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PARTICIPATION IN CAPACITY-BUILDING PROGRAMS AND THE IMPLICATIONS FOR THE WELL-BEING OF YOUNG FARMERS WITH AND WITHOUT DISABILITIES IN UGANDA

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ABSTRACT

This research study comparatively examined participation in capacity-building programs and the implications for the well-being of young farmers with and without disabilities in Northern and Eastern Uganda. The study employed a comparative, mixed methodology, cross-sectional research design involving 774 young farmers composed of 388 with disabilities and 386 who had no disabilities. The sample selection strategies involved the use of a stratified, random and criterion purposive sampling techniques. This research utilized an interviewer-administered paper survey, focus group discussions, and in-depth interviews in collecting data. Descriptive statistics and regression analyses were used in analysing quantitative data. Qualitative data helped to validate quantitative findings using Seldana's framework for coding and analysis.

The findings indicated that many young farmers with disabilities are male (65.5%), 20 to 29 years old, married (55.4%), and attained a primary school education (59.8%). Most households had at least one person with a disability (71.1%). Many young farmers have an innate disability (69.6%), and most experienced moderate (52.1%) to severe (34.2%) limitations to participation in daily life activities. A majority of the young farmers have a disability caused by accidents (48.7%), disease (18.5), and gunshots/landmines/civil wars (17.6%). Many young farmers with limb disabilities were innate (25.8%) and acquired (19.1%). Most disabilities were linked with loss of limbs (20.1%), or from burns (9.3%), loss of hearing (5.7%), and loss of vision (4.4%) among those aged 20 to 29 years. However, there were no statistically significant associations between the causes of disability among young farmers across the various age categories. There were statistically significant associations (Cramer's $V = .148$; $p = .043$) between the types of disabilities among young farmers across the various age categories; however, no association existed between region and type of disability. There were no statistically significant associations between causes of disability among young farmers and age of acquisition of disability in Uganda

Many young farmers with disabilities (48.7%) and without disabilities (43.9%) were self-employed (55.6%) in subsistence agriculture. However, people with disabilities were less engaged in vocational trades due to a lack of skills and competencies. There was no statistically significant

differences in employment sectors for young farmers with and without disabilities. Most young farmers with disabilities (52.3%) earned income comparable to that earned by young farmers without disabilities (47.7%), with a greater proportion of young farmers with disabilities in Northern Uganda (35.7%) earning incomes comparable to those with disabilities in Eastern Uganda (16.4%). In contrast, a slightly greater proportion of young farmers without disabilities (26.3%) in Eastern Uganda earned income compared to their counterparts in Northern Uganda (25.2%). There was a statistically significant association in the regularity of income earned by young farmers with and without disabilities in Eastern Uganda as well as in Northern Uganda.

Further, for agricultural production needs, disability, value addition, and market demonstrated evidence of a statistically significant negative impact on food security. However, there was a statistically significant positive association between being from Northern Uganda, money, improved animals, agricultural information and food security. Furthermore, for social capital; disability demonstrated a statistically significant negative relationship with food security. However, in Northern Uganda, talking to people outside the family, traveling to places outside the community of residence had a statistically significant positive influence on food security. In terms of poverty trap, disability has a statistically significant negative relationship with food security. While adequacy of food eaten in a meal, level of satisfaction with food eaten in a meal, and level of food availability in a household have a statistically significant positive relationship with food security. In addition, for social exclusion; disability and group membership have a statistically significant negative relationship with food security whereas Northern Uganda has a statistically significant positive relationship with food insecurity.

In addition, young farmers with a disability and being contacted face-to-face were less likely to participate in community capacity-building programs. In contrast, for farmers in Northern Uganda, those contacted in a group setting, application of sign language interpretation, being female, and having supportive training staff increased the chances of their participation in community capacity-building programs. Moreover, having a disability, satisfaction with the amount of food eaten in a meal, interaction with people outside the family, feeling of belonging, and highest level of education

have a statistically significant positive relationship with well-being of young farmers. In contrast, active participation in training and being female had a statistically significant negative association with well-being of young farmers. In order to navigate difficult social-cultural terrain to function fully in their communities, young farmers with disabilities employ self-disability awareness, self-created positive self-image, building social network beyond disability-related, competitive behaviors, and forming disability-groups.

Therefore, the researcher recommends disability-inclusive programming and the use of evidence-based disability-inclusive programming as a criterion for funding capacity-building programs, enforcement of disability policies, retooling extension and community educators, and integrating disability in training curricular for extension and community educators.

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CHAPTER 1

INTRODUCTION

1.1 **Background to the Study**

Young farmers with disabilities in Uganda tend to be excluded from participation in capacity-building programs that would make a difference in their wellbeing (Department for International Development [DFID), 2014, 2015; Peter, 2006; Vornholt, Uitdewilligen, & Nijhuis, 2013). For example, categories of people with disabilities include that of young farmers who mostly live in rural and remote areas of Uganda. Marginalization and exclusion from education, health, and agricultural programs meant to improve the livelihood and well-being of community members characterize young farmers with disabilities in Uganda (DFID, 2015). Having been largely excluded from formal education, young farmers with disabilities experience low production and productivity in the livelihoods in which they engage, especially in subsistence production agriculture (UNESCO, 2018). Thus, 80% of the people with disabilities in northern and eastern Uganda live in chronic poverty (Uganda Bureau of Statistics, 2007).

Most young farmers with disabilities engage in production agriculture, but do not access agricultural extension services meant to provide young farmers with knowledge and skills, information, production inputs and technologies (DFID, 2014, 2015). Farmer groups need agricultural extension and advisory services in Uganda but the high level of stigma attached to disability forces young farmers with disabilities to undertake casual and risky jobs shunned by people without disabilities. Given the high level of discrimination and exclusion, young farmers with disabilities primarily derive their livelihood and well-being from subsistence agriculture and informal jobs such as collecting garbage, cleaning premises, casual labor at farms, and begging for alms in urban settings (DFID, 2014, 2015). Most young people with disabilities engage in less gainful jobs and receive low pay compared to young farmers without disabilities (Milner et al., 2015). Thus, poverty and food insecurity characterize the daily life of young farmers with disabilities (Yeo, 2005).

Studies point to a relationship between chronic poverty and disability in most developing countries (Eide & Ingstad, 2013; Lwanga-Ntale, 2003; Yeo, 2005). An estimated 50,000 people, including 10,000 people with disabilities, die every day because of chronic poverty (Yeo, 2005). Poor people tend to have disabilities and are most likely to be poor. Their poverty limits their access to education and health (Lwanga-Ntale, 2003; Whelan et al., 2009) and recreational services (Devine, 2012), and experience acute food shortages and poor nutrition (Lwanga-Ntale, 2003). Their families and communities bear the burden of the high costs of care (DFID, 2015; Emmett, 2006; Yeo, 2005).

Northern Uganda experienced a protracted civil war between the Lord's Resistance Army (LRA) and the Government of the Republic of Uganda between 1986 and 2004. War has catastrophic effects on human physical, mental and emotional health, and the wellbeing of people and communities (Carter, 1997; Forge, 1997). The Northern and Eastern Uganda civil wars displaced people from their communities, and cause loss of life, injuries, and loss of livelihood (Beisland & Mersland, 2014). The political climate in Uganda is characterized by civil conflict that lasted over 20 years, with after-war effects such as increasing the number of people with disabilities, land conflicts among families and with the state, diseases, and a breakdown of social services (education and health). Post-war disabilities and psychological trauma affect many (Grant, 1997). Globally, the effects of war are more pronounced on children and women, with one child in every 200 traumatized by war.

Development agencies, practitioners, and human rights bodies recognize that regardless of where people with disabilities live, they are more likely to be poor, vulnerable, and marginalized (Eide & Ingstad, 2013; Lwanga-Ntale, 2003; Yeo, 2005; Mpofu & Shumba, 2013;). Notably, Article 32 of the United Nations (UN) Convention on the rights of people with disabilities mandates that international cooperation and international development programs be inclusive of and accessible to people with physical and mental impairments (DFID, 2015; Wolbring, Mackay, Rybchinskin, & Noga, 2013). As argued by Wolfensohn (2002), former President of the World Bank, the UN Millennium Development Goals and the current sustainability development goals will not be met unless disability issues are addressed (Wolbring et al., 2013).

Based on the social model on which this study was focused, disability refers to a social consequence of the possessed impairment attributed to inequities faced by people with disabilities due to community structure (Whelan et al., 2009; Yeo, 2005). Therefore, disability refers to a complex system of restrictions and barriers imposed on people with physical and mental impairments that impede their ability to enjoy rights and other opportunities accessed by people without disabilities (Friesen, Krassikouva-Enns, Ringaert, & Isfeld, 2010; Siddiqua et al., 2012; Yeo, 2005). Disabilities can occur in the form of physical, sensory, intellectual, mental or behavioral condition (Friesen et al., 2010; Yeo, 2005), an injury, illness, or inborne (Whelan et al., 2009).

According to the Uganda Police Force annual crime/traffic reports for 2010 through 2013, accidents constitute the leading cause of death and disability in Uganda. Similar reports by World Health Organization (2013) and Gukande, Jombwe, Fualal, & Gakwaya (2009), attribute acquired disability to road accidents that are common in Uganda because of the poor state of roads. In addition, most farmers lack protective wear, thus, they are facing increased risk to injuries from farm implements, sharp objects, agrochemicals, and snakebites.

The concept of capacity building refers to a continuous process of supporting and strengthening people and communities through training and retooling to improve their production capacities in livelihood activities (Columbia Center on Sustainable Investment, 2015). Capacity building entails identifying needs, developing existing skills and abilities, and providing new opportunities to the target group. Furthermore, capacity building increases awareness and confidence, social networks and resources for the target population so that it can participate in making decisions and taking actions for their own benefit (Carrasco, Acker & Grieshop 2003; Laverack & Thangphet, 2007). Thus, capacity building refers to the introduction and application of more efficient technologies and systems, with the intent of changing people's mind-sets and improving behavior beneficial to the development of households and communities.

Capacity building is the strategy most used by development agencies to improve production capacities and community members' abilities. Despite being a commonly used strategy, most capacity-building programs lack professional services needed to address the specific needs of people

with disabilities in Uganda. Most countries have legislation and policies on disabilities; however; capacity-building programs are not disability-inclusive (DFID, 2014). Much as there is evidence of a legal framework for people with disabilities in Uganda, there is a gap in existing laws, policies and practices and the participation of people with disabilities in capacity-building programs in communities (Abimanyi-Ochom & Mannan, 2014; DFID, 2014, 2015). Furthermore, the inability to implement existing disability legislations and policies remains the most curtailing factor in social and economic development of people with disabilities (Wolbring et al., 2013). Worse still, some communities lack disability policies, which constrains participation of people with disabilities in capacity-building programs in their communities (Gensby al., 2013).

People with physical and mental disabilities have a key role to play in their livelihood, which requires their participation in capacity-building programs. However, people with disabilities tend to experience many challenges due to community opinions towards their physical embodiments (DFID, 2015; Mpofu & Shumba, 2013; Siddiqua et al., 2012). A disability affects a person's participation in livelihood activities, whether in on-farm and off-farm employment (DFID, 2015; Mpofu & Shumba, 2013; Siddiqua et al., 2012; Whelan et al., 2009). Thus, disability alters a person's way of life, and their wellbeing (Mpofu & Shumba, 2013).

Most often, employers do not have policies and procedures in place to help people with disabilities return to or stay at work. Because people with disabilities experience health problems, special health attention is required, as well as special consideration for participation in capacity-building programs. People with disabilities tend to give up their occupational activities due to ongoing job limitations and spend much time not engaging in their livelihood activities (Siddiqua et al., 2012). A study conducted in the U.S. indicated that a few recreational agencies provide inclusive recreational services to cater to the needs of people with disabilities (Devine, 2012). The study further pointed out that despite the existence of the Americans with Disabilities Act of 1990, to date, identifiable and significant gaps still exist in services provided to people with disabilities.

Therefore, people with disabilities tend to be vulnerable to most limitations. Vulnerability refers to a state that renders an individual or group unable to benefit from development programs

targeting that community due to community structures and other factors beyond an individual or group capacity (DFID, 2014, 2015). Most often, capacity-building programs meant to benefit vulnerable groups in society tend to bypass them. Many capacity-building programs fail to attract participation by people with disabilities, an indication of social exclusion from community development programs (Lwanga-Ntale, 2003).

The concept of inclusion encompasses both people with and without disabilities by engaging together in various aspects of the community, including the social, economic and political, among others, mostly by reducing barriers to participation by using adaptations and accommodations designed to maximize the abilities of individuals to engage in personal, community and national development (Anderson & Kress, 2003). Thus, inclusion increases the opportunities available to people with disabilities to lead a rewarding and satisfying life. Barriers to inclusion in capacity-building programs are due in large part to administrative structures and processes, the personnel delivering development programs, and community beliefs, perceptions and stereotypes (Devine, 2012).

People with disabilities tend to be vulnerable to poverty due to engaging in less gainful jobs, lack of production resources, poor health, and conflict-related insecurity (Wolbring et al., 2013). Thus, the vulnerability of people with disabilities remains the most critical factor impeding their livelihood systems (DFID, 2014). This is because vulnerability impedes their ability to develop relevant knowledge and skills, and constrains access to information needed to enhance livelihood production and productivity. In addition, lack of substantial and appropriate capacity building support to alleviate chronic poverty limits people with disabilities' resilience to serious predicaments.

Therefore, disability tends to limit participation and inclusion (Siddiqua et al., 2012), causing those with disabilities to lead unhappy and unfulfilling lives, which results in low wellbeing (Deeming, 2015). Low employability and low to no income are two factors influencing the low wellbeing experienced by people with disabilities, as well as difficulties in accessing school infrastructure, inadequate inclusion in educational programs, and poor health status.

A discrepancy is evident in the way capacity-building programs target community members (Lwanga-Ntale, 2003; Peter, 2006). It is thus sufficient to point out that the discrepancy in service delivery and provision to communities tends to work against people with disabilities. Most communities view people with disabilities negatively, rendering them undeserving of the worth ascribed to physically able-bodied people (DFID, 2014, 2015). Capacity-building programmers also tend to portray stereotypes of the disabled. Even when these people are included in capacity-building programs, there are significant differences in terms of meaningful participation between people with and without disabilities (Fiorati & Elui, 2015). As argued by rural developers, to alleviate poverty and achieve sustainable development, equitable inclusion in capacity-building programs needs to be addressed (Hustedde & Woodward, 1996).

Participation refers to a process by which people equitably share influence in carrying out capacity building activities regardless of their hierarchical status in the program or community. This includes information-processing, decision-making, or problem-solving tasks (Wegner III, 1994). Participation has a positive effect on the performance and satisfaction of those involved in carrying out program activities. More so, participation enhances ownership and a feeling of belonging to the program and the community. Thus, participation by target stakeholders is a key attribute in measuring the success of capacity-building programs. Table 1.1 indicates high poverty levels among people with disabilities.

Table 1.1

Matching Millennium Development Goals: Situation of People with Disabilities
Goal Number One - Eradicate Extreme Poverty and Hunger

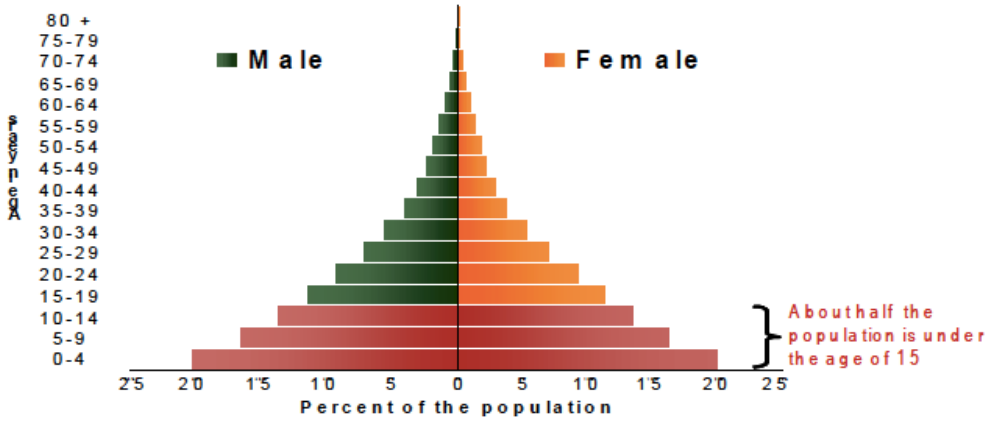
Goals and targets	Indicators for monitoring progress	Disability indicators[a]	Available global data on the situation of persons with disabilities and the MDGs[b]
Target 1.A. Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day	1.1. Proportion of population below $1 per day	1.1. Proportion of population with disabilities below $1 per day	
	1.2. Poverty gap ratio	1.2. Poverty gap ratio for persons with disabilities	"An estimated 80 per cent of all people with disabilities in the world live in developing countries. Of these, some 426 million live below the poverty line and often represent the 15-to-20 per cent most vulnerable and marginalized poor in such countries." [c]
	1.3. Share of poorest quintile in national consumption	1.3. Proportion of persons with disabilities within the poorest quintile in national consumption	
Target 1.B. Achieve full and productive employment and decent work for all, including women and young people	1.4. Growth rate of gross domestic product (GDP) per person employed	1.4. Growth rate of GDP per person with disabilities employed	"There is ample evidence that people with disabilities are more likely than non-disabled persons to experience disadvantage, exclusion and discrimination in the labour market and elsewhere. As a result of these experiences, people with disabilities are disproportionately affected by unemployment. When they work, they can often be found outside the formal labour market, performing low-paid and low-skilled jobs, offering little or no opportunities for job promotion or other forms of career progression. Employees with disabilities are often under-employed."[d]
	1.5. Employment-to-population ratio	1.5. Employment-to-population ratio for persons with disabilities	"The most common form of discrimination is the denial of opportunities to persons with disability either to work altogether or to build on their abilities and potential. The unemployment rates of persons with disabilities reach an estimated 80 per cent or more in many developing countries."[e]
	1.6. Proportion of employed people living below $1 per day	1.6. Proportion of employed persons with disabilities living below $1 per day	"People with disabilities are often given low-paid, unskilled and menial tasks or belong to the 'last hired—first fired' group of workers who are more vulnerable to the effects of recession."[f]
	1.7. Proportion of own-account and contributing family workers in total employment	1.7. Proportion of own-account and contributing family workers with disability in total employment of persons with disabilities	

Source: United Nations (2011).

1.2 **Statement of the Problem and Context**

People with disabilities constitute about 10% of the world's population and 75% live in developing countries (Thomas, 2004) (Table 1.2). Young people constitute over 60% of Uganda's population, thus have a great potential to contribute to the development of household and national economies (Uganda Bureau of Statistics, 2015). There is great potential value in developing youth participation in agriculture value chains, especially through capacity building (Butler & Kebba, 2014). However, young farmers with disabilities are less likely to participate in capacity-building programs in Uganda. In addition, those who are disabled are largely unemployed, pursue less gainful employment, and are less likely to attain a formal education (Siddiqua et al., 2012), as well as having less access to social services and support networks (Mpofu & Shumba, 2013; Whelan, Ruane, McNamara, Kinsella, & McNamara, 2009; Yeo, 2005).

Figure 1.2. *Uganda Population Pyramid*



Source: State of Uganda Population Report, 2012.

According to the demography of disability in Uganda, 28.5% have visual impairment; 17.5%, hearing impairment; 29.5%, mobility impairment; and 24.5%, other impairments (Beisland & Mersland, 2012). The most common disabilities are 35.3%, loss and limited use of limbs; 22.3%, injuries; 15.1%, hearing difficulties; and 6.7%, vision difficulties. However, there is variation in disability rates in regions of Uganda, with the northern region being the highest (4.4%); western (2.9%); and eastern and central (3.6% and 3.1%, respectively) (The Republic of Uganda & UNICEF, 2014). There is variation in statistics for people with disabilities, with some indicating 16 to 20%

(Republic of Uganda & UNICEF, 2014)—this is one issue that was addressed in this study. The 2009 /2010, Uganda National Housing Survey estimated the number of people with disabilities to be 16%; however, other researchers have documented 4 percent of Uganda's population (Swedish International Development Agency [SIDA], 2014)

Eighty percent of people with disabilities in Uganda live in chronic poverty with limited access to social services and employment (Uganda Bureau of Statistics, 2007). People with disabilities engage in less gainful employment, have limited livelihood alternatives and limited access to agricultural production resources, such as land, microfinance, knowledge and skills to pursue meaningful wellbeing (Beisland & Mersland, 2014; Mpofu & Shumba, 2013). However, the literature and statistics are inadequate in explaining the extent to which disability, vulnerability, poverty, and participation in capacity building influence the wellbeing of people with disabilities.

Most capacity-building programs tend to address the effectiveness of achieving desired goals but fail to fulfil equity in social inclusion and participation by marginalized groups (Mpofu & Shumba, 2013; Phillips, Waddington, & White, 2014; Yeo, 2005;). This contradicts the very purpose of capacity-building programs to enhance the livelihoods and wellbeing of community members (Davis, 2008).

The Global Hunger Index report (IFPRI, 2012) categorized Uganda as one of the countries with severe food insecurity and malnutrition, a factor in less meaningful participation by marginalized groups such as people with disabilities. The rate of return for capacity-building programs in Uganda is between 8 and 49% (Benin et al., 2011). This low rate of return is due to a failure to tailor capacity-building programs to the needs of farmers with disabilities. The intention of this study, then, was to examine participation in capacity-building programs and the implications of doing so for the wellbeing of people with disabilities in northern Uganda.

1.3 **The Main Goal**

The general goal of this study was to examine participation in capacity-building programs and the implications of participation/lack of participation for the wellbeing of young farmers with and without disabilities in Uganda.

Based on the challenges (see study background) faced by people with disabilities, notably social exclusion from participation in capacity-building programs, the results include chronic poverty, low social networks, and food insecurity. To learn more about these issues, several research objectives were developed for this study.

1.3.1 **Research Objectives**

The specific objectives of this study were:

i) To describe the socio-economic situation of young farmers with and without disabilities living in Uganda

ii) To examine factors influencing food security status of young farmers with and without disabilities in Uganda

iii) To assess the determinants of young farmers' participation in capacity-building programs designed for the public in Uganda

iv) To assess the determinants of wellbeing for young farmers with and without disabilities in Uganda

v) To examine mechanisms that young farmers with and without disabilities use to cope with their disability and exclusionary social practices that influence their wellbeing

1.3.2 **Research Questions**

The following research questions guided this study:

i) What is the socioeconomic situation of young farmers with and without disabilities in Uganda?

ii) How do basic needs, social support, poverty traps, stigma of exclusion, and disability status affect the food security of young farmers with and without disabilities?

iii) What determines the participation of young farmers with and without disabilities in capacity-building programs designed for the public in Uganda?

iv) What determines the wellbeing status of young farmers with and without disabilities in Uganda?

v) How do young farmers with disabilities cope with their disability, social, and psychological exclusionary practices to function fully in their communities?

1.4 **Significance of the Study**

Disability issues have generated a lot of debate at all levels of community leadership and social services provision (The Republic of Uganda & UNICEF, 2014). This study fed the current conversations on how best to implement the existing legal frameworks to address the capacity-building activities needed to benefit people with disabilities (Butler & Kebba, 2014; Jang, Wang, & Lin, 2014). There is great potential value in capacity building for young farmers with disabilities, including increasing their current and future relevance to the national economy (Butler & Kebba, 2014). This study, therefore, was designed to offer information that will inform the current debate on people with disabilities among policy, development practitioners and disability scholars.

Inclusive-participation by people with disabilities in capacity-building programs is fundamental to the transformation of households and communities (Okoboi et al., 2013). For academics, this study's findings will offer new knowledge that will form a basis for future research on people with disabilities. Socially, the findings will contribute to a better understanding of inclusive-participation by people with disabilities as the foundation for disability-inclusive capacity-building programming in communities. To policy makers at the central and local government levels, the findings will feed into ongoing discussions on how best to implement the existing legal frameworks to address participation and service delivery for the inclusion of people with disabilities in capacity-building programs to improve their wellbeing (Jang, Wang, & Lin, 2014).

1.5 Limitations of the Study

Especially in Northern Uganda, which has just emerged from an over 20-year civil war, the political climate is characterized by pockets of insecurity and lawlessness; illegal light weapons are still in the hands of local people.

The complex bureaucracy for accessing authorization documents from the central and local governments and National Union of Disabled Persons in Uganda (NUDIPU) at the district, sub-county and village levels implies increased financial and time costs. The government of Uganda keeps forming new districts by subdividing the old districts, which further increases uncertainty about the exact number of districts in northern Uganda.

Most people with disabilities live in rural and remote communities with poor communication and transportation, which constrains access and makes scheduling survey appointments with respondents difficult, limiting response rate. In addition, cultural limitations keep people with disabilities from the public, especially those with mental health issues, which can limit their participation in a study. Furthermore, the diverse nature of disabilities requires the hiring of specialized professionals such as sign language interpreters to the team of research enumerators. Finally, it is difficult to determine the sampling frame since the number of people with disabilities is unknown. There are conflicting statistics on the number of people with disabilities, ranging between 4 and 20% of Uganda's total population.

1.6 Operational Definitions

Disability: refers to complex system of restrictions and barriers to people with physical and mental impairments resulting in denial rights enjoyed by other people causing limited access to opportunities for a better wellbeing (Yeo, 2005; Friesen, Krassikouva-Enns, Ringaert & Isfeld, 2010; Siddiqua *et al.,* 2012). I will adopt Yeo's characteristics of disabilities.

Social model of disability: refers to disability because of the impairment attributed to inequities emanating from the structure of community (Yeo, 2005).

Physical disability: refers to being lame, deaf, dumb, blind, and/or mentally retarded (The Republic of Uganda & UNICEF, 2014).

Social exclusion: refers to denying a person or a group of people the opportunity to interact and build relationships and social networks in the community (Simplican, Leader, Kosciulek, & Leahy, 2015). Thus, excluded people fail to access and participate in capacity-building opportunities and information that flow within the community social networks.

Participation: refers to the process of attendance and active involvement of people in situations and decisions that affect themselves and community (Checkoway & Gutierrez, 2008). In this study, participation refers to shared influence and responsibility of participants in active involvement in program activities such as decision making and feeling of belonging to those programs and communities (Wagner III, 1994; Head, 2007). Participation entails informing, consultation, involvement, collaboration, and empowerment of participants (Wagner III, 2007).

Capacity building: refers to training and retooling of community members to improve their capacities, knowledge, skills and practices in various livelihoods (Laverack &Thangphet, 2007). For the benefit of this study, capacity building refers to all organized activities including training, input supply, access to information among others aimed at improving the production and productivity of young farmers

Vulnerability: is the state in which an individual or groups are unable to benefit from development programs targeting the community because of the structure of the community and generally factors beyond an individual or group capacity (DFID, 2014).

Community development programs: are activities implemented in communities, usually targeting a section or whole community for improving their wellbeing of the people.

Wellbeing: refers to the level at which an individual, group or community is able to satisfy their needs as happiness, food, shelter, interaction, and feeling of belonging to the community (Deeming, 2015).

CHAPTER 2

LITERATURE REVIEW

2.1 **Introduction**

In this chapter, I review the literature relevant to participation in capacity-building programs and findings with implications for the well-being of young farmers with and without disabilities. The reviewed literature includes origin of disability studies and concept of disability, disability models in the context of disability in East Africa, discrimination and social exclusion and structures of exclusion, poverty, participation and capacity-building programs and well-being, and coping strategies for people with disabilities. A summary of the major points in the literature relevant to this thesis concludes the review.

2.2 **Origin of Disability Studies**

Studies on people with disabilities have received increasing attention over the last decade (since 2000) though still limited compared to other disciplines. The available literature on people with disabilities tends to cover the most common themes such as marginalization, vulnerability, capacity-building, physical disability and policies. A look at the peer-reviewed literature in this area highlights the major focus of most disability studies and identifies the existing gaps.

For example, the literature highlights the dilemma people with disabilities face in dealing with marginalization, vulnerability, capacity-building, physical disability and policies. There is a significant focus on the social model of disability and to a lesser extent on the medical model as guided by previous studies. Disability is an inter/multi-disciplinary study, which recognizes disability as a human experience with wide-ranging critical political, social, and economic implications for people with disabilities and without disabilities at the personal, household, national, and global levels. In this literature review, then, an effort was made to draw from diverse disciplines ranging from the social sciences to basic science (Wolbring, Mackay, Rybchinski & Noga, 2013).

The increase in the people with disabilities movement in the 1970s marked the beginning of disability studies as an academic discipline (Albert, Dube, & Riis-Hansen, 2005; Burton, 1993). This

movement included the development of an analytical tool (social model) to apply in political campaigns that emphasized the belief that disability is more than a social phenomenon that prevents their full participation in societies, and not a physical functional limitation (Barnes & Oliver, 1995; Burton, 1993). Earlier researchers such as Barton (1993) espoused the social model approach as an essential tool in making social services such as education and health disability-inclusive (Oliver & Barnes, 2010).

2.2.1 **Models for Studying Disability**

The study of disability involves four models: medical model, social model, charity model, and spiritual model (United Nations, 2011). However, it is important to note that the social and medical models tend to dominate most disability studies. The charity model considers people with disabilities as recipients of social and economic handouts.

The spiritual model considers supernatural spirituality and religiosity as the best interventions for people with disabilities (Underwood, 1999). It is important to note that people with disabilities have turned to religion and spirituality because of social exclusion by communities and their failure to access therapy to their social and health challenges, as advocated by the spiritual model of disability (Underwood, 1999; Treloar, 2002).

The social model is mainly used in disability studies in the global South; while researchers conducting disability studies in the global North prefer the medical model (United Nations, 2016). Rehabilitation needs for people with disabilities tend to define disability models. Disability refers to a limitation in participation in daily living, work, or leisure activities resulting from physical or mental health condition (medical model).

The social model, the newest in disability studies, became popular in response to the growing global Disability Rights Movement (United Nations, 2016). The social model breaks the causal link between impairment and disability. Much as the disability exists in an individual, the cause of people's disabilities is cultural, economic, and social disadvantage (United Nations, 2016). The existence of a physical and/or mental disability does not constitute the primary cause of socio-economic disadvantages faced by people with disabilities. The emphasis is on how society disadvantages people

with disabilities from accessing existing social and economic opportunities, thus rendering them dependent on other people for support services. The social model approach has been pivotal in the development of social policies that address the plight of people with disabilities. The United Nations popularized the social model by linking disability to human rights abuses, which culminated in the United Nations Convention on the Rights of People with Disabilities (CRPD) in 2008 (United Nations, 2011, 2016). Disability is a human rights violation due to the exclusion of people with disabilities from education, health care, and social participation.

2.3 **Concept of Disability**

Social and medical models in disability studies influence the definition of disability and the disability policies of different countries. The International Classification of Functioning, Disability and Health (ICF) recognized by the World Health Organization in 2001 refers to disability as a complex phenomenon that reflects the interaction features and functioning of a person's body and features of the society in which he/she lives (World Health Organization [WHO], 2002). The U.S. National Safety Council (NSC) defines a disabling injury as one that causes death or permanent disability or any degree of temporary total disability beyond the day of the injury. A temporary disability is an injury that does not result in death or permanent disability but renders the injured person unable to perform regular duties or activities on one or more full calendar days after the day of the injury. This definition includes a much larger number of individuals than those usually included in the definition of disability, and is inconsistent with the standard definition in the Americans with Disabilities Act (ADA) or that used by the national disability organizations (Deboy, Jones, Field, Metcalf, & Tormoehlen, 2008). Most countries predict an increase in the prevalence of disability due to future increases in aging populations, chronic diseases, and civil wars over resources (WHO, 2011).

2.3.1 **Categories of Disability**

Categorization of disability tends to be based on physical and mental, temporary or permanent, and age at which disability manifests (e.g., old age disabilities). Physical and mental disabilities can be based on location, therefore including walking or handling, visual, hearing,

speaking constitute physical disabilities, and mind or cognitive constitute mental disabilities. The elderly with disabling ailments may be regarded as disabled due to their inability to cope with the physical demands of work and life such as walking. Disabilities in physical, psychological, or cognitive abilities are inevitable in old age (Gilson & Depoy, 2002). However, in Uganda a disability is more or less permanent and falls into one or more physical and mental categories. Ailments developed in old age do not necessarily cause a person to be regarded as possessing a disability because such inabilities are expected to manifest in old age.

Findings from a U.S.-based study indicated discrimination against people by prospective employers or organizations based on perceived disability. Issues contested include qualification standards, hiring, reinstatement, demotion, job assignment, retirement, terms and conditions of employment, especially involving industries such as manufacturing, mining, construction, agriculture, wholesale, retail, transportation, utilities, finance, insurance, and real estate. It is common for employers to perpetuate and perceive disability out of ignorance despite the availability of a policy for guidance (Draper, Hawley, McMahon, Reid, & Barbir, 2014).

Disability reduces a person's ability to perform some tasks and increase demand for assistance in performing specific tasks. Disability in males tends to have more negative effects on families (Reed, 2004), causing the spouse to fill the gap by taking up the husband's responsibilities together with what she formerly performed, and thereby increasing stress and fatigue. This affects livelihood and alters the known gender roles in the family or community, and the worth of the family. Farmers are among those who experience the emotional impacts of disability on a family. A study by Robertson et al. (2006) revealed that farmers who experienced injury required practical help from community members, causing the farmers to manifest feelings of anguish. However, despite acquiring or having a disability, young farmers mostly continue in their occupation (farming), compared to old farmers. Financial provision helps injured farmers to return to work and keep those with disabilities in farming (Friesen et al., 2010). These financial programs help them to cope with the disability (social model). Furthermore, rural people with non-severe disabilities are more likely to be employed compared to people with non-severe disabilities in urban settings. On the other hand,

people with severe disabilities in urban settings are more likely to be employed compared to their counterparts in rural settings.

Disability in older people is a common problem and tends to be due to a chronic condition, with the prevalence increasing in older age. Older people with disabilities may become dependent on assistive devices or other people, which imposes a negative impact on the quality of their lives. The level of disability will determine whether older people will be able to live in their own house, with or without modifications, or whether they have to live in a home for older people or nursing home. In terms of the future, the expected increase in disabilities will results in economic and logistical challenges for society. There will be an increasing demand for professional caregivers as most children of older people will not be in the position, by either choice or economic necessity, to take care of their own aging parent. In targeting preventive, curative, or palliative strategies, it is important to predict disability to identify high-risk groups. Prediction of high-risk groups helps in providing effective preventive strategies to those groups.

2.4 **Understanding Disability in the Ugandan Context**

In Uganda's context, disability is deeply rooted and visualized in local traditions and culture. The topology of disability has cultural, social, and economic dimensions. In addition, the challenges afflicting sub-Saharan Africa, including Uganda, due to disease, environmental degradation, poverty, ethnic conflicts and civil wars, and human rights violations and abuses, and accident-prone transport systems, aggravate the occurrence and magnitude of disabilities.

A recent report on progress towards the goals of the Millennium Project indicated that many countries in East Africa are unlikely to attain those goals by the target date of 2015. In addition, evaluation of the achievement of the Millennium Development Goals (MDGs) indicated that Uganda had lagged in achieving most goals compared to other East African countries, notably Tanzania, Kenya, and Rwanda. Although universal access to primary education has generally increased in East Africa, the access rates in Uganda remain substantially below 100% because cultural constructs and high levels of poverty promote marginalization of some groups of people (Peter, 2003). Thus, lack of access and participation by people with disabilities in education, health, and capacity-building

programs raises issues of equity and human rights in relation to development programs in communities. Studies have indicated that disability is the single most important factor excluding people from schooling (Peters, 2003).

2.4.1 **Cultural Dimensions**

Most Ugandan communities strongly believe in traditions and customs that directly affect people's attitudes and beliefs about disability (Schildknecht, 2015). The occurrence of a disability in a family tends to be considered supernatural and beyond human understanding—in other words, many think that spiritual intervention could alleviate perpetuation and existence of a disability (Stone-Macdonald & Butera, 2014). Communities stigmatize children with inborn disabilities compared to people who acquired disabilities in their lifetime. This is because the presence of an inborn disability tends to encourage a community to speculate on its cause and effects on the family and community.

People who acquire a disability at any stage of their lifetime tend to have a greater acceptance level in the community. Since the community had witnessed the individual's functions, capabilities, and potential pre-disability, post-disability, all are aware of just how the disability has robbed value and potential from the family and community, especially if the limitation occurs at a young and productive life stage. Community members tend to resent people with disabilities and their families (Schildknecht, 2015). This resentment often begins with the immediate family, and then spreads to the larger community. However, community resentment of a family with people with disabilities tends to increase the social exclusion of a person with a disability from the family. In other words, resentment affects the person with a disability and his or her family's level of interaction with and acceptance by the community.

The level of interaction and acceptance in the community varies with ethnic groups given the diversity of traditions and customs. Most often, families render a person with a disability as an embarrassment, thus kept from the public (Stone-Macdonald & Butera, 2014). Restraining a child with a disability from public interaction denies him or her early interaction with and acceptance in the community. If this person then tries to gain access to the community at a later age, the level of social exclusion tends to be high compared to children with disabilities who interact with communities at an

earlier age. Thus, people with disabilities whose families restrained their interaction with communities in childhood and youth tend to be excluded from participation in capacity-building programs in their communities.

However, at the same time, people with disabilities are looked upon as having a chronic sickness that is beyond the capacity of the existing traditional and modern therapy—traditional or religious spiritual intervention are regarded as the most lasting therapies for disability, culminating in a religious or spiritual model of disability (Stone-Macdonald & Butera, 2014; Treloar, 2002). African thinking about disability reinforces the medical model of disability used in the global North, which views disability as a defect or sickness that requires medical intervention. The medical model of disability looks at therapy as the only possible intervention for correcting physical and mental disabilities so that a person regains social and economic functions in the community.

Families and communities attach very low value to and expectation from a person with a disability, such that the person receives the least opportunity for socioeconomic development (Schildknecht, 2015; Treloar, 2002). These individuals are perceived as burdens whose value remains a mystery in family and community development. Communities are especially likely to attribute burden to those with rare disabilities such as people without limbs or with limb-like structures, or any disability considered uncommon or strange. Depending on the nature and category of disability, community members attribute the manifestation of disability to the family and parents of the disabled person. Usually, communities equate disability with a curse or punishment by the spirit world on the family, parents, or fore-parents for wrongdoing. However, ultimately, the person with a disability seems to take a larger part of that blame.

Stigmatization also is manifested on occasions where communications with those connected to a person with a disability involve derogatory words and names framed in accordance with the perception of the community members about the disability. The parents in turn stigmatize the child in an attempt to diffuse the stigma, expressed through social and economic exclusion of a person with disability from the family, recreation, and social activities because he/she is regarded with shame (Stone-MacDonald & Butera, 2011). In such situations, the family infringes on the individual's rights

by instituting punitive measures that include flogging, denying food, chaining limbs, tethering, or imprisonment.

Traditionally, communities consider it inappropriate to directly laugh or ridicule people with disabilities (Ogechi & Ruto, 2002; Talle, 1995); however, that does not prevent the stigmatization of a person with disabilities. While those with disabilities receive less public attention in most communities, the presence of disability remains a barrier to participation in community programs, conversations help to shape community attitudes held by community members, development programmers, and leaders. Communities perceive and equate public discussion of disability with the perpetuation of a bad omen in the family and community, rendering disability a salient issue.

2.4.2 **Social Dimensions**

Community culture and traditions greatly influence the social life of people with disabilities. Northern Uganda has endured a protracted civil war and cattle rustling between the Government of Uganda and the Lord's Resistance Army (LRA) from 1986 to 2004 (Nannyonjo, 2005). In the same vein, Eastern Uganda experienced civil war and cattle rustling during the same time, only the civil war ended earlier than in Northern Uganda. Since her independence from Britain in 1962, Uganda has undergone political turmoil marked by military coups and civil wars. This includes the 1966 crisis in which the Government of Apollo Milton Obote abrogated Uganda's constitution and abolished kingdoms, the 1972 military coup by Idi Amin Dada, and the 1979 liberation war that ousted president Idi Amin. Another example is the protracted 1981– 1986 liberation war that brought President Yoweri Kaguta to political power and civil wars that ensued in West Nile, Northern and Eastern regions of Uganda, and led to other sporadic civil conflicts. Northern Uganda, sharing a border with Sudan, also experienced the war between the Sudan People's Liberation Army (SPLA) and the Government of the Republic of Sudan in the late 1960s and 2011 when South Sudan attained political independence from Sudan.

However, the Lord Resistance Army (LRA) and Uganda Peoples' Army (UPA) civil wars have had lasting negative effects in Northern and Eastern Uganda. The LRA and UPA civil wars especially affected the Acholi and Teso sub-regions of Uganda. Worse still, most of the people were

placed in internally displaced camps to keep them safe from the brutal LRA and UPA insurgencies. This resulted in adverse conditions, including poor service delivery (e.g., poor transport and communication), low quality education, poor medical services, reduced production agriculture, and overall negative impacts on the well-being of people in Northern and Eastern Uganda (Nannyonjo, 2005). Wounded combatants and civilians in caught in the crossfire, together with a broken health system, resulted in Northern and Eastern Uganda having the highest disability and poverty rates. The most common disabilities are limbs, visual, hearing, speaking, and mental. Most people with disabilities cannot move from one location to another due to a lack of accommodative facilities, nor participate in capacity-building programs in their communities.

Therefore, people with disabilities largely remain excluded, stigmatized, and marginalized from participation in capacity-building activities meant for the public due to the nature of their bodies and socio-cultural constructs (Abimanyi-Ochom et al., 2014). It is very difficult for people with disabilities to negotiate entry to capacity-building activities in communities, resulting in a low public status. Attempts to attain formal education usually result in school drop-out due to a lack of accommodation facilities; further, most teachers are not prepared psychologically, emotionally, and technically to help people with disabilities fit into the school environment.

2.4.3 **Economic Dimensions**

Studies indicate a high relationship between disability and chronic poverty (DFID, 2000; Lwanga-Ntale, 2003). Many factors such as social stereotypes, stigmatization, and functional challenges posed by the nature of disability impede participation of people with disabilities in capacity-building programs in communities. This condition renders many disabled unable to avoid adverse economic conditions, forcing them to experience lives of poorer quality than that endured by the nondisabled poor.

The World Health Organization (WHO) estimated that 10% of Africans have a disability, but there is limited data from African countries on the actual prevalence (Fujiura, Park, & Rutkowski-Kmitta, 2005). Peters (2003) suggested that the numbers of children with disabilities might be growing due to increasing poverty, armed conflict, child labor practices, violence and abuse, and

HIV/AIDS. Those with obvious disabilities can appear normal if they are able to participate in daily community living. Similarly, scholars in Africa have noted that a person not usually identified as *disabled* in the developed world could be considered disabled in many African communities if he or she cannot participate in important life activities, such as bearing children (Devlieger, 1995; Ingstad, 1995; Zhang, 2001).

2.5 **Concept of Capacity Building**

Most capacity-building programs tend to address the effectiveness of achieving desired goals but fail to fulfil equity in social inclusion and participation of marginalized groups (Yeo, 2005; Mpofu & Shumba, 2013; Phillips, Waddington, & White, 2014). This contradicts the very purpose of capacity-building programs to enhance the livelihoods and wellbeing of community members (Davis, 2008). While an extant literature exists on the capacity building of farmers, a lack of literature and a knowledge gap persist on issues relating to the participation of young farmers in capacity-building program—this study has been developed to fill this gap.

Furthermore, capacity building entails training and retooling community members to improve their knowledge, skills, and practices in various livelihoods (Republic of Liberia, 2007). Capacity-building involves a continuous process of strengthening the abilities of people, groups, organizations, or communities to perform core functions, solve problems, and understand and deal with their own development needs (World Health Organization, 2002); and increase their access to networks and resources (political capital) (Emery, Fernandez, Gutierrez-Montes & Flora, 2007). Usually, a link exists between capacity building and a specific community program or project. Essentially, capacity-building tends to be an internal and complex process that sometimes attracts external assistance to accelerate the needed change, such as changing people's mind-sets and behaviors by introducing more efficient technologies and systems (Horton, 1999).

Capacity-building involves a time-bound process and is systematic, identifying and meeting the needs of target beneficiaries by building skills, knowledge, and abilities, through offering education, training, and retooling as well as an internal process with local ownership. It includes coping up with change, uses integrated and holistic approaches, and builds partnerships or

collaboration with external agencies (Gboku & Bebeley, 2016; Horton, 1999). In addition, accountability should foster flexibility, innovation, and action in learning strategies (Horton, 1999).

Capacity building constitutes a major strategy for international and government agencies seeking to dispense services to communities (Horton, 1999). Capacity-building efforts target human development (skills, attitudes, competencies, and abilities). The purpose, therefore, is to improve the capacity of people to live within and outside their community (Gboku & Bebeley, 2016). Organizational-level capacity building focuses on developing the capabilities of the organization, including its management, human resources, financial resources, physical infrastructure, leadership and management, and operational structure. Environment-level capacity building tends to be broader, with a focus at the national or regional level—which is the area within which agricultural development occurs (Gboku & Bebeley, 2016). The focus tends to be on policy issues, and socioeconomic conditions that enable or constrain agricultural development. Environment capacity building immensely influences development at the level of the individual person and organization or community (Gboku & Bebeley, 2016; Horton, 1999). Thus, capacity building sustainably empowers people, groups, organizations, and communities and supports their livelihoods and well-being (United Nations Development Program, 2009). Capacity building employs learning strategies such as theoretical sessions, field visits, field demonstrations, supervised practice (Iqbal, 2014).

The Global Hunger Index report (IFPRI, 2012) categorizes Uganda as one of the countries with severe food insecurity and malnutrition, a factor influencing the less meaningful participation of marginalized groups such as people with disabilities. As it is conflict- and natural catastrophe-prone, capacity building is the inevitable strategy for community development in developing countries.

The rate of return on capacity-building programs in Uganda is between 8% and 49% (Benin et al., 2011). This low rate of return for capacity-building programs indicates a failure to tailor capacity-building programs to the needs of farmers with disabilities. Adapting capacity building to the local context, involving a broad spectrum of stakeholders, and training based on the needs of target participants improve the success of capacity-building programs (Gboku & Bebeley, 2016).

Moreover, involvement of target participants' in the design and planning, implementation, and evaluation process could improve ownership and success of the program (Khang & Moe, 2008).

2.6 **Social Exclusion and Discrimination**

Social inclusion encompasses two dimensions: interpersonal relationships and community participation (Simplican, Leader, Kosciulek, & Leahy, 2015). The interpersonal dimension of social inclusion entails social interactions, relationships, and the formation of social networks, which occurs in private settings such as homes. However, access to community facilities and community participation provides inclusion with a public dimension. Lack of access to the community renders a person socially excluded. A feeling of belonging, however, defines the depth of social inclusion. Feeling of belonging to the community emanates from number of friendships and quality of life, among other factors. Social inclusion entails societal acceptance of people with disabilities in schools, health centers, work community settings and community programs (Walker, Calkins, Wehmeyer, Walker, Bacon, Palmer, 2011). Therefore, feelings of belonging provide people with disabilities an actual level of involvement in their local communities

Social exclusion, isolation, and neglect are the daily experience of people with disabilities (Vornholt et al., 2013). These individuals are among the most disadvantaged, stigmatized, and discriminated against in communities due to disdainful attitudes and misinformed views on people with disabilities (Lwanga-Ntale, 2003; Siddiqua et al., 2012; Wolbring et al., 2013; Yeo, 2005). Detailed knowledge of the lives of those with different disabilities is lacking, and the need for various disability categories is evident. In addition, while people with disabilities live in both rural and urban settings; their proportions are still unknown in most developing countries (Lwanga-Ntale, 2003). More people with disabilities live in rural areas compared to urban areas. Most often face humiliation and negative attitudes in the workplace; their working environment is not friendly to their disability condition (Siddiqua et al., 2012).

The concept of inclusion applies to both people with and without disabilities, influencing their participation in general life and community development programs. Inclusion promotes participation by addressing the existing barriers. Studies of the inclusion of people with disabilities in

recreational organizations in the United States indicated the existence of a few administrative barriers though of limited magnitude, such as policies and support services. However, more pronounced barriers exist in financial and marketing services. Families and caregivers are more inclusive and the major source of support to people with disabilities. Rather than employing people with disability-specific skills, people with diverse professional backgrounds should be employed to ensure that everyone is responsible for the wellbeing of people with disabilities (Devine, 2012).

Organizations and community programs use many strategies to promote inclusion of people with disabilities, such as adaptations, accommodations, and mechanisms designed to maximize and broaden the opportunities for people with disabilities in community development programs. Inclusion involves social acceptance in a particular setting, preparedness, and training of staff to facilitate inclusion in community development programs (Devine, 2012). However, social exclusion is a dynamic concept that requires identifying factors to promote entry into and exit from exclusion and disadvantaged situations. This tends to vary from one community to another. Social exclusion occurs at family and community levels (Chen, 2013).

Social exclusion from social services tends to lead individuals and communities to disparage and relegate people with disabilities to lower classes (Vornholt et al., 2013). People with disabilities experience hostility and negligence at family, community, and national (government) levels. Cultural beliefs tend to relegate people with disabilities to a state of social non-acceptance, sometimes causing them to be perceived as an embarrassment to the family and community (Siddiqua et al., 2012). For communities to embrace people with disabilities, it is important for both people with and without disabilities to overcome environmental and social barriers to social inclusion.

A study carried out in Hong Kong and China on the link between social exclusion and life satisfaction indicated that the functional capacity of people with disabilities was associated with life dissatisfaction, with exclusion by neighbors the most salient barrier Chen, 2013). Thus, social networks, social support, and participation in civic activities, neighbourhood interaction, access to basic services, and participation in economic activities provide a meaningful measure of social exclusion. Owing to degeneration during the aging process, it is likely that older people have

vulnerabilities. Older people with disabilities are living lives that are less deserving considering their entitlement to decent living conditions. Society tends to erect barriers that include structural factors and social exclusion (Chen, 2012).

2.6.1 **Structures of Social Exclusion**

Since society is built on a competitive market foundation and social system that disables other people (Cotter, 2002), disability can be a social prison due to constraints that cause disabled people from leading a satisfying life. The structures of social exclusion fall into three categories. One microstructure is the family. People with disabilities receive help or are constrained by immediate family members. A family influences positive personal attitudes towards recovery and determination to continue to pursue personal development interests such as education, emotional stability, personal sense of humor, and personal faith. Support can come from family members such as spouses, children and other family members.

The second level constitutes the meso structure, or community. People with disabilities tend to receive volunteer labor support to supplement any labor needs that arise due to increased demand and need. A farm labor crisis that manifests due to a farmer's physical injury or disability attracts support from community and social organizations such as the church, farmwomen and community leaders. Networks and social capital flows allow people with disabilities to benefit from the community. However, people with disabilities only build community networks if they freely talk to and interact with community members and participate in community programs. Development of networks constitutes a key to inclusive participation of people with disabilities in capacity-building programs in their communities (Vornholt et al., 2013).

In developed countries, community organizations provide support to people with disabilities to aid their recovery or contribute resources such as information towards the economic activities that have been interrupted by the disability. Such organizations include the agricultural department, which provides the farm family with relevant information on performing particular farm operations. The farmers' insurance provides financial assistance during recovery and rehabilitation. Nonetheless, farmers with disabilities experience inadequate access to medical, rehabilitation, and therapy. Most

farmers with disabilities find it difficult to continue farming and providing to the food and fiber needs of society.

The third level constitutes the macro structure. People with disabilities continue to experience the same barriers faced at the family and community levels due to the influence of families and communities at the national level. Barriers in the macro structure include lack of policies on access to financial services, healthcare, and a limited scope of insurance owing to a lack of collateral security, especially in developing countries (Friesen et al., 2010; Mpofu & Shumba, 2013; Siddiqua et al., 2012). However, it is important to note that there is limited knowledge of the extent to which credit, insurance, and healthcare are accessed between developing and developed countries.

2.7 **Vulnerability in People with Disabilities**

In most communities, people with disabilities are highly vulnerable, live in chronic poverty, and participate less in community capacity-building programs (Okoboi et al., 2013; Siddiqua et al., 2012; Yeo, 2005). Often communities have a negative perception about people with disabilities as not worthy of any of the benefits of development. This negative perception renders people with disabilities more alienated and marginalized from participating in development programs. Furthermore, most capacity-building programs in communities inadequately integrate mechanisms that effectively cater to the capacity building of people with disabilities (Phillips et al., 2014; Yeo, 2005).

Agriculture ranks among the top three most hazardous industries in the United States for the occurrence of disabilities and illness in individuals, especially among children of all ages who usually get exposed to farm activities early in life and yet are unsuspecting of the occurrence of any injuries (Reed, Kidd, Westneat, & Rayens, 2001). Farmers or individuals with disabilities are more vulnerable to accidents, injury as well as emotional, psychological, social and financial challenges (Friesen et al., 2010). About 1.3 million farm children live, play, and work on farms, and therefore are exposed to or interact with animals, machinery, and farm structures in completing farm chores. Generally, all these circumstances expose children to possible injury risks (Reed et al., 2001).

Farmers are at risk of suffering a disability due to use of agro chemicals that can lead to respiratory disorder, hearing loss, skin diseases, mental stress illnesses, and loss of limbs; the level of recovery depends on the supportive environment (Friesen et al., 2010). The long-term effects of disability are reduced physical capacity (difficulty in engaging in specific work activities), emotional grief and loss, and shifting family roles and responsibilities. Injuries that result in amputation, spinal cord damage, and chronic pain cause disruption of the farmer's career.

In developed countries, young males perform most of the machinery-related and animal work on the farm in addition to engaging in many other hazardous activities in other occupations, especially from rotating power take-off machinery (Whelan et al., 2009). Working in dusty farm surroundings often leads to respiratory symptoms and illnesses. In their early teens, most tend to work unsupervised and yet have little experience and expertise. This makes most teens highly susceptible to injuries that cause temporary or permanent disability.

People with disabilities are the major part of the rapidly growing marginal, weaker and vulnerable population in developing countries (Vornholt et al., 2013; Yeo, 2005). People with disabilities are hidden, in forced silence, their concerns unknown—those speaking on their behalf merely speculate on their concerns and needs, and their voices are barely heard. People with disabilities are subject to acute vulnerabilities and gross deprivation. Poverty is not simply the consequence of a lack of resources—the issue is that people with disabilities are unable to access existing resources because of who they are, what they believe, or where they live. Such discrimination is a form of exclusion and cause of poverty (DFID, 2000). Further, those with disabilities are deprived of employment opportunities, income (or better income), suitable environments in the workplace, and extra facilities to exercise their abilities, all of which serve to perpetuate poverty among people with disabilities. Even while employed, people with disabilities earn incomes that are relatively lower than those of people without disabilities are and therefore remain largely unable to meet their basic needs (Siddiqua et al., 2012).

People with disabilities are more vulnerable to low levels of social wellbeing. Studies on wellbeing tend to point to both social (happiness) values and economic (resources/assets and

material) situations and their distribution among a proportion of people or communities. It is thus vital to determine the status of this population's well-being by focusing research on both the social and economic determinants of disabled individuals' wellbeing in order to adequately inform and influence social policies (Deeming, 2013).

2.7.1 **Coping Mechanisms Used by People with Disabilities**

Human life is engrossed in crises requiring resolution naturally or with effort and at a cost (Martin-Breen & Anderies, 2011). Sustaining high wellbeing requires valuable, flourishing, and standards of procedure to reduce exposure to risks to the community, with the best strategy being for the affected individuals or community to develop resilience to risks.

Resiliency refers to the ability to withstand significant stress, disturbance or debilitating situations without becoming permanently or disastrously damaged or with less negative effect, and returning to a normal life and production quickly or being able to withstand adversities with continued success in livelihood and wellbeing (Martin-Breen & Anderies, 2011). Martin-Breen and Anderies argued that every person needs wellbeing in terms of food, income, happiness, care, and individual assets; however, some people do not experience wellbeing due to factors beyond their control. The disruptive situation is equated to the vulnerability, poverty and socioeconomic situations of people with disabilities, which disturbs their wellbeing.

Resilience involves mitigating disruption or reducing the severity of disruption (Martin-Breen & Anderies, 2011). Therefore, to increase the chances of wellbeing, deprived people require adaptive mechanisms to cope with adversities in their local community. Resilience is the ability of individuals, group or community to gain access to a wide variety of resources that enable them to have a meaningful livelihood and wellbeing (Runswick-Cole & Goodley, 2013). Access to resources implies that those with disabilities exercise directly some power and control over those resources or indirectly through their relational networks. It also involves developing survival and adaptation mechanisms appropriate to a locality or context to cope with the debilitating situation (Martin-Breen & Anderies, 2011). Therefore, amidst vulnerability and the marginalization of people with disabilities, coping

strategies must be used to lead a meaningful life. Less resilience is synonymous with greater vulnerability.

2.7.2 **Levels of Resilience**

People with disabilities develop levels of resilience: individual level, family level, and environmental level. Each level provides various coping mechanisms that allow those with disabilities the ability to access different resources (Grant, Ramcharan & Flynn, 2007).

First, at the individual level, cognitive acceptance of the disability and dealing with emotions, personal value and greater understanding of the disability condition enables them to make headway in activities of daily living. Others include a sense of control and coping with routine activities, and the accumulation of skills and experience (Grant et al., 2007; Henninger, & Taylor, 2014). In addition, maintenance of value identity is crucial, such as the development of personal goals, and the ability to adjust and cope with new situations (transformational coping). Jones (2012), in a study of adolescents with intellectual and developmental disabilities, found that family income and parental support vitally influenced the self-perception of adolescents with intellectual and developmental disabilities.

Vocation, a functional societal role, or social participation such as any form of employment (paid or volunteer) and skill training helps people with disabilities to contribute to community-productive activities, and thereby makes it possible to transition through difficult situations (Henninger & Taylor, 2014; Silverman, Molton, Alschuler, Ehde, & Jensen, 2015). Silverman et al. (2015) found that physical functioning, social participation for better wellbeing and health are highly correlated with resilience in people with disabilities. At the family level, individual resilience in a person with a disability is a factor in family love and support, ethics and values, and regulation of internal and external support. The environmental level determines the flow of opportunities and threats to people with disabilities in the form of material, social, cultural and political resources. Most individuals tend to experience higher resilience at the environmental level.

The ecological and strength approach is required to determine existing resources and opportunities provided by the community to people with disabilities to increase their resilience to disruptive community events (Porcelli, Ungar, Liebenberg, & Trépanier, 2014). Porcelli et al. added

that independent, assisted and contextual movements by youth with physical disabilities within the community makes them well acquainted with the people and local environment, thus enabling them to develop a positive identity with the community. Micro mobility, referred to as the skills and competencies developed by youth with visual and auditory impairments, enables them to easily navigate through obstacles in the community's psychological (identity), social (friends), and physical (recreational resources) environments to cope with daily challenges. However, the adaptive capacity of youth with physical disabilities to access and participate in community programs manifests in many ways specific to different contexts. Mobility (or moving out of the home) provides people with disabilities access to community and influences their identity formation and social interactions with other people, allowing them to cope with everyday challenges (Henninger & Taylor, 2014; Porcelli et al., 2014). It enables youth with physical disabilities to develop coping patterns needed for psychological, social and physical identities and wellbeing, like other youth without physical disabilities.

Runswick-Cole and Goodley (2013) and Mannino (2015) argued that the strength-based approach to resource possession makes people with disabilities to become resilient to discrimination. Runswick-Cole and Goodley further argued that the belief that people with disabilities are vulnerable is more misleading because they can also lead normal lives just like those without disabilities if they can develop relational attributes that enable them to access networks of resources, power and control, build relationships, and develop community identity. Resilient capacity in people with disabilities transitioning to adulthood is a result of individual and environmental factors. Still there is a need to determine which factors are most effective in fostering resilience. Therefore, resilience in people with disabilities is rooted in the network of community resources that allow them to access and develop identity, relationships, power and control over resources, which makes people with disabilities able to participate in community activities with ease (Grant et al., 2007; Runswick-Cole & Goodley, 2013).

Grant et al. (2007) recommended a study on conditions within the family that promote resilience in people with disabilities. Lewis (2010) argued that to enhance resilience in people with disabilities, a partnership is needed among people with disabilities, their advocates and organizations

that promote the wellbeing of people with disabilities to deliver capacity building that is meaningful, relevant and empowering to people with disabilities (Friesen et al., 2010). For equitable and sustainable development to be attained as the world implements programs to achieve sustainable development goals, it is paramount to effect and implement a disability-inclusive agenda for all programs implemented in communities that provide for inclusive participation by people with disabilities in community development programs (Wolbring et al., 2013). In addition, community organizations and potential employers must mitigate the occurrence of perceived disability through capacity building on the perceived disability (Draper, Hawley, McMahon, Reid, & Barbir, 2014). The Agricultural Disability Awareness and Risk Education (AgDARE) program as implemented in the U.S. curriculum could be an effective and efficient method of teaching farm safety in high school agriculture classes (Reed et al., 2001).

2.8 **Participation in Capacity-building Programs**

Participation refers to the process of attendance and active involvement of people in situations and decisions that affect themselves and their community (Checkoway & Gutierrez, 2008). In this study, participation refers to shared influence and the responsibility of participants to become actively involved in program activities such as decision making and feeling of belonging to those programs and communities (Head, 2008; Wagner III, 1994). Participation entails informing, consultation, involvement, collaboration, and empowerment of the target participants (Wagner III, 2008).

In addition, participation takes three dimensions: as contribution, as organization, and as empowerment. Participation as contribution refers to participation of community members through labor, cash, and land, among others. Participation as organization refers to creation of appropriate structures to facilitate participation by targeted people. While participation as empowering refers to involving marginalized and underserved groups and communities to develop power and influence to make decisions and have control over programs meant to benefit them (World Health Organization, 1991). Critical, therefore, to the definition of participation is that it targets vulnerable, underserved,

and excluded people to build their capacity to make decisions and have control over all programs intended to benefit them.

Participation takes a number of forms including: informing people with balanced and objective information, consulting people and providing feedback, involving and working directly with communities, collaborating and partnering with groups or communities in decision making, and empowering and ensuring that the participants retain control over decisions that affect them (World Health Organization, 2008). It is, therefore, important create spaces that enable and encourage participation by vulnerable and excluded groups such as people with disabilities. However, a critical gap exists in factors that influence participation by people with disabilities in capacity-building programs in communities.

2.8.1 **Topology of Participation**

Participation involves eight levels: 1) manipulation, 2) therapy, 3) informing, 4) consultation, 5) placation, 6) partnership, 7) delegated power, and 8) citizen control (Sherry, 1969). While the presence of eight levels seems oversimplified, they help to illustrate something that is often omitted by development programmers to the disadvantage of targeted program participants.

Unfortunately, community power holders tend to disadvantage poorly resourced people. Most often, development practitioners misconstrue manipulation as if people have been involved in planning, yet the resource-poor have not been engaged/have not participated in either planning or decision-making (Sherry, 1969). Information and consultation allow the targeted poor to hear and to have a voice in program planning and decision-making. Participation by vulnerable and excluded groups from capacity-building programs in communities tends to be facilitated by less stratified communities, a supportive environment, and conducive policy framework (Anaby, Hand, Bradley, DiRezze, Forhan, DiGiacomo, Law, 2013; World Health Organization, 1991).

As with all people, when people with disabilities participate in capacity-building program activities, they develop skills, competencies, and social networks (Deutsche Gesellschaft fur Technische Zusammenarbeit [GTZ] 2005; World Health Organization, 2008). In addition, people with disabilities achieve mental and physical health, and develop a feeling of belonging to the

community, and meaning and purpose in life. Meaningful, active, and rewarding community participation is the main goal of capacity-building programs. Participation is important to the well-being of people with disabilities (World Health Organization, 2008). People with disabilities are not meaningfully included in community development activities due to the demands required to be effective in making fundamental changes in organizational policies, and capacity building of personnel, among others. In 2005, a report of a meeting between USAID, the National Union of Persons with Disabilities in Uganda (NUDIPU), the Kampala Disabled Persons Business Association, and Action on Disability and Development (ADD) showed that organizations for the disabled had difficulty accessing funding because their program interests did not align with the donor community's priorities (Albert, Dube & Riis-Hansen, 2005).

In the above scenario, these organizations were not funded because the funding interests of USAID were perceived to be different from those of people with disabilities. The question is this: how many other organizations for people with disabilities in the world may have and may be continuing to experience such funding dilemmas? Failure to obtain funding or support constrains people with disabilities from pursuing their interests and needs. Capacity building for the disabled requires hands-on learning and observation of innovative agricultural practices in the case of farmers/farm workers. Access to these resources can promote skill development in problem solving through participatory learning and group activities designed to empower farmers as well as to promote social cohesion through increased cooperation (Phillips et al., 2014).

A few organizations are involved in and have championed research and capacity building for people with disabilities and their support organizations in developing countries. The best example, so far, is the United Kingdom's Department for International Development (DFID) as the first agency to issue a paper on the status of people with disabilities, and the United States Agency for International Development (USAID), which has continuously mainstreamed disability issues in programs and organizations and supported those agencies. Such mainstream activities that address the plight of people with disabilities include opportunities to support more-focused activities, direct support of organizations for the disabled, and support of all initiatives aimed at building capacity people with

disabilities. The reason for this support is that people with disabilities lack human development and capacity building opportunities, such as educational and vocational training opportunities (DFID, 2000; Siddiqua et al., 2012). People with disabilities must be involved in all aspects of capacity-building programs such as planning, advocacy of training programs, and delivery of the capacity-building programs at individual, group and systemic levels. Lewis (2010) added that capacity-building programs could elicit successful outcomes when people with disabilities constitute part of the consultative and delivery process as agents for socioeconomic change.

In developed countries, however, policy makers promote and subsidize adaptive capacity-building courses for people with disabilities to cover their educational deficits and skill inadequacies (Pagan-Rodriguez, 2015). Disability is both a cause and a consequence of poverty and eliminating world poverty is unlikely unless the rights and needs of people with disabilities are considered in development programs (Yeo, 2005).

In practice, community development programs are meant to address equity criteria by targeting people with disabilities among others. Unfortunately, however, community programs tend to prioritize effectiveness criteria to maximize the impact of the program as opposed to equity criteria, which is all-inclusive. The effectiveness criteria mostly address participation of more resourced, educated and socially networked individuals. Most programs, however, tend to adequately meet effectiveness criteria as opposed to equity inclusion. This stems from either conflicting target criteria or participant-selection mechanisms that favor the elite or capture the need for a minimum level of social and economic capital (Vornholt et al., 2013). The poor tend to benefit more when they participate directly in programs than when those programs are only knowledge-based (Phillips et al., 2014).

Capacity building for people with disabilities in relevant areas also serves to increase their knowledge and skills through informal learning, learning by doing, and lifelong learning while building the capacity of organizations supporting people with disabilities (Wolbring et al., 2013). A study carried out in Zimbabwe pointed to the exclusion of people with disabilities from access to community entrepreneurial programs, despite the fact that those with disabilities were aware of the

program's existence in the community (Mpofu & Shumba, 2013). People with disabilities have lower expectations because they are more disadvantaged in the labor market (Pan-Rodriguez, 2015). The presence of a disability has been found to contribute to lower job satisfaction. Sometimes further participation by people with disabilities capacity-building programs does not translate into increased rewards because of the already existing stigma employers and other workers portray against people with disabilities

Even when people with disabilities supposedly participate in capacity building through community development programs, their attendance or non-attendance, or dropout rate is influenced by factors such as accessibility and relevance of the program to their needs (Phillips et al., 2014; Vornholt et al., 2013). Ineffective program implementation or economic constraints, and perceived returns and opportunity costs of attendance also influence the participation of people with disabilities in community capacity-building programs. However, sometimes participants drop out due to a failure to achieve individually anticipated expectations such as loans, cash or payment in kind for their attendance (Phillips et al., 2014). Participant expectations tend to be guided by those occasions in which development programs with incentives attract participation or require inputs for individuals to implement the program. Therefore, the absence of payment or incentives elicits a negative reaction that discourages participation. In addition, if participants feel that the program is going to encroach on their time for other socio-economic activities and the distance to attend the program is long, they are most likely to drop out or irregularly attend (Phillips et al., 2014).

Many challenges characterize Uganda's extension service delivery. There is very high farmer to extension educator 5000 to one ratio, hard to reach remote and rural communities with poor communication, poorly facilitated extension educators with very low morale, thus most young farmers remain unreached by agricultural extension services (Barungi, Guloba, & Adong, 2016). Barungi et al. add that since 1960, Uganda's extension system has experienced several reforms, whose effect further alienated vulnerable and underserved groups of farmers such as those with disabilities. The ultimate blow on the Uganda's extension system was a decree by the executive arm

of the Government of Uganda in 2014, summarily phasing out frontline extension educators and replacing them with military personnel (Rwakakamba & Lukwago, 2014).

2.9 **Well-being of People with Disabilities**

A few studies have focused on the wellbeing of people with disabilities in society (Siddiqua et al., 2012). In most cases, people with disabilities struggle to maintain even the most minimum living condition that other categories of the poor can easily afford (Siddiqua, et al., 2012).

Living standards or well-being refers to the quality of life and environment in which people live, measurement of GDP, and economic growth. Scholars have recommended the development of studies on the influence of socio-demographic factors (i.e., age, gender, income, household composition, unemployment, health and illness/disability) on the wellbeing of individuals (Deeming, 2013). However, it is difficult to determine and compare the wellbeing of people or a group of people in different countries due to variation in the standards and measures of what constitutes good or poor wellbeing.

2.9.1 **Poverty among People with Disabilities**

Globally, one billion people have a disability, 80% live in the global South, and account for 20% of the poorest people (Department for International Development, 2014; Stein & Stein, 2007). People with disabilities represent the largest proportion of the poor. Thus, disability is both a cause and consequence of poverty. Poverty persists despite interventions and capacity-building programs implemented by governments and development agencies. Development activists equate chronic poverty stemming from exclusionary conditions against people with disabilities to human rights abuses. American and international disability rights advocates have immensely contributed to ensure the equality of people with disabilities, as evidenced by the growing number of countries that have enacted disability-related legislation. Unfortunately, the continuing economic inequities and social exclusion of disabled persons worldwide severely calls into doubt the efficacy of these efforts. It also begs the question of whether any country adequately protects its disabled citizens. In addition,

children with disabilities are twice not likely to attend school compared to children without disabilities (Table 2.1).

Table 2.1

Situation of People with Disabilities: Millennium Development Goal Number Two - Achieve Universal Primary Education

Goals and targets	Indicators for monitoring progress	Disability indicators	Available global data on the situation of persons with disabilities and the MDGs
Target 2. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	2.1. Net enrolment ratio in primary education	2.1. Net enrolment ratio of children with disabilities in primary education	"Of the 75 million children of primary school age who are out of school, one third are children with disabilities."[a] "Over 90 per cent of children with disabilities in developing countries do not attend school."[b]
	2.2. Proportion of pupils starting grade 1 who reach the last grade in primary school	2.2. Proportion of pupils with disabilities starting grade 1 who reach the last grade in primary school	Based on data from seven countries, on average a child with a physical disability is half as likely to be in school as a child without disability.[c]
	2.3. Literacy rate of 15- to 24-year-olds, women and men	2.3. Literacy rate of 15- to 24-year-olds with disabilities, women and men	"Literacy rate for adults with disabilities is as low as three per cent—and, in some countries, as low as one per cent for women with disabilities."[d]

Source: United Nations (2011).

Disability has a close relationship with poverty but the detailed nature of the relationship needs to be further explored (Eide & Ingstad, 2013; Lwanga-Ntale, 2003). People with disabilities as a category are over-represented among the poor. Poverty is attributed to factors pertaining to person-social attributes, structural and contextual (place-local social and economic structures) (Bollman & Reimer, 2009; Cotter, 2002). People with disabilities are trapped in chronic and multidimensional poverty, which is linked to intergenerational transmission, and therefore cannot sustain or improve their own livelihood. Disability has a greater impact on access to education, health, and recreation than gender, household economic status, or rural/urban divide (DFID, 2014, 2015). In 2007, one out of three children who dropped out of school had a disability.

Poverty can cause new disabilities to emerge due to poor and dangerous living and working conditions; malnutrition; lack of adequate health care; education; and vocational training

opportunities. As noted in DFID Issue Paper, *Disability, poverty and development* (2000), disability is both a cause and consequence of poverty; eliminating world poverty is unlikely to be achieved unless the rights and needs of people with disabilities are considered in development programs. People with disabilities are trapped in a cycle of chronic poverty and disability, each as a cause and a consequence of the other (DFID, 2000; Yeo, 2005). A combination of disability and poverty destroys the lives of people with disabilities by imposing a burden on their families that is too difficult to bear (Siddiqua, Islam, & Afrin, 2012) (Table 2.2).

Table 2.2

Situation of People with Disabilities: Millennium Development Goal Number One - Eradicate extreme Poverty and Hunger

Goals and targets	Indicators for monitoring progress	Disability indicators[a]	Available global data on the situation of persons with disabilities and the MDGs[b]
Target 1.C. Halve, between 1990 and 2015, the proportion of people who suffer from hunger	1.8. Prevalence of underweight children under five years of age	1.8. Prevalence of underweight in children with disability under five years of age	
	1.9. Proportion of population below minimum level of dietary energy consumption	1.9. Proportion of population with disabilities below minimum level of dietary energy consumption	* Persons with disabilities, even in households where food is available, are often denied equal access to sufficient amounts of food or nutritious food available to others.[g]

Source: United Nations (2011).

2.9.2 **Social Networks of People with Disabilities**

The power of the poorest people with disabilities in the community is minimal and usually has a few horizontal linkages with other marginalized people (Yeo, 2005). Social network development for people with disabilities encompasses deliberate efforts to be involved in more organizational and individual groups that enable the development of strong ties. People are regarded

as social agents who can develop perceptions and capacities to tackle their own social exclusion. Those with disabilities interpret and react to exclusion in order to deal with social exclusion. In other words, people with disabilities must spearhead and champion any course of action that will liberate them from exclusion by raising their voices in any forums, advocating for their rights in all platforms irrespective of the available opportunities to do so, and improving individual attitudes. This measure, if effectively implemented, changes the consequences of exclusion for the wellbeing and life satisfaction of those with disabilities in the community as a whole (Chen, 2012).

Access by people with disabilities to subsidized capacity-building programs tends to increase their levels of job satisfaction, especially if they participate actively with others in the design and content of those courses. There is a strong relationship between the age of people with disabilities and job satisfaction. Therefore, it is important to design community development programs with age-specific strengths and restrictions in long-term planning. The elderly with disabilities require specific accommodations such as assistive technologies to allow them to participate in further capacity building and enhance their levels of satisfaction. In this case, people with disabilities also require vocational rehabilitation and capacity building, especially after the onset of the disability. However, compared with people without disabilities, those with disabilities are more likely to be more satisfied in their jobs (Pagan & Malo, 2009).

2.10 **Summary of Literature Review**

In this chapter, I discussed the concept of disability and literature as characterized in the social framework of disability. The main prepositions that emerged from a review of the literature refer to disability as social restrictions imposed on people with physical and mental impairments, thus rendering them unable to benefit from the rights enjoyed by other community members. Further, disability is closely linked with poverty and its antecedents such as decreased access to food, income, and employment, and low levels of education. Discrimination and exclusion of people with disabilities from participation in community programs occur due to stigma and stereotypes that constitute cultural constructs.

The literature considers social exclusion to be the factor most limiting the disabled's participation in capacity-building programs. People with disabilities are less able to engage in social capital formation due to lack of mobility and assistive devices, and mostly associate with other people with the same disability that they possess. Lack of production skills and participation in less gainful employment, limited social capital formation, food insecurity, chronic poverty, discrimination, and social exclusion all contribute to very low well-being among those with disabilities.

2.11 **KIPAF Framework on Disability**

Figure 2.1. KIPAF Framework on Disability

The knowledge-inclusion- participation- access-fulfilling obligation (KIPAF) framework, which is based on the social model of disability, informs this study's focus on participation in capacity-building programs and the implications for the well-being of young farmers with and without disabilities in Uganda. According to this framework, social exclusion and poverty among people with disabilities can be overcome through the provision of knowledge, inclusion, participation, access and fulfillment of obligations (DFID, 2000; Ortiz, 2004). Alleviation of the antecedents of social exclusion and chronic poverty levels in people with disabilities can result in a rewarding and fulfilling life.

Disaggregating the KIPAF framework, people with disabilities deserve a quality life, but lack the capacity-building opportunities to develop their knowledge, skill, and competencies in their livelihoods (DFID, 2000). For example, farmers with disabilities lack improved seed and animals, agricultural information, and value addition and processing, and markets for their produce. Further,

the social exclusion of people with disabilities from social and economic benefits constitutes one of the most curtailing factors in the participation of people with disabilities in the social, economic, and political civic activities in their communities. Often, from the outset, people with disabilities tend to be denied access to public social and economic activities; and are not consulted on issues affecting them, leaving them without input and a voice in decision-making processes. Lack of supportive and enforced legislation hinders access by people with disabilities to the social, economic, and political activities that would enable them to establish the social, economic, political, and physical capital crucially essential for fulfilling and flourishing life (Ortiz, 2004).

In this study, I added coping strategies, demographic characteristics, and need to determine participation in capacity-building programs and their implications for wellbeing. I did not include policies in the study's conceptual framework because despite the existence of supportive legislation in Uganda, those policies have not been fully implemented and enforced. In addition, most prior disability studies have focused on the policy environment.

2.12 **Theoretical Framework**

The study used the *ecological systems and community interactional theoretical frameworks* to gain insights into the influence of different components of community on participation in capacity-building programs and the wellbeing of young farmers with disabilities (Bronfenbrenner, 1993). The ecological systems framework can be useful in explaining the interrelationships among different systems in a community (Bronfenbrenner, 1993). The ecological system, viewed as nested networks within social circles, determines the extent of interaction, and exchange of resources in a society. Thus, an ecological system consists of structures that tend to overlap, and is indirectly or directly connected to social interactions among individuals. Ecological system theory posits that different community structures interplay and deeply embedded in the institutional abuse of disadvantages groups. Theoretical application of the ecological framework in the participation in capacity-building programs and the implication for young farmers' wellbeing is organized into socioeconomic situation (individual level), interpersonal (family and community level), institutional (programs and employment) (Bronfenbrenner, 1993; Darling, 2007; Nastasi, Hitchcock, & Brown, 2010).

The interactional theory postulates that a community is comprised of social fields, which allow people to connect and interact to form community fields (Pigg, 1999; Wilkinson, 1991). Community members interact through social fields that allow them to access community resources such as information on available capacity-building programs. Therefore, the strength or weakness of the social fields formed among young farmers with arm, leg, hearing, speaking, mental or other disabilities, little people, and albino is critical to access of resources dispensed by capacity-building programs targeting young farmers with disabilities. Community fields link community members and, if strong, can influence inclusion; if weak, they can promote marginalization.

2.12 **Conceptual Framework of Participation in Capacity-Building Programs and Implications for Well-being of Young Farmers with and without Disabilities**

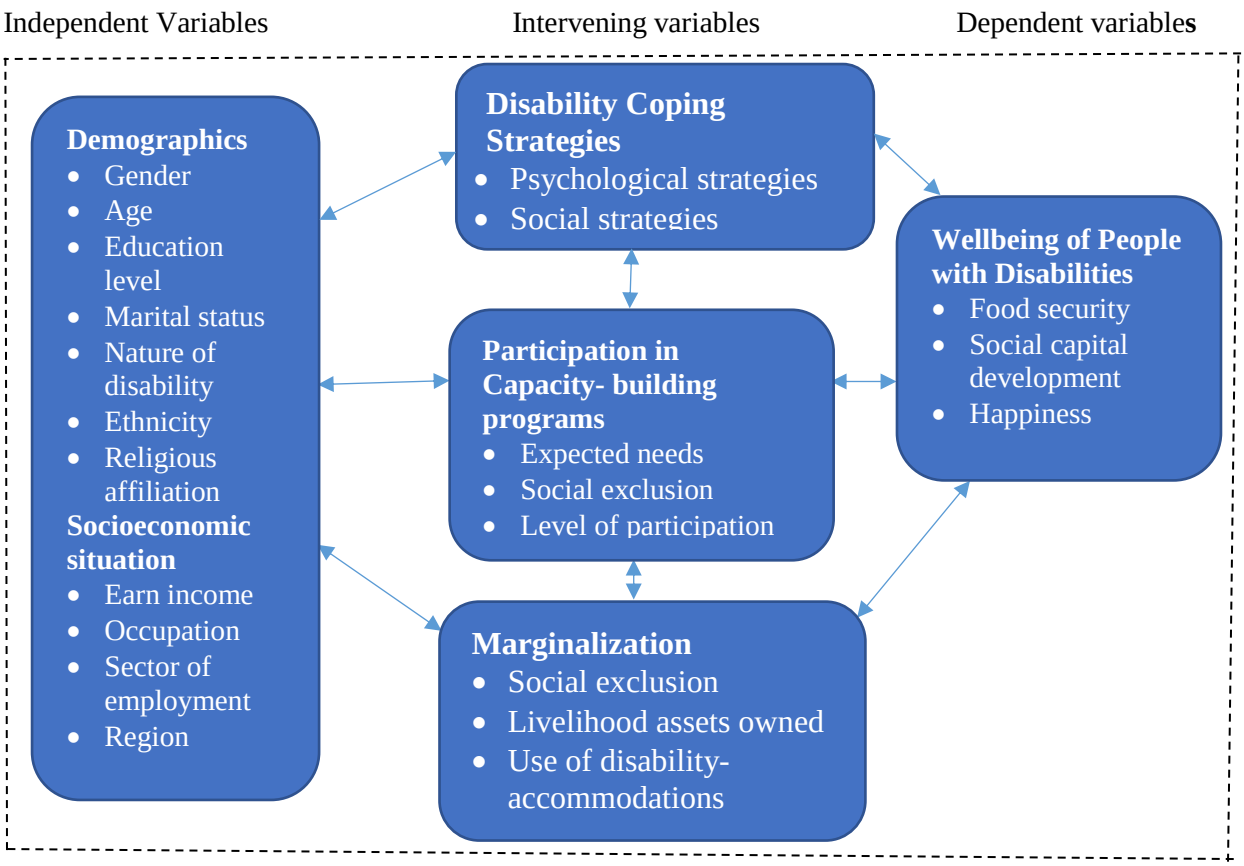


Figure 2.2. Conceptual Framework

The conceptual framework shown in Figure 2.1 considers five factors that affect the wellbeing outcome of people with disabilities: socioeconomic conditions, capacity-building gaps

(needs), participation in capacity-building programs, well-being, and coping mechanisms. The relationship among variables is indicated only by the double-pointed arrow, which shows a relationship or an interaction among the independent, intervening and dependent variables.

As shown in Figure 2.1, a full understanding of the situation of people with disabilities begins by analyzing the five levels that influence the well-being of young farmers with disabilities: socioeconomics, capacity-building needs, participation, well-being, and coping mechanisms used by young farmers with and without disabilities. In addition to the social exclusion, stemming from having disabilities, young farmers' participation in capacity-building programs is influenced by their demographic characteristics, including gender, age, level of education, and marital status, among others. A combination of a young farmer's demographics and socioeconomic situation, including income, occupation, employment sector, engagement in agricultural enterprises, and region of residence have an effect on both participation in capacity- building programs and well-being of young farmers. In light of the many challenges they face, young farmers with disabilities tend to develop psychological and social mechanisms for coping with social exclusionary practices in their communities. These coping strategies determine their resiliency in navigating challenging social terrain to participate in capacity building programs in their communities, contributing to improved wellbeing, social networks, food security, asset accumulation, and happiness. However, the level of wellbeing among young farmers with disabilities equally influences their coping strategies, participation levels, and socioeconomic situations.

However, external to this conceptual framework is environmental contexts such as societal culture, political conditions, and geographic settings that influence the wellbeing of young farmers with disabilities (Laverack et al., 2007). For example, the geographic setting can influence livelihood strategies and coping mechanisms (Birner et al., 2009).

CHAPTER 3

METHODOLOGY

3.1 **The Geography of Study Area**

Uganda is comprised of four geographical and administrative regions: Northern, Eastern, Western, and Central (Uganda Bureau of Statistics, 2015). This study was completed in the Northern and Eastern regions because they have the highest disability and poverty rates in Uganda (The Republic of Uganda & UNICEF, 2014). Northern Uganda (Figure 3-1) has a total population of 7,188,139 people and Eastern Uganda 9,042,420 people (Bureau of Statistics, 2015). Given reliable data on the number or percentage of people with disabilities in Uganda does not exist; however, existing estimates range from four percent to twenty percent. It is, therefore difficult to obtain an accurate frame to base the study sample on.

Thus, in this study the investigator adopted 16 percent as the population percentage with disabilities, which constitutes about one million people with disabilities in Northern and Eastern Uganda. The study area is over 80 percent rural, with two towns in each region identified as urban settings, namely Gulu and Lira, Soroti, and Kumi (The Republic of Uganda & UNICEF, 2014).

The northern and eastern regions of Uganda have experienced protracted civil wars since the mid-1980s to early 2000s (Beisland & Mersland, 2014). The civil war resulted in numerous physical, emotional, and traumatic disabilities on the people of northern and eastern Uganda. The civil wars displaced people from their communities, with many living in concentration camps for over 15 years in northern and about seven years in eastern Uganda.

The northern and eastern regions receive rainfall of 1,500mm per annum, and these regions have the most fertile soils in Uganda, and thus are a potential food basket in Uganda and regionally. Subsistence agriculture is the dominant livelihood for the ethnicities Acholi and Langi of northern and Iteso of eastern Uganda (Uganda Bureau of Statistics, 2015). Northern Uganda is strategically located at the border with South Sudan, which is currently Uganda's leading trade partner. Southern

Sudan offers a lucrative market for Uganda's agricultural products, thus northern Uganda has great potential for development because of ease of access and proximity to South Sudan.

Figure 3.1. Uganda Districts by Statistical Sub-regions for 2011

3.2 **Research Design**

This study employed a multidimensional model of research design involving a comparative, descriptive cross-sectional survey combined with mixed qualitative interview methods/strategies and critical analysis (Niglas, 2010). The research was guided by the positivist/post positivist worldview of research (Guba & Lincoln, 1994; Nastasi et al., 2010). Comparative research examines similarities and differences between two or more entities, along a common point (Crossley & Broadfoot, 1992).

The data collected represents cross sectional research information since the quantitative data identifies characteristics of a sample to determine population parameters at a specific point in time (Urdan, 2010). In this study, the comparison is between young farmers with disabilities and without disabilities. This study utilized mixed methods/methodologies involving a combination of quantitative and qualitative approaches (Cameron, 2011, Creswell & Plano Clark, 2011).

In addition, the study utilized critical methodology to aid in identifying assumptions/assertions that might exist in reality, including structures, and potentially uncover common wisdom taken for granted, or viewed as beneficial or not beneficial. Thus, a critical approach considers historical, cultural, social, political, and gender factors that may intersect with participation and well-being of young farmers with or without disabilities (Guba & Lincoln, 1994; Niglas, 2010).

Quantitative data were collected using an interviewer-administered paper survey. Qualitative data were collected via in depth individual interviews and focus-group discussions to explore the qualitative aspects of the generative processes in the lives of young farmers with and without disabilities (Morell, 2014).

Mixed method research refers to a research design in which philosophical, assumptions, and methods of inquiry of quantitative and qualitative approaches were used to guide the collection and analysis of quantitative and qualitative data to provide a more comprehensive understanding of the phenomena under study (Creswell & Plano Clark, 2007; Onwuegbuzie & Collins, 2007). Four steps are crucial in mixed methods research: 1) type of methods or strategies mixed, 2) timing of mixing, 3) rationale of mixing and breadth of mixing, and 4) pacing (simultaneously or sequentially) of mixing (Cameron, 2011; Tashakkori & Teddlie, 2010; Teddlie & Yu, 2007). In this study, quantitative data were collected first, and qualitative data were gathered six months later because of logistical and time constraints inhibiting the ability to simultaneously collect quantitative and qualitative data.

The face-to-face interview was administered using a paper survey comprised of five structured sections for collecting quantitative data. Research enumerators that assisted in the administration of the survey were trained for four days to reduce measurement error as much as

possible. In addition, the training helped minimize potential harm to human subjects, in line with standards approved by the Institutional Review Board (IRB) ID STUDY00005263 exempt research (see Appendix A).

3.3 **Study Population and Sample**

The sample size of 774 young farmers with and without disabilities was determined using sampling a table of 95% confidence, with a 5% margin of error.

This study utilized sequential mixed method sampling that integrates probability and purposive sampling techniques as recommended by Teddlie and Yu (2007). The study used a mixture of multi-stage stratified, simple random sampling and criterion based purposive sampling techniques.

For the quantitative sample (Figure 3-2), the study used multi-stage-stratified sampling to identify districts, sub counties. The stratum was region (Northern Region or Eastern Region). Criterion based purposive selection was used in selecting the northern and eastern regions of Uganda because the two regions have the highest disability rates and highest poverty levels in Uganda (Bureau of Statistics, 2015). The stages represented districts and subcounties. A list of all districts in each region constituted a sampling frame from which simple random sampling, with replacement, was used in selecting at least three districts in a region. At the district level, a list of all people with disabilities was obtained from the National Union of Disabled Persons of Uganda (NUDIPU) district offices, which served as the sampling frame for individuals. Once the districts were selected, individual names of young farmers in each district were obtained. Then simple random sampling was used to give all young people with and without disabilities an independent and equal opportunity to be selected to participate in the study (Urdan, 2010; Dillman, Smyth, & Christian, 2014). The sample was generated by assigning numbers to a frame of all young farmers with disabilities in Northern and Eastern Uganda. By using a random number generator on Microsoft Excel, the respondents were randomly selected to constitute the study sample. Thus, the unit of analysis for enumeration was the individual young farmer with or without a disability.

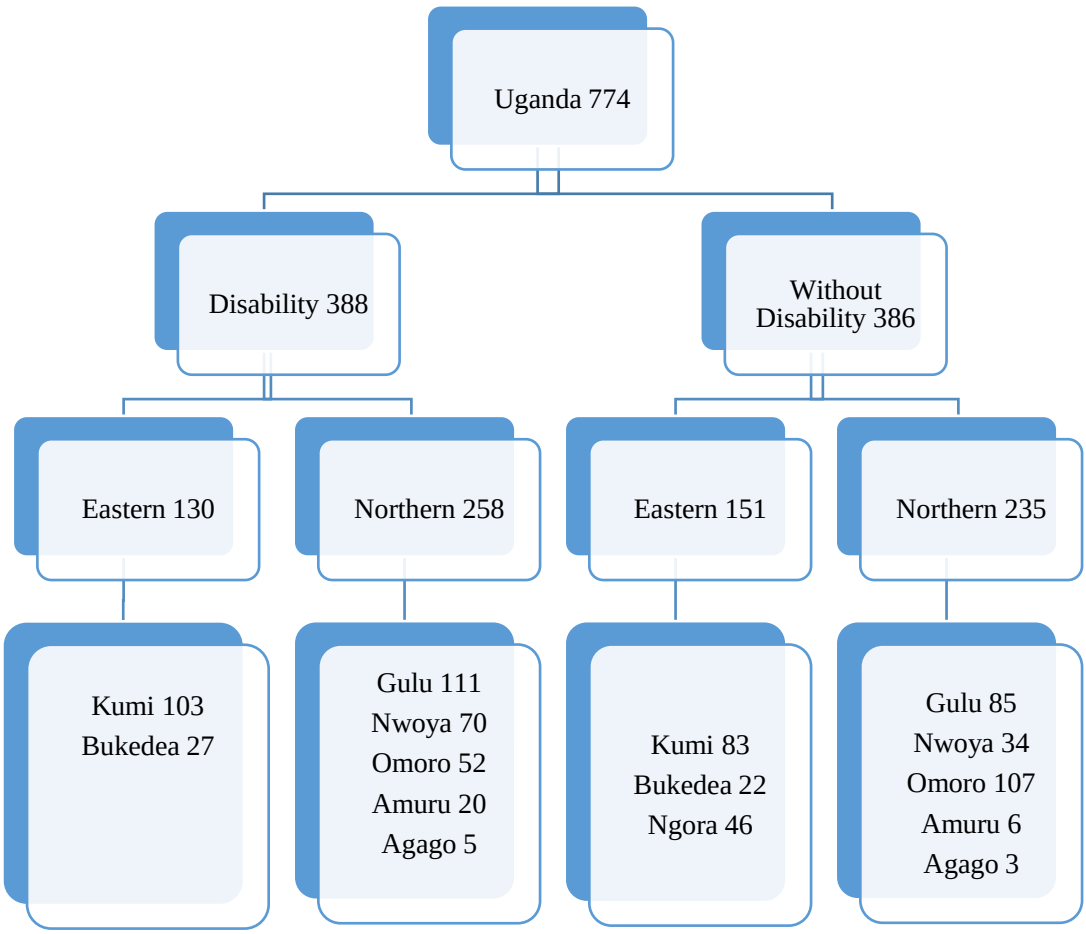
This study included 774 young farmers, with 388 having disabilities and 386 without disabilities. The sample included 493 selected from Northern Uganda (258 with disability and 235

without disability) and 281 from Eastern Uganda (130 with disabilities and 151 without disabilities). The ages ranged between 16 and 45, and all were involved in the agricultural sector.

Personnel at the National Union of Disabled Persons of Uganda (NUDIPU) acted as the point of entry to access young farmers with disabilities because of their knowledge and experience as a disability organization that is closely working with people with disabilities in communities. NUDIPU has offices that span national and district levels, in line with Uganda's decentralized system of governance of bringing services closer to the people to improve their participation in addressing development challenges affecting themselves.

The 45 key informants for the qualitative component were selected using criterion based purposive sampling (Creswell & Plano Clark, 2011). The key informants constituted people with disabilities that are heads of disability organizations and executive members of the Local Government Councils in their communities.

Figure 3.2. *Sampling Scheme for Quantitative Data Sample*



For the qualitative component, 45 key informants were selected using criterion based purposive sampling (Creswell & Plano Clark, 2011). The key informants constituted people with disabilities that are heads of disability organizations and executive members of the Local Government Councils in their communities. Thus, the criteria were having a disability, being the head of a disability organization and being an executive member of a local community government council. These key informants included District National Union of Disabled Persons of Uganda (NUDIPU) officials and disability representatives on Local Council because there are few knowledgeable individuals regarding disability issues in the communities. Furthermore, disability and Local Council administrative units tend to oversee performance of government capacity building programs in communities.

3.4 **Instrumentation**

The researcher utilized an interviewer-administered paper survey and interview protocol for collecting quantitative and qualitative data respectively.

3.4.1 **Interview-administered Paper Survey**

The interviewer-administered paper survey was developed for collecting quantitative data from young farmers with or without disabilities. The interviewer-administered paper survey contained four main sections including socioeconomic factors, participation in programs, well-being, and demographic characteristics of the respondents. The questionnaire was reviewed for content validity by a panel of experts, which included the dissertation committee members. In addition, the paper survey was pilot tested by administering it to 20 young farmers with or without disabilities. The pilot test participants were not included in the actual study data. Cronbach Alpha was used for determining the internal consistency of the items, which were used in forming summated subscales.

The survey instrument consisted of some items with a five-point Likert response scale, rated as: very high =5, high =4, neither high nor low =3, low =2, and very low =1 or fully achieved =5, mostly achieved =4, partially achieved =3, lowly achieved =2, and not achieved -1. Other items were

rated on a five-point Likert response scale consisting of most often =5, often =4, sometimes =3, rarely =2, and not at all =1. Cronbach Alpha (α) was used for testing internal consistency of the summated scales and ranged between α= .535 and α = .911. The reliability analysis for food security α = .862, household needs α = .535, production needs α = .911, and participation in training α = .940. In addition, reliability disability accommodations α = .951, and social capital α =.759.

Table 3.1.

Summated Sub-scales

Scale Name	# of Items	Cronbach Alpha	Mean (SD)	Low	High
Production Needs (Ordinal)	6	.911	2.524	2.8.4	3.515
Household Needs (Ordinal)	4	.535	3.145	2.193	4.317
Food Security (Continuous)	4	.862	2.962	0.524	1.655
Participation in Training (Continuous)	3	.940	5.132	5.051	5.258
Accommodations (Continuous)	5	.951	5.128	4.803	5.367
Social Capital (Continuous)	4	.759	3.582	3.141	4.012

3.3.2 **Interview Protocol**

The focus group discussion and in depth interviews collected data not gathered by the questionnaire for verifying and further developing an understanding of findings from the quantitative data. The focus group checklist explored self-image, perception of the family members, community members, and program officers about a person with disability and identifying coping mechanisms for disability and social exclusionary challenges at the family, community, and program levels. Other areas of focus included capacity building programs participated in and whether they were public or private; access to financial credit and ownership and use of land; and most critical challenges faced and how to address those challenges.

The focus group checklist was reviewed and field-tested through a group discussion with social workers working with disability organizations in Northern Uganda. For better comprehension of the checklist by focus group discussants, some questions were rephrased or deleted. Based on the

two categories of discussants, young farmers with and without disabilities, two focus group checklists were developed for comparison, only differentiated by the phrase *with and without disability*.

3.4 **Data Collection Process**

The data collection process began by consulting with personnel at the District Union for Disabled Persons of Northern and Eastern regions of Uganda to secure permission to carry out research involving young farmers with disabilities. The purpose of the consultation with NUDIPU personnel was for obtaining support in identifying and mobilizing potential research enumerators and respondents from Gulu, Amuru, Nwoya, and Omoro, Kumi, Bukedea, and Ngora district. Research enumerators that assisted in the administration of the survey were trained for four days to reduce potential measurement error as much as possible in the data collected and to increase the efficiency and effectiveness of the research process.

Furthermore, Gulu Community Vocational Institute, which is implementing DYNAMIC project of Agriculture, which targets youth in Northern Uganda was requested to provide support because of their experience and knowledge in working with people with disabilities and young farmers in northern Uganda. However, in eastern Uganda with less developed disability formalized structures, the study used Local Council (LC) administrative structures to identify research enumerators and respondents.

3.4.1 **Quantitative Data Collection**

The paper survey was administered by five research enumerators trained by the principal investigator in accordance with standards approved by Penn State University Institutional Research Board. Since most people with disabilities cannot read nor write, the questions were translated into Luo and Ateso dialects for comprehension. The research enumerators included social workers with disability organizations, youth with disabilities, and sign language interpreters for the benefit of young farmers with hearing and speaking disabilities. Quantitative data were collected in January 2017 from 774 respondents, with 493 (258 with disability and 235 without disability) from Northern and 281(130 with disabilities and 151 without disabilities) from Eastern Uganda. The questionnaires

were administered in the households of young farmers with disabilities in one sitting. The data collection was supervised by the principal investigator to ensure adherence to Institutional Research Board standards of minimizing harm on the respondents.

Quantitative data were collected from young farmers with or without disabilities using two interviewer-administered paper surveys that are only differentiated by the demographic (disability) variable to allow comparison of young farmers with or without disabilities. In-depth interviews were employed to collect data from key informants, which included District NUDIPU officials and disability and youth representatives in community Local Council executive.

Quantitative data were collected from young farmers with or without disabilities that are engaged in the agricultural sector. Young farmers with disabilities were in the categories of: speaking, hearing, walking and handling, visual, and burns/deformities; and mental and epilepsy disabilities; albino and little people. Through disability organizational structures, appointments were made with selected respondents and interview-paper survey administered in situ. Each young farmer with a disability that participated in the study was given salt and soap as incentives to increase response rate.

3.4.2 **Qualitative Data**

In-depth interviews were administered to District NUDIPU personnel, disability representatives on Local Councils, and young farmers with or without disabilities who did not participate in completing the interviewer-administered paper survey. Furthermore, the study carried out focus group discussions on selected young farmers with or without disabilities who did not participate either in the survey or in depth interview. The researcher conducted four focus group discussions, each comprised of 10 young farmers with different types of disabilities and without disabilities. Focus group discussions for young farmers with and without disabilities were held in public venues selected by the participants based on their accessibility and proximity. As an incentive, the participants of focus group discussions were given transport refund commensurate to transport fare used.

3.5 **Data Analysis Plan**

Data for young farmers with or without disabilities were separately collected and entered in SPSS as separate data files. After cleaning the data and checking for missing data patterns, if any, the two data sets were merged with identifier variables created regarding disability status and region. No personal identifiers (names, codes, etc. were assigned to specific individuals in the data files.

The Statistical Package for Social Science (SPSS) was used to analyze quantitative data. The study employed basic descriptive univariate statistics, bivariate correlations and regression analysis. Linear regression analysis or binary logistic regression analysis with backward elimination of variables were used to identify factors influencing (explaining) participation and well-being of young farmers with and without disabilities. Factors with significance p= or < 0.05 were considered to be statistically significant.

Table 3.2

Data Analysis Scheme

Objective	Scale Type		Statistic Used	Significance Level (Apriori)
	Independent	Dependent		
Socioeconomic Situation	Nominal, Categorical		Percentage and	
Factors affecting Food Security	Nominal, Continuous	Continuous	Descriptive, Linear Regression	p= or < 0.05
Determinants of Participation	Nominal, Continuous	Categorical	Logistic Regression	
Determinants of Well-being	Nominal, Continuous	Continuous	Linear Regression	p= or < 0.05
Disability Coping Strategies	Text	Text	Coding Data	

3.5.1 Qualitative Data-coding Framework

Qualitative data related to coping strategies used by young farmers with and without disabilities to function fully in communities were analysed by generating codes and themes. This involves systematically reducing data (chunks of information) to open codes and axial codes, then developing themes from the codes, and identifying keywords and using the surrounding words to understand the underlying meaning of the keyword to explain the occurrence of a phenomenon

(Onwuegbuzie & Combs, 2010). The study employed the qualitative data-coding framework recommended by Saldana (2010) for coding and analysis procedures of the qualitative data.

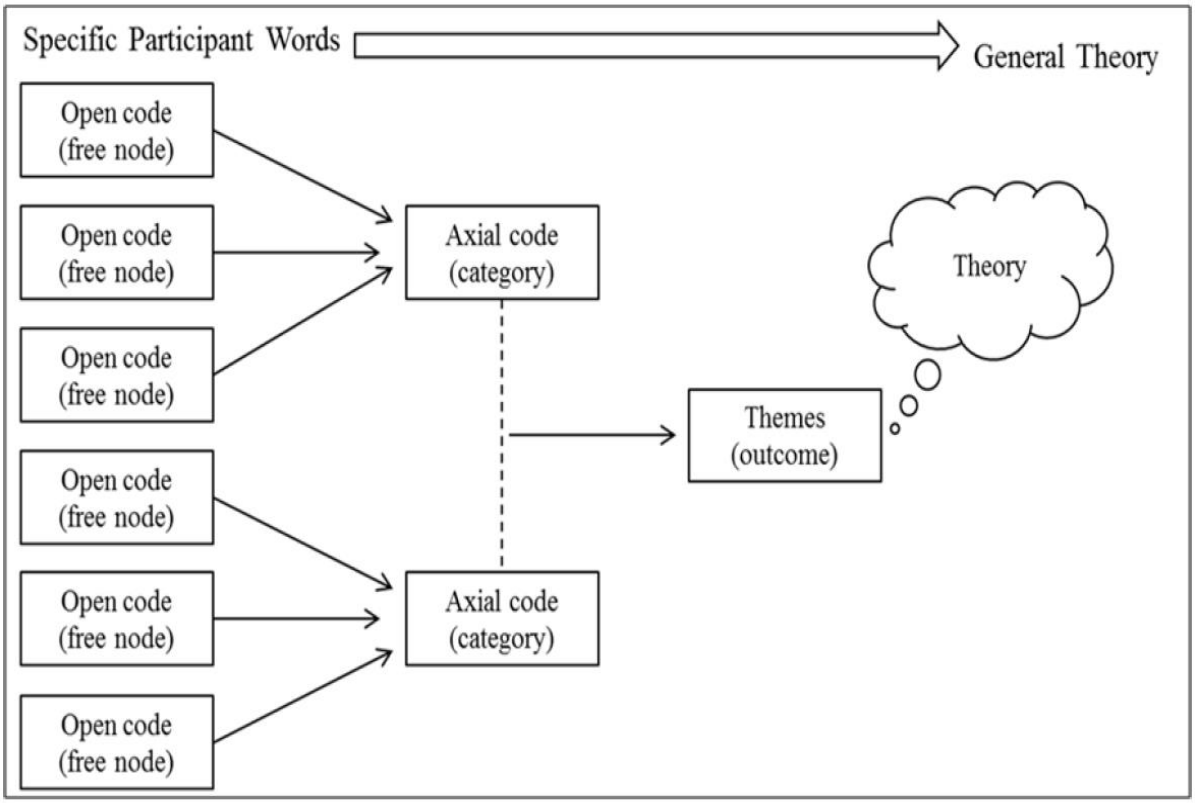


Figure 3.3. Qualitative Data-coding Framework. Adapted from Saldana (2010). The coding manual for qualitative researchers. Thousand Oaks, CA: Sage.

CHAPTER FOUR

RESULTS

4.1 **Introduction**

This chapter is comprised of six sections. The first section summarizes the sample characteristics. From the second to sixth sections, the results presented and discussed are in accordance with the study objectives.

4.2 **Demographic Characteristics**

The demographic characteristics of the respondents included gender, age, education, marital status, ethnicity, and religious affiliation. The young farmer demographics are categorized according to their disability status (Table 4-1).

Table 4.1

Demographic Characteristics of Young Farmers with and without Disabilities

Demographic Characteristic (N=774)	With Disabilities (N=388) Percentage	Without Disabilities (N=386) Percentage
Gender		
Male	65.5	70.7
Female	34.5	29.3
Age (years)		
Below 20	13.7	17.4
20 to 29	41.5	45.9
30 to 39	33.0	25.6
40 and Beyond	4.6	1.3
Household members with disability		
None	00.0	1.7
One Person	71.1	73.5
Two People	22.0	20.5
Three People	6.9	2.6
Four People		0.9
Five People		0.9
Highest Education Completed		
Primary School	59.8	52.1
Secondary School	14.9	21.5
Tertiary Education	13.7	18.7
None/No Formal Schooling	10.6	2.6
University Education	1.0	5.2
Marital status		
Married/Cohabiting	55.4	52.3
Never Married	39.4	43.3

Separated/Divorced	3.6	2.3
Widowed/Widower	1.5	2.1
Ethnicity		
Acholi	60.1	53.4
Iteso	33.5	39.1
Langi	5.4	6.5
Others	1.0	1.1
Religious affiliation		
Catholic	61.3	57.8
Anglican/Protestant	25.5	27.7
Born Again/Pentecostal	10.6	10.1
Muslim	1.0	4.4
Others (traditionalist/pagan)	1.5	0.0

Table 4.1 indicates that male young farmers with disabilities (65.5% are male) are most frequently aged between 20 and 29 years (41.5%) that have attained mostly a primary education (60%) with one percent having a university education and 10% having no formal education. The higher percentage of those with disabilities being males (65.5%) compared to females (34.5%) can be explained by a common practice in Uganda characterized by high mobility of men from the households to the wider community to participate in socioeconomic activities that can improve the welfare of their households. Furthermore, the majority of the young farmers with disabilities (41.5%) and without disabilities (45.9%) were aged between 20 and 29 of which young farmers with disabilities (55.4%) and without disabilities (52.3%) were married.

In terms of the regional disability distribution (Table 4-1), the Acholi people (60.1%) of Northern Uganda have a greater proportion of people with disabilities compared to the Iteso people (53.4%) of Eastern Uganda. The Catholic (61.3%), Anglican (25.5%), and Pentecostal faith (10.6%) dominate young farmers with disabilities. The same trend of religious faith dominates young farmers without disabilities with Catholics (57.8%), Anglican (27.7%), and Pentecostal (10.1%) being most prominent.

The researcher further examined the demographic characteristics of the young farmers with disabilities at household level, origin, causes of acquired disability, and the severity of the disability (Table 4-2).

Table 4.2

Description of Disabilities

Disability Characteristic (N=388)	Percentage
Origin of Disability	
Inborne	69.6
Acquired in Lifetime	30.4
Cause of Acquired Disability	
Accidents	12.1
Gunshots/Land Mines/Civil Wars	5.4
Disease	4.9
Other Causes (snake bites/fire/acid burns)	8.2
Severity of the Disability	
Severe	34.2
Moderate	52.1
Mild	13.7

Most young farmers have inborn disabilities (69.6%) and acquired disabilities (30.4%) in their lifetime. Most acquired disabilities are caused by accidents (12.1%), other causes (snake bites/fire/acid burns/witchcraft) (8.2%), gunshots /landmines /civil wars (5.4%), and disease (4.9%). The disabilities imposed are rated moderate (52.1%), severe (34.2%), and mild (13.7%) in terms of severity on the health and ability of young farmers to engage in productive activities in their communities. Given that, most young farmers possess inborn disabilities, with most of the disabilities representing a moderate to severe condition emphasizes the need for broad interventions for young farmers with disabilities.

Furthermore, while in Table 4.2, most young farmers indicated that they have been born with disabilities (69.6%) and acquired disabilities (30.4%) in their lifetime, in-depth interviews revealed a new dimension. During in-depth interviews with key informants with disabilities, it was documented that most respondents did not differentiate between the various forms of disability that are in-borne with those acquired in their lifetime. For example, most respondents indicated polio, cleft feet, among others as in-borne, yet such disabilities tend to be developed at early childhood. Further analysis of the cause of disabilities acquired in the young farmers' lifetime is summarized in Table 4.3.

Table 4.3

Type of Disability by Cause

Type of Disability	Grouped Causes of Disability			
	Accidents (N=58)	Gun shots/Civil Wars (N=21)	Disease (N=22)	Other Causes (burns/snakebites/witchcraft) (N=18)
Limbs Deformed/Burned	25.2	9.2	8.4	8.4
Body	8.4	5.0	6.7	4.2
Hearing	6.7	0.0	1.7	0.0
Visual	6.7	3.4	0.0	1.7
Speaking	1.7	0.0	1.7	0.0
Total Cause of Disability	48.7	17.6	18.5	15.1

Information in Table 4.3 indicates that regardless of the type and origin of disability, most disabilities are caused by accidents (48.7%), disease (18.5%), gunshots/landmines/civil wars (17.6%), and other causes (15.1%) such fire/acid burns/snake bites/witchcraft. In addition, most limb disabilities are inborn (25.8%) and acquired (19.1%) during a person's lifetime. Multiple body deformations are inborn (17.5%) and acquired (5.9%). Acquired multiple body deformations are primarily due to road injuries, acid and fire burns, or deliberate mutilation by assailants. Further, the high percentage of multiple body deformations in Northern and Eastern Uganda is because of the civil wars between 1986 and 2004 where an undocumented number of people suffered physical mutilation. In addition, access to and currently existing poor health care services, especially maternal and child health care services, exposes people to preventable disabilities.

Furthermore, the investigator examined type of disability by age, and the results are summarized in Table 4.4.

Table 4.4

Type of Disability by Young Farmer's Age

	Type of Disability (N=388)	Age (years) of Young Farmer			
		% Below 20	% 20 - 29	% 30-39	% 40 and Beyond
Both Regions	Limbs	6.2	20.1	13.7	4.9
	Deformed/Burned Body	3.4	9.3	9.3	1.5
	Hearing	3.1	5.7	4.6	2.6
	Visual	0.8	4.4	3.6	1.8
	Speaking	0.4	2.1	0.5	1.0
	Mental	0.0	0.0	1.3	0.0
	Chi square = 25.518 (p = 0.043); Cramer's V = 0.148				
Eastern (N = 130)	Limbs	4.6	14.6	21.5	10.0
	Deformed/Burned Body	1.5	0.8	3.8	2.3
	Hearing	1.5	3.1	4.6	6.2
	Visual	1.5	5.4	5.4	4.6
	Speaking	0.0	3.1	0.8	11.8
	Mental	0.0	0.0	1.5	0.0
	Chi square = 14.524 (p = 0.486); Cramer's V = 0.193				
Northern (N = 258)	Limbs	7.0	22.9	9.7	2.3
	Deformed/Burned Body	4.3	13.6	12.0	1.2
	Hearing	3.9	7.0	4.7	0.8
	Visual	0.4	3.9	2.7	0.4
	Speaking	0.4	1.6	0.4	0.0
	Mental	0.0	0.0	3.8	0.0
	Chi square = 16.999 (p = 0.319); Cramer's V = 0.148				

Table 4.4, shows that most disabilities are associated with limbs (20.1%), burns (9.3%), hearing (5.7%), and visual (4.4%) tend to be developed by young farmers at the age of 20 to 29 years. The Chi square = 25.518 (p=0.043) indicates that there is a significant association between the type of disabilities among young farmers across the various age categories. Youth hood, represents a development stage in which the body experiences many rapid changes that most find difficulty to cope with. At the youth hood stage, young people are highly adventurous in many aspects of life, thus exposing themselves to many risks such as accidents.

Lastly but not least, the researcher considered the cause of disability by age of young farmers as presented in Table 4.5.

Table 4.5

Cause of Disability Possessed by Young Farmers by Age

Region	Cause of Disability (N=114)	Age (years) of Acquisition of Disability			
		% Below 20	% 20 - 29	% 30-39	% 40 and Beyond
Both Regions (N = 114)	Accident	48.2	2.6	0.0	0.0
	Gunshot/Civil Wars	12.3	4.4	0.0	0.9
	Disease	13.2	3.5	0.9	0.0
	Other Causes (burns/witch craft/snake bites)	11.4	1.8	0.9	0.0
	Chi square = 16.553 (p =0.056); Cramer's V = 0.220				
Eastern (N = 51)	Accident	84.3	3.9	0.0	0.0
	Gunshot/Civil Wars				
	Disease	3.9	0.0	0.0	0.0
	Other Causes (burns/witch craft/snake bites)	7.8	0.0	0.0	0.0
	Chi square = 0.278 (p = 0.870); Cramer's V = 0.074				
Northern (N = 63)	Accident	19.0	1.6	0.0	0.0
	Gunshot/Civil Wars	22.2	7.9	0.0	1.6
	Disease	20.6	6.3	1.6	0.0
	Other Causes (burns/witch craft/snake bites)	14.3	3.2	1.6	0.0
	Chi square = 6.491 (p = 0.690); Cramer's V = 0.185				

From Table 4.5, most disabilities among young farmers below 29 years are caused by accidents (50.8%), gunshot/civil wars (16.7%), diseases (16.7%) and other causes (13.3%). In addition, the Chi-square vale of 16.553 (p=0.056) imply that there are no significant associations between the causes of disability among young farmers across the various age categories in which a disability was acquired. This may be explained by the fact that a youth at 20 to 29 years has reached the climax of youth-hood, a development stage in which young people are highly adventurous in many aspects of life, thus exposing themselves to many risks such as accidents.

4.3 **Socio-economic Situation of Young Farmers with and without Disabilities**

Objective one of this study was to describe the socio-economic situation of young farmers with and without disabilities in Uganda. The socio-economic situation of young farmers included income and its regularity, occupation and form of employment among others. The description of income and its regularity by region is presented in Table 4.6.

Table 4.6

Socioeconomic Situation

Region	Income	Disability Status	
		With Disability Percentage (N=388)	Without Disability Percentage (N=386)
	Earn some income (N=774)		
Eastern (N=281)	Yes	16.4	26.3
	No	29.9	27.4
Northern (N=493)			
	Yes	35.5	25.2
	No	16.8	22.5
	Total		
	Yes (N=419)	52.3	47.7
	Regularity of earning income (N=419)		
Eastern (N=120)	Very regular (Monthly) (N=42)	8.2	6.8
	Regular (quarterly) income (N=37)	3.2	10.0
	Occasional income Irregular (six months) (N=28)	5.0	5.0
	Very irregular (yearly or beyond) (N=13)	0.0	4.6
	Total	16.4	26.3
	Chi square =21.996 ($p<0.001$); Cramer's V = 0.280		
Northern (N=299)	Very regular (monthly)	20.9	13.6
	Regular (Quarterly) income	13.6	9.9
	Irregular (occasional-six months)income	0.6	1.0
	Very irregular (yearly and beyond)	0.4	0.6
	Total	35.5	25.2
	Chi square = 14.116 ($p=0.007$); Cramer's V = 0.169		

Table 4.6 indicates that overall, most young farmers with disabilities (52.3%) earn income compared with young farmers without disabilities (47.7%) in Uganda. However, a greater proportion of young farmers with disabilities in Northern Uganda (35.7%) earn income compared to those with

disabilities in Eastern Uganda (16.4%). In contrast, a very slightly greater proportion of young farmers without disabilities (26.3%) in Eastern Uganda earn some income compared to their counterparts in Northern Uganda (25.2%).

Interestingly the regularity at which young farmers with disabilities earn some income is higher for both young farmers without disabilities in both Eastern and Northern Uganda. In addition, the regularity of income earned by young farmers with disabilities in Northern Uganda is higher compared to their counterparts in Eastern Uganda.

Further the Chi-square value 21.996 (p<0.0001) for Eastern Uganda indicates that there is a significant association in the regularity of income earned by young farmers with and without disabilities. Similar trends are also observed in Northern Uganda (Chi-square = 14.116, p= 0.007). Furthermore, the study considered the sources of income of young farmers with and without disabilities and the findings are presented in Table 4.7.

Table 4.7

Sources of Employment of Young Farmers with and without Disability by Region

Region	Sources of Income (N=343)	With Disability (N=165) Percentage	Without Disability (N=178) Percentage	Chi-square (χ^2)	*p*-value	Cramer's V
Both Regions	Subsistence agriculture	28.6	29.5	2.500	0.286	0.057
	Commercial agriculture	4.9	3.0	5.069	0.079	0.081
	Salaried employment	3.3	7.4	12.787	0.002	0.129
	Agro processing	0.2	1.0	5.669	0.059	0.086
	Metal fabrication	2.2	1.0	4.204	0.122	0.074
	Carpentry	0.6	2.0	6.303	0.043	0.090
	Retail/wholesale trade	2.8	4.9	3.281	0.194	0.065
	Plant/machinery service	0.0	0.2	3.615	0.164	0.068
	Tailoring	0.0	1.0	6.994	0.030	0.095
	Art and craft	9.4	0.0	47.532	0.000	0.248
Eastern (N=104)						
	Subsistence agriculture	11.0	18.5	5.403	0.067	0.139
	Commercial agriculture	0.4	1.4	6.003	0.050	0.146
	Salaried employment	1.1	2.1	5.396	0.067	0.139
	Agro processing	29.9	27.4	5.298	0.021	0.137
	Metal fabrication	29.9	27.4	12.401	0.002	0.159
	Carpentry	0.0	0.4	5.894	0.052	0.145
	Retail/wholesale trade	0.4	3.9	10.125	0.006	0.190
	Plant/machinery service	16.4	26.3	5.298	0.001	0.137

	Tailoring	0.0	0.4	4.894	0.052	0.145
	Art and craft	0.7	0.0	8.409	0.015	0.173
Northern						
(N=239)	Subsistence agriculture	17.6	11.0	12.770	0.002	0.161
	Commercial agriculture	4.5	1.6	14.623	0.001	0.172
	Salaried employment	2.2	5.3	25.731	0.000	0.129
	Agro processing	0.2	1.0	15.994	0.000	0.180
	Metal fabrication	2.2	1.0	12.401	0.002	0.159
	Carpentry	0.6	1.6	16.165	0.000	0.181
	Retail/wholesale trade	2.4	1.0	12.744	0.002	0.161
	Plant and/or machinery	0.0	0.2	13.070	0.001	0.163
	Service					
	Tailoring	0.0	0.6	15.854	0.000	0.179
	Art and craft	8.7	0.0	46.319	0.000	0.307

Table 4.7 shows that most young farmers with and without disabilities are engaged in subsistence agriculture (28.6%) for young farmers with disability and 29.5% for young farmers without disability. Young farmers are less engaged in commercial agriculture as reflected by young farmers with disability (4.9%) and without disabilities (3.0%). This implies that agriculture, especially subsistence agriculture is the main livelihood strategy and source of employment for young farmers in Uganda.

Very few (0.2%) young farmers with and without disabilities (1.0%) are involved in agro processing. In addition, there is less attention given to vocational trades such as metal fabrication, carpentry and tailoring among others to build the capacity of young farmers to engage in off-farm activities to supplement income from production agriculture.

In the study, I also considered the broad sectors of employment of young farmers in Eastern and Northern Uganda. The findings are presented in Table 4.8.

Table 4.8

Sectors of Employment Involved by Young Farmers with and without Disability by Region

Region of Uganda	Form of Employment (N=419)	With Disability (N=221) Percentage	Without Disability (N=198) Percentage
Both Regions	Self-employment	48.7	43.9
	Private Sector	4.7	3.8
	Government	0.6	1.6
	Chi square = 15.838 (p=0.003) Cramer's V=0.143		
Eastern (N=120)	Self-employment (N=112)	15.3	24.2
	Private Sector (N=6)	0.4	1.8
	Government (N=2)	0.4	0.4
	Chi square = 8.077 (p=0.089) Cramer's V=0.170		
Northern (N=299)	Self-employment (N=261)	33.3	19.7
	Private Sector (N=31)	2.0	4.3
	Government (N=7)	0.2	1.2
	Chi square = 27.702 (p<0.00) Cramer's V=0.237		

Table 4.8 indicates that most young farmers with disabilities (48.7%) and without disabilities (43.9%) are engaged in self-employment as a source of livelihood. However, there are a greater proportion of self-employed young farmers with disabilities in Northern Uganda (33.3%) as compared with young farmers with disabilities in Eastern Uganda (15.3%) and those without disabilities in either Northern (19.7%) or Eastern (24.2%) Uganda. The private sector constitutes the lowest form of employment for young farmers with disabilities (4.7%) and without disabilities (3.8%) when compared to government as a form of employment; young farmers with disabilities (0.6%) and without disabilities (1.6%). Overall, there is a statistically significant (Chi square=15.838, p=0.003) association in the sectors of employment for both young farmers with and without disabilities, with a small effect size (Cramer's V=0.143) in Uganda. The chi-square value = 27.702 (p <0.01) indicates that there is a significant association in the sectors of employment for both young farmers with and without disabilities in Northern Uganda. However, there is no significant association (Chi square=8.077, p=0.089), with small to moderate effect size (Cramer's V=0.170) in the sectors of employment for both young farmers with and without disabilities in Eastern Uganda.

4.4 **Factors Influencing Food Security Status of Young Farmers with and without Disabilities**

Objective two of the study was to examine the factors influencing food security of young farmers. The study conceptualised these factors as basic needs, social support, poverty trap, stigma of exclusion by disability status and region as summarized in Table 4.9.

Table 4.9

Personal Achievement Rating of Basic Needs and Agricultural Production Needs

Basic Household Need and Agricultural Production Need	With Disability (N=388)		Without Disability (N=386)	
	N	Mean Rating and Standard Deviation (SD) Mean (SD)	N	Mean Rating and Standard Deviation (SD) Mean (SD)
Food	137	3.48(1.596)	90	3.04(1.642)
Social Interaction	156	4.54(0.960)	93	3.82(1.510)
Money	133	2.41(1.596)	82	2.12(1.598)
Health Services	137	3.01(1.558)	80	2.81(1.744)
Agricultural Production Needs				
Knowledge and Skills	148	3.74(1.565)	89	3.31(1.742)
Improved Seed	147	2.45(1.623)	89	2.83(1.680)
Improved Animals	151	2.23(1.541)	86	2.42(1.605)
Agricultural Information	144	2.60(1.686)	82	2.87(1.769)
Adding Value and Processing Produce	131	2.19(1.589)	79	2.32(1.614)
Market for Agricultural Produce	145	2.47(1.612)	84	2.44(1.638)

Rating on a five-point Likert scale: 5-fully achieved, 4-mostly achieved, 3-partially achieved, 2-lowly achieved, and 1-not achieved.

Table 4.9, indicates that in terms of basic household needs for both young farmers with and without disabilities, social interaction was rated very highly (mean=4.54 and mean=3.82 respectively) which indicates they on average reported having “mostly achieved” this basic need. Agricultural knowledge and skills was rate as “partially achieved” (mean= 3.74 and mean=3.31 respectively), and food was rated as “partially achieved (mean= 3.48 and mean=3.04 respectively). The high rating of social interaction implies that the mobility of young farmers with disabilities to access the community influences their identity formation and social interactions created with other people, which allow

them to cope with daily challenges. Thus young farmers both with and without disabilities regard social networks as avenues for social interaction, knowledge and skills acquisition for production agricultural, which increases food security status in their households.

Further, Table 4-9 data indicates that achievement regarding needs for production agricultural such as improved seeds and animals, agricultural information, money, value addition and processing, marketing for agricultural produce as well as health care services were generally rated as a "low level of achievement. These findings imply that both young farmers with and without disabilities experience difficulties with production agriculture because they are not achieving essential production needs. This state of affairs tends to maintain agricultural production at a subsistence level to meet household food needs. Production agriculture as an agenda pursued by the Government of Uganda to modernize agriculture by transforming it from dominant subsistence to commercial agriculture is far from reality because young farmers are lacking agricultural inputs that are crucially essential for improved agricultural productivity, food security, incomes and exports.

Further, the study considered social capital development as a factor influencing food security (Table 4.10).

Table 4.10

Social Capital Development

Interacting with Other People Indicator	With Disability (N=388)	Without Disability (N=385)
	Rating Level of Interaction with Other People Mean (SD)	Rating Level of Interaction with Other People Mean (SD)
How often do you talk to people outside your family when you have a problem?	3.83(1.085)	4.19(.950)
How often do you other people talk to you if they have a problem?	3.30(1.145)	3.69(1.031)
How often do you interact with people outside your family?	3.63(1.031)	3.73(1.082)
How often do you travel to places out of your community?	2.84(1.217)	3.45(1.174)

Rating on a five-point Likert scale: 5-most often, 4-often, 3-sometimes, 2-rarely, and 1-never.

Table 4.10, indicates that young farmers with and without disabilities indicated they often talk to people outside their families whenever they have a problem (mean= 3.83 and mean=4.19 respectively). In addition, young farmers with and without disabilities they often interact with people outside their families (mean= 3.63 and mean=3.73 respectively). However, young farmers with and without disabilities rated that they sometimes talk with other people when they have a problem (mean= 3.30 and mean=3.69 respectively), and rated that they rarely travel to places outside their communities (mean= 2.84 and mean=3.45 respectively).

The information in Table 4.10 indicates that slight differences exist in social capital development in young farmers with and without disabilities. Young farmers with disabilities' ability to travel to other places outside their communities is curtailed by the nature of disability possessed and lack of accommodation facilities such as white cane and wheel chairs. In addition, since most young farmers travel on foot, it poses a limitation on the distance a young farmer can travel outside the community. Further, it is a limitation in communities in which social interaction is key for creation of social networks and build social capital through which soft and material benefits flow (Portes, 1998). Being outside a social network tends to disadvantage young farmers with disabilities from accessing and participating in capacity building programs to achieve needs for production agriculture.

In addition to the above, the study considered household assets as a factor influencing food security, and the findings are summarized in Table 4.11.

Table 4.11

Assets Owned by Young Farmers with and without Disabilities

Assets Owned	With Disability			Without Disability		
	N	Number Owned	Percentage	N	Number Owned	Percentage
Bicycle	168	1	42.7	202	1	51.0
		2	0.5		2	1.0
		3	0.3		3	0.3
Motor cycle	14	1	3.6	37	1	9.3
					4	0.3
Motor Vehicle	3	1	0.8	6	1	1.6
Milling Machine	4	1	1.0	5	1	1.3
Radio	205	1	52.8	239	1	61.4
		2	0.3		2	0.5
Cell Phone	155	1	39.6	228	1	58.8
		2	0.5		3	0.3
Cattle	79	1-2	10.7	83	1	8.6
		3-4	7.0		3-4	8.5
		5-6	1.8		5-6	2.1
					7-8	1.9
		10 and below	1.0		10 and beyond	0.6
Goats/Sheep	162	1-2	12.9	162	1-2	12.1
		3-4	14.5		3-4	17.6
		5-6	8.5		5-6	8.1
		7-8	2.1		7-8	1.8
		9 and beyond	3.9		9 and beyond	2.4
Chicken/Ducks/Turkeys	183	1-4	11.9	179	1-4	11.1
		5-10	27.2		5-10	29.7
		11-16	3.4		11-16	2.3
		17-22	3.2		17-22	1.3
		22 and beyond	1.8		22 and beyond	2.2
Land (Hectares)	161	0.5 – 1.0	10.6	150	0.5-1.0	6.4
		2.0 – 4.0	20.7		2.0-4.0	23.9
		5.0 – 10.	6.0		5.0-10.0	6.0
		10.0 and beyond	4.5		10.0 and beyond	2.7
Permanent House	11	1	2.1	15	1	2.8
		2	0.7		2	0.8
					3	0.3
Temporary House	272	1	39.4	251	1	23.3
		2-4	30.6		2-4	37.4
		5-7	1.3		5-7	4.4

Table 4.11 shows that both young farmers with and without disabilities own less assets, mostly of lower value, which is an indication of higher poverty levels. A large number of young

farmers with and without disabilities own non capital assets such as bicycles, cell phones, and small animals such as chickens.

However, capital and higher value assets such as motor cycles, motor vehicles (owned by only nine), and milling machines (owned by less than five) are owned by a few, and mostly one. Only 14 young farmers with and 37 young farmers without disabilities own one motor cycle. Given that youth unemployment in Uganda is at 83 percent, most young farmers tend to own a motor cycle (locally known as boda-boda) for transporting passengers as a main source for income generation.

A few (30) young farmers with and without disabilities own higher value farm animals such as cattle, goats, and sheep, with most owning two farm animals. In Northern and Eastern Uganda, ownership of cattle is regarded as a measure of wealth and economic status. Cattle serve as oxen for farm labor related to crop cultivation and transporting farm inputs and outputs. Therefore, ownership of cattle tends to be an indicator of higher agricultural productivity and higher food security. Thus, culturally and economically, lack of cattle ownership is regarded as an indicator of being highly impoverished and highly food insecure in the community. In addition, culturally cattle and goats function as a bride price for marriage. Thus, lack of the same farm animals outright categorizes individuals and households as poor and unable to offer support to a family.

In the following section, regression analysis findings are summarized. The regression analyses examine the simultaneous influence of basic needs, social support, poverty trap, stigma of exclusion, and disability status on food security status of young farmers with and without disabilities.

4.4.1 **Influence of Basic Needs on Food Security Status of Young Farmers**

The influence of basic needs on food security of young farmers was determined using a simultaneous linear regression analysis, and the findings are summarized in Table 4.12.

Table 4.12

Summary for Food Security Regressed on Selected Independent Variables

	Unstandardized Coefficient		Standardized Coefficient		
Model	B	SE of B	Beta	*t*	*p*
Constant	1.271	0.320		3.967	<0.001
Disability status (1= With)	-0.306	0.073	-0.264	-4.173	<0.001
Region of Uganda (0 = Eastern)	0.449	0.153	0.187	2.928	0.004
Money	0.117	0.023	0.331	5.041	<0.001
Improved animals	0.101	0.034	0.277	2.963	0.003
Agricultural information	0.107	0.040	0.330	2.702	0.008
Adding value and processing produce	-0.104	0.045	-0.297	-2.311	0.022
Market for agricultural produce	-0.083	0.042	-0.242	-1.967	0.051

Dependent variable: Number of meals eaten in a day

Regression results indicate that disability status has a negative influence (*beta* = -0.264, *p* <0.001) on food security implying that young farmers without disability are most likely to be food insecure. Secondly, the region, being from the Northern region compared positively influences food security significantly (*beta* = 0.187, *p* = 0.004). Further the higher the self-reported achievement of expected needs such as money (*beta* = 0.331, *p* = 0.001), improved animal breeds (*beta* = 0.277, *p* = 0.003) and access to agricultural information (*beta* = 0.330, *p* = 0.008) positively influence food security status of young farmers. The greater the self-reported achievement of access to finances (money), improved animals, and agricultural information contributed positively young farmers' food security status. However, having achieved greater access to markets for agricultural produce (*beta* = -0.242, *p* = 0.051) and adding value and processing produce (*beta* = -0.297, *p*= 0.022) contributed negatively to food security of young farmers. This implies that more access to market and value addition to agricultural produce opportunities reduces food security of young farmers. Access to markets and value addition, attracts high market prices, which make young farmers to sell all the agricultural produce, thus rendering their household food insecure.

Disability increases food insecurity of young farmers because currently many capacity-building programs implemented in Northern and Eastern Uganda are likely to exclude participation of

young farmers with disabilities. In addition, many capacity-building programs, especially in Northern Uganda, because of empathy people give young farmers with disabilities alms and other benefits, thus are likely to experience improved food security compared to young farmers without disabilities. The 2016/2017, Uganda National Household Survey indicated that declining poverty level in Northern Uganda compared to increasing poverty levels in Eastern Uganda. However, it is important to note that the improved food security situation and reducing poverty levels in Northern Uganda is likely to be unsustainable because most humanitarian non-governmental organizations implementing capacity-building programs are withdrawing their services from the communities. This is a worrying situation given that the capacity of young farmers with without disabilities have not been fully developed to ensure sustainability of programs implemented in their communities. According to focus group discussions, young farmers with and without disability in Northern Uganda experience improved food security situation compared to young farmers with and without disabilities in Eastern Uganda. The improved food security in Northern Uganda is because of many post-conflict capacity-building programs implemented by non-governmental organizations and the Government of Uganda in Northern Uganda, especially targeting farmers.

However, it is important to note that the disparity in disability status and food security, as argued by young farmers in focus group discussions in Eastern Uganda, results from inability of their community leaders to integrate young people in capacity building programs in their communities. Young farmers in Eastern Uganda attributed their lack of participation in capacity-building programs to social exclusion and misappropriation of capacity-building funds and programs meant to benefit young farmers to benefit themselves and those with social ties with them. According to the young farmers, local leaders charge subscription fee for them to participate in Youth Livelihood Initiative, which they lack because they are unemployed. Youth Livelihood Initiative is a public program in Uganda meant to build capacity of young farmers for improved agricultural productivity. None of the young farmers in the focus group discussion in Eastern Uganda had ever participated in capacity-building programs in their communities, yet young people constitute 65% of Uganda's population, a potential force for improved agricultural production.

Most capacity-building programs in communities fail to address the equity criteria by targeting people with disabilities among others. This is because community programs tend to prioritize effectiveness criteria to maximize the impact of the program as opposed to equity criteria, which is all-inclusive. The effectiveness criteria mostly address participation of more resourced, educated and socially networked individuals. This has a great impact on the accessibility of basic needs of production by people with disabilities which results in young farmers with disabilities being more food insecure than their counterparts without disability.

Capacity-building programs are premised on helping the poor, yet the same programs often marginalize and exclude the poorly resourced, especially people with disabilities, who tend to be illiterate and uneducated and have low social standing. Sometimes, the selection criteria for participation in community development programs specifically preclude some groups such as people with disabilities from participating or the mechanisms of selection may imply less likelihood of selection to participate in the program **(**Phillips, Waddington & White, 2014).

Reduced Regression Equation:

$Y_{\text{food security}}$ = 1.271 - 0.264 (disability status) + 0.187 (region) + 0.331 (money) + 0.277 (improved animals) + 0.330 (agricultural information) – 0.297 (adding value and processing) – 0.242 (market for the produce)

4.4.2 **Influence of Social Capital on Food Security of Young Farmers**

Culture and traditions of the community greatly influences the social life of young farmers with disabilities. The interpersonal dimension of social inclusion entails social interactions, relationships, and forming social networks, which occurs in private settings such as homes. However, access to community facilities and community participation give inclusion a public dimension. Thus, interaction with many friends without access to the community public assets renders a person socially excluded from a community. The regression analysis findings of social capital on security are summarized in Table 4.13.

Table 4.13

Food Security Regressed on Social Capital, Disability Status, and Region

Model	Unstandardized Coefficient		Standardized Coefficient		
	B	SE of B	Beta	*t*	*P*
Constant	1.198	0.117		10.265	<0.001
Disability status (1 = With)	-0.293	0.049	-0.202	-6.002	<0.001
Region of Uganda (0 =Eastern)	0.323	0.050	0.215	6.465	<0.001
People outside your family talk to you when they have a problem	0.060	0.024	0.091	2.526	0.012
Travel to places outside of your community	0.127	0.022	0.217	5.796	<0.001

Dependent variable: Number of meals eaten in a day

Table 4.13, shows that disability status has a negative influence (*beta* = -.0.202, *p*=<0.001) on food security. Young farmers with disabilities are more likely to experience food insecurity. Additionally, being from Northern region of Uganda has a significant positive influence on food security (*beta* = 0.215, $p < 0.001$) of young farmers. Further, people outside the family frequently talk to (*beta* = 0.091, *p*=0.012) or travelling to places outside their communities of residence (*beta* = 0.217, $p = 0.000$) has a positive significant influence on food security of young farmers. This implies that social capital development is most likely to increase food security of young farmers with disability.

Reduced Regression Equation:

$Y_{\text{food security}} = 1.198 – 0.202$ (disability status) + 0.215 (region) + 0.091 (people outside your family talk to you) + 0.217 (travel to places outside your community)

4.4.3 **Influence of Poverty Trap on Food Security of Young Farmers**

In most communities, people with disabilities are highly vulnerable to chronic poverty because of less participation in community capacity-building programs. Most communities perceive people with disabilities as not worthy of any development benefits, which renders people with

disabilities more alienated and marginalized from participation in capacity building programs. Regression analysis findings regarding the influence of the poverty trap on the food security of young farmers with and without disabilities is summarized in Table 4.14.

Table 4.14

Food Security regressed on Poverty Trap and Disability Status Variables

Model	Unstandardized Coefficient		Standardized Coefficient		
	B	SE of B	Beta	*t*	*p*
Constant	1.207	0.076		15.812	<0.001
Disability status (1 = With)	-0.209	0.045	-0.145	-4.620	<0.001
Level of your satisfaction with the amount of food you eat in meal	0.117	0.033	0.190	3.573	<0.001
Adequacy of food eaten in a meal	0.132	0.032	0.219	4.090	<0.001
Level of food availability in your household	0.086	0.025	0.154	3.398	<0.001
Model Summary					
df = 4					
p = .000					
R = .563					
R Square = .317					
R-Square (adj) = .313					

Dependent variable: Food security (number of meals eaten in a day)

Disability status has significant negative (*beta* = -0.145, *p*= <0.001) relationship with food security. Young farmers with disability are more likely to experience food insecurity. Additionally, adequacy of food eaten in a meal has a significant positive relationship (*beta* = 0.219, *p*= <0.001) with food security of young farmers. Thus, an increase in self-reported adequacy of food eaten in a meal tends to improve food security, which reduces the poverty trap. Further, the level of satisfaction has a significant relationship (*beta* = 0.190, *p* <0.001) with food security. This implies that level of satisfaction with the amount of food eaten in a meal increases food security of young farmers thereby lowering the poverty trap. In addition, level of food availability of food in a household has a significant positive (*beta* = 0.154, *p* = 0.001) relationship with food security of young farmers. This implies that level of food availability increases food security of young farmers with disability.

Reduced Regression Equation:

$Y_{\text{food security}} = 1.207 - 0.145$ (disability status) + 0.219 (adequacy of food eaten) + 0.154 (food availability in household) + 0.190 (level of satisfaction with food eaten)

4.4.4 **Influence of Stigma of Social Exclusion on Food Security**

Social inclusion defines the depth of feeling of belonging to the community that emanates friendships, quality of life, and in turn entails societal acceptance. Social exclusion characterized by isolation and neglect defines daily experiences of people with disabilities. The influence of social exclusion on food security is summarized in Table 4.15.

Table 4.15

Food Security Regressed on Indicators of Social Exclusion, Disability Status and Region

	Unstandardized Coefficient		Standardized Coefficient		
Model	B	SE of B	Beta	*t*	*p*
(Constant)	1.927	0.111		17.314	<0.001
Disability Status (1 = With)	-0.403	0.049	-0.279	-8.285	<0.001
Region of Uganda (0 = Eastern)	0.407	0.051	0.271	8.036	<0.001
Group membership (1 = Yes)	-0.134	0.049	-0.093	-2.758	0.006
Model Summary					
df = 3					
p = .000					
R = .378[a]					
R Square = .143					
R-Square (adj) = .140					

Dependent variable: Number of meals eaten in a day

Table 4.15, indicates that disability status has a significant negative relationship (*beta* = -0.279, p <0.001) with food security. Young farmers with disability are less likely to face food security. Disability status of young farmers tends to promote stigma of exclusion, which denies young farmers with disabilities participation in community programs that would improve their food security situation.

Additionally, in terms of social exclusion, Northern Uganda has significant positive (*beta* = 0.271, p <0.001) relationship with food security of young farmers. During the 1986 to 2004 civil war, people of Northern Uganda lived in camps. All the people regardless of their social status lived in the same socioeconomic situations and faced similar challenges such as loss of assets, loss of lives, and

displacement from their communities of residence. Facing similar challenges and living close to one another, created social cohesion between people with disabilities and without disabilities. Living together in camps created social cohesion that promoted inclusion of people with disabilities, resulting to improved food security situation for people with disabilities.

Further, Table 4.15 results indicates that group membership (*beta* = -0.093, *p* =0.006) negatively influences food security. This implies that young farmers with high social exclusion do not belong to any group and are thus food insecure.

Reduced Regression Equation:

$Y_{\text{food security}} = 1.927 - 0.279\ (\text{disability}) + 0.283\ (\text{Northern}) - 0.093\ (\text{group membership})$

4.5 **Determinants of Young Farmers' Participation in Capacity-building Programs Designed for the Public in Uganda**

Objective three sought to examine the determinants of participation in capacity building programs by young farmers with and without disabilities. The factors this study conceptualizes to influence participation broadly include contact with extension educators, use of accommodation facilities, disability status, and region. In addition, this study considered participation in capacity-building programs as shared influence and responsibility of participants in active involvement in program activities such as decision making and feeling of belonging to those programs and communities. The findings of young farmers' participation in capacity building programs are summarized in Table 4.16.

Table 4.16

Participation in community capacity building programs by Disability Status or Region

Participation in training activities in community		With Disability		Without Disability
	N	*Mean (SD)*	N	*Mean (SD)*
Level of attending training activities	170	4.15 (0.77)	95	3.83 (0.930)
I actively participated in training	131	3.53 (1.01)	87	3.89 (0.882)
I am involved in decision making	131	3.73 (0.88)	87	3.82 (0.971)
I am part of the community	131	4.18 (1.040)	87	4.18 (0.995)
My production capacity improved by training organizations	168	4.21 (0.720)	103	3.67 (9.330)
Level of benefiting by being a member of community groups	197	3.50 (1.19)	189	3.37 (1.233)
Participating in training activities in community	N	*Eastern Uganda*	N	*Northern Uganda*
Level of attending training activities	57	3.82 (0.690)	208	4.10 (.874)
I actively participated in training	63	3.35 (0.950)	155	3.81 (.954)
I am involved in decision making	63	3.48 (0.840)	155	3.88 (.918)
I am part of the community	63	4.03 (1.050)	155	4.25 (1.00)
My production capacity improved by training organizations	49	3.86 (0.470)	130	4.20 (0.800)
Level of benefiting by being a member of groups	53	3.64 (0.857)	107	3.86 (1.224)

Rating at a five-point Likert scale: 5-very high, 4-high, 3-neither high nor low, 2-low, and 1-very low.

Young farmers with disabilities have a high level (mean = 4.15) while young farmers without disabilities have neither high nor low (mean = 3.83) level of attending training activities delivered by capacity building programs in their communities. However, both young farmers with and without disabilities experience medium high level (mean = 3.53 and mean = 3.89 respectively) of actively participating in training activities in their communities. In addition, capacity building programs have a high (mean = 4.21) potential to improve production capacity of young farmers with disabilities, and consider themselves being part of their local communities (mean = 4.18).

On the other hand, young farmers without disabilities experience lower level (mean = 3.73) of involvement in decision-making, and capacity building program activities are perceived to have high potential (mean = 4.21) for improving their production capacities. As much as young farmers with and without disabilities subscribe as members to community groups, young farmers with and without disabilities experience low level (mean = 3.50 and mean = 3.37 respectively) of benefit from community groups. Both young farmers with and without disabilities experience a high level (mean = 4.18 and mean = 4.18 respectively) of belonging to their local communities.

Furthermore, the findings in table 4-16 corroborate World Health Organization (1991) information that participation reflects three dimensions: as contribution, as organization, and as empowerment. The contribution dimension refers to participation of people through the giving labour, cash, and land among others. The organizational dimension involves creation of appropriate structures to facilitate participation of targeted people. The empowerment dimension entails integrating involving marginalized and underserved groups and communities to develop power and influence to make decisions and have control over programs meant to benefit them. It is, thus, important to note that participation in capacity building should target the vulnerable, underserved and excluded people such as those with disabilities to build their capacity to make decisions and have control over all programs.

Asked to Participate in Community Training Programs in Last Five Years. Binary logistic regression was used to simultaneously examine the collective influence of disability status, region and mode of contact on whether the young farmer was or was not asked to participate in community capacity building programs. Thus, the investigator examined the determinants of participation of young farmers in capacity building programs. Table 4.17 summarizes the descriptive statistics for each of the variables included in the analysis for the first logistic regression. Approximately 31% (N = 88/128) indicated they had been contacted via a face-to-face conversation and 35% (N=45/128) indicated they had been contacted in a group setting.

Table 4.17

Summary Descriptive Statistics for Variables used in Logistic Regression Analysis

Variable	Dummy Coding	frequency	Percentage
Disability	0 = No Without Disability	386	68.7
	1 = Yes With Disability	176	31.3
		562	100.0
Region	0 = Eastern	183	32.6
	1 = Northern	379	67.4
		562	100.0
Contact by Face-to-Face	0 = No	88	68.8
	1 = Yes	40	31.2
		128	100.0
Contact in Group Setting	0 = No	83	64.8
	1 = Yes	45	35.2
		128	100.0
Asked to Participate in Community Programs	O = Yes	316	56.2
	1 = No	246	43.8

The logistic regression results (Table 4.17) indicated there was an acceptable model fit (discrimination among the two groups of the dependent variable) on the basis of the four independent variables (X^2 = 48.00, p - .<.001). Of the four predictor variables two were found to be statistically significant (disability status p = 0.001; face-to-face contact p = 0.013). This indicate odd that those with a disability were 94.4% less likely compared to those without disability (p<0.001) to participate in community capacity building programs. An odd of .046 indicates that the outcome labelled a 1 (not asked to participate in community programs) is 0.046 times as likely with a one unit increase in the predictor variable when controlling for the influence of the other three predictor variables. Being contacted via face-to-face conversation had an Exp(B) value of 0.178.

The four variables collectively were somewhat acceptable regarding the discrimination between the two groups of the dependent variable. The variables correctly classified 89% of those individuals that have been contacted in the last 5 years to attend any community training programs; whereas, the model correctly classified 71.4% who were not contacted to attend community training programs.

It must be emphasized that this analysis is conducted using listwise deletion of missing cases, and thus only 128 young farmers were used in the logistic regression analysis in Table 4.18.

Table 4.18

Participation Regressed on Disability, Region, and Selected Modes of Contact

Model	B	SE B	Wald	Exp(B)	*p*
Constant	-2.369	1.450	2.667	0.470	0.102
Disability status (0 = Without 1 = With)	-3.085	0.912	11.433	0.046	0.001
Region (0 = Eastern 1 = Northern)	1.294	0.688	3.539	3.646	0.060
I was contacted by face to face conversation (0 =No 1=Yes)	-1.726	0.694	6.195	0.178	0.013
I was contacted in a group meeting (0 = No 1 =Yes)	0.550	0.630	0.762	1.733	0.383
Model Summary N - 128 df = 4 Chi Square = 48.004 p = <.001 -2 Log likelihood = 86.478 Cox & Snell R Square = .313 Nagelkerke R Square = .481					

Dependent variable: In the last five years have you been asked to participate in community training programs is coded 0 = Yes, asked to participate and 1 = No, not asked to participate.

Table 4.18 indicates having a disability reduced the odds of a young farmer's participation in capacity-building programs by 95.4% (p<0.001). This implies that young farmers with disabilities are less likely to participate in capacity building programs meant to benefit all community members. In addition, Northern Uganda increasesd the odds of a young farmer to participate in capacity-building programs in their communities by a factor of 3.646 compared to young farmers in Eastern Uganda (p=0.060). Thus, young farmers in Northern Uganda experience more opportunities of participating in capacity-building programs compared to their counterparts in Eastern Uganda. Furthermore, face-to-face contact decreased odds of young farmer participation in capacity-building programs in their communities by 82.2% (p = 0.013), while contact in a group setting increased the odds by 73.3% (p =

0.383). According to focus group discussions in Northern Uganda, young farmers have formed groups to access capacity-building services and increase their ability to advocate for service delivery.

Log (odds of participation) = -2.369 – 3.085 (disability) + 1.294 (Northern Uganda) - 1.727 (face-to-face) + 0.550 (group meeting)

Further, the investigator analysed the determinants of effective participation in capacity-building programs by young farmers with and without disability, findings summarized in Table 4.19.

Table 4.19

Active Participation Regressed on Disability Accommodations and Gender

Model	B	SE	Wald	Exp(B)	*p*
Constant	-4.210	0.767	30.104	0.015	<0.001
Sign language interpretation (0 = No)	0.387	0.093	17.403	1.472	<0.001
Supportive training staff (0 = No)	0.462	0.142	10.601	1.587	<0.001
Gender (0 = Female)	1.290	0.362	12.691	3.633	<0.001

Dependent variable: In the last five years, have you worked with any extension educator on issues related to your agricultural enterprises

Table 4.19, indicates that sign language interpretation increased the odds of young farmers with disabilities to work with extension educators on issues related to their agricultural enterprises by 47% (p <0.001). This implies that young farmers with disabilities are more likely to participate in capacity-building programs when the training implementers provide sign language interpretation. Thus, application of sign language interpretation in capacity-building programs promotes inclusion, which enhances young farmers' feeling of belonging to and participation in capacity-building programs. In addition, disability-supportive training staff increased the odds of participation of young farmers with disabilities in capacity-building programs by 58% (p <0.001).

Furthermore, Table 4.19 shows that being female increased the odds of a young farmer to participate to participate in capacity-building programs by a factor of 3.633 compared to males. In Uganda, most development agencies target women participation in capacity-building programs due to their pivotal role in household nutrition and performing over 80% of agricultural activities.

Reduced Regression Equation:

Log (odds of participation) = -4.210 + 0.387 (sign language interpretation) + 0.462 (supportive training staff) + 1.290 (female)

4.6 **Determinants of Well-being in Young Farmers with and without Disabilities in Uganda**

Objective four examined variables associated with well-being of young farmers with and without disabilities in Uganda. The study broadly disability status, region, participation, food security, and social capital as factors that influence the well-being of young farmers. The findings are summarized in Table 4.20.

Table 4.20

Well-being Regressed on Disability Status, and Selected Variables for Participation and Demographics

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	SE of B	Beta	*t*	*p*
Constant	1.759	0.291		6.043	<0.001
Disability Status (1 = With Disability)	0.358	0.090	0.180	3.992	<0.001
Level of satisfaction with the amount of food eaten in a meal	0.172	0.041	0.207	4.166	<0.001
How often do you interact with people outside your family?	0.073	0.036	0.081	2.000	0.046
I actively participated in training	-0.112	0.047	-0.156	-2.365	0.018
I felt I am part of the community	0.130	0.053	0.154	2.441	0.015
Highest level of education	0.179	0.040	0.185	4.444	<0.001
Gender (2 = Female)	-0.254	0.080	-0.125	-3.169	0.002

Dependent variable: Level of satisfaction with your current life

Table 4.20, indicates that disability status has a significant positive (*beta* = 0.180, *p*= <0.001) relationship with well-being. Young farmers with disability are more likely to experience good well-being. However, much as disability is statistically significant, the effect of disability in improving well-being of young farmers is somewhat small. Additionally, the data suggest that level of satisfaction with food eaten in a meal has a statistically significant positive relationship (*beta* = 0.207, *p* <0.001) with well-being of young farmers. Therefore, the level of satisfaction with food eaten in a meal tends to vary overtime given poor socioeconomic situation of young farmers with disability.

Besides, satisfaction with food eaten, many other factors have a bearing on the well-being of young farmers. Further, the frequency in which young farmers interact with people outside their families has a small, but statistically significant, relationship (*beta* = 0.081, $p = 0.046$) with well-being. Close interaction with people outside their families tend to improve well-being because of social satisfaction that accrues from social capital developed in the community. In addition, the data indicate that active participation in training programs has a significant negative (*beta* = -0.156, $p = 0.018$) relationship with the well-being of young farmers. This implies that active participation in training programs tends to lower well-being of young farmers. Moreover, feeling of belonging to the community (*beta* = 0.154, $p = 0.015$), level of education (*beta* = 0.185, $p < 0.001$) have significant positive relationship with well-being. Females have a significant negative (*beta* = -0.125, $p = 0.002$) relationship with well-being.

Reduced Regression Equation:

$$Y_{\text{well-being}} = 1.759 + 0.180 \text{ (disability status)} + 0.207 \text{ (satisfaction with amount of food eaten)} + 0.081 \text{ (interaction with people outside the family)} - 0.156 \text{ (active participation in training)} + 0.154 \text{ (feeling of belonging)} + 0.185 \text{ (level of education)} - 0.125 \text{ (female)}$$

The feeling of belonging improves well-being because of psychological satisfaction and material benefits that accrue to a person owing to belonging to the community social network and social capital. The information sharing, social protection and safety nets, for example, food alms and other benefits that community members give young farmers with disabilities improves their food security and social interaction, which tends to improve the well-being of young farmers.

Active participation in capacity building programs tends to lower well-being, especially if returns from young farmers' participation in such programs fail to measure up to energies and resources invested in. In such a situation, participation in capacity-building programs does is less likely to improve agricultural production and productivity. Moreover, active participation in non-rewarding capacity building programs tends to deplete young farmers' scarce production resources, leaving them worse off than before involvement in such programs. Such a situation tends to cause frustration and attrition in participation in community programs, culminating to low well-being.

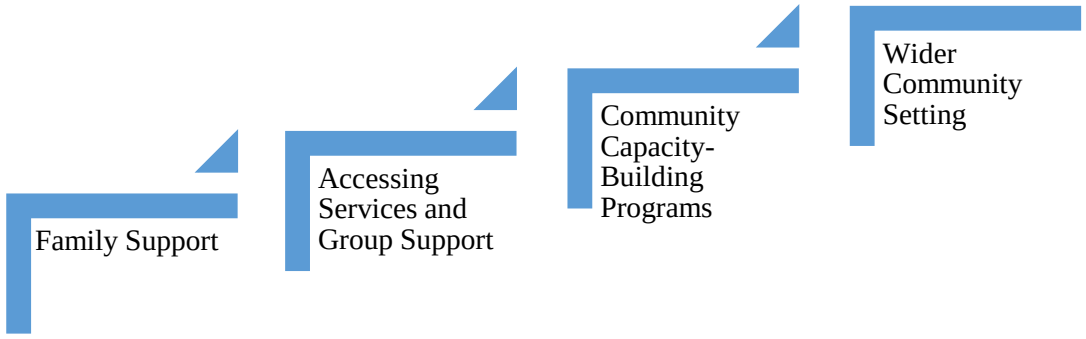
While higher education improves decision-making and participation in capacity building programs and access to paying jobs and improved income. In addition, the level of education has effect on participation and building beneficial social networks, which are likely to improve a young farmer's well-being. In contrast, gender reduces the well-being of young farmers. Gender stereotypes against women still predominate communities in Uganda. Men tend to dominate women in access, ownership and control of resources for production agriculture.

4.7 **Strategies used by Young Farmers with Disabilities to cope with Disability, Social, and Psychological Exclusionary Practices in their Communities**

It is important to note that young farmers with disabilities find difficulty in navigating through different social structures in their communities to participate in capacity-building programs. While young farmers without disabilities can easily access the wider community and its social networks, young farmers with disabilities tend to encounter many forms of physical and social barriers when attempting to engage in the community. In order to access capacity-building programs in their communities, young farmers with disabilities have to navigate through four levels of social structures.

Figure 4.1. A family of Farmers with Visual Disability in Amuru District, Uganda

The four levels of social structures are: 1) family support, 2) accessing services and group support for people with disabilities, 3) community capacity-building programs, and 4) the wider community. Figure 4.1 shows the social structures.



Agole (2018)

Figure 4.2. Social Structures Young Farmers with Disabilities Navigate

Within each of the social structures that young farmers need to navigate, there are unique challenges that those with disabilities face. Here are some examples, as articulated by individuals in the research sample.

[Marginalization at the family level:]

> *When somebody gives birth to a disabled child, that child is not treated the same as other children and they are segregated and usually marginalized. This does not stop there but persists into later states of life.* [A woman from Gulu district with a walking disability.]
>
> *My family discriminates me, we are four children in the family, but when they are counting children, they say we have three children and one disabled person.* [A man from Kumi district with a visual disability and a walking disability.]

Figure 4.3. A boy with Visual Disability Selling Eggs in Kumi District, Uganda

[Accessing group support for people with disabilities:]

> *When programs come for people with disability, our leaders come and register us and during implementation of the programs, other people benefit on our behalf. People with disabilities are used only for accountability purposes.* [A man from Kumi district with a visual disability.]

[Difficulty joining community capacity-building programs:]

> *In my area if you do not know anybody in any program, you cannot benefit anything. Sometimes you have to bribe your way into these programs like the youth livelihood program. Another alternative is to have a friend or relative in the program otherwise you are left out.* [A man from Kumi district with a visual disability.]

[Marginalization by the community:]

> *This community discriminates us a lot. People with disability are excluded from leadership positions in homes, community and even schools. We have endured all sorts of insults from the community members! During election campaigns, you often hear statements such as who can be led by a disabled person! Others consider it a taboo to associate with people with disability.* [Select comments made during a focus group with 15 individuals from Gulu district who have disabilities.]

Figure 4.4. Focus Group Discussion with People with Disabilities in Gulu District, Uganda

Despite the discrimination and social exclusion from most community programs, many people with disabilities exhibited a strong determination to make progress in achieving their goals for improved livelihood and well-being. Despite their struggles in finding acceptance and support in their families and communities and, in many cases, being left to fend for themselves, many of the individuals in this study found ways to adapt and function fully in their communities. Here are some of the cognitive and social engagement strategies that some individuals with disabilities have used to survive and make inroads into their communities.

First, awareness of the nature of one's disability is a step towards self-acceptance and developing a positive self-image, which is crucial for full engagement in community life. Unfortunately, many people with disabilities have excluded themselves from community activities due to negative perceptions about the nature of their disabilities. When a person is aware and accepting of his/her disability, it ceases to be a hindrance to interaction with other people and engagement in community activity. As an example of an individual who has an informed awareness of his own disability, consider the case of Denis, a farmer in Eastern Uganda. He said I know that I have a hearing disability but I have the potential to learn and adopt improved agricultural practices for improved production and productivity.

Second, it is important for people with disabilities to accept that although they may have a disability; this does not preempt them from achieving a worthwhile livelihood. Therefore, positive self-image is a fundamental strategy that allows people with disabilities to interact freely with people

without disabilities outside their families. Interaction with members of the community allows people with disabilities build social capital, and this opens their access to information and opportunities within the community and elsewhere. In a focus group discussion with people with disabilities in Eastern Uganda, Thomas, an individual who is unable to get around without the aid of a wheel chair or walker remarked that he wants to develop his family to a level that is self-sustainable through building relationships with other people. Scovia who has a visual disability said, I no longer want anyone to help me but work to help myself by doing things on my own. That is an indication that some people with disabilities are able to effectively establish a positive self-image as a coping strategy for social and psychological adaptation to their communities.

Third, it is important to seek to break the imaginary and psychological barriers created in communities against people with disabilities. This involves actively participating in community programs and activities, perhaps even with a willingness to take on leadership roles. This approach involves ignoring existing and potential discriminatory and social exclusionary practices by venturing to participate in community development programs. Given the scarcity of resources, including funds, most communities tend to be constrained in the provision of program services that cater to underserved groups of people. This means people with disabilities often need to be assertive to be recognized and accepted in various civic organizations. It is through competitive behavior that people with disabilities, as remarked by Simon who has a walking disability, can find a platform for raising awareness and advocating on behalf of those who are afflicted with disabilities. Individuals like Simon remain extremely determined to not only attend community meetings, but to also advocate on behalf of people with disabilities. The main message they deliver is that it is important to view people in terms of their potential and abilities rather than any disability they might have. It is through his sheer determination, and effectiveness in influencing community members, that Simon became a member of a local savings and credit cooperative society (SACCOS) and participated in local politics to represent his community Local Council Three, a local government structure at the level of a sub county. SACCOS refers to a formal/nonformal association of community members with an agreed

upon weekly amount of money that is loaned to its members at low interest rates. Simon added that it is through his social prominence that he married a wife without a disability in his community.

Fourth, people with similar types of disabilities tend to form groups; the most common are groups of people with hearing and visual disabilities. Since most development agencies dispense capacity-building resources to groups, forming a group with members of the same nature of disability and with similar challenges tends to build a sense of social cohesion. It is through participation in such group systems that people with similar types of disability create a strong bargaining and negotiating force for service provision and increase their prominence. Moreover, a group of people with similar disabilities reflects good organization ability and attracts external support from funding agencies that prefer funding particular disabilities. The groups are formed as a strategy to attract funding or in reaction to a funding agency targeting people with a particular disability. My interaction with Simon, who heads a highly productive and model group of bee farmers with visual disabilities in Northern Uganda, was quite helpful. Simon's group is an example of a very well organized, high performance group. This is because people with similar disabilities in a community tend to have the same needs, as opposed to the assumption made by most development programs in communities that people with disabilities have similar needs.

Fifth, participation in political civic actions (such as offering support to political candidates, displaying campaign posters, and canvasing in support of political candidates) can attract financial and other forms of resource support. Aaron, an egg vender with a visual disability emphatically noted that presidential and local council elections attract substantial financial rewards and material rewards such as political parties' paraphernalia. Political election campaigns in Uganda are highly commercialized, with bribery of voters with money. However, the question is whether it is sustainable to earn money and other material resources through political civic engagement.

Sixth, opportunities for making a living can be found by engaging in economic activities that are mostly shunned by people without disabilities. Such manual activities include vending commodities for other business personnel, washing dishes and cleaning restaurants, and collecting trash among others. Unfortunately, their employers sometimes exploit people with disabilities. As

commented by Aaron, who worked as a dish washer and cleaner in a local restaurant in Eastern Uganda, his employer would give him leftover soup as payment for his services under the pretext that he only needed food, not money.

CHAPTER 5

SUMMARIES, CONCLUSIONS, AND RECOMMENDATIONS

5.1 **Introduction**

This chapter presents summaries of study findings and conclusions, offers recommendations on participation in capacity-building programs and discusses the implications of these programs for the well-being of young farmers with and without disabilities in Uganda. The investigator categorized these summaries into those indirectly and directly relevant to this research study. Then, the researcher presents a summary of relevant findings and conclusions in accordance with the study objectives; however, the recommendations address the entire study. Finally, areas of future research on disability are described.

5.2 **Summaries of Findings**

The researcher grouped the summaries of findings into two groups: those that were indirectly relevant and directly relevant to this study.

5.2.1 **Summary of Findings Indirectly Relevant to the Study**

Most Ugandan young farmers with disabilities are male (65.5%), 20 to 29 years old, married (55.4%), and have attained a primary school education (59.8%). Each household in this study had at least a person with a disability (71.1%), most disabilities were innate (69.6%), and many of the disabled had experienced mostly moderate (52.1%) to severe (34.2%) limitations to participation in daily life activities. Regardless of type and origin, most disabilities were due to accidents (48.7%), disease (18.5), and/or gunshots/landmines/civil wars (17.6%), and other causes (15.1%) including fire/acid burns/snake bites/witchcraft. Most acquired disabilities were caused by accidents (12.1%), other causes (snake bites/fire/acid burns/witchcraft) (8.2%), gunshots /landmines /civil wars (5.4%), and disease (4.9%). Most disabilities involved a loss of limbs (20.1%), or were due to burns (9.3%), loss of hearing (5.7%), or loss of vision (4.4%) among those aged 20 to 29 years. There was a statistically significant (Chi square = 25.518; p=0.043) association between type of disabilities among young farmers across various age categories but with small effect size (Cramer's V = 0.148). There

was no significant association between type of disabilities and various age categories of young farmers in Eastern Uganda (Chi square = 14.524, $p = 0.486$; Cramer's V = 0.193) and in Northern Uganda (Chi square =16.999, $p = 0.319$, Cramer's V = 0.148). There was a statistically significant (Chi square =16.553, p=0.056; Cramer's V = 0.220) association between cause of disability among young farmers and age of acquisition of disability in Uganda. However, there was no significant association between cause of disability and age of acquisition of disability in Eastern Uganda (Chi square = 0.278, $p = 0.870$; Cramer's V = 0.074) and Northern Uganda (Chi square =6.491, $p = 0.690$; Cramer's V = 0.185).

5.2.2 **Summary of Findings Directly Relevant to This Study**

More young farmers with disabilities (52.3%) earned income than did young farmers without disabilities (47.7%) in Uganda. However, a greater proportion of young farmers with disabilities in Northern Uganda (35.7%) earned income compared to those with disabilities in Eastern Uganda (16.4%). In contrast, a very slightly greater proportion of young farmers without disabilities (26.3%) in Eastern Uganda earned some income compared to their counterparts in Northern Uganda (25.2%).

Most young farmers with disabilities (48.7%) and without disabilities (43.9%) were self-employed. However, a greater proportion of self-employed young farmers with disabilities lived in Northern Uganda (33.3%) as compared with young farmers with disabilities in Eastern Uganda (15.3%) and those without disabilities in either Northern (19.7%) or Eastern (24.2%) Uganda. Overall, there was a statistically significant (Chi square=15.838, p=0.003) association among employment sectors for young farmers with and without disabilities, with a small effect size (Cramer's V=0.143) in Uganda. There was a statistically significant (Chi-square value = 27.702, p<0.00) association among employment sectors for young farmers with and without disabilities, with moderate effect size (Cramer's V=0.237) in Northern Uganda. In contrast, there was no association (Chi square=8.077, p=0.089), with small to moderate effect size (Cramer's V=0.170), among employment sectors for young farmers with and without disabilities in Eastern Uganda.

Many young farmers with disabilities (48.7%) and without disabilities (43.9%) were self-employed (55.6%) in subsistence agriculture, with young farmers with disabilities (28.6%) and

without disabilities (29.5%) in Uganda. More young farmers with disabilities (17.6%) in Northern Uganda than in (11.0%) in Eastern Uganda were engaged in subsistence agriculture. However, overall, most young farmers without disabilities (18.5%) in Eastern Uganda were involved in subsistence agriculture compared to young farmers with disabilities (11.0%) in Eastern Uganda (11.0%), and without disabilities in Northern Uganda (11.0%).

With regard to basic needs, disability had a negative influence (*beta* = -0.264, p <0.000) on food security. The young farmers in Northern Uganda had a statistically significant positive (*beta* = 0.187, p = 0.004) relationship with food security. In addition, production needs, notably money (*beta* = 0.331, p = 0.001), improved animal breeds (*beta* = 0.277, p = 0.003) and access to agricultural information (*beta* = 0.330, p = 0.008) positively influenced the food security status of young farmers. However, greater access to markets for agricultural produce (*beta* = -0.242, p = 0.051) and adding value and processing produce (*beta* = -0.297, p= 0.022) contributed negatively to the food security of young farmers.

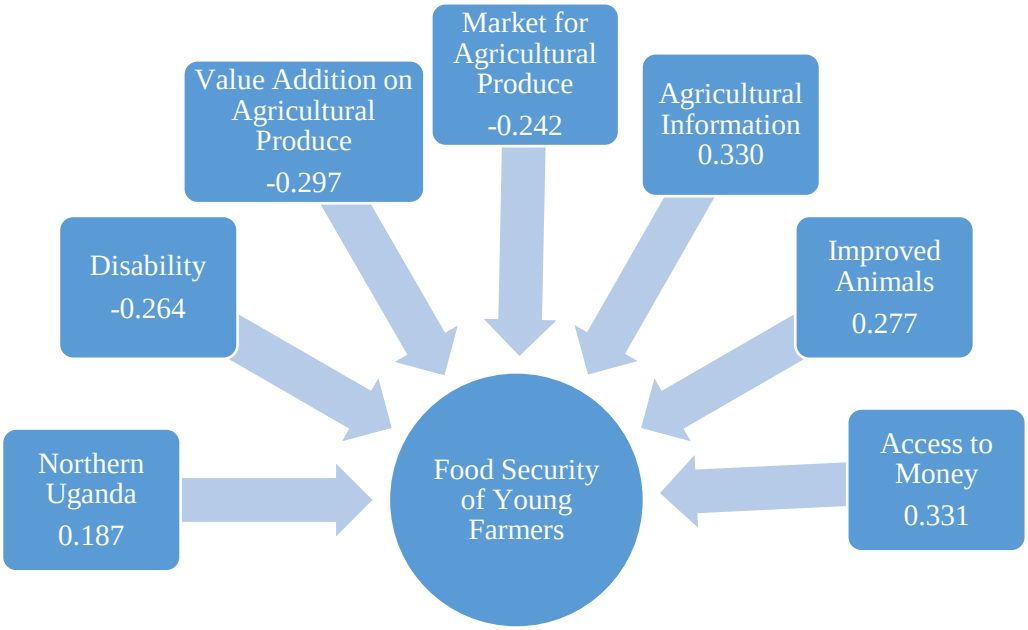


Figure 5.1. Influence of Production Needs, Disability Status, and Region on Food Security

In terms of social capital, disability had a statistically significant negative (*beta* = -.0.202, *p*=<0.001) association with food security. The northern region of Uganda had a significant positive influence on the food security (*beta* = 0.215, *p* < 0.001) of young farmers. Further, people outside the family (*beta* = 0.091, *p*=0.012) or a young farmer travelling outside communities of residence (*beta* = 0.217, *p* < 0.001) had a statistically significant positive significant influence on food security.

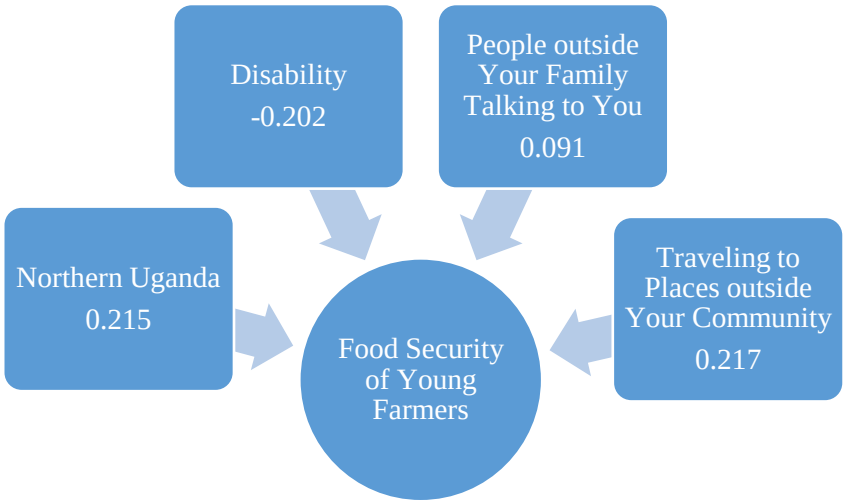


Figure 5.2. Influence of Social Capital, Disability Status, and Region on Food Security

For poverty traps, disability had a statistically significant negative (*beta* = -0.145, *p*= <0.001) relationship with food security. Additionally, adequacy of food eaten in a meal (*beta* = 0.219, *p*= <0.001) and level of satisfaction had a significant relationship (*beta* = 0.190, *p* <0.001), while level of food availability in a household had a statistically significant positive (*beta* =0.154, *p*= 0.001) relationship with food security.

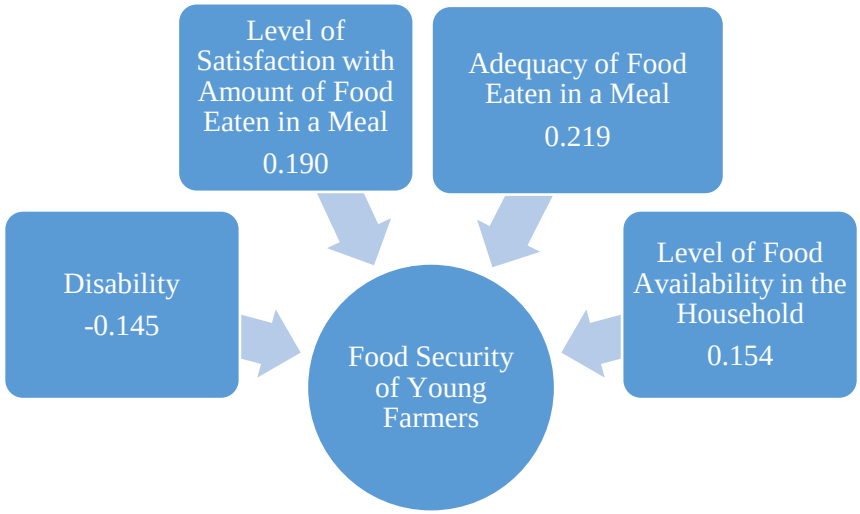


Figure 5.3. Influence of Poverty Traps and Disability Status on Food Security

In terms of social exclusion, disability (*beta* = -0.279, *p* <0.001) and group membership (*beta* = -0.093, *p* =0.006) had a statistically significant negative relationship with food security. However, Northern Uganda had a statistically significant positive (*beta* = 0.271, *p* <0.001) relationship with the food security of young farmers.

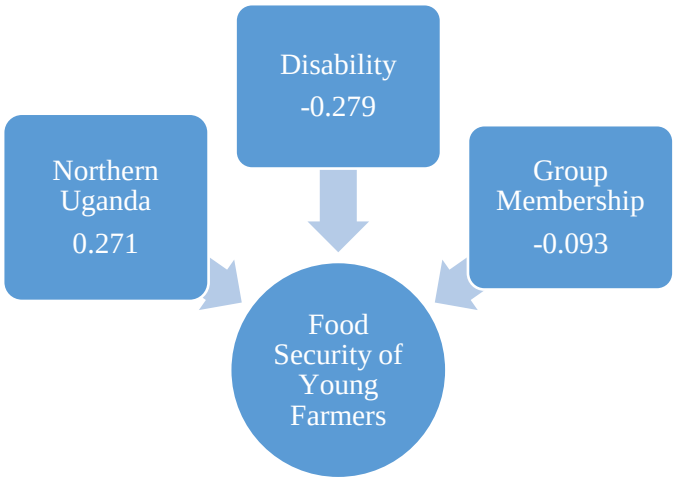


Figure 5.4. Influence of Social Exclusion, Disability Status, and Region on Food Security

The presence of a disability reduced the odds of a young farmer being asked to participate in community capacity-building programs by 95.4% (*p*<0.001). Living in Northern Uganda increased the odds of a young farmer participating in capacity-building programs in their communities by a factor of 3.646 compared to young farmers in Eastern Uganda (*p*=0.060). Furthermore, face-to-face contact decreased the odds of young farmers being asked to participate in capacity-building programs in their communities by 82.2% (*p*=0.013), while contact in a group setting increased the odds by 73.3% (*p* = 0.383). Sign language interpretation increased the odds of young farmers with disabilities working with extension educators on issues related to their agricultural enterprises by 47% (*p* <0.001). In addition, the presence of disability-supportive training staff increased the odds of young farmers with disabilities working with extension educators on issues related to their agricultural enterprises by 58% (*p* <0.001). Being female increased the odds of young farmers participating in capacity-building programs by a factor of 3.633 compared to males.

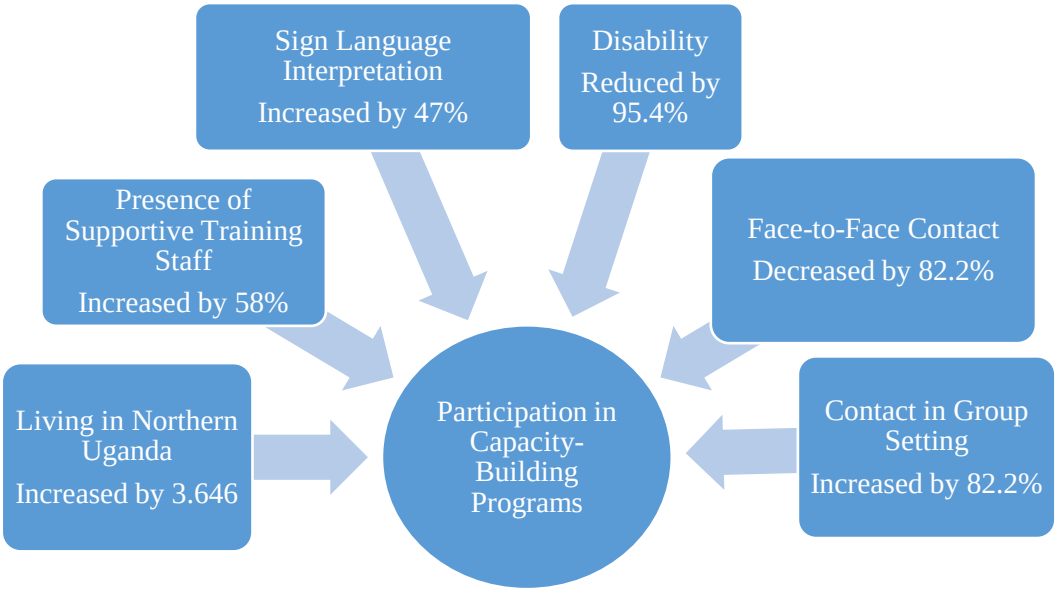


Figure 5.5. Determinants of Participation in Capacity-Building Programs

Disability (*beta* = 0.180, *p*= <0.001), level of satisfaction with food eaten at a meal (*beta* = 0.207, *p* <0.001), feeling of belonging to the community (*beta* = 0.154, *p* = 0.015), and highest level of education completed (*beta* = 0.185, *p* <0.001) all had statistically significant positive relationships with well-being. However, active participation in training programs (*beta* = -0.156, *p* = 0.018) and being female (*beta* = -0.125, *p* =0.002) had statistically significant negative relationships with the well-being of young farmers.

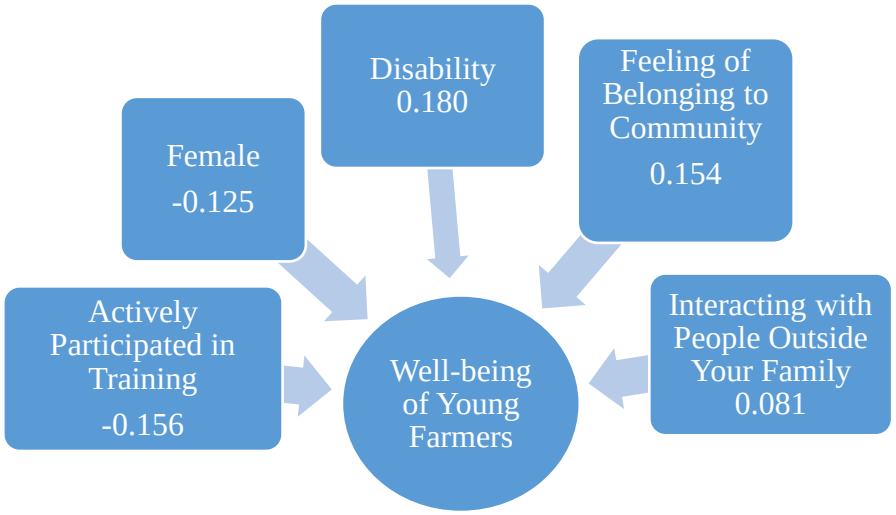


Figure 5.6. Determinants of Well-being

In order to function fully in their communities, young farmers with disabilities had to navigate through: 1) family, 2) groups of young farmers with similar disabilities, 3) groups of people with disabilities, and 4) community. Thus, young farmers with disabilities employed psychological and social strategies that included awareness of self-disability, self-created positive self-image, building social network beyond disability-related, competitive behavior, and forming disability-groups.

5.3 **Conclusions**

The investigator categorized the study conclusions into those indirectly relevant and directly relevant to participation in capacity-building programs by young farmers with and without disabilities in Uganda.

5.3.1 **Conclusions on Findings Indirectly Relevant to the Study**

The greater percentage of males compared to females with disabilities can be explained by a common practice in Uganda: greater male mobility from households to the wider community to participate in socioeconomic activities that can improve household welfare. The low level of formal education among young farmers with disabilities is largely due to their social exclusion in communities and from formal education opportunities that would empower them. The social exclusion of young farmers with disabilities is due in part to the very low value attached by families and communities to a person with a disability—in other words; these individuals may be viewed as a burden with less/low value to family and community development. Faced with this challenge, young farmers with disabilities tend to marry at an early age and most marry others with similar disabilities to foster close interactions among people with the same types of disability due to social exclusion from the wider community.

People with disabilities often turn to religion and spirituality as forms of therapy for their social and health challenges, as advocated by the spiritual model of disability (Treloar, 2002; Underwood, 1999). Depending on the nature and severity of the disability, community members tend to attribute its manifestation to family and especially the parents of the person with a disability. It also

is perceived as a curse or punishment by the spirit world, for wrongdoing by the family, parents, or fore-parents. However, ultimately, the person with a disability seems to take a larger part of that blame. Thus, the Pentecostal Faith Christian denomination strongly promotes the spiritual model of disability, regarding disability as a problem that requires spiritual intervention.

Limb-related (legs and hands) disability tends to be more prevalent because Ugandans are more susceptible to injuries and polio infection. Road accidents are common, especially due to the poor state of roads and number of motorcycle (boda-boda) commuters and passenger service vehicles that serve as the primary means of transport in Uganda. In addition, young farmers lack protective wear for production agriculture work, exposing themselves to the risk of injuries from farm implements, sharp objects, agrochemicals, and snakebites.

According to reports from the Uganda Police Force (2010 through 2013), and World Health Organization (2013), as well as those offered in Gukande et al. (2009), accidents are the leading cause of death and disability in Uganda. Many young farmers with disabilities experience moderate to severe conditions, an indication of a need for broad interventions that enable them to improve their participation in capacity building and well-being programs.

Multiple body deformations are primarily due to road injuries, acid and fire burns, or deliberate mutilation by assailants. Another reason for the high percentage of multiple body deformations in Northern and Eastern Uganda is the civil wars between 1986 and 2004, where an undocumented number of people suffered physical mutilations. Exacerbating this, limited access to and overall poor healthcare services, especially maternal and child health care services, expose people to preventable disabilities.

5.3.2 **Conclusions on Findings Directly Relevant to the Study**

Conclusions directly relevant to this research study are offered below.

5.3.3 **Socioeconomic Situation of Young Farmers**

The fact that most young farmers with and without disabilities were self-employed in subsistence agriculture implies that production agriculture is the main livelihood strategy and source

of employment for young farmers in Uganda. However, many young farmers in Northern and Eastern Uganda were less engaged in vocational trades due to a lack of skills and competencies. In addition, less attention is given to vocational trades by organizations that promote formal and/or non-formal education in Uganda. Moreover, formal education in Northern and Eastern Uganda suffered during the protracted civil wars in 1986 and 2004; it is still in a state of recovery. Lower engagement by young farmers with and without disabilities in vocational livelihood strategies points either to challenges in finding employment, and /or a high rate of collapse in self-initiated livelihood strategies due to inadequate managerial knowledge and skills, capital, and markets.

The disparity in earned income between young farmers with and without disabilities is the result of direct interventions for young farmers with disabilities, especially in Northern Uganda. For example, supportive legislation at both national and local government levels and programs target people with disabilities in Uganda, especially by the National Union of Persons with Disabled Persons in Uganda (NUDIPU), Action on Disability and Development (ADD), and World Vision International, among others. Further, the disparity in incomes is attributable to the multiple coping strategies employed by people with disabilities, including handouts from charity organizations. At the individual level, the cognitive acceptance of the disability and dealing with emotions, personal values, and greater understanding of the disability condition influenced young farmers with disabilities to forge a sense of control, enabling them to cope with routine activities, and accumulate skills and experience. Coping strategies enable young farmers with disabilities to focus on the crucial development of personal goals and on gaining the ability to easily adapt to and cope with new challenges.

Moreover, regional income disparities between Eastern and Northern Uganda are attributable to many development interventions implemented in Northern Uganda. In addition, compared to Eastern Uganda, the civil war in Northern Uganda lasted over two decades and was more devastating. In fact, it attracted so much international publicity that non-governmental organizations provided post-war capacity-building programs. However, most of these non-governmental organizations have

subsequently withdrawn support from communities in Northern Uganda, bringing into question the sustainability of development programs and activities.

Social exclusion from most forms of paid private and public employment limits young farmers with disabilities from contributing to community productive activities and to transitioning from impoverished situations. This confines young farmers with disabilities to self-employment, especially in traditional subsistence agriculture. In addition, low levels of formal education limit young farmers with disabilities from participating in alternate off-farm employment to supplement income from production agriculture, thus contributing to a higher poverty level among young farmers in Uganda.

5.3.4. **Factors Influencing the Food Security Status of Young Farmers**

Disability is the most curtailing factor in young farmers' food insecurity because many capacity-building programs are likely to exclude and discriminate against participation young farmers with disabilities. This group has a lower chance of interacting with people outside their families and communities, and therefore less opportunity to build social capital compared to young farmers without disabilities. In addition, many young farmers with disabilities lack assistive devices such as wheelchairs, white canes, and hearing devices, among other items, making it difficult to participate in capacity building programs in their communities. Therefore, a combination of disability and lack of assistive devices keeps young farmers with disabilities in chronic poverty traps and causes food insecurity to transcend generations.

As noted earlier, the security situation in Northern Uganda is likely to be unsustainable because most humanitarian non-governmental organizations implementing capacity-building programs are withdrawing their services from communities. This is worrisome because the current capacity of young farmers with and without disabilities makes it unlikely that they can sustain the capacity-building programs implemented in their communities. The protracted time people in Northern Uganda spent in internally displaced people's camps reduced socio-cultural barriers, thus creating a feeling of belonging and cohesion between young farmers with and without disabilities.

Improved social capital development also enhanced the food security status of both groups of young farmers.

Moreover, young farmers in Eastern Uganda experience food insecurity because community leaders exclude them from participation in capacity-building programs, misappropriate public capacity-building resources, and base access decisions on social ties and relatives. Thus, capacity-building programs in communities fail to address equity criteria put into place to target young farmers. In addition, compared to Northern Uganda, Eastern Uganda lacks robust disability support structures needed to facilitate participation by young farmers in capacity-building programs.

Access to market and value additions to agricultural produce opportunities reduce the food security of young farmers by attracting high market prices, leading young farmers to sell all of their agricultural produce and rendering their household food insecure. This is especially the case due to lucrative food exports to South Sudan.

5.3.5 **Determinants of Young Farmers' Participation in Capacity-building Programs**

Having a disability reduces a young farmer's opportunity to participate in capacity-building programs. Young farmers with disabilities are more likely to be contacted in group settings rather than via face-to-face—an indication of social exclusion and discrimination that restricts them from participation in capacity-building programs compared to young farmers without disabilities. Thus, unless they are in a group setting, young farmers with a disability are less likely to be asked by extension or community educators to participate in capacity-building programs. However, access to sign language interpretation and supportive-training personnel and being in Northern Uganda improves or enhances participation among young farmers with disabilities in capacity-building programs.

5.3.6 **Determinants of Well-being in Young Farmers with and without Disabilities Uganda**

Young farmers with disabilities who interact with the wider community feel that they belong in capacity-building programs; their communities experience a slightly higher sense of well-being compared to those without disabilities. The slight improvement in well-being by young farmers with disabilities characterizes the initial exposure and excitement resulting from limited participation in

capacity-building programs. Young female farmers and those who actively participate in capacity-building programs are less likely to experience well-being, an indication that capacity-building programs are not gender-responsive and productive to young farmers.

5.3.7 **Coping Strategies Used by Young Farmers with Disabilities**

Self-initiated coping mechanisms that vary in accordance with family, group, or community settings help young famers with disabilities to navigate and function fully in their communities. The disability, social, and psychological coping strategies include self-disability awareness, positive self-image, building social networks beyond disability-related groups, competitive behavior, and forming disability groups.

5.4 **Recommendations**

Recommendations relevant to this research study and future research on disability are offered below.

5.4.1 **Recommendations for This Research Study**

Agencies that fund community development should demand evidence of disability-inclusive programming as one criterion for funding capacity-building programs. Moreover, community leaders and programmers should promote and enforce disability policies to promote equity in farmer participation in capacity-building programs. Since formal education plays a key role in participation and well-being, it is important to deliver relevant and contemporary formal and vocational education to develop the skill set(s) needed for production agriculture and off-farm livelihood. Extension and community educators should receive continuing education on disability issues and incorporate disability sensitive programs in training curricula. Lastly, communities should be educated on methods to prevent rampant road accidents and implement regulations in the commercial transport system, especially passenger service vehicles.

5.5.2 **Recommendations for Future Research**

The investigator recommends that future research be conducted regarding participation by those with and without disabilities in off-farm employment, including alternative and creative ways to

earn livelihoods. Because young farmers with disabilities tend to find employment in subsistence, low paying occupations it would be valuable to specifically identify training and education needed to open pathways to more promising and higher wage earning careers. Such research could provide a basis for development of meaningful education, training and development programs to help "break the cycle" of marginal, low paying, segmented opportunities too often available to young farmers with disabilities. Such research would provide a basis for looking to the future rather than accepting what exists.

Research should also be conducted focused on the limitations posed by different types of disabilities. Such information would provide the basis for developing a shared agenda between the public agencies and the private sector in formulating shared initiatives to reduce the barriers and limitations, which currently inhibit the employability and socialization of young farmers with disabilities. If such a shared agenda is to be developed, more detailed analysis of the barriers and limitations needs to be conducted. For example, it would be important to examine the influence of gender as an intervening factor on participation of young farmers with and without disabilities in capacity building programs.

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Appendix A

Institutional Review Board

PENNSTATE

IRB Program
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EXEMPTION

Date: October 17, 2016

From: Courtney Whetzel, IRB Analyst

To: David Agole

Type of Submission:	Initial Study
Title of Study:	Vulnerability, poverty, participation in capacity building programs, and their implications on the livelihood and wellbeing of people with disabilities in northern Uganda
Principal Investigator:	David Agole
Study ID:	STUDY00005263
Submission ID:	STUDY00005263
Funding:	Not Applicable
Documents Approved:	• IRB Penn State (5).pdf (0.06), Category: IRB Protocol • Questionnaire for people with disabilities.docx (0.01), Category: Data Collection Instrument

The Office for Research Protections determined that the proposed activity, as described in the above-referenced submission, does not require formal IRB review because the research met the criteria for exempt research according to the policies of this institution and the provisions of applicable federal regulations.

Continuing Progress Reports are **not** required for exempt research. Record of this research determined to be exempt will be maintained for five years from the date of this notification. If your research will continue beyond five years, please contact the Office for Research Protections closer to the determination end date.

Changes to exempt research only need to be submitted to the Office for Research Protections in limited circumstances described in the below-referenced Investigator Manual. If changes are being considered and there are questions about whether IRB review is needed, please contact the Office for Research Protections.

Penn State researchers are required to follow the requirements listed in the Investigator Manual (HRP-103), which can be found by navigating to the IRB Library within CATS IRB (http://irb.psu.edu).

This correspondence should be maintained with your records.

Appendix B

Questionnaire for Young Farmers with Disabilities in Uganda

Dear Fellow Countrymen,

I am **David Agole,** a PhD candidate in Agricultural and Extension Education, and International Agriculture and Development at The Pennsylvania State University. I am conducting a study titled *''Participation in Capacity Building and the Implications for Young Farmers with Disabilities in Uganda''*. I am asking your help in this study by filling out this questionnaire based on your honest and true experiences. The information you give will only be used for academic purposes and remain strictly confidential.

Identifiers

a) Location

District	**Sub county**	**Parish**	**Name of the Village/Zone/Cell**

b) Name of Interviewer: ……Telephone #: …….

c) Date of Interview: …….

d) Start Time: …….....End Time: …….

e) Questionnaire ID # .....

Section A: Livelihood Strategies

1. a) Do you earn some income?

Yes	No (go to 2a)

b) If yes, how regular do you earn some income? (Check one that applies)

Very regular (Monthly Income)	Regular (Seasonal/ Three 3 months' interval)	Irregular (Six months' interval)	Very irregular (yearly or beyond)

c) In which form of employment are you involved? (Check those that apply)

Government	Private sector	Self-employed	Others (specify)

d) If very regular or regular, what are the various sources and levels of income available to you in a year?

Sources of income	Check all that apply	ii) Amount of income in a year (in UGX)
1. Salaried Employment		
2. Subsistence Agriculture		
3. Commercial Agriculture		
4. Agro-processing		
5. Metal Fabrications		
6. Carpentry		
7. Retail/Wholesale		

8. Plant and Machinery (maintenance & repairs)		
9. Tailoring		
10. Art and Craft		
11. Others (specify)……		

e) If you are involved in agriculture, what enterprises are you currently undertaking? Please rank these enterprises as per your interest:

Agricultural enterprises you are doing?	Check all that apply	Rank them starting with most to least preferred
1. Raising birds		
2.Raising pigs		
3. Raising Goats/sheep		
4. Raising Dairy/beef ranching		
5. Growing Mushroom		
6. Bee keeping		
7. Vegetables		
8. Growing trees and fruits		
9. Growing Crops		
10. Others (specify)……		

f) What is the source of money that you invest in your agricultural enterprises in 1(f) above?

Source of money for running your enterprise	Check all that apply	Your experience in accessing money		Comment
		Easy	Hard	
1. Borrowing from friends/relatives				
2. From regular income (salary/wage)				
3. Savings in SACCOS/microfinance/bank				
4. Microfinance money lenders				
5. Commercial bank				
6. From sale of personal assets				
7. Others (specify)……				

Section B: Participation in capacity building programs in your community

2. a) In the last five years, have you participated in any training program in your community?

Yes	No

b) If no, why (go to **Section C)**

Reasons for no	Check all that apply
i) I did not know about the program	
ii) I was sick	
iii) I was discriminated against (nature of discrimination) ……	
iv) I did not have resources needed for training	

v) Difficult to travel to training site	
vi) The training did not meet my interests	
vii) Difficult to train with other people without disabilities	
viii) Others, specify……	

c) If yes, in 2a) above did you attend all the training activities from the beginning to the end?

Yes	No

d) If yes, what is the name of the organization/program that was providing you with that training?
.....

e) To what extent has that organisation improved your production capacity in enterprises that you are undertaking?

Very high	*High*	*Neither high nor low*	*Low*	*Very low*

f) If no, why did you fail to attend all the training activities from the beginning to the end?

Reason for failing to complete training	Check all that apply
i) I was sick	
ii) I was discriminated against	
iii) I did not have resources needed for training	
iv) Difficult to travel to training site	
v) The training did not meet my interests	
vi) Difficult to train with other people without disabilities	
vii) Others, specify……	

f) What needs did you expect to achieve by participating in training programs in your community?

	Rate the level of attaining expected needs				
Household needs expected to be attained	*Fully achieved*	*Mostly achieved*	*Partially achieved*	*Lowly achieved*	*Not achieved*
Household needs					
i) Food					
ii) Social interaction with other people					
iii) Money					
iv) Health services					
Production needs					
i) Knowledge and skills for farming					
ii) Improved seeds for planting					
iii) Improved animal breeds					
iv) Agricultural information (e.g., where to buy farm inputs or sell produce)					
v) Adding value and processing produce					
vi) Market for agricultural produce					
vii) Others (specify)……					

g) As a participant in the training program in your community, how would you rate your level of attendance of training activities?

Very high		High	Neither High/Low	Low	Very low

Section C: Capacity building strategies and actions

Needs assessment

3. a) In the last five years, have you worked with any extension workers on issues related to your agricultural enterprises?

Yes	No (If no go to 4a)

b) If yes, how many times has an extension worker contacted you in the last five (5) years?

…

c) What needs or assistance did you get from the extension worker (s)?

i)……

ii)……

iii)……

iv)……

d) i) Why did the extension worker(s) visit your farm or home? (Check that applies)

I asked for technical assistance	They had asked to assist me	I do not know why they came

ii) Did extension workers visit you as:

An individual	Group	Household/family

e) Has any extension worker ever contacted you to collect any information about farming?

Yes	No

f) If yes, what methods did the extension workers use to collect information?

Methods of collecting information	Check all that apply
i) By face to face conversation	
ii) By telephone call	
iii) By telephone SMS/text message	
iv) By group meeting	
v) I do not know	

Implementation of capacity building

4. a) In the last five years, have you been contacted to attend any community training programs?

Yes	No (go to 5a)

b) If yes, did you attend the community training programs when you were contacted?

Yes	No (go to 5a)

c) If yes, what was the name of the program(s)?

……

d) If yes, how many times have extension workers conducted training in your community in the last five years?

……

e) In the last five years: Rate your participation in training

What was your participation in training	(1-Very low, 2-Low, 3-Neither High Nor Low 4-High, and 5-Very high)

	Very low	*Low*	*Neither Low nor High*	*High*	*Very high*
i) I actively participated in training					
ii) I am involved in decision making					
iii) I felt I am part of the community					

f) Accommodation facilities:

Do your training activities have supportive facilities	To what extent are accommodation facilities used in training activities (1-Not at all, 2 Rarely, 3 Sometimes, 4 Often, 5 Most often)				
i) Transport facilities (mobility to the venue)	*Most often*	*often*	*Sometimes*	*Rarely*	*Not at all*
ii) Structural accessibility					
iii) Sign language interpreter					
iv) Braille					
v) Supportive training staff					
vi) Any other tools (specify)……..					

Section D: The wellbeing of people with disabilities

Food security

5. a) Source of food for your household

Sources of food	Rate the sources of food (1 Never, 2 Sometimes, 3 Often, 4 Most often)				
	Most often	Often	Some times	Rarely	Never
i) Home grown food					
ii) Buy food in cash					
iii) Bought from shops on credit					
iv) Borrow from relatives or friends					

b) Food availability in the household

Number of meals in a day	Rate food availability in your household			
i) How many meals do you eat in a day	*Once*	*Two times*	*Three times*	*Four times*
ii) What is your level of your satisfaction with the amount of food you eat in meal?	Very low	Low	High	Very high
iii) Adequacy of food eaten in a meal?	Very low	Low	High	Very high
iv) What is the level of food availability in your household?	Very low	Low	High	Very high

Social capital

6. a) Talking to people outside your family:

	Rate talking to other people:				
Talking to people outside your family	*Most Often*	*Often*	*Sometimes*	*Rarely*	*Never*
i) How often do you talk to other people outside your family when you have a problem?					

ii) How often do other people outside your family talk to you if they have a problem?					
iii) How often do you interact with people outside your family?					
iv) How often do you travel to places out of your community?					

b) Are you a member of any group or association in your community (e.g., farmer group/SACCOS etc.)?

Yes	No

c) If yes, how many groups are you registered with as a member in your community?.....

d) To what extent have you benefited by being a member of those groups in your community?

Very high	*High*	*Neither high nor low*	*Low*	*Very low*

d) To what extent are you willing to participate in community activities with other people with disabilities?

Type of disability	**Rate your willingness to participate**				
	Very high	*High*	*Neither high nor low*	*Low*	*Very low*
Hearing					
Seeing					
Talking					
Walking and handling					
Mental Illness					
Little people					
Albinos					

Resources owned

7. What assets do you own?

Assets owned	Check all those that apply	Number owned now	Comments
1) Bicycle			
2) Motor cycle			
3) Motor vehicle (car or truck)			
4) Milling machine			
5) Radio			
6) Cell phone			
7) Cattle (number)			
8) Goats/sheep			
9) Chickens/ducks/turkeys			
10) Land (hectares)			
11) Permanent house (block/burned bricks/cemented/corrugated sheets/tiles			

12) Temporary house (mud/wattle/unburnt bricks/grass/earth/wood			

8. What is the source of the land that you use for production?

Personal land	Borrowed land	Family land	Hired land

9. How much of the land have you put into production (Hectares)?

Used all the land	Used three-quarters of the land	Used half of the land	Not used at all

10. In the last 5 years did you live in this community?

Yes	No

11. If no, why did you move to this community?

……
……
……

12. To what extent are you satisfied with your current way of life?

Most satisfied	More satisfied	Satisfied	Least satisfied

Section E: Demographic Characteristics

13. (a) Please observe and tick the gender of the respondent?

Female	Male

b) Age (in years) ……..

c) What is your tribe? ……...
d) What leadership position do you hold in your community? …….
e) What is your religious affiliation?.....
f) What is your highest level of education?

1) None or no formal schooling	1. Completed	2. Not completed
2) Primary school		
3) Secondary school		
5) Tertiary education		
6) University education		

g) Marital status?

1) Never married	
2) Married/ co-habiting	
3) Separated/ divorced	
4) Widowed/widower	
5) Other (specify)…….	

h) How many people do you live with on a permanent basis in your household including yourself?
……..

i) How many of those have disabilities?.....
j) How often do you work together with people without disabilities in any activities in your community?

Most often	*Often*	*Sometimes*	*Rarely*	*Not at all*

k) What type (s) of impairment (s) do you have?

Physical disabilities	Check that apply	Rate limitation by the impairment (1- Severe, 2- Moderate and 3- Mild)				Cause of disability	Age you became disabled (years)	Comment
		Severe	Moderate	Mild	None			
1. a) I was born with an impairment								
b) I acquired an impairment								
2. What physical disabilities do you have								
a) Visual								
i) Left eye								
ii) Right eye								
c) Hearing								
i) Left ear								
ii) Right ear								
d) Speaking								
e) Limbs								
i) Left leg/foot								
ii) Right leg/foot								
iii) Left arm/hand								
iv) Right arm/hand								
f) Deformed/burned body								
3. Mental disability								
a) Mental Illness								
b) Epilepsy								
c) Others specify……								
4. Little people								
5. Albinos								
6. Others (specify e.g. spinal injuries, etc.) …								

Thank you for completing the survey

Appendix C

Questionnaire for Young Farmers without Disabilities in Uganda

Dear Fellow Countrymen,

I am **David Agole,** a PhD candidate in Agricultural and Extension Education, and International Agriculture and Development at The Pennsylvania State University. I am conducting a study titled *''Participation in Capacity Building and the Implications for Young Farmers with Disabilities in Uganda''*. I am asking your help in this study by filling out this questionnaire based on your honest and true experiences. The information you give will only be used for academic purposes and remain strictly confidential.

Identifiers

e) Location

District	**Sub county**	**Parish**	**Name of the Village/Zone/Cell**

f) Name of Interviewer: ……Telephone #: ……

g) Date of Interview: ……

h) Start Time:…….....End Time: ……..

e) Questionnaire ID #.....

Section A: Livelihood Strategies

2. a) Do you earn some income?

Yes	No (go to 2a)

e) If yes, how regular do you earn some income? (Check one that applies)

Very regular (Monthly Income)	Regular (Seasonal/ Three 3 months' interval)	Irregular (Six months' interval)	Very irregular (yearly or beyond)

f) In which form of employment are you involved? (Check those that apply)

Government	Private sector	Self-employed	Others (specify)

d) If very regular or regular, what are the various sources and levels of income available to you in a year?

Sources of income	Check all that apply	ii) Amount of income in a year (in UGX)
12. Salaried Employment		
13. Subsistence Agriculture		
14. Commercial Agriculture		
15. Agro-processing		
16. Metal Fabrications		
17. Carpentry		
18. Retail/Wholesale		

19. Plant and Machinery (maintenance & repairs)		
20. Tailoring		
21. Art and Craft		
22. Others (specify)……		

e) If you are involved in agriculture, what enterprises are you currently undertaking? Please rank these enterprises as per your interest:

Agricultural enterprises you are doing?	Check all that apply	Rank them starting with most to least preferred
1. Raising birds		
2.Raising pigs		
3. Raising goats/sheep		
4. Raising dairy/beef ranching		
5. Growing mushroom		
6. Bee keeping		
7. Vegetables		
8. Growing trees and fruits		
9. Growing crops		
10. Others (specify)……		

f) What is the source of money that you invest in your agricultural enterprises in 1(f) above?

Source of money for running your enterprise	Check all that apply	Your experience in accessing money		Comment
		Easy	Hard	
1. Borrowing from friends/relatives				
2. From regular income (salary/wage)				
3. Savings in SACCOS/microfinance/bank				
4. Microfinance money lenders				
5. Commercial bank				
6. From sale of personal assets				
7. Others (specify)……				

Section B: Participation in capacity building programs in your community

2. a) In the last five years, have you participated in any training program in your community?

Yes	No

b) If no, why (go to **Section C)**

Reasons for no	Check all that apply
i) I did not know about the program	
ii) I was sick	
iii) I was discriminated against (nature of discrimination) ……	
iv) I did not have resources needed for training	
v) Difficult to travel to training site	

vi) The training did not meet my interests	
vii) Difficult to train with other people with disabilities	
viii) Others, specify……	

c) If yes, in 2a) above did you attend all the training activities from the beginning to the end?

Yes	No

d) If yes, what is the name of the organization/program that was providing you with that training?
.....

e) To what extent has that organisation improved your production capacity in enterprises that you are undertaking?

Very high	*High*	*Neither high nor low*	*Low*	*Very low*

f) If no, why did you fail to attend all the training activities from the beginning to the end?

Reason for failing to complete training	Check all that apply
i) I was sick	
ii) I was discriminated against	
iii) I did not have resources needed for training	
iv) Difficult to travel to training site	
v) The training did not meet my interests	
vi) Difficult to train with other people with disabilities	
vii) Others, specify……	

g) What needs did you expect to achieve by participating in training programs in your community?

	Rate the level of attaining expected needs				
Household needs expected to be attained	*Fully achieved*	*Mostly achieved*	*Partially achieved*	*Lowly achieved*	*Not achieved*
Household needs					
i) Food					
ii) Social interaction with other people					
iii) Money					
iv) Health services					
Production needs					
i) Knowledge and skills for farming					
ii) Improved seeds for planting					
iii) Improved animal breeds					
iv) Agricultural information (e.g., where to buy farm inputs or sell produce)					
v) Adding value and processing produce					
vi) Market for agricultural produce					
vii) Others (specify)……					

h) As a participant in the training program in your community, how would you rate your level of attendance of training activities?

Very high	High	Neither High nor low	Low	Very low

Section C: Capacity building strategies and actions

Needs assessment

3. a) In the last five years, have you worked with any extension workers on issues related to your agricultural enterprises?

Yes	No (If no go to 4a)

b) If yes, how many times has an extension worker contacted you in the last five years?
.....

c) What needs or assistance did you get from the extension worker (s)?

i)……
ii)……
iii)……
iv)……

d) i) Why did the extension worker(s) visit your farm or home? (Check that applies)

I asked for technical assistance	They had asked to assist me	I do not know why they came

ii) Did extension workers visit you as:

An individual	Group	Household/family

e) Has any extension worker ever contacted you to collect any information about farming?

Yes	No

f) If yes, what methods did the extension workers use to collect information?

Methods of collecting information	Check all that apply
i) By face to face conversation	
ii) By telephone call	
iii) By telephone SMS/text message	
iv) By group meeting	
v) I do not know	

Implementation of capacity building

4. a) In the last five years, have you been contacted to attend any community training programs?

Yes	No (go to 5a)

b) If yes, did you attend the community training programs when you were contacted?

Yes	No (go to 5a)

c) If yes, what was the name of the program(s)?
……

d) If yes, how many times have extension workers conducted training in your community in the last five years? ……...

e) In the last five years: Rate your participation in training

What was your participation in training	(1-Very low, 2-Low, 3-Neither High Nor Low 4-High, and 5-Very high)				
	Very low	*Low*	*Neither Low nor High*	*High*	*Very high*
i) I actively participated in training					

ii) I am involved in decision making					
iii) I felt I am part of the community					

Section D: The wellbeing of people

Food security

5. a) Source of food for your household

Sources of food	Rate the sources of food (1 Never, 2 Sometimes, 3 Often, 4 Most often)				
	Most often	Often	Some times	Rarely	Never
i) Home grown food					
ii) Buy food in cash					
iii) Bought from shops on credit					
iv) Borrow from relatives or friends					

b) Food availability in the household

Number of meals in a day	Rate food availability in your household			
i) How many meals do you eat in a day	*Once*	*Two times*	*Three times*	*Four times*
ii) What is your level of your satisfaction with the amount of food you eat in meal?	Very low	Low	High	Very high
iii) Adequacy of food eaten in a meal?	Very low	Low	High	Very high
iv) What is the level of food availability in your household?	Very low	Low	High	Very high

Social capital

6. a) Talking to people outside your family:

Talking to people outside your family	Rate talking to other people:				
	Most Often	*Often*	*Sometimes*	*Rarely*	*Never*
i) How often do you talk to other people outside your family when you have a problem?					
ii) How often do other people outside your family talk to you if they have a problem?					
iii) How often do you interact with people outside your family?					
iv) How often do you travel to places out of your community?					

b) Are you a member of any group or association in your community (e.g., farmer group/SACCOS etc.)?

Yes	No

c) If yes, how many groups are you registered with as a member in your community?.....

d) To what extent have you benefited by being a member of those groups in your community?

Very high	*High*	*Neither high nor low*	*Low*	*Very low*

Resources owned

7. What assets do you own?

Assets owned	Check all those that apply	Number owned now	Comments
13) Bicycle			
14) Motor cycle			
15) Motor vehicle (car or truck)			
16) Milling machine			
17) Radio			
18) Cell phone			
19) Cattle (number)			
20) Goats/sheep			
21) Chickens/ducks/turkeys			
22) Land (hectares)			
23) Permanent house (block/burned bricks/cemented/corrugated sheets/tiles			
24) Temporary house (mud/wattle/unburnt bricks/grass/earth/wood			

8. What is the source of the land that you use for production?

	Personal land	Borrowed land	Family land	Hired land

9. How much of the land have you put into production (Hectares)?

Used all the land	Used three-quarters of the land	Used half of the land	Not used at all

10. In the last 5 years did you live in this community?

Yes	No

11. If no, why did you move to this community?

……
……
……

12. To what extent are you satisfied with your current way of life?

Most satisfied	More satisfied	Satisfied	Least satisfied	Not satisfied at all

Section E: Demographic Characteristics

13. (a) Please observe and tick the gender of the respondent?

Female	Male

b) Age (in years) ……..

c) What is your tribe? ……...
d) What leadership position do you hold in your community? ……
e) What is your religious affiliation?.....
f) What is your highest level of education?

1) None or no formal schooling	1. Completed	2. Not completed
2) Primary school		
3) Secondary school		
5) Tertiary education		
6) University education		

g) Marital status?

1) Never Married	
2) Married/ Co-habiting	
3) Separated/ divorced	
4) Widowed/Widower	
5) Other (specify)……	

h) How many people do you live with on a permanent basis in your household including yourself?
…….

i) How many of those have disabilities?.....

j) To what extent are you willing to participate in community activities with people with disabilities?

Type of disability	**Rate your willingness to participate**				
	Very high	*High*	*Neither high nor low*	*Low*	*Very low*
Hearing					
Seeing					
Talking					
Walking and handling					
Mental Illness					
Little people					
Albinos					

k) How often do you work together with people with disabilities in any activities in your community?

Most often	*Often*	*Sometimes*	*Rarely*	*Not at all*

l) Do you have any invisible/hidden disabilities?

Yes	No

m) if yes, what hidden/invisible disabilities do you have? ……

n) To what extent does that disability prevent your participation in community activities?

Very high	High	Neither High nor low	Low	Very low

Thank you for completing the survey

Appendix D

Interview Protocol for Young Farmers with and without Disabilities

1. What do you think about yourself (self-image)?

2. What do you think other people (family members, community members, and program officers) think about you as a person with disability?

3. Why and how do those people (in 2 above) think about you in such a way?

4. How are you able to cope with disability discrimination challenges to participate in community development programs and be productive in your community in relation to:
   a) Family members
   b) Community members
   c) Program officers

5. What specific development programs have you participated in the last 5 years?

6. Which organizations provided those programs?
   i) Government programs
   ii) NGO programs
   iii) Others specify

7. How have you been able to?

   a) own land

   b) use land

   c) access financial credit

8. (a) What is the most difficult challenge you have faced as a person with disability?

   (b) How has the above challenge affected your performance in agriculture and other livelihoods projects?

9. In your opinion, what should be done to fix the challenge?

VITA

David Agole

Education

2018 Ph.D., Agricultural and Extension Education and International Agriculture and Development, The Pennsylvania State University, University Park (Fulbright)

2013 Masters of Science, Agricultural Extension Education, Makerere University

2005 Bachelor of Education (Agriculture), Kyambogo University

1996 Diploma, Secondary Education, Institute of Teacher Education Kyambogo

Research

Conducted doctoral research on *Participation in Capacity-Building Programs and the Implications for the Well-being of Young Farmers with and without Disabilities in Uganda,* funded by Dr. Connie D. Baggett, Director AgrAbility Project for Pennsylvanians at The Pennsylvania State University

Conferences

Presented papers at the 16th International Conference on Education Honolulu, Hawaii (January 3-8, 2018)

American Association of Adult and Continuing Education, Memphis, Tennessee (October 31 - November 5, 2017).

Pan-African Professional Alliance Symposium, Rural Sociology Student Conference

African Studies Seminar Series,

Delta Sigma, and Graduate Student Exhibitions at Pennsylvania State University, University Park

Professional Experience

2017-2018 The Pennsylvania State University, Graduate Assistant and co-teacher, *Interpersonal Skills for Tomorrow's Leaders,* for Dr. Connie D. Baggett

2006-2013 Kyambogo University, Teaching Assistant and Assistant Lecturer

2010-2011 Akershus University College, Norway, Assistant Professor

1998-2006 Ministry of Education and Sports, Uganda, Teacher of Agriculture

Awards

2015-2018 Fulbright Fellowship recipient

2016-2018 AgrAbility Research and Travel Grants to Uganda

2018 Travel Award to Honolulu, Hawaii