

**EXPLORATION OF THE ROLE OF AN URBAN FARMING PROGRAM IN  
PROMOTING YOUTH'S LIFE SKILLS, ENTREPRENEURSHIP, AND  
HEALTHY EATING INTENTIONS FOR MINORITY YOUTH  
ATTENDING FELEGE HIYWOT CENTER, INDIANAPOLIS**

by

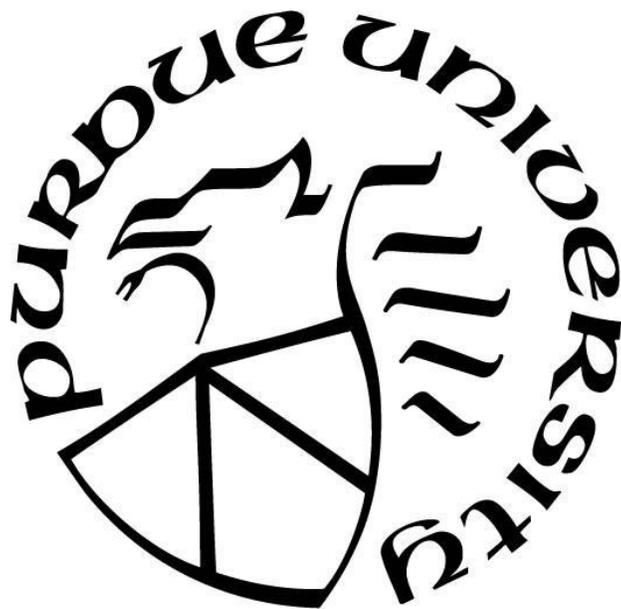
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## ABSTRACT

Community gardens and youth-based programs in urban agriculture have potential to engage youth, especially minorities, in personal development, community building, and healthy eating promotion. This research study explored the role of urban agriculture at the Felege Hiywot Center (FHC), in promoting life skills, entrepreneurship, and healthy eating intentions among minority youth engaging in its programs. The study employed a mixed methods approach through surveys (n=24) and semi-structured interviews (n=10). The Theory of Planned Behavior (Ajzen, 1991; Fishbein, 2000) served as the conceptual framework with three predictive variables to life skills, entrepreneurship, and healthy eating intentions. Community partnerships, program structure, and individual background factors were measured, and relationships between life skills and entrepreneurship were explored. Results obtained from the analysis for both surveys and interviews indicate that participation in FHC promotes life skills, entrepreneurship, and healthy eating intentions for minority youth who engage in its programs. Overall, participants acknowledged the role of volunteers, professionals, sponsors, FHC structure, and individual background factors in promoting life skills, entrepreneurship, and healthy eating intentions. Qualitative data reports more in-depth descriptions of minority youth's experiences at FHC's youth program that impacted their daily lives and career decisions. Quantitative and qualitative results highlighted the leadership at the Felege Hiywot Center as particularly influential. This research study contributes to the literature on the impacts of urban agriculture youth programs that incorporate experiential learning, farm-based education, and student centered-learning with youth development philosophies. The study also generated a conceptual framework that shows the interactions of different factors that lead to intentions. The results from this study support and extend prior research that suggests positive, lasting impacts from youth-based programs in urban agriculture.

**Keywords: Urban agriculture, youth-based programs, experiential learning, life skills**

# CHAPTER 1. INTRODUCTION

## 1.1. Entrepreneurship

Throughout the world, entrepreneurship is gaining recognition as the engine of economic and social growth, employment, and innovation (Bakotic & Kruzic, 2010). Entrepreneurs who engage in startups and operate small business firms play a big role in job creation and add to the net job growth of the U.S. economy (Decker, Haltiwanger, Jarmin, & Miranda, 2014). Some of the characteristics of a good entrepreneur include risk perception, self-efficacy, innovativeness, internal locus of control, and proactiveness (Obschonka et al., 2013). Several studies demonstrate that individuals who display these characteristics and traits tend to create and operate firms that exhibit entrepreneurial orientation on a corporate level and achieve entrepreneurial success (Bolton and Lane, 2012; Leutner, Ahmetoglu, Akhtar, & Chamorro-Premuzic, 2014), which leads to higher levels of firm performance (Anderson and Eshima, 2013; Mousa & Wales, 2012; Wales et al., 2013).

Although entrepreneurship seems to be a big channel that can be used to increase income and improve well-being for families and communities, there has been slow adoption of this movement among minority populations, especially African Americans (Alsaaty, 2013; Mijid & Bernasek, 2013). The major causes include low educational levels, low asset levels, smaller probabilities of having self-employed parents, demographic trends, and discrimination (Fairlie & Meyer, 2000). Despite these challenges that limit experiences in entrepreneurship for the minority population, especially African Americans, several studies show that individuals who are involved in entrepreneurial education programs are more likely to become entrepreneurs than those who are not (Solesvick et al., 2013). Several previous studies have relied on the theory of planned behavior to assess intuition in entrepreneurship. The current study therefore seeks to apply theory of planned behavior to the Felege Hiywot Center (FHC) Youth Led Urban Agriculture Program in Indianapolis, Indiana, in a mixed methods approach to evaluate how: program structure, individual background factors, and professionals, volunteers and sponsors promote life skills, entrepreneurship, and healthy eating intentions among minority youth attending FHC.

## **1.2. Healthy Eating**

Research has shown how income can predict healthy eating for a given household as described in later sections. For example, Golan et al. (2008) demonstrated that low-income households tend to eat less healthy diets than households with higher income. This results in greater incidence of nutrition-related health problems in low-income households, especially obesity and diabetes (Robbins et al., 2001). Other studies show that low-income households tend to live in areas having limited access to nutritious foods, especially fruits and vegetables, but relatively easy access to energy-dense, nutrient-poor foods (Moore & Diez Roux, 2006; Morland, Wing, & Diez Roux, 2002; Zenk et al., 2005).

A positive association exists between low-income neighborhoods and the location of fast food outlets (Chou, 2004). This association is caused by limited financial resources that can be used to buy healthy food. Many businesses tend to locate where they expect to make a profit, which conveys the relationship between access to food and income (Chou, 2004). Furthermore, in other studies that investigated the relationship of low income and healthy food, an often-cited reason for poor eating patterns among low-income households was the cost of healthy food (Cassady et al., 2007; Drewnowski, 2003; Reicks et al., 1994). These findings are based on the observation that the least expensive sources of calories are energy-dense foods with high fat and sugar content, and the perception that fruits and vegetables are particularly high in cost (Drewnowski & Specter, 2004). Based on prior studies on the relationship between low income and healthy eating, the current study hypothesizes that an increase in income through youth urban farming entrepreneurship activities among Martindale-Brightwood community members in Indianapolis, Indiana, will lead to a healthy eating intention as an ultimate goal. The FHC is an existing youth program in this community that among its initiatives provides both skills and knowledge about urban agriculture and entrepreneurship and also teaches youth about healthy diets.

## **1.3. Urban Agriculture**

Several benefits of urban farming include health, well-being, and economic growth of the community (Brown et al., 2003; Viljoen et al., 2005). Health benefits related to urban farming include improvement in accessing fresh produce, opportunities for outdoor exercise, and psychological benefits of working with plants (Mukherji, 2009). Urban farming can be a good

source for nutritious food, especially in the areas with high food deserts. Urban farming can also provide an opportunity for outdoor exercise, which is a good opportunity for children, elderly people, and others with limited mobility to stay fit (Bellows et al., 2003).

Urban farming plays a role in providing income benefits to those who have limited or no income to sustain their families (Mukherji, 2009). This farming system can also be a source of culturally significant foods that cannot be found in typical grocery stores. Some urban farming programs involve education, whereby others are used to run youth internships or nutrition programs or to host class trips (Foster, 2006; Warner & Durlach, 1987).

Urban farms, gardening supply stores, and farmers markets are sources of income for many families, especially those with no other type of employment. Urban farming entrepreneurship is another way to strengthen the community through job training for youth and people who were previously incarcerated (Steele, 2017).

#### **1.4 Background and Need for the Study**

Urban agriculture continues to increase in most U.S. cities. In several urban areas of Indiana such as Indianapolis, Fort Wayne and Gary, there is estimated to be more than 200 urban farms, both community and private gardens (Toner, 2014). The increase in urban agricultural operations is due to growing consumer demand for fresh local produce (O'Hara & Stagl, 2001). Multiple surveys and studies show that nine urban Indiana counties doubled their number of farmers markets from 2009 to 2013 (Ayers et al. 2013, ERS 2017, USDA, 2015). Indiana school districts spent more than \$11 million on local food in 2011-2012, with 37% of these schools desiring to support local producers through their purchase of local produce (Ayers et al., 2013; ERS 2017, USDA, 2015). Other benefits of urban agriculture include improving food access to food-insecure areas, increasing consumption of fresh fruits and vegetables, boosting youth development opportunities, creating jobs and other career opportunities, and helping people to start small businesses with minimum start-up costs (Golden, 2013).

#### **1.5. The rise and fall of Martindale-Brightwood**

Since the 1820s, when the City of Indianapolis was incorporated, the city has known periods of population and economic growth. Hulse & Zeigler (1991) showed that the population of

Indianapolis tripled during the years following the Civil War with the migration of African American residents from the southern U.S. and the influx of many Irish and German immigrants searching for jobs in Indianapolis, Indiana.

In 1891, the City of Indianapolis created a new municipal charter that widened the city boundaries. In the same year, the City of Indianapolis expanded beyond its city center areas, from the former suburbs of West Indianapolis and Brightwood, North Indianapolis, Haughville, Mt. Jackson, and Irvington. According to Hulse (1991), during the expansion of Indianapolis the native-born middle class moved to new neighborhoods to the north and east, and the neighborhoods in the old city displayed an increasing degree of residential segregation (Hulse and Zeigler, 1991). This is believed to be the major factor that contributed toward the increase of racial, ethnic and class segregation of older neighborhoods in the city. Hulse & Zeigler (1991) also reported that the increase in development of land in Center Township of Indianapolis caused the population to grow 27% around the 1920s. As city development led to an increase in the number of residents, residential areas downtown shifted with the arrival of commercial and industrial facilities that created pollution in the city's oldest areas. As a result, wealthier residents relocated to the edges of the city, which became the suburbs of Indianapolis (Hulse & Zeigler, 1991).

In addition to the Indianapolis population increase as a cause of the city's changing structure, the railroads and streetcar lines also played a significant role in the development of the City of Indianapolis from the early 1870s to the early part of the 20<sup>th</sup> century (Fuller, 2011). The streetcar lines increasingly travelled outward from the city's center to foster greater suburban development (Fuller, 2011). This resulted in significant growth in residential development in the early 1870s on the south side of Indianapolis (Fuller, 2011). The railway increased the amount of industrial traffic that helped the development of industrial suburbs like North Indianapolis, West Indianapolis, Haughville and Brightwood (Fuller, 2011). Due to the railways, both West Indianapolis and Brightwood became industrial hubs within the larger Indianapolis area (POLIS, 2000; Fuller, 2011). The north side of Indianapolis, which did not contain railways, attracted wealthier people. This area became popular, with parks for residents and free from the pollution found in other parts of Indianapolis (Fuller, 2011). As a result, the streetcar companies moved quickly to provide service to the north side of the city. This resulted in its extension. Hulse and Zeigler (1991) show that the north side of Indianapolis was coded as a "high grade area" for

residential development in the Comprehensive Zoning Ordinance of 1922. The north side of the city has been considered a refuge for wealthy people to escape pollution and traffic (Fuller, 2011).

The discovery of natural gas in 1886 on the east side of the city offered a new form of development. Two years after the discovery of natural gas, a pipeline was constructed that connected Indianapolis to the region's larger gas pipelines (Hulse & Zeigler, 1991). Natural gas became another factor that contributed to Indianapolis' economic and physical expansion (Fuller, 2011). The growth of industrial and residential development of the city raised some concerns, which resulted in a Comprehensive Zoning Ordinance in 1922 that provided the city with a mechanism by which it could control any further development (POLIS, 2000). The West Indianapolis and Martindale-Brightwood communities were sealed as industrial areas through this zoning ordinance (Hulse and Zeigler, 1991). Their industrial heritage and the future of several urban communities of Indianapolis led to further population shifts. More people left the city center and relocated to newly forming suburban areas (Fuller, 2011).

While Marion County's population kept on growing for several decades, the city center of Indianapolis lost approximately 1% of its population. The number of residents who left the city center kept increasing for the following 40 years (Hulse & Zeigler, 1991). Hulse and Zeigler (1991) show also that between 1961 and 1970, Center Township lost approximately 18% of its population. The residents that remained in the center of Indianapolis were more likely to be poor and African American as "white flight" toward the suburbs took hold (Fuller, 2011). More middle- and upper-class whites left downtown Indianapolis because of a Marion County judicial decision that encouraged more equal racial balance in local schools in the county (Hulse & Zeigler, 1991). This resulted in population decline in Center Township during the 1970s by nearly 24% (Hulse & Zeigler, 1991).

### **1.6. Reasons the Martindale-Brightwood community was selected as a study area**

The geographical location of Martindale-Brightwood comprises the area near northeast side of Indianapolis bounded by 30<sup>th</sup> Street on the north, Massachusetts Avenue and Sixth Street on the south, Sherman Drive to the east, and the Norfolk Southern Railroad tracks (Fuller, 2011). The first Indianapolis neighborhood that people settled in was Brightwood, around 1872, followed by Martindale in 1874. These were combined in 1897 as one neighborhood, Martindale-

Brightwood. According to POLIS (2000), Brightwood was established as an attractive location for employment predominantly in the railroad industry. This location had a large number of railroad workers and railroads. Martindale was established as an area of manufacturing and machine shops serving the nearby railroad industry.

Martindale was predominantly populated by African Americans and foreign-born residents toward the end of the 19<sup>th</sup> century (POLIS, 2000). Brightwood had a substantial portion of white residents who often sought jobs with various railroad and auto industry shops located in Martindale and Brightwood (Fuller, 2011). The African Americans who migrated from the southern U.S. lived in the area of Martindale that was an industrial center of the neighborhood, Martindale Avenue, which changed its name to Dr. Andrew Brown Avenue to honor the local civil rights leader (Fuller, 2011). The major industries that were located in this area included Mono Railroad Yards and National Motor Vehicle Company (Fuller, 2011).

Among the businesses that contributed to the economy for the Martindale-Brightwood community was the Big Four Railroad. However, in 1908, this community suffered when it lost the railroad industry, which relocated to the Indianapolis suburb of Beech Grove with Big Four Railroad (Fuller, 2011). Besides losing the railroad industries, Martindale-Brightwood kept losing jobs related to them. This led to white flight from these neighborhoods to Beech Grove after World War II. This affected Indianapolis because most Whites left the inner-city to live in more distant suburbs (Fuller, 2011). As a result, the population of Martindale-Brightwood changed to more low-income, African American residents (Hulse & Zeigler, 1991). Churches offered these residents hope. The only hope for these low-income residents were churches. Churches were considered important sites of optimism and identity within this community (Pierce, 2005; Thornbrough, 2001). They played a big role in community gatherings and discussions (McAdam, 1999). They also offered medical services, counseling and civil rights support (Fuller, 2011). Some of these churches include St. Rita's Catholic Church, Scott United Methodist Church, St. Paul AME Church and Hillside Christian Church. St. Rita's was exceptional because it promoted social and educational activities for African Americans in Indianapolis. It was operated by Father Bernard Strange, who started his career in 1935, provided a wealth of social opportunities, and fought for the desegregation of Catholic schools and civil rights in Indianapolis (Hulse & Zeigler, 1991).

POLIS (2000) showed that prior to community development corporations, the Brightwood community had a community center founded in 1935. It played a big role in the community by assisting residents with various educational, social, and recreational opportunities. The churches and community center worked together to address the poverty of Martindale-Brightwood residents and also promoted neighborhood beautification projects (POLIS, 2000).

Indiana was one of the states that did not want African Americans to settle anywhere inside the state as a rule (Brady, 1996). Regardless, the African American population in Indianapolis has significantly increased since the city was founded in 1820 (Hulse & Zeigler, 1991). Between 1860 and 1870, the African American population of Indianapolis increased by 500%, which comprised 10% of the population of the entire city (Brady, 1996). Brady (1996) also showed that both the heavy industrial foundation of the city and pre-existing population of Blacks contributed greatly toward the northern migration of Indianapolis. In 1910, Blacks made up about 9% of the city's total population. One year later, it had risen from 9% to 11% of total population. This increase had a negative effect on jobs and housing, which were not available for the Blacks. Despite the increase, African Americans were significantly isolated racially and economically (Fuller, 2011). Communities that were predominantly Black were forced to develop their own institutions in terms of social services, assistance, and economic markets (Fuller, 2011). Martindale and Brightwood had two different demographics. Early on, Martindale contained a large African American population (Hulse & Zeigler, 1991). On the other hand, Brightwood was predominantly populated by a White population of primarily first-generation European immigrants (Hulse & Zeigler, 1991). The large population of Blacks who moved to Indianapolis from the southern U.S. after World War I increased racial tensions. This resulted in the creation of segregation policies at high schools that had been integrated until 1928 (Hulse & Zeigler, 1991). One of the biggest driving forces of segregationist policies was the Ku Klux Klan (KKK), which had a strong influence in Indianapolis politics during the 1920s (Thornbrough, 2001).

By 1930, the Black population had risen from 11% to 12% of Indianapolis' total population. This number was deemed by many Whites as too large to easily confine in a few particular neighborhoods (Pierce, 2005). Segregation extended to the Jim Crow segregationist policies of the 1960s (Thornbrough, 2001). The residents of Martindale-Brightwood struggled against various social ills including racism, unemployment, housing decay, health issues, red-

lining (systematic denial of various services by U.S. government agencies, local governments as well as the private sector, either directly or through the selective raising of prices), lack of social services, and industrial development. In 1967 Martindale-Brightwood was declared a poverty target area by the federal government (Hulse & Zeigler, 1991). Since 1980, Martindale-Brightwood residents have continued to deal with unemployment, crime, housing needs, and industrial pollution (Fuller, 2011). Besides the social issues faced by these communities, other issues, including limited healthy food, are ongoing problems. An estimated 200,000 of Indianapolis residents have low food access and live in low-income areas that are predominantly food deserts (Savi, 2018).

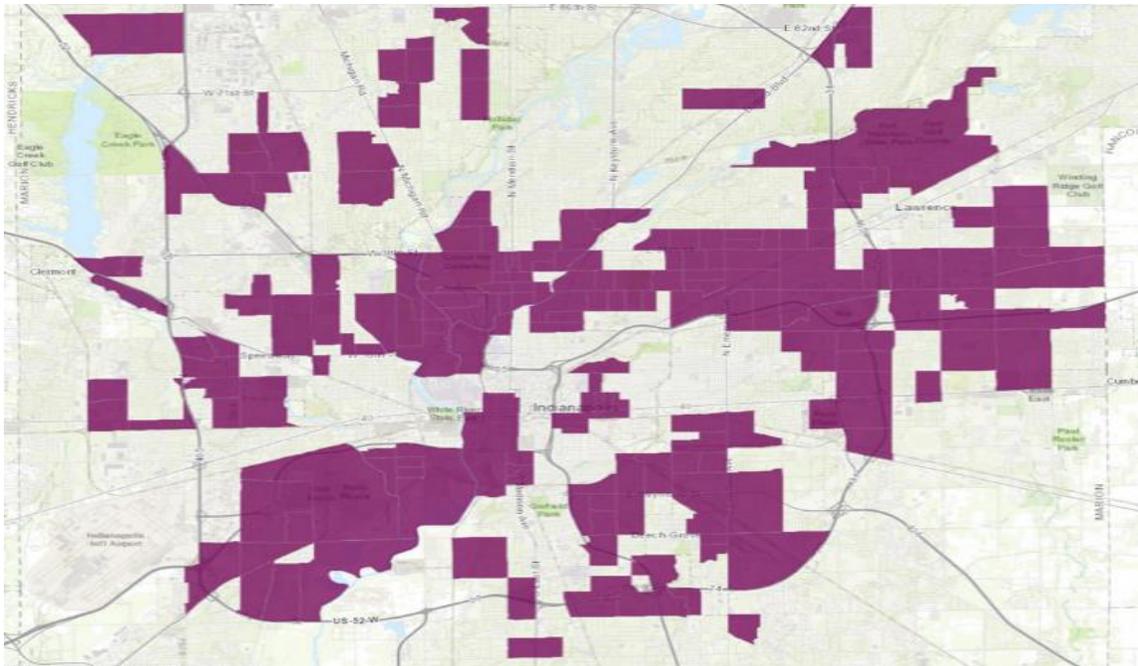


Figure 1. Food desert map of Indianapolis, Indiana, where purple represents food desert areas (Savi, 2018).

Figure 1 shows the food desert map in Indianapolis, which includes Martindale-Brightwood, the area where the research study took place. Low-income families are likely to live in poor neighborhoods, and these families are also less likely to have one car per adult. Many families living in these poor neighborhoods don't have access to a vehicle. To buy food, they have to rely on city buses. Based on the data provided by Savi (2018), the largest food deserts are north and northwest of downtown such as Riverside and Crown Hill. Another vulnerable food desert area is northeast of downtown in parts of Martindale-Brightwood, Forest Manor, and Arlington

Woods. Other food desert areas include Mars Hill and West Indianapolis, and the city's southwest, near southeast and far Eastside.

The community of Martindale-Brightwood has limited retail food establishments, and those that exist are fast food stores (ready-to-serve food). Community members from this area travel long distances either by bus or car to obtain fresh produce. It has been shown that poor dietary intake is responsible for significant mortality and morbidity in the U.S. (MacGovern et al., 1996). Other studies show that poor dietary practices correlate with increased risk cardiovascular diseases (Ergin et al., 2004; Cooper et al., 2000; Campbell et al., 1999; MacGovern et al., 1996). It also has been found that people who consume high levels of dietary fat, too little fiber, and limited fresh fruit and vegetables have high risk of developing heart disease, stroke, and cancer (McGuire, 2011; Bal & Foerster (1991).

Cobb & Solera (2003) showed several factors that contribute to low intake of fresh fruits and vegetables. These include social and situational family factors. This is even more of a problem among minority populations such as African Americans, especially those who are entrenched in poverty-stricken communities like Martindale-Brightwood (John & Ziebland, 2004). Potter et al. (2000) & Serdula et al. (1995) found that African Americans consume fewer than the recommended number of fruit and vegetable servings per day compared to Whites. Research also shows differences in daily intake and variations of consumption patterns of fruits and vegetables among different ethnic groups (Resnicow et al., 2000). These differences can range from the area of the country people reside into how food is prepared (Resnicow et al., 2000). Other factors that affect behavioral change for the intake of fresh fruits and vegetables include limited availability cost and time to prepare (John & Ziebland, 2004; Wargovich, 1997; Horowitz et al., 2004; Reicks et al., 1994; Treiman et al., 1996). Moreland et al. (2009) found often fewer supermarkets in an African American neighborhood as compared to a White neighborhood regardless of per capita income (Morland & Evenson, 2009). This is believed to be among the factors contributing to health-related diseases in many African American families.

As an intervention for some of these social-economic and political issues faced by this community, the Felege Hiywot Center (FHC) was founded to inspire youth to be part of the change. FHC is located in the Martindale-Brightwood neighborhood. This center was co-founded by Ethiopian immigrants Aster Bekele, a retired Eli Lilly chemist, and Azeb Yilma. These two

dedicated their time and effort in the early years in an area suffering from poverty and blight. The FHC, with its youth-led urban agriculture program, has transformed a series of vacant lots into a beacon of hope. In 2013 FHC received funding from the Indy Food Council for pilot programs and projects that allowed high school youth to take the lead in improving their neighborhoods through working at the center's urban farm. This youth-led program was launched because there are limited employment opportunities for Indianapolis youth; and because during the first year of the Youth Led Farm Initiative (YLFI) program, YLFI reported a teen summer unemployment rate of nearly 25%. The same year, FHC managed to employ 12 youth ages 15-19. During the summer school break from June 1 to August 8, the youth work on the farm daily. These youth work 25 hours per week and participate in youth development programming for 10 hours per week. Each earns an average of \$2,100 in seven months or \$300/month.

FHC's main goal is to promote youth development by empowering them to make decisions in every aspect of the program. It also supports youth in their efforts to revive their struggling neighborhoods through passion, determination, and love. The Center combines agriculture, enterprise, science, technology, engineering, and mathematics (STEM) education, and service opportunities to create a rigorous, practical, and integrated experience. The youth work on the farm, participate in workshops, work together as a diverse team, lead volunteers in the fields, and endeavor to expand community food access.

The Center also creates a meaningful work environment that provides opportunities for young people to build valuable skills and work habits that positively affect the rest of their working lives. The Center teaches youth about interpersonal communication, time management, effective strategies for teamwork, how to get along with co-workers, and the importance of being appropriately dressed and punctual.

The Center develops a variety of entrepreneurial experiences that have a positive economic impact on youth participants and the larger community. The youth are involved in planning farm finances and developing marketing strategies. Youth also participate in a highly structured system for enhancing their communication skills called "Talk Time." During the real talk, the youth receive feedback about the quality of their work and practice how to effectively communicate with peers and supervisors.

The youth at this Center have opportunities for deep and sustained learning. As youth grow in the program, they are given leadership roles that prepare them to become the next generation of leaders not only in the food movement, but in any field, they choose to pursue.

All youth workers, a month-and-a half after joining the program, work on the farm and serve their communities by distributing produce at an affordable price at the farmers market and also by donating to senior-serving organizations. In the second stage, youth workers become youth leaders, and spend Saturdays expanding on their knowledge of sustainable agriculture and food justice that they acquired in their previous stage of the youth worker program. They also develop public speaking and job-readiness skills.

The third stage is for the youth farm interns. The interns put their knowledge into action by partnering with staff and community members to engage in hands-on projects that further the FHC mission.

Recruiting strategies at this Center are designed to bring together a diverse group of youth to cultivate mutual understanding across geographic, socioeconomic, and racial boundaries. The Center works with communities of all income levels to create and build sustainable farming while prioritizing the needs of underserved communities. FHC is located in a low-income, high-crime neighborhood, and most of the youth have lost at least one family member to gun violence. The Center works closely with organizations already serving low-income populations to round out services for those in need. The FHC farm reinforces ties to one's environment and increases food access and food security. The youth from this Center are active in the development of a quality of life plan for this area of the city and have taken the lead in starting a youth council, which makes their parents proud. The process of sharing farm produce helps to bridge gaps and create networks that cross socioeconomic and cultural strata.

Based on the social, political and economic factors that contributed to high poverty, crime, unemployment, health-related issues and a food desert in this neighborhood, this study explored and described how urban farming programs such as the Felege Hiywot youth-led program promotes minority youth life skills, entrepreneurship and health eating intentions among youth attending the FHC who live in Martindale-Brightwood.

### **1.7. Significance of the study**

This study contributes to information that supports new understanding of how different factors, in addition to an urban farming program, influence intentions in entrepreneurship, life skills and healthy eating among minority youth attending the FHC.

Woodard (1997) observed the future of minority entrepreneurship, especially African American, as a means of accumulating wealth remains turbulent. Woodard attributes this to individuals' fears and self-doubts concerning their chances of success, which can be alleviated only through formal technical education. Therefore, new understanding from this study will serve as a foundation from which leaders, practitioners and planners in the field of education and agriculture can develop programs geared toward training future minority entrepreneurs in urban agriculture and related programs.

This study also has the potential to contribute valuable information about existing disparities among various ethnic groups related to urban farming and entrepreneurship. The study revealed paths minorities have to travel in their urban agriculture entrepreneurial work, life skills and healthy eating. The results will help leaders, practitioners and educational planners develop programs that will motivate and train more urban agriculture entrepreneurs, specifically African American youth, by using the methodologies and recommendations the study provides. The more African American youth understand urban agriculture opportunities through classroom instruction, academic programs and programs that support entrepreneurship, life skills and healthy eating in their communities, the more the gap will narrow between minority youth and other racial groups. By providing urban agriculture entrepreneurship skills and knowledge, youth and other members of the workforce in the community will be able to generate income that can help them to afford healthy food by reducing the consumption of unhealthy food.

Unhealthy food has a substantial negative impact on development and potential for young people. Several studies have shown that patterns of eating behavior developed during childhood and growth are carried into adult life (Whitaker, 1997; Birch & Davison, 2001; Magarey, 2003). Along with other issues, youth obesity can increase the incidence of adult morbidity and mortality, and the cost to the health care system can be problematic (Birmingham et al., 1999). Given the vast number of negative outcomes associated with unhealthy eating, having some strong measures

that can be used to overcome this issue can be helpful. The low-income families are likely to live in poor neighborhoods and less likely to have one car per adult. Many families living in these poor neighborhoods don't have access to a vehicle.

Although several studies have focused on African Americans and eating behavior, few have tried to contextualize the eating behavior and social-economic influence. Therefore, this study used a mixed method approach as a way of deepening understanding of the factors that promote healthy eating, youth urban agriculture entrepreneurship intentions and life skills for the minority youth in the context of African American culture in the Martindale-Brightwood area of Indianapolis, Indiana.

It can be argued that tools and methods developed for evaluating interventions in different parts of the U.S. may not translate effectively to all cultures. For instance, dietary or entrepreneurship behaviors in predominantly White cities cannot be assumed to be the same as their Martindale-Brightwood counterparts, given different social, cultural, environmental factors involved in both regions. The correct cultural context is crucial to the success of any program and must be sensitive to the beliefs and characteristics of a particular social, ethnic, or age group (Steven, Story & Right, 2003). For minority youth to adopt the entrepreneurship behaviors/intentions and change eating behaviors, youth of Martindale-Brightwood who attend FHC's urban agriculture program require culturally acceptable information, knowledge, and training if they are to make healthy food and nutrition decisions. Results from this study added to the body of knowledge for researchers and also policymakers, and other health and nutrition practitioners will potentially use the information to create educational programs and interventions relevant to the culture.

## 1.8. Research objectives

The overall objective of this research study is to use the Felege Hiywot Center's Urban Farming Program to evaluate the extent to which both community partners and youth-led programs in urban agriculture promote entrepreneurship intentions, life skills, and healthy eating intentions among minority youth attending FHC.

***The sub-objectives include:*** The specific objectives for this research study are to evaluate:

1. The contribution of the FHC program structure in promoting life skills, entrepreneurship intentions, and healthy eating intentions among minority youth attending FHC.
2. The contribution of community partners (sponsors, volunteers and professionals) in promoting life skills, entrepreneurship, and healthy eating intentions among minority youth attending FHC.
3. How individual background factors promote or impede entrepreneurship intentions, life skills, and healthy eating intentions.

## 1.9. Research Questions

1. To what extent do the community partners (sponsors, volunteers, and professionals) promote:
  - a) Life skills
  - b) Entrepreneurship intentions
  - c) Healthy eating intentions?
2. To what extent do individual background factors contribute to:
  - a) Minority youth's entrepreneurial intentions
  - b) Healthy eating intentions
  - c) Life skills

3. What is the contribution of the Felege Hiywot Center to:
  - a) Life skills among the minority youth attending the center
  - b) Entrepreneurship intentions
  - c) Healthy eating intentions

### **1.10. Definitions**

**Entrepreneurship:** A process by which individuals pursue opportunities without regard to resources they currently control. An entrepreneur recognizes an opportunity to make a profit, raises money to open a business, and eventually hires managers to run the business (Rogers, 2010).

**Small business:** An economic enterprise that is independently owned and operated (Blackford, 1991). A small business can also be defined as having a minimum of 250 employees or a maximum of 1,500 employees. These are privately owned corporations, partnerships or sole proprietorships that have less revenue than larger business (Fundera.INC, U.S)

**Food security:** Access to enough food by all people at all times for an active and healthy life (Nord et al., 2007).

**Urban agriculture/farming:** A process of growing, processing, and distributing food and nonfood plants and tree crops and raising livestock, directly for the urban market, both within and on the fringe of an urban area (Mougeot, 2006).

### **1.11. Assumptions**

The study assumed that data were collected using a valid and reliable instrument used before or evaluated by the experts in the field of the study. It assumed also that data collected were age-appropriate for youth participants according to the American definition of youth. Next, the study assumed that participants provided honest answers while completing the questionnaires with no missing data. The fourth assumption was that data collection was done using survey-

questionnaires, and interviews and all responses accurately reflected the participants' thoughts and beliefs.

### **1.12. Limitations**

Some of the limitations for this study include the reliability of the prior youth participants' experience, which can present challenges in interpreting the results from this research study. Limited reliability can occur if the same surveys and interviews are administered multiple times; the minority youth participants might respond differently each time. With this challenge, the results from this study were interpreted cautiously. Second, the study location was unique. Results from this study might differ from one community to another community or location. The third limitation was that the number of participants was small. Therefore, the results might change if what is used in a larger group. The fourth limitation is that some participants might drop out from the study and this might affect the results, especially if they are among the targeted group. The predictive model for this study is also not generalizable to other urban agriculture programs. However, this model might have applications within national youth development programs.

## **2 LITERATURE REVIEW**

### **2.1. Review on African American unemployment**

Oliver and Shapiro (1995) & Pinkney (1989) found that in 1978, the unemployment rate for Blacks was approximately 12.3% compared to 5.4% for Whites. Thirty-three years later, the United States Department of Labor (2012) found that the average unemployment rate for Blacks in 2011 was 15.8% compared to 7.9% for Whites and 11.5% for Hispanics/Latinos. African American unemployment has been a big issue particularly as the U.S. has been struggling to recover from a national recession, which began in 2007. Since the recession, Blacks have experienced higher unemployment rates because of having less education compared to other races (U.S. Department of Labor, 2012). The U.S. Department of Labor (2012) reported that the unemployment rate among Blacks was slower to recover due to low levels of education, yet this group makes up a significant portion of the government workforce, a sector that experienced substantial layoffs during the recession. As the U.S. started to recover from the recession, Blacks remained underrepresented in sectors of work that experienced the greatest growth. For example, the U.S. Department of Labor (2012) shows that Blacks have had minimal success in gaining workforce experience in fast-growing fields such as the manufacturing, professional, and business sectors. The U.S. Department of Labor (2012) also reported that Blacks who became unemployed were less likely to be hired and remained unemployed for longer periods. In 2011 Blacks remained unemployed for a median period of 27 weeks, while Whites had a median period of 19.7 weeks and Hispanics, 18.5 weeks. About 49.5% of all Blacks who were unemployed remained jobless for a minimum of 27 weeks compared to Whites at 41.7% and Hispanics at 39.9% (U.S. Department of Labor, 2012). Prolonged unemployment makes securing a new job more difficult, especially for individuals who don't have a network of family members, friends, and acquaintances who can be utilized for job leads or recommendations (U.S. Department of Labor, 2012).

In recent years, U.S. Department of Labor statistics (2017) reported the overall unemployment rate in the U.S. at 4.9%. However, Blacks had an unemployment rate of 8.4%, compared to Whites at 4.3% and Latinos at 5.8%. The unemployment rate of Blacks, nearly double compared to Whites, has remained consistent regardless of the decline of the unemployment rate in the last several years (U.S. Department of Labor Statistics, 2017). By examining statistics across

gender, race and ethnicity for 2016, U.S. Department of Labor statistics (2017) showed White women had the lowest unemployment rate at 4.2%, with Latina women at 6.3% and Black women at 7.8%. Black men, at 9.1%, had the highest unemployment rate. White women experienced the shortest duration of unemployment, which was captured at less than five weeks, whereas Black women experienced the longest duration, which was captured at 27 weeks and over (U.S. Department of Labor and Statistics, 2017). The difference in unemployment rates can be attributed to discrimination experienced by individuals of various groups, a factor mentioned in different literature (Gill, 2004; Littig, 1968; Oliver & Shapiro, 1995; Walker, 2008).

Besides the overall unemployment rate for their race, Black youth have been also affected by the same challenge of unemployment. The U.S. Department of Labor (2012) reported that Black teens' unemployment climbed to 49.1% during the recession, then declined to 38.5% in 2012. This decline was due to the fact that the Black teens were not working, nor were they looking for employment (U.S. Department of Labor, 2012). Black teens held the highest rate of 33% unemployment compared to Latinos teens at 22.5% and White teens at 17.3% (U.S. Department of Labor, 2015).

## **2.2. Urban farming**

Urban farming can be described as the practice of cultivating, processing, and distributing in and around urban areas (Mougeot, 2006). Urban farming and gardening programs promote social interactions among community members and can be beneficial for social aspects of neighborhoods and the health of individuals. Social ties for those involved in gardening programs influence place-based social processes, which include collective efficacy and feelings of neighborhood social attachment (Kuo et al., 1998). Gardens and public open spaces can hold special meaning to people throughout their lives (Francis, 1995), and this boosts social networks among the participants (Clayton, 2007; Kim & Kaplan, 2004; Kuo et al., 1998). Gardening programs have been shown to benefit communities by improving relationships among people, increasing community pride, and serving as an impetus for broader community improvement and mobilization (Armstrong, 2000; Wakefield et al., 2007). Additionally, gardening programs have been shown to be a positive social influence within neighborhoods and act as a catalyst for other positive place-based social dynamics, such as the generation of collective efficacy (Teig et al.,

2009). It is believed that urban agriculture can be used for beautifying areas and reducing crime in a community by planting fruits, vegetables, and flowers in vacant areas. Removing vacant areas in urban areas through urban farming can increase property values, which can generate more revenue for a city or municipality (Been & Voicu, 2006).

The environmental benefits of urban agriculture are believed to overlap with economic benefits. These environmental benefits can be categorized into two categories — national (local) or international. The production of food in urban areas mitigates the amount of fuel and energy involved in bringing food into the city from very far places. This production system also provides opportunities for growing a greater diversity of crops, as food production in urban farms tends to be geared towards tastes at the scale of the individual or the neighborhood, rather than what will be most profitable on the large scale (Halwell, 2002). By improving urban environments, urban agriculture can help make cities more appealing, luring people away from less sustainable suburbs (Halwell, 2002). Urban farms and gardens are believed to help to absorb stormwater, decrease the urban heat island effect, and improve air quality. By using food scraps and leaves for compost, or by feeding food waste to livestock, city wastes can be reduced (Van Hemert & Holmes, 2008; Deelstra & Girardet, 2000; Brown et al., 2003).

Golden (2013) & Sonti et al. (2016) showed that the presence of urban agriculture programs and enterprises in a community can increase fresh fruits and vegetables consumption by its residents. Relf (2003) also reported that gardens may motivate student learning in different academic subjects because the gardening or farming activities provide more hands-on experience, which helps learners easily transfer and recall what they learned during the activities. Urban farming and community gardens were found to promote entrepreneurship among community residents. Phillips & Wharton (2016) & O'Hara (2017) reported that urban agriculture programs build capacity in the communities where they are located by using urban agriculture and green infrastructure to create jobs, offer education and improve public health. Another study by Golden (2013) showed that in 2013 USDA-funded community food projects had generated 2,300 jobs, incubated over 3,600 microbusinesses, and trained an estimated 3,500 individuals in farming, sustainable agriculture, business management and marketing. The same study also showed that the community food projects employ youth to run gardens and farms, provide paid stipends in addition to skills training, are in neighborhoods where unemployment is high, and serve as a viable

employment catalyst or the basis of entrepreneurship endeavors. The study also showed that participants mentioned that most of the job-related skills they developed were the most significant outcome of their experience.

### **2.2.1. Review of studies for community-based youth agriculture programs**

Community-based youth agriculture programs offer knowledge about food, and positive youth and community development to the participants and residents of a given community. Whether it is through school or community organizations, these agriculture programs foster participants' resilience, civic engagement, youth leadership, food justice, community food security, as well as the practice and teaching of sustainable food cultivation techniques (Caesar, 2012; Heiges, 2017; Krasny and Tidball, 2009; Levkoe, 2006)

Several studies also show that community-based youth agriculture programs are capable of providing a unique educational opportunity for youth and helping them acquire a sense of self, identity and ownership for their neighborhood. For instance, Hung (2004) examined a community gardening program in Brooklyn, New York, that provided the community with fresh and affordable vegetables, preserved public space, and engaged local youth in community development in devastated areas. Semi-structured interviews were conducted with 18 youth interns who worked for the program, which engaged adolescents between the ages of 10 and 16 in cultivating and harvesting the produce and assisted the local farmers market where the produce from the garden was sold. The youth developed a sense of self and identity that demonstrated their importance and valued was to them community, along with new gardening knowledge and interpersonal skills such as how to nurture a garden and how to work with a team to achieve goals. The gardens provided a safe space in the community where youth could interact with each other and with trusted adults. Youth contributed to improving their communities by transforming a place in their neighborhood into something beautiful, offering fresh and inexpensive produce to local residents (Hung, 2004). Sonti et al. (2016) also conducted a follow-up study on the same program in New York, which surveyed 50 alumni who had completed the program in the previous one to nine years. The variables of interest included alumni's academic and career paths and level of civic engagement, as well as their attitudes and behaviors regarding the environment, food, health, community, and

sense of self. The results showed significant positive impacts for interns as a result of involvement in this program (Sonti et al., 2016).

Fulford and Thomson (2013) assessed the impacts of a community garden-based youth internship program in Winnipeg, Canada, on youth and community development outcomes. Through semi-structured interviews with youth and staff, observations and film-based participatory research, the authors found that interns gained leadership and job skills, developed a greater sense of self-esteem, improved nutrition and food security, developed a critical understanding of the food system, showed enhanced environmental awareness and sensitivity, and cultivated a deeper connection to their community. Another case study of Toronto's Food Leadership for Youth (FLY) program at The Stop Community Food Center by Goldstein (2014) evaluated how participation in the program advanced food literacy in the neoliberal and critical levels of consciousness. Results show that regardless of the program's intentions to foster a more critical and holistic understanding of food system issues, 51 more practical skills and knowledge based on individual choice and consumption were most important for the participants (Golstein, 2014; Golstein, 2016).

Wever (2015) applied a critical food pedagogy framework to assess learning outcomes from participation in School Grown, an integrated, agriculture-based youth employment and school program in Toronto. Results show that program participation facilitated elements of critical, emancipatory food literacy as the most mentioned outcomes. Other outcomes included improved interpersonal skills, renewed academic engagement and job skills. One follow-up study in the grey literature that focused on agriculture-based youth development programs was taken from The Food Project, an agriculture and food justice-based youth empowerment program in Boston. Brigham and Nahas (2008) assessed long-term outcomes from participating in The Food Project's youth employment program. The two authors conducted interviews with 30 program alumni to identify the most impactful aspects of their internship experience. The 52 alumni entered the program at age 14 and 15 and were between 18 and 24 years old at the time of the interviews. The outcomes included positive work ethic, empowered sense of leadership, greater appreciation for diversity, heightened understanding of social justice issues, deeper appreciation for food, and enhanced understanding of sustainable agriculture.

Furthermore, McArthur et al. (2010) & Fusco (2001) found that gardening can potentially develop science, work, and life skills. Dirks and Orvis (2005) also evaluated 14 Indiana third-grade Junior Master Gardeners. The study used a mixed-methods approach to evaluate knowledge gained. The pre- and post-test surveys showed significant gains in knowledge and attitude. Qualitative data indicated that the students enjoyed the program, shared what they learned with others and wanted to participate in more JMG and gardening-type activities. In a case study by Pothukuchi (2004), youth were able to grow and take home a variety of vegetables from the Hortaliza community garden in Detroit. After one season, youth demonstrated increased interest in and knowledge of eating fruits and vegetables, nutrition, plant ecology, and gardening. The garden also helped youth make new friends, improve the neighborhood's appearance and work with adults. Waliczek et al. (2000) also found that gardening helped youth participants learn how to grow food, socialize with friends, feel relaxed and safe in a plant environment, learn about plants, improve the home or community, exercise, reduce stress, improve self-esteem, and experience less depression. Robinson & Zajicek (2005) found that youth who participated in a year-long gardening program showed an increase in life skills, teamwork skills, and self-understanding, which encouraged them to become responsible and productive citizens.

### **2.2.2. Review on the role of sponsors and volunteers in urban agriculture programs**

For these urban agriculture programs to run their programs in a sustainable way, most rely on collaborations with professionals, volunteers and sponsors. These individuals play a big role in providing grants, facilitating teaching and running the programs. Studies by Hunold et al. (2017) & Daftary et al. (2015) show that urban agriculture can only be sustainable and meet food justice, social capital and job creation goals with some outside funding. Without it, these programs will not be able to sustain themselves for long. Eslick & Thomas (2010) also showed that financial resources play a big role in sustaining community or urban agriculture programs. Developing a community garden or any urban agriculture program requires grant sponsorship.

Volunteers also are believed to play an important role in these urban agriculture programs. The partnership between these programs and their volunteers eases the burdens of program leaders and coordinators. Henderson & Mapp (2002) showed that volunteers are significant resources in helping create a supportive and welcoming environment in schools and facilitating learners'

behavior and performance. Volunteers in urban agriculture programs help to educate and engage in some activities that increase the hands-on experience. Volunteers act as role models, motivators and mentors who contribute to participants' better school attendance, improved grades, less misbehavior, better social skills, staying in school and going to college. When volunteers are around, the learners take learning seriously. This can lead to a positive attitude towards learning, especially in inner cities where a limited number of the youth manage to go to college. Furthermore, Saldivar-Tanaka & Krasny (2004) showed that community gardens or any other urban agriculture programs rely on leadership, management, and coordination from volunteers and other partners. Wilson & Musick (2000) also showed that volunteers can significantly foster interpersonal trust, toleration, empathy for others, and respect for common good.

### **2.2.3. Review on meaning and evolution of Food deserts in the U.S.**

Food plays a big role in the life of every human being. Food creates communities when equally and freely shared to everyone. On the other hand, when food is unequally shared/distributed or scarce, it kills the body and spirit of families and communities. Food displays us as who we are, who we have been and who we want to be (Counihan & Esterik, 1997). Food also marks social differences, boundaries, bonds, and contradictions (Counihan & Esterik, 1997). The U.S. is believed to be developed and well advanced in terms of its people's well-being. However, its social differences, boundaries, and contradictions are seen in more than 23.5 million of Americans living in food deserts — urban and rural communities with no access or severely limited regular access to healthy and affordable food (USDA, 2009; National Academies Press, 2009).

The concept of food deserts originated in the UK. At the beginning, this simply meant newly built, isolated public housings devoid of viable food shopping for residents (Ford & Dzewaltowski, 2008). The term “food desert” has been used by policymakers, government officials, and researchers to mean low income areas/communities in the U.S. that lack convenient access to healthy food (New York Law School, 2012). Several approaches have been utilized to measure food deserts. In the U.S., the government defines an urban community that lacks access to healthy foods as at least 500 people in the census tract living over a mile from a supermarket (USDA, 2012). The government tracks low-income communities lacking access to supermarkets

and focuses on census tracts with income at least 80% below the average income in the area (USDA, 2012). Mari Gallagher Research and Consulting Groups (2006), defines food deserts as neighborhood blocks that are more distant from grocery stores than other blocks in a city. This research group claims that when fast food restaurants are closer than supermarkets to a neighborhood, people from this neighborhood are more likely to make unhealthy food choices. When researchers label an area as a food desert, they often mean that the people who live in that area lack access to healthy food. Studies show that more than 23.5 million of Americans live in low-income neighborhoods located more than one mile from supermarkets (USDA, 2009).

U.S. surveys and different studies show that more than half of these food-insecure people are African American, and a third are Hispanics. In the U.S., minority populations tend to be more food insecure than Whites. Minority neighborhoods not only have limited supermarkets, but their stores are smaller and often contain higher-priced food and less varied food products than in White neighborhoods. For instance, the City of Detroit, which is 83% African American and 6% of the neighborhood has no chain supermarkets (Smith & Hurst, 2007). The City of Los Angeles, which is predominantly White, has 3.2 times as many supermarkets as predominantly African American areas and 1.7 times as many as predominantly Latino areas (Shaffer, 2002). Residents of predominantly African American neighborhoods in Chicago and Gary, Indiana, travel further to a grocery store than Whites or people in racially diverse neighborhoods (Mari Gallagher & Mari Gallagher Research & Consulting Groups, 2006).

The main causes of food deserts are believed to be government policies and incentives that contributed to racial segregation and discrimination in all U.S. cities (Johnson, 2011). For instance, in 1940 new regulations were implemented whereby low-interest home loans were provided to middle-class White families through the Federal Housing Administration and Veterans Administration, which helped them move from cities to the suburbs (Massey, 2008). Businesses, including supermarkets, followed the Whites, who had good income compared to African Americans or other minority populations (Giang et al., 2008). Minority groups, especially African American families, were not able to access the same interest rate for home loans as White families due to government sanctions, covenants, and discrimination, which left this group struggling in the cities (Massey, 2008). In 1970 northern cities were more populated by African Americans than Whites (Massey, 2008). African Americans, Native Americans, and Latinos who lived in these

cities did not have enough supermarkets and travelled farther to look for food, having limited choices and paying more than Whites (USDA, 2009; Brookings Institution Metropolitan Policy Program, 2006). Local grocery stores in minority-populated areas are likely to be about three times smaller with higher priced food, less fresh produce, and more processed food than in affluent White neighborhoods (USDA, 2009; Brookings Institution Metropolitan Policy Program, 2006; Larson et al., 2009). The intake of food that contains higher fat, salt, and sugar leads to obesity, heart disease, hypertension, and other chronic diseases (Larson et al., 2009; Flegal, 1999, 2008; Treuhaft & Karpyn, 2010).

Poor diet is also believed to impede cognitive development in children, which can result in poor educational outcomes in a community (Univ. of Mississippi, 2001). Supermarkets are a source of employment with several skills sets. The lack of the supermarkets in a community can heavily affect employment opportunities for the people living there without them (Eisenhauer, 2001).

#### **2.2.4. Background of Felege Hiywot Center youth-led urban agriculture program**

The FHC Youth Farm is centered at 1648 Sheldon Street, Indianapolis, Indiana (<https://fhcenter.org/about-felege-hiywot/felege-hiywot-center-history/>). This urban agriculture center grew out of the need for job opportunities for local high school students. Its mission is “to serve urban youth of Indianapolis.” The Center teaches urban farming and environmental preservation as a way of developing future food security and environmental advocates. FHC encourages youth to embrace the virtues of community service. With this, the center believes that youth who grow up loving their community are likely to support and develop it. The Center performs these missions as a way of expressing Christian faith. The center’s vision is to follow Jesus’s guidance in Mathew 25:40: “Truly, I say to you, as you did it to one of the least of these my Brethren; you did it to me.” The center believes as it teaches youth and reaches out to the community, it practices faith and demonstrates Christ’s love among those who are served. Felege Hiywot Center has been an incorporated nonprofit since 2004, although its roots go deep into the 1970s. The Center was founded by Aster Bekele shortly after immigrating to the U.S. She founded the center after seeing the local children in need of a caring and interested adult and began tutoring the children after school. Through the stories she shared about her motherland, Ethiopia, and the

struggle her people go through, children started understanding how privileged they actually were. Since those early days of tutoring, Ms. Aster and FHC have enjoyed giving back to Indianapolis and Ethiopian children in need of someone to care for them and invest in them. In 2004 FHC was incorporated as a 501(c)(3) organization. Over the years, the center has initiated, revised, expanded, and terminated programs as it continues to refine its vision, develop community partnerships, and conduct outreach programs. Currently, FHC focuses on youth farming, the care of orphans, and cultural expression. The youth farming program initiative includes both indoor and outdoor gardening. The orphanage program extends to Aster's homeland of Ethiopia, and the cultural programs celebrate both American and Ethiopian traditions. The farm is completely youth-led and provides meaningful job opportunities where students develop business, environmental, and life skills.

Through farming, the center teaches youth of Indianapolis how seeds grow into plants; how to care for the garden; how to be environmentally responsible; and how to prepare, eat and share produce from the farm. The lessons taught at the center extend beyond the farm and shape the way youth embrace their roles in the community. Programs at FHC are designed to keep students involved in the community long after they graduate from high school. Once these youth graduate, they become mentors, tutors, and farm leaders because they want to continue the FHC mission. Students in the Youth Farm Initiative work side by side cultivating crops, growing friendships, and developing life skills. FHC also teaches high school students the importance of service, leadership, teamwork, and knowledge. The Youth Farm Initiative is youth-led and provides experiential learning opportunities, implementation of real-world life and business principles, service to the community, and an outlet for local agriculture.

The farm focuses on four areas: STEM Education, Job Opportunities, Sustainability and Food Production. For STEM Education, the farm offers hands-on agriculture and business activity by applying inquiry-based science curriculum to reinforce state academic standards. For Job Opportunities, the farm creates a work environment full of learning opportunities and allows students to market and sell the produce they grow. For Sustainability, the farm visually demonstrates innovative and environmentally sustainable uses of current and future vacant urban spaces. For Food Production, the FHC farm generates fresh, sustainable produced food for neighborhoods with health issues and heightened food insecurity.

### **2.2.5. Review on the contribution of professionals and guest speakers on youth's career choices**

Guest speakers and other professionals with different career backgrounds are believed to assist youth in finding their career paths. Raffo & Reeves (2000) showed that external speakers are capable of providing social capital, even temporarily, expanding young people's personal networks by giving them access to a larger number of professionals with more varied types of experience than would be available from family-based social networks. Granovetter (1995) showed that these interventions can increase access to trusted information about the availability of economic opportunities and suitability of application for potential jobs. Young people can potentially convert the temporary social capital offered by guest speakers and other professionals into substantive cultural capital through listening and engaging in talks and meeting with the professionals who might become role models. The interactions and talks between youth and these professionals help youth build up different attitudes and expectations about their future path and help them develop confidence about how they might progress along that path.

Results from survey data by Rehill et al. (2017) show that youth strongly value volunteers with direct experience in jobs they speak about. Mann & Caplin (2014), after analysis of data from several hundred teenagers, found that career information from direct interactions with employers was perceived to be of more value to the young people thinking about their career choices than information gathered from close ties such as parents or friends or from online or media. In 2019 Education and Employers published the results of a three-year research project linked to a particular type of guest speaker, careers talk, and students' attitudes and General Certificate Secondary Education (GCSE) results. The study, a randomized trial of about 650 young people in England, analyzed the impact of three career talks conducted in the months leading up to GCSEs. The study found a 9% higher increase in weekly revision hours compared to peers in the control group, which contributed to outperformance vs. predicted grades in English, math, and science — the equivalent of one student in a class of 25 beating all their predictions by one grade as a result of the career talks. The study shows that the talks influenced students' thinking about their future: about 7% of the students said that they changed their future plans as a result of the talks, while 20%-28% questioned their career and education choices. Results also showed that attitudes towards self-efficacy, the relevance of education, and self-confidence improved after the talks, particularly among young people who initially had been least engaged (Kashefpakdel et al., 2019)

One of the aims of the FHC urban agriculture programs is to expose its youth to different professionals with different career paths so these youth can explore what might be suitable for them. FHC has a strong partnership with Purdue University and other local institutions, including Timmy Global Health and Marion County Extension. These professionals are often invited to engage with minority youth from the inner-city neighborhood of Martindale-Brightwood who have limited exposure to different careers.

#### **2.2.6. Review on the role of urban agriculture programs on life skills**

Boyd et al. (1992) found that youth who engage in youth programs such as urban agriculture and 4-H can potentially develop stronger leadership skills further than peers who are not involved in youth programs. Branas et al. (2011) found that natural spaces such as gardens can be buffers to soften emotional stressors and stabilize moods and anxiety. Lautenshlager & Smith (2007) showed that the gardening participation by youth helps them to create a sense of place while developing decision-making and problem-solving skills within an environment of teamwork. The same study found that urban agriculture has potential in providing unique opportunities to encourage creativity, problem solving, nurturing, nutrition, failure and success in a safe and social environment. Sandler, et al. (1995) used a gardening program that involved service learning as the primary teaching method and incorporated problem solving, design and research into the garden design and implantation. Their study reported that participants had a greater cultural awareness and improved academic success.

Urban agriculture is believed to be a perfect laboratory where scientific concepts literally come to life. Lessons in biology, the scientific method, interdependence, and meteorology take place in an authentic environment that stimulates curiosity in a way textbook learning cannot (Mohrmann, 1999). Rahm (2001) found that youth who participated in community youth gardening programs were able to describe plant growth needs, plant growth characteristics, and the uses of different plants that were growing in the garden. Nine of the 12 studies reviewed by Blair (2009) showed a positive relationship between increases in science achievement and presence of an integrated gardening program at the school. Shinew et al. (2004) found that leadership development nonprofit organizations use urban agriculture to provide leadership development skills. The same study found that community gardens have the power to transform

neighborhoods and build self-confidence and leadership skills among youth who engage in such programs. Voluntad et al. (2004) also found that the intent of these programs is to provide a positive place for constructive activities to steer youth from risky behaviors such as crime, substance abuse, suicide, and sexual activity.

### **2.2.7. Review on how the Entrepreneurship skill is acquired**

Entrepreneurship is viewed as a factor that boosts the economy and creates jobs for many nations across the globe (Smith & Chimucheka, 2014). The word “entrepreneurship” is a complex and multifaceted phenomenon with varying definitions (Kannadhasan et al., 2014). According to Burg & Romme (2014), entrepreneurship is a way that entrepreneurs capitalize on opportunities to actively engage in creating, building, and expanding an enterprise to bring about a new economic, social and cultural environment. Entrepreneurship is a simplified definition of a process with pre-launch phases where opportunity recognition and planning take place; a launch phase where an entrepreneur executes a plan based on gathered resources available; and a post-launch phase whereby an entrepreneur strategically manages a new venture in such a way that it grows and survives (Frese & Gielnik, 2014). Other opportunities in entrepreneurship offer the creation and development of new technology and industries (Woolley, 2014), and also the reduction of poverty and unemployment (Alvarez & Barney, 2014; Fairlie, 2013a).

Fairlie & Meyer (2000), using a regression analysis and decomposition methodology, found that racial convergence in education levels and demographic trends did not have large effects on the trend in the racial gap in the self-employment rate. The study found that a large racial gap in self-employment throughout the 20<sup>th</sup> century was primarily due to low Black self-employment rates in all industries, not because of Blacks being over-represented in sectors characterized by low self-employment. Their empirical findings indicated that neither small wages nor the initial lack of business experience could help explain low levels of Black self-employment. While factors such as low educational levels, low asset levels, smaller probabilities of having self-employed parents, demographic trends, and discrimination have been cited as causes of limited entrepreneurship in African American communities, some social capital literature that addresses African American entrepreneurship focuses on African American culture as the primary reason for the scarcity of black entrepreneurs. Light (1980) argued that Black communities are too individualistic and lack networking and solidarity that support business in their communities. In

comparing African Americans and Asian Americans, “Asian Americans are considered to be classic small-business stories, while scholars and journalists often address black entrepreneurship by asking them what’s going wrong with blacks” (Bates, 1997).

However, several studies indicate that individuals who are involved in entrepreneurial education programs are more likely to become entrepreneurs than those who are not (Solesvik, 2013). Fayolle & Gailley (2013) showed that entrepreneurial training and educational programs assist in strengthening entrepreneurial intention and motivation, while also serving to mitigate the lack of prior business ownership (Bruhn & Zia, 2013). Sanchez (2013) conducted a study of 729 secondary school (high school) students in Spain to explore the role of entrepreneurship education in increasing competencies and motivations to become self-employed. The study concluded that entrepreneurial education has a positive impact on entrepreneurial motivation and intent among secondary (high school) students. A study by Gibson et al. (2014) examined the entrepreneurial attitudes of 93 African American business students and found these students were more motivated to become entrepreneurs than before taking the program. Below, a brief discussion of the theory of planned behavior explains how entrepreneurship, healthy eating intentions, and life skills can be achieved, and what factors lead to the intentions in the context of youth-led programs in urban agriculture.

### **2.3. Connection of Theory and Programming**

This study predicted the intentions of youth participating in urban agriculture programs from low-income families living in Martindale-Brightwood, Indianapolis, Indiana, U.S.A. for entrepreneurship, healthy eating intentions, and life skills by applying the Theory of Planned Behavior (Ajzen, 1988).

This study used Theory of Planned Behavior (TPB) and its conceptual framework as a way of answering the three research questions. The aim of this theory was to predict and understand any motivational factors that influence intentions not under the individual’s volitional control. Understanding behavior means identifying and manipulating the antecedents of behaviors; once this is achieved, behavior change is promised (Ajzen, 1988; Ajzen & Icek, 1991). This theory suggests that an individual’s beliefs about performing a behavior influences their behavior intentions (Ajzen, 2005). The theory has the following assumption: Intention is an immediate

antecedent of actual behavior. This intention is also determined by the attitudes toward a behavior and subjective norms and perceived behavioral control. All these factors are formed by an individual's set of beliefs relating to each component. Both behavior and normative and control beliefs are determined by an individual's background, culture, demographics, and experiences (Ajzen, 1991, 2005).

The rest of this section will discuss aspects of TPB that apply to this study. In addition to the constructs of TPB discussed here, specific aspects of TPB were reviewed in further detail. These aspects included behavioral beliefs, normative beliefs, and control beliefs. Each of these will be discussed below.

**Behavioral beliefs.** Behavioral beliefs are the connection a person establishes between a given behavioral trait and the behavior it produces. Ajzen (1991) suggested that an individual may have many beliefs regarding a behavior; however, some of those beliefs are readily accessible. Accessible beliefs work together with subjective understanding of the outcomes, which are said to be produced by the behavior, which in turn develops the individual's attitude toward a specific behavior. An individual's level of behavioral beliefs and his/her attitude toward behavior can be positively or negatively affected (Ajzen, 1991). The individual's attitude toward a certain behavior has a direct impact/influence on his/her behavioral intention.

**Normative beliefs.** Normative beliefs are an individual's perception of other closely related/associated people and a group's beliefs regarding a specific behavior. Some of these people include friends, families, relatives, role models and mentors, and workmates, depending on behavior. A person's motivation to perform a certain behavior depends on his/her perception, which ends up establishing his/her individual subjective norms. According to Ajzen (1991), an individual who has strong subjective norms is highly likely to have a strong behavioral intention when these referents are for the behavior. On the other hand, a person whose referents don't align with the given behavior have weak subjective norms and are less motivated. As a result these individuals exhibit lower levels of behavioral intention (Ajzen, 1991).

**Control beliefs.** Control beliefs are based on everything a person believes that can encourage or discourage a behavior change. Stronger control beliefs and perceived power permits an individual to believe that he/she can perform a behavior. On the other hand, weaker control

beliefs and perceived power can easily block an individual's performance of a behavior (Ajzen, 1991).

The Theory of Planned Behavior has been used in several studies to predict entrepreneurship intentions. Varamaki et al. (2013) used this theoretical framework to investigate the relationships of entrepreneurship with entrepreneurial education, pedagogy, and antecedents of entrepreneurship intention. Data was collected in two periods; a self-report measure and a follow-up as a way to check the impact of entrepreneurship education on entrepreneurship intention (Varamaki et al., 2013). The study concluded that the theory of planned behavior model was enough to predict entrepreneurship intention. There was also a positive significant relationship with attitude toward entrepreneurship. A study by Karimi et al. (2013) was similar but focused on the role of the role models in boosting intention toward entrepreneurship. Positive significant findings and antecedents predicted the entrepreneurship intention. In other words, the role models indirectly predicted the entrepreneurship intention (Karimi et al., 2013). Using the TPB model, Tkachev & Kolvereid (1999) investigated the employment status choice intentions of students at three universities. Demographics such as parents being entrepreneurs, gender, and past entrepreneurial work experience were examined as a way of understanding the role these variables play in determining the intention to become self-employed. Results from the study showed that self-employment attitude, subjective norms, perceived behavioral control, and self-employment experience are significant predictors of employment status choice intentions (Tkachev & Kolvereid, 1999).

Similarly, many studies on changing eating behavior have used the theory of planned behavior. Its conceptual framework provides a meaningful measurement that processes the relationship between beliefs, attitudes, subjective norms, intention, and behavior toward eating healthy. Chan & Tsang (2011) showed that perceived behavioral control, attitudes toward healthy eating and subjective norms predicted 45% of the variance in behavioral intention. Fila & Smith (2006) studied healthy eating behavior and found that boys' subjective norms and perceived behavioral control explained 30% of the variance in behavior. For girls' barriers, attitudes, self-efficacy, and subjective norms predicted 45% of the model. The study concluded that the most predictive barrier to healthy eating was the availability and taste of foods (Fila & Smith, 2006). A study by Martens et al. (2005) of high school students on the relative importance of personal and

social environmental predictors of their consumption of fruit, high-fat snacks and breakfast concluded that for all three behaviors, a more positive attitude and subjective norms were associated with a higher intention to change. In other words, more positive self-efficacy expectations were associated with a higher intention to increase fruit intake. Chan et al. (2009; 2011) found that regarding subjective norms, family members played a big role in encouraging adolescents to eat healthily.

## 2.4. Conceptual Framework

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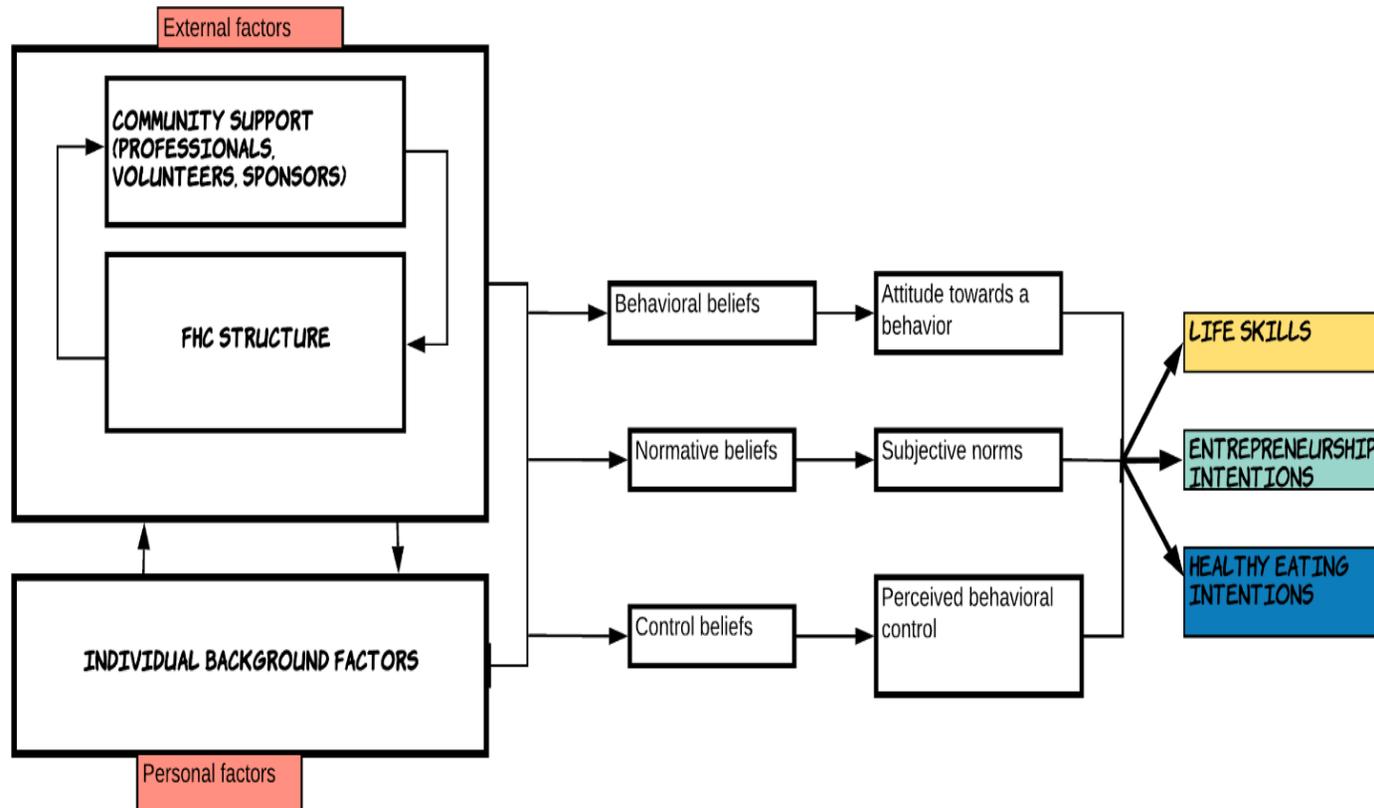


Figure 2. Conceptual framework for entrepreneurship, healthy eating intentions, and life skills adopted from Ajzen, & Fishbein (2005) model.

The conceptual model for this study was informed by the Theory of Planned Behavior adopted from Ajzen & Fishbein (Figure 1). The model is based on the premise that a predictor of entrepreneurship and healthy eating intentions, and life skills is influenced by attitude, subjective norms, and perceived behavior; and all these independent variables lead to intentions toward entrepreneurial and healthy intentions and life skills. The next parts will discuss aspects of my conceptual framework, which includes self-efficacy, intentions, personality traits, and socio-cultural factors in more detail.

In addition to attitudes and subjective norms that make up the theory of reasoned action, the theory of planned behavior adds the concept of perceived behavioral control, taking its origin from self-efficacy theory (SET). Self-efficacy was suggested by Bandura in 1977 and came from social cognitive theory (Bandura, 1977). From Bandura's point of view, motivation, performance, and feelings of frustration associated with repeated failures are responsible for effect and behavioral reactions. Furthermore, perceived behavioral control refers to the degree to which a person believes that he/she can control any given behavior. From the theory of planned behavior, individuals are much more likely to intend to enact certain behaviors when they feel they enact them successfully (Ajzen & Fishbein, 2005). Increased behavioral control is a mix of two dimensions — self-efficacy and controllability. Self-efficacy is one's beliefs and their own ability to succeed in performing a behavior. Controllability refers to external factors and one's belief that they personally have control over the performance of the behavior. High perceived behavioral control leads to increased confidence that the same person can perform a specific behavior and succeed (Ajzen & Fishbein, 2005).

#### **2.4.1. Self-efficacy**

Self-efficacy is part of the theory of planned behavior. This piece simply shows one's beliefs and ability to succeed in performing a behavior. For instance, a person might have opportunity and skills, but if he/she does not believe that he/she can succeed in performing a behavior, the behavior will not be performed.

An individual's self-efficacy is defined as a person's belief in his/her capability to perform a task (Gist, 1987). This condition influences the complex process of new venture creation. The concept of self-efficacy is believed to play an important role in entrepreneurial development and

healthy eating intentions and actions (Bandura, 1977a, 1977b, 1982). Individuals develop attitudes toward performing a given behavior based on their beliefs that performing the behavior will lead to certain consequences and the normative beliefs about behavior (Boyd & Vozikis, 1994). If a person wants to perform a given behavior or a task, the only way to know that behavior or task will be performed is to ask the same person if he/she is intending to perform that task or behavior (Fishbein & Ajzen, 1975). The relationship between intention and behavior to perform a task includes the degree to which an intention and behavior are measured at the same level of specificity; the stability of the intention over time; and volitional control, or the degree to which the person is able to carry out the intention (Ajzen, 1987; Fishbein & Ajzen, 1975).

The relationship between intention and behavior can be influenced by personal factors like skills, abilities, and willpower; and environmental factors like time limits, task difficulty, and the influence of other people through social pressure (Ajzen, 1987; Tubbs & Ekeberg, 1991). Ajzen (1987) showed that the perceived ease or difficulty of performing a behavior can reflect the individual's past experience and anticipated future obstacle. Self-efficacy affects a person's beliefs regarding whether or not certain goals may be attained. Choices, aspirations, effort, and perseverance in the face of setbacks are all influenced by the self-perception of one's own capabilities (Bandura, 1991). If a person perceives a certain behavior to be beyond their ability, he/she will not act, even if there is a perceived social demand for that behavior. Self-efficacy is acquired gradually through the development of complex cognitive, social, linguistic and/or physical skills obtained through experience (Bandura, 1982; Gist, 1987). The acquisition of skills through past achievements reinforces self-efficacy and contributes to higher aspirations and future performance (Herron & Sapienza, 1992). Individuals develop and strengthen beliefs about their efficacy through mastery experiences, modeling (observational learning), social persuasion, and judgments of their own physiological states (Bandura, 1982; Wood and Bandura, 1989).

The most effective way for individuals to develop a strong sense of self-efficacy is through mastery experiences or repeated performance accomplishments (Bandura, 1977a, 1982; Gist, 1987; Wood & Bandura, 1989). Enactive mastery provides conforming experiences that contribute to positive estimations of future performance (Lent & Hackett, 1987). However, when people experience only easy successes, they become quickly discouraged by failures when they occur. To gain a more stable and resilient sense of self-efficacy, it is necessary to have direct experience in

overcoming obstacles through effort and perseverance (Wood & Bandura, 1989). Performance setbacks serve the useful purpose of teaching that sustained effort is usually necessary for success. In addition, if people develop a sense of confidence in their capabilities through experiencing success and failure, setbacks may be more effectively managed (Wood & Bandura, 1989).

Vicarious experience, or observational learning through modeling, provides a slightly less effective method of strengthening self-efficacy (Gist, 1987; Wood & Bandura, 1989). Proficient role models convey effective strategies for managing situations, and they affect self-efficacy through a social comparison process (Wood & Bandura, 1989). That is, people form judgments of their own capabilities by comparing themselves to others. Through observational learning, an individual estimates the relevant skills and behavior used by a role model in performing a task, approximates the extent to which those skills are similar to his or her own, and infers the amount of effort versus skill that would be required to reach the same results (Gist & Mitchell, 1992). The effect of modeling is enhanced when there is a perceived similarity between the subject and model in terms of personal characteristics and capabilities, and when the modeled behavior produces obvious consequences or results (Gist, 1987; Bandura, 1977a).

The third way in which self-efficacy may be strengthened is through social persuasion. Persuasive discussions and specific performance feedback may be used to provide information regarding a person's ability to perform a task (Gist & Mitchell, 1992). If people receive positive feedback and realistic encouragement directed at convincing them that they can perform tasks, they may be more likely to extend greater effort (Gist, 1987; Wood & Bandura, 1989). However, the only issue with this method is that beliefs of self-efficacy may be increased to unrealistic levels. Social persuasion therefore should incorporate the assignment of tasks that develop self-improvement (mastery experiences) to ensure success for performing any tasks. In addition, it is crucial to consider factors such as the credibility, expertise, trustworthiness, and prestige of the persuading person when evaluating the usefulness of persuasive information (Bandura, 1977; Gist & Mitchell, 1992). Formation of self-efficacy is influenced by the individual's assessment of the availability of resources constraints, both personal and situational, that may affect future performance (Ajzen, 1987; Gist & Mitchell, 1992).

One factor that impedes self-efficacy is anxiety, which may be viewed as debilitating fear that will increase the likelihood of failure and lower self-efficacy expectations (Gist, 1987; Stumpf,

Brief, & Hartman, 1987; Wood & Bandura, 1989). General physical condition, personality factors, and mood may affect self-efficacy by influencing the arousal a person experiences when confronted with a task (Gist & Mitchell, 1992). Anxiety levels contribute to low self-efficacy expectations (Stumpf et al., 1987). To strengthen perceptions of self-efficacy, people should take steps to enhance their emotional and physical status and reduce stress levels (Gist, 1987; Wood & Bandura, 1989).

#### **2.4.2. Intentions**

Individual intentions reflect a person's willingness to pursue a given behavior, while perceived control considers the realistic constraints and limitations that may exist. Krueger (1993) suggests that perceived feasibility — the degree to which a person feels capable of successfully starting a business — is an important antecedent to the formation of entrepreneurial intentions. However, self-efficacy is a broader construct that provides insight into the sources of efficacy judgments that subsequently influence behavior and goal attainment. That is why self-efficacy is often proposed as an important explanatory variable in determining both the strength of entrepreneurial intentions and the likelihood that those intentions will result in entrepreneurial actions (Boyd & Vozikis, 1994). Ryan (1970) also shows that self-perception, or the way in which a person perceives his or her abilities and tendencies, plays a role in development of intentions. Below are brief descriptions for different skills required for a successful entrepreneur.

**Background factors.** According to a reasoned action approach, the major predictors of intentions and behavior are behavioral, normative, and control beliefs. However, a multitude of other variables can highly influence people's beliefs (Ajzen, 2005). Such variables include age, gender, ethnicity, socioeconomic status, education, nationality, religious affiliation, personality, mood, emotion, general attitudes and values, intelligence, group membership, past experiences, exposure to information, social support, and coping skills (Ajzen, 2005). Background factors influence intentions and behavior indirectly by their effects on behavioral, normative, or control beliefs and, through these beliefs, on attitudes, subjective norms, or perceptions of control (Ajzen, 2005). Corner & Flesch (2001) found that men had significantly stronger intentions to have casual sex than women. Another study by Fishbein et al., (2002) assessed several background factors including time spent with friends who tend to get into trouble, sensation seeking, and parental

supervision. It found that intentions to smoke marijuana increased with the amount of time spent in the company of friends who tend to get in trouble and with sensation seeking and decreased with amount of parental supervision.

### **2.4.3. Personality traits**

Personality traits, the traits an individual is born with, have been used as one of the factors that predict entrepreneurship intentions. Entrepreneurship intentions and behavior are likely to take place if an individual has these traits. On the other hand, it might be difficult for an individual to become an entrepreneur if these traits are absent.

Several studies have tried to compare entrepreneur and non-entrepreneur managers to explore differences in personalities between these two groups. Studies by Stewart & Roth (2001; 2004), show that entrepreneurs are higher in risk-taking propensity than ordinary managers from different institutions and entities. Collins et al., (2004) & Stewart & Roth (2006) showed that entrepreneurs are more highly motivated to achieve success than other ordinary managers. In other words, if you compare two managers, one who is an entrepreneur and another who is just a manager for an institution, the entrepreneurial manager will be more highly motivated to achieve success than the ordinary manager. Zhao & Seibert (2006) used the Five Factor Model of personality to categorize diverse range of scales on personality and entrepreneurial status. Their study showed that entrepreneurs are higher on conscientiousness, emotional stability, and openness to experience, and lower on agreeableness, than ordinary or non-entrepreneurial managers. The most important common experience found in most entrepreneurs that is linked to entrepreneurship intention is when a potential entrepreneur finds and manages his/her own business (Bird, 1988; Krueger et al., 2000).

It is believed that founding and managing a new business venture requires an entrepreneur to fulfill a number of unique tasks, demands or work roles. These include innovator, risk taker and bearer, executive manager, relationship builder, builder, risk reducer, and goal achiever (Chen et al., 1998). Also, individuals are attracted to entrepreneurship because of a self-perceived match between their own personality traits and the task demands of entrepreneurship. In other words, people who have higher personality trait for entrepreneurship are more likely to be successful entrepreneurs; these individuals are more likely to engage in the type of behaviors called for and

will do so with less conscious effort or strain, and will be more satisfied, committed, and motivated in those situations (Zhao et al., 2010). Among personality traits that determine a successful entrepreneur are these six explained below.

**Conscientiousness.** Studies show conscientiousness to be a personality dimension that describes an individual's level of achievement, work motivation, organization and planning, self-control and acceptance of traditional norms, and virtue and responsibility toward others (Costa & McCrae, 1992; Roberts et al., 2005). In previous work on achievement motivation, individuals who score high on need for achievement are attracted to work situations in which they have personal control over outcomes, face moderate risks of failure, and experience direct and timely feedback on performance. These individuals are attracted to entrepreneurship because it provides more of these conditions than most traditional forms of employment (McClelland, 1961). Other traits under the conscientiousness dimension such as goal orientation and perseverance also are associated with entrepreneurial behavior. Markman & Baron (2003) show that perseverance is called for by entrepreneurial work, while other researchers have emphasized the importance of motivation, perseverance, and hard work (Chen et al., 1998; Baum & Locke, 2004). Locke (2000) found that work goal orientation, hard work, and perseverance to achieve one's goals in the face of daunting obstacles are closely associated with entrepreneurship in the popular imagination.

**Openness to experience.** Openness describes someone who is intellectually curious, imaginative, and creative, and who seeks out new ideas and alternative values and aesthetic standards. McCrae (1987) showed this phenomenon is correlated with aspects of intelligence related to creativity like divergent thinking. According to Schumpeter (1942;1976), entrepreneurship is characterized by creativity and proclivity, which results in an innovative change. Locke (2000) regards entrepreneurs as heroes who pursue their creative vision even in the face of overwhelming resistance from more conventional thinkers. Ciavarella et al., (2004) and Morrison (1997) also found that success in a critical early task of entrepreneurship opportunity recognition is likely to be related to imagination, creativity, and openness to new ideas. Successful entrepreneurs are also likely to rely on their creativity to solve day-to-day problems and formulate strategies using the limited resources at their disposal (Baron, 2007; Schumpeter, 1942, Schumpeter, 1976; Zhao and Seibert, 2006). Barrick & Mount (1991) found openness to be related to performance in learning situations such as school and workplace training. Therefore, most

successful entrepreneurs are likely to require constant information monitoring and learning to keep up with changing tastes and market trends, competitor behavior, and new technologies.

**Emotional stability.** Baron (1999) & Locke (2000) found that entrepreneurs in both popular imagination and academic literature are described as hardy, optimistic, and steady in the face of social pressure, stress, and uncertainty. These individuals are capable of resisting both physical and emotional burdens. They are also capable of pressing on where others might be discouraged by obstacles, setbacks, or self-doubt. In contrast, individuals with low emotional stability feel vulnerable to psychological stress and experience a range of negative emotions more frequently and intensely, which include anxiety and worry, depression, and low self-esteem (Zhao et al., 2010). These individuals are sensitive to negative feedback and tend to become discouraged by small failures. In a difficult situation, they feel worried, hopeless, or even panicked.

Entrepreneurs also experience pressures that include a heavy personal workload, critical decision making with little precedent as a guide, and often considerable financial consequences at stake, but they can manage pressure. On the other hand, those low on emotional stability are unlikely to want to take on the personal responsibilities and strains associated with the entrepreneurial role. A study shows that emotional stability consistently and positively is related to job performance across occupations (Barrick et al., 2001). The role of and tasks done by an entrepreneur are more challenging than in most traditional employment because starting and opening one's own business involves new and unanticipated and uncontrolled challenges, highly uncertain outcomes, and high personal stakes in the outcome (Zhao et al., 2010). It is believed that high levels of anxiety, depression, and negative moods such as anger, hostility, and depression are likely to interfere with one's ability to make sound decisions, put in the amount of effort required, persist in the face of obstacles or criticism, and effectively lead and influence others (Zhao et al., 2010). Judge et al. (2002) showed that emotional stability is positively related to leadership emergence and effectiveness, which contribute to the success of an entrepreneur. Costa and McCrae (1992) showed that entrepreneurs with high emotional stability are more likely to cope with problems and high stress through positive thinking and direct action. These individuals behave in a calm and confident manner and focus on the tasks at hand, even under stress. This is likely to help them to perform better in the entrepreneurship role.

**Extraversion.** People with a high level of extraversion are gregarious, outgoing, warm, and friendly. These individuals are likely to be more energetic, active, assertive, and dominant in social situations. They experience more positive emotions and are optimistic, and always seek excitement and stimulation. Studies by Baron (1999) & Locke (2000) show that assertiveness, energy, a high activity level, and optimism are traits associated with people who have potential in becoming entrepreneurs. Extraverts like careers that are more stimulating and exciting than many other traditional business occupations. They are also viewed as the leaders of their new venture teams (Vecchio, 2003). Extraversion and its associated components like energy, assertiveness, and sociability are associated with people's implicit perceptions of the leadership role (Lord et al., 1986). Markman & Baron (2003) showed that many of the tasks engaged in by entrepreneurs are likely to involve social interaction, which include communication of vision and enthusiasm, building networks with outside backers and other constituents, establishing relationships among employees and partners, and negotiating deals with suppliers and customers.

**Agreeableness.** People with a high level of agreeableness are often believed to be trusting, altruistic, cooperative, and modest. These individuals show sympathy and concern for the needs of others and tend to defer to others in the face of conflict. A person low on agreeableness can be described as manipulative, self-centered, suspicious, and ruthless. Barrick et al. (2003) showed that people with high agreeableness are more likely to have career interests in social occupations such as social work and teaching, rather than business, because those occupations provide frequent interpersonal interactions where they can work for the benefit of others. On the other hand, entrepreneurs involved in establishing a for-profit enterprise that is built around the entrepreneur's own needs and interests (Singh & DeNoble, 2003). These individuals have to work hard for the survival of the new business, sometimes to the detriment of previous employers, partners, suppliers, and even one's own employees (Zhao et al., 2010). Highly agreeable people are unlikely to find the entrepreneurial role attractive because of limited leeway for altruistic behavior and the high likelihood of guarded and conflicting interpersonal relationships associated with entrepreneurship (Zhao et al., 2010). The major factor for entrepreneurs having low agreeableness is that entrepreneurs have only very limited resources and a small margin for error, and often do not have a long-term knowledge or experience with business partners, clients, or investors where trust could be reasonably developed (Zhao et al., 2010). Zhao & Seibert (2006) showed that the

ability to drive hard bargains, look out for one's own interests, and even manipulate others may be more important skills for survival and growth for an entrepreneur.

**Risk propensity.** This personality trait involves the willingness to pursue decisions or courses of action involving uncertainty regarding success or failure outcomes (Jackson, 1994). Baron (1999) & Chen et al. (1998) found that risk propensity is associated with people's stereotype of the entrepreneur. A strong propensity for risk may lead the entrepreneur to gamble firm resources on new and untested products, technologies, markets, or strategies when persistent exploitation of a known competitive advantage would be more effective (Zhao et al., 2010).

#### **2.4.4. Socio-cultural factors**

Several studies show that entrepreneurship intentions are also linked to social-cultural factors. Aldrich & Zimmer (1986) showed that entrepreneurship is embedded in a social context. Both studies done by Organization for Economic Co-operation and Development (OECD) and European Union (EU) show that social and cultural factors influence an individual's career choice to be an entrepreneur and to create a new business (European Commission, 2004, 2006; OECD, 1998, 2000). Studies show that entrepreneurs have to have a wide range of casual contacts (Aldrich & Zimmer, 1986; Birley, 1985), suggesting that a variety of trusted social linkages is an important prerequisite to developing an entrepreneurial idea (Shane, 2000), the decision to be an entrepreneur (Reynolds, 1991), and for garnering the resources to start a new business (Shane & Cable, 2002).

**Social networks.** Social networks are defined by a set of actors and a set of linkages between those actors (Brass, 1992). Social networks are the relationships through which one receives opportunities to use financial and human capital — relationships in which ownership is not solely the property of an individual but is jointly held among the members of a network (Burt, 1992). Social networks also can define the perception of a community, whether a business community or a more general notion of community in society (Anderson & Jack, 2002). Portes & Landolt (2000) showed that exclusion of outsiders, excess claims on group members, restriction on individual freedoms, and downward leveling of norms are the negative consequences of social capital. The same authors found that the same strong ties that enable group members to obtain privileged access to resources bar others from securing the same assets (Thornton et al., 2011). The particular preferences granted to members of a clan or circle of friends are commonly at the

expense of the universalistic rights of others. This phenomenon of unequal rights to entrepreneurial resources often frames the differences among ethnic entrepreneurial groups, or among entrepreneurs in different regions or countries (Thornton et al., 2011). Studies show that although entrepreneurs might hold some of the resources necessary to create a business, generally they need complementary resources, which they obtain through their contacts to produce and deliver their goods or services (Aldrich & Zimmer, 1986; Cooper et al., 1995; Greve & Salaff, 2003; Hansen, 1995; Ribeiro-Soriano & Urbano, 2009; Teece, 1987).

**Culture.** There are environmental patterns for behavior that lead to the formation of different cultural values in different societies, some of which influence the decision to create new business. Therefore, culture as distinct from political, social, technological, or economic contexts, has relevance for economic behavior and entrepreneurship (Shane, 1993; Shapero & Sokol, 1982). Cultural values are defined as the collective programming of the mind that distinguishes the members of one human group from another and their respective response to their environments (Hofstede, 1980). Cultural differences across societies can be reduced to four quantifiable dimensions: uncertainty avoidance, individualism, power distance, and masculinity (Hofstede, 1980; 2001). Uncertainty avoidance represents preference for certainty and discomfort with unstructured or ambiguous situations (Thornton et al., 2011). Individualism stands for a preference for acting in the interest of one's self and immediate family, as distinct from the dimension of collectivism, which stands for acting in the interest of a larger group in exchange for their loyalty and support (Thornton et al., 2011). Power distance represents the acceptance of inequality in position and authority between people (Thornton et al., 2011). Masculinity stands for a belief in materialism and decisiveness rather than service and intuition (Thornton et al., 2011). A study by Hayton et al. (2002) shows that entrepreneurship is facilitated by cultures high in individualism and low in uncertainty avoidance, and low in power-distance and high in masculinity. Major domains of life and how they affect entrepreneurial behavior are conceptualized and measured in the context of distinct institutional orders such as family, religions, market, professions, state, and corporation (Thornton, 2004; Thornton & Ocasio, 2008). These institutional orders embody competing and conflicting sources of norms, values, legitimacy, and justifications of worth that have consequences for supporting or discouraging entrepreneurial behavior (Thornton et al., 2011). The family and the market as institutional orders embody values that organize behavior and knowledge in quite different ways.

A typical example for this argument performed by Friedland & Alford (1991). Acting as if to sell a used car at the family dinner table would draw scorn, while treating a used car salesman like a family member would lead to exploitation. The simile illustrates that individuals and organizations have the capacity to loosely couple and manipulate elements of culture using them strategically as if they were a tool kit (Boltanski & Thevenot, 1991; DiMaggio, 1997; Swidler, 1986; Thornton, 2004). Scott (2008) suggested that institutions consist of cognitive, normative, and regulative structures and activities that provide stability and meaning in social behavior. Institutions are the game in a society that function as constraints and opportunities shaping human interaction (North, 1990). These institutions represent the set of rules that articulate and organize the economic, social, and political interactions between individuals and social groups, with consequences for business activity and economic development (Díaz et al., 2005; Veciana & Urbano, 2008).

**Institutions.** According to North (1990), institutions can be formal, such as political and economic rules and contracts; or informal, such as codes of conduct, conventions, attitudes, values, and norms of behavior. Formal institutions are subordinate to informal institutions in the sense that they are the deliberate means used to structure the interactions of a society in line with the norms and values that make up its informal institutions. North (1990) concluded that policy making that attempts to change the formal institutions of society, without measures to adjust the informal institutions in compatible ways, will have marginal success.

Informal institutions are likely to resist change and can take much time to evolve toward new social norms. Both formal and informal institutions can legitimize and delegitimize business activity as a socially valued or attractive activity and promote and constrain the entrepreneurial spirit (Aidis et al., 2008; Veciana & Urbano, 2008; Welter, 2005). Combining entrepreneurship, ethnic and transnational entrepreneurship with institutional economics, Urbano et al. (2011) showed that while role models and immigrants' entrepreneurial attitudes and values play an important role in the emergence of transnational entrepreneurial activity, the immigrants' social works and perceptions of the host society's culture as providing entrepreneurial opportunities most facilitate the development of transnational entrepreneurial activities. Korsgaard & Anderson (2002) show that, far beyond simple economic decision making, it was social conditions of

entrepreneurs combined with the social nature of entrepreneurial opportunities that affected the entrepreneurial process.

Audretsch et al. (2011) showed that social events facilitate entrepreneurs and innovation by those who participated. Zhang et al. (2011) concluded strong ties are more salient than weak ties in entrepreneurs' resource acquisition, and this importance grows when resource owners have less prior knowledge to offset problems of information asymmetry. Their study found that while social networks are useful information channels, entrepreneurs are more likely to turn to interpersonal ties for seeking contacts or acquiring resources.

**Entrepreneurial skills.** Starting a business requires an established business skill. Without these skills it can be hard for individuals wishing to venture into a new business to make it. An entrepreneur might have passion and a great idea, but strong passion without entrepreneurship skills can't guarantee the success of a new business.

Skills are multidimensional constructs made of cognitive knowledge and what is learned, the effective emotional expression and what is experienced, the behavior action at strategic, tactical and personal levels and the context sectoral, occupational, job, and task levels (Chell, 2013). Perhaps & Chell (2013) suggest that entrepreneurship skills are imparted and improved over time with repetition and practice. In other words, an entrepreneur becomes fully skilled to be successful in a new business by trial and failure, and by using evaluation strategies on what went wrong and right to be able to rectify or improve on any skills that worked well and contributed greatly to his/her success. Studies conducted by Chell (2013), Linan (2008), & Lorz (2011) claim that entrepreneurship skills are important because they help in performing all functions important to success for any enterprise.

Lichtebsteib & Lyons (2001) claim that entrepreneurial skills can be learned and developed. In other words, entrepreneurship skills are not inherited from parents or gifted at birth as other previous studies have claimed. They can be taught either in formal or informal settings. This study also supports entrepreneurship as a set of skills gained through training and development rather than innate endowment. The study by Lazear (2001) furthers the discussion by claiming that even if individuals are not endowed with the complete set of skills necessary to start a business, they can still acquire those skills in different types of educational settings. In other words, individuals who do not have previous entrepreneurial skills to start a new business can still

learn these skills, either through formal education in schools, workshops, or conferences, or through informal education with their mentors or successful role models.

Having entrepreneurial skills is critical for entrepreneurs who want to venture into a new business. Davidsson (1991) suggests that for an entrepreneur to become successful, a new business venture and business-related skills, exposure, and education must relate to each other. In other words, a successful entrepreneur must have an idea of a business in mind, skills and strategies that can assist him/ her in achieving goals, and education and exposure to the intended business. For entrepreneurs willing to work on small and medium-sized enterprises, technical skills, interpersonal skills, conceptual skills, and communication are crucial (Pupulova, 2007). Important skills an entrepreneur needs to venture into a new business include the identification and recognition of a feasible niche market, new products and services development suitable for market needs, the generation of an innovative idea, environmental scanning, identification and capitalizing on opportunities, and framing innovative strategies to exploit market opportunities (Michelmores & Rowley, 2013). It was also found that personal skills play a big role in the decision/intention to become self-employed (Chen et al., 1998).

Linan (2008) explains that individuals who feel they have enough entrepreneurial skills are more likely to go for a new business venture. Motivation and self-efficacy can push individuals dreaming to become entrepreneurs to achieve their goals and face challenges on their road to becoming a successful entrepreneur. Many studies also reinforce the role of having entrepreneurship skills. The study by OECD (2011) shows that entrepreneurship skills to be affected an individual's intentions to become self-employed. These are the business skills that individuals acquire to help them perform their work effectively in their business environment as a self-employed entrepreneur (Folahan & Omorivi, 2006). Lyons also explains entrepreneurship skills as the skills needed to be able to develop innovative products and services and to generate solutions to emerging needs in the marketplace. Successful entrepreneurs need to constantly learn, acquire new knowledge, and develop new skills that can assist them toward success (Smilor, 1997; Minniti & Bygave, 2001; Tether et al., 2005; World Economic Forum, 2009). For instance, a successful urban farmer entrepreneur can create a new idea by either introducing a new crop or adding value to the produce as a way of increasing profits and attracting more buyers. He/she can also scan what is needed in the market and who needs certain produce as a way for avoiding losses

caused by market fluctuations. All these skills are needed for a typical successful entrepreneur and also are part of life skills, as both skills overlap.

**Entrepreneurial knowledge.** Entrepreneurial knowledge can be defined as the individual's appreciation of the concepts, skills, and mentality expected of any person wishing to venture into self-employed business (Jack & Anderson, 1999). This knowledge can be acquired and developed through consistent exposure to entrepreneurship activities (Massad & Tucker, 2009).

There are two distinct types of entrepreneurial knowledge that complement each other when determining new venture creation processes (Turker, 2009). These are the individual's ability to recognize entrepreneurial opportunities, which involves the process of discovering, and evaluating opportunities offered by a new venture. Recognizing business opportunities is the ability to identify a market or a group of people who are in demand of a product or a service. The pathway used to solve such an issue/problem involves development of a realistic and doable new idea and approach. This involves the ability to identify a market or a group of people facing a particular problem. As an example, a young person living in an urban area might realize that an urban young farmers' cooperative is having trouble accessing good markets. The young entrepreneur can come out with an idea to brand their products as a way of linking them to the big stores or local farmers markets. This young entrepreneur will act both as a consultant for this cooperative and a commissioner between the cooperative and stores. The second type of knowledge is exploiting the identified opportunity. A successful entrepreneur can develop a business model that contributes to the success of a new business venture.

### **3 METHODOLOGY**

The overall purpose of this research was to assess the role of urban agriculture programs in promoting life skills, entrepreneurship, and healthy eating intentions. FHC was used to conduct the study because it provides programs that promote positive youth development, specifically minority youth who live in low-income neighborhoods of Martindale-Brightwood, Indianapolis, Indiana. There has been some misinterpretation of entrepreneurship work spirit among minority people, especially African Americans, despite social class and their contributions in many areas of business. There has also been some misunderstanding about the community support given by minorities, especially youth, to improve their well-being and sustain their entrepreneurship opportunities. By exploring all factors and narratives from participants attending and supporting the Felege Hiywot Center urban agriculture youth-led program who live the experience, this study provides important information regarding the path that minority youth from this Center have to travel to improve their life skills, entrepreneurship, and healthy eating intentions.

A mixed method approach combining quantitative and qualitative methods helped triangulate and substantiate findings (Rubin, 1994; Greene & Carcelli, 1997). After data collection, the quantitative and qualitative information collected was appropriately and systematically analyzed to effectively answer the proposed research questions and stay on track to meet objectives.

#### **3.1. Research Design**

To arrive at a holistic understanding of how urban farming like FHC promotes life skills, healthy eating, and entrepreneurship intentions, this study used an explanatory sequential mixed methods approach. According to Creswell (2014), an explanatory sequential mixed method is one in which the researcher first conducts quantitative research, analyzes the results, and then builds on the results to explain them in more detail with qualitative research. According to this method, quantitative data results are explained further with the qualitative data. This mixed method study relied on a review of literature, surveys and interviews to arrive at an understanding of the life

skills, entrepreneurship, and healthy eating intentions among youth attending the agriculture program.

This methodology was necessary because a quantitative research method was not adequate to meet the need to explore views and behaviors from various participants. A qualitative research method helped create opportunities for participants to share freely their views and experiences. Patton (2002) mentioned that personal narratives, family stories, and life stories reveal cultural and social patterns through the lens of individual experiences. This was very important for this study as it dealt with a center that predominantly serves African Americans. Surveys were not enough to give a full picture and include experiences from the participants. It was important to listen to the participants' experiences and the life they live day-by-day in relation to the research questions. Another reason this method was chosen, was a desire to align participants' responses with Creswell (2008), where choice of open-ended questions allows participants to best voice their experiences, unconstrained by any perspectives of the researcher. Besides surveys, during the interviews care was taken to allow participants to share their perceptions and voices without any interruptions by the researcher to guard against personal biases. Interview questions were created from the mean scores from the survey results. For instance, if the mean scores for given variables were low or high compared to average mean scores, questions were built from those scores to check whether or not the Center promotes those particular variables.

### **3.2. Research Settings for Quantitative Research**

**Recruitment.** The target population for the quantitative survey was high school youth enrolled at Felege Hiywot Center STEAM (Science Technology Engineering Agriculture and Mathematics) summer camp. The FHC and Martindale-Brightwood community were considered for this study because of the community's issues of food deserts, White flight, high crime, and high unemployment among the youth living in this neighborhood. The FHC was specifically chosen because of its urban agriculture program and other youth development programs and services related to life skills, entrepreneurship, and healthy eating offered by the center. A sample of 24 (N=24) minority youth living in the Martindale-Brightwood neighborhood and surrounding areas was purposely selected to answer survey questionnaires on August 2, 2019, at FHC. As a study criterion, the chosen participants were between 13 and 26 years old. Survey questions were

administered to the youth, who completed the 2019 STEAM summer camp program from June 18 to August 2, 2019. The STEAM summer camp included guest speakers from Purdue University with different career backgrounds and other community development service providers interested in youth development from Marion County, Indiana.

Martindale-Brightwood falls into a category of neighborhoods that have a high rate of unemployment for the minority population that resides there. Therefore, this program and its type of participants met all the criteria for the study. Youth of this age are likely to be more independent and capable of making decisions with minimal external influence — two factors that lead to the adoption of intentions. Furthermore, youth at this age have enough skills to start building concrete interpersonal relationships and other life skills needed to succeed.

**Instrumentation.** A review of the literature revealed three instruments that met the goal of the study. A complete copy of the adapted survey utilized in this research can be found in Appendix C. First was the Youth Experience Survey 2.0 (YES 2.0) verified by Hansen and Larson (2015). This instrument was made up of 52 items with 16 sub-scales and six scales. The instrument was modified to meet the research questions of this study. The second instrument was adapted from the Adolescent Food Habits checklist, a study conducted by Johnson et al. (2002) on UK youth about their eating habits. The instrument was made up of True or False statements and was also modified to fit into the research questions. The survey instrument included items that focused on: 1) eating low-fat food; 2) avoid eating unhealthy food; and 3) trying to eat vegetables and fruits. These items used a dichotomous response where Yes=1 and No=0.

The third instrument utilized Rai et al. (2017), which is a review on intention models for predicting entrepreneurial behavior. This adapted instrument is made of items that focus on: 1) attitude toward a given behavior; 2) subjective norms; and 3) perception of control over the behavior. These items were given a 4-point rating scale: 1= Yes definitely, 2=Quite a bit, 3=A little, 4=Not at all. However, during the analysis, the items were reverse coded where 4=Yes definitely and 1=Not at all.

The final instrument with adaptations from the prior three surveys contained information regarding: 1) Identity experience; 2) Initiative experience; 3) Basic skills; 4) Positive relationship/Interpersonal relationships; 5) Teamwork and social skills and 6) Adult networks and social skills. This instrument was used to allow students to reflect on the life skill experiences

gained from the FHC. These items were made on a 4-point rating scale: 1=Yes definitely, 2=Quite a bit, 3=A little, and 4=Not at all. However, during the analysis, the items were reverse coded, where 4=Yes definitely and 1=Not at all.

**Data collection.** On August 2, 2019, at the closing of the STEAM Summer Camp during the data collection, instructions were read in front of the participants before participants completed the surveys. The participants were informed about the purpose, content, and confidentiality, and given some instructions on how survey questionnaires were supposed to be filled out. After providing the instructions, the researcher, program director, and program manager administered the surveys. During the survey administration, the researcher encouraged youth to ask questions whenever they needed some clarification on a certain question as a way to ensure the youth answered the questions accurately. The surveys took approximately 30 minutes. All completed surveys were returned to the researcher, who sorted them to see the incomplete and complete surveys.

**Reliability.** According to Maxwell (1992), a researcher implicitly or explicitly relies on a variety of understandings and corresponding types of validity in the process of describing, interpreting, and explaining phenomena of interest. The same author adds that there are philosophical and practical dimensions of descriptive validity, interpretive validity, theoretical validity, generalizability, and evaluative validity. The survey instrument used in this study consisted of items and questions that have been used in previous studies. However, because of some items added to meet research questions and objectives for the study, a pilot study was conducted on participants with closely related criteria to test the instrument before administering the surveys to the participants. The pilot study for the survey was done at Lawrence Community Gardens, an urban agriculture program located in Lawrence Township, Indianapolis. The pilot study surveys were used to increase the reliability and validity for the data collected.

**Data analysis.** According to Bogdan and Biklen (2007), data analysis is the process of systematically searching and arranging interview transcripts, field notes, and other accumulated materials to enable the researcher to develop findings. This process involves organizing data, breaking data into manageable units, coding the data, synthesizing the data, and searching for patterns based on the research questions and both the theoretical and conceptual frameworks used by the study. Quantitative data were collected using the life skills, entrepreneurship, and healthy

eating intentions survey questionnaires. The Statistical Package of the Social Scientist (SPSS®) version 26 was used to analyze participants' responses across all quantitative items. Descriptive statistics including means, standard deviations, frequencies, and Pearson's correlation coefficients were used to analyze data.

### **3.3. Research Settings for Qualitative Research**

The overall objective for this research study was to assess the role of FHC's urban agriculture program in promoting life skills, entrepreneurship, and healthy eating intentions for minority youth attending Felege Hiywot Center in Indianapolis. To meet this objective, three major Research Questions (RQs) helped to address the study's objective. (RQ1) To what extent does the community support promote life skills, entrepreneurship, and healthy eating intentions among minority youth attending Felege Hiywot Center? (RQ2) To what extent do background factors contribute toward life skills, entrepreneurship, and healthy eating intentions for minority youth who attend Felege Hiywot Center? and (RQ3) To what extent does Felege Hiywot Center promote life skills, entrepreneurship, and healthy eating intentions for minority youth attending its programs?

To answer the three research questions, the research design helped to capture rich, in-depth descriptions that represented the opinions and experiences of the study's participants (Rossman and Rallis, 2012). To collect the descriptive information needed, a qualitative approach was used to collect data from a group of participants (Creswell, 2014).

**Narratives inquiry.** Clandinin (2013) states that narrative inquiry is an approach to the study of human lives conceived as a way of honoring lived experiences as a source of important knowledge and understanding. Connelly & Clandinin (1990) view the narrative inquiry as a study of the ways people experienced/or experience the world (p. 2). This study represents an understanding of the past, present, and future (Clandinin, 2013). This current study adopted a more conversational approach to capture the experiences and feelings of the participants. The information was shared narratively through storytelling to capture the context in which each participant has lived or experienced (Clandinin, 2013; Connelly & Clandinin, 1990). The information provided narratively offered unique and distinct experiences. Furthermore, the narrative requires the researcher to place his/her life alongside the lives of his/her participants to

understand where he/she fits within the landscape (Clandinin, 2013; Connelly & Clandinin, 1990). In this case, the researcher positioned his life alongside the lives of the chosen participants and listened and fit into their landscape.

**Participants.** The study was conducted at the FHC youth-led urban agriculture program, which serves predominantly minority youth living in Martindale-Brightwood. Alumni, current youth who attend the program, parents, and board members provided more in-depth information that touched all angles of the program. Patton (1990) states that there are no rules for sample size in qualitative inquiry (p. 184). Therefore, a small number of participants who offer a wealth of detailed information can prove very valuable (Patton, 1990). A sample of 10 participants involved at FHC was purposely and conveniently chosen. Because a particular subgroup of students was purposefully selected for in-depth information specific to their lives and experiences, the sample was considered a homogenous sample (Patton, 1990). Selected participants were identified with the help of the FHC's founder and CEO. They included six youth ages 13 to 26 who were either enrolled and attending or had graduated from the Felege Hiywot Center program; two parents who send their children to the FHC; and two board members — the founder and CEO and a board member involved in decision making. The main objective of the study was to explore the role the FHC plays toward minority youth life skills, entrepreneurship, and healthy eating intentions. Survey questionnaires were administered during the 2019 STEAM Summer Camp (see section 3.3). Interviews were conducted at the FHC, where the urban agriculture youth program is conducted.

The research study used a convenience sampling method. Ackoff (1953) points out that a convenience sampling is a process of selecting participants because of their availability and convenience. According to Mangal (2002), convenience sampling tends to be a favored sampling technique among students as it is an inexpensive and easy option compared to other sampling techniques. This method helps overcome many of the limitations associated with research. Dornyei (2007) also points out that convenience sampling is used when a researcher decides to choose a sample because it is easier for him/ her to access participants, and participants fit the researcher's interest. This type of sampling method is non-probability or non-random sampling, in which members of the targeted population are selected for the study based on how the population meets certain practical criteria, such as geographical proximity, availability at a certain time, ease of

access, or willingness to volunteer (Dörnvei, 2007). Mangal (2002) points out that convenience sampling produces errors in estimating population parameters from a sample statistic. One of the drawbacks of this sampling method is that results can't be compared, and the validity is always questionable (Muijs, 2004). This type of sampling design can also produce outliers that can't belong to the data, a major cause of the lack of validity of data collected (Hatch & Lazaraton, 1991). The outliers are points that stand out as different from the bulk of the data — problematic for classic statistics in which normality of distribution is an obvious prerequisite (Larson-Hall, 2010). Classic statistics advises using graphic summaries to identify outliers and then remove them by running the analysis both with and without them (Larson-Hall, 2010). However, elimination of an outlier may make another subject stand out as an outlier. Outliers also can affect sample statistics by easily decreasing the precision of estimates about a population of interest. As a result, it becomes almost impossible for another study to replicate the use of the same sampling method with the same independent variables (Mackey & Gass, 2005).

Based on this cited literature, this study used a convenience sampling method for the following reasons. The first was age, with most of the participants classified as minors. The investigator relied on the Center's leader, who knew youth who were available and ready to share their experiences. Mangal (2002) points out that it is quite impractical and inessential to approach every person fitting in our research. Convenience sampling is sometimes used to reduce time and costs to recruit a large number of people. Second, it was almost impossible to examine all youth, parents, and board members at FHC who fit the research design. The researcher used a sample of participants from FHC to generalize findings from the study to the broader population at FHC he drew a sample from. To generalize the data using this sampling method, both survey questionnaires and semi-structured interviews were used to obtain as much information as possible to represent the whole population/community. The survey sample consisted of 24 youth from the STEAM summer camp. One-on-one, semi-structured interviews were conducted of three graduates from FHC, three youth currently attending FHC, two parents of participants at FHC, and two current FHC board members. All participants were interviewed to assess the role FHC, as an urban agriculture program, plays in promoting minority youth life skills, entrepreneurship, and healthy eating intentions.

**Instrumentation.** After analyzing the quantitative survey data, questions were generated and used during the semi-structured interviews. These interviews with open-ended questions were administered to gather the data needed and permit participants to respond in their own voices, with the prospect of elaborating on or raising new ideas (Rubin & Rubin, 2012). This approach was used to gather enough information that answered the three research questions.

Field notes were also added to complement the primary instrumentation of interviewing. The field notes helped record additional information during the interview process (Clandinin and Connelly, 2000). The field notes became the narrative record of each participant and interview location, setting, and atmosphere (Clandinin & Connelly, 2000; Rossman & Rallis, 2012). The tone, context, and emotions between a participant and the researcher, were narratively recorded.

The field notes included gaps and periods of silence, tension, rigidity, and facial gestures participants exhibited during the interview or in response to specific interview questions (Clandinin & Connelly, 2000; Rossman & Rallis, 2012). Besides the field notes, the researcher used a journal to record and manage any feelings, thoughts, and reactions regarding participants and their responses (Maxwell, 2013). This helped to assist with the reflective process. Clandinin (2013) & Connelly & Clandinin (1990) show that narrative inquiry requires that a researcher place his/her life alongside the lives of participants to understand where he/she fits within the landscape. As a Black person living in the U.S. with close related issues, the researcher shared with participants that the process was similar to his own experiences.

**Interview protocol.** The interview protocol consisted of a diverse number of questions (Appendix B). After quantitative data analysis, the results obtained from the surveys informed the interview questions used in collecting narratives from the participants. These questions included information related to experiences with the FHC, knowledge and skills gained, relationships built, future career aspirations, perception of preparedness for college, perception of parents toward their children's positive development, perception of board members toward youth's development, what motivates board members to keep on investing time and resources at the center, and perception of parents toward the center. Some probing questions were also asked to clarify some questions to the participants or to the researcher.

### **3.4. Qualitative Method**

**Recruitment.** Upon completion of survey analysis, interviewees were informed about the follow-up study that aimed to deepen understanding of FHC's contribution to life skills, entrepreneurship, and healthy eating intentions for minority youth attending the program. Participants were conveniently selected based on their availability and time spent in the program, as well as important information they were likely to offer regarding the FHC and its role in promoting life skills, entrepreneurship, and healthy eating intentions. Participants represented each category of individuals who had direct connections with the FHC.

### **3.5. One-on-One interview methodology**

The qualitative piece of the study used a one-on-one approach. This allowed the investigator to collect data from individuals, and to dig deeper when trying to get some extra information regarding the discussion. This approach allows a researcher to thoroughly assess the body language of the interviewee. One-on-one interviews were used as a way of capturing an individual's experiences as a result of FHC.

A sample of two parents (N=2) was chosen and interviewed to explore their perceptions on the role the FHC plays in promoting minority youth life skills, entrepreneurship, and healthy eating intentions. Questions focused on the factors that motivate parents to send their children to the youth-led urban agriculture program. The questions also focused on any changes parents observed in their children as a result of participation in this program.

A sample of two FHC board members (N=2) was selected to explore their perceptions on the contribution of the FHC program toward life skills, entrepreneurship, and healthy eating intentions among the minority youth who attend the center. The questions had been presented to staff members, and everyone had an opportunity to review the questions asked. The questions focused on the factors that motivate board members to invest their time and resources in the youth-led urban agriculture program. Questions also focused on any changes board members observed in youth as a result of this program.

One-on-one interviews were done with three alumni (N=3) who graduated from the FHC program. These youth were purposely selected based on how often they come back to the Center,

their success stories, and their willingness to participate in the study. The alumni were chosen to explore the extent to which the program helped them in their careers or school. Some points of interest included experiences they had when enrolled in the program and how those experiences were connected to their current successes. Furthermore, a sample of three (N=3) current youth who attend the program was purposely and conveniently selected based on how often they come to the center and how much they engage with youth at the Center. These youth were chosen to explore the extent to which the program is helping them in their current school and life in general. The major points included the experiences they had as a result of participating in the program and how based on these experiences, they now predict their future.

The researcher withheld any level of expertise to ensure that the participants became the experts in providing the information needed by the researcher. During the interviews, participants were treated as experts in their own lives, which is suggested by Auerbach & Silverstein (2003). They also mentioned that a qualitative study suggests that people who have direct life experience with a phenomenon know more about it than the researcher. In this case, the researcher can ask participants directly about their experiences and learn from what they say.

Interviews were used to provide insights using the youths' perspectives to illustrate their experiences. The interview method is more conversational than simply asking questions, allowing for topics to emerge naturally in the dialogue between the participants and the researcher. Interviews started out with baseline open-ended questions about the program and then emerged into open-ended questions about the youth and adults' experiences.

The researcher had previous experience with the target group and was aware that using oral rather than written questions was the right approach. The researcher used an audio recorder to capture responses for all interviews, ensuring accuracy of responses. He also took field notes as a way of capturing any interesting information and behavior regarding the youth and adults' experiences.

**Data analysis.** Analysis of the interview findings consisted of an eight-step process, which included: searching and writing (Rossman & Rallis, 2012). The audio recordings were transcribed by Rev.com Company ([www.rev.com](http://www.rev.com)), and each interview was repeatedly listened to again and edited where the website skipped or did not hear well. Reading the transcriptions and listening over and over to the recordings helped the researcher to organize and get familiar with participants'

responses. These steps were followed by identifying and coding key words and phrases from participant interviews for the purpose of developing categories and generating themes that emerged from the interviews. Generated themes provided the framework of the substance and analysis of data (Rossman & Rallis, 2012; & Saldana, 2013).

Data analysis and interpretation for the field notes were also done. The process of reading helped the researcher build accounts that were chronicled and summarized (Clandinin & Connelly, 2000; Richardson & St. Pierre, 2005). The data collected from the field notes was coded to identify topics as well as themes that emerged (Clandinin & Connelly, 2000; Saldana, 2013).

The coding process was done based on the three research questions that were addressed regarding the role of FHC in promoting life skills, entrepreneurship, and healthy eating intentions. To maintain consistency across all one-on-one interviews with participants, the meaning of the coded scripts was normalized. Themes generated/emerged from the codes included: Basic Skills, Initiative Experience, Identity at Work, Teamwork and Social Skills, Entrepreneurship, Cognitive Skills, Community Support, Healthy Eating, Adult Networks and Social Capital, Program Structure, and Communication Skills, shown in Table 1.

Table 1. Major themes generated from one-on-one interview discussion on the role of the urban agriculture program in promoting minority youth’s life skills, entrepreneurship, and healthy eating intentions.

Themes	Definition	Examples from the scripts
<b>Basic Skills:</b> <ul style="list-style-type: none"> <li>● Emotional regulation</li> <li>● Cognitive skills</li> </ul>	Acquired skills that help regulate emotions and improve performance in activities.	Youth mentioning how they managed to learn how to control their temper and how the knowledge acquired from the Center helps them do well in their present and future careers and school.
<b>Identity Experience:</b> <ul style="list-style-type: none"> <li>● Self- knowledge</li> <li>● Exploration</li> <li>● Identity reflection</li> </ul>	The ability to discover what he/she is capable of doing and what he/she is interested in as a result of the program or training that exposes individuals to different activities.	Youth citing how the Center helped them discover what they are good at, what they are interested in and what they don’t like, and how that has shaped their future career aspirations.

Table 1 continued

Themes	Definitions	Examples from the scripts	Examples from
<p><b>Initiative Experience:</b></p> <ul style="list-style-type: none"> <li>● Goals</li> <li>● Effort</li> <li>● Problem solving</li> <li>● Time management</li> </ul>	<p>Skills gained to be able to solve problem and achieve goals.</p>	<p>Youth citing how the Center helped them be able to solve problems or learn how to push themselves hard at work or in school.</p>	
<p><b>Teamwork and Social Skills:</b></p> <ul style="list-style-type: none"> <li>● Group process skills</li> <li>● Feedback</li> <li>● Leadership and responsibility</li> <li>● Diverse peer relationship</li> <li>● Prosocial norms</li> </ul>	<p>Ability to work collaboratively and peacefully with different people in a group to achieve a certain goal.</p>	<p>Youth citing how the Center helped them gain some leadership skills or work with a diverse group of people in different projects that required collaborations and everyone’s inputs.</p>	
<p><b>Adult Networks &amp; Social Capital:</b></p> <ul style="list-style-type: none"> <li>● Integration with family</li> <li>● Linkages to community</li> <li>● Linkages to work and colleges</li> </ul>	<p>Skills developed to help you link yourself to the community or family as a result of a program or a training.</p>	<p>Youth citing how the program helped them learn more about their community and trained them to help the people in their community.</p>	
<p><b>Program Structure</b></p>	<p>The way a program functions in terms of order and leadership style.</p>	<p>Youth and adults citing how the program is a youth-led program and how youth are involved in decision making.</p>	
<p><b>Community Support</b></p>	<p>All supports from the community, including volunteers, donors, sponsors, and partners.</p>	<p>Adults and youth citing how community partners have helped the FHC achieve its goal and missions.</p>	

Table 1 continue

Themes	Definitions	Examples from the scripts	Examples from
<p><b>Entrepreneurship:</b></p> <ul style="list-style-type: none"> <li>● Attitude towards entrepreneurship</li> <li>● Perceived behavior control on entrepreneurship</li> <li>● Perceived norms and entrepreneurship</li> </ul>	<p>Attitude and intention toward starting your own business as a result of a program or a training.</p>	<p>Youth citing how the FHC has helped them learn more about how they can start their own business and how that inspired them to do it in the future.</p>	
<p><b>Healthy Eating</b></p>	<p>Attitude and intention toward changing a certain diet as a result of a program or a training.</p>	<p>Youth citing how the Center taught them how eating healthy is good for their lives, and how some gradually changed their eating habits as a result of the FHC.</p>	
<p><b>Cognitive Skills:</b></p>	<p>Core skills the brain uses to think, read, learn, remember, reason, and pay attention.</p>	<p>Youth and adults citing how their communication and knowledge about agriculture have improved as a result of the FHC.</p>	
<p><b>Positive Relationships:</b></p> <ul style="list-style-type: none"> <li>● Diverse peer relationships</li> <li>● Prosocial norms</li> </ul>	<p>A skill possessed by individuals that helps them build networks and friendships with different people.</p>	<p>Participants mentioning how they managed to make some friends as a result of the FHC.</p>	
<p><b>Individual Background Factors</b></p> <ul style="list-style-type: none"> <li>● Personality traits</li> <li>● social factors (race, gender)</li> <li>● Background information</li> </ul>	<p>Prior skills and knowledge and other socio-economic factors that individuals bring into the program.</p>	<p>A participant mentioned how before she attended the Center, she was thinking of becoming an entrepreneur. Another mentioned how the information she got before she joined the program helped her to change her diet.</p>	

**Validity and Reliability.** To ensure validity and reliability of the study, semi-structured interviews with open-ended questions were applied. This approach allowed the researcher to present a comprehensive story based on findings from participants' lived experiences. The use of interview transcripts helped the researcher consult with the participants for validation, elaboration, and revisions (Rossman & Rallis, 2012, p.65). Conducting interviews with field notes and journals was another way to produce an in-depth and comprehensive picture. According to Richardson and St. Pierre (2005), the use of interviews, field notes, and journals is an attempt to crystallize the findings. The researcher also had prior interactions with the participants through the STEAM summer camp, which helped build a rapport with them (Maxwell, 2013). Narrative inquiry helped connect with participants when the researcher was collecting data on their perceptions and sought to relay their beliefs, stories, and experiences as participants of FHC (Clandinin, 2013). Furthermore, help provided by the research advisor, committee members, and colleagues was crucial, because they served as briefers that increased the validity and reliability of this research study (Rossman & Rallis, 2012). Finally, a pilot study to evaluate one-on-one interview questions was done at Thea Bauman Leadership Academy in Gary, Indiana, a similar cultural environment to increase the validity and reliability of the study.

**Personal beliefs, assumptions, and experiences.** As a person of color from Africa living and studying in the U.S., the researcher has his own beliefs, assumptions, and experiences that shaped how this study was conducted in relation to participants, how questions were phrased, and how findings are communicated. The researcher made sure that his biases were acknowledged before starting this study. Interview questions were piloted as a way of avoiding inferences and leading questions. Reviewing the literature helped to establish a structure and guidance to manage the researcher's biases. Fisher (1993) states that avoiding inferences and leading questions can reduce the risk of social desirability — the act of participants to present themselves in a favorable image by distorting responses they believe to be more acceptable. The researcher used a journal for recording personal responses and insights during the interviews, which helped to track his thoughts and reflections.

**Positionality.** Peshkin (2001) states that positionality is created from identity based on features that include age, religion, and so on. In this study, race and class were key, important points. Peshkin (2001) & Takacs (2003) posit that many unique experiences emerge from our

identities, which in turn position us and shape our perceptions and comprehension. In terms of research, one's own experiences can potentially assist the researcher with a comprehensive understanding of the topic (Takacs, 2003). The researcher's experiences as a person of color in the U.S. provided a unique insight to information and knowledge that other individuals cannot dispute (Takacs, 2003). This was the lens through which this researcher chose his research topic for further exploration (Peshkin, 2001). The researcher believes that people of color are survivors of oppression. They continue to battle against stereotypes and preconceived notions and must thrive through the system framed by the dominant cultures. The dominant culture is happy when people of color are not as successful as they would like to be and are surprised when people of color exceed expectations set forth by the same dominant culture. With experience, the researcher also believes that these systems of oppression historically have included education, employment, housing, healthcare, and economy. Scales-Trent (1991) shows that our poor health is connected to the kind of work we are allowed to do. Our inability to find good work is related to bad education, which is in turn related to segregated housing. Segregated housing, often dangerous housing, in turn affects our health, which in turn affects our ability to work. It is all part of a puzzle. Pull one of these strands, and our lives unravel (Scales-Trent, 1991). As the researcher is a PhD student at Purdue University and dealing with youth who are still in low levels of education, this positionality is part of his own social accountability to the African American youth, parents, and board members and efforts to encourage the accountability of others.

**Human Subject Protection and Ethical Considerations/IRB.** To protect the rights of the participants, the graduate student (researcher) completed the Collaborative Institutional Training Initiative (CITI) Course in the Protection of Human Subjects online training offered by Purdue University. Upon completion of the CITI online training, the researcher submitted an application to the IRB Committee on the Use of Human Research Subject at Purdue University, which included the descriptive materials and survey instrumentation, on July 18, 2019. The approval letter is attached in Appendix A with the research title, "Exploration of role of urban farming in promoting minority youth's life skills, entrepreneurship and healthy eating intentions for minority youth attending Felege Hiywot Center, Indianapolis" (IRB protocol number 1907022458), granting exemption on July 24, 2019. After survey data collection, the researcher submitted interview questions to follow the survey results to the Purdue University IRB Committee for an amendment to the previous exemption. A second protocol for adult interviews was submitted and

approved (IRB protocol number 2019-780). All recorded data was kept private. Names and other identifiers were not associated with the data. Following IRB protocol, all information was stored in a locked cabinet in the researcher's secured office. Completed surveys were kept secure along with the results of the study. Entered data was secured by a password-protected computer system.

The approval letter was also read in front of the participants as a way of informing them about the study's objectives, purpose, and data-collection plans. Dates for interviews were planned, and the interviews were performed both at FHC and on the phone based on the availability of the participants. The interviews were recorded and transcribed with an accurate English translation. The transcripts were then imported into NVIVO12<sup>®</sup>. Themes were generated based on the research study questions and objectives.

## 4 RESULTS

### 4.1. Quantitative results

The FHC aims to promote life skills, entrepreneurship, and healthy eating among minority youth who attend its programs. This aim was chosen because most of the youth who attend FHC programs coming from Martindale-Brightwood, one of the poorest and highest crime neighborhoods in Indianapolis. The Center came as an intervention to decrease minority youth unemployment and promote life skills and healthy eating. The Center assists youth in learning how to eat healthy food. The neighborhood where FHC is located is considered a food desert, where there are limited or no stores that sell fresh and healthy food. This forces youth who live in this neighborhood to eat ready-to-serve meals high in fat and sugars. The surveys and interviews assessed the relationship between the programs offered at FHC and life skills, entrepreneurship, and healthy eating intentions.

#### 4.1.1. Results from testing the reliability of the surveys

Reliability is the overall consistency of the data. The data are reliable when all the items within the scales and subscales are consistent. The reliability measure ranges from 0 to 10. Table 1 summarizes the reliability of the statistical data for the form of evaluation made on a 4-point Likert Scale where 1= very poor and 4=very good.

Table 2. Range of the values of Cronbach's alpha scores

Cronbach's alpha scores	Level of reliability
0.0-0.20	Less Reliable
>0.20-0.40	Rather Reliable
>0.40-0.60	Quite Reliable
>0.60-0.80	Reliable
>0.80-1.00	Very Reliable

Table 3. Reliability for the life skills, ag and entrepreneurship, healthy eating items

Cronbach's alpha	Cronbach's alpha	N of items
	Based on standardized items	
0.94	0.94	52
0.87	0.86	18
0.77	0.77	13

The life skills subscales consisted of 52 items ( $\alpha=0.937$ ). The items were consistent and reliable. This is supported by Cronbach's alpha, which states that the items are consistent and reliable when  $\alpha$  is equal or higher than  $\alpha \geq 0.7$ . The  $\alpha$  value for these life skills items was excellent, as it was closer to 1. The entrepreneurship intentions subscales consisted of 18 items ( $\alpha=0.867$ ). The items were consistent and reliable. According to Cronbach's alpha, items are consistent and reliable when  $\alpha$  is equal or is higher than  $\alpha \geq 0.7$ . This number was very good. Hence the items were very reliable and consistent. The healthy eating subscales consisted of 13 items ( $\alpha=0.771$ ). The items were consistent and reliable. According to Cronbach's alpha, items are consistent and reliable when the  $\alpha=0.7$ , which is an acceptable constant.

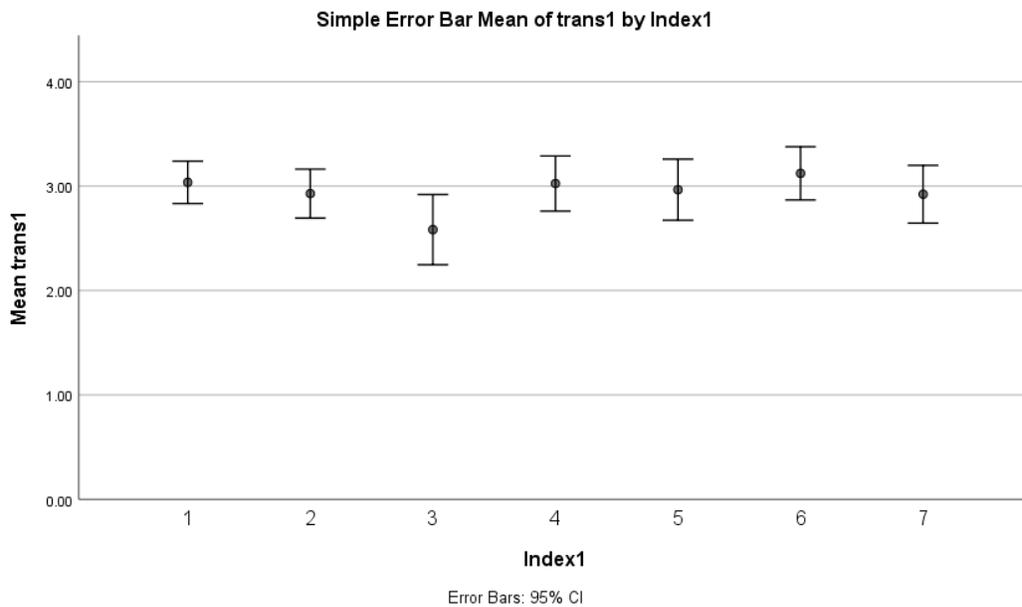
**4.1.2. Results for mean and standard deviations from all life skills, entrepreneurship intentions and healthy eating**

Table 4. Mean and standard deviation for subscales of the final survey questionnaire (N=24)

	Mean	Std. Deviation
Eating behavior	0.52	0.24
Basic skills	2.58	0.80
Perceived social norm & entrepreneurship	2.71	0.66
Perceived behavioral control & entrepreneurship	2.71	0.59
Attitude & entrepreneurship	2.87	0.94
Adult network & social capital	2.92	0.66
Initiative experience	2.93	0.55
Interpersonal relationship	2.97	0.69
Cognitive skills	3.03	0.63
Identity experience	3.04	0.48
Teamwork & social skills	3.12	0.60

The average scores on a 4-point Likert scale (**Table 4**) are as follows. Teamwork and social skills, identity experience, and cognitive skills had an average mean score of 3. Average scores for interpersonal relationship, initiative experience, adult network, and social capital were 2.9. Attitude and agriculture entrepreneurship, perceived behavioral control and agriculture and entrepreneurship, perceived social norm and agriculture entrepreneurship, and basic skills had average mean scores between 2.5 and 2.9 on 4-point Likert scale. The health eating scale was on a dichotomous scale whereby Yes=1 and No=0. The average mean score for healthy eating was 0.52.

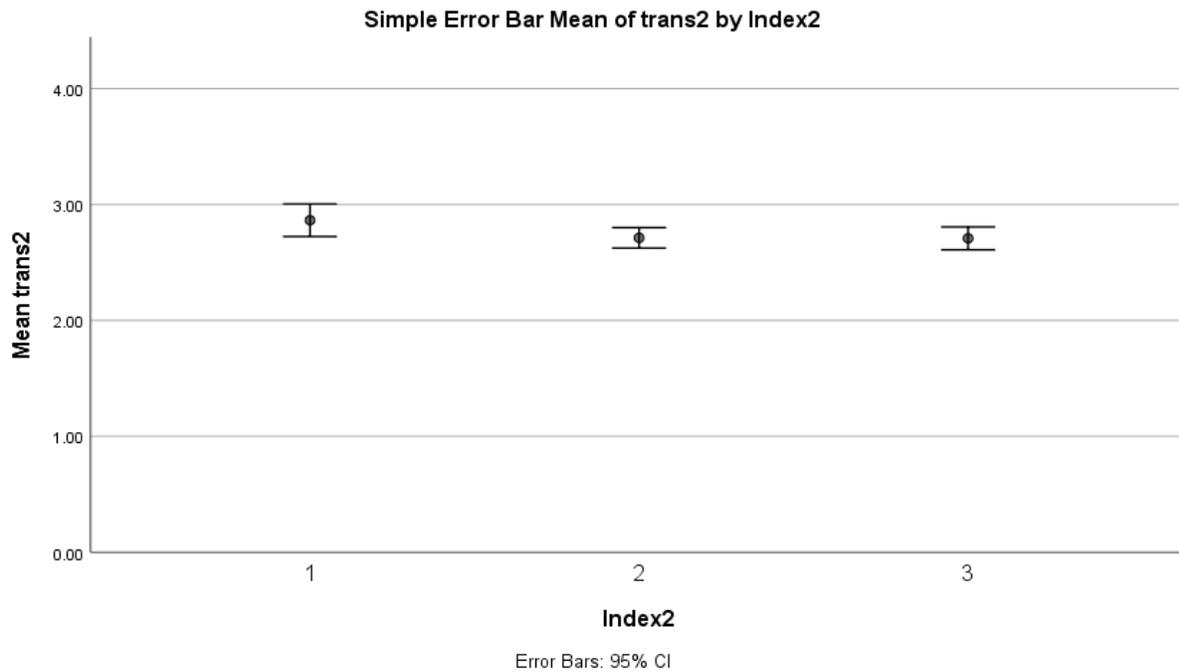
Table 5. Confidence Interval for life skill scales



**The Index 1**= the subscales (sub-variables) from the survey questionnaires. **The Mean Trans 1**= the mean score for every subscale.

The error bar mean graph above (**Table 5**) shows the confidence interval for the life skills items. On the 4-point Likert scale, most of the items' error bar mean fell almost on 3, which was the average score for seven items.

Table 6. Confidence Intervals for entrepreneurship scales



The graph above (**Table 6**) displays three subscales from the entrepreneurship intentions. **Index 2**=the entrepreneurship subscales, and **Mean trans2**=mean scores for the subscales.

The error bar mean graph (**Table 6**) above shows the confidence interval for the entrepreneurship subscales. The error bar mean graph above shows the confidence interval for entrepreneurship intentions. On the 4-point Likert scale, the three items fell around 2.9. There was no significance difference on the average mean for each item.

Table 7. Correlations between scales for life skills, entrepreneurship and healthy eating intentions (Pearson Correlation Sig. (2 – tailed N))

	1	2	3	4	5	6	7	8	9	10
Basic skills	1									
Cognitive skills	0.37	1								
Attitude towards entrepreneurship	0.08									
Perceived behavioral control towards entrepreneurship	0.35	0.34	1							
Perceived social norms & entrepreneurship	0.09	0.11								
Eating behavior	0.29	0.37	0.72**	1						
Positive relationship	0.17	0.08	0.00							
Identity experience	0.46*	0.30	0.51*	0.47*	1					
Initiative experience	0.02	0.16	0.01	0.02						
Teamwork and social skills	-0.18	0.006	0.16	0.031	-0.14	1				
	0.40	0.98	0.46	0.89	0.51					
	0.34	0.86**	0.33	0.31	0.07	0.005	1			
	0.10	0.00	0.12	0.14	0.73	.983				
	0.41*	0.49*	0.12	0.00	0.08	0.07	0.56**	1		
	0.05	0.02	0.59	1.00	0.71	0.76	0.004			
	0.34	0.60**	0.64**	0.57**	0.31	0.14	0.67**	0.58**	1	
	0.11	0.002	0.001	0.004	0.13	0.51	0.00	0.003		
	0.29	0.61**	0.06	0.005	0.08	-0.04	0.75**	0.51*	0.43*	1
	0.17	0.002	0.78	0.98	0.70	0.84	0.00	0.01	0.04	

\*. Correlation is significant at the 0.05 level (2-tailed).

Table 7 depicts correlations between life skills and entrepreneurship skills. Items in the predictive variables were combined and produced major variables, which include identity experience, initiative experience, basic skills, cognitive skills, positive relationships (interpersonal relationships), teamwork and social skills, adult networks and social capital, attitude, perceived social norms and perceived behavioral control, and entrepreneurship. Pearson correlations were calculated for different variables.

The strength of correlation among the scales was reported. There were several significant correlations between life skills scales and entrepreneurship scales. Statistically significant relationships (\*=0.05 level and \*\*=0.01 level) are present between scales within the predictive variables: attitude towards entrepreneurship and perceived behavioral control and entrepreneurship (0.72\*\*); perceived social norms and basic skills (0.46\*); perceived social norms and attitude towards entrepreneurship (0.57\*); perceived social norms and perceived behavioral control (0.47\*); interpersonal relationship and cognitive skills (0.86\*\*); identity experience and basic skills (0.41\*); identity experience and cognitive skills (0.49\*); identity experience and interpersonal relationships (0.56\*\*); initiative experience and cognitive skills (0.60\*\*); initiative experience and attitude towards entrepreneurship (0.64\*\*); initiative experience and perceived behavioral control (0.57\*\*); initiative experience and interpersonal relationships (0.67\*\*); initiative experience and identity experience (0.58\*\*); teamwork and social skills and cognitive skills (0.61\*\*); teamwork and social skills and interpersonal relationships (0.75\*\*); teamwork and social skills and identity experience (0.51\*); and teamwork and social skills and initiative experience (0.43\*).

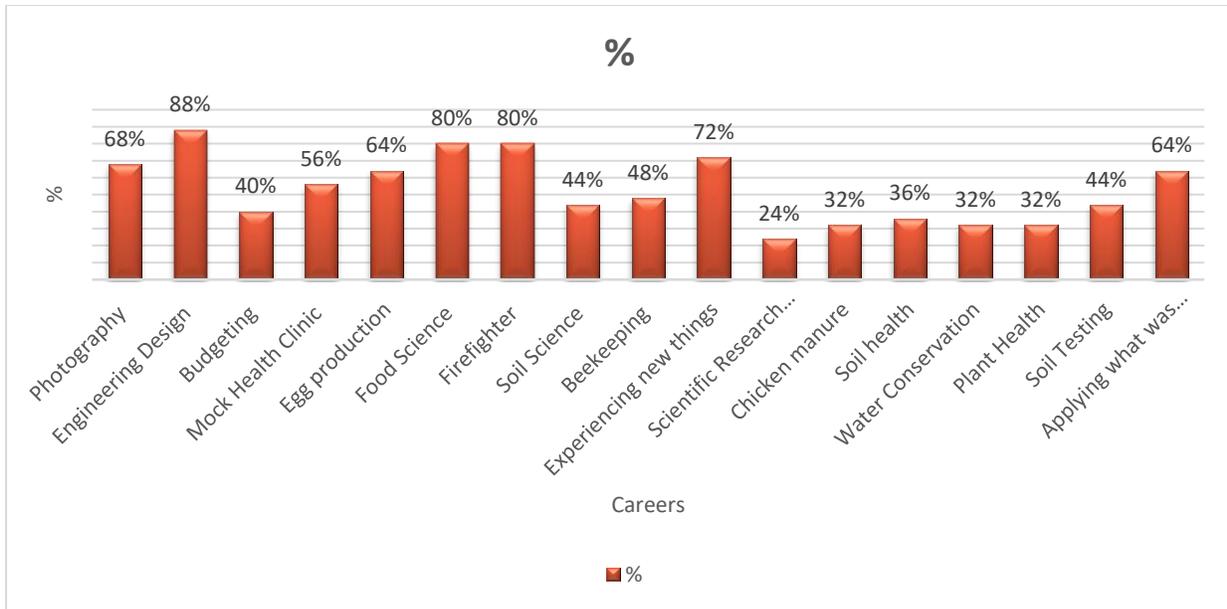


Figure 3. STEAM summer camp survey questionnaires about youth’s attitude towards different professionals

Figure 3 shows the perceptions of minority youth towards different career choices. In a short survey done by FHC during STEAM summer camp 2019, the youth were asked to rank different professionals/guest speakers who came to share about different career paths. The surveys were on a 5-point Likert scale, where 1=Not interested in this career and 5=Very interested in this career. After removing all neutral responses (3=Undecided), the results for attitude of youth toward different career opportunities presented by different professionals are shown as a percentage (%). This data was shared by FHC and is included to demonstrate how the minority youth enrolled in STEAM summer camp reacted to different professionals who came to present different career opportunities.

## 4.2. Qualitative Results

### 4.2.1. Research Question 1

Research question #1 (RQ1) assessed the extent to which professionals, volunteers, and sponsors promote life skills, entrepreneurship, and healthy eating intentions among the minority youth attending FHC. The generated overarching theme from the one-on-one interview discussions for RQ1 was *partnership*, with sub themes that included *sponsor support*, *professionals support*, and *volunteer support*. This shows how youth and adults view the role of community support for the FHC, which includes the different professionals, sponsors, and volunteers who play a crucial role in promoting minority youth's life skills, entrepreneurship, and healthy eating intentions. Different participants acknowledged this. Five participants (N=5) during the interview discussion acknowledged the importance of having different professionals, volunteers, and sponsors at FHC. The Felege Hiywot Center is crucial to the minority youth who attend it and to the surrounding community. Youth gain a variety of skills from this center. Some of these skills include leadership, communication, teamwork, and so on. The presence of this center in Martindale-Brightwood provides not only skilled people but also better future citizens and leaders.

#### ***4.2.1.1. Partnership (professional support and volunteer support, sponsor support)***

The feelings toward and acknowledgement of the role of individuals who come to either volunteer or financially support the Center were observed in all categories of participants, including youth currently attending the FHC, alumni, parents, and board members. These participants show how different professionals and guest speakers come to the Center with the intention to teach youth different skills and expose them to different career choices that can help them in their future. Some youth end up finding their career paths as a result of the presence of different professionals and volunteers who come and engage with youth in hands-on activities they cannot get elsewhere. For instance, Indiana University students who are in medical programs come and share about health-related topics, including different careers in this field and the requirements to get into nursing or medical school.

Participants demonstrated how different sponsors of FHC contribute significantly to most of the activities, programs, and services at the Center. Eli Lilly Foundation has been a major

sponsor through its endowment grants. Other volunteers come and assist in construction, teaching, and planting and harvesting crops on the farm. One participant expressed how his attitude and behavior toward careers other than sports and music have changed as a result of the different professionals and volunteers who came and shared some of their expertise with youth at the FHC. Two board members also acknowledged the role of the volunteers, professionals, and sponsors and how, without them, the Center will not be able to run its programs and activities. Support from community partnerships is crucial and strengthens and keeps the Center moving forward. These acknowledgements can be observed from interview discussions with the participants.

**Professional support.** The professional support theme was acknowledged by different categories of participants. Among FHC leadership, one male board member acknowledged how some community partners come with ideas to share with the Center and how this strengthens programs and activities conducted at the Center. This board member stated:

“Yeah. We look and accept all ideas, thoughts. If you come to the program and you say, ‘Hey, we can try this or can we try that?’ A lot of things that Ms Aster has been around a long time and things I’ve asked: ‘Can we do this?’ She says, ‘We did that and it didn’t work, so we stopped.’ But we always listen to ideas and thoughts and things that people come in, like we have speakers come in and talk, and they have ideas and we try them. So, there’s more than one way to skin a cat.”

The way this board member expressed his feeling about support from different professionals is an indication that these individuals play a substantial role in shaping programs and activities at FHC.

The other participant from the board, who is also the co-founder of the Felege Hiywot Center, similarly acknowledged the importance of having different professionals involved in strengthening programs and activities offered by the Center. She mentioned:

“...And I switched everything. It’s no more. So, the school paper, the books and stuff became resources. Now here are students who would say, ‘I don’t want to be a scientist. I’m just going to play ball.’ No problem. I remember one of the scientists came and he had different, you know, how the basketballs he would inflate them to a certain size and see how high they go. And then he taught them, that’s also science. And then if they do singing, it’s the same thing. When they cooking, instead of me saying, ‘Sodium chloride, let’s make solution,’ I said, ‘Let’s make lemonade,’ and then that’s what they used to.”

This board member acknowledges the role different professionals play in helping connect minority youths’ career aspirations and interests, often sports and music, to science. Building from

what youth are familiar with helps them easily understand the implications of what they do in their daily lives. Most minority youth living in the inner-city have limited exposure to other careers.

The same board member also expressed her gratitude for professionals who come to support the programs and activities offered by the Center and provide different recipes to the minority youth living in the Martindale-Brightwood neighborhood. In her interview, she showed how it is almost impossible for the program to progress without these professionals, who come to meet the needs of the youth that she cannot. This is expressed in her interview:

“The partnership is what is making the community grow. It’s the same way Felege Hiywot is growing. So, if each person says, ‘I’m good at this, what’s the next thing I’m going to do?’ The students themselves, and I tell them, ‘Oh, I have a passion. I really want to talk to these kids, and I can really help them.’ Even if we are talking about crime, you say, ‘What about crime? What part of the thing you can do?’ So, they list all of those things, and we can brainstorm. I say, ‘Are you going to do all of those?’ They say, ‘No.’ ‘Then you got to find a good person that will do this one, this one, this one.’ Once you list it, it will bring people together. There’s a common goal. And the idea that I’m the only one that could do this does not work.”

In this statement, she showed how different professionals bring different ideas to share with both youth and the leadership for the Center so that, together, they can find what fits the youths’ passion and what works and what doesn’t.

She also stated:

“So, the goal is you don’t want have any block. You want to keep partnering. And focus on each kid individually. When you do that, that’s when you know you have to partner. Because you cannot give 100% to every need. There’s somebody else that has to contribute to that. And that’s what I learn. I really have to learn that, ‘No, I got only this part.’ And if my goal is to really help this student, I have to be totally opened to partner with somebody else to provide that.”

In the statement above, the board member acknowledges the role of different individuals coming to help at the Center and how they help minority youth gain life skills, entrepreneurship, and healthy eating intentions. The individuals come with diverse ideas, skills, and knowledge to help minority youth shape their future.

One participant from the alumni category also expressed his feelings toward different individuals who come to support the FHC and its programs. In his words:

“So I wasn't really good at sports. I couldn't really rap. I couldn't really make music. So honestly, I don't know what I thought I was going to do. I didn't even really plan to go to college, really. But coming here, I'll probably just say, just being introduced to different people. Miss Aster definitely introduced us to different entrepreneurs. And I mean, we met firemen, we met police officers, we met nurses, we met nurse practitioners, we met people in sales, and we just met a different plethora of people.”

This participant acknowledged the opportunities brought by different individuals who encourage and help youth discover what they are good at and their future career aspirations. As a youth who grew up in an inner-city with limited resources, he shows how the leader brings in diverse professionals to expose youth to different skills and careers. This alumnus demonstrated that the typical jobs inner-city youth dream about are rap music and sports. The outstanding thing about FHC is that youth are introduced to diverse career options they can easily choose and follow. His reactions and expressions when this topic was covered during the interview discussion showed the enormous opportunities this youth received from the center as a result of meeting with different volunteers and professionals. The way he talked about how he did not have any dream and how the Center provided it through the exposure of different professionals clearly showed how much he is impacted by the FHC.

This is confirmed by another participant who acknowledged the role of different professionals:

“I say the number of people we have come in and the different things we did, it opens you up to a large view of what you can do in the future. So, I know last time we had the engineering thing going on. So, it just always you're to a broader scale of what you could be doing in the future or what you may or may not be interested in.”

This participant expressed how FHC brings different people with varied career backgrounds to help youth find their passions. As a young African American girl living in a limited-resources neighborhood with few options in terms of career choice, she showed how the center offered her and her colleagues a different career path. The same participant also acknowledged the professionals in her words that:

“For me personally, I remember if we went to farm festival, the garden is like a farm festival, kind of. And this guy, I can't remember his name, he gave a speech about how the health food affects the brain and ADHD and stuff. That's why no one wants ... it was really interesting the science part of food and how it affects more

than just ... People are like, ‘Vegetables are healthy.’ But it explained the how the vegetables are healthy. So that's how I figured out what I wanted to do.”

The enthusiasm and tone expressed by this participant toward the presenter in helping her find her career, shows how the FHC partnership with other professionals plays a crucial role in helping youth not only gain skills and knowledge, but also helps them to choose their career paths. The youth was touched by the discussion made by this professional, and it created a desire to pursue college and start minding what she put in her body.

Among participants who talked about the role of professionals and their contribution to minority youth life skills, entrepreneurship, and healthy eating intentions, one of the parents acknowledged:

“It showed them that it was good opportunities out here for them as young Black men as they got older. He had a lot of different mentors and a lot of different positive people around. You would see all different kinds of people when you were down at FHC, and you were introduced to different types of things that you might not be able to be introduced to otherwise. I know Ms. Aster knew a lot of professional people. You may see someone in the medical field from IU. You may see someone from the School of Dentistry, or you may see someone from a corporation like Major Tools.”

The parent’s enthusiasm and tone for different professionals who come to support FHC programs shows how much she appreciates how these professionals helped her boys gain knowledge and skills that will assist them in their futures. Considering the neighborhood’s limited resources to offer to the youth, especially young Black men living in Martindale-Brightwood, bringing different professionals to the center helps minority youth to get exposure to a variety of activities that parents, and schools around cannot offer.

**Volunteer support.** One of the board members acknowledges how different volunteers from the neighborhood and surrounding communities come to the Center and help minority youth understand the science behind every activity they engage in. She also acknowledged that when some volunteers come, they help youth learn how to put what they are learning into practice. This is shown in one of her statements during the interview:

“The other part of it, we also have a lot of volunteers. When the volunteers come — and none of this building has been done by contractors, it’s volunteers that come and do that — when they do that, what happens? They will say, ‘I’m nailing this, do you want to give me the drill? Do you want to hold it? Do you want to do this?’

I keep watching that. And they say, ‘Oh, I could be a carpenter. Oh, I could be this, or I could be that.’”

The same board member also acknowledged the impact of the volunteers on the youth and the Center, and how it can be hard or even impossible for the center to function without help from different volunteers. This is acknowledged in this statement:

“One day I had 35 students. There were about 34 volunteers. But the thing is, when they leave it’s just me that’s left. So, it’s the major person that’s going to put together. When everybody left, and I knew it’s going to be another 35 kids coming the next day, I was just totally spent. Ready to just quit and close the door and cry. And then, knock on the door. Somebody heard something and say, ‘Hey, I heard you’re going to be doing this tomorrow. Do you need this?’ And then another one comes in, and then even. I remember that day, a guy came and he said, ‘My wife thought that you need this.’ Just like that, people keep knocking on the door and bringing things and they keep me going. I could not believe it. I never had time to call anyone for support. But they just knew it.”

The emotions and expressions used during the discussion reflected her own experience with the volunteers and how they kept her moving forward instead of stopping halfway. Because the Center is in one of the poorest neighborhoods in Indiana, the praise and the tone she used to express her gratitude for the volunteers means a lot to the Center and minority youth.

**Sponsor support.** In addition to providing skills necessary for students’ academic and professional development, sponsors also provide much-needed financial assistance in the form of grants to the Center. One board member acknowledged support from sponsors that provide grants so that the Center can carry out its programs and activities. She says: *“Yes, we have the big help, Eli Lilly. I never left Lilly’s, because to me I feel like I’m still working at Lilly’s and I’m still connected. People still come and support us. And that individual help is also huge. Bring change from inside out.”* Eli Lilly Foundation is one of the biggest financial sponsors for most FHC programs and activities. The tone and the expression she used when she was discussing its support shows how much she appreciates the importance of this organization.

#### 4.2.2. Research Question 2

Research question #2 (RQ2) assessed the extent to which background factors contribute to life skills, entrepreneurship, and healthy eating intentions for minority youth who attend Felege Hiywot Center. Background factors include *individual personality* (mood, emotion, intelligence, values, stereotypes, general attitudes, and experience), *social* (education, age, gender, income, religion, race, ethnicity, and culture), and *background information* (knowledge, media, and intervention).

During one-on-one interview discussions with youth, emerging themes related to RQ2 included *individual personality*, *social factors*, and *background information*. Youths' responses demonstrated how background factors have a part to play in acquisition of life skills, entrepreneurship, and healthy eating intentions. During the interview, one youth acknowledged that she had interest in becoming an entrepreneur. She also mentioned how the Center helped her gain more knowledge on how to start and run a business. On the other hand, another youth mentioned that regardless of the training and knowledge about entrepreneurship, she is not interested in becoming an entrepreneur. She is interested instead in getting her college degree and working for other people. This is a clear indication that regardless of the programs and professionals the Center invites to come and assist youth, based on her individual personality, she is not inclined to become an entrepreneur.

**Individual personality.** One of the participants from the alumni category stated:

“I feel like personally I’ve had an interest in entrepreneurship, but the facility also offered different programs or lessons towards management of or financial management or how to sit down and learning well, in my position when I was the assistant farm manager, learning how to plan out for the year some supplies that you might need and whatnot. That all those activities help tie into building the skills that would be needed for having to be an entrepreneur.

The tone and confidence this participant used to express her ability to start her own business reflected how her individual personality played a big role in her entrepreneurship intentions. A participant's prior intention toward entrepreneurship was acknowledged as the major contributor toward her entrepreneurial endeavor. She also acknowledged that the Center strengthened entrepreneurship intentions she already had. This is an indication of how individual personality can positively contribute to entrepreneurship intention.

Another participant acknowledged how the Center encourages minority youth to become entrepreneurs through its entrepreneurship programs and activities. However, because of her individual personality, she is not interested in becoming an entrepreneur. This participant stated: *"Me personally, I'm not interested in entrepreneurship, but I know if that's something you're interested in or you express it, we have those opportunities."* Her facial expression and gestures when she was discussing this topic showed how much she would not like to be self-employed. Regardless of the entrepreneurship exposure provided by the Center, she is not interested in becoming an entrepreneur based on her individual personality.

This participant showed how her individual personality is an obstacle in her communication and leadership skills. Regardless of how the Center exposes youth to different opportunities that foster leadership and communication, this youth shows she is still not comfortable speaking in front of other youth who come and make quick progress and she is still not comfortable talking in front of people or telling them what to do. During the one-on-one interview discussion, she acknowledged: *"Again, I'm not very good at communicating with the group of people sometimes, so I think one challenge is telling people what to do. I'm getting there, but it's tough."* The tone and facial expression used by this participant clearly indicated that her individual personality is a barrier regardless of the opportunities to exercise her leadership and communication skills provided by the Center. Assigning people what to do is one of several leadership qualities. If the Center provides that skill, and this participant feels she is not confident enough to do it, it is an indication that her individual personality affects application of the leadership skill.

Another participant stated that her dream was to become a vegan. Regardless of her effort, her individual personality conquered her passion of becoming a vegan. In the interview, she stated: *"I do love meat, I tried to be vegan for... and I tried it three different times, but my love for steak and Church's Chicken was too strong."* The tone she used and regrets she expressed by shaking her head reflected how her personality impeded her goal of becoming a vegan.

**Social factors (race and gender).** Another theme that emerged was the *social factor*. This theme reflected how gender and race contribute to entrepreneurship; for example, a common stereotype is that African American males pursue careers in music or sports. This is demonstrated by one of the youth who is currently attending the center, who stated: *"I'm very into music. So, I*

*do rap. I have phones and things like that. So, one thing that I would like to do is start my own record label and get my own artists and producers.”* The gestures and enthusiasm this participant used to express his passion about music and how he wants a career as an artist reflected how social factors have a role to play in the career choice of some minority youth. This is an indication that his gender and ethnicity as an African American male helped him feel comfortable starting his own studio to produce rap music. Besides this youth being interested in music, there is also support from his mother. The support he gets from his mother, ie. buying necessary equipment to use in his music and being taken to different concerts to meet with his role models, has increased his passion to become an artist as a career. This youth stated: *“Because my mother, she paid for my studio time, and she always tells me to take opportunities, like if I see any artist out, because I’m already visiting cities and things like that. So, my mom takes me to concerts so I can meet artists and rap to them and things. Yes, my mother, she really does believe in my dream.”* The youth’s emotions and gestures when he was mentioning how his mom is very supportive in his music career path reflected how social factors affect the way we choose careers. Besides his individual personality traits of wanting to become an artist, this statement shows how support from the mother complements the desire that is already there.

**Income.** During one-on-one interviews, other participants also showed that social factors have a part to play in adoption of a certain behavior. Factors such as low income and culture have a big impact on how youth choose certain meals over others. One aim of the Center is to teach youth to eat healthy, but limited resources in inner-city neighborhoods and the culture of what they are used to eating impact how youth develop healthy eating intentions. For instance, one participant stated: *“And if you’re poor, you’re going to eat bad food because it’s cheaper. You can go buy a McDonald’s hamburger for \$1 and the salad at McDonald’s cost \$3, so what’s healthier? The McDonald’s or the salad and that’s where they get you.”* The tone and the way this participant shook his head indicated how income influences how people decide what to eat, regardless of the individual’s will to change the diet. This participant shows how income becomes a problem to these youth when they choose to go out to eat.

**Background information.** Another participant shared how her eating habits have changed as a result of the information she learned from the Center. The youth acknowledged how, after learning the importance of eating healthy and how unhealthy food is not good for the body, she

decided to gradually change her diet. The information she gained as background played a big role in her healthy eating intentions. In the interview she stated:

“I would say when I switched my eating habit and I decided to become pescatarian and I suddenly stopped to eat large amounts of junk food and realizing how acidic that stuff is, my family at first, they were, ‘Oh my gosh, no.’ But now over time I could see that this switch between more fatty foods and then actually putting in the thought and effort into more healthier food items. So not always deep-fried KFC chicken, but maybe a chicken as an example.”

During the discussion, her gestures and facial expression when she was talking about junk food and the danger of eating it clearly showed how the information, she got affected the way she started minding what to put in her body. This is another example that shows how background factors can promote or impede behavioral change. In this case, after learning about the benefits of eating healthy, she decided to change her diet as a result of the information she acquired from the Center.

### **4.2.3 Research Question 3**

Research question #3 (RQ3) assessed the extent to which the structure/organization of FHC promotes life skills, entrepreneurship, and healthy eating intentions for minority youth attending its programs.

During interviews, the overarching themes related to RQ3 generated during the data analysis included: *identity experience, initiative experience, basic skills, cognitive skills, interpersonal relationship (positive relationships), teamwork and social skills, adult network and social skills as life skills, entrepreneurship, and healthy eating*. Each major theme had some subthemes generated from discussions with the participants.

#### **4.2.3.1. Identity experience**

The first theme for RQ3 was the *identity experience* skill. The skill provides youth the ability to explore and reflect on their identities. Among the sub-themes generated during data analysis were *identity exploration skills* acknowledged in the one-on-one interview discussions with participants. These sub-themes were generated from discussions in which some youth mentioned that because of FHC programs, they had opportunities to try new things, act in new

ways around people, or do new things they don't get to do elsewhere. They also mentioned that the programs helped them discover who they are and what they are thinking about the future as a result of an activity or knowledge acquired from the FHC.

**Identity exploration.** Participants acknowledged FHC programs for helping them discover what they are capable of and good at doing. Some mentioned how the Center has helped them to do new things and act in a new way as a result of the activities and services. This is shown in discussions during the interviews. One youth mentioned: *“I think I learned that I can be confident in myself to do the things I need to do or say the things I need to say to get a job done.”* The confidence and tone used when this youth describes how the Center built her confidence reflects the impact the Center has on minority youth in helping them explore their identities. This is one of the skills youth need, especially those from inner cities with limited resources.

Another youth stated that:

*“I want to say Miss Aster, I believe she made me a team leader my first year. So, I guess you saw something in me that I didn't really see. I didn't think I could be no team leader. I think just over the years I sort of learned how to break out of my shell. I wasn't as outgoing or I wasn't really a people person. I morally kept to myself. But having to be over people, having to be the person that says, ‘Hey, guys, we got to do this,’ or having to get everybody together having to keep everybody on schedule, I'll say that really helped me open up and everything.”*

The confidence and enthusiasm this participant used during the discussion clearly shows how appreciative he is that the Center helped him discover his leadership skills.

This is also confirmed by another youth who acknowledged how the Center and its leader helped her believe in herself. She ended up getting a leadership position over the summer. During the interview discussion she mentioned:

*“Okay. Well, one thing I learned about myself is that I'm very strong-minded. At first, I will have that thought like, ‘Mmm, I don't think I can do this, or I can't do that.’ But you can really do anything that you put your mind to and I think I will always thank Ms. Aster for it. She saw potential in me. When I was.... or this thing that I thought that, that she chose for me to be a leader, I thought I was ... I don't know, I was scared. I was like, ‘Oh man, I'm not ready for this, or I can't lead a whole team,’ but Ms. Aster, she saw something and she believed in me, and I ended up being the leader of the summer. So, she thought something right.”*

The gestures and tone used by this youth to express how the Center helped her discover the leadership skill was observed. This is another indication that minority youth who attend FHC are learning new things, and the more they advance, the more they discover their identities and their capabilities with the help of the center's founder.

**Identity reflection.** During one-on-one interview discussion, one participant acknowledged how the Center helped her to think about who she is and her future. She stated: “*So, I worked everywhere, I worked inside in the kitchen, I worked outside sometimes, and then sometimes I worked in the office writing up what happened that day. And my least favorite was probably writing what happened that day. I don't really know how to explain it, but it just was not my favorite part.*” The gestures and facial expression used while discussing her experience attending the FHC shows how the Center helped this young lady to learn about what she is capable of and what she is likely to do in her future career. The participant discovered that she is not good at journaling what happens on a particular day. This helps her to think about the type of jobs she can do in her future.

#### **4.2.3.2. Initiative experience**

The second theme for RQ3 was the *initiative experience* skill. This skill provides youth the ability to set goals in their lives, solve problems, put effort in whatever they do, and manage time. Among the sub-themes generated during data analysis were *effort, problem solving, and time management skills*, acknowledged during the one-on-one interview discussions with participants.

**Effort.** Effort is one of the sub-themes generated from the interviews during data analysis. Effort is a skill that helps individuals to put energy into whatever they are doing or push themselves to do better.

Participants acknowledged the role of FHC in fostering youths' effort in activities at the Center. During the interview, one participant acknowledged: “*Yeah, like I said, Ms. Aster, she always going to push you to do your best or try your hardest, or to challenge your mind. Just, she always pushes you to do more to basically just to your limit, or get you to figure out your limit, so.*” This participant, who currently attends the program, acknowledged how the leader of the Center helped her put effort in what she was doing by aiming higher. She shows how Ms. Aster, the Center's leader, helped her to push herself when she is working on something.

The same participant also mentioned: *“Okay, okay. So, with me, first coming to Felege I was of course, like I said, a very shy person and, but over the years, I’ve opened up to people here. And it was actually a very good thing that I decided to do that. I don’t know, learning, just learning those things at Felege is what I like about it.”* The confidence and enthusiasm of this participant when explaining how the Center helped her get rid of her shyness and become open to others clearly indicated how appreciative she is for FHC.

**Problem solving.** Problem solving was another sub-theme generated under initiative experience skills. Individuals gain this skill by observing how others solve problems and learning from them such things as how to develop plans to solve problems or use the imagination to solve problems.

One participant currently attending FHC gave a practical example on how the Center provided the opportunity for youth to learn how to solve problems. He stated:

*“Yes. We have learned about solving problems. Actually, we had a project dedicated to solving problems. So, what we did... And I’m pretty sure it was Purdue that came to see us. We had a project about some strings that were tied, and the group had to work together to figure out how to get the strings untangled. And that really helped me with problem solving skills because one thing that we had to do was listen because everyone had an idea, but no one wanted to listen to each other. They all shouted out their ideas. So, we took a minute. We listened to each person’s idea. We tried every idea out until we got the string to come loose.”*

The enthusiasm and gestures used by this participant in explaining how this activity helped him learn strategies to use in solving problems showed how much he is impacted by the types of skills he is getting as a result of joining FHC. The statement shows how the Center uses many approaches to help youth learning strategies on how they can solve problems through activities and games.

Besides other activities, the Center also has a platform called TalkTime, which encourages youth to express freely when they have challenges or other issues that might hinder their learning. One of the youth participants mentioned, *“...and then problem solving, also TalkTime to do that. So, we had the issue during the day, we use that time to say, ‘I didn’t like how this went and I think we can change it through this way.’ So, I guess this introducing it to us and then us being able to implement it, problem solving.”* The gestures and facial expressions used by this participant

showed how appreciative she is for this platform. This participant demonstrates how the Center helped them to learn how to solve conflicts through the TalkTime platform.

One participant from the alumni category talked about how the Center helped her to learn how to deal with conflict resolution. She sees this skill as important even in her future workplace or in school group projects. The acknowledgement she gives to the Center shows that the youth who attend FHC get exposed to different types of skills they cannot find anywhere else in their community. During the interviews she stated:

“I feel like I may be able to learn how to respectfully solve conflicts was useful and useful in learning and how to, there’s a useful skill to transfer over for other interpret like other professional relationships or if any other issues came up and the workspace or just like with the acquaintances or between group members for academic projects. I feel like that was very useful because conflict management can be a kind of a pain in the rear end. So, I feel like it was very useful to learn all by not necessarily the best experience when not every experience is going to be amazing. So that's just how it is.”

Besides learning how to deal with conflict among individuals, one participant also acknowledged how the Center offered her an opportunity to learn how to critically solve problems related to activities on the farm. This skill can help youth find solutions for social and physical issues that might be affecting their community. During the interview, the participant stated:

“So, every year a lot of responsibilities came with more things to learn about or more obstacles that we would have to find solutions to. So even if it was just like person to person trying to mitigate any comp team conflicts or having to deal with new diseases or pests on the garden that we haven’t really dealt with before, or if we would have to go to any conferences and we would always get more knowledge there about team building activities and what not.”

The tone used when this participant was discussing how the Center has helped her learn how to deal with some diseases in the crops, showed how gratified she is for the FHC. This is another indication that the Center plays a big role in promoting life skills essential for minority youth living in low-income neighborhoods.

**Time management.** Time management was another sub-theme generated during data analysis. This skill helps individuals learn to organize time and not procrastinate, set priorities, and practice self-discipline.

One participant acknowledged the role of the Center in helping youth learn how to utilize time, showing how she learned how to perform multiple tasks with limited amounts of time as a result of FHC programs. *“I have time limits because I know Miss Aster require lot, but I also did basketball at school. I did a lot of things at school as well as being here. And I know now in college I’m doing a lot of stuff there, but I’m also still doing a lot of stuff here. So definitely time management, being able to write down what’s going on for the day.”*

#### **4.2.3.3. Basic skill**

Basic skill in this context is defined as a skill that helps individuals learn how to control emotions, become better at dealing with fear and anxiety, and become better at handling stress. This is a very important skill especially for minority youth who live in low-income families in high-crime areas like Martindale-Brightwood. Learning how to manage emotions in this type of environment can help not only youth but also the community. The resilience individuals acquire by learning how to manage emotions can be beneficial for others who might be seeking some emotional support. During data analysis, one generated sub-theme was emotional regulation.

**Emotional regulation.** Emotional regulation helps individuals deal with fear and anxiety as well as control their temper. Most participants acknowledged the role played by FHC in helping minority youth dealing with emotions and stresses. For instance, one board member mentioned, *“I perceive that as these kids are so strong, and they keep smiling every single day no matter what’s going on in their lives. Because they don’t have everything that I have, and they don’t have everything that my friends have, and they’re still pushing through and doing what they need to do and smiling and having a good time at the same time.”* The sympathy and gestures this board member used during the discussion shows how he acknowledges the resilience these youth develop as a result of the programs and services offered at the Center, which builds them into strong individuals who can deal with emotions. This quote clearly shows how some youth come to FHC with different issues going on in their lives, but the Center helps them to learn how to handle them.

One youth participant also acknowledged how programs such as TalkTime help them solve some conflicts and emotions: *“We would also have, like, Fridays where we would have real talks and setting where we could openly communicate how we were feeling or any frustrations that we may have had or any conflicts that may have occurred throughout the past*

*week. But doing it in a space where we have to be respectful and find solutions to these things, that won't lead to more future issues.*" The pride and enthusiasm used by this participant when she was describing how the Center helps youth to learn how to release emotions clearly indicated the benefit of the TalkTime platform to minority youth. In this paragraph, this participant shows how the program helped her to learn how to handle stress as a basic skill through a TalkTime platform. This platform helps youth to learn how to solve conflicts in a respectful manner as a way of avoiding future potential conflicts.

Another youth acknowledged:

"I'll say it definitely helps improve it because now I feel I can approach my family with any issue that comes up now, or feeling I don't have to suppress how I feel just because... So now if I have a problem, I can express it. If something's bothering me I can express it. And then also she... We talk about death a lot here because that's actually pretty common in African American community. I think almost everybody here has been to a funeral more than once I'd say. And then we kind of built that support system where say you had a cousin die that was really close to you. And you said, you really don't want to go because it's really hurting, and she kind of taught them you should go for support... we'll go for support kind of thing." So just being a better supportive family member and yeah."

This youth shows how the program helped her learn how to share her emotions and stresses with her parents as a result of intervention by the Center. Whenever she has an issue, she can freely approach her parents and share her problem. She mentions how they frequently discuss death, which is a common challenge in the African American community, and how the program has helped her to deal with the emotions and taught her to go and support those who are grieving or having other challenges.

To know if there is any sustainable impact on the emotional regulation skill acquired by youth who attend the FHC, parents were also interviewed. One parent acknowledged the role of the FHC in helping their children in learning how to deal with emotions. She stated, "*Kids, they are able to learn conflict resolution and just gain the confidence to try to thrive and soar above some of the things that they have to deal with. Like I said, all three of my children have definitely benefited from just being involved with....*" The tone and enthusiasm used by this participant clearly indicated how she is grateful and appreciative for the transformation she observed in her children who attend the Center.

#### **4.2.3.4. Cognitive skill**

Cognitive skill helps individuals improve in their academics such as reading, math, art and science, finding information, and communicating information. During data analysis from the interview scripts, the generated sub-themes from this major theme included *communication skill* and *academic skill*.

**Communication skills.** Communication skills help individuals interact and speak professionally in front of people. One of the aims of the FHC is to provide useful knowledge for the minority youth that they can use in their schools and careers. For instance, on the communication side, one youth who is currently attending the program stated that:

“We’re placed in groups during the summer, so you have to learn to listen to your group members, their ideas, and not overbear them with your ideas and not listen to them. You have to learn how to communicate and listen to others. I think that’s one skill that I learned during the summer. I think this program is very positive, and it’s a positive experience for me because I can’t talk to people like that, even strangers. I get really shy, so it’s a positive experience for me because I get go open up to people and make new friends and learn how to communicate.”

One board member participant acknowledged the role the Center plays in helping youth learn how to communicate well when they are engaging in interviews or other professional opportunities that require them to use communication skills. The board member stated, “*They can interact with professional people, which is a goal of the center is to teach them how to interview the correct way when they go for an interview, for a job, how to dress for the interviews, and how to manage their money financially when they start getting checks, bank accounts. Why do you need a bank account? Why do you need to do this with your money?*” This board member shows how once youth join the program, they start to learn how to interact with different professionals and engage in interviews that help them build their communication skills.

**Academic skills.** Besides the communication skills, participants also acknowledged that the FHC provided youth with academic skill that enabled them to get rid of caterpillars or work on the raised bed. All these skills are very important, especially to minority youth who might end up enrolling in agriculture and related programs or teaching other youth such skills. This knowledge can also help them engage in urban farming businesses such as being a farmer or a consultant. For instance, one youth acknowledged, “*Well, we learned how to get rid of caterpillars when we had*

*to weed, and we also learned about the water cycle, which was pretty cool. And I think we also learned about pH, with different elements and whatnot.*” The confidence used when this participant was describing how she acquired a lot of information about agriculture shows how appreciative and thankful she is for joining this Center.

Another participant mentioned, *“Well it's a farm, of course, and I can say I've learned many things about that. Like I know I have my mom spoke on wanting to fix up her own garden or make her own garden and I will definitely be able to help her with that since I worked at Felege so long and I know how to do it.”* The confidence and courage shown by this participant during the discussion clearly shows the impact of the FHC on minority youth.

Finally, one of the participants from the alumni category mentioned, *“...and then with the different community guards that we've been doing, I actually got hands-on experience of how to build raised beds, how to buy the lumber, how much lumber you would need, how to cut it, different things like that.”* This statement shows how this youth benefited a lot on how to start a garden as a result of FHC programs.

#### ***4.2.3.5. Interpersonal relationships (positive relationships)***

Interpersonal relationship skill helps individuals make friends with people of different genders or from different backgrounds and be able to help others or change others for the better. Data analysis from interview scripts generated sub-themes that included *diverse peer relationship* and *prosocial norms skills*.

The positive/interpersonal relationship is a critical skill for minority youth who live in a predominantly African American community. The youth grow up seeing people who look like them in the neighborhood, and their schools can sometimes become a barrier when they want to go to college or workplaces.

**Diverse peer relationship.** Diverse peer relationship is a skill that helps individuals befriend people from different genders, races, and backgrounds. For instance, one participant acknowledged:

*“The people that were there, as I was there with for a few years, some of them still recognized me when I went down. So that was nice. I know Naomi, she worked there. I don't know if she still has plans to come back during the summer, but she,*

excuse me, she said he's here now, so we still get to interact and hang out and whatnot. The rest of the people that I interacted with are still in Indianapolis, but we're still in like good terms or we're still like hang out every now and then if I'm in town. So, I feel like good relationships were built on spending all this time at the program and being able to grow through similar struggles or conflicts also helps to bring us together and like commonalities."

The feeling and gestures this youth used when she was describing the importance of having friends as a result of the Center show she is grateful for the experiences she had at the FHC. This shows how this youth learned how to interact with other people she met at the Center as a result of the programs offered by the FHC.

One of the youth participants who is currently attending the program also acknowledged:

"The program was very helpful for me, and I think it was a good decision to join the program because I met new people. And out of them, they all taught me different things. And I got to experience different cultures because we also went to a cultural thing that we got to eat different types of food and things like that. So, I got to see... It's kind of opened my eyes to the world a little bit, like what's going on around me."

This youth shows how the Center helped him meet various people who taught him different things. The Center aims to help youth learn how to step out of their comfort zone and make friends with people who are different from them.

**Prosocial norms.** Prosocial norms is a skill that helps individuals help others, changing community or people for the better. This skill is critical especially for minority youth who come from limited-resources and high-crime neighborhood like Martindale-Brightwood.

During the interview discussion, one of the participants from the parents category mentioned, *"Once the summer program started, I liked that he was able to be around a group of children that were not out here doing the bad things, and they kind of formed like a sister and brotherhood through there.* This is also another indication that the Center helps its youth to help each other.

#### ***4.2.3.6. Teamwork and social skills***

Teamwork and social skills help individuals be aware that working with other people requires compromise, become better at giving feedback, and know the requirements for a good

leader. During data analysis for the interview scripts, a sub-theme related to the major theme generated was *leadership responsibilities*. Every category of participants talked about how the Center promotes leadership among the minority youth.

**Leadership responsibility.** One of the goals of the FHC is to foster teamwork and develop future leaders who not only can develop their neighborhood but also other communities that might face similar challenges as does Martindale-Brightwood. During one-on-one interview discussions, participants, especially youth, strongly acknowledged the role FHC plays in promoting leadership skills. They mentioned how these skills were acquired from the Center and how they could not get them elsewhere.

For instance, one of the participants from the youth category mentioned, *“I was on kitchen staff for most of the summer in the mornings when I couldn’t take pictures or something like that because all the activities and fun stuff happened in the afternoon. So, I basically took charge of the kitchen, and the staff didn’t have to worry about anything.”* The leadership opportunity this participant acquired helped her to take a lead in the kitchen, and her feeling about what she did shows how she appreciates the program.

One of the participants from the alumni category also acknowledged how the Center developed her into a strong leader by promoting her every year into different leadership opportunities. The participant stated that:

*“and after like a week or so through hard work and staying focused, they picked me out as a person to be a team leader. And then I stayed with them for like three years. And then I worked up from team leader to Youth Group Coordinator, because of both the team lead... there is the teams, So, we have three to five people per team and there's the leaders and then what I would call it Youth Group Coordinators. We would coordinate the team leaders and then my third year I was able to move on up to Assistant Farm Manager. So, help more so with planning the crop rotation and disease management or like pest management and when we would do planting or seed sourcing and whatnot”*

This participant shows how the Center helped her to gain some of the leadership opportunities that took her from one level of leadership to another.

Besides the youth’s experiences, the board members also acknowledged the changes they see from the youth since day one they join the FHC till they leave the Center. This participant stated that, *“well yeah, I see how the youth, when they come, they're here for camp and they're part*

*of the camp, but then they learn everything and the next summer they are part of the leadership of the camp and they're teaching the other kids how to do this and how to do that. But you see them grow into being a leader and they remember. They're like sponges. They remember everything you tell them."* This passage clearly shows how the youth come to the Center without any leadership skills and are able to go leave as leaders because of the opportunities and knowledge this Center provides to them.

Finally, the other participant from the parent's category acknowledged the experience she had with her kid who attends the FHC program, she stated that:

"Definitely. I think that my son definitely has shown improvement in maturity. I always joked with him and talked about... which isn't a bad thing for me. As a parent, you don't want your children to grow up too fast, but I joked about how silly and goofy he is. I think I've seen growth in him over the summer. And just I think the program has provided a good, stable foundation for him, where it's allowing him to continue to be a young person, a kid, but also easing him into those roles and leaderships, easing him into how to relate on a team level, how to deal with the pressures of being around your peers"

The enthusiasm this mother has towards her child's development displays how she is grateful for the leadership opportunities and other skills provided by the Center.

#### ***4.2.3.7. Adult networks and social skills***

Adult networks and social skills help individuals improve relationships with parents/guardians and connection with the community or help those in school stay focused on school. During the data analysis from interview scripts, sub-theme generated were *linkages to the community* and *linkages to work and community*.

**Linkages to the community.** Linkages to the community help individuals develop relationships with community members. By learning the history and meeting the elders of the community, youth from those communities find out what makes their community/neighborhood the way it is. This can help them work together and find solutions to the problems.

Participants acknowledged the role the FHC plays in helping youth develop a strong bond with their neighborhood and community, and how that has helped some to proceed with college. For instance, one of the participants from the alumni category stated:

“So I guess I helped with the consistency and the rewards were both financial and otherwise in terms of being able to share knowledge and interact with a bunch of different people that I would’ve never interacted with in the first place. And being able to be more active in the community or we would also go out and help some elderly people set up their gardens or maintain their gardens and stuff like that. And the knowledge and the stories that they had to share were also fulfilling in being able to reach out to them because otherwise they wouldn’t have had the means to do so.”

This participant describes how the Center helped her connect to some community members as a result of this program and its activities. The tone, pride, and gestures she used when discussing how the center helped her to connect with some elderly people in the community clearly indicated that she was grateful for joining the Center.

Another participant acknowledged:

“Okay. So, it started with, went to a lot of neighborhood meetings. I remember we walked around, we did interviews on the elders that lived here. I remember one day was we got a history lesson over this neighborhood and then since then it's just been increasing and improving. And then I started the... communities, the youth program and my senior capstone was centered around community engagement and low-income and minority communities and not having the proper development. And then we went to the INPD Community Day. We had the trash pickup day, the community day that I had. We did the KIB neighborhood beautification thing. We did cleanups. We do a lot of community-based stuff.”

The pride and facial expressions when this participant was describing how her connection to the community, even helping her to write her senior capstone, clearly shows how much she is thankful for the experience she had as a result of the FHC.

**Linkages to work and college.** Linkages to work and college is a skill that helps individuals be prepared for college and to stay in school. This is a very critical skill especially for youth who come from inner-city neighborhoods where dropout rates are high.

During the interview discussion, the participant mentioned:

“And for me personally, I remember if we went to farm festival, the garden is like a farm festival kind of. And this guy, I can’t remember his name, he gave a speech about how the health food affects the brain and ADHD and stuff. That’s why no one want... it was really interesting the science part of food and how it affects more than just... People are like, ‘Vegetables are healthy.’ But it explained how the vegetables are healthy. So that’s how I figured out what I wanted to do.”

This is another youth from the alumni category who is currently studying at Purdue University as a result of this presentation she attended at the Center. The presentation on the impact of unhealthy food on our body helped her work on her capstone and led her to choose pharmacy so she can tackle food-related diseases, which are found in poor, inner-city neighborhoods.

#### ***4.2.3.8. Eating healthy intentions***

Eating healthy is one of the aims of the FHC. One of the reasons FHC was founded was the issue of Martindale-Brightwood being a food desert. The FHC was established as a way of helping youth through the farm, where they would learn to grow fresh and healthy food and be able to consume it.

During one-on-one interview discussions, participants acknowledged the role of FHC in promoting healthy eating through its programs and services. One youth mentioned, *“So, when I first came here, I was a regular eater, but I don’t know what happened over time; my eating start change. I started to become pescatarian. And at first my mom thought it was something that happened here, why stop eating meats and red meats and stuff. But I think it was just Miss Aster, she kind of talks to me about how eating influences how you focus in school, how your body feels, how you feel. And I’m just feeling better. And I know we tried to implement vegetables or introduce new vegetables, just different vegetables, just being open to be open and vegetables and stuff.”*

The gestures used by this participant clearly indicated how she acknowledges the Center’s influence in her changing her diet. This is critical for a kid who comes from a food desert neighborhood where the only food kids know is high-fat and sodium-rich.

Another participant currently attending the program acknowledged that before attending the FHC, he was reluctant to try any vegetable-related dishes. But when he joined the program, he started tasting vegetables and ended up loving them. This is another indication that the center does promote healthy eating for the youth who attend its programs. The youth stated:

*“So, it’s actually like a yes and no question. On the yes side because before I attended FHC, I really didn’t eat vegetables. Vegetables weren’t really my thing, but when I came to FHC, I was talking and doing things like that, and that actually got me to try my first vegetable. I believe it was kale, and it actually turned out to be pretty good. Yes. That’s one thing that I picked up, too. Every time Miss Aster made them, I eat them. Yeah, I pretty much... Yeah. I love greens. That’s one thing that I didn’t eat before I came to the program, too.”*

This is also emphasized by one participant from the board members category who mentioned, *“Because when they really getting what they like and they say, ” ‘What is this?’ ‘Well, we cooked it. Do you want to try it?’ Then that becomes like we also getting them to try something new. But the whole community and the elders they would come, sometimes they would come here and cook and share with the students. So, when they really, we are growing something they like, it brings the community together.”* The facial expression and pride this participant used to show how proud she is of the progress she made with youth who did not like vegetables and ended up eating them, clearly indicated how rewarding she feels whenever she sees minority youth eating healthy.

#### **4.2.3.9. Entrepreneurship intentions**

Entrepreneurship skill helps individuals create and run their own businesses. One of the aims of the FHC is to help minority youth who come from low-income neighborhoods with high rates of unemployment learn how to create and run a successful business. This not only can help improve individuals’ lives, but also the community where these individuals live. During data analysis, the interview scripts generated three sub-themes. These sub-themes included *perceived behavioral control*, *attitude towards entrepreneurship*, and *perceived social norms and entrepreneurship*.

**Perceived behavioral control.** During one-on-one interview discussion, participants acknowledged the Center’s role in helping them acquire entrepreneurship skills. One particular participant showed how she had that desire before attending FHC, but with the additional programs she got from the Center, she feels it is easy for her to start her own business and become successful.

“I feel like personally I’ve had an interest in entrepreneurship, but the facility also offered different programs or lessons towards management of or financial management or how to sit down and learning well, in my position when I was the assistant farm manager, learning how to plan out for the year some supplies that you might need and whatnot. That all those activities help tie into building the skills that would be needed for having to be an entrepreneur. And I know that some of the students there were interested in starting their own business and they would talk to us there about it and she’d help.”

This participant shows how she sees that being an entrepreneur is easy for her because of her prior interest and additional training she received from the FHC, which enabled her to feel confident about starting her own business.

**Attitude towards entrepreneurship.** One participant acknowledged how the Center helped him and his friend develop a business that they will be running once they have money to do it. The participant mentioned:

“We were really able to see like, ‘Wow, there’s a lot of people that talk to us about what we’re doing at the center.’ And we’d always hear, ‘Oh, I would love to do that at my house,’ or ‘I would love to be able to do that.’ And so, we were like, ‘What if we were just to create little raised beds. I can drill together a little raised bed, bring it to you, and get your home grown from the garden started.’ Miss Aster actually put us in contact with somebody that did free shirts for us. We’ve got free business cards done. And then with the different community guards that we’ve been doing, I actually got hands-on experience of how to build raised beds, how to buy the lumber, how much lumber you would need, how to cut it, different things like that. So now me and my friend, we started working on it. And we’re just trying to save up a little money and yeah, that’s the plan.”

Another participant currently attending the FHC also stated, “*And I call myself looking at being that I want to do if I was to do entrepreneurship, even though I want to be a nurse, but it’s never... It’s okay to have that little side hustle that you want to do. So, yeah, I did think about that a few times and I like babies, so I was thinking why not have a little daycare or something like that, so yeah.*” This is an indication that youth are acquiring entrepreneurship skills from FHC, and they intend to use the skills in their future, which is one of the the Center’s goals.

**Perceived social norms.** This sub-theme describes the confidence with which a relative or friend sees an individual being able to create and run a business. One participant from the parents category mentioned:

“Yeah, it’s funny that you mention that. My oldest, I would say out of all three of my children, he is the closest and then Ms. Aster’s favorite, just because he started with her from the very beginning. If you ever got the chance to meet him and talk to him, he always pushes and states that his goal isn’t to work for anybody for the rest of his life. His goal is to be able to form some type of business for himself or some type of web-based something, or something where he wants to generate his own growth. Versus working for anyone.”

The enthusiasm and facial expressions used by this participant clearly indicates how she is grateful that the Center has created her son as an entrepreneur.

## 5 DISCUSSION

### 5.1. Introduction

The aim of this study was to explore the role of the FHC, an urban agriculture program, in promoting life skills, entrepreneurship, and healthy eating among minority youth who attend its programs. FHC is a youth-led urban agriculture program that serves primarily African American youth from the Martindale-Brightwood neighborhood. Participants are engaged in different activities at FHC. Those activities include, but are not limited to, working on the farm, town hall meetings, civic engagement, selling produce, and other outreach in the community. Participants shared their narratives, which included detailed information about their experiences with the Center, their colleagues, professionals, volunteers and the leadership of FHC. Qualitative data were collected and coded from participant narratives, from which themes were generated from keywords and phrases.

In order to answer three research questions designed to explore the role of the Center with youth, the study used literature review, conceptual framework, FHC vision and mission, and methodology. A review of literature explored studies related to minority unemployment in the U.S., food deserts and the health impact on minorities, the role of urban agriculture programs on youth, and other studies that explored entrepreneurship. A conceptual framework explored how different variables interact with each other and how their interactions lead to life skills, entrepreneurship, and healthy eating intentions. Community support, which is made up of professionals, volunteers, and sponsors together with program structure (a youth-led urban agriculture program) are considered external factors. External factors and personal factors contribute toward three independent variables. These variables include *behavioral beliefs*; in other words, the subjective probability that the behavior will produce a given outcome or experience. *Normative beliefs* are the individuals' beliefs about the extent to which other people who are important to them think they should or should not perform particular behaviors. *Control beliefs* are factors individuals perceive as being present that may facilitate or impede performance of their behavior. Once individual behavioral beliefs are achieved, they develop into attitude toward a behavior, which is the degree to which performance of the behavior is positively or negatively valued. Normative beliefs develop into subjective norms, or beliefs about the extent to which other

people who are important to them think they should or should not perform particular behaviors. Finally, control beliefs develop into perceived behavioral control, or people's perceptions of their ability to perform a given behavior. A combination of attitude toward a behavior, subjective norm, and perceived behavioral control lead to an individual's intentions (Ajzen, 1991; Fishbein, 2000). In this research study, the combination of three independent variables (attitude, subjective norm, and perceived behavioral control) lead to the acquisition of life skills, entrepreneurship, and healthy eating intentions.

A sequential research methodology was used. Survey questionnaires were administered to youth which were followed by one-on-one interviews to explore in depth the contribution of the FHC toward minority youth's life skills, entrepreneurship, and healthy eating intentions. The process involved administering survey questionnaires to the participants, which helped inform the interview questions. Survey data analysis focused on the mean scores. Follow-up interview questions were created based on how high or low a given mean score was for the variables of interest. Interview questions were created from the mean scores of the survey results. For instance, if the mean scores for given variables were low or high compared to the average mean scores, questions were built from those mean scores to check whether or not the Center promotes those particular variables.

The reason FHC aims to promote entrepreneurship is that minority youth in the U.S., especially in inner-city neighborhoods like Martindale-Brightwood, have a high rate of unemployment compared to other races in the same age range. Creating a platform for these youth where they can learn how to create and run their own business is the ultimate goal that can change their lives and the neighborhood in which they live. The FHC promotes healthy eating because of the high rate of chronic diseases such as diabetes, heart attack, obesity, and blood pressure that are predominantly found in most of the neighborhoods of people of color. The Martindale-Brightwood neighborhood, where FHC is located, falls into the category of a food desert — an area characterized by limited fresh food. The FHC uses its farm to teach youth and parents how to produce their own fresh food as a way of making it available to and accessible by minority people. The Center also aims to use the farm to help minority youth gain life skills they can use in school, home, or their future careers. This is important especially for minority youth who live in limited-resource neighborhoods. Youth from neighborhoods like Martindale-Brightwood face challenges

such as dropping out of school, unemployment, and family challenges caused by the lack of adequate resources in the households. The presence of the FHC came as an intervention for such youth who don't have opportunities to gain extra life skills like youth from more affluent communities.

The discussion of the results has two parts: quantitative and qualitative. First, the quantitative portion discusses the survey questionnaire responses, the STEAM Summer Camp surveys collected by the Center on the attitude of the minority youth toward different career choices, and the correlation between life skills and entrepreneurship intentions.

## **5.2. Quantitative results discussion**

This exploratory study assessed the role of the FHC programs in promoting life skills, entrepreneurship and healthy eating intentions. There are results from two quantitative survey questionnaires. The first survey questionnaires evaluated the extent to which FHC promotes life skills, entrepreneurship and healthy eating intentions. The second questionnaire surveyed the perception of minority youth towards different professionals who exposed them to different careers during the 2019 STEAM Summer Camp.

### **5.2.1. Surveys assessed life skills, entrepreneurship and healthy eating intentions**

Towards the end of the 2019 STEAM Summer Camp, survey data was gathered that assessed the perception of participating youth about FHC in promoting life skills, entrepreneurship and healthy eating. The surveys were used as a baseline to construct the interview questions to enable the researcher to better understand key factors that contribute towards life skills, entrepreneurship and healthy eating intentions and how the interactions between factors lead to these three variables of interest. On a 1 - 4 Likert scale from "not at all" to "yes definitely", the results show that the average mean score for perceived social norm, perceived behavioral control, attitude and agriculture entrepreneurship, adult networking and social capital, initiative experience, initiative experience, interpersonal relationship, cognitive skills, identity experience and teamwork and social skills, were all (M=3), which is higher than average. The mean score for Basic skills was (M=2.6). For healthy eating surveys, which was a dichotomous response where yes=1 and no=0, the mean score for healthy eating was (M=0.52). The data showed that FHC promotes life

skills, entrepreneurship and healthy eating intentions among minority youth who attend its programs. This is supported by the literature (Golden, 2013; Sonti et al., 2016; Fulford and Thomson, 2013), where findings indicate that the urban agriculture youth programs can promote life skills such as interpersonal relationships, identity, resilience, entrepreneurial skill, job skill as well as the improving of nutrition and food security.

### **5.2.2. Surveys assessed youth perceptions towards professionals**

Results showed a significant positive impact on awareness of different professions available for youth as a result of the various professionals presenting different career paths during the 2019 STEAM Summer Camp program. A previous study done by Rehill et al. (2017) found that youth strongly value volunteers with direct experience of the jobs about which they are speaking. In other words, once professionals present to youth about different careers, they develop attitudes towards those careers that they find interesting. Another study done by Mann and Caplin (2014) found that career information that comes from direct interactions with employers is perceived to be of more value to the young people when thinking about their career choices than information gathered from close ties such as parents or friends or from online sources or media. Though this was a short term evaluation for the minority youth and results are not conclusive, the finding shows that the professionals who engage the youth at the Center play a big role in helping minority youth experience different careers and be able to choose what they think they do well. The partnership with different institutions like Purdue University and IUPUI, and Marion County 4-H/Extension provide unique experiences for youth that they cannot get from school or within their community. These findings also align with the previous studies which show that youth can better choose their career aspirations when they are exposed to different professionals as compared to learning from a relative or another family member or media.

### **5.2.3. Relationships among the potentially predictive variables**

Pearson's  $r$  correlation was calculated to determine the significant relationships among predictive variables which revealed a number of statistically significant relationships among predictive variables. Results (**Table. 5**) show the correlation between attitude towards entrepreneurship and perceived behavioral control and entrepreneurship ( $0.72^{**}$ ). This indicates

that youth who believe that they have potential to start and run their own business feel more confident that they can more easily become self-employed and be successful in their business. One of the goals of the Center is to train youth and boost their self-confidence in whatever they do. The Center does this by providing tasks and activities which expose them to different skills that improve their self-efficacy in becoming entrepreneurs, which is an ability to trust yourself that you can do something. The interactions youth get with professionals and other local business owners increase knowledge, skills and desire of becoming entrepreneurs. The more they are exposed to skills and knowledge on how to become entrepreneurs, the easier they can see that it is feasible to start their own businesses. Youth see the Center as another home for them because of leadership, professionals, and volunteers that create a loving and supporting environment. This is very important, especially for youth who come from low income families where they have limited programs that treat them in a manner as found at FHC. The Center creates an empowering environment that helps them to learn how to assess a problem and find solutions while FHC leadership acts as facilitators. The Center also creates a unique environment that allows youth to make mistakes and learn from their experiences, which is different from other places such as school or at workplaces. For instance, the Director of the Center mentioned how she welcomes the youth's ideas related to entrepreneurship whether wrong or right and provides room for them to share their ideas. This approach is good trait quality for entrepreneurship, especially if you are nurturing youth with limited experiences in taking risks. It is also a good approach that shows youth that it is okay to make a mistake but not to repeat it. This result parallels Krueger (1993) who found that perceived feasibility, or the degree to which a person feels capable of successfully starting a business, is an important antecedent to the formation of entrepreneurial intentions.

The correlation between perceived social norms and basic skills (0.46\*) indicates that minority youth who have supportive relatives and peers may feel like they have potential to start their own business when they show their abilities in managing stresses and emotions. Youth who attend FHC come from neighborhoods with lots of stressors which affect their schoolwork and other activities they might want to do. The Center provides a unique environment that helps them to learn how to deal with the stresses and be able to complete some assigned tasks. For instance, the Center provides a platform called Talk Time that helps them learn how to deal with stresses and conflicts. It also provides activities facilitated by different experts in business and local entrepreneurs which fosters teamwork, communication and leadership skills, which are essential

for a good entrepreneur. The result similarly aligns with Zhao et al. (2010) who found that the role and tasks done by an entrepreneur are more challenging than most traditional employment role because starting and opening one's own business involves new, unanticipated and uncontrolled challenges, highly uncertain outcomes, and high personal stakes in the outcome. These authors state that high levels of anxiety, depression, and negative moods such as anger, hostility, and depression, emotions defined as basic skills, are likely to interfere with one's ability to make sound decisions, put in the amount of effort required, persist in the face of obstacles or criticism, and effectively lead and influence others.

Significant correlations were observed between perceived social norms and attitude towards entrepreneurship and perceived behavioral control (0.47\*). Minority youth who are believed by their parents, peers and relatives to be able to start their own business are likely to own their own business, rather than pursuing a promising career as employees. Additionally, the more youth show potential that they are capable of starting and owning their own businesses, the more likely they are to be trusted by their relatives and peers that they can own their own business and make it successful. The results agree with the interview finding where youth participants acknowledged the role of the Center in empowering them with skills and knowledge about entrepreneurship. Participants mentioned that they acquire experiences and information when they meet with different professionals and local business owners who come and engage with them in different activities related to how to run a business. The environment created by the Center increases confidence and motivation among minority youth who live in inner cities. Confidence is a life skill which is crucial, especially for entrepreneurs and the Center aims to bring hope and self-confidence for those youth who come from the low-income families with limited opportunities and exposure. This result parallels Krueger (1993) findings where perceived feasibility, or the degree to which a person feels capable of successfully starting a business, is an important antecedent to the formation of entrepreneurial intentions.

As indicated by a significant correlation between interpersonal relationships and cognitive skills (0.86\*\*), people who are likely to make friends with distinctly different genders, socio-economic status and race are likely to acquire more knowledge which they can use in their future daily lives or careers. Interpersonal relationships and cognitive skills are likely to help them excel at their workplaces or in schools as these two skills are essential, especially in multicultural

environments. In the interview results youth acknowledged how the Center cultivates a climate which promotes friendships and teamwork among minority youth and also outside people such as professionals, volunteers and local community members. For instance, youth acknowledged how the Center created an environment that helps youth learn how to work together through activities and tasks provided by the Center. When youth work together, they share knowledge and skills about how things are done. Other participants mentioned how the Center helped them to make friends with people from different backgrounds and genders and how this increased their general knowledge. The more they build relationships with their peers, professionals and volunteers who come to the Center, the more they exchange knowledge and skills among themselves. Another participant whose response aligns with this correlation mentioned how youth from FHC developed friendships with elders from the local community where they go and learn history of the neighborhood. The type of knowledge they get from these elders cannot be learned in the classroom settings or in their families. This type of knowledge is also only accessed because of the relationship they have with their peer, professionals, volunteers, and the elders found the local community.

A significant correlation between identity experience and basic skills was observed (0.41\*), which indicates that people who are likely to acquire a new identity are those who are able to deal positively with their emotions and stresses. This correlation confirms the finding obtained from the interview discussions with the participants. Participants mentioned how the Center has helped them discover their identities through their daily activities and tasks performed at the Center. For instance, one participant mentioned how she became a leader as a result of training she got from FHC. One attribute of a leader is being able to solve challenges by managing emotions and stresses. The Center provides a unique opportunity that helps minority youth to manage their emotions which is a good quality of a leader. Another participant also mentioned how when he came into the program, he was not good in sports and singing, which are two dream careers most minority youth dream to do. However, as he continued with the program the youth mentioned how he found his dream career as a result of the professionals and volunteers who come and engage with youth and share different career choices.

The Center also creates an environment which allows youth to try different things including career options that otherwise they cannot get from school nor in their community. There was a

significant correlation between identity experience and cognitive skills (0.49\*). This means that the more minority youth are motivated to discover what they are good at, the more their knowledge about different things increases. The results of this correlation also align with the interview discussions provided by the minority youth. Participants acknowledged how the Center, to them feels like another home where they come and try and fail and keep on trying without much pressure nor rebukes from the leaders. Participants acknowledged how such an environment helps them to discover what they are good at doing. They claimed how at school they don't get a chance to make mistakes as a way to explore what they do well. They feel like FHC is a unique youth program which provides an opportunity that allows them to make mistakes and learn where they went wrong, which is different from the school settings or at work. Participants also mentioned how, through activities and other exposure they receive, they gain knowledge and skills through learning by doing. The more minority youth discover their identities through activities and professional engagements, the more they acquire certain skills and knowledge from these professionals. This is important, especially for youth who live in inner cities with limited resources which can assist them to learn what they are good at doing. Other youth from affluent and rural neighborhoods get a chance to participate in youth programs such as 4-H and FFA and they gain skills which prepare them for their future careers. However, minority youth sometimes don't have a chance to attend such youth programs. A significant correlation was shown between identity experience and interpersonal relationships (0.56\*\*). People who are likely to explore and reflect on their identities are likely to build friendships with people from different race, genders and socio-economic status. The correlation above aligns with the interview discussion from the participants who acknowledged how the Center helped them to find their career or college preference as a result of interacting with different professionals, volunteers and peers. For instance, one participant acknowledged how she is interested in becoming a pharmacist as a result of interaction she had with different health professionals who demonstrated to her how the food we eat has an impact on our well-being. The youth also acknowledged how they learn what they are good at doing through the tasks and activities required, which helps them to learn either from their peers or from different professionals. Peer to peer influence allows minority youth to learn from each other and copy certain skills that can assist them discovering what they like and are good at doing.

A significant correlation between initiative experience and cognitive skills was displayed (0.60\*\*), as people develop skills of solving problems, putting more effort in whatever they do,

they are likely to acquire different sets of knowledge, which can be used at school or in their daily lives. This correlation also agrees with the finding from the interview discussions where participants acknowledged how the Center helps them learn how to solve problems through activities provided by FHC. Participants also acknowledged how they are often pushed beyond their limits. Youth acquire skill sets when they are solving problems. These skills can easily be used either in their future careers or in their schoolwork. This is another example of how the Center provides an environment to youth that offers them skillsets to deal with problems and which pushes them to put more effort in whatever they do by performing everything beyond their limits. This is very important especially for minority youth who come from the low-income neighborhood where there are limited resources which can be used to expose youth to different skills.

As indicated by a significant correlation between initiative experience and attitude towards entrepreneurship (0.64\*\*), the more people develop skills for solving problems, setting goals, putting more effort into what they do and handling several tasks in a limited amount of time, the more they are likely to become entrepreneurs. Entrepreneurs are individuals who need to have exceptional skills in order for them to run a business. These important skills include leadership, problem solving, effort and time management. The Center has a unique way of providing these skills by bringing different professionals, volunteers to the Center and they organize different activities that help youth to gain those skills mentioned above. For instance, during the interview discussions, participants acknowledged how professionals from Purdue University come to the Center and engage them in activities which teach them about problem solving, working on time and putting effort in whatever they do, which are good qualities for an entrepreneur. The more they gain these skills the better they develop an attitude towards entrepreneurship. These skills are very essential for a good entrepreneur. This result similarly aligns with Chen et al. (1998) and Baum and Locke (2004) who found that motivation, perseverance and hard work are very important predictors for a good entrepreneur.

A significant correlation between initiative experience and perceived behavioral control and entrepreneurship also was observed (0.57\*\*), indicating that youth who develop skills to solve problems, set goals and perform several tasks in a limited amount of time are likely to believe in themselves that they can easily start their own business and become successful. The correlation aligns with the finding from interview discussions provided by different participants. Participants

acknowledged how the Center treats them with respect and believes that youth who attend its program are capable of doing several tasks. Through activities and tasks provided by the Center, minority youth learn how to solve problems, put effort in whatever they do as well as perform activities and tasks in limited amount of time. The more these youth get exposed to these skills the better they developed confidence in entrepreneurship which is one of the aims of the FHC. The Center wants to develop youth who are capable to be job creators instead of job seekers. This aim was put into place as a result of high rate unemployment for minority youth who live in low-income areas. A significant correlation between initiative experience and interpersonal relationships was observed (0.67\*\*). The more people develop skills on how to solve problems, set goals and manage time the more easily they connect with different genders, socio-economic status and race because different people like individuals who set goals in their lives, and problem solvers. This correlation is another indication of the role that the Center it plays for its minority youth. The Center creates an ecosystem that helps youth to learn skills like problem solving, time management, and setting goals. These skills are acquired through activities and tasks that are designed and organized to foster the interrelationships among youth themselves and also with professionals, volunteers who come to the Center to help youth develop different skills. The Center put a system in place which fosters youth's collaborations when they are working on their own projects which creates friendship. In the interview discussions, participants acknowledged how coming to the FHC was important. They mentioned that besides the life skills they gained from the Center, they managed to make new friends, which they continue to engage with them even after they leave the Center. This is another indication for the role this Center plays which benefit minority youth who cannot get such skills anywhere else besides this Center.

As indicated by a significant correlation between initiative experience and identity experience (0.58\*\*), the more youth develop skills on how to set goals, become problem solvers and manage time, the more these youth are likely to discover what they like and do well. The correlation between these two variables is very important to the Center and its programs. It is another indication that the Center develops di sets of skills. The Center creates a welcoming environment which develops youth skills from experiences which they cannot get anywhere else in the neighborhood. Youth see FHC as a successful Center being led by a Black woman and capable of developing students who go on to attend well-known institutions like Purdue University, IU, and others, This inspires youth to work extra hard in whatever they are doing

because they see her as their role model. The youth are motivated to acquire life skills including learning how to set goals, manage time and problem solving. These skills help them to discover what they are good at doing, which is one of the goals of the Center, helping youth acquire skills which can help them to discover what they can do well in their future.

A significant relationship between teamwork and social skills and cognitive skills was shown (0.61\*\*), indicating that people who develop skills on how to work in a group or a team with different individuals are likely to acquire more knowledge that they can use at school or in their daily lives. Teamwork skills are essential for youth as they help them to depend on each other's knowledge and skills when they are solving some real-world problems. This correlation aligns with the finding obtained from the interview discussions where participants acknowledged how the Center provides different professionals and volunteers who engage youth participants in activities which require teamwork and collaborations as a way of helping them to learn what they might come across in their future school or workplaces. The more these minority youth develop skills of working together and relying on each other, the more they start to acquire some skills from their peers and professionals which they can use in their daily lives at school or in at their workplaces. This is very important for these youth and the community in general because once they start to learn how to work together, they can do something which can significantly contribute towards their neighborhood development.

As indicated, a significant relationship between teamwork and social skills and interpersonal relationships was viewed (0.75\*\*). People who develop skills in working in groups or teams are more likely to make friendships with people from different backgrounds, race and gender. Group work often boosts friendships among people. The more people get used to working with different people in different groups, the more they are likely to connect with such people outside of work. The correlational results are aligned with the finding obtained from the interview discussions. Participants acknowledged how the Center provides an environment which assists them to work together and work with people from different genders, and socio-economic status. Youth are offered activities by different professionals and volunteers with expertise in youth development. These activities help youth to learn working together at the same time teaching them how to work with people from different gender, socio-economic status. This is crucial not only for the youth but also for the Center and the community in which they live The more minority youth

learn how to work together and work with people who don't look like them or don't come from same social class, the better they can be useful in developing their community that has been marginalized as a result of the discriminations which affected most of the African American communities.

A significant correlation between teamwork and social skills and identity experience (0.51\*) was found. In other words, people who acquired skills of working in teams or working on a group project with different people with different backgrounds, are likely to discover their identities as they learn what they are good at doing from peers who bring diverse skills in group projects. The results from this correlation also aligns with the finding obtained from the interview discussions with participants. For instance, participants acknowledged how the Center brings different professionals who expose them to different activities which help them to learn to depend on each other and work without overbearing other team members. This is an important skill considering that these minority youth don't have other similar programs which provide opportunities like FHC in the neighborhood. The Center also provides activities which assist these minority youth to discover what they are good at which is important especially given that FHC is the unique program within the community.

As shown, a significant correlation between teamwork and social skills and initiative experience (0.43\*), indicates that, the more people develop skills in working with different people in a group, the more are likely they are to learn from their peers how to solve problems, set goals in their lives and also manage their time by performing several tasks in a limited amount of time. Successful teamwork requires members to have certain skill sets like problem solving, setting goals and time management. The Center's aim is to offer these skills to minority youth so that they can do well in their future workplace and schoolwork. These skills are acquired when different professionals and volunteers come and engage with youth in different activities and tasks that don't only help to learn how to work together but also help them to learn how to solve problems, manage time and set goals in whatever they do. These skills are important to youth and the community they live in as they can significantly contribute towards their community development. The Center, as a youth development program offers a unique experience to these minority youth that cannot be found elsewhere within their community. These unique experiences are very important because they can change the future well-being of these youth and the community in which they might live.

### 5.3. Qualitative data discussion

**RQ1.** The extent to which communities support professionals, volunteers, and sponsors in their efforts to promote life skills, entrepreneurship and healthy eating intentions among minority youth who attend FHC programs. The RQ1 themes generated were sponsor, professional and volunteer supports. Results showed that professionals, volunteers, and sponsors play crucial roles in supporting the programs offered at FHC, which in return promotes life skills, entrepreneurship and healthy eating intentions.

**Sponsor support.** Interviewees acknowledged that it is almost impossible for the Center to maintain its programs if there are no funds from different sponsors and donors. Eli Lilly Foundation, whose international corporate headquarters are based in Indianapolis, is one of the biggest sponsors of the FHC. As a non-profit organization, FHC needs sponsors and donors who can support programs through grants or donations. The money donated by the sponsors is used to pay costs for program delivery, maintenance and stipends earned by the youth, as well as daily meals provided to the youth. Sponsor support is very important for FHC, because it is an NGO located in a low-income neighborhood where there are limited resources that would provide a solid tax base to support community operations. The limited resources for the Martindale-Brightwood residents which led to the creation of FHC was caused by the migration of African Americans from the southern states who came to the north to look for life. Upon arrival in northern states, some White people who were living in different cities and towns fled with most of the businesses and services which used to bring taxes. African American families found themselves living in the areas where most of the businesses were no longer available. Besides the issue of the White flight found in most of the cities and towns in the north, Jim-Crow laws which discriminated against Blacks access to 0 loans for houses and businesses and schools, destroyed what the White flight left behind. The lack of businesses as a result of community discrimination and Jim-Crow laws within the African American neighborhoods led to a generational poverty which continues to persist even in the 21<sup>st</sup> century. The FHC is one of the few programs found in the Martindale-Brightwood and cannot achieve its goals and visions without supports from the external donors. These partnerships with different sponsors are very important because they contribute so much towards the progress of the Center. The results align similarly with Hunold et al. (2017) and Daftary et al. (2015) who found that urban agriculture can only be sustainable and meet the food justice, social capital and job creation goals when there are external funds. Eslick & Thomas (2010)

showed that financial resources play a big role in sustaining the community or urban agriculture programs. These programs will not be sustainable if there are no external funds or donations.

**Professional support.** The contribution of professionals provided by FHC to minority youth and programs was indicated in the interviews. Some participants acknowledged how these professionals bring a variety of activities and examples which expose minority youth to different life skills and careers. Other participants acknowledged how they started to learn how to create and run their own businesses as a result of one specific professional who came and shared their example with the youth. Youth also mentioned how these professionals helped them to improve their eating habits. For instance, one participant mentioned that professionals who come and presented to them helped them to learn that what they put in their bodies has a significant impact on their health and education/schoolwork.

Professionals provide different career choices and they walk them through those career options so that minority youth can find their career interests. Learning how the food they eat impacts their wellbeing and schoolwork is also important considering that these youth are from food deserts and low-income families with limited resources that forces them to eat ready-to-serve food which is high in fats and sugar. Professional support is essential for the Center, given that the Martindale-Brightwood is among the low-income neighborhoods caused by low taxes because of limited businesses to support the local schools and other services. The poor educational system with limited support programs for the youth within the community have a negative impact on personal and professional development and the community in general. Youth from low income neighborhoods have limited exposure for career choices. The majority of them only grow up dreaming to become athletes or artists because of what they see on the TV or in the neighborhoods. Having different professionals who come and interact with youth provide them opportunities to acquire certain skills and also youth start to see that there are more options available for careers that they can pursue and be able to change their lives and the community.

Raffo & Reeves (2000) also demonstrate that external speakers can provide social capital, even if it is temporary, thereby expanding young people's personal networks by giving them access to a larger number of professionals with more varied types of experiences than would be available from family-based social networks. Mann & Caplin (2014) also found that career information coming from direct interactions with employers was perceived to be of more value to the young

people when thinking about their career choices than information gathered from close ties, such as parents or friends or from online or media. Finally, Kashefpakdel et al. (2019) found that attitudes towards self-efficacy, the relevance of education, and self-confidence all improved after the talks, particularly among young people that had been initially least engaged.

**Volunteer support.** Interview participants acknowledged that volunteers are the backbone for the FHC. Board members mentioned that it can be difficult for the Center to run its programs if these volunteers are not available. The activities performed by the volunteers at the Center include building, repairing, harvesting, cooking or even engaging and assisting minority youth in their tasks.

The Center needs enough skilled hands and volunteer support so that it can manage costs and at same time engage and motivate the minority youth who attend its programs. This also encourages community connections with FHC which is one of their primary aims. With limited resources in Martindale-Brightwood where FHC is located, volunteers are needed to reduce costs involved in running most of the urban youth programs especially those from the low-income neighborhoods. Most of the youth development programs from these low-income neighborhoods are private institutions (Non-Government Organizations). Most of the urban youth programs rely on volunteers, who come not only to assist youth but also the community in general through their unpaid services and activities they provide. This finding is also supported by the conceptual framework which shows the importance of the volunteers leading the youth's intentions as a result of the activities and other supports they provide to youth who attend the urban agriculture programs like FHC. This study results align with Henderson & Mapp (2002), finding that volunteers are significant resources in helping create a supportive and welcoming environment in schools, and facilitate learner's behavior and performance. These volunteers act as role models, motivators and mentors and this can significantly contribute towards school attendance, improving grades, reducing misbehavior, improving social skills, staying in school and going to college. Saldivar-Tanaka & Krasny (2004) also found that community gardens or other urban agriculture programs rely on leadership, management and coordination from volunteers and other partners, which is similar to FHC.

**RQ2.** RQ2 assessed the extent to which background factors contribute towards life skills, entrepreneurship and healthy eating intentions for minority youth who attend FHC. When youth

come to the Center, even if they come in the same age range, they come with different backgrounds and different life experiences. These life experiences can easily promote or impede the acquisition of different life skills, entrepreneurship and healthy eating intentions. Their resilience towards any challenge facing them also plays a significant role in the acquisition of life skills, entrepreneurship and healthy eating intentions. This is true for the youth who come from low-income families with limited resources and support from the parents.

Themes that emerged for RQ2 were individual personality, race and gender, income and background information. Results showed that individual background information plays a significant role in promoting or impeding life skills, entrepreneurship and healthy eating intentions. Interviewees recognized how their individual backgrounds boosted or impeded some of the skills that are offered at FHC.

**Individual personality traits.** One of the participants acknowledged that even before she came to the Center, she dreamed of being self-employed. However, when she joined the program, she gained more skills and knowledge on how to create and run a successful business. In contrast, another participant mentioned that regardless of the activities and training FHC offers about entrepreneurship, she does not feel interested in becoming an entrepreneur. This is an indication that individual personality had a big influence on these two participants in choosing to or not to become an entrepreneur. The fear and lack of intentions towards entrepreneurship from one participant and the confidence from another clearly indicates that regardless of the entrepreneurship training offered by the Center at the similar level, individual personality has a role to play towards the acquisition of the behavior. The finding also clearly indicates that because of the limited resources within the Martindale-Brightwood which again is caused by the discriminations and other bad policies which were put into place against the African Americans since they started moving from the south to the north. The lack of entrepreneurship in role models in this neighborhood also limits the minority youth in becoming an entrepreneur regardless training and other supports that are given to them. One can argue that one participant acknowledged that she had an intention to become an entrepreneur before joining the Center can be attributed to the way the African Americans have higher unemployment rates mainly as a result of some discriminations during the hiring process. Self-employment can be the only way of avoiding the rejections during the hiring process.

Other participants mentioned how their diets have changed while others did not change at all in spite of the fact that FHC assists youth in the same way. FHC in Martindale-Brightwood is among the neighborhoods that belong into food desert areas on Indianapolis map. The lack of availability and cost for fresh produce in this area leaves many households relying on the fast foods which are sold in gas stations. This has a direct impact on the African American children born in such conditions where the only food options they see and have on the table is the cheap food which are rich in fat and sugar. Regardless how much information they are given at the Center, if they go home and eat the same food they are used to, it will not be easy to change their intentions towards their healthy eating. The Director of the Center also acknowledged that when she receives the new youth, she does not start with the fresh produce right away. She likes to start with what the youth are used to, and then gradually she adds some more greens and fruits in their breakfasts and lunches. The fact that she meets these youth where they are when they come at the Center significantly helps some to start changing their eating intentions. Some participants mentioned how they joined the FHC and became leaders right away, yet others mentioned how regardless of the leadership opportunities they get from the Center, they still feel unable to lead others. The Center aims to produce leaders of tomorrow. In order to reach this goal youth are organized into groups and each group is given a leader. Besides this opportunity, youth are sometimes given roles in their daily activities where each youth leads others at least in one activity. Regardless the opportunities offered to all youth, some show interest in leadership and others don't. These youth who don't show interest in becoming leaders or who don't feel comfortable becoming leaders sometimes can be attributed to the limited role models in their neighborhoods. Most of the youth who attend the Center come from a single parent household as a result of various past events which discriminated African Americans and created environment which promote violence and incarcerations. This is not a good condition to foster leaders. However, others come to the Center with their personal leadership traits which allow them to easily grow once they find a center like FHC that fosters leadership skills.

These results are parallel with Stewart and Roth (2001, 2004) who found that entrepreneurs are higher in risk taking propensity than ordinary managers from different institutions and entities. In other words, being an entrepreneur requires intrinsic motivation that allows individuals to choose whether to become self-employed or not. The entrepreneurs also are likely to pursue decisions or courses of action involving uncertainty regarding success or failure of outcomes

(Jackson, 1994). Studies also show that conscientiousness as one of the individual personalities can potentially describe an individual's level of achievement, work motivation, organization and planning, self-control and acceptance of traditional, norms, and virtue and responsibility toward others (Costa & McCrae, 1992; Roberts et al., 2005) play a big role in promoting or impeding a given behavior. All these personal traits are essential in determining whether a person can or cannot become an entrepreneur.

**Race and gender.** Another sub-theme generated during data analysis was race and gender as aspects of the individual social factors. One interviewee mentioned how he wants to do some rap music as his own career. In the US, many successful people in the rap industry are predominantly African American males. The fact that rap music has more male African Americans than other races and gender also has an impact on the young people who grow up seeing some of those singers as their role models, which in turn promotes their interest in becoming one of them. Race and gender, therefore, influence attitudes toward a certain intention or behavior. The other potential factor that influenced this interviewee to feel motivated to become an entrepreneur in rap music, is the fact that African Americans have been discriminated during the hiring process and also their schools have limited resources that expose them to different careers as well as the high rates of dropout among the minority youth that forces them to engage more into music and sports than other careers. A young person who grow up in the neighborhood with limited number of role models in other areas is likely to be attracted by the most successful artists who look like them.

**Income.** Interviews revealed that income, especially in low socio-economic status neighborhoods influences the way people choose what to eat. One participant mentioned that because of the limited resources and low income in inner city neighborhoods, when minority youth try to obtain healthy food in fast food restaurants, money often becomes a constraint. Food with high fats and rich in calories cost less as compared to healthy food in many cases. This indicates that regardless of how youth might be willing to eat healthy, their family socio-economic status forces them to choose foods rich in fats and sugars. Therefore, income is one social factor that can significantly affect the eating healthy intentions among the youth from less resourced neighborhoods. If two youth come from families with different incomes, regardless of the programs and support offered by FHC, one from middle- or high-income status might easily adopt healthy eating because once he/she goes back home, he/she can easily afford buying those healthier

food choices. On the other hand, the youth from a lower income family can face challenges to purchase or eat healthier meals, which is a common issue in impoverished inner-city neighborhoods. This challenge is also connected to the history of the Martindale-Brightwood. When African Americans started to migrate from the south to the north, they faced discrimination. For instance, when they arrived in Indianapolis, the White occupants fled some neighborhoods that the African Americans started to occupy. They moved with the businesses and left neighborhoods stranded and almost with no businesses. Besides this social factor which contributed to the poverty in inner cities, the government also played a big role when the Jim-Crow laws were implemented. These laws did not only promote segregation in public schools but also encouraged banks and real-estate owners to refuse providing loans and houses to the African Americans who wanted good houses or loans to start businesses. This significantly impacted the African American neighborhoods, as even today many inner-city neighborhoods are still facing the same challenges. Martindale-Brightwood neighborhood has limited businesses and poor infrastructure and the educational system is less competitive compared to other affluent neighborhoods where the majority of the Whites reside. Parents in these African American neighborhoods have to work more hours in order to feed and clothe their children. Sometimes the financial pressure forces these parents and children to buy only the ready-to-serve foods that are less expensive from the nearby convenient stores. This result aligns with other studies that investigated the relationship of low income and healthy food, where the studies found that an oft-cited reason for poor eating patterns among low-income households was the cost of healthy food (Cassady et al., 2007; Drewnowski, 2003; Reicks et al., 1994). These findings were based on the observation that the least expensive sources of calories are energy-dense foods with high fat and sugar content, and the perception that fruits and vegetables are particularly high in cost (Drewnowski & Specter, 2004).

**Background information.** The last sub-theme generated from the interview discussions for RQ2 was background information. Background information refers to information an individual might have about any given topics that others might not have. This can also include prior experiences and exposure an individual possesses when they come into a program or classroom that other colleagues might not have. The experiences lived and information collected from friends, family members and school contribute significantly towards our behavior change. This is true also for youth who grow up in neighborhoods like Martindale-Brightwood with limited exposure and

opportunities to expand their knowledge and skills outside of schools and other youth development programs. The limited exposure to different experiences and information has a direct impact on the acquisition of skills and knowledge provided by youth development centers and other institutions that promote youth development like FHC. Background information which minority youth bring into the Center can positively or negatively affect the way they acquire knowledge or a given skill. For instance, one participant acknowledged that, after discovering through a presentation she attended that what she eats can affect her learning and health in general she easily transitioned to healthy eating options the Center introduced to her with no struggle as compared to other youth who did not have same information. This demonstrates that personal information an individual brings to a program such as FHC can potentially increase or decrease their attitude towards a certain behavior regardless of the information or programs the Center might provide. That is why some youth show progress within a limited amount of time and others might take more time to change or could fail to change their behavior or attitudes at all.

**RQ3.** RQ3 assessed the extent to which the structure and/or organization of FHC promotes life skills, entrepreneurship and healthy eating intentions among minority youth attending its programs. The analysis of data from the interviews generated several themes which displayed the contribution of the center in promoting life skills, entrepreneurship and healthy eating intentions. Under the life skills, seven major themes were generated, and some major themes generated some sub-themes. The major themes and sub-themes generated are discussed below.

### **5.3.1. Identity experience**

During interviews, two sub-themes were generated under the theme identity experience. These sub-themes included *identity exploration and identity reflection*.

**Identity exploration.** Identity exploration refers to a process whereby individuals, through activities or programs such as those of FHC, can identify or discover what they are capable of or could be proficient. This skill is important especially for minority youth who live in neighborhoods with limited opportunities and exposure to different programs and activities that promote positive youth development. A neighborhood like Martindale-Brightwood, among the poorest neighborhoods in Indianapolis, has limited opportunities which can help youth to explore and discover at what they may excel. For instance, one participant acknowledged how the program

helped him build confidence and trust in himself. This youth mentioned how in the first months of his arrival at FHC he was not able to lead even his group, but the Director started assigning him various tasks which helped him to discover that he is good at leading others, then he finally became a group leader.

Another participant mentioned how she came to the Center with no leadership experience but eventually, she became one of the best leaders and was promoted every year to different levels. She started leading her team and ended up being the assistant manager for the whole Center. FHC, as a youth-led urban agriculture program fosters minority youth to discover or explore their identities through activities and tasks they are given at the Center. The statements shared by minority youth on how they discovered their identities as a result of attending FHC programs shows how the Center is the ultimate hope of the African American youth and neighborhood. This is true because of the history of African Americans who have been discriminated against in schools and other places. Opportunities offered by the Center for these youth who only see that they can only become athletes or artists help them to discover other hidden skills. The Center not only helps them to discover their identities but also helps youth to apply them in their daily lives.

**Identity reflection.** Identity reflection refers to the ability of individuals to not only explore what they are good at doing, but also gives them the ability to connect to what they are good at doing to their future. One of the aims of FHC is to help minority youth who come from the Martindale-Brightwood neighborhood to discover their identities and think about how those identities can be useful in their future careers or schooling. Martindale-Brightwood, where the Center is located has limited resources that can be used to assist youth in discovering their identities and also be able to apply them in their future lives. This skill is very important to the community considering how its children who are born in inner city neighborhoods with limited experiences and exposure see themselves and their futures. For instance, one of the participants stated how she is good at working in the kitchen and outside, but she also discovered that she is not good at journaling about what happens on a particular day. It is very important for youth to figure out what they are good at doing at an early age before they start careers or enroll into college where they can risk changing the programs as a result of not knowing what they are interested in or capable of doing. It can also help youth to secure a job when they are confident that they can perform well in that particular job. These results similarly align with Hung (2004) who found that, besides the

increase in supply for fresh fruits and vegetables in food desert areas, the urban agriculture programs also help youth to develop a sense of self and identity.

### 5.3.2. Initiative experience

The initiative experience plays an important role at work and in schools, as this skill helps individuals put effort into what they are doing, critically solve problems and perform several tasks in a limited amount of time. As the Center also aims to develop some entrepreneurs from its programs, these three skills are very important for a successful entrepreneur. Three sub-themes were generated from this major theme: *effort, problem solving, and time management*.

**Effort.** Effort is a skill which helps individuals to put energy into whatever they are working on or push themselves to always do better. This is an important skill for youth who come from neighborhoods such as Martindale-Brightwood, where FHC is located because there are many stressors which don't allow them to focus on their work. Minority youth, especially African Americans face challenges in their schooling because of limited resources and limited educational support available in their neighborhood and from their families. Having a center like FHC which assists these youth in learning how to put more effort into whatever they are doing potentially helps them to stay into schools and can easily decrease the likelihood of dropout from school. Related to this sub-theme, one youth participant acknowledged how the Director of the Center pushed her hard and challenged her to work extra hard so that she can figure out her work limit. This was accomplished through tasks and activities youth participate in and work on tasks with which they don't have any experience. However, through the guidance and motivation from the Director of the Center, the youth end up doing well.

**Problem solving.** The FHC aims to help minority youth who attend its programs to become problem solvers in their communities. Once minority youth develop the skill of solving problems, this can potentially help them tackle socio-economic challenges faced by their neighborhoods or communities. This can not only increase the well-being of the residents in these neighborhoods but also lead to community development. Martindale-Brightwood, like other inner-city neighborhoods have been discriminated against because of their higher number of African Americans. Different participants acknowledged how FHC has helped them to learn how to solve

problems through engaging activities that forced them to think deeply and critically on how the scenario or a challenge given can be solved.

Others acknowledged how the Center has helped them to learn how to confront peer-to-peer conflicts through the TalkTime platform that encourages youth to freely speak out any issues they have with their colleagues as a way of solving problems which might affect the whole group of youth or the Center. Due to limited resources found in most inner-city neighborhoods in the US, youth get exposed to some family conflicts as a result for fighting for scarce resources. The Center helps youth who come from these neighborhoods with skills to handle conflicts whenever they occur between peers. This is done through TalkTime program where youth go in front of the others and share freely how she/he got offended by someone else. The Center acts as a facilitator in case there is conflict among youth at the Center. Those who offended each other are called in front of everyone and given a chance to express themselves as way of training them to solve conflicts/problems. A good environment is created at the Center that promotes sister-brother love and youth believe that they cannot find this elsewhere. This has potential for bringing peace among youth and helps them to learn how to deal with conflicts. Besides conflict resolution promoted by the Center, FHC is also a place that encourages youth to learn how to solve problems they face in their daily lives. For example, a participant mentioned how every year they get different diseases that attack their crops at the FHC farm and how they are taught how to tackle such challenges whenever they occur. The Center aims to develop some urban farmers who can assist in increasing supply for fresh produce in Martindale-Brightwood community which is a food desert neighborhood. By the Center teaching minority youth who never had any interactions with farming in their lives about farming and how to deal with challenges related to farming not only improves the livelihood for the youth, but also is an opportunity for them to start finding some careers related to the agriculture fields. This is an indication that the Center offers a variety of problem-solving skills to these minority youth that they may not get anywhere else.

**Time management.** Time management is a skill which helps individuals learn how to work on time by setting priorities and not procrastinating work. The FHC aims to help youth to learn how to manage their time in schools and at the Center. This is very important because it potentially reduces amount of time youth spend doing things which don't contribute towards their well-being. This skill also decreases the number of dropouts from school, especially in this

generation where youth are likely to spend much time on social media and their schoolwork is sometimes affected. For instance, one participant acknowledged how the Center helped her to work on many tasks in a limited amount of time. She mentioned how the FHC helped her to balance playing basketball at her high school, working on the farm as a leader and coordinator, and at the same time focusing on schoolwork. The Center provides activities and tasks that foster time management. For instance, if a youth comes a bit later and finds that others have started working, his/her stipend gets reduced off as a result of coming late to work. This is another indication that the FHC provides to minority youth a variety of skills including the skill of managing time. These results parallel Fulford and Thomson (2013) who found that community-based youth internship programs increased leadership and job skills and developed a greater sense of self-esteem among the youth who interned in Winnipeg Canada. Golden (2013) also found that community food projects can provide stipends in addition to skill training to youth who live in neighborhoods with high unemployment rates and serve as viable employment catalysts or the basis of entrepreneurship endeavors.

### **5.3.3. Basic skills**

Basic skills was another major theme generated from the data analysis of the interview scripts. Under the basic skills theme, one sub-theme, *emotional regulation* was generated. This skill helps individuals to learn how to control their emotions and better deal with fear and stresses.

**Emotional regulation.** This skill helps individuals to learn how to deal or cope with stressors, which is important because that can affect performance at work, school and even at home. Because of the limited resources and many sources of conflicts minority youth face, which can sometimes lead to/or result from death or incarceration for family or friends, they grow up with fear, depression, or even trauma. The Center aims to help minority youth who attend its program learn how to cope with such challenges. One board member acknowledged how he often sees these youth smiling everyday regardless of the challenges they go through daily because of their tough life. He admired the way that, regardless of the limited resources they have, they keep on pushing and smiling and have a good time. This points to how FHC helps these minority youth to cope with stresses. Another participant acknowledged how the Center helps them to support their friends and relatives whenever there is an issue like a funeral or other case that needs

emotional support. The FHC TalkTime session every Friday also encourages youth to come and express freely in front of others, any issue they may have with their colleagues or if they have something going on in their families. This opportunity is created by the Center to give a platform for the youth to learn how to deal with stresses. This is very important, especially for the youth from a neighborhood like Martindale-Brightwood that has long history of discrimination and poverty. The African Americans who migrated from the south to the north faced social and economic discriminations and this led to endless poverty and crimes in the neighborhoods they occupied. The Center provides unique experiences for minority youth who grew up in such neighborhoods to learn how to deal with their emotions caused by the challenging experiences they live in their daily lives from either their families, workplaces or neighborhood. The Center helps them to learn how to share their stresses and frustrations with others who might give some emotional support. The results similarly align with Waliczek et al. (2000) who found that gardening programs help youth participants to learn how to grow food, socialize with friends, feel relaxed and safe in a plant environment, learn about plants, improve the home or community, exercising, stress reduction, improved self-esteem and less depression.

#### **5.3.4. Cognitive skills**

Cognitive skills help individuals to improve in their academics such as reading, math or finding and communicating useful information. Minority youth sometimes don't have opportunities that help them improve in their communication and schoolwork such as youth involved in FFA or 4-H may have. They only are supported by knowledge from the local schools which can have limited resources. Once they get home, they deal with some other family challenges which can easily hinder their success in school. This can lead to dropping out from school. Under the cognitive skills theme, two sub-themes were generated which included *communication skill* and *academic skill*.

**Communication skills.** Communication skills help individuals to interact and speak professionally in front of people. Participants acknowledged how FHC helped them to acquire some communication skills through the creation of group discussions where these youth have to listen to their colleagues' ideas and share without overbearing them. Other participants also mentioned that they learned how to communicate professionally with experts and volunteers who

come to the Center. One participant stated how FHC taught them to present themselves in professional interviews. All these opportunities the Center provides show how much it promotes communication skills. This is an important skill, especially for the minority youth who come from low income families where they don't get opportunities to go to the best schools which assist them in becoming good communicators. They also don't get a chance to go to different youth programs such as 4-H and FFA that foster these skills. Considering how Martindale-Brightwood suffered White flight that led to whole businesses and services which could have strengthened the educational systems or create more opportunities to gain skills such as communication for the minority youth, FHC is even more important.

**Academic skills.** Academic skills provide useful information which minority youth can use in their schools or at college. Participants acknowledged how the youth learned how to get rid of caterpillars and about the water cycle and soil pH. This knowledge is important for those minority youth who want to go to college and enroll in agriculture related programs. Another participant noted how the FHC taught her how to make some raised beds for gardening. This skill is meaningful for youth who potentially plan to engage in urban agriculture businesses or careers. Youth who attend the FHC are predominantly African Americans who come from low income families with limited resources. Most of these youth don't have other places or programs which can offer them such rich opportunities where they learn by doing, which is different from their schools. The youth see the Center as the only place that fosters these experiential learning opportunities. This is mentioned during the interviews where participants stated how they learn different skills including skills to maintain the farm and how they apply the skills learned at the farm even in their schoolwork. It is clear that the Center creates a unique environment that encourages these African American youth to learn by doing, which is one of the approaches that increases school grades and at the same time creates a unique experience which cannot be found in the classroom settings. The hands-on experiences obtained from the Center help learners to easily transfer what they learned during the activities and be able to apply elsewhere like in schools or workplaces.

The results similarly align with Relf (2003) who found that gardens can potentially motivate students learning in different academic subjects because garden activities are more hands-on experience which help learners to more easily transfer and recall what they learned during the

activities. Hung (2004) also found that youth who engage in community gardens develop a sense of self and identity that demonstrate their importance and value of the community. They also gain new gardening knowledge and interpersonal skills such as how to nurture a garden and how to work with a team to achieve a goal.

### **5.3.5. Interpersonal relationships (positive relationships)**

Interpersonal relationships serve as a skill that helps individuals to make friends with diverse people regardless their gender, race or socio-economic status. This is an important skill especially for minority youth who live in inner cities where they typically see and interact only with people who look like them. This can be a challenge, especially at work or at college once they meet others who look different than them. Under this major theme, two sub-themes were generated which included *diverse peer relationships and prosocial norms*.

**Diverse peer relationship.** Participants acknowledged how FHC helped them to create friendships with other peers who attend the Center and with professionals and volunteers who often come to assist. This is another indication that FHC teaches youth to establish friendships with others regardless of who they are. One of the successes for the Center is the environment it provides to the youth that helps them to learn how to get along with people they are not used to or who don't look like them. The Center achieves this through activities and various professionals and volunteers who come and interact with the youth. This unique experience helps minority youth start making friends with people with different skin color, gender and different socio-economic status. This has a significant role to play in their future workplaces and schools. The majority of the youth that attend the Center are African Americans who attend schools that are populated predominantly by Blacks. Sometimes it becomes hard to adjust once these youth are employed in more diverse workplaces or schools like Purdue University which are predominantly white institutions. Therefore, the more these youth start to open up new friendships with their colleagues and different professionals who don't look like them or with different socio-economic status, the better they are capable to do well in their workplaces and schools. During interviews, participants acknowledged how they managed to make friends as a result of the experiences provided by the Center when it brings different youth, professionals from different backgrounds, and volunteers who come and interact with them through activities and events arranged by the Center.

**Prosocial norms.** This is a skill which helps individuals to help others and change community or people for the better. The Center aims to create future leaders and people who can give back to their communities. This is achieved through activities and services offered to youth that foster the spirit of giving back to their communities or supporting those who need support. Some of the activities that develop this skill include sister-brother promotion whereby individual youth see their peers as brothers or sisters. The Center promotes this by creating an environment that promotes inter-dependence among youth. For instance, when one peer is not performing well at the Center, other youth approach him/her and try to help the individual to improve on his/her performance or behavior. The Center also has a program where they go and assist people within the neighborhood who don't have enough food and clothes. For instance, one participant acknowledged how during summer her child socialized with other youth at the Center and formed "like a sister and brotherhood". The youth who attend the Center are often sent by their parents as a way of protecting them from bad peers from their neighborhoods. Once youth get connected with others with bad behaviors, they influence them. This not only leads to trouble with parents or police, but also can lead to dropping out of school for some. The Center provides a unique experience which positively influences peer to peer support and interactions. This additionally indicates that the Center promotes positive relationships which help in the positive growth of youth.

#### **5.3.6. Teamwork and social skills**

Teamwork and social skills can assist individuals to become aware that working with people requires compromise, improve at giving feedback and knowing what makes a good leader. These are important skills especially for minority youth because it helps them learn how to collaborate with peers and to safely lead others to a common goal. One sub-theme generated from this theme was *leadership responsibility*.

**Leadership responsibility.** One of the goals of the FHC is to help youth mature into individuals who can potentially become future leaders capable of developing their neighborhoods and communities. This happens through the activities and tasks which expose them to different leadership skills. The Center has a unique way of promoting the leadership skills by dividing the youth who attend the Center into groups. Each group is given a leader. In a group, youth have a

group representative. All group leaders are led by another youth who reports to the farm manager and the Director of the Center. The Center encourages youth who graduated from the program to come and assist the FHC youth. Such youth who graduated are the ones who participate in decision making, planning and implementations. This is a unique experience provided by the Center for the minority youth that is not commonly taught in schools or elsewhere. For instance, participants acknowledged how FHC helped them to take leadership responsibilities by leading a group, coordinating groups or being assistant farm manager. The more these minority youth develop such skills, the better they become good at it and this can help them to get good job or can help them to engage to take leadership roles in the future.

These results align with Fulford and Thomson (2013) who found that community garden-based youth internships provided leadership and job skills, developed a greater sense of self-esteem, improved nutrition and food security, developed a critical understanding of the food system, showed enhanced environmental awareness and sensitivity, and cultivated a deeper connection to the community.

### **5.3.7. Adult networks and social skills**

Another major theme generated was adult networks and social skills. These skills help individuals to improve their relationships and connections with parents/guardians and community members. It also helps those who are in schools to stay focused on their schoolwork. These are important skills especially for minority youth who live in low-income neighborhoods with high school dropout rates and struggling communities. This helps them to remain in schools and connect with the community members which can bring them back once they are successful in their businesses or schools. This has the potential to improve the lives of the people living in those low-income neighborhoods.

The Center fosters these experiences through different activities and interpersonal exposure youth are given whenever they come at FHC. For instance, the Center offers the opportunity for youth to go into the community and talk to the elders and learn about the history of their community. Different stories they learn from these elders are so unique and rich that they cannot be found in the classroom settings. The youth also are given chance to go around the neighborhood that surrounds FHC and help elderly people with fresh produce. After the harvest, the Center

organizes an event which brings parents and other community members together to share meals and other youth successes. All of these experiences help youth to be more aware of their community and can help them to start thinking about what they can do to make it better. This result parallels Hung (2004) who found that the community gardens help youth to develop a sense of self and identity that demonstrates their importance and value of community. It also similarly aligned with Pothukuchi (2004) who found that youth were able to grow and take home a variety of vegetables from the Hortaliza community garden in Detroit, MI as a result of participating in this gardening program. After one season, youth demonstrated an increased interest in and knowledge of eating fruits and vegetables, nutrition, plant ecology and gardening. The garden also helped youth to make new friends, improve the neighborhood appearance and work with adults. Two sub-themes were generated from the adult networks and social skills major theme *were linkages to the community and linkages to work and college.*

**Linkages to the community.** One of the main goals of the FHC is to help minority youth living in Martindale-Brightwood to connect themselves to this neighborhood. Through its programs and activities, it helps youth to develop relationships with elders in the community. For instance, one participant mentioned how the Center helps them to interact with different people within the community such as elders and leaders. A participant mentioned how they go and help elders to set up their gardens and maintain them, as well as providing some fresh produce to elders and families in need within the community. They also get a chance to interact with the elders and learn the history of their neighborhood. This is a unique experience which these youth cannot learn from their classrooms. Learning the history of the neighborhood greatly helps youth to participate in solving community problems which is the main goal for the Center. This aligns with Hung (2004) who found that gardens like FHC provide a safe space in the community where youth can interact with each other and with trusted adults.

**Linkages to work and college.** Linkages to work and college help individuals to stay in school and get ready for college. One of the aims of the Center is to equip youth with skills and knowledge so that they can be better citizens. The Center aims to help youth excel at school and at workplaces. The Center achieves this through activities and services it provides to the youth. Different professionals and volunteers come to the Center with different skills that connect what they learned at the Center to their college major or roles in their careers. For instance, youth learn

about the water cycle and soil pH and other knowledge that cannot be easily offered in their classrooms. These unique experiences provided by the Center are very important considering the limited local programs that can offer agricultural science experiences within their neighborhood. The Center also brings professionals from different institutions like Purdue University who come and share with them the requirements to get into different programs and career opportunities from different majors. If desired, the Center also assists the minority youth through the college and scholarship application process or job search. One participant acknowledged how FHC helps youth to think about college and requirements for some programs at college. For instance, one participant mentioned that after attending one presentation that talked about food and how the food, we eat has an impact on our health and school, she started to see science unfolding. The participant ended up attending Purdue University as a result of this opportunity the FHC provided to her. The results parallel the study done by Relf (2003) who found that gardens may motivate student learning in different academic subjects because the gardening or farming activities provide a more hands-on experience which help learners to easily transfer and recall what they learned during the activities.

#### **5.3.8. Healthy eating intentions**

Another major theme developed was healthy eating intentions. One of the main reasons FHC is in Martindale-Brightwood is because this neighborhood is located in a food desert area. This means that there are few places where you can get fresh and nutritious produce. The absence of fresh and healthy produce forces people living in these neighborhoods to buy foods that are considered less healthy, some which are high in sugar and fat. This can cause different chronic diseases such as asthma, heart disease and high blood pressure. Such diseases can potentially cause significant health problems or affect an individual's learning. FHC helps its minority youth to learn how to eat healthy through its healthy eating program.

One of the strategies which helps the Center to improve healthy eating intentions among minority youth is that the Center meets each youth where they are. Though some consider that this defeats the Center's purpose, it works well with youth who come from low income families who are only used to the ready-to-serve food they purchase from the convenient stores. The Center starts with meals youth are used to eating and then gradually, it adds some greens in their diets.

Different participants acknowledged how the healthy eating intentions gradually changed as a result of the Center and its unique approach. For instance, one participant acknowledged how when she came to the Center, she was a regular eater, in other words, she was eating what was available in that neighborhood which includes food with high fat and sugar. But as she progressed with the FHC program, she started changing her diet until she became a pescatarian. Another participant mentioned how before he came to the Center, he did not eat any vegetables. But at the FHC, he got a chance to try some vegetables and he ended up loving them. This is an indication that the Center promotes healthy eating among the minority youth attending its programs. The results similarly align with Golden (2013) and Sonti et al. (2016) who found that the presence of urban agriculture programs and enterprises within a given community can increase fresh fruits and vegetables consumption by its residents. Fulford and Thomson (2013) also found that youth interns engaged in urban agriculture programs can gain leadership and job skills, developed a greater sense of self-esteem, improved nutrition and food security, develop a critical understanding of the food system, enhance environmental awareness and sensitivity, and cultivate a deeper connection to their community. The results are further supported by a case study done by Pothukuchi (2004) who found that youth were able to grow and take home a variety of vegetables from the Hortaliza community garden in Detroit. After one season, youth demonstrated an increased interest in and knowledge of eating fruits and vegetables, nutrition, plant ecology and gardening.

### **5.3.9. Entrepreneurship intentions**

Entrepreneurship intentions was another major theme developed during the data analysis from the interview discussions. One of the goals of the FHC is to train minority youth to learn how to create and run their own businesses. This can potentially improve the lives of these youth and the community. Different participants acknowledged how the Center helped them to improve their entrepreneurship desires. A participant acknowledged that FHC provided the opportunities to learn how to make some raised beds, to buy lumber and then to be able to sell what they made in the community. Three sub-themes were generated from the interview discussions. These sub-themes include *perceived behavioral control*, *attitude towards entrepreneurship*, and *perceived social norms*.

**Perceived behavioral control.** Perceived behavioral control refers to how an individual perceives the easiness of a certain task or behavior to be acquired. This is an important skill for youth who dream to become entrepreneurs. The more you consider that a certain task is easy to perform, the higher the chance to perform that task. Through activities provided by different professionals and volunteers, as well as the environment that the Center creates where minority youth feel equipped and supported, the youth who attend the Center are empowered and often feel that they are capable to do anything. The Center provides the environment where these minority youth come and grow. The Center also provides a unique experience to youth and helps them to believe in themselves that they are able to perform any tasks. This is done by allowing youth to involve in decision making and also perform some tasks with minimum supervision. The experiences they get helps them to learn how to be an effective leader, solve problems, communicate, deal with emotions and learn how to work with others. For instance, one participant acknowledged that before she came to the FHC she dreamed of becoming an entrepreneur. She also acknowledged how the Center improved her entrepreneurship endeavors through its entrepreneurship programs and activities and other experiences the program provides which boost the entrepreneurship intentions and behavior.

**Attitude towards entrepreneurship.** One of the aims of the Center is to foster entrepreneurship among the youth who attend its programs. The Center focuses on this skill because of high unemployment rate found among African American youth and endless poverty found in African American communities. The Center offers unique experiences to its youth by bringing professionals and other business owners who come and inspire youth about entrepreneurship with activities and tours. The more they interact with professionals and business owners, the more they start to learn all processes involved in becoming an entrepreneur. The information and training offered by the Center about the entrepreneurship are essential because they help youth who have no experience with entrepreneurship nor with history with anyone in the family who has been an entrepreneur to develop entrepreneurial intentions. For this sub-theme one participant acknowledged how he and his friend developed a business idea which eventually became a real business as a result of the Center. This youth mentioned how he and his friend created a raised beds garden business where they will be acting as consultants and providers of these raised beds. Another participant also mentioned how she wants to be a nurse, but she also

wants to have a daycare center where she can care for youth from the neighborhood. All of these statements indicate the contribution of the Center towards entrepreneurship.

**Perceived social norms.** Perceived social norms skills reflect how parents, relatives and friends perceive your ability to create and run a successful business. One of the aims of the Center is to empower minority youth who come from low income families to become self-reliance. The Center achieves this through activities and approaches it uses to empower its youth. The Center's leadership acts as facilitator while youth are empowered to take decisions and solve problems. This is a unique experience which the youth don't find anywhere else except FHC. The way the Center empowers the youth helps them feel capable to start some businesses. This is also transferred to the parents, guardians and relatives where they start to see that their children or friends' ability to become successful entrepreneurs is high. For instance, one participant mentioned how her child plans to start his own business because he prefers to be self-employed.

The way this participant sees her son capable of running his own business shows that the Center provides enough and unique skills which foster entrepreneurship. The results are consistent with Philips and Wharton (2016) & O'Hara (2017) who found that urban agriculture programs can build capacity in the communities where they are located by using urban agriculture and green infrastructure to create jobs, offer education and improve public health. Golden (2013) also found that the USDA funded community food projects had generated 2,300 jobs, incubated over 3,600 microbusinesses, and trained an estimated 3,500 individuals in farming, sustainable agriculture, business management, and marketing. The same study also shows that these community food projects employ youth to run gardens and farms, provide paid stipends in addition to skill training, are located in the neighborhoods where unemployment is high and serve as a viable employment catalyst or the basis of entrepreneurship endeavors. Besides the entrepreneurship skills, FHC also provides opportunities to earn stipends for minority youth that they can use in buying some school supplies or running small businesses.

## **6 IMPLICATIONS, CONCLUSION, AND RECOMMENDATIONS**

### **6.1. Implications**

This study gives further evidence of the benefits of learner-centered, relationships-based, and experiential learning methods in urban agriculture youth programs. The results from this research demonstrate that FHC, as an example of urban agriculture youth-based programs, provide more than just short-term benefits and can help youth with develop and translate skills that result in positive personal, economic, and social outcomes. This is very important with the current situation for minority classroom disengagement and school dropout rates in the conventional public-school system, especially in inner city schools. Urban agriculture youth based programs such as FHC that directly engage youth in issues related to food, environment and community can potentially contribute to meaningful personal and community development and promote critical awareness which can inspire action to create a more sustainable and equitable society that lifts up those who have been lagging behind as a result of social and political challenges.

Furthermore, by building a predictive model based on the independent variables guided by the Theory of Planned Behavior and its conceptual framework, this research study adds to the existing literature on urban agriculture and youth development programs. A predictive model based on the community support, program structure and individual background factors provides a framework that measures life skills, entrepreneurship and healthy eating intentions among minority youth living in low income neighborhoods. This framework has crucial implications for use with urban agriculture youth-based programs because practitioners, researchers and coordinators can use it to measure the impacts of a given urban agriculture or any youth development program on the youth and their communities. It also adds to the literature related to the uniqueness of urban, lower-income, and Black populations for national youth development programs such as 4-H and FFA, by describing the participants' perception of the educational training of an urban agriculture program.

Another implication from this study is that in order for minority youth to gain entrepreneurship skills, practitioners and urban agriculture educators should provide culturally relevant activities and tasks which can assist minority youth in recognizing their strengths and weaknesses, conquer challenging tasks and also not to give up in whatever they are doing. The

more these minority youth acquire such life skills, the more likely they can potentially transfer these skills into their entrepreneurial work. Also, the results showed that community partnerships play a big role in promoting life skills, entrepreneurship and healthy eating intentions. Most of the urban agriculture youth programs are either faith based or private entities which are often self-funded or reliant on donors. However, some still struggle because of limited resources. Therefore, the results from this study imply that the more these urban agriculture youth-based programs can partner with different professionals, volunteers and sponsors, the more their programs can reach their goals.

An implication on the policy side is that there is a need to implement policies that require open conversations and collaborative projects that serve as opportunities for the programs to foster a supportive educational environment through urban agriculture activities for minority youth living in low income neighborhoods. A supporting system is needed that contributes to their growth, development and preparations for future career aspirations. There is also a need for policies which can assist minority youth by building a healthy support system that encompasses home, school, urban agriculture youth program centers, and professional contacts. This supporting system must have some successful African American representations in different careers where the minority youth can safely interact and learn more from people who look like them without issues of preconceived notions and stereotypes which are often used against marginalized populations. One could say that the success of this program can potentially be linked to the demographics of volunteers and leaders at the Center. This implies that, for programs like FHC to increase the positive outcome in their programs, there is a need to increase the number of minority volunteers and professionals who come to the Center to share knowledge and skills with youth. The more these minority youth see their representations, the more they will be motivated to engage in different tasks and activities.

## **6.2. Conclusion**

The purpose of this study was to explore the role of urban agriculture youth-based programs, specifically FHC as an example, in promoting life skills, entrepreneurship and healthy eating intentions among minority youth living in low income neighborhoods. Three specific research objectives were used to frame the evaluation of the contributions of this Center towards

the promotion of the life skills, entrepreneurship and healthy eating intentions. Survey questionnaires were administered to 24 minority youth who attend the FHC. Surveys were followed with interview questions with ten participants (youth, alumni, volunteers, and staff) who offered their narratives as individuals who had experiences with the FHC. While their stories and experiences were shared individually, collectively their stories and experiences spoke to the role of the FHC in promoting life skills, entrepreneurship and healthy eating intentions. Surveys, which informed the interview questions, also provided insight on how the Center significantly promotes life skills, entrepreneurship and healthy eating intentions.

After exploring and analyzing the results from both surveys and interview questions, the findings from this study demonstrate the role played by the Center in assisting minority youth with life skills, entrepreneurship and healthy eating skills. What distinguishes this Center from other youth programs is the operational model which is very much imbedded in the program. The Center created and intentionally implements an ecosystem where youth lead other youth through hands-on experiences and teamwork. Youth who are being led by other youth who look like them benefit significantly in the acquisition of skills as they take their youth leaders as their role models. The Center is unlike other organizations that simply equip youth with knowledge that they can apply at home. FEC relies on a practical model of creating a welcoming environment where youth come to work and learn and acquire these skills while interacting with each other, professionals and volunteers.

Also, the way the Director of the Center positions herself in the organization produces successes to the Center. The Director is very approachable by any youth who might need help. At the Center, youth are able to interact with her and they trust her. The fact that she is a leader who the youth feel comfortable approaching and with whom they can easily interact, teaches them many leadership skills. For many, a leader is someone who merely gives orders and is far removed from the daily operations of an establishment. But by having constant access to the leader of the Center gives the youth new insights on leadership; leadership that centers on their needs and feedback from those being served. Also, for these youth to see a successful program being so well run by a black woman in their neighborhood is another element which makes them trust her as someone who is there to change their lives. Furthermore, the fact that the Center is able to accomplish so many management aspects to serve the youth including attracting

volunteers and other professionals, securing funding, maintaining the facility, providing meals, and sending students to different institutions like Purdue University and IU are all evidence of success to youth and the community. It is very important that these youth have a Center this successful in their neighborhood which is led by a leader who looks like them as a leadership model. This influence is hard to measure but is like a catalyst which boosts youth's desire to acquire certain skills and be able to go elsewhere and apply them.

The majority of urban youth programs are highly dependent on the support from volunteers and professionals. Without these volunteers and professionals these programs would not be able to function. For example, the manager of the FEC farm, as one person cannot afford to hire practitioners to offer all skills needed by minority youth, especially those from low income families. The Director relies on these volunteers and professionals who come with different skill sets and engage with youth in a way that allow the youth to acquire different skills that otherwise the Director cannot offer alone. Previous studies also found that volunteers and professionals play a role in providing youth with skills in youth programs. For example, Raffo & Reeves (2000) findings showed that external speakers are capable of providing social capital even if it can be temporary, expanding young people's personal networks by giving them access to a larger number of professional with more varied types of experience than would be available from family-based social networks. Mann & Caplin (2014), after the analysis data from several hundred teens, also found that career information that came from direct interactions with employers was perceived to be of more value to the young people when thinking about their career choices than information gathered from close ties such as parents or friends or from online media. Furthermore, Saldivar-Tanaka & Krasny (2004) found that community gardens or any other urban youth programs rely on the leadership, management and coordination from volunteers and other partners. These studies highlighted the role of the volunteers and professional in providing life skills parallel with the finding from this current study.

Like other urban youth programs, especially those from inner cities, FHC relies heavily on donors so that they are able to run their programs. The Center cannot operate the way it does if there was no external donor funding available. A large part of the success of the FHC programs are the grants and donations from the local organizations like Eli Lilly Foundation which are used in its youth programs and activities. The fact that FHC is located in low income

neighborhood where there are limited resources and businesses which can support it, requires it to find funding elsewhere in order to function. FHC leadership capitalize on its partnerships with donors like Eli Lilly Foundation which provides money that is used to pay youth's stipend, building maintenance and capital improvements, and other services related to the Center. Previous studies also align with this current study's finding. For example, Eslick & Thomas (2010) showed that financial resources play a big role in sustaining the community gardens or urban agriculture programs. Hunold et al. (2017) & Daftary et al. (2015) also found that urban agriculture can only be sustainable and meet the food justice, social capital and job creation goals when there is some outside funding. Without external sources of funding these programs will not be able to sustain themselves.

Unlike other organizations, FHC strives to incorporate the backgrounds of the students in its operational model and this can only be done in an environment where leadership has freedom to decide how external funds/donations should be utilized. Youth come from low income families where there are limited resources to buy healthy food options. One of the aims of the Center is to teach minority youth how to eat healthfully using fresh produce from the Center's farm. Sometimes these youth join the Center with limited experiences in eating healthy food because of its cost and the lack of the stores which sell those fresh produce in their neighborhoods. Most of them are used to ready-to-serve food which is bought in the nearby convenient stores. The Center's success lies to the fact that it does not push these minority youth who are used to these fat and sugar rich foods to start eating healthy food immediately, instead it starts with what they are used to eating, then gradually it shifts to healthy options. The FHC leadership goes through the background of the youth and learn what they like and don't like. Once they learn about the youth's background, they start to serve these youth based on their needs and they start where they are, which is different from the public schools or other youth programs.

### **6.3. Recommendations**

Based on the findings from this study, there are recommendations that can be shared with FHC, the City of Indianapolis, and other researchers and practitioners who are involved in urban agriculture youth-based programs. One of the aims of the FHC is to train minority youth to become

entrepreneurs so that they can be self-employed and generate some jobs within the community. Because of the limited resources found in the Martindale-Brightwood community, training will not lead directly to employment and have an impact on the community. Therefore, youth without some financial support would benefit by the opportunity to apply for some form of micro-loans directed to the minority youth so that they can reasonably engage in some entrepreneurial related activities and projects. Therefore, recommendation 1 is that both the FHC and the City of Indianapolis consider creating a micro loan program which can be used to fund entrepreneurial related projects developed by the minority youth who show potential in starting and running their own businesses.

Recommendation 2 is that the FHC Director, together with the City of Indianapolis, assist minority youth who show a passion in entrepreneurship to connect with the business incubators in Indianapolis so that they can expand their knowledge, skills, and network in entrepreneurship. Some youth also showed interest in urban farming as their entrepreneurial activities. The City of Indianapolis would benefit from a program to help these minority youth interested in urban farming get some plots/land, possibly vacant City properties, where they can easily start their entrepreneurial activities.

Results also showed that FHC contributes towards healthy eating for the minority youth who attend its program. Though the results showed that the FHC promotes healthy eating, this will not have much impact if youth only eat healthy food at the Center and go home and eat what they are used to eating in their homes. Therefore, recommendation 3 is that FHC creates opportunities where youth can bring parents and other community members to the Center and teach them how they can cook healthy and culturally relevant dishes using fresh produce grown at the FHC. This could also include having the youth take produce home from FHC or possibly teach their families to grow vegetables at home.

Participants acknowledged the role of professionals who come and share different career opportunities with these minority youth. Thus, recommendation 4 is that it will be beneficial if FHC youth get involved in selecting the type of professionals who can visit the Center based on their interests and career aspirations. Bringing professionals, especially those who look like the youth, with relevant careers to the youth can significantly increase their engagement during career exposure. Recommendation 5 is that the Center assist the youth to go to different career fairs and

conferences such as Indiana Small Farms Conference, FFA and 4-H/Extension events and programs where they can network with other youth and potential employers involved in youth development programs and entrepreneurs. This can provide networking opportunities with different people from different backgrounds and can also assist them in learning what others do and how they do differently from them.

The issue of food deserts, healthy eating and unemployment among minority youth are complex and can only be solved using comprehensive approaches. Therefore, urban agriculture youth programs like FHC, together with the leadership of the city, practitioners, educators and researchers can provide the insight of the cause and unbiased information which can be used to solve these challenges. Using an interdisciplinary research study can significantly lead to important information which can be used to solve the challenges minority youth face.

The field of agriculture youth-based programs is rapidly increasing, and this brings future research opportunities for those interested in youth development and agriculture. Based on these findings, recommendation 6 is to implement a longitudinal study by integrating data from pre- and post-program evaluations. Given the strength of data provided by mixed methods study design, the pre- and post-program evaluations should include quantitative and qualitative data instead of one-time data collection. Future interviews could also add volunteers, professionals and sponsors to capture their experiences with the Center and what motivators exist that might be useful to attract others to engage with FHC in the future. Recommendation 7 is to collaborate with the City of Indianapolis, Marion County Extension or other development programs to use a similar and common survey and interview framework across additional urban agricultural-based youth development programs in different geographical and cultural contexts in order to test the reliability and validity of the results and instruments used. Recommendation 8 is to conduct research to compare minority youth who are not enrolled in these types of programs with those who are as a way of accurately determining the contribution of these urban agriculture youth-based programs on minority youth's life skills, entrepreneurship and healthy eating.

There are few important observations made during the engagement with the Center relative to potential adjustments and sustained impact in this community. Some of these include the Center that relies heavily on one sponsor, Eli Lilly Foundation. The leader of the Center has retired from the parent Eli Lilly, Inc. When she retired, she decided to assist the youth from

Martindale-Brightwood which is highly populated with African American families with low income. The connection between the leader and Eli Lilly continued when she started the Felege Hiywot Center, an urban agriculture youth program responsible to equip youth with life skills and entrepreneurship. Though this has been of great benefit for the Center, it can be a challenge, especially if anything happens to the Eli Lilly Foundation's leadership. The change of leadership of the sponsor can sometimes affect the management, the way the funding priorities are changed, allocated and who receives the funding. If for example, a new manager comes in with different values which don't align with FHC's mission and vision, the funds can be easily be diverted and this can heavily affect the Center's programs. Such risk can be avoided by diversifying donors and sponsors which can add flexibility and sustainability if one donor or sponsor is no longer able to support the Center.

FHC leadership is centrally held by the founder and Director, who with the Board makes all decisions and who is relied upon to solve everything. Although there have been program and farm managers from time to time, the Director is the one in charge of writing grants, bringing in professionals and volunteers, chairing the Board, engaging with youth and leading other tasks needed at the Center. The fact that she is the only person who is doing almost everything has disadvantages to the Center. Some of the disadvantages include the leader does all those activities mentioned above. The worry is that once she retires, there will not be anyone to replace her who is capable of doing or knowing what she does for the Center and youth. Without intentional succession planning, there will be no one prepared to replace her. This can lead to decreased operational qualities and reduced benefits to the youth. Tragically, this could lead to the closing up of the organization which can affect the community which sees the Center as the savior for the minority youth. This can also limit the youth's learning once she is no longer helping the Center as she is very approachable and highly trusted by both youth and parents with the community. In order for the Center to remain sustainable in its programs, there is a need to nurture individuals and prepare someone who can take over whenever she decides to stop working with the Center.

Another point observed during the interaction with the Center is that most of professionals, volunteers, and Board members are predominantly Whites. While this seems to be a good thing for the Center to bring people who are skilled and willing to serve minority youth, it

can also be a drawback for youth who work with such kind of people who don't look like them. One of the challenges which could happen will be the disconnection between minority youth and the successful White professionals and volunteers who provide knowledge and skills to them. Having successful people who look like them is very important considering that the majority of these youth grew up in a community where there are few successful business people. Bringing successful people who look like them can significantly increase their self-efficacy in acquiring certain skills as they can easily connect with them by taking them as their role models. The Center can improve on this by diversifying volunteers and professionals who often come to engage with youth.

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## APPENDIX A. IRB APPROVAL LETTERS



**This Memo is Generated From the Purdue University Human Research Protection Program System, Cayuse.**

**Date:** December 9, 2019

**PI:** KATHRYN ORVIS

**Department:** PWL YOUTH DEVL AG EDUC

**Re:** Initial - IRB-2019-780

*Exploration of adult perceptions on the role of urban farming in equipping youth in agriculture and entrepreneurship and change healthy eating for minority youth attending Felege Hiywot Center, Indianapolis*

The Purdue University Human Research Protection Program (HRPP) has determined that the research project identified above qualifies as exempt from IRB review, under federal human subjects research regulations 45 CFR 46.104. The Category for this Exemption is listed below. Protocols exempted by the Purdue HRPP do not require regular renewal. However, The administrative check-in date is **December 9, 2022**. The IRB must be notified when this study is closed. If a study closure request has not been initiated by this date, the HRPP will request study status update for the record.

Specific notes related to your study are found below.

**Decision:** Exempt

**Category:** Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).

The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

Category 2.(ii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).

Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial



**This Memo is Generated From the Purdue University Human Research Protection Program System, Cayuse.**

**Date:** December 12, 2019

**PI:** KATHRYN ORVIS

**Department:** PWL YOUTH DEVL AG EDUC

**Re:** Modification - 1907022458

*Exploration of role of urban farming in equipping youth in agriculture and entrepreneurship and change healthy eating for minority youth attending Felege Hiywot Center, Indianapolis*

The Purdue University Institutional Review Board has approved the modification for your study "*Exploration of role of urban farming in equipping youth in agriculture and entrepreneurship and change healthy eating for minority youth attending Felege Hiywot Center, Indianapolis.*" The Category for this Exemption is listed below. This study maintains a status of exempt and an administrative check-in date of --. The IRB must be notified when this study is closed. If a study closure request has not been initiated by this date, the HRPP will request study status update for the record.

Specific details about your modification approval appear below.

**Decision:** Exempt

## APPENDIX B. INTERVIEW QUESTIONS

IRB Protocol # 1907022458A001

Theoneste Nzaranyimana/ K. Orvis (Principal Investigator)

THE INTERVIEW GUIDING QUESTIONS FOR THE FELEGE HIYWOT CENTER

URBAN AGRICULTURE YOUTH LED PROGRAM

### *A. Interview questions for parents with youth attending FHC urban farming*

#### **Objectives:**

- 1. To explore what motivates parents in sending their youth at FHC urban ag youth led program**
- 2. To explore any outcomes observed by parents from their children**

Hi, thank you for taking your time to hear and participate in this study I am doing.

I want to give you a brief explanation for the purpose for this study and why your inputs have a significance role to play towards this FHC urban agriculture program. But I want to remind you that this will depend on whether you want to involve in this study or not. Participation is voluntary. Anytime you want to drop out from this study, you can do it. Also, you are free to answer the question and if you are not comfortable to answer it, please feel free to let me know that you are not comfortable in answering a given question.

Everything from this study will be completely private and confidential. There will not be any private information that will help anybody identify you. I will be asking you questions related to your child and the role of FHC urban agriculture in promoting your child's life skills, entrepreneurship, and healthy eating. I will also want to know what motivates you to send your child to the FHC urban agriculture youth program.

The interview is going to take about 1 hour, and I will be audiotaping you the time we will be discussing about your experiences with your child and FHC. At the end of the interview, you will be given a gift certificate as a token of appreciation for your time and the information you provided.

#### **Question 1:**

- Please tell me a little bit about your child?
- What led your child to attend the FHC urban ag program?
- Tell me some of the thoughts or feelings you had when you first heard about the FHC urban agriculture? How was the FHC urban ag first described to you?
- What was/is your role in your child's FHC urban ag youth program's experience? How this changed since your child started attending the FHC urban ag youth program?

- Tell me more about the FHC urban ag youth program process with your child and their mentors/leaders? What were some of your first impressions? How have those impressions changed as time went by?
- What is your relationship with your child's FHC leaders/mentor like?
- How often do you connect with the leaders from the FHC?
- Tell me more about your relationship with your child since he/she started attending the FHC?
- How is his/her performance in school as compared to prior he/she attends the FHC?
- What new skills and behaviors have you noticed from your child since he/she started attending the FHC?
- Use some probing questions which direct the discussion to life skills, entrepreneurship skills, healthy.

**Questions 2:**

- How did the FHC leader help relates and connects with your culture in the process of urban agriculture youth program?
- What difference did you see in your children's behavior at home, or school, or in public as a result of FHC urban ag youth program?
- What else do you think it would be important for me to know about your experiences while your child was/is attending the FHC urban ag youth program?

Thank you very for your time and the information you shared with me. I truly appreciate your inputs. Please let's remain in touch. I would love to share with you the results from this study. Thank you very for your time and the information you shared with me. I truly appreciate your inputs. Please let's remain in touch. I would love to share with you the results from this study.

IRB Protocol # 1907022458A001

Theoneste Nzaranyimana/ K. Orvis (Principal Investigator)

THE INTERVIEW GUIDING QUESTIONS FOR THE FELEGE HIYWOT CENTER

URBAN AGRICULTURE YOUTH LED PROGRAM

***B. Pair or Individual interviews for the staff (founder and board members) at FHC urban agriculture youth program***

**Objectives:**

- 1. To explore what motives leaders for the FHC to continue to invest time and resources in this urban ag youth led program.**
- 2. To explore role played by FHC leaders in promoting life skills, entrepreneurship and healthy eating**

Hi, thank you for taking your time to hear and participate in this study I am doing.

I want to give you a brief explanation for the purpose for this study and why your inputs have a significance role to play towards this FHC urban agriculture program. But I want to remind you

that this will depend on whether you want to involve in this study or not. Participation is voluntary. Anytime you want to drop out from this study, you can do it. Also, you are free to answer the question and if you are not comfortable to answer it, please feel free to let me know that you are not comfortable in answering a given question.

Everything from this study will be completely private and confidential. There will not be any private information that will help anybody identify you. I will be asking you questions related to your child and the role of FHC urban agriculture in promoting your child's life skills, entrepreneurship, and healthy eating. I will also want to know what motivates you to send your child to the FHC urban agriculture youth program.

The interview is going to take about 1 hour, and I will be audiotaping you the time we will be discussing about your experiences with your child and FHC. At the end of the interview, you will be given a gift certificate as a token of appreciation for your time and the information you provided.

**Question 1: What impacts do you see on youth because of the program?**

- Please describe the FHC youth led urban agriculture program and your role in this program?
- What are the goals for this program?
- Does the program engage youth in this program?
- Are there ways for the students and their parents making suggestions about the program?
- What food is grown at your center and why? How much food is grown, and what is done with it?
- Do you think youth enjoy coming to this program? Please explain why you think they do, or they don't?
- Do you think the program has affected participants in the following areas: life skills (lists them), entrepreneurship, and health eating?
- Is the healthy eating an important topic to your program?
- How about entrepreneurship? How this urban agriculture changes a Martindale-Brightwood community?
- Why do you think youth continue to come in the program?
- Do you encourage interpersonal relationships among youth attending the program?
- Please describe any changes you have observed from the youth as they enter the program and graduate from it?

**Question2: What motivates you to keep running this program?**

- How did you become interested in this type of urban farming youth led program?
- What made you to start this program in this community with this specific type of youth?
- What are some challenges you have experienced in this urban agriculture program so far?
- What are some successes you have experienced in this program so far?
- Please explain what you think that contributed towards these successes?
- How do you plan what activities or programming you offer? Based on youth needs?
- How do you record what is happening at the program/center?

- How do you record successes and challenges?
- Are there any community organizations that works with the program?
- In what ways do these organizations provide support?
- What motivates you to keep on investing your time and resources in this urban agriculture program?
- What else do you think it would be important for me to know about your experiences while running the FHC?

IRB Protocol # 1907022458A001

Theoneste Nzaranyimana/ K. Orvis (Principal Investigator)

THE INTERVIEW GUIDING QUESTIONS FOR THE FELEGE HIYWOT CENTER

URBAN AGRICULTURE YOUTH LED PROGRAM

*C. FHC Youth Participants Interview: those who are still attending the program*

**Objectives:**

- 1. To explore what motivates youth to continuously attend the Felege Hiywot center**
- 2. To explore the outcomes /impact for attending the Felege Hiywot Center**

**Flow of the interview:**

Hi, thank you for taking your time to hear and participate in this study I am doing.

I want to give you a brief explanation for the purpose for this study and why your inputs have a significance role to play towards this FHC urban agriculture program. But I want to remind you that this will depend on whether you want to involve in this study or not. Participation is voluntary. Anytime you want to drop out from this study, you can do it. Also, you are free to answer the question and if you are not comfortable to answer it, please feel free to let me know that you are not comfortable in answering a given question.

Everything from this study will be completely private and confidential. There will not be any private information that will help anybody identify you. I will be asking you questions related to your child and the role of FHC urban agriculture in promoting your child's life skills, entrepreneurship, and healthy eating. I will also want to know what motivates you to send your child to the FHC urban agriculture youth program.

The interview is going to take about 1hour, and I will be audiotaping you the time we will be discussing about your experiences with your child and FHC. At the end of the interview, you will be given a gift certificate as a token of appreciation for your time and the information you provided.

**Evaluation for the Felege Hiywot Urban Agriculture Youth Led Program**

- Can you briefly tell me about the FHC program you participate in?
- How did you get involved in the program?
- Were parents or your own choice? How long have you participated in the FHC?

- If this is not your first year, how did this year compare to other years?
- What are the things you liked better?
- Liked less? Do you think being in the FHC urban Ag several years has helped you developing skills even more or less? Please give me some examples.
- Thinking back, what were your expectations coming into the FHC youth urban agriculture program?
- Were your expectations met? Currently being met? If not yet met, what do you think is the main challenge?
- Is the program at FHC a positive experience, a negative experience, or a little of both?
- Explain what was your favorite part of the program? Why? What was your least favorite part of the program? Why?
- Name at least two biggest highlights or favorite part of the program?
- How the FHC program compare to other programs you are, or you have been involving in? what are the similarities and differences have you observed? Why? Is this FHC a positive thing for you? Why or why not?
- What was your experience like working with the program leader(s)? What was your relationship like working with the program leader(s)? in what ways? Respect, support, trust, acceptance, open, caring, listened, understood, positive?
- Did the leaders/mentors challenge you to develop new skills in at FHC urban agriculture program? Were both leaders and parents encouraging?
- Did you feel both parents and leaders provided you with choices and options throughout the program? In What ways? Please give some examples. Do the leaders encourage you to ask questions, be engaged in decision making? Please explain with some examples.
- Do you want to continue participating in the FHC program in the future? For what reason? Do you plan on returning to the program in the coming years? Would you recommend this program to other youth?

**Evaluation for the outcomes for the FHC urban agriculture program**

- Do you enjoy participating in FHC program?
- Does it make you feel good about yourself? How so?
- In general, would you say that being involved in this program helped your development as a youth?
  
- What did you learn in this urban agriculture youth program? Probe with some program-specific outcomes such as: (**identity exploration, identity reflection, goal setting, effort, problem solving, time management, emotional regulation, cognitive skills, interpersonal relationships, prosocial norms, group process skills, feedback, leadership responsibility, integration with family, linkages to the community, linkages to work and college, attitude towards urban agriculture entrepreneurship, perceived behavioral control for urban agriculture entrepreneurship, perceived social norms about urban agriculture entrepreneurship, eating behavior**)? Please can you give me an example on how you learned that skill (probe for each skill youth identifies).

- How would describe your relationships with other youth in the program? Did everyone get along? Does the FHC encourage peer to peer relationships? Did you make new friends?
- What do you believe has impacted you the most during the FHC urban agriculture program?
- Do you believe your attitudes have changed regarding ag and entrepreneurship, eating behavior, other life skills?
- Did this program make youth think differently about your future? In what ways?
- Do you plan to use the life skills you have learned in the program in any areas of your life such as home, school or with friends? How do you think such skills learned will help you at school, home and with friends?
- What do you believe you learned about yourself throughout this program? In what ways? What makes it difficult to use the skills outside of the FHC urban program?
- What would consider your biggest improvement to be from participating in this program?
- How have your perceptions of your community (family, friends, neighborhood) changed as a result of your participation in this FHC urban agriculture?

**Other potential probing questions before closing the interviews**

Given what you shared with me today, is there anything else you would like to say? Can you tell me a little bit more about that? Please explain more about what you mean by....? Are there other ideas you have? That's interesting, can you tell me more about that?

IRB Protocol # 1907022458A001

Theoneste Nzaranyimana/ K. Orvis (Principal Investigator)

THE INTERVIEW GUIDING QUESTIONS FOR THE FELEGE HIYWOT CENTER

URBAN AGRICULTURE YOUTH LED PROGRAM

***D. FHC Alumni Participants Interview: alumni of the FHC program***

**Objectives:**

- 1. To explore what motivated youth to continuously attend the Felege Hiywot center**
- 2. To explore the outcomes /impact for the alumni after attending the Felege Hiywot Center**

Hi, thank you for taking your time to hear and participate in this study I am doing.

I want to give you a brief explanation for the purpose for this study and why your inputs have a significance role to play towards this FHC urban agriculture program. But I want to remind you that this will depend on whether you want to involve in this study or not. Participation is

voluntary. Anytime you want to drop out from this study, you can do it. Also, you are free to answer the question and if you are not comfortable to answer it, please feel free to let me know that you are not comfortable in answering a given question.

Everything from this study will be completely private and confidential. There will not be any private information that will help anybody identify you. I will be asking you questions related to your child and the role of FHC urban agriculture in promoting your child's life skills, entrepreneurship, and healthy eating. I will also want to know what motivates you to send your child to the FHC urban agriculture youth program.

The interview is going to take about 1 hour, and I will be audiotaping you the time we will be discussing about your experiences with your child and FHC. At the end of the interview, you will be given a gift certificate as a token of appreciation for your time and the information you provided.

### **Evaluation for the Felege Hiywot Urban Agriculture Youth Led Program**

- Can you briefly tell me about the FHC program you participated in?
- How did you get involved in the program?
- Were parents or your own choice?
- How long have you participated in the FHC? If this is not your first year, how did this year compare to other years? What are the things you liked better? Liked less?
- Do you think being in the FHC urban Ag several years has helped you developing skills even more or less? Please give me some examples.
  
- Thinking back, what were your expectations coming into the FHC youth urban agriculture program? Were your expectations met? Currently being met? If not yet met, what do you think is the main challenge?
- Is the program at FHC a positive experience, a negative experience, or a little of both? Explain what was your favorite part of the program? Why? What was your least favorite part of the program? Why?
- Name at least two biggest highlights or favorite part of the program? How the FHC program compare to other programs you are, or you have been involving in? what are the similarities and differences have you observed? Why? Is this FHC a positive thing for you? Why or why not? What was your experience like working with the program leader(s)? What was your relationship like working with the program leader(s)? in what ways? Respect, support, trust, acceptance, open, caring, listened, understood, positive?
- Did the leaders/mentors challenge you to develop new skills at FHC urban agriculture program? Were both leaders and parents encouraging?
- Did you feel both parents and leaders provided you with choices and options throughout the program? In What ways? Please give some examples.
- Do the leaders encourage you to ask questions, be engaged in decision making? Please explain with some examples.

- Do you want to continue participating in the FHC program in the future? For what reason? Do you plan on returning to the program in the coming years? Would you recommend this program to others? Why?

### **Evaluation for the outcomes for the FHC urban agriculture program**

Did you enjoy participating in FHC program? Did it make you feel good about yourself? How so? In general, would you say that being involved in this program helped your development as a youth? What did you learn in this urban agriculture youth program? Probe with some program-specific outcomes such as: (**Identity exploration, Identity reflection, Goal setting and effort to achieve a goal, Problem solving, time management, emotional regulation, cognitive skills, interpersonal relationships, prosocial norms, group process skills, feedback about your progress, leadership responsibility, integration with family, linkages to the community, linkages to work and college, attitude towards urban agriculture entrepreneurship, perceived behavioral control for urban agriculture entrepreneurship, perceived social norms about urban agriculture entrepreneurship, eating behavior**)? Please can you give me an example on how you learned that skill (probe for each skill youth identifies).

- How would describe your relationships with others in the program? Did everyone get along? Does the FHC encourage peer to peer relationships? Did you make new friends?
- What do you believe has impacted you the most during the FHC urban agriculture program?
- Do you believe your attitudes have changed regarding ag and entrepreneurship, eating behavior, other life skills?
- Did this program make youth think differently about your future? In what ways? Do you plan to use the life skills you have learned in the program in any areas of your life (home, school or with friends)?
- How do you think such skills learned will help you at school, home and with friends? What do you believe you learned about yourself throughout this program? In what ways? What makes it difficult to use the skills outside of the FHC urban program? What would consider your biggest improvement to be from your participation in this program?
- How have your perceptions of your community (family, friends, neighborhood changed as a result of your participation in this FHC urban agriculture?

### **Other potential probing questions before closing the interviews**

Given what you shared with me today, is there anything else you would like to say? Can you tell me a little bit more about that? Please explain more about what you mean by....? Are there other ideas you have? That's interesting, can you tell me more about that?

## APPENDIX. C. SURVEY QUESTIONNAIRES

**Instructions:** Based on your **current** or **recent** involvement in urban agriculture program please rate whether you have had the following experiences in the program.

Your experience in summer camp				
Urban Agriculture program				
Yes, Definitely	Quite a Bit	A little	Not All	At
1	2	3	4	

### IDENTITY EXPERIENCES

1. Tried doing new things	1	2	3	4
2. Tried a new way of acting around people	1	2	3	4
3. I do things here I don't get to do anywhere else	1	2	3	4

4. Started thinking more about my future because of this urban agriculture program	1	2	3	4
5. This urban agriculture program got me thinking about who I am	1	2	3	4
6. This urban agriculture program has been a positive turning point in my life	1	2	3	4

### INITIATIVE EXPERIENCES

7. I set goals for myself in this urban agriculture program	1	2	3	4
8. Learned to find ways to achieve my goals	1	2	3	4
9. Learned to consider possible obstacles when making plans	1	2	3	4

10. I put all my energy into this urban agriculture program	1	2	3	4
11. Learned to push myself	1	2	3	4
12. Learned to focus my attention	1	2	3	4

13. Observed how others solved problems and learned from them in this program	1	2	3	4
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14. Learned about developing plans for solving a problem	1	2	3	4
15. Used my imagination to solve a problem	1	2	3	4

16. Learned about organizing time and not procrastinating (not putting things off)	1	2	3	4
17. Learned about setting priorities	1	2	3	4
18. Practiced self-discipline	1	2	3	4

### BASIC SKILL

19. Learned about controlling my temper	1	2	3	4
20. Became better at dealing with fear and anxiety	1	2	3	4
21. Became better at handling stress	1	2	3	4
22. Learned that my emotions affect how I perform	1	2	3	4

### COGNITIVE SKILLS

23. Academic skills (reading, writing , math, agriculture)	1	2	3	4
24. Skills for finding information related to urban agriculture	1	2	3	4
25. Computer skills/internet skills	1	2	3	4
26. Artistic/Creative skills	1	2	3	4
27. Communication skills	1	2	3	4

### INTERPERSONAL RELATIONSHIPS

28. Made friends with someone of the opposite gender	1	2	3	4
29. Learned I had a lot in common with people from different background	1	2	3	4
30. Got to know someone from a different ethnic group	1	2	3	4
31. Made friends with someone from a different social class (someone richer or poorer)	1	2	3	4

32. Learned about helping others	1	2	3	4
33. I was able to change my school or community for the better	1	2	3	4
34. Learned to stand up for something I believe was normally right	1	2	3	4
35. We discussed morals and values	1	2	3	4

### TEAMWORK AND SOCIAL SKILLS

36. Learned that working together requires some compromising	1	2	3	4
37. Became better at sharing responsibility	1	2	3	4
38. Learned to be patient with other group members	1	2	3	4
39. Learned how my emotions and attitude affect others in the group	1	2	3	4

40. Learned that it is not necessary to like people in order to work with them	1	2	3	4
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41. I became better at giving feedback	1	2	3	4
42. I became better at taking feedback	1	2	3	4

43. Learned about the challenges of being a leader	1	2	3	4
44. Others in this urban agriculture program counted on me	1	2	3	4
45. Had an opportunity to be in charge of a group of peers	1	2	3	4

**ADULT NETWORKS AND SOCIAL CAPITAL**

46. This urban agriculture program improved my relationship with my parents/guardians	1	2	3	4
47. I had good conversations with my parents/guardians because of this activity	1	2	3	4

48. Got to know people in the community	1	2	3	4
49. Came to feel more supported by the community	1	2	3	4

50. This urban agriculture program opened up job or career opportunities for me	1	2	3	4
51. This urban agriculture program helped prepare me for college	1	2	3	4
52. This urban agriculture program increased my desire to stay in school	1	2	3	4

Your experience in summer camp				
Urban Agriculture and entrepreneurship				
Very Important	Important	Neutral	Not At All Important	

**ENTREPRENEURSHIP INTENSIONS**

1. I would rather own my own business than earn higher salary as an employee	1	2	3	4
2. I would rather own my own business than pursue a promising career as an employee	1	2	3	4
3. I would work somewhere else only in order to make another attempt to start my own business	1	2	3	4
4. I am willing to make a significant personal sacrifice in order to stay in my own business	1	2	3	4

5. For me, being self-employed would be very easy	1	2	3	4
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6. If I wanted to, I could easily pursue a career being self-employed	1	2	3	4
7. Being self-employed, I would have a complete control over the situation	1	2	3	4
8. The number of the events outside my control which could prevent me from being self-employed is very high	1	2	3	4
9. If I become self-employed, the chances of success would be very high	1	2	3	4
10. If I pursue a career being self-employed, the chances of failure would be very high	1	2	3	4

11. My closest family think that I should start my own business in urban agriculture	1	2	3	4
12. My closest friends think that I should start my own business in urban agriculture	1	2	3	4
13. My fellow students/colleagues think that I should start my own business in urban agriculture	1	2	3	4
14. Other people who are important to me think that I should start my own business in urban agriculture	1	2	3	4
15. For me, the expectations of my closest family are important	1	2	3	4
16. For me, the expectations of my closest friends are important	1	2	3	4
17. For me, the expectations of my fellow students/colleagues are important	1	2	3	4
18. For me, the expectations of other people, who are important for me are important	1	2	3	4

## EATING BEHAVIOR

**After attending this urban youth program please tick the box that is right for you**

	<b>True</b>	<b>False</b>
1. I usually avoid eating fried foods		
2. I make sure I eat at least one serving of fruit and vegetables a day		
3. I try to keep my overall fat rich foods down		
4. I avoid eating lots of sausages and burgers		
5. I try to keep my overall sugar rich food intake down		
6. I make sure I eat at least one serving of vegetables or salad a day		
7. I often eat fast food		
8. I try to ensure that I eat plenty of fruit and vegetables		

9. I often eat sweet snacks between meals		
10. I usually eat at least one serving of vegetables or salad with my evening meal		
11. When I have snack between meals, I often choose fruits		
12. I eat at least 3 servings of fruit most days		
13. I generally try to have a healthy diet		

## VITA

### Theoneste Nzaranyimana

Lilly Hall of Life Sciences, Room 4-401

915 West State Street

West Lafayette, IN 47906

Email: [tnzarany@purdue.edu](mailto:tnzarany@purdue.edu)

#### AREAS OF EXPERTISE

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- ✓ Strong leadership skill
- ✓ Lifelong background in multicultural relationships
- ✓ Proficient in designing activities to empower and inspire youth and adult
- ✓ Experience with Extension/engagement methods and community development
- ✓ Demonstrated strong interpersonal and communication skills
- ✓ Highly organized and disciplined
- ✓ Strong communication skills and balanced judgment and creativity

#### EDUCATION

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- 2017 - 2020      **Ph.D. Studies in Applied Agricultural Science Education**, Specialization in urban agriculture entrepreneurship & healthy eating in low income families  
**Dissertation:** 'Role of urban agriculture in promoting entrepreneurship and healthy eating for minority youth living in food desert neighborhoods'
- 2017              **M.S. (Agriculture)**, College of Applied Science and Technology, Illinois State University, Normal, Illinois, USA  
**Thesis:** 'Determining the effects of sulfur fertility levels on edamame soybean [Glycine max (L.) Merrill] protein components'
- 2017              **Post graduate certificate** in STEM Education and Leadership, with specialization in curriculum design related to Agriculture and Natural Resources, Illinois State University, Normal, Illinois, USA
- 2014              **B.S.**, Agriculture and Natural Resources majoring in horticulture, Africa University, Mutare, Zimbabwe

#### AWARDS

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- 2020    NACTA Graduate Teaching Award, New Mexico State University, New Mexico.
- 2019    First place 2019 North American College and Teachers of Agriculture graduate poster contest, Twin Falls, Idaho
- 2017    Purdue University Ross Fellowship, West Lafayette, Indiana

- 2014 Beta Prizes Award -Outstanding Graduate Student, horticulture, Africa University, Zimbabwe
- 2014 Vice-Chancellor Award - Outstanding Graduate Student, Department of Horticulture, Africa University, Zimbabwe
- 2013 Awarded study abroad opportunity by Africa University at Wright Farms, Illinois, USA

#### **CERTIFICATIONS:**

- Collaborative Institutional Training Institute (**CITI**)
- Family Educational Rights and Privacy Act of 1974 (**FERPA**)

#### **PUBLICATIONS:**

- **Nzaranyimana<sup>1</sup>, T.**, Orvis<sup>2</sup>, K., Benjamin<sup>2</sup>, T. (2019). Using Urban farming approach to equip youth in entrepreneurship & increase supply of fresh fruits and vegetables in food desert community of Gary, Indiana. Poster Presentation. North American Teachers and College of Agriculture. Twin Falls, Idaho. June 18-21, 2019
- **Nzaranyimana<sup>1</sup>, T.**, Russell<sup>2</sup>, M., Tinkler<sup>2</sup>, S., Orvis<sup>3</sup>, K. (2018). Assessing Cultural Awareness and International Engagement through Experiential Learning: A case study of a spring 2018 undergraduate study abroad class in rural areas of Peru. Congreso Internacional de Innovación Educativa en Temas Agrarios. Conference presentation at Universidad Nacional Agraria La Molina, Lima, Peru, October 17-19, 2018
- **Nzaranyimana<sup>1</sup>, T.**, Russell<sup>2</sup>, M., Tinkler<sup>2</sup>, S., Orvis<sup>3</sup>, K. (2019). Cultural Immersion through a study abroad program and its role in changing students' attitude towards different cultures. Purdue University 2019 Engagement and Service-Learning Summit. Poster presentation. Purdue University Honors Hall, West Lafayette, IN, February 28, 2019
- **Nzaranyimana<sup>1</sup>, T.**, D. Kopsell<sup>2</sup>, D. Kopsell<sup>3</sup>, and R. Rhykerd<sup>2</sup>. (2018). Effect of Sulfur Fertility on Proteins and Carbohydrates in Bean of Edamame Soybean [Glycine max (L.) Merr.]. Poster Presentation. American Society for Horticultural Science Conference, Washington, D.C. - July 31-August 3, 2018

#### **RESEARCH GRANTS**

2016 – 2017 Graduate Research grant from Illinois Soybean Association (ISA): \$10,000 Grant

#### **ACADEMIC WORK EXPERIENCE**

2018 – Present	<b>Graduate Research Assistant</b> , Purdue University, West Lafayette, Indiana
2017-2018	<b>Ross Fellowship</b> , Purdue University, West Lafayette, Indiana
2015 – 2017	<b>Graduate Research Assistant</b> , Illinois State University, Normal, Illinois

#### **CONFERENCE PAPER PRESENTATIONS**

- **Nzaranyimana<sup>1</sup>, T.**, Russell<sup>2</sup>, M., Tinkler<sup>2</sup>, S., Orvis<sup>3</sup>, K. (2018). Assessing Cultural Awareness and International Engagement through Experiential Learning: A case study of a spring 2018 undergraduate study abroad class in rural areas of Peru. Congreso Internacional de Innovación Educativa en Temas Agrarios. Conference presentation at Universidad Nacional Agraria La Molina, Lima, Peru, October 17-19, 2018

#### INVITED & POSTER PRESENTATIONS

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- **Nzaranyimana, T.**, Orvis, K. (2020). Invited presentation in PK-12 Engagement at Purdue University, West Lafayette, IN
- **Nzaranyimana, T.**, Russell, M., Abrahams, J. (2019). Invited presentation in International Engagement Methods and Food Security winter study abroad class (ASEC-431) at Purdue University, West Lafayette, IN.
- Kornegay, R., **Nzaranyimana, T.** (2019). The 2019 STEAM Summer Institute. Invited presentation at Felege Hiywot Urban Agriculture Program, Indianapolis, IN
- Russell, M., **Nzaranyimana, T.**, & Alexander, E. (2019). Purdue Agribusiness Science Academy Summer Institute (PASA). Invited presentation at Purdue University, West Lafayette, IN
- **Nzaranyimana<sup>1</sup>, T.**, Orvis<sup>2</sup>, K., Benjamin<sup>2</sup>, T. (2019). Using Urban farming approach to equip youth in entrepreneurship & increase supply of fresh fruits and vegetables in food desert community of Gary, Indiana. Poster Presentation. North American Teachers and College of Agriculture. Twin Falls, Idaho. June 18-21, 2019
- Alexander, E., Kornegay, R., **Nzaranyimana, T.**, & Esters, L.T. (2018). *Partners in the environment (PIE) day*. Invited presentation at Cold Spring Environmental Magnet School, Indianapolis, IN
- **Nzaranyimana, T.**, Nyairo, N., Quellhorst, H. (2018). How might digital tools be used to link a public extension service with markets in Ethiopia? Invited presentation “Revitalizing Extension for Agricultural Development University Student Hackathon” conducted in conjunction with the conference December 12-13 in Washington, D.C.
- **Nzaranyimana<sup>1</sup>, T.**, Russell<sup>2</sup>, M., Tinkler<sup>2</sup>, S., Orvis<sup>3</sup>, K. (2019). Cultural Immersion through a study abroad program and its role in changing students’ attitude towards different cultures. Purdue University 2019 Engagement and Service-Learning Summit. Poster presentation. Purdue University Honors Hall, West Lafayette, IN, February 28, 2019
- **Nzaranyimana, T.**, Kornegay, R. (2018). STEM Conference for the kids. Invited presentation at Purdue University, West Lafayette, IN. April 12-13, 2018
- **Nzaranyimana, T.**, Kornegay, R. (2019). From the soil to plate cucumber pickling activity. Purdue Grandparents day. Invited presentation at Purdue University, West Lafayette, IN, June 27-28, 2018
- **Nzaranyimana<sup>1</sup>, T.**, D. Kopsell<sup>2</sup>, D. Kopsell<sup>3</sup>, and R. Rhykerd<sup>2</sup>. (2018). Effect of Sulfur Fertility on Proteins and Carbohydrates in Bean of Edamame Soybean [Glycine max (L.) Merr.]. Poster Presentation. American Society for Horticultural Science Conference, Washington, D.C. - July 31-August 3, 2018

## **WORKSHOPS AND PROFESSIONAL DEVELOPMENT OPPORTUNITIES**

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- Ten weeks training as Junior Master Gardener with Purdue University Extension, February 5<sup>th</sup>, 2020, Tippecanoe County, Lafayette, IN
- **Teaching Assistant in Teaching Agriculture Educators about Greenhouse management class**, January -May 2020, Purdue University, West Lafayette, Indiana
- **Indiana STEM Education Conference**, Meeting the objectives of Indiana's STEM Education Strategic plan, January 2020, Purdue University, West Lafayette, Indiana
- **The 9<sup>th</sup> Multi Stakeholder Partnership Conference**, Innovation for Sustainable Livestock agenda, September 2019, Kansas State University, USA
- **NACTA (North American Colleges and Teachers of Agriculture) Conference**, June 2019, Twin Falls, Idaho, USA
- **Indiana Small Farmer Conference**, March 2019, Hendricks County, Danville, Indiana, USA
- **International Conference on Education Innovation in Agrarian Topics (CIETA)**, October 2018, Universidad Nacional Agraria La Molina, Peru
- **Indiana Small Farmer Conference**, February 2018, Hendricks County Fairgrounds, Danville, Indiana, USA
- **Study Abroad in Peru**, March 2018, Andean communities, Peru
- **Scale up conference**, September 2018, Purdue University, West Lafayette, Indiana, USA
- **Borlaug Summer Institute on Global Food Security**, June 3 – 16, 2018, Purdue University, West Lafayette, USA
- **PLT training in Environmental Education**, August-December 2017, Purdue University, West Lafayette, Indiana
- **Illinois Ag in the Classroom**, June 2017, Bureau County, Illinois, USA
- **Scholarship for Teaching and Learning**, February 2017, Illinois State University, Normal, Illinois, USA
- **Intern at the Wright Farms**, June 2013, Bureau County, Illinois, USA
- **Intern at the Coneflower Farm**, June 2013, Bureau County, Illinois, USA
- **Manager Trainee Intern at Greater Sisal Farms**, May 2012, Mutare, Zimbabwe

## **LEADERSHIP OPPORTUNITIES**

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- **STEAM Summer Institute at Felege Hiywot Youth Center**, program coordinator, July 2019, Indianapolis, Indiana, USA
- **President and co-founder for MANRRS (Minority in Agriculture Natural Resources and Related Sciences) chapter** at Illinois State University, 2017, Illinois, USA
- **International Student and Scholars team leader** for the international student's orientation, June 2016-January, 2017, Illinois State, Illinois, USA
- **President & founder for Rwandese and Burundians student association at Africa University**, April 2012-June 2014, Mutare, Zimbabwe

## **VOLUNTEER OPPORTUNITIES**

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- **Volunteer at Felege Hiywot Center urban agriculture youth program**, July 2019, Indianapolis, Indiana, USA
- **Volunteer, University of Illinois Extension Unity Center**, 2015-2017, McLean County, Illinois, USA
- **Volunteer at Garden of Hope at Hartzell Orphanage**, 2011-2013, Mutare, Zimbabwe

## **LANGUAGE FLUENCY**

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- English, French, Swahili, Shona, Kinyarwanda, Kirundi