/AIDS.

#### HIV/AIDS in Uganda

HIV/AIDS was first identified in Uganda in 1982 near the western shore of Lake Victoria (Tumushabe, 2006). The virus quickly spread and by the late 1980s Uganda was in a full AIDS epidemic (Hladik et al., 2008). The prevalence of HIV/AIDS was

exacerbated by the ongoing violence in the country (Tumushabe, 2006). This epidemic led to the death of over 800,000 people and over two million children were orphaned (Tumushabe, 2006). Since this initial outbreak, the Ugandan government along with international organizations have led coalitions fighting the spread of HIV/AIDS. While the virus continues to be a problem, the prevalence has significantly decreased. According to the World Health Organization the nation HIV prevalence rate in Uganda in 2016 was 6%, down from 7.3% in 2011 (World Health Organization, 2017). While the rates of infection are significantly decreasing, the impact of losing generations of people is still evident in the country.

A contributing factor to the decreasing prevalence of HIV/AIDS is the availability of antiretroviral therapy drugs (ARVs). Through various international partnerships, the Uganda Ministry of Health was able to provide free ARVs because of their drug access initiative (Kunihira, Nuwaha, Mayanja, & Peterson, 2010). This initiative was expanded in 2003 as prices for ARVs decreased and Uganda received additional funding from the United States (Kunihira et al., 2010). Specifically in the Luwero District, this increased access to medication led to a healthier workforce, who are now facing the problem of unemployment due to low education levels and stigmatization.

Often there is a stigma surrounding individuals diagnosed with HIV. This stigma creates challenges for HIV+ individuals to work, generate income, and send their children to school. According to a 2013 survey, 23% of people living with HIV in Uganda reported losing work or income. Additionally, one in five Ugandans felt people

living with HIV should feel shame (NAFOPHANU, 2013). In an effort to combat this problem of unemployment Bishop Asili Hospital in the Luwero District and Just Like My Child Foundation (JLMC) partnered with Heifer International and helped families infected and affected with HIV/AIDS improve their livelihood through a dairy goat donation program called the Livelihood Project.

#### Just Like My Child Foundation and the Girl Power Project

Just Like My Child Foundation (JLMC) builds the capacity of communities to combat female inequality and oppression in central Uganda. This non-governmental organization (NGO) is headquartered in San Diego, CA and was founded in 2006. Since then it has collaborated and co-invested with communities in providing healthcare services, education, microenterprise, social justice, and empowerment programs to over 200,000 individuals in 76 rural communities across Uganda and Senegal (Just Like My Child, n.d.). Previous projects that have graduated into self-sustainability from JLMC include, Project Keep a Mother Alive, which focused on quality maternal health services, facilities, and equipment attracting mothers to a local hospital for a safe delivery. Project Universal Education was a school building initiative that helped equip primary schools with quality spaces, learning resources, and educators where girls were encouraged to attend. Today, JLMC's flagship program is a curriculum and model of delivery they developed called the Girl Power Project (GPP). The GPP is a two-year, multi-faceted curriculum supplementing the education of 12-15 year-old girls in public and private schools. This curriculum focuses on a variety of different topics including

life skills, developing healthy bodies and relationships, and leadership skills. JLMC staff members travel to often remote, rural and semi urban communities and facilitate two workshops (three days each) in place of the girl's regular classes. At the end of the first year of this curriculum an overnight camp is held where a select group of girls, chosen by their peers, receive additional leadership and mentorship training and supplies to help them manage menstruation. In the second year of the program, the girls attend weekly club sessions where they learn about a specific topic from a local expert, such as learning self-defense from the local police. There is also a corresponding boy's engagement component (BPP) to the Girl Power Project curriculum that is being strengthened with the help of a monitoring and evaluation process.

A unique strategy JLMC uses is a community covenant (Appendix D). This is a document that community leaders sign signifying their community's commitment to advocating for girls and children in the community and to help JLMC with the implementation of their programs. The GPP depends on Community Legal Volunteers (CLV) who are trained by JLMC's Project Justice and are individuals in the community who are passionate about fighting gender-based violence through legal pathways. CLVs attend multiple trainings on children's rights and the local laws. CLVs also build referral systems with local authorities to protect girls and serve as pseudo paralegals for the community.

Girls in the GPP develop relationships with mentors while attending workshops. These mentors are often Girl Power Advocates (GPA) who become champions of the GPP in the community. GPAs also attend training and help with the implementation of



the program. The way they choose to serve is up to them, the researchers met one women who went door to door telling her neighbors about the prevalence of gender-based violence and how their community can help stop the violence.

The way JLMC incorporates the community in their programs is key to their success. By establishing community partnerships with groups such as the police and local NGOs, they have built credibility and valuable relationships. JLMC is also aware of the importance of their community volunteers. JLMC monitors and rewards the good work of the CLVs and GPAs. Those who go above and beyond receive a bicycle from JLMC, allowing them to travel faster and reach more people, allowing for a deeper community impact. During a community visit, an exuberant CLV showed her bicycle to the researchers as she beamed with pride. JLMC also provided a lunch and celebration for the CLVs and GPAs on the Ugandan holiday of Heroes Day. These small acts of kindness speak volumes to the recipients and are a worthy investment in the community. Through the GPP, JLMC is helping increase the participating girls' knowledge and shifting their behavior and attitudes (Just Like My Child, n.d.). JLMC discovered with their own internal study, based on quasi experimental design, that after a full participation in the Girl Power Project, vulnerable teenage girls have additional assets critical to increasing their skills and abilities and increasing their human capital. To further understand the impact of the GPP, JLMC contracted a research team from Texas A&M University to help assess the impact of the GPP at the community level.

This research team is composed of four graduate students, Mitchell Baker, Lindsey Coleman, Darienne Davis, and Marcus Jenkins, and two professors Dr. Manuel

Piña, Jr. and Dr. Silva Hamie. Together, these researchers worked extensively over the course of a year to prepare for and conduct evaluation research on the impact of the GPP in the Luwero District. Prior to arriving in Uganda, the researchers reviewed JLMC's archived data and helped produce some evaluation tools for them to use before the team arrived. Through this process the research team developed their research skills. Additionally, the researchers built their evaluation questions before they arrived in Uganda. The researchers spent eight weeks in country from May 28 through July 24, 2018.

During the first two weeks in country, the researchers learned a lot about Uganda and the context in which they were researching. With the help of JLMC Program Director Tessa Davis, Founder of JLMC Vivian Glyck, and the 19-member Ugandan JLMC team, the researchers tweaked their evaluation questions and started their research. Ultimately, the researchers interviewed 139 community members from 17 different communities. Together they analyzed the data and produced a report for JLMC. The report is intended to help JLMC gain support for their programs based on the evidence that educating adolescent girls, boys, and adults through the GPP has immense ripple effects throughout the communities they serve.

Through this connection with JLMC, the researchers gained access to the participants in JLMC's Livelihood Project. The Livelihood Project, was sponsored by JLMC, implemented by Heifer International, and facilitated by the Bishop Asili Hospital. The project provided HIV/AIDS infected or affected families with dairy goats and other resources to help them improve their lives.

## Dairy Goat Livelihood Project

The dairy goat Livelihood Project, was inspired by the directors of the Bishop Asili Hospital in Luwero District, Uganda. While treating HIV+ patients, the hospital staff turned to JLMC as a community resource and requested they establish a program that could help improve nutrition and provide income for stigmatized families. JLMC partnered with Heifer International and Bishop Asili Hospital to create the Livelihood Project, which enabled HIV+ clients from Bishop Asili Hospital to generate income and created opportunities enabling HIV/AIDS infected or affected families to live healthier lives and send their children to school (Just Like My Child, n.d.). The project aimed to improve the livelihoods of 630 families (Heifer International, 2016).

Heifer International provided families infected or affected by HIV/AIDS with training and a loan of two dairy goats, various crop seeds, and pasture planning materials. Before the family received the loan, they were trained on how to care for the goats and generate a profit. This training also included animal and plant husbandry, integrated livestock farming, environmental protection, human nutrition, and animal pen building (T. Davis, personal communication, January 14, 2019). Once the animals had a female offspring the recipient family passed on the gift of the offspring to another family who was trained by model farmers in the program.

The Livelihood Project reached 548 families. These families received 811 goats; this number includes the original loaned goats and the offspring that were passed on. Of the 811 goats, 206 died and 6 were stolen (Heifer International & JLMC, 2016). The

initial evaluation of the project found that the participant families consumed and sold the milk produced by their goats. This allowed for increased income and improved nutrition (Heifer International & JLMC, 2016). Further, the participants sold their goats allowing the families to increase their assets (Heifer International & JLMC, 2016). With the vegetable seeds provided to the families, the farmers were able to improve their agricultural skills and environmental management abilities (Heifer International & JLMC, 2016). This increased knowledge helped maintain food, income, and nutrition security (Heifer International & JLMC, 2016). In 2016, JLMC and Heifer International-Uganda officially handed the project off to the Bishop Asili Hospital to oversee the continuous “Pass on the Gift” sustainability model as per the exit strategy plan (Just Like My Child, n.d.).

### Capacity Development

Organizations like Heifer International and JLMC build capacity through their programs. Capacity development has many definitions. In this study capacity development is defined as “abilities, skills, understandings, attitudes, values, relationships, behaviors, motivations, resources and conditions that enable individuals, organizations, networks and sectors and broader social systems to carry out functions and achieve their development objectives over time” (Bolger, 2000 p.2). From this definition, abilities, skills, and attitudes equate to human capital. Relationships and networks are developed through building social capital. Financial capital is built through increased income and increased personal assets (Mattos, 2015). The Livelihood Project

sought to build human, social, and financial capital enabling communities to build capacity to improve their lives.

### Purpose of Study

The purpose of this study is to understand how the Livelihood Project influenced community capacity development through the development of human, social, and financial capital. This study will provide greater understanding and insight about how an NGO-led, small-scale farmer initiative can have an impact on community capacity building. This research will provide a qualitative analysis of the impact of the Livelihood Project, a goat microenterprise project in the Luwero District of Uganda. Through a qualitative approach, the researcher will describe how human capital was built through the development of skills, abilities, and understandings as a result of participation in the Livelihood Project. The researcher will describe how social capital was built through transfer of livestock and knowledge. Finally, the researcher will explain how financial capital was built as a result of participating in the livelihood project.

To date, research and literature related to microenterprises has mostly focused on quantitative economic impact and specific nutritional benefits. There is limited research on the net impact of livestock donations (Rawlins, R., Pimkina, S., Barrett, C. B., Pedersen, S., & Wydick, 2014). Heifer International and JLMC conducted an earlier evaluation of the Livelihood Project. This study seeks to complement that previous evaluation by collecting and analyzing qualitative data that illuminates a broader community capacity development impact.

## CHAPTER II

### LITERATURE REVIEW & THEORETICAL FRAMEWORK

#### Microenterprise

Microenterprise projects are a growing development strategy. Specifically, animal donation microenterprises help participants out of poverty (Rawlins et.al, 2014). Microenterprises are a unique way to stimulate local economies and provide employment (Michalous, 2011). In a 2008 study, James Midgley defined microenterprises as “small businesses owned and operated by poor people or groups of poor people with the support of sponsoring organizations.” (p. 469). Midgley identified how microenterprise programs have an overall positive impact on their communities. However, he pointed out, it is important to keep in context the small percentage of the global poor who have access to microenterprise programs (2008). Further, Midgley reported that there are a disproportionate number of women involved in microenterprise projects.

While the participants in the Livelihood Project did sell the products they produced, they did not all establish small businesses in the traditional sense. Additionally, there are more layers to the Livelihood Project than a traditional microenterprise. Each project that Heifer International sponsors is specifically tailored to the region in which it is offered. Further, the loan of the animal, in this case the dairy goat, does not need to be paid back in the same way it was given. Participants repay their loan by passing on the gift of the goat’s female offspring to another family in their

community. While the Livelihood Project can be interpreted as a microenterprise project, it is slightly more complex.

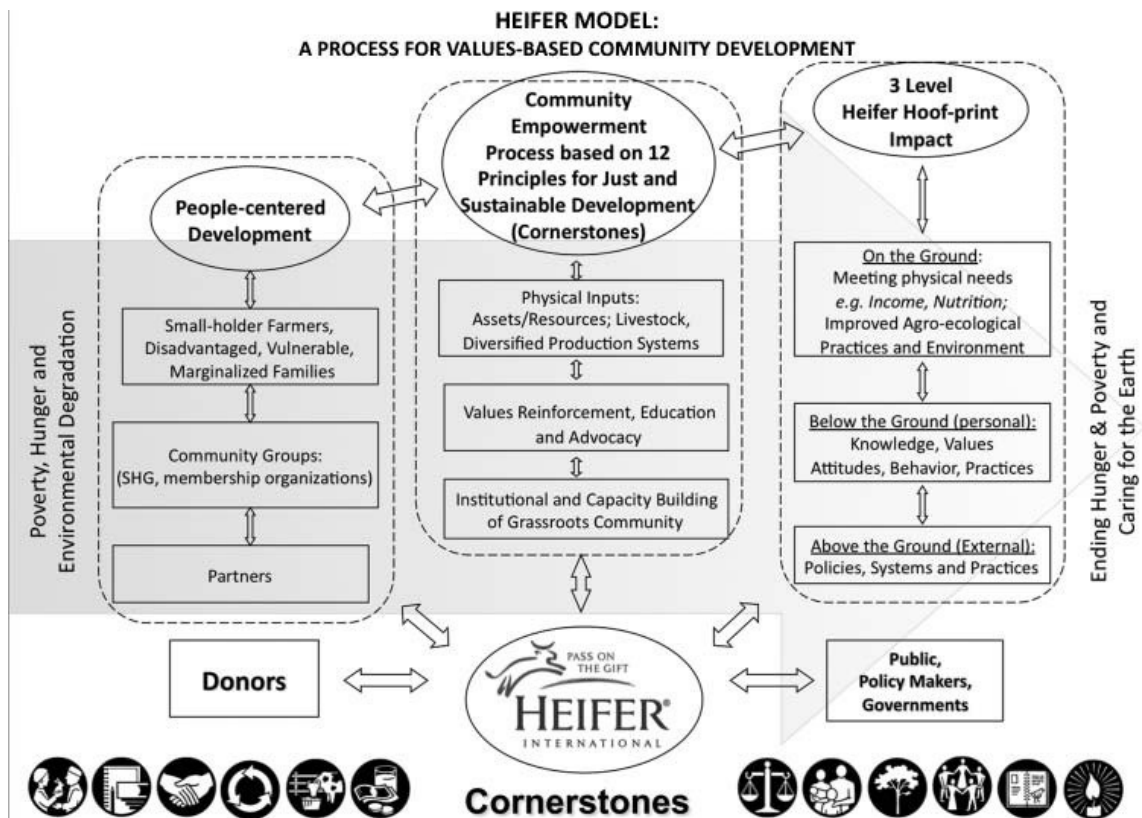
There is an expansive amount of literature assessing the impact of microenterprise projects. Among this body of research are studies devoted to assessing the impact of female-led microenterprise projects. A study conducted by Schuler and Hashemi in 1994 concluded that women found empowerment through micro-credit programs. Studies in Bangladesh and Sri Lanka demonstrated how income generated through microfinance allowed women to feel independent and in control (Odek et.al 2009). A study from the University of Southern California found that microenterprises can address the economic needs of the poor and improve their living conditions (Bhatt, 1997). A study in Tanzania found that business training and small grants significantly impacted the business performance of small scale entrepreneurs in the long and short term (Berge, Bjorvatn, & Tungodden, 2014).

There is a developed base of research explaining the benefits of microenterprises such as job creation and overall economic growth. However, few studies detail the impact microenterprises have on the families of the individuals participating in the microenterprises from a qualitative perspective. This study seeks to expand the understanding of the impact of microenterprises, specifically on community capacity building. This study seeks to offer more detail about the impact and develop a more detailed understanding of how NGO-led microenterprises can increase community capacity through the development of human, social, and financial capital.

## Heifer International

Microenterprise projects are often sponsored by organizations. In the context of this study, the Livelihood Project was sponsored by a partnership between Heifer International and JLMC. Often microfinance and microenterprise projects involve an initial monetary investment. Heifer International is unique in their process as they offer an initial investment through an in-kind loan of animals and training. In a 2011 address, Heifer International's Vice President of Program Development Dr. James De Vries explained how Heifer International is built around the idea of providing resources to individuals who are then able to use those resources to provide for themselves. Additionally, Heifer International focuses on developing communities by encouraging individuals to pass on the gift of a female offspring to another family in the community who can then use the resource to provide for themselves. Heifer International follows a value-based community development model (De Vries, 2011).





**Figure 1 Heifer International Model**

Figure 1 is the Heifer International model for the Livelihood Project in Uganda. An important part of the first step in the Heifer International model is developing community groups. Through partnering with JLMC and the Bishop Asili Hospital, community groups and partnerships were formed with trusted and established organizations in the community. These partnerships help build social capital. Through their partnership with JLMC, Heifer International had access to local support and knowledge of the Luwero District community. Heifer International then provided the physical inputs through the loan of two dairy goats and seeds along with intensive interdisciplinary training. Participants were then successful in meeting their physical

needs through generating income, improving nutrition, and health (Just Like My Child, n.d.).

There are many studies evaluating the impact of Heifer International's work around the world. In 2013, Rosmary Rawlins conducted a study evaluating the impact of a Heifer International dairy cow and meat goat project in Rwanda. Rawlins concluded that livestock donations positively impacted children's health. There was a statistical correlation between dairy cow donations and height for age z scores among children (Rawlins, 2014). A 2011 study from Western Michigan University assessed the overall impact of a large Heifer International project in Albania. This project "assisted 7,325 families in more than 50 communities through the gift of 3,960 heifers, 228 sheep, 1,300 goats, 256 pigs, 272 beehives and 27,400 forestry saplings." (Coryn, 2011 p. i). This study concluded that most participants experienced increased income and improved nutrition. Further, participants sustained their production for multiple years after the initial loan (Coryn, 2011). Additionally, researchers from Cornell University studied a dairy cow, meat goat, and draft cattle project in Zambia. These researchers found that increased livestock ownership directly increases dietary diversity through increased access to animal products and indirectly increased dietary diversity through increased incomes (Jodlowski, Nelson, Baylis, & Gold, 2016). Finally, a study from the Massachusetts Institute of Technology in the Philippines assessed the impact of five umbrella projects and concluded that the umbrella projects impacted food security and food variety. Heifer International has been successful in improving the livelihood of

communities around the world following their value based community development model.

During their time in country, the researchers met with the director of Heifer International-Uganda. During their meeting the researchers learned more about the East Africa Dairy Development project, an on-going dairy project in Kenya, Tanzania, and Uganda. The director shared about how this project allowed farmers to form cooperatives. As a group, these farmers used their power to demand their local government build a road connecting them to larger markets and making it possible for their milk to be delivered. This demonstrates the potential spillover effects of livestock microenterprise programs. By investing livestock assets and knowledge in a small group of dedicated individuals, the whole community has the potential to benefit and grow.

### Theoretical Framework

Community Capitals Framework (CCF) is a theoretical framework used to help assess the Livelihood Project. This framework was created by Cornilia and Jan Flora and is used to analyze communities and community development efforts from a systems perspective (Mattos, 2015). This framework focuses on the role seven different tangible and intangible capitals play in developing community capacity (Gutierrez, Emery, & Fernandez-Baca, 2009). In this framework, capital is defined as “the resources people and/or communities possess” (Gutierrez et al., 2009 p. 109). The seven capitals are built, financial, political, social, human, cultural, and natural (Mattos, 2015). CCF was used for this study because this framework “offers a way to analyze community and economic

development efforts from a systems perspective by identifying the assets in each capital (stock), the types of capital invested (flow), the interaction among the capitals, and the resulting impacts across capitals” (Emery & Flora, 2006 p. 20). The resulting impacts as each capital grows is the development of community capacity through the development of economic security, social inclusion, and a healthy ecosystem (Mattos, 2015). Robert J. Chaskin synthesized many different definitions of community capacity and offers the definition that community capacity includes resources ranging from skills to income, networks of relationships, and leadership (2001).

This study seeks to understand how the Livelihood Project impacts social, human, and financial capital. While the remaining capitals are important to achieving a healthy ecosystem, vital economy, and social well-being, they go beyond the scope of this study. However, all the capitals influence each other and investing in one capital can possibly enhance the productivity of the other capitals (Gutierrez et al., 2009).

Human capital, within this framework, is defined as the skills and abilities possessed, along with the capacity to access outside knowledge and increase understanding (Mattos, 2015). By training participant families, with an interdisciplinary approach, the Livelihood Project seeks to increase human capital by increasing the skills and abilities of participants. Through increasing health and nutrition, abilities are increased. This study seeks to understand what those skills and abilities are.

Social capital within this framework is defined as the connections among people and organizations (Mattos, 2015). Through the Heifer International’s model of passing on the gift we see how the Livelihood Project has the immense potential for influencing

social capital by connecting community members through the transfer of knowledge and livestock. Additionally, as participant farmers learn, they have the potential to serve as resources and teachers for others in their community, further strengthening social networks.

Finally, financial capital is defined as the financial resources available to invest in the community (Mattos, 2015). By teaching participants how to build a microenterprise, the Livelihood Project creates a strategy for income generation allowing for the increase in financial capital. This increase in financial capital can then have spillover effects that benefit the whole community.

## CHAPTER III

### METHODS

The purpose of this study is to understand how the Livelihood Project influenced community capacity development through the development of human, social, and financial capital. This study will provide greater understanding and insight about how an NGO-led, small-scale farmer initiative can have an impact on community capacity building. This research will provide a qualitative analysis of the impact of the Livelihood Project, a goat microenterprise project in the Luwero District of Uganda.

#### Research Questions

The purpose of this study was achieved by providing answers to the following research questions.

1. How did the Livelihood Project impact human capital?
2. How did the Livelihood Project impact social capital?
3. How did the Livelihood Project impact financial capital?

#### Research Design

A qualitative research design was used for this study. Qualitative research allows the researcher to study things in their natural settings, attempting to interpret and bring meaning to the things they observe (Denzin & Lincoln, 2008). Qualitative research assumes reality is a social construct and exists as participants perceive it (Cresswell &

Miller, 2000). The primary sources of data in this study are the individuals who participated in the Livelihood Project. A qualitative approach works well because this method allows the experience of the participants to be presented as reality. Additionally, qualitative research requires the researcher to have direct contact with the people in their study in their own environments, allowing the researcher to understand the realities and details of the participants' daily lives (Patton, 2002).

Specifically, this study was evaluation research into the perceived impact of the Livelihood Project on the development of community capacity through the strengthening of human, social, and financial capital. Bryman defines evaluation research as “research that is concerned with the evaluation of real-life interventions in the social world” (2016 p. 691). Patton defines evaluation as “the systematic collection of information about the activities, characteristics, and outcomes of programs....evaluation research can include any effort to judge or enhance human effectiveness” (2002 p. 10). Further, evaluation research is used to make judgement about a program and occurs in the environment of the program application (Childers, 1989). The researchers in this study sought to understand how the intervention of the resources provided through the Livelihood Project changed the lives of participants through improvement of human, social, and financial capital.

### Research Participants

Families infected or affected by HIV/AIDS are the primary group involved in the Livelihood Project. There were a total of 548 families reached by the project. These

families were all geographical located in the Luwero District which is composed of three sub-districts Luwero, Buntutmula, and Nyiibwa. The researchers visited the homes of four families involved in the project. Three of the visits were conducted during the first week in country and the fourth visit took place on the same day the interviews were conducted during the sixth week in the community. The first three families visited were chosen by the JLMC staff. The three homes that the researchers visited were located in the sub-districts of Tebalyala, Kanyogo, and Kaguugo. The researchers interviewed 26 farmers at the fourth home the researchers visited. These interviews were conducted in Katuugo Parish, at the home of one of the farmers in the project. The 26 interviewees, were recruited by the JLMC staff. The researcher used a purposive sample, gathering data from individuals and families who received a goat as part of the Livelihood Project. The staff members used their communication channels and invited participants in the Livelihood Project to be interviewed. The staff choose to contact participants who were physically located along main roads and could be reached easily to be interviewed. Additionally, the staff chose to invite participants in the project who had emerged as leaders or displayed leadership qualities. Each person interviewed was compensated with a light snack, soda, and the cost of their transportation by JLMC. Purposive sampling was used because the researchers chose the sample in a strategic way, interviewing individuals who have relevant experience with the Livelihood Project, where conveniently located, and demonstrated leadership qualities (Bryman, 2016). Patton states that the reason for purposive sampling is to "...select information-rich cases whose study will illuminate the questions under study" (2002 p. 46). An important part



of the purposive sample is that it cannot be used to generalize to a population (Bryman, 2016). A study on farmer cooperatives used purposive sampling in Abuja, Nigeria that allowed from the most information rich participants to be interviewed (Innocent & Adefila, 2014). Due to limited time, resources, and access the researchers were not able to speak with everyone or a majority of the individuals who participated in the Livelihood Project.

### Data Collection

Before arriving in Uganda, archived data was used to develop a context for the Livelihood Project. The primary form of data collection was through semi-structured interviews. Three researchers Lindsey Coleman, Mitchell Baker, and Marcus Jenkins each conducted one-on-one semi-structured interviews. Semi-structured interviews in qualitative research can be defined as a conversation with a purpose (Erlandson, Harris, Skipper & Allen, 1993). Dooley suggests developing a guiding set of questions that allow for deviation and further probing (2007). Further, Fylan (2005) states that semi-structured interviews follow a set of questions that allow the researcher to find out what they want to know, but the conversation can vary from the guiding questions. This variance allows for probing or clarification questions to be asked. The researchers used the following questions as a flexible structure from which further questions were asked.

Q1: What have you learned through the Livelihood Project?

Q2: What are you doing differently now than prior to Livelihood Project?

Q3: Do you feel differently now that you have participated in Livelihood

Project? If yes, how?

Q4: How has Livelihood Project influenced your community?

Q5: What are some of the things you liked about Livelihood Project? Why?

Q6: If this project were done again what do you think should be done differently?

Each question was asked for a specific reason. The rationale behind asking Q1 is to understand what skills, knowledge, and abilities were developed through this process.

How was human capital influenced by the Livelihood Project?

The rationale for asking Q2 is to understand how behaviors changed as a result of this project. For clarification, a common probing question asked was, what are you now able to do? This question seeks to understand how families have been affected by the Livelihood Project. Did the Livelihood Project allow for increased access to different resources like electricity or education? Are families eating higher quality food because of increased income or increased access? Are families more relaxed and able to do more things? How has the Livelihood Project influenced human capital and financial capital?

The rationale for asking Q3 is to understand how attitudes have changed as a result of this project. Do participants feel a sense of purpose? Do participants feel a sense of community? Do participants feel stronger or more powerful? Do young daughters of participant families feel empowered? Do children feel inspired from seeing their parents working and generating income and giving back to their community? How has the Livelihood Project influenced human capital?

The rationale for asking Q4 is to understand how social capital has been influenced as a result of the Livelihood Project. Do participants feel connected to their

community? Do participants feel a sense of responsibility for helping contribute to the growth of their community? How has each person's network grown because of their involvement in the project? How has the Livelihood Project influenced social capital?

The rationale for asking Q5 and Q6 is to further understand how or if this model can be replicated. Q6 cause some confusion during the interviews. The researchers added the clarifying phrase "What would you and the implementer do differently?" The researchers wanted to understand if there is a more familiar livestock animal participants would prefer. Should the training before starting the project be different? How can this project be done better? How can we use resources in the country to help other Ugandans?

The semi-structured interviews with the 26 interviewees were conducted on one afternoon at the home of one of the lead farmers during the researchers sixth week in the community. The interviews were conducted outside in the yard shaded by trees. Prior to the interviews, the researchers toured the compound and saw the farmer's current goats. Each interview took 10 to 20 minutes. Lindsey Coleman interviewed 10 people, Marcus Jenkins interviewed seven people and Mitchell Baker interviewed nine people, for a total of 26 interviews. The semi-structured interviews were conducted in English as this is the language spoken in the country. Translators were available to clarify questions and answers. Because there were three researchers and translators were used, the researchers used member checking to ensure accuracy by verifying each response during the interview (Erlandson et al., 1993). While the data from these interviews were all collected at the same time, other data was collected through observations and

conversations during the eight-week period the researchers lived in the Luwero District. Prolonged engagement is an essential aspect of qualitative research. By living in Luwero District and working in 17 communities on a contracted research project, from May 28, 2018 to July 24, 2018, the researchers established a prolonged engagement allowing trust to be built and avoiding potential distortions (Dooley, 2007).

During the visits to the farmers' homes, data was collected through observations and informal conversations. Observation will help the researcher grasp an understanding of motives, beliefs, concerns, and interests (Dooley, 2007). Further, observations allow the researcher to gather in-depth data and identify relevant information (Dooley, 2007). Additionally, the researchers collected data through personal notes, journaling, and other unobtrusive measures during their time in the Luwero District. This form of data collection occurred through the many casual conversations with the JLMC staff members and Livelihood Project facilitators. This unobtrusive data collection allows for data to be collected from a different perspective (Dooley, 2007). Finally, data was collected through peer debriefing. "Peer debriefing allows the researcher to test working hypotheses and find alternative explanations" (Dooley, 2007 p. 38). There were three researchers who collected data from the farmers during the interviews. The fourth researchers did not collect data from the interviews, but was a member of the research team during the many visits to the communities. Together the four researchers reflected with each other to construct knowledge or make sense of the information they were collecting. Archived data and additional evaluation reports of the Livelihood Project were also used. Through the use of multiple data sources, the researcher is able to cross

check and add validity to their findings (Patton, 2002). Multiple data sources were used to triangulate the data ensuring credibility (Bryman, 2016). The observed data from the visits to the farmer's homes was triangulated with the verbal responses provided in the interviews (Erlandson, 1993). Credibility was further ensured through the researcher's prolonged engagement in the community, the triangulation of data, peer debriefing among the researchers, and member checking during the interviews (Erlandson et al., 1993).

To further ensure accuracy and trustworthiness, interviews were recorded with the consent of the participants. To ensure dependability the researcher used an audit trail including all raw data, observations, written journal entries, and everything involved in data analysis (Bryman, 2016). Through the use of thick description and purposive sampling, transferability was ensured (Dooley, 2007). Finally, to establish transparency and mitigate bias, a reflective journal was kept.

In preparation for the contracted evaluation research and anticipating complementary thesis research, an Institutional Review Board application was submitted. It was reviewed and determined that IRB approval was not needed. A copy of the IRB letter is found in Appendix C.

## Data Analysis

After the eight-week period in Uganda, the researcher began data analysis. The researcher transcribed the responses to the questions in the semi-structured interviews into Microsoft Excel. Each question was individually analyzed. Each response stated by

the interviewee was separated by idea (Compton, 2014). For example, if a respondent answered Q1 stating they learned how to grow corn and build shelter for goats through their involvement in the Livelihood Project, that response would be separated into two different ideas. Each idea was then thematically analyzed. Bryman defines thematic analysis as a way to examine data by extracting core themes from transcripts (2016). Each idea was then coded through the use of open coding. Open coding is “the process of breaking down, examining, comparing, conceptualizing, and categorizing data (Strauss & Corbin, 1990). The coded ideas were then grouped together by theme. The frequency of each theme was then counted. Each theme was only counted once per respondent, if a respondent provided a response with repeating themes, the repeated themes were coded as such and not counted in the total so as to accurately represent how many people stated each theme. The researcher wanted to understand how many people of the 26 interviewed mentioned each theme. Even if one respondent mentioned a single theme multiple times, it was only counted once. The coded themes were counted and the frequency of each theme was calculated out of the total number of respondents ( $N=26$ ), as each theme is only present once per respondent. This process allowed the researcher to link the data to the research questions and specifically assess the impact of the Livelihood Project through the themes that emerged. There were some situations where the respondent provided a response to a question that better answered a different question. In those situations, the researcher moved the response to the question it more accurately answered.

## Study Limitations

Because this study was conducted internationally, language and cultural limitations exist. Interviews were conducted in English, the language spoken in the country. However, the researchers were accompanied by a translator to clarify questions and answers, when necessary. Additionally, the researchers were limited in their access to the full group of 548 families who participated in the Livelihood Project. Their limited access was due to a limited amount of time in the country, JLMC's staff limited communication resources, and physically it was difficult for participants to travel to be interviewed. While the JLMC staff members allowed the researchers access to the participants, their presence could also have presented a bias as JLMC was instrumental in the Livelihood Project. Finally, racial and gender bias may also be present as the researchers are American and the participants are Ugandan. Some of the participants thought the researchers were part of Heifer International, potentially contributing to bias.

## CHAPTER IV

### RESULTS

This chapter will cover the observations from visiting the homes of four farmers involved in the Livelihood Project, the themes that emerged from the semi-structured interviews with 26 participants in the project, and a discussion about the overall results.

#### Observations from Farmer Visits

The research team traveled to the homes of four different farmers and their families who participated in the Livelihood Project. To keep the identities of these farmers confidential, they will be referred to as F1, F2, F3, and F4. The first three visits occurred during the researchers first week in country. Later, when the researchers conducted the interviews, they visited the home of a fourth farmer. The first three visits helped the research team develop a deeper understanding of the community.

Additionally, visiting the farmers homes helped provide context for the Livelihood Project which permitted the researchers to have a physical and visual understanding for the responses they heard later in the interviews. During these home visits, the researchers had casual conversations with the farmers and their families and observed how their lives were impacted by the project. As the researchers were using these visits to develop a foundational understanding of the project, they did not formally interview the farmers; they were simply acquiring context. The JLMC staff were available to help clarify and add context for the researchers. It is possible that the presence of the JLMC staff who



helped facilitate the Livelihood Project could have introduced bias in what the farmers and their families shared with the researchers.

The first farmer visited (F1), shared about how the project helped his family. F1 is a male farmer who lives in Tebalyala, he has five children, there are seven people in his home, and he served as one of the community leaders of the Livelihood Project. The other farmers in the project selected F1 to serve as the leader. He helped zone farmers and build committees among the participating farmers. F1 served as a resource for other farmers to come ask him questions. This helped him develop his leadership skills and connections in the community. As part of the project, when the goat they receive gives birth to a female offspring, the family is required to pass on the offspring to another family in the community. F1 was able to pass on two goats, further connecting him and his family to the community.

F1 learned new skills through this program. Because of his leadership position, he and his family were sent for additional training about the specific breed of goats in the program. F1 also learned how to build the goat housing structure. Through this process he gained construction skills.

F1 stated many different ways this project improved his and his family's quality of life. By selling the goat milk, he was able to generate income. This income was used to send one of his children to school. Additionally, the project connected his family with the local hospital, allowing them to receive their HIV medication. Most notably, F1 shared how their family no longer felt financial or societal pressure. He discussed how

often families infected or affected with HIV/AIDS are hopeless, but this project restored his hope.

Further, F1 shared about how he is now more involved in agriculture. He is using the manure from the goat in his garden. In his garden he is now growing bananas and coffee as a direct result of the project. Additionally, F1 has more goats; he was able to sell three goats, further contributing to his increased income. He also has two pigs and one cow.

F1 also shared what he thought was lacking from the program. He wants to learn more about diseases that affect his animals and crops and expressed interest in having extension officers to help him and other farmers in his community. Further, F1 wants more training on how to plant grass for the goats as feeding the goats is a challenge he faces.

F1 took great pride in his work. His compound was very clean and he was excited to show the researchers his animals. The structure he built for his goats was sturdy and well built. He was seemingly very proud to be part of the project and had taken the opportunity he was given and turned it into something bigger that benefited his whole family. He demonstrated for the researcher team his knowledge and skills as he fed sweet potato leaves to his goats.

The second farmer (F2) visited was female, she lives in the Kanyogoga district. The research team spent less time with her, she shared how she learned how to keep records and was very grateful to the JLMC staff for all they had done for her. The researchers walked through her garden and witnessed all the work she had done to

improve her land and house. Her children were involved with the GPP and one of her older female family members was receiving help from a CLV for a domestic problem and expressed her gratitude to the CLV during the visit.

The third farmer (F3) visited was also female and lives in Kabuko. She serves as the vice chairperson for the community. The vice chairperson works with the local chairperson (LC1) as the village leaders. Together, the vice and local chairperson work with their village and the police to solve problems and make necessary changes. The LC1 and vice chairperson work with the parish chief and district office on behalf of the people in the village. Serving in this position has improved F3's leadership skills. She is proud of how other farmers come to her for help. Helping other farmers helps F3 build community relationships and connections. Similarly to F1, F3 exuded pride in her work. She stood tall next to the goat structure sharing about how she dreams of being the head chairperson in her community someday. She wants to be the "mother" of the community, someone others can look to.

F3 was part of the original pilot test group before the full Livelihood Project started, and she shared many of the same lessons learned as the farmers who joined the full project. F3 shared how she learned commitment and responsibility from having to take care of the goats. She also learned time management and how to create a time table for herself and her family. The most unique thing F3 shared was that her family members are now better learners because of the responsibility they gained in taking care of the goats. Like F1, F3 turned her original goat into a larger herd and now has seven goats.

Additionally, F3 has improved her family's quality of life. She is now able to pay school fees with the income earned from the goat products. She uses this income for other scholastic materials to help her children. The researchers also noticed her home had glass windows, indicating a higher quality living condition. F3 also expressed a desire for her children to learn about agriculture. She had seen the way working with goats helped her and wanted her children to follow a similar path.

F3 expressed what else she wants she learn. She expressed an interest in learning more about agriculture, specifically how to raise cows. She also wants her children to learn more about animals.

The researchers conducted the semi-structured interviews at the home of the fourth farmer, one of the lead farmers in the Livelihood Project. This farmer (F4) was also included in the 26 individuals who were interviewed. F4 lives in Katuugo Parish. The researchers toured his compound and land before conducting the interviews. F4's home was beautiful with glass windows indicating a higher quality living condition. F4's wife was wearing a beautiful Goma dress, a traditional Ugandan outfit. The couple seemed very excited to host the researchers and provided many chairs for everyone to use. They also showed the researchers their goats and the sturdy structure in which the goats lived. F4 also showed the researchers his cows and orange tree farm. Before the researchers left their house, the family sent the researchers and JLMC staff home with lots of fruit to share. F4, his wife, and their child looked healthy and happy.

## Interview Results

The researchers interviewed 26 individuals who participated in the Livelihood Project. All interviews were conducted at Katuugo Parish on July 7, 2018, during the researchers sixth week in the Luwero District. The JLMC staff used their resources to contact farmers who participated in the project and invited them to be interviewed. The JLMC staff were limited by their transportation and communication resources and could not reach every participant in the project. Additionally, the research team and the participants were limited with their time to conduct the interviews. Due to other commitments the research team and the participants had there was only a specific window of time available to conduct the interviews.

It is important to mention again that the researchers lived in the Luwero District for eight weeks. During this time they visited 17 different communities that gave them unique opportunities to more fully understand the context in which the Livelihood Project was conducted, i.e., moving from community to community required many hours of travel that enabled the researchers to fully appreciate and compare the food and agriculture production systems in the area.

All 26 interviewees were compensated with a soda, light snack, and the cost of their transportation to Katuugo Parish. Three researchers, Lindsey Coleman, Marcus Jenkins, and Mitchell Baker, conducted the semi-structured interviews. Each researcher worked with a translator from JLMC who helped clarify. Because there were three different translators, the statements provided by the respondents are in different formats. Each translator used their own style resulting in the direct quotes from respondents being

in different tenses. To understand the impact of the Livelihood Project, the following open-ended questions were asked,

Q1: What have you learned through the Livelihood Project?

Q2: What are you doing differently now than prior to Livelihood Project?

Q3: Do you feel differently now that you have participated in Livelihood Project? If yes, how?

Q4: How has Livelihood Project influenced your community?

Q5: What are some of the things you liked about Livelihood Project? Why?

Q6: If this project were done again what do you think should be done differently?

With Q2, a common probing question asked was “what are you now able to do?”

With Q6, there was some confusion so the researchers added the clarifying question, “What would you do differently and what do you think the implementers should have done differently?”

Among the respondents 35% were male ( $n=9$ ) and 65% were female ( $n=17$ ). To keep the identities of the respondents confidential, the respondents are identified as R with a number of 1-26 assigned to each, e.g., R1, R2. The major, prominent, and minor themes that emerged in response to each question are presented. If a theme was present among at least 50% ( $n \geq 13$ ) of the respondents it was judged to qualify as a major theme by the researcher. Themes with 49-33% representation ( $n > 9$  or  $< 13$ ) were judged to qualify as prominent themes by the researcher. Themes with less than 33% ( $n < 9$ ) of respondents were judged to qualify as minor themes. The researchers also took into

account their observations during the interviews which often reflected the feelings expressed by the interviewees as they responded to the questions.

Because each respondent provided responses with more than one theme, the sum of the percentages of themes does not equal 100%. If a theme contained subthemes, those are presented in the corresponding table; if there are no subthemes an additional section in the table is absent. Representative statements are presented to help give life to the data in the tables and more clearly illustrate the theme. Representative statements related to minor themes with 12% or less of respondents ( $n=$  or  $<3$ ) are not presented. For a complete list of all the responses please refer to Appendix B.

**Q1: What have you learned through participating in the Livelihood Project?**

In response to Q1, two major themes emerged. The first major theme is participants learned general agricultural knowledge, how to produce vegetables and coffee, and animal agriculture skills. Among the 26 respondents 62% ( $n=16$ ) provided responses with this theme. This major theme is composed of four subthemes. Specifically, among these 16 respondents, eight learned animal agriculture skills, four learned general agricultural knowledge, and one learned coffee production skills.

**Table 1 Agricultural Knowledge and Skills**

<b>Theme</b>	<b><i>n</i></b>	<b>%</b>
<i>Participants learned general agricultural knowledge, how to produce vegetables and coffee, and animal agriculture skills</i>	16	62
<b>Subthemes</b>	<b><i>n</i></b>	
Animal agriculture skills	8	
General agricultural knowledge	4	
Vegetable growing skills	3	
Coffee production skills	1	

Statements representative of this theme include,

- R8: “I have learned more skills in animal keeping”
- R13: “she has learned more skills with rearing cattle”
- R17: “I have more skills in farming”
- R5: “I am more knowledgeable about agriculture”
- R26: “she learned about vegetable gardening”

The second major theme is, participants developed intrapersonal and life skills including, teamwork, leadership, caring, friendships, responsibility, commitment, and time management. Among the 26 respondents, 54% ( $n=14$ ) provided responses with this theme. This major theme is composed of six subthemes. Specifically, among these 14 respondents, four learned time management skills, three learned how to be more



responsible, two learned leadership skills, two learned teamwork, two learned to care more, and one learned to be more committed.

**Table 2 Intrapersonal and Life Skills**

<b>Theme</b>	<b><i>n</i></b>	<b>%</b>
<i>Participants developed intrapersonal and life skills including, teamwork, leadership, caring, friendships, responsibility, commitment, and time management</i>	14	54
<b>Subthemes</b>	<b><i>n</i></b>	
Time management skills	4	
Responsibility	3	
Leadership skills	2	
Teamwork	2	
Improved caring	2	
Commitment	1	

Statements representative of this theme include,

- R22: “[she has] learned time management ”
- R7: “I have learned how to be committed”
- R9: “I have learned how to be more responsible”
- R1: “I have learned how to mobilize people in the community

A prominent theme is participants learned how to make and use manure efficiently. Among the 26 respondents 38% ( $n=10$ ) provided responses with this theme. Statements representative of this theme include,

- R3: “I have learned how to make manure from the excrement from the goats”
- R6: “I learned how to make manure myself for my garden”
- R12: “she is learning how to use manure in the garden”.

Another prominent theme that emerged is, participants increased their knowledge on goat rearing. Among the 26 respondents, 38% ( $n=10$ ) provided responses with this theme. Statements representative of this theme include,

- R5: “I feel that I am more knowledgeable about goat skills”
- R15: “she learned how to take care of goats”.

A minor theme is, participants learned how to generate income and get out of poverty. Among the 26 respondents 19% ( $n=5$ ) provided statements included in this theme. Specifically, among the five respondents, four learned how to generate income, and one learned how to get out of poverty.

**Table 3 Income Generation**

<b>Theme</b>	<b><i>n</i></b>	<b>%</b>
<i>Participants learned how to generate income and get out of poverty</i>	5	19
<b>Subthemes</b>	<b><i>n</i></b>	
How to generate income	4	
How to get out of poverty	1	

Statements representative of this theme include,

- R16: “she now knows that you can sell 2 goats and use the money for the home”
- R23: “she has learned how to get out of poverty”.

An additional minor theme is, participants learned how to efficiently use land and natural resources. Among the 26 respondents 15% ( $n=4$ ) provided responses with this theme. This theme is composed of two subthemes. Specifically, among these four respondents, two have improved their ability to manage land and two learned how to efficiently use natural resources.

**Table 4 Efficient Land and Natural Resource Use**

<b>Theme</b>	<b><i>n</i></b>	<b>%</b>
<i>Participants learned how to efficiently use land and natural resources</i>	4	15
<b>Subthemes</b>	<b><i>n</i></b>	
How to efficiently use land	2	
How to efficiently use natural resources	2	

Statements representative of this theme include,

- R6: “I learned how to carry out animal farming on a small piece of land”
- R26: “[she has learned] how to grow pastures”

Another minor theme is, participants learned how to improve their health and nutrition. Among the 26 respondents 15% ( $n=4$ ) participants indicated an increase in knowledge on how to improve nutrition with goat’s milk. This theme is composed of

two subthemes. Specifically, among the four respondents, three learned how to improve their nutrition, and one had improved health.

**Table 5 Improved Health and Nutrition**

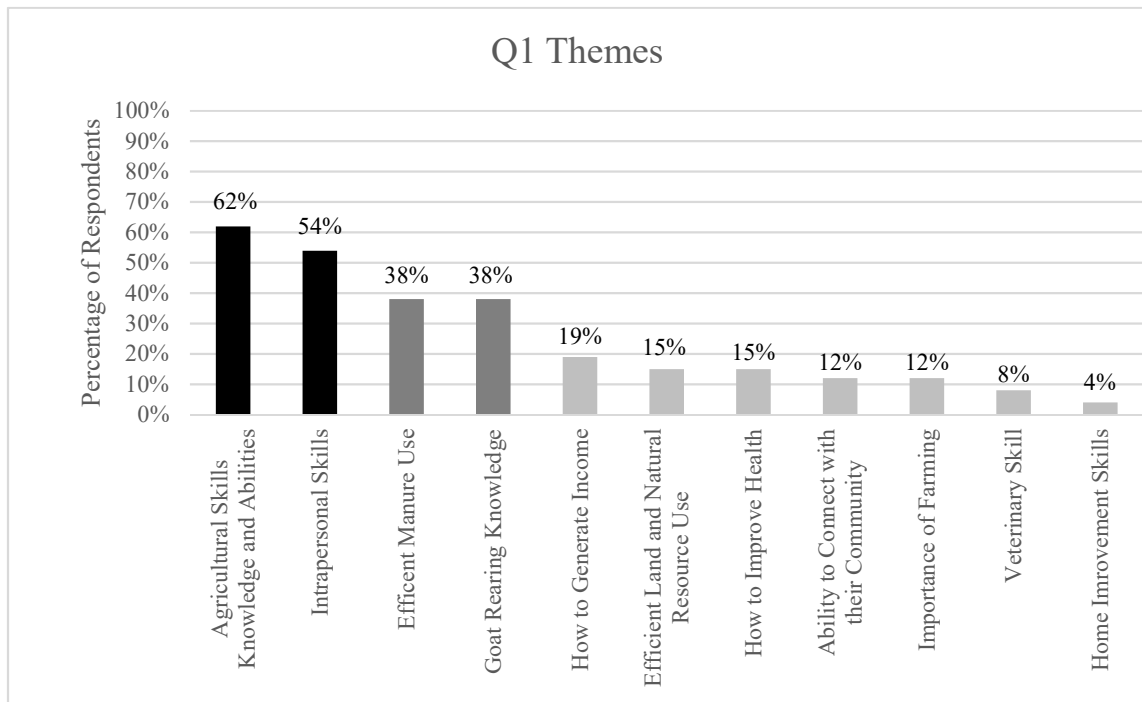
<b>Theme</b>	<b><i>n</i></b>	<b>%</b>
<i>Participants learned how to improve their health and nutrition</i>	4	15
<b>Subtheme</b>	<b><i>n</i></b>	
Improved nutrition	3	
Improved health	1	

Statements representative of this theme include,

- R23: “she feeds her family on the milk”
- R24: “health improvement in his home”.

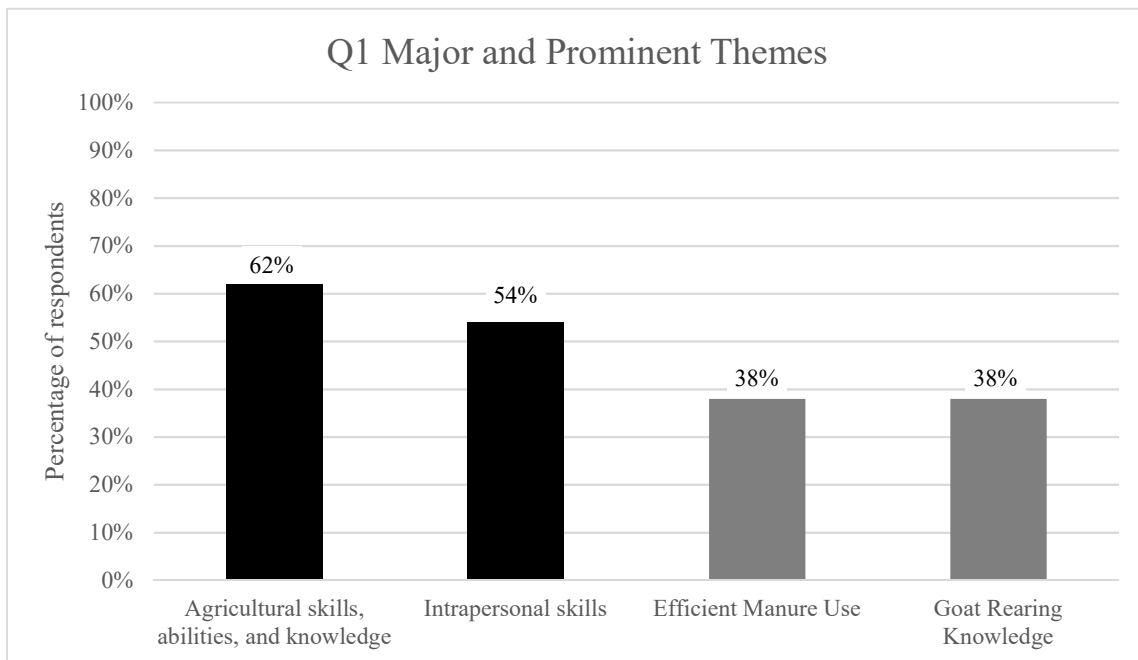
Other minor themes include, participants increased their ability to connect with their community, and participants learned the importance of farming. Among the 26 respondents 12% ( $n=3$ ) provided responses with these themes, respectively. Another minor theme is participants learned veterinary skills. Among the 26 respondents 8% ( $n=2$ ) provided responses with this theme. The final minor theme is, participants gained home improvement skills. Among the 26 respondents 4% ( $n=1$ ) provided responses with this theme.

Figure 2, graphically summarizes all the themes that emerged in response to Q1 by the percentage of respondents who stated each theme. Because each respondent provided more than one theme in their response, the sum of each theme does not equal 100%.



**Figure 2 Percentage of respondents for each theme in response to Q1**

In response to Q1, 11 individual themes emerged. Knowledge about different agricultural related topics was built and participants developed various life and agricultural skills.



**Figure 3 Major and prominent themes in response to Q1**

Of these four most common themes, three of them are related to agriculture, demonstrating that most knowledge gained by the participants was related to agriculture in some way. This is consistent with the fact that the participants received training specific to the resources provided which were the goats and seeds. The development of intrapersonal skills demonstrates how building agriculture knowledge can help increase other skillsets.

**Q2: What are you doing differently now that you were not doing before you joined the Livelihood Project?**

In response to Q2, two major themes emerged. The first major theme is participants improved their quality of life through an increase in income, improvement in nutrition and health, increased access to medication and education, and increased personal resources. Among the 26 respondents 77% ( $n=20$ ) provided responses with this theme. This theme is composed of seven subthemes. Specifically, among the 20 respondents, four respondents increased personal resources, four respondents increased their income, four increased their access to school, three increased their access to medication, three have improved health, one improved nutrition, and one improved quality of life.

**Table 6 Improved Quality of Life**

<b>Theme</b>	<b><i>n</i></b>	<b>%</b>
<i>Participants improved their quality of life through an increase in income, improvement in nutrition and health, increased access to medication and education, and increased personal resources</i>	20	77
<b>Subthemes</b>	<b><i>n</i></b>	
Increased personal resources	4	
Increased income	4	
Increased access to school	4	
Increased access to medication	3	
Improved health	3	
Improved nutrition	1	
Improved quality of life	1	

Statements representative of this theme include,

- R25: “we have a pit latrine that was not standard, now it is very ok”
- R3: “the milk had improved the health of my family members”
- R4: “the project has helped me personally it has improved our health”
- R1: “my income has increased”
- R12: “she has increased her income to pay for school fees”
- R13 stated, “they sell the food they grow buy more medicine”



The second major theme is participants increased and diversified their agricultural projects. Among the 26 respondents, 69% ( $n=18$ ) provided responses with this theme. This theme is composed of two subthemes. Specifically, among the 18 respondents, 12 have diversified their agriculture, six have improved or increased their agriculture projects.

**Table 7 Increased and Diversified Agricultural Projects**

<b>Theme</b>	<b>n</b>	<b>%</b>
<i>Participants increased and diversified their agricultural projects.</i>	18	69
<b>Subthemes</b>	<b><i>n</i></b>	
Diversified agriculture	12	
Improved/increased their agriculture projects	6	

Statements representative of this theme include,

- R4: “I now carry out vegetable farming”
- R5: “I now have chickens I did not have before”
- R12: “she has more crops like maize and beans”
- R14: “she has other projects like, cows”
- R18: “he is diversifying his agriculture”.

Additionally, two prominent themes emerged. The first prominent theme is participants increased their agricultural knowledge and skills. Among the 26 respondents, 42% ( $n=11$ ) provided responses with this theme. This theme is composed of three subthemes. Specifically, among the 11 respondents, six increased their

agriculture knowledge, four improved agricultural skills, and one had an increased value for agriculture.

**Table 8 Increased Agriculture Knowledge and Skills**

<b>Theme</b>	<b><i>n</i></b>	<b>%</b>
<i>Participants increased their agricultural knowledge and skills.</i>	11	42
<b>Subthemes</b>	<b><i>n</i></b>	
Increased their agriculture knowledge	6	
Improved agricultural skills	4	
Increased value for agriculture	1	

Statements representative of this theme include,

- R8: “His agriculture skills have improved”
- R9: “She now knows the disease form crops...”
- R16, “she now knows the milk has higher value”
- R20: “she now has better yielding techniques”.

The second prominent theme that emerged is, participants are using manure from the goats. Among the 26 respondents 35% ( $n=9$ ) provided responses with this theme.

Statements representative of this theme include,

- R16: “now he uses goat manure for his garden”
- R18: “Now he can get manure from the goats house”.

A minor theme that emerged is participants have more personal resources at home. Among the 26 respondents 15% ( $n=4$ ) provided responses with this theme.

Statements representative of this theme include,

- R1: “I have crops and fruit and animals which I did not have before the program”
- R4: “I built an energy saving stove”
- R17 stated “...he uses the money for basic needs at home”.

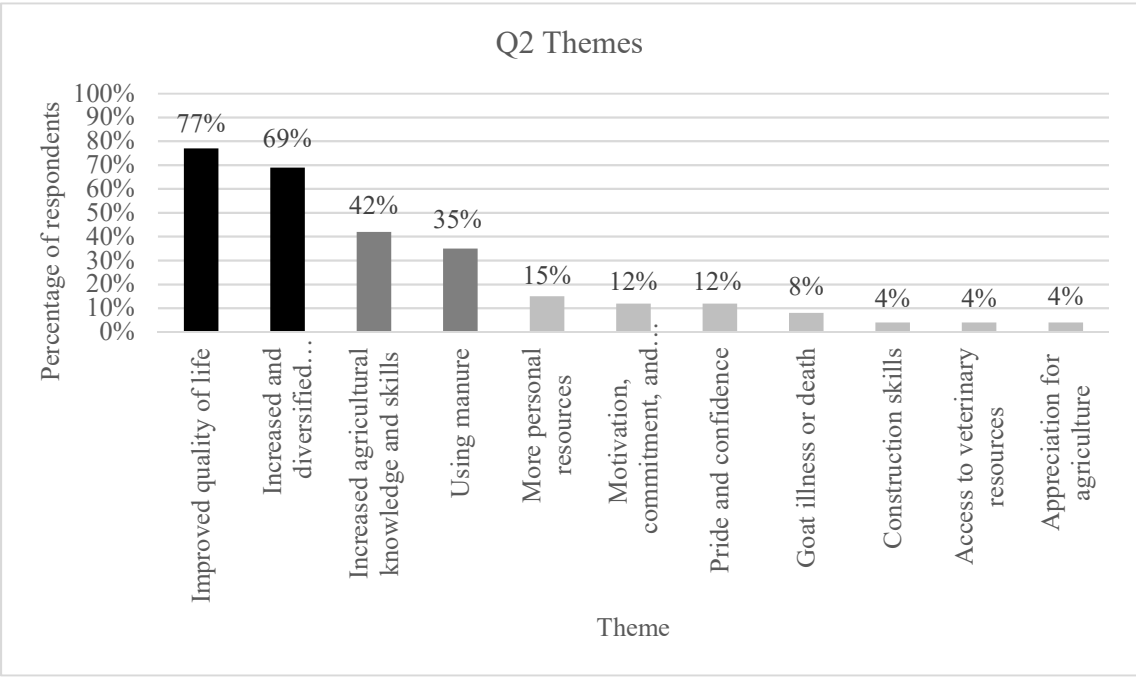
Another minor theme that emerged is participants have motivation, commitment, and empowerment. Among the 26 respondents, 12% ( $n=3$ ) respondents provided responses with this theme. This theme is composed of three subthemes. Specifically, among these six respondents, one has motivation, one has commitment, and has empowerment.

**Table 9 Motivation, Commitment, and Empowerment**

<b>Theme</b>	<b><i>n</i></b>	<b>%</b>
<i>Participants have motivation, commitment, and empowerment.</i>	3	12
<b>Subtheme</b>	<b><i>n</i></b>	
Motivation	1	
Commitment	1	
Empowerment	1	

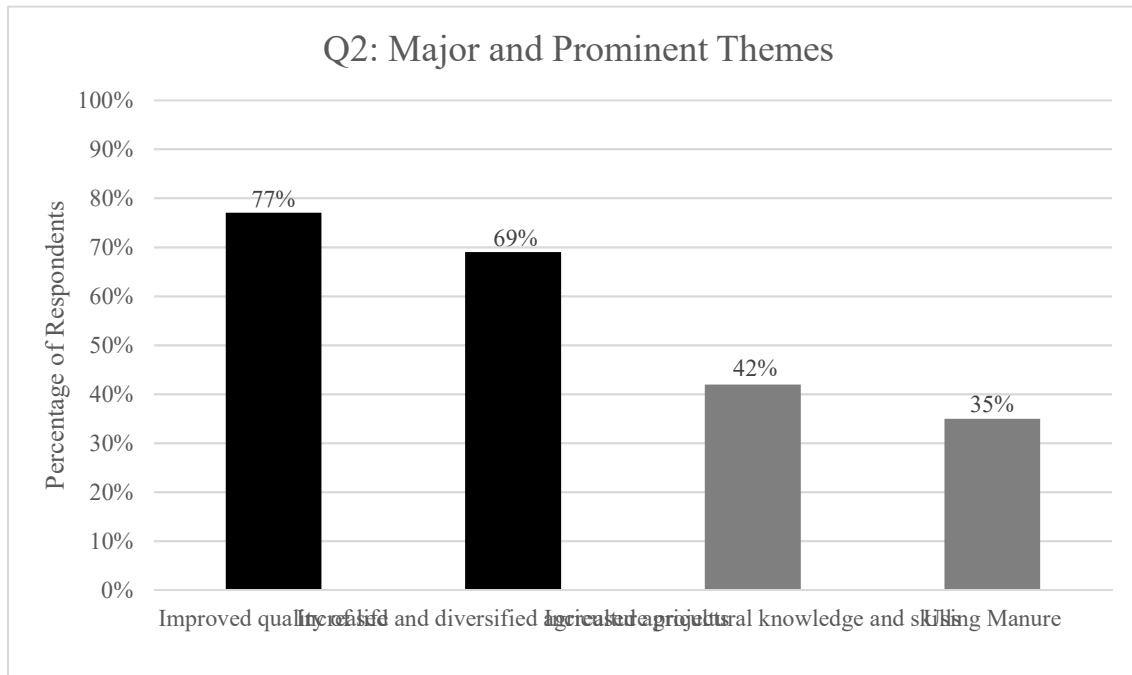
Other minor themes include participants feel increased pride and confidence. Among the 26 respondents 12% ( $n=3$ ) provided responses with this theme. Other minor themes are participants experienced goat illness or death, participants increased their

construction skills, and participants have access to veterinary resources. Among the 26 respondents 8% ( $n=2$ ) provided responses with each of these themes. The final minor theme is participants have an appreciation for agriculture. Among the 26 respondents 4% ( $n=1$ ) provided responses with this theme.



**Figure 4 Percentage of respondents for each theme in response to Q2**

In response to Q2, 11 themes emerged. There was a lot of variety between themes demonstrating the many different ways the Livelihood Project impacted the behaviors of the participants.



**Figure 5 Major and prominent themes in response to Q2**

The most common theme in response to Q2 is an increased quality of life among participants. The other three major and prominent themes include increased resources and knowledge that could have contributed to the increased quality of life 77% ( $n=20$ ) of the participants experienced. The interconnectedness of the themes demonstrates the breadth of impact of the Livelihood Project.

**Q3: How do you feel differently now that you have participated in the Livelihood Project?**

Three equally prominent themes emerged in response to this question. The first prominent theme is participants explicitly felt happy and good about the project. Among the 26 respondents 35% ( $n=9$ ) provided responses with this theme. This theme is composed of two subthemes. Specifically, among the nine respondents, eight felt good, and one felt happy.

**Table 10 Happy and Good**

<b>Theme</b>	<b><i>n</i></b>	<b>%</b>
<i>Participants explicitly felt happy and good about the project.</i>	9	35
<b>Subthemes</b>	<b><i>n</i></b>	
Good	8	
Happy	1	

Statements representative of this include,

- R1 “I feel happy”.
- R2, 3, 4, 11, 13, 12, and 14: “I feel good now”.

The second prominent theme is participants feel more connected and supported by the community. Among the 26 respondents, 35% ( $n=9$ ) provided responses with this theme. This theme is composed of two subthemes. Specifically among the nine respondents, seven felt more connected and two felt supported.

**Table 11 Connection and Support**

<b>Theme</b>	<b><i>n</i></b>	<b>%</b>
<i>Participants feel more connected and supported by the community.</i>	9	35
<b>Subthemes</b>	<b><i>n</i></b>	
Connected	7	
Supported	2	

Statements indicative of this theme include,

- R2: “I have people I can consult with”
- R17: “through gatherings they share knowledge and skills”
- R22: “she got friends now she belongs to a group”.

The third prominent theme is, participants feel smarter, more skilled, educated, and experienced. Among the 26 respondents 35% ( $n=9$ ) provided responses with this theme. This theme is composed of three subthemes. Specifically among the nine respondents, six feel more skilled, two feel smarter, and one feels more experienced.

**Table 12 Smarter, Skilled, Educated, and Experienced**

<b>Theme</b>	<b><i>n</i></b>	<b>%</b>
<i>Participants feel smarter, more skilled, educated, and experienced.</i>	9	35
<b>Subtheme</b>	<b><i>n</i></b>	
Skilled	6	
Smarter	2	
Experienced	1	

Statements representative of this theme include,

- R4: “Now I am more knowledgeable”
- R9: “I have more skills”
- R19: “she believes they now have the capacity to raise goats”
- R17: “he feels like he is able to use his skills with other projects like cows”.

A minor theme that emerged is participants feel efficacious. Among the 26 respondents, 31% ( $n=8$ ) provided responses with this theme. This theme is composed of four subthemes. Specifically, among these eight respondents, four said they feel more empowered, two feel more able, one feels motivated, and one feels more confident.



**Table 13 Efficacious**

<b>Theme</b>	<b><i>n</i></b>	<b>%</b>
<i>Participants feel efficacious</i>	8	31
<b>Subtheme</b>	<b><i>n</i></b>	
Empowered	4	
Able	2	
Motivated	1	
Confident	1	

Statements representative of this theme include,

- R4: “Now I am more motivated”
- R5: “I feel confident to raise another goat”
- R7: “I now feel that I have the ability to take care of a wider variety of animals”
- R13: “She is empowered to share what she knows with other people”.

Another minor theme that emerged is participants feel financially secure/stable.

Among the 26 participants, 23% ( $n=6$ ) provided responses with this theme. Statements representative of this theme include,

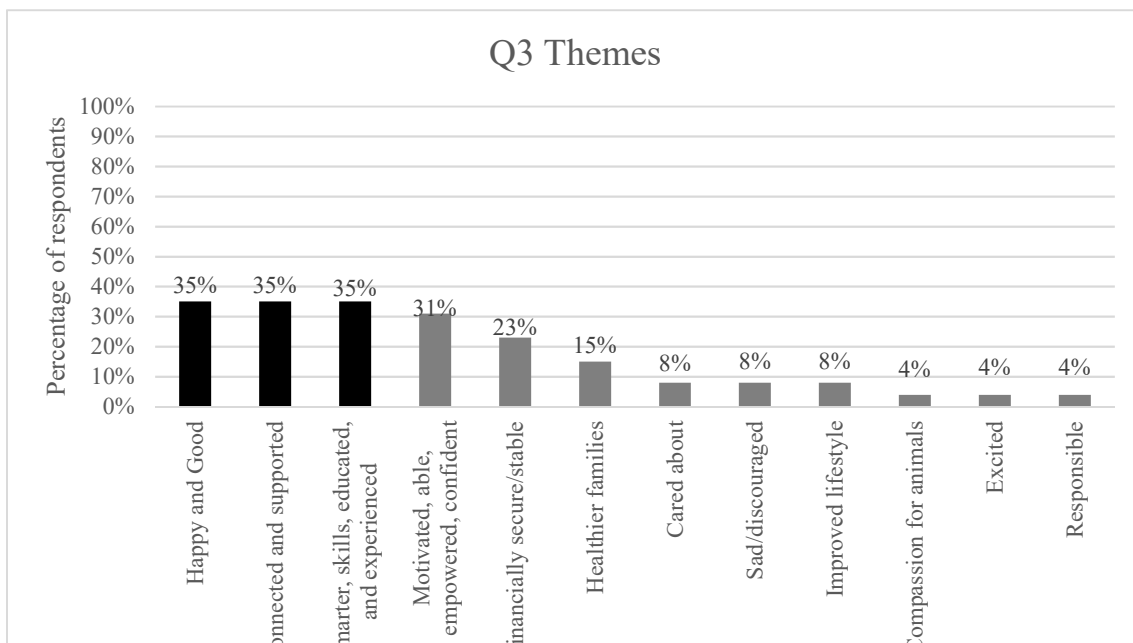
- R3: “I know that I have goats as security”
- R21: “she bought a solar panel with money from the goat project”
- R25: “Now we have a daily income, we sell milk and fruit.”

Another minor theme that emerged is participants and their families feel healthier. Among the 26 respondents 15% ( $n=4$ ) provided responses with this theme.

Statements representative of this theme include,

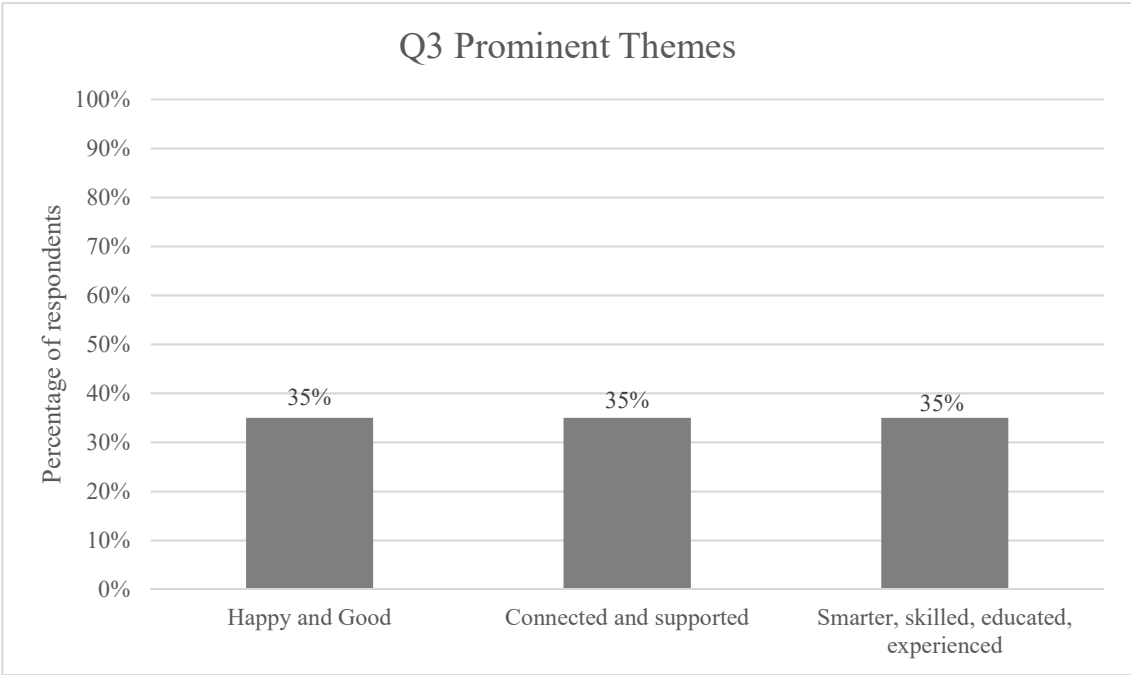
- R13: “The milk has helped her improve her immunity”
- R19: “the milk helps her children”
- R21: “she had a malnourished baby after 2 months of goat milk the baby was healthy and doing great”

Other minor themes are participants feel cared about, participants feel sad/discouraged, and participants feel they have improved their lifestyle. Among the 26 respondents, 8% ( $n=2$ ) provided responses with each of these themes. Minor themes are, participants feel compassionate for animals, participants feel excited, and participants feel responsible. Among the 26 respondents 4% ( $n=1$ ) provided responses with each of these themes.



**Figure 6 Percentage of respondents for each theme in response to Q3**

In response to Q3, 12 themes emerged. While there were no major themes, there are three prominent themes. The lack of major themes demonstrates how each participant had a unique emotional response to the project. Further, there was only one negative feeling mentioned, suggesting an overall positive emotional response to the project.



**Figure 7 Prominent themes in response to Q3**

The researchers noticed that the respondents struggled to talk about their feelings in response to Q3. Participants did not offer many responses that cited specific emotions other than feeling happy and sad.

#### **Q4: How has the Livelihood Project helped you and your community?**

In response to this question, two major themes emerged. The first major theme is, participants increased their community connections, networks, and friendships. Among the 26 respondents, 65% ( $n=17$ ) provided responses with this theme. This theme is composed of three subthemes. Specifically among the 17 respondents, nine increased their network, six increased community connections, and two have more friendships.

**Table 14 Community Connections, Networks, and Friendships**

<b>Theme</b>	<b><i>n</i></b>	<b>%</b>
<i>Participants have increased their community connections, networks, and friendships.</i>	17	65
<b>Subtheme</b>	<b><i>n</i></b>	
Increased network	9	
Increased community connection	6	
Friendships	2	

Statements representative of this theme include,

- R11: “The program has helped organize community meetings”
- R13: “They share advice and information with each other”
- R17: “The have friends from this project”
- R19: “the project has helped them become known in the community so it is easy to get medicine”
- R16: “She can talk to someone else in the program for help.”

The second major theme that emerged is participants and the community improved their nutrition, health, and food resources. Among the 26 respondents, 62% ( $n=16$ ) provided responses with this theme. This theme is composed of three subthemes. Specifically among the 16 respondents, six identified improved health in the community, six have increased food resources, and four have improved nutrition.

**Table 15 Community Improved Nutrition, Health, and Food Resources**

<b>Theme</b>	<b><i>n</i></b>	<b>%</b>
<i>Participants and the community improved their nutrition, health, and food resources</i>	16	62
<b>Subtheme</b>	<b><i>n</i></b>	
Healthier	6	
Increased food resources	6	
Improved nutrition	4	

Statements representative of this theme include,

- R1: “[with families in] this project, health and nutrition has improved”
- R20: “goat milk nutrition has helped the community”
- R2: “there is no problem with food scarcity in the community”
- R18: “you can bring milk to improve nutrition”
- R22: “most people have improved their health”.

Additionally, a prominent theme that emerged is, participants identified that incomes in the community increased. Among the 26 respondents, 42% ( $n=11$ ) provided responses with this theme. Statements representative of this theme include,

- R6: “I can sell the milk and make money”
- R12: “they sell the goats to the community”
- R22: “the project helped the community to raise money and get income”.

A minor theme that emerged is participants identified that the community is now more involved in agriculture. Among the 26 respondents, 19% ( $n=5$ ) provided responses with this theme. Statements representative of this theme include,

- R2: “[for families not in the project, the project] has improved their abilities to carry out agriculture”
- R4: “the project has inspired our neighbors to do agriculture”

Another minor theme that emerged is, participants inspired other community members. Among the 26 respondents, 19% ( $n=5$ ) provided responses with this theme. This theme is composed of two subthemes. Specifically, among these five respondents, four had the opportunity to inspire others in the community and one said the community is inspired.

**Table 16 Inspiration**

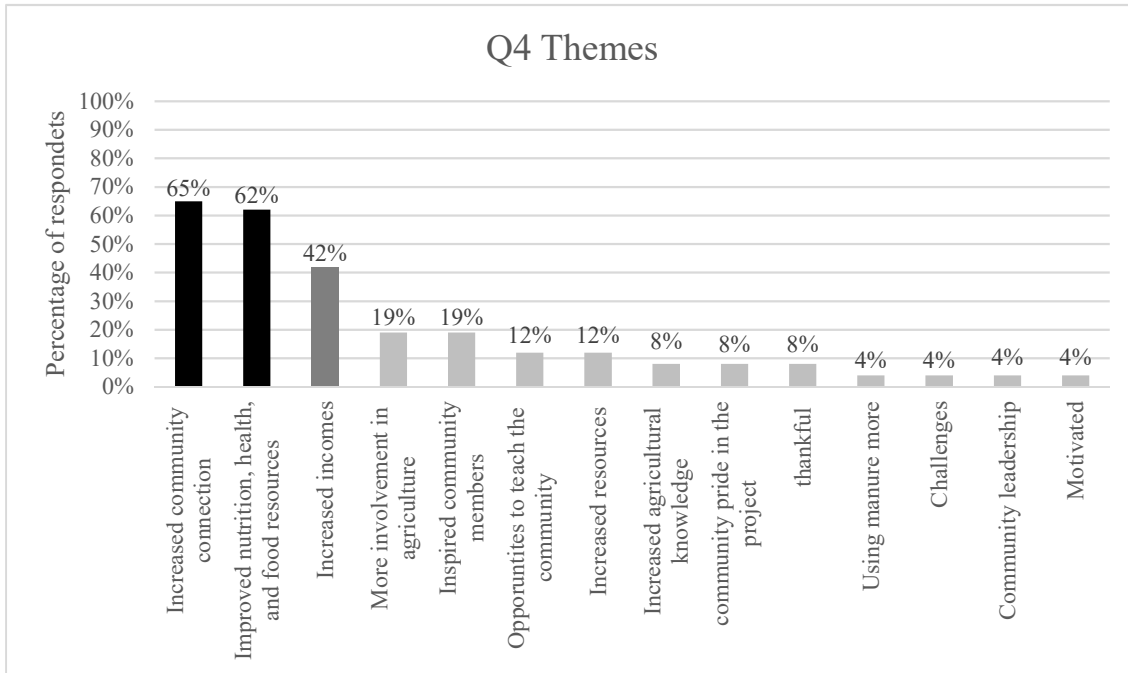
<b>Theme</b>	<b><i>n</i></b>	<b>%</b>
<i>Participants inspired other community members</i>	5	19
<b>Subthemes</b>	<b><i>n</i></b>	
Opportunity to inspire	4	
Community is inspired	1	

Statements representative of this theme include,

- R7: “I think I have inspired the community more to carry out agriculture and animal keeping”
- R10: “farmers are an inspiration to other farmers”.

Two minor themes are participants had the opportunity to teach the community and participants identified the community has increased resources. Among the 26 respondents, 12% ( $n=3$ ) provided responses with these themes, respectively.

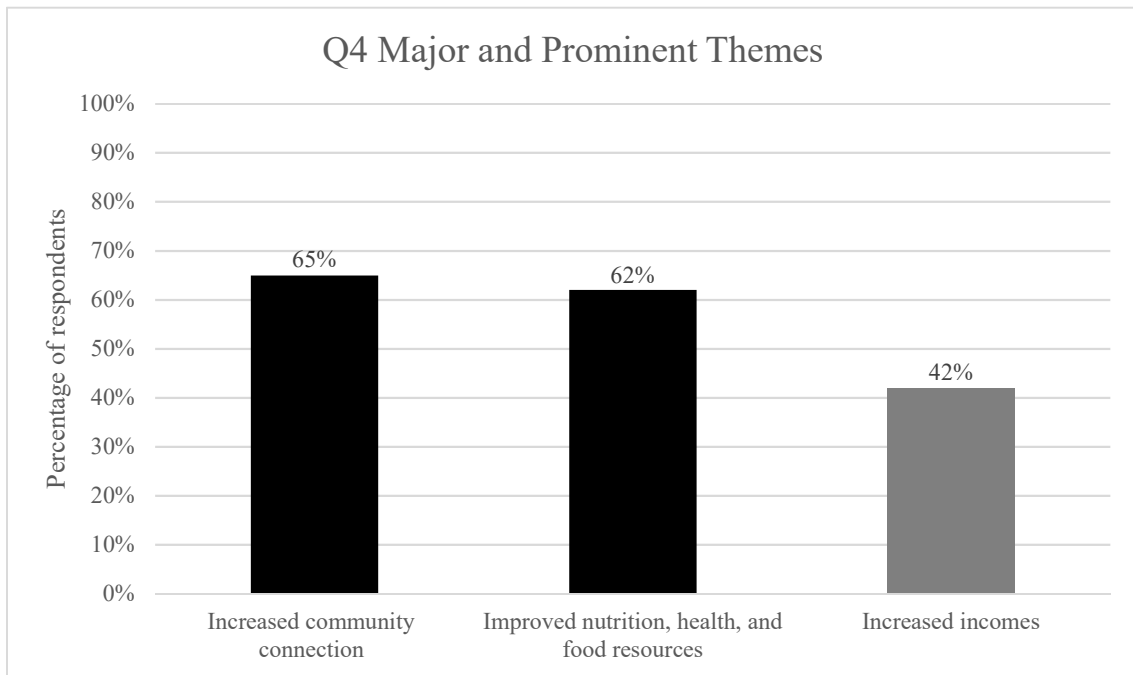
Three other minor themes are participants in the community have increased their agricultural knowledge, community pride in the project, and participants in the community are thankful. Among these 26 respondents, 8% ( $n=2$ ) provided responses with each of these themes. Finally, minor themes are the community is using manure more, participants are facing challenges, participants have the opportunity for community leadership, and participants are motivated. Among the 26 respondents, 4% ( $n=1$ ) provided responses with each of these themes.



**Figure 8 Percentage of respondents for each theme in response to Q4**

In response to Q4, 14 themes emerged, demonstrating the many unique ways the Livelihood Project impacted different communities. An interesting overlap between Q4 and Q3 was that in response to Q4 increased community connection was the most common theme, and in response to Q3, feeling connected and supported by the community was a prominent theme. The prominence of these similar themes demonstrates the deep impact the Livelihood Project had on building community connections and social capital.





**Figure 9 Major and prominent themes in response to Q4**

The researchers observed that participants struggled to discern the difference between how the Livelihood Project impacted their families and how the project impacted their communities. However, as the participants and their families are part of the community, the project impacting their families also impacts the community. Further, the rationale behind this question was to understand how the project impacted community connection and social capital for the participants. As 65% of the respondents stated they felt their community connections have increased, it is clear that social capital increased among the 26 participants. Further, the prominent theme of increased income in the community demonstrates the spillover effects that can occur with microenterprise projects.

### **Q5: What are some parts of the Livelihood Project you really liked?**

In response to this question three prominent themes emerged. The first prominent theme is participants liked the dairy goats and the milk they produce. Among the 26 respondents, 42% ( $n=11$ ) provided responses with this theme. Statements representative of this theme include,

- R12: “She liked getting milk for her children”
- R17: “He has liked the goats the most”
- R7: “I loved that they brought something new, I had never seen a goat produce milk”.

The second prominent theme that emerged is participants enjoyed the community connections that were formed. Among the 26 respondents 42% ( $n=11$ ) identified responses with this theme. Statements representative of this theme include,

- R5: “I was able to give milk to my neighbors so they could taste the milk”
- R8: “we were able to create this association”
- R22 “when they would come together for workshops, it was creating oneness in them”.

Another prominent theme that emerged is participants appreciated the facilitators and their encouragement. Among the 26 respondents 35% ( $n=9$ ) provided responses with this theme. Statements indicative of this theme include,

- R2: “[the facilitators] have not abandoned us”
- R13: “they liked being encouraged to carry out farming on a large scale”

- R22: “the veterinarians working with the project were very responsible and on time”.

A minor theme that emerged is participants enjoyed learning and the trainings. Among the 26 respondents 27% ( $n=7$ ) provided responses with this theme. Statements representative of this theme include,

- R10: “I love regular trainings”
- R19: “she likes the trainings given before receiving the goats”
- R4: “I like this project because they teach us so many things”.

Another minor theme that emerged is participants enjoyed their improved health and quality of life. Among the 26 respondents, 23% ( $n=6$ ) provided responses with this theme. Statements representative of this theme include,

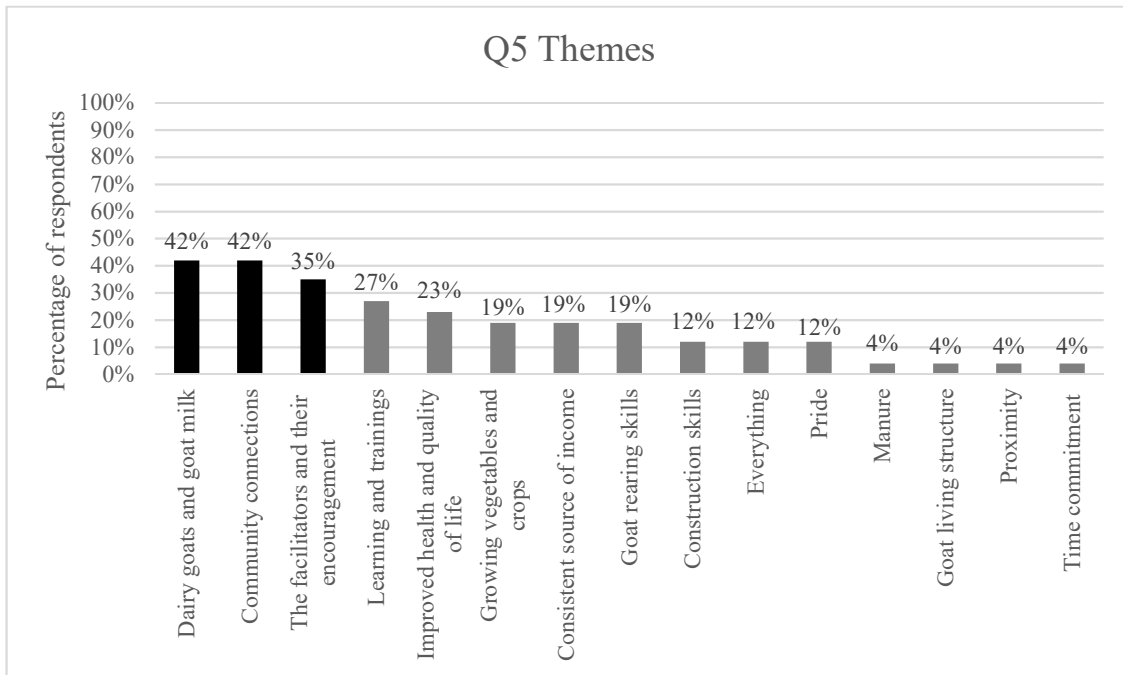
- R5: “our health improved as a family”
- R23: “through this project, they were introduced to community health”
- R18: “[the facilitators] taught them how to make a fireplace to cook from”.

Three minor themes are participants like being able to grow vegetables and other crops, participants liked the consistent source of income, and participants enjoyed gaining specific skills related to goat rearing. Among the 26 respondents, 19% ( $n=5$ ) provided responses to each of these themes. Statements indicative of these three themes include,

- R5: “I can now grow vegetables”
- R9: “I have a consistent source of income”
- R11: “he likes having farming skills”.

Three minor themes are participants enjoyed learning new construction skills, participants explicitly enjoyed everything about the project, and participants enjoyed the pride they felt. Among the 26 respondents, 12% ( $n=3$ ) provided responses to each of these themes.

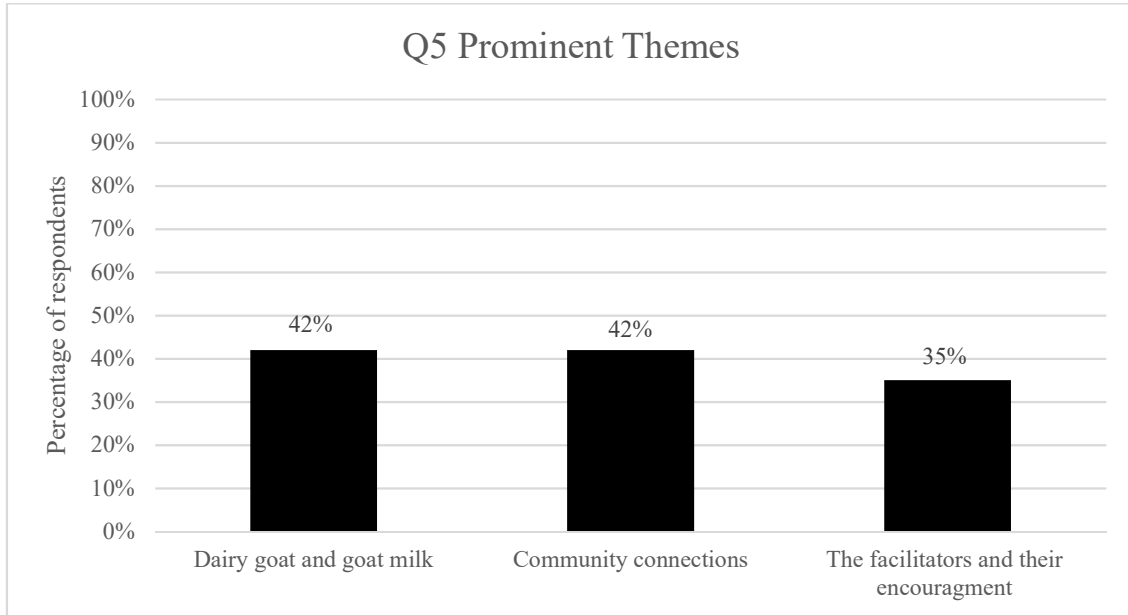
Other minor themes are participants enjoyed having manure for their gardens, participants enjoyed how the goats lived in their housing structures, participants liked the proximity of the project, and participants liked the time commitment required for the project. Among the 26 respondents, 4% ( $n=1$ ) provided responses with each of these themes.



**Figure 10 Percentage of respondents for each theme in response to Q5**

In response to Q5, 15 themes emerged. This question had the most themes emerge. The researchers were glad to see such a variety in the responses. The larger

number of themes and variety of themes indicates that the Livelihood Project had multiple strengths and was uniquely impactful to the participants.



**Figure 11 Prominent themes in response to Q5**

Specifically, the dairy goat and the goat milk produced were appreciated by the participants. This is interesting as the breeds used for the Livelihood Project are not always local breeds and there is occasional hesitancy toward dairy goats as meat goats are usually more valued. However, the appreciation for the goat's milk suggests an increased appreciation and value for goat's milk. As it is evident these farmers have an increased appreciation for the goats milk, they could potentially serve as teachers or ambassadors in their communities teaching others the benefits of goats milks, helping improve the nutrition of other families.

**Q6: If this project were done again what do you think should be done differently?**

In response to this question, one major theme emerged. The major theme is, participants would prefer a different animal or a meat goat. Among the 26 respondents, 42% ( $n=11$ ) provided responses with this theme. Statements representative of this theme include,

- R22: “meat goats might be better”
- R2: “a variety of animals to choose from like cows and pigs, not all people can handle goats”
- R16: “If there could be an opportunity to get goats for meat that could add value”.

Two minor themes are, participants wanted more veterinary resources and participants want more support from the facilitators. Among the 26 respondents, 19% ( $n=5$ ) provided responses with each of these themes. Statements reflective of these two themes include,

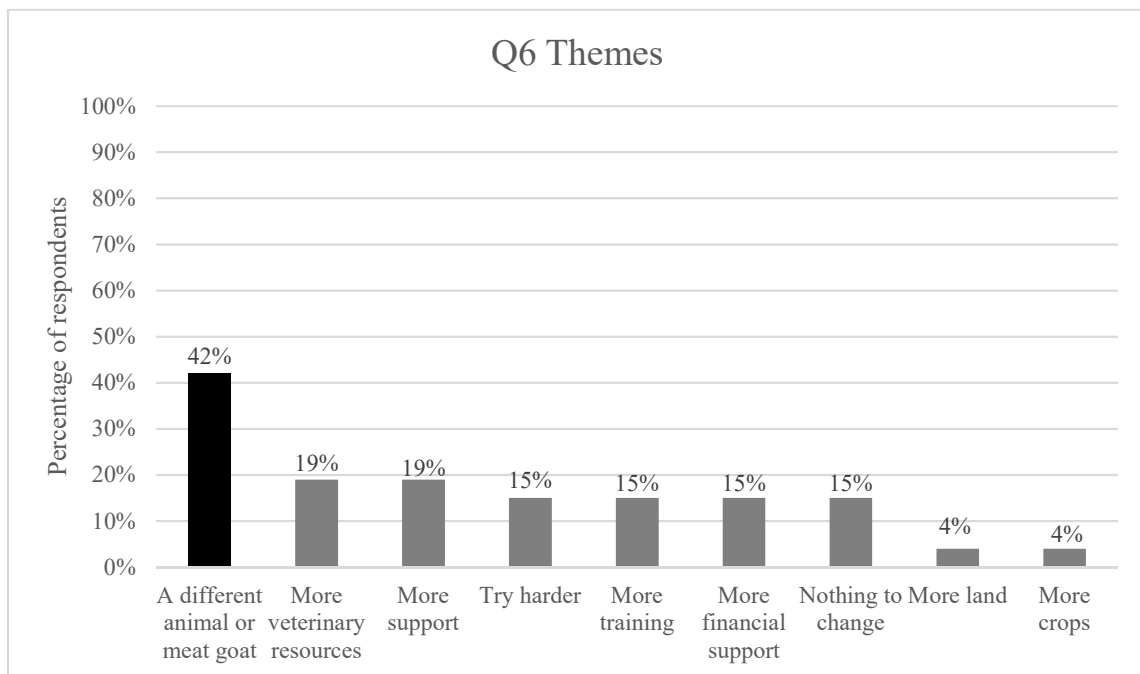
- R6: “[for the implementers] I would make sure we had veterinary care available”
- R12: “more support, more real medicine”.

Four minor themes are, participants would try harder if the project happened again, participants want more training, participants want more financial supports, and participants do not want anything to change. Among the 26 respondents, 15% ( $n=4$ ) provided responses with these theme respectively. Statements indicative of each theme include,

- R5: “I think I would be more responsible”

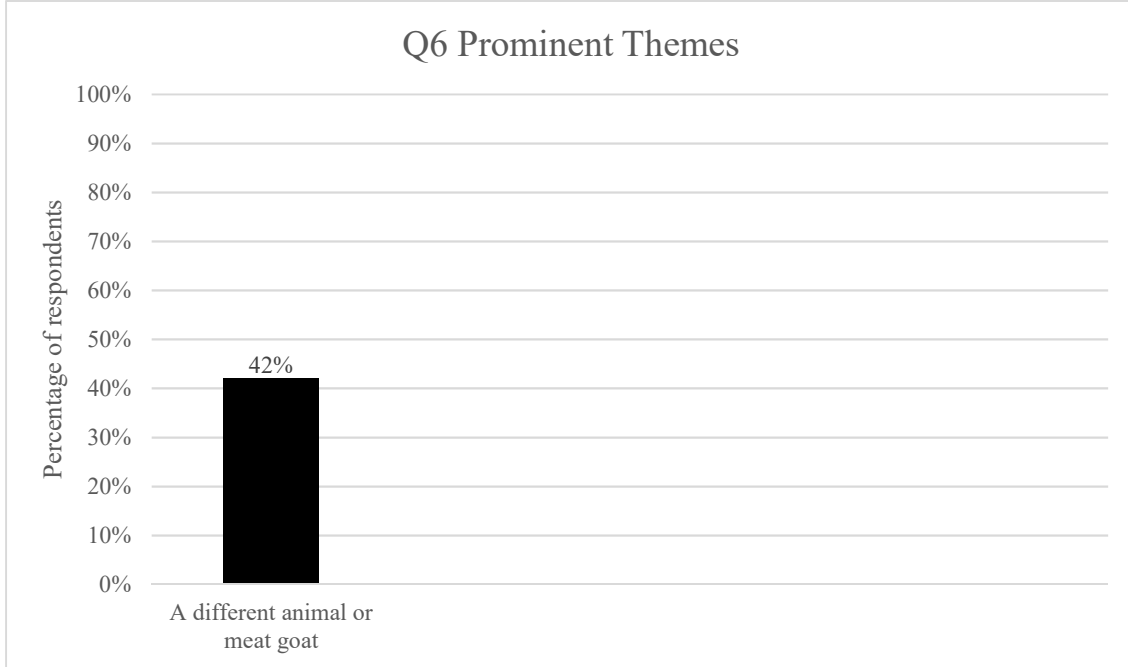
- R14: “Improvement in the way they train”
- R6: “create markets for the goats”
- R15: “she is content with everything she has nothing to add or subtract”

Other minor themes are participants want more land and participants want more crops. Among the 26 respondents, with 4% ( $n=1$ ) provided responses with each of these themes.



**Figure 12 Percentage of respondents for each theme in response to Q6**

In response to Q6, nine themes emerged. It is clear there was a preference for a different animal, but otherwise there was no prominent problem identified. Participants stated they wanted more resources because they were eager to keep learning, not necessary because they were lacking resources.



**Figure 13 Prominent themes in response to Q6**

The researchers observed some confusion in response to Q6. Respondents provided answers for what they personally would do differently in a future project and also what they thought the implementers of the project should do differently. This led to diverse responses. There was no major theme that emerged in response to this question indicating there was no specific characteristic of the project that a majority of the 26 respondents thought should be done differently. Further, there is an interesting juxtaposition between the desire for a different animal as a response to Q6 but also an appreciation and enjoyment of the dairy goats in response to Q5.

## Discussion

In this section, notable themes from each question and the complete data set will be discussed.



**Q1: What have you learned through participating in the Livelihood Project?**

*Participants learned how to make manure efficiently.* Manure can sometimes be deemed as important as meat or milk in developing countries (de Wit et.al., 1997). The researchers observed many Ugandans traveled around town with their livestock as they moved from their home to work and other locations. With the Livelihood Project, participants took an innovative approach and built a structure for their goat to live, keeping the goat in one place, allowing the manure to collect in one spot making it easier to collect and distribute. Previous research states that for some small holder farmers, manure produced by animals can serve as the only external product that helps sustain soil fertility (Romney & Thomas, 1994). While manure can be greatly beneficial, it can also present a host of environmental concerns such as leaching of Nitrogen and Phosphorus into ground water (de Wit et al., 1997). To help mitigate these concerns, there could be increased training and investment in new fertilizer technologies that allows famers to use the goat manure in the most beneficial and sustainable way

**Q2: What are you doing differently now that you were not doing before you joined the Livelihood Project? What are you now able to do?**

*Increase in quality of life.* This was also a major theme in response to Q4. Respondents noted an increase in the quality of life for their family. This was seen through an improvement in health and nutrition, increased income, increased food resources, and increased access to school and medicine. Previous evaluations of dairy cow loan programs also cited an improvement in health and dietary diversity. A study on

the impact of a dairy cow donation program in Rwanda found a statistically significant increase on the mean height for age z score among children (Rawlins, 2014). This study also found that monthly household dairy consumption was positively correlated with receiving a cow (Rawlins, 2014). This indicates that quality of life, specifically health and nutrition among the recipient families, can be greatly impacted through the development of dairy livestock systems.

**Q3: How do you feel differently now that you have participated in the Livelihood Project?**

*Increased connection among the community.* The livelihood project increased the networks of the farmers involved, but it also allowed for connections to form and for the lives of the whole community to improve. The farmers shared how they were able to sell milk to their fellow community members and also inspire them to participate in agriculture. This allows other community members to increase their dietary diversity and nutrition. These spillover effects are beneficial for the overall development of the community. This impact is seen in other research as well. In a study from the University of Illinois evaluating a dairy cow donation program in Zambia the authors state, “Donating livestock, especially animals that produce milk is an effective way to increase milk consumption in the community” (Jodlowski et al., 2016 p. 109).

#### **Q4: How has Livelihood Project influenced your community?**

*Inspiration.* While this theme did not emerge as a major theme in response to this question, it was clear that the participant farmers were inspiring their communities. There was an interesting mix of respondents who noted the community was inspired by the project. There were also respondents who enjoyed having the opportunity to inspire the community. It is possible some participants felt a sense of purpose through participating in the project and setting an example for others in the community. Further, another minor but powerful theme was that some participants enjoyed the opportunity to teach their fellow community members. Through inspiring and teaching others in the community, the researchers noted a confidence among the participants. This confidence allowed for increased ability and increased community connection.

#### **Q5: What are some parts of the Livelihood Project you really liked?**

*Participants favored the goats and goat milk.* Dairy animals are often favored for development projects because of the immense health benefits of milk. Generally, animal products have increased micronutrients, which are essential for proper nutrition (Nicholson & Mwangi, 2003). While researching a Heifer International dairy cow and meat goat program in Rwanda, Rawlins (2014) noted that among the families who received a meat goat, their children's height for age z scores were significantly lower than children who received a dairy cow. This potentially suggests that dairy animal donation programs are more beneficial to community's health than meat animal projects. This, along with the responses from the farmers, indicate that future projects should

prioritize dairy animal projects over meat animal projects. However, this could possible contradict the desires of the farmers.

**Q6: If this project were done again what do you think should be done differently?**

*Different animals.* In response to Q6, 42% ( $n=11$ ) of respondents stated they would prefer a different animal. Perhaps, to mitigate this, there could be additional training over a longer period of time before the project starts to help farmers understand the value of milk and the value of meat. Further, this presents an interesting opportunity for further needs assessment to take place. Perhaps, the participants want a meat animal because meat has a perceived higher value than milk. This could mean that communities are looking for high value products to help quickly and sustainably increase their income demonstrating a need for income generation strategies. This presents an opportunity for organizations to complete deeper needs assessments and corresponding training before implementing programs. Although there needs to be a balance between the desires of the community and proven development strategies. While communities many desire and request meat animals, there is substantial evidence that dairy animals are equally if not more helpful than meat animals. Balancing the desires of the community with the most efficient strategies is very difficult and specific to each region and culture. In order to make the best decisions development projects need to spend ample amounts of time in communities so they can best understand the needs of the communities. Further, local leaders need to be the people implementing the programs and creating change.

An additional theme that was subtly presented throughout the entire set of interviews, was the appreciation for JLMC who facilitated the project. While visiting F3,

it was clear how much the female family member appreciated the CLVs who helped her solve the domestic problem she was having. It is possible, that because these farmers had access to JLMC and CLV's they had a strong network of people to help them solve day-to-day problems. Because they had more resources available to help them day-to-day, they could commit more time and energy to their goats and other agricultural enterprises.

Further, the connection to JLMC could have influenced some families in their decisions to use their increased income to send their children to school. Every community involved with the Livelihood Project, was also involved with the GPP. Because of this, families are increasingly aware of the importance of keeping their children, specifically their girls, in school. This partnership further demonstrates the importance of small local organizations in development projects. Heifer International is a large international NGO, and they supplied the goats for the Livelihood Project, but most of the remaining financial investment came from JLMC, a significantly smaller organization. While fiscally smaller, JLMC had the local resources and knowledge to properly implement and manage the project in conjunction with their programming, allowing for holistic community development.

## CHAPTER V

### CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study is to understand how the Livelihood Project influenced community capacity development through the development of human, social, and financial capital. From the findings, participants increased human capital through the development of skills, abilities, and improved health. Additionally, connections were established among the participants, thus improving their social capital. Finally, participants increased their financial capital, indicated by increased access to medicine, education, and other daily needs.

#### Human Capital

Human capital was developed through the development of different life and agricultural skills and abilities among those who participated in the Livelihood Project. According to Bolger (2000) human capital is abilities, skills, and attitudes that allow individuals to achieve their objectives. The development of life skills was demonstrated in response to Q1 where 14 participants cited an increase in their ability to work on a team and to lead, be responsible, and manage time. Additionally, among these 14 respondents, two stated they have improved their ability to care. The development of life skills and abilities was also seen in response to Q2 where six respondents cited increased motivation, commitment, empowerment, confidence, and pride. Some notable statements indicative of increase in life skills include R1 who stated “*I have learned how to work*

*together with people” and R9 who stated “I have learned how to be more responsible, I have learned how to be more caring”.*

The development of agriculture skills, knowledge, and abilities also contributed to the growth of human capital. In response to Q1, 10 respondents stated they now know how to make and use manure, 10 respondents stated they have improved goat rearing skills, eight stated they have increased skills specific to animal agriculture, three stated they have increased their ability to grow vegetables, two stated an increase in their ability to efficiently use land, and two stated an increase in their ability to efficiently use natural resources. In response to Q2, six respondents stated they had increased their agricultural knowledge and four stated they have increased their agricultural skills. In response to Q3, eight respondents stated they felt more knowledgeable and skilled about agriculture. Further, two respondents also identified how they felt more able. Also in response to Q2, one respondent shared how they had increased the value they placed on agriculture. In response to Q4, two respondents identified an increase in agricultural knowledge among families in the community. Some notable statements indicative of the increase in agricultural skills include, R3 who stated *“I have learned how to make manure from excrement from goats, this manure helps me in my garden”* and R6 who stated *“I have learned how to carry out animal farming on a small piece of land, I learned how to use available materials to feed the animals.”* In conclusion, 65% (n=17) of respondents, identified an increase in knowledge, skills, and abilities during their interview.

Another part of human capital is improved health and nutrition. As community members get stronger and healthier, human capital increases. In response to Q1, three respondents stated they have increased and improved their nutrition, and one respondent stated their health had improved. In response to Q2, two respondents stated they now have improved health and one stated their nutrition improved. In response to Q3, four participants stated they felt healthier as a result of the project. In response to Q4, six stated their communities were healthier, and four stated their communities had improved their nutrition. Some notable statements demonstrative of improved health and nutrition include, R4 who stated *“This project has helped me personally, it has improved our health, my grandchild was malnourished, abandoned, this project helped revive him”* and R24 who stated *“my children used to fall sick frequently, but now they are sick less.”* In conclusion, 54% ( $n=14$ ) participants stated they have improved their health or nutrition.

### Implications

Drinking the milk from dairy goats was vital for improving the health of the community. Another way dairy products can help improve the health of a community, is by helping to decrease the transmission of HIV/AIDs through breastmilk. One of the ways HIV is transmitted is through breastmilk; however the risk of transmission is unknown (Quintanilla, 1996). If HIV positive families have increased access to goat milk, they can lower the chance of transmission of HIV through breastmilk by providing their child with goat milk. This will help reduce risk of transmission of HIV and also provide essential nutrients for the child. Development projects geared toward serving



populations infected or affected by HIV/AIDS should focus on improving the health and nutrition of the population by increasing access to animal products, specifically goat milk. Goat milk is often recommended by health professionals for those affected by HIV/AIDS (De Vries, 2008). There is very limited research on the ways to decrease the transfer of HIV through breastmilk. Future research should focus on how dairy animal development projects can help decrease the transmission of HIV.

To further understand the health benefits of goat milk, research organizations should conduct experiments comparing the growth and health changes of communities who incorporate goat milk into their diet and communities who do not. Further, specifically among research organizations conducting research on HIV/AIDS, there should be more funding allocated for researching the transmission of HIV through breastmilk. If HIV+ mothers have access to milk, providing an alternative source of nutrition to breastmilk, perhaps transmissions rates will decrease. Once this transmission rate is further understood, there should be more resources or projects providing improved nutrition for communities with HIV/AIDS.

Human capital was also developed through the strengthening of different life and agricultural skills. This suggests that agricultural education can be used as a strategy for teaching other skills. Further, in response to Q5 there was a desire for more training. The government in Uganda and other international NGOs should look for ways to create an agricultural vocational school in the Luwero District. Further, there should be continued research on the implementation of agricultural education curriculum in primary schools and in the GPP curriculum. As many Ugandans have small gardens, there is already a

developed agricultural knowledge, but the technical skills are lacking. If schools or NGOs were able to educate farmers on small technical changes, there could be immense impact.

### Social Capital

Social capital increased as participants strengthened their personal networks and connections with others in their community. Social capital is defined as relationships and resources that allow individuals to achieve their development objectives (Bolger, 2000). Most notably, the responses to Q4 demonstrated the increased connections participants made in the community. Nine participants cited an increase in their network and stated how the program provided them with increased resources to ask for help. Additionally, six participants cited an increase in community connection through an increase in linkage between the goat farmers and other people in the community. Further, two respondents identified increased friendships, further demonstrating how farmers increased their social capital.

Responses to Q1 and Q3 also demonstrate an increase in social capital. In response to Q1, three participants cited an increase in community connections. In response to Q3, nine participants stated they now felt more connected to their community members and how more people are available to them in case they need help. These increased resources and feeling of connection and support demonstrate how participants have increased their social capital. Some notable statements indicating increased social capital include, R13 who stated “*there is unity among the community*

*members, they share advice and information with each other, she can call someone for help, there is much connection and working together”* and R16 who stated *“They get new friends in the community, they carry out visits with other community members in the program, she can talk to someone else in the program for help, through the friendships they share information and advice.”* In conclusion, 54% (n=14) of respondents cited an increase in their connection to the community during their interviews.

### Implications

As the social capital in a community grows, the opportunity for cooperatives to form also grows. Through the development of farmer cooperatives there is the potential for value chains to be developed. As NGOs, such as Heifer International, help build social capital, there needs to be a partnering investment from industry leaders who buy the products produced by these strong social groups. For example, Land O’ Lakes has invested in and partnered with a group of farmers in Kenya who produce livestock feed (Peterson, 2018). This combined partnership between NGOs and industry presents a strategy for sustainable economic development. Increased investment in foreign cooperatives could be incentivized through policies that use trade agreements as a form of aid.

While Heifer International creates programs for individuals who would not traditionally qualify for a loan, many of their programs still fail to reach the poorest of the poor who cannot meet the requirements (Rawlins, 2014). While these requirements are in place to help participants be successful, there is a population of people living in

poverty who could benefit from the programs but are not being reached. One strategy to help reach this population is through increasing focus on female farmers (De Vries, 2008). More development projects need to focus on empowering women through agriculture. JLMC has an incredible opportunity to incorporate agricultural education into their programming, allowing women to gain knowledge and social connections to help them improve the quality of their lives. Many development organizations are focusing their projects on empowering women, including Heifer International. However, even with this increased focus on women, there are still deep cultural biases against women in many developed and developing countries. As organizations implement programs that teach and empower women, there needs to be corresponding cultural change led by local leaders teaching their communities to value women. If programs give women power, there needs to be a community in place that will build her power and not take it away, ie., enable or allow for women to employ this new-found power. A great example of this is the GPP. As communities are learning to value women, women are experiencing more opportunities gaining and power and, because the communities have been sensitized, the women are assuming leadership positions and impacting their communities.

In order to successfully inspire culture change and empower women, men need to be part of the trainings along with the women. Programs and trainings that focus on empowering women, need to also include men. A unique thing that JLMC does, is involve the whole community, encouraging men and women to be taught and sensitized

together. By training both men and women about the GPP, men are taught the importance of women and girls, allowing for future long-term female empowerment.

### Financial Capital

Financial capital increased as participants increased their income and resources.

This increase allowed participants more access to needed resources. In response to Q1, four respondents indicated they learned how to increase their income. In response to Q2, four different respondents stated they have increased their income as a result of participating in the program. Additionally, three different respondents stated they now have the ability to pay school fees and three respondents stated they have the ability to pay for medicine. In response to Q3, six respondents stated that they felt more financially secure and stable because of the goat project. In response to Q4, 11 respondents cited an increase in income across the community. Some notable statements demonstrating the increase in financial capital include, R1 who stated “*My income has increased, I now have enough food for my family, I can sell some food and get money*” and R14 who stated “*She sells the manure to other farmers, this allows her to get more food and milk and money.*” In conclusion, 80% ( $n=21$ ) respondents, cited an increase in income, among their family or in the community, during their interviews.

### Implications

As the community’s income grows through spillover effects from the microenterprise project, there is potential to start community lending programs. As part

of future microenterprise projects, there should be additional training for how to develop and sustain community banking programs. As these groups grow, there is increased potential to invest in other parts of the community or to provide financial assistance to individuals who do not have access to credit or who do not qualify for microenterprise projects.

Through the development of community lending programs, perhaps community members could establish programs in which the landless poor could participate. The details of programs like this would need to be locally driven, but as the income of a community increases, there is potential of creating lending programs to help those suffering the most. Community members who have increased incomes, could come together and create a lending program to offers small loans to others in their community.

#### Overall Recommendations

The Livelihood Project was created, facilitated, and mostly funded by JLMC. JLMC is a small organization that has immense support from the Bishop Asili Hospital and many competent community leaders on their staff. Heifer International participated in this project through their investment of the physical resources, including the donations of animals and seeds. The monetary total of Heifer International's investment was much smaller than JLMC's. This project is a great real-life example of how successful small local organizations can be in leading development projects and helping communities grow. To incentivize large international NGOs partnering with small local organizations, recipient countries could increase their vetting process. There could be policies in place

that require INGOs with projects of a certain size, to have a smaller, local, partner NGO that is helping to implement the program. Following are recommendations for future agricultural development projects and future evaluation research.

Recommendation 1. Large international NGO's should seek out and invest in local organizations that develop their own projects and only require a minimal investment from outside organizations. This allows for the local experts to lead projects with the resources from a large international NGO.

Recommendation 2. Technical skills should be taught and encouraged in partnership with cultural change. For example, as the families in the Livelihood Project learned the value of women and girls through the GPP they also learned income generating techniques through the Livelihood Project which resulted in families using their income to send their children to school because they were made aware of the importance of education through the GPP.

Recommendation 3. Interdisciplinary agricultural education should be taught to women as an income generation strategy. Women need to learn technical agricultural skills, along with money management and business skills in a culturally encouraged way.

Recommendation 4. Future researchers conducting evaluation research on agricultural development projects should use a local to conduct the research.

Local researchers will have a stronger sense of how the project impacted the community and there will be less bias.

Recommendation 5. Future researchers should seek to talk to a majority of the participants in the program to gain a more comprehensive and robust understanding of the program. Researchers should do long and short term evaluations. Researchers should gain as much background information as possible to establish the most context and develop the deepest understanding.



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## APPENDIX A

### INTERVIEW QUESTIONS

Q1: What have you learned through the Livelihood Project?

Q2: What are you doing differently now than prior to Livelihood Project?

Q3: Do you feel differently now that you have participated in Livelihood Project? If yes, how?

Q4: How has Livelihood Project influenced your community?

Q5: What are some of the things you liked about Livelihood Project? Why?

Q6: If this project were done again what do you think should be done differently?

## APPENDIX B

### RESPONSES BY THEME PER QUESTION

#### Question 1

Theme: Participants increased their general agricultural knowledge, their ability to produce vegetables and coffee, and their animal agriculture skills 62% n=16

- cultivate vegetables
- I have learned new skills in animal farming
- I am more knowledgeable about agriculture
- also, learned how to build a shelter where the goats live
- I have learned more skills in animal keeping
- Bee farmer
- she has improved her farming skills
- she has learned more skills with rearing cattle
- she included pigs and cows to her herd
- she used her goat skills to raise other skills
- more farming skills
- I have more skills in farming
- he feels the knowledge he has received has grown his coffee production
- she started on a chicken project, but the chicken's got a disease but she still learned
- Vegetable gardening in the backyard gardens
- learned how to make a goat house
- how to care for animals
- she learned about vegetable gardening
- how to make the goat house
- she learned that animals should be kept in a stall

Theme: Participants developed intrapersonal/life skills including, teamwork, leadership, caring, friendships, responsibility, commitment, and time management 54% n=14

- I have learned how to work together with people
- I have learned how to mobilize people in the community
- I have learned how to work together with other people
- I have learned how to be committed
- I have learned how to be more responsible
- I have learned how to be more caring
- I have to make sure I am available to take care of my animal s
- I have also learned teamwork because we work together with other farmers
- you become a good time manager
- she has learned how to be responsible
- time management

- she learned how to give extra care
- she has learned time management
- friendship
- she has learned how be responsible

Theme: Participants learned how to make and use manure efficiently 38% n=10

- I have learned how to make manure from the excrement from the goats
- this manure helps me in my garden
- I learned how to make manure myself for my garden
- I learned how to make manure at home
- learned how to use manure in the gardens
- she is learning about how to use manure in the garden
- she can use the manure in her garden
- the manure helped develop a larger scale operation
- I learned how to use manure in gardening
- manure from the goats can be good fertilizer
- making fertilizer
- she has learned the value of manure
- she used manure for backyard crops

Theme: participants increased their knowledge on goat rearing 38% n=10

- how to take care of goats
- goat rearing skills
- I feel now that I am more knowledgeable about goat skills
- I am more skilled and knowledgeable now, specifically in goat rearing
- goat rearing how to handle them, how to feed them
- she learned how to take care of goats
- she learned how to rear goats
- she has got skills on how she can take care of goats
- digging/planting grass for the goats
- I have the skill of rearing goats in one place
- How to take good care of the goats
- how to take good care of the goats
- how to care for the goats
- she was getting good milk from the goat
- she has learned to take care of the goats
- she did not know how to take care for these exotic breeds

Theme: Participants learned how to generate income and get out of poverty 19% n=5

- vegetables helps supplement food and income
- she now knows that you can sell 2 goats and use the money for the home
- they know they can sell the goats to make money for meet basic needs



- generating income
- when rearing the goats, she can get income
- most goats were male so she sold them to pay for school fees
- she has learned how to get out of poverty
- income levels, he can sell the milk and the baby goats

Theme: Participants learned how to efficiently use land and natural resources 15% n=4

- how to manage animals on a small piece of land
- I learned how to carry out animal farming on a small piece of land
- I learned how to use available materials to feed the animals
- I learned I can use other grass, leaves, and left over food
- I have learned how to rear the goats in a small piece of land
- you can still do things with a small piece of land
- how to grow pastures

Theme: Participants learned how to improve their health and nutrition 15% n=4

- improving nutrition
- emphasising the importance of nutrition in the goat milk
- they eat the goat meat
- her grandchildren were looking good
- she feeds her family on the milk
- health improvement in his home

Theme: participants increased their ability to connect with their community 12% n=3

- and I have learned how to get involved in community work
- sense of belonging to the community
- consulting with friends

Theme: Participants learned the importance of farming, 12% n=3

- they know that farming can put someone somewhere
- she has learned the importance of goats
- it is good to have animals or grow crops

Theme: Participants learned veterinary skills 8% n=2

- now I can more easily diagnose sick animals
- how to treat them when they are sick
- now to diagnose sickness

Theme: Participants gained home improvement skills 4% n=1

- she also learned how to make energy saving stoves

Question 2

Theme: Participants indicated an increase in quality of life through an increase in income, improvement in nutrition and health, increased access to medication and education, and increased personal resources 77% n=20

- I have crops that I sell
- I have crops and fruit and animals which I did not have before the program
- my income has increase
- I now have enough food for my family
- I can sell some food and get money
- now I cultivate tomatoes that I eat
- now I cultivate tomatoes that sell
- the milk had improved the health of my family members
- I built an energy saving stove
- The project has helped me personally it has improved our health
- \*\*grandchild malnourished, abandoned, this project helped revive him
- he is now has money to get more money for medication
- she has increased her income to pay for school fees
- she has increased her income to pay for medication
- they sell the food they grow to buy more medicine
- they sell the food they grow to pay school feels
- she sells the manure to other farmers
- this allows her to get more food and milk and money
- she sold the first goat
- also, he now uses the money from the goats and milk to pay school fees
- also, he uses the money for basic needs at home
- she used money from selling goats to pay school fees
- his children used to fall sick frequently, but now they are sick less
- we have a pit latrine that was not standard, now it is very ok
- she grows a variety of crops to improve her income

Theme: Participants have improved, increased, and diversified their agricultural projects 69% n=18

- I'm now more involved in agriculture
- before, I was only focused on crops
- I purchased some local goats as well as pigs because I now had the knowledge
- before the project I was not dealing with vegetables
- I now carry out vegetable farming
- I now have chickens that I did not have before
- through the project, I was able to improve my agriculture
- before, I was not interested in animals, now I have a variety at home
- Now she is involved in growing spear grass
- Now, he has gone ahead to expand his agriculture projects like bananas and fruits
- she carries out digging on a large scale

- she has more crops, like maize and beans
- they carryout farming
- she has other projects like, cows
- she has more goats
- she now has 5 goats
- he uses the manure on his coffee crop, the coffee looks good
- he is diversifying his agriculture
- when she got the goat, the gov came and gave them orange seedlings
- she can do backyard gardens
- she is now able to grow different crops

Theme: Participants improved their agricultural knowledge and skills 42% n=11

- his agriculture skills have improved
- agriculture skills have improved
- she now knows the disease from crops and diseases
- she built housing for the goats
- she used to consider milk for goats not for good use
- she now knows the milk has higher value
- before he used to buy manure
- before joining the project, she used to only use her hands to grow crops
- she now has better yielding techniques
- before, she would ignore if her crops looked bad
- now, she pays attention to the leaves and takes care of them
- the idea of dairy goat keeping was new to her
- she realized that goat milk was very nutritious
- he can understand how the goats are feeling
- he can tell when the goat is sick
- how to care for the animals

Theme: Participants are now using manure from the goats 35% n=9

- due to the fact that I get manure,
- I know how to apply manure now
- I use my manure to help my agriculture
- she is using the manure to grow coffee and bananas
- application of manure in my garden from the goats
- now she knows how to use the manure from the goats for her garden
- now he uses goat manure for his garden
- Now he can get manure from the goats house
- she has an orange farm, she is using manure now

Theme: Participants indicated an increase in motivation, commitment, and empowerment 23% n=6

- this project motivated me
- I love my goat, I named her Jessica
- my commitment towards agriculture has changed
- at first she felt like she could not do anything on her own, ever since she joined the program, she feels empowered
- they looked more organized than any other farmer
- she feels confident and cares

Theme: Participants now have more personal resources at home 15% n=4

- I have crops and fruit and animals which I did not have before the program
- I now have enough food for my family
- I built an energy saving stove
- this allows her to get more food and milk and money
- also, he uses the money for basic needs at home

Theme: Participants experienced goat illness or death, 8% n=2

- *one of her goats died*
- with time, her goats got disease, she sold them and got indigenous breeds

Theme: Participants increased their construction skills, 4% n=1

- she is making bricks to make a house

Theme: Participants increased their access to veterinary resources, 4% n=1

- she involves the veterinarian
- she gets vaccinations from the vet

Theme: Participants expressed and increased value for agriculture 4% n=1

- now, she pays attention to the leafs and takes care of them

### Question 3

Theme: Participants explicitly stated they felt happy and good about the project 35% n=9

- I feel happy
- I feel very good now
- I now feel good
- I feel good now
- he feels good
- she feels good
- she feels good
- she feels good
- he feels good

Theme: Participants feel more connected and supported by the community 35% n=9

- have more friends
- I have people I can consult with
- I can come and ask Mr. William questions and he can teach me
- before I did not have anyone I could talk with
- he is part of the village bank
- she feels good in the way she personally can have a word with other farmers
- they have got friends out of this project
- through the gatherings they share knowledge and skills
- this has helped them go ahead and make home visits to other farmers in the project
- they get advice on how to improve
- she got friends now she belongs to a group
- being a heifer farmer so was able to be part of a group
- she got the popularity
- she feels now she is in a circle of friends
- exchange visit among farmers

Theme: Participants feel smarter, more skilled, educated, and experienced 35% n=9

- Now I am more knowledgeable
- I now feel that I have more skills in animal keeping
- I have more knowledge
- I have more skills
- I am more experienced
- I have the skills to take care of as many goats as possible
- he feels like he is able to use his skills with other projects like cows
- she believes they now have the capacity to raise goats
- now they get to go on agricultural tours

Theme: Participants feel more motivated, able, empowered, and confident 31% n=8

- Now I am more motivated
- I feel confident to raise another goat
- I now feel that I have the ability to take care of a wider variety of animals
- I feel now that I have more ability
- he feels more empowered to stand up for his family
- she is empowered to share what she knows with other people
- she feels more empowered
- empowered

Theme: Participants feel financially secure/stable 23% n=6

- I know that I have goats as security
- I feel like I have security and a source of income
- he can now spare some money to save

- she bought a solar panel with money from the goat project
- now we have a daily income, we sell milk and fruit
- she can raise more money to take care of herself and her family

Theme: Participants and their families feel healthier 15% n=4

- the milk has helped her improve her immunity
- her and her children, are on HIV drugs
- before, they would get medicine but they needed good nutrition
- ever since this project came, she is rearing the goats and getting good milk
- the milk helps the children
- now, they do not get sick
- they are healthier because of this
- she had a malnourished baby after 2 months of goat milk the baby was healthy and doing great
- we are healthy

Theme: Participants feel cared about 8% n=2

- the project coordinators are loving
- one of her goats died

Theme: Participants feel sad/discouraged 8% n=2

- She lost her goat, it died, she feels sad
- the goats alone could not support his production

Theme: Participants feel compassionate 4% n=1

- I have more love for animals

Theme: participants feel excited

- he is looking towards the next opportunity.

Theme: participants feel responsible.

- she has to take care of the goats and feed them and clean them

#### Question 4

Theme: Participants have increased their community connections, networks, and friendships 65% n=17

- the program has helped organize community meetings
- there is unity among her and the community members
- they share advice and information with each other
- she can call someone for help
- there is much connection and working together

- It has improved more, their connection with other community members
- If she has a problem with her goats, she gets advice from neighbor
- they share meetings with each other.
- If that does not work, she can go to someone else
- They get new friends in the community
- they carry out visits with other community members in the program
- she can talk to someone else in the program for help
- through the friendships they share information and advice
- they have friends from his project
- they do home visits and get advice
- the project has helped them know each other
- the project has created friendship among the people in the project
- the project has helped them become known in the community so it is easy to get medicine
- her goat was not giving enough milk, her neighbor relied on the goat milk
- whenever a goat fell sick she would reach out to another person for help
- people come and consult them on how to do goat rearing
- farmers come to consult

Theme: Participants identified that the community has improved their nutrition, health, and food resources 62% n=16

- families that have this project, health and nutrition has improved
- there is no problem with food scarcity in the community
- These goats produce milk
- the milk has improved the health of the community
- me and my family, have been helped with an increase in milk
- the milk is very nutritious
- for my family, the milk has helped our nutrition
- as for me and my family, we have benefited from the milk
- as a family the goat provided us with milk
- she has maize, someone else has bananas and they exchange
- you can drink milk to improve nutrition
- goat milk nutrition has helped the community
- her neighbor had twins, because of the goat milk the children are healthy
- the project has helped the community health
- most people have improved their health
- health improvement because of the nutrition
- people have improved hand washing facility

Theme: Participants identified that the livelihood project has helped increase incomes in the community 42% n=11

- families have income

- for the community you have two sections those in the project and not
- because I sell my milk to them
- I no longer have to spend money on milk
- I can sell the milk and make money
- I can sell the goat and make money
- this has improved their sources of income
- they sell the goats to the community
- the profit helps them invest in other projects
- together, they have as a family, participated in markets
- the project has improved income levels
- the project helped the community to raise money and get income
- increase their income levels
- in general the project has helped improve income levels

Theme: Participants identified that the community is now more involved in agriculture 19% n=5

- not in the project, it has improved their abilities to carry out agriculture
- the project has inspired our neighbors to do agriculture
- they are now more involved in commercial agriculture.
- the community has been inspired to do more in agriculture
- you can sell milk to help the home and ag production

Theme: Participants inspired other community members 19% n=5

- I think I have inspired the community more to carry out agriculture and animal keeping
- for the community this program has inspired them
- community members are inspired to buy the goats so they can get the benefits
- community members look up to goat farmers
- farmers are an inspiration to other farmers
- the farmers serve as role models for other communities
- other community members come get advice from them
- the community looks to us as a model

Theme: Participants identified the opportunity to teach the community 12% n=3

- I used the knowledge I had to teach others in my community about agriculture
- with the community, I have tried to teach my friends about the project
- the farmers have taught their skills to other community members

Theme: Participants identified the community has increased resources 12% n=3

- this has boosted our crop production
- the farmers get counseling services
- the hospital gave them local goats



Theme: participants in the community have increased their agricultural knowledge 8% n=2

- Families not in the project, it has expanded their knowledge on agriculture
- as a community they have knowledge on how to rear goats

Theme: The community took pride in the project 8% n=2

- she has fellow community members feeling proud
- now, people sweep and keep their compounds clean

Theme: Participants in the community are thankful 8% n=2

- I am so thankful for the people who brought us this project
- she is so thankful that JLMC brought the project

Theme: The community is using manure more 4% n=1

- for my family, it has helped provide manure we use in our garden

Theme: Participants are facing challenges 4% n=1

- Challenge, they were getting a small amount of milk

Theme: Participants have the opportunity for community leadership 4% n=1

- now, as the LC he can oversee the project

#### Question 5

Theme: Participants explicitly stated that they liked the dairy goats and the milk they produce 42% n=11

- the goats are multipurpose
- I did not know goats made this much milk
- my goat produced 4 L of milk every day
- I loved that they brought something new, I had never seen a goat produce milk
- I love that I can get milk from the goat
- I love the fact that my goat was healthy and good looking
- I was able to get milk that was more nutritious than cows milk
- she liked getting milk for her children
- she likes that she get's milk from the goats
- He has liked the goats the most
- the day she received the goat it was exciting
- he never heard of goats milk
- learning about the potential of goat milk
- when she started milking her goats, she was so grateful

Theme: Participants enjoyed the community connections that were formed 42% n=11

- I was able to give milk to my neighbors so they could taste the milk
- we were able to create this association
- I enjoying have visitors come see my goats and other things I do
- the part where they organize meetings and trainings
- she likes the way they conducted these programs as a team m
- they come together and discuss solutions to their problems
- the groups have village carts
- being together brought them together so they could build relationships
- she was excited to pass on the goat
- a lady had come learn how to do the project
- when they would come together for workshops, it was creating oneness in them
- through this project they were introduced to self for health Uganda
- she became a CLV because of this project

Theme: Participants appreciated the facilitators and their encouragement 35% n=10

- they have not abandoned us
- the always come back to motivated us and help us
- The implementers do not concentrate on only one thing
- everything was done for free
- we were able to borrow money in case we were in need
- they liked being encouraged to carry out farming on a large scale
- they are able to get free treatment at the hospital
- the visit from Heifer international
- the veterinarians working with the project were very responsible and on time
- heifer function came to her house, famous actress came

Theme: Participants enjoyed learning and the trainings 31% n=8

- they always come and train us for all the things that can happen
- I like this project because they teach us so many things
- I love regular training
- he likes the counseling and guidance part of the project
- she likes that they meet
- many workshops
- three interesting workshops
- she liked the trainings given before receiving the goats
- the other opportunity was to train as a CLV

Theme: Participants enjoyed their improved health and quality of life 23% n=6

- goats provided good quality milk
- our health improved as a family
- they have hospital cards and be treated
- taught them how to make a fireplace to cook from

- her child was sent home for school fees and she had no way to pay
- through this project they were introduced to community health

Theme: Participants like being able to grow vegetables and other crops 19% n=5

- I can now grow vegetables
- we were told about the crops as well
- the project has helped her grow food for the home and then sells it to the market
- the workshops involved growing vegetables
- they planted seeds in their backyard gardens
- she was given seeds

Theme: Participants liked the consistent source of income 19% n=5

- I can sell the goat and get money
- we have a savings association
- I had a consistent source of income
- she sells the milk and drinks some
- she was able to sell goat milk and pay the school fees

Theme: Participants enjoyed gaining specific skills related to goat rearing 19% n=5

- we were told how to take care of the goats
- he likes having farming skills
- now she knows what times to feed and clean the goats
- taught them how to grow grass for the goats
- this helped them learn how to rear goats

Theme: Participants enjoyed learning new construction skills 12% n=3

- we've been taught how to construct housing for animals
- they taught them how to build the goat house
- when constructing houses they would do it together so they can learn together

Theme: Participants explicitly enjoyed everything about the project 12% n=3

- I personally have loved every bit of this project
- I loved everything
- I loved everything

Theme: Participants enjoyed the pride they felt 12% n=3

- he liked the passing on of a gift
- we had a function here, they chose us as the model farmers
- at first she felt very proud

Theme: Participants enjoyed having manure for their gardens 4% n=1

- goats provided manure for garden

- the dung helped in the garden

Theme: Participants enjoyed how the goats lived in their housing structures 4% n=1

- because the goats live in paddocks I can go do other things
- she likes these goats are "indoors"

Theme: Participants liked the proximity of the project 4% n=1

- the plantations are close to her house

Theme: Participants like the time commitment required for the project 4% n=1

- I like working with goats because it allowed me to have time to do other things

#### Question 6

Theme: participants would prefer a different animal or a meat goat 42% n=11

- a variety of animals to choose from like cows and pigs not all people can handle goats
- I think we should have a variety of animals
- like a goat and a cow so the milk output is higher
- if the implementers could give us a variety of animals
- for the implementers I would get a variety of animals
- If the implanters could get us more animals resistant to drought and disease
- maybe use dual purpose meat and dairy goats
- If there could be an opportunity to get goats for meat, that would add value
- if there can be a possibility to change from goats to different animals
- maybe the challenges are from dairy goats
- meat goats are easier to manage
- meat goats might be better
- recommend for those who have succeeded to have a dairy cow
- maybe a different hybrid species

Theme: participants wanted more veterinary resources 19% n=5

- for the implementors: I would make sure we had veterinary care available
- veterinary care is needed
- if they could get veterinarians to come check on the goats
- the veterinarian should be more available

Theme: participants want more support from the facilitators 19% n=5

- the screening process should be better
- if maybe they could help us with shelter for the animals
- more support, more real medicine
- if they could get more support

- government support
- get experts to come help
- more supervision and encouragement

Theme: participants identified how they would try harder if the project happened again  
15% n=4

- I would start making my own fertilizer with the dung
- I think I would be more responsible
- I now know not to wait for the goat to get sick
- I would not sell them while they are little
- I would wait until I had more goats before I sell them
- I would put in more effort in my animal rearing skills

Theme: participants want more training 15% n=4

- teach us other ways to maintain shelters
- government training
- improvement in the way they train
- more trainings and more skills
- provide more training for how to raise meat goats

Theme: participants do not want anything to change 15% n=4

- she is content with everything she has nothing to add or subtract
- He would not want it to be done differently
- she would not want any improvement, everything was done well
- she does not see any changes

Theme: participants want more land 8% n=2

- I would get a larger place so my animals can live freely
- I would get a larger place so my animals have more grass
- I would try to get a larger space so I can accommodate more animals

Theme: Participants want more crops 4% n=1

- if there is an opportunity increase crops
- expanded programing for crop growth

## APPENDIX C

### DIVISION OF RESEARCH

### NOT HUMAN RESEARCH DETERMINATION

May 08, 2018

Type of Review:	Initial Review
Title:	Girl Power Community Impact in Uganda – An evaluation of the impact of the Girl Power Project at the community level
Investigator:	Manuel Pina
IRB ID:	IRB2018-0227
Reference Number:	076522
Funding:	Just Like My Child Foundation
Documents Received:	IRB Application Version 1.3; Coleman Thesis Proposal Final; Baker Thesis Proposal Final; Site Authorization Letter; Interview Schedule; Minor Assent Form; Parental Permission Form; Adult Consent Form

Dear Manuel Pina:

The Institution determined that the proposed activity is not research involving human subjects as defined by DHHS and FDA regulations.

Further IRB review and approval by this organization is not required because this is not human research. This determination applies only to the activities described in this IRB submission and does not apply should any changes be made. If changes are made you must immediately contact the IRB about whether these activities are research involving humans in which the organization is engaged. You will also be required to submit a new request to the IRB for a determination. Please be aware that receiving a 'Not Human Research Determination' is not the same as IRB review and approval of the activity. You are not to use IRB consent forms or templates for these activities.

If you have any questions, please contact the IRB Administrative Office at 1-979-458-4067, toll free at 1-855-795-8636.

Sincerely,

IRB Administration

750 Agronomy Road, Suite 2701  
1186 TAMU  
College Station, TX 77843-1186  
Tel. 979.458.1467 Fax. 979.862.3176  
<http://rcb.tamu.edu>

## APPENDIX D



### Community Covenant

Girls cannot change their fate alone. They need a community that stops violence and respects their human rights. That's why it is critical to offer the opportunity for girls, boys and community members to acknowledge and protect the rights of girls. This valuable community work sets a foundation for Girl Power to take hold and weaves a safety net to provide girls with the support and confidence they need to live safe and happy lives.

As the chairpersons of school management committee and P.T.A of \_\_\_\_\_, We declare on behalf of the community on this date of \_\_\_\_\_, that we are committed to respecting and protecting the human and legal rights of the girls in our community. As such, we agree to fully support and be involved in Girl Power Project activities at the school and we provide permission for our girls to fully participate.

Let this document remind us of the role we are all playing in improving our community and the nation by supporting our girls in becoming healthy, educated leaders and successful contributors to society.

\_\_\_\_\_  
Chairperson S.M.C

\_\_\_\_\_  
JLMC Country Director

\_\_\_\_\_  
Chairperson P.T.A.

\_\_\_\_\_  
JLMC Girl Power Representative