DEVELOPMENT AND VALIDATION OF A SURVEY INSTRUMENT TO MEASURE FORMER MEMBER PERCEPTIONS OF YOUTH DEVELOPMENT ORGANIZATIONS
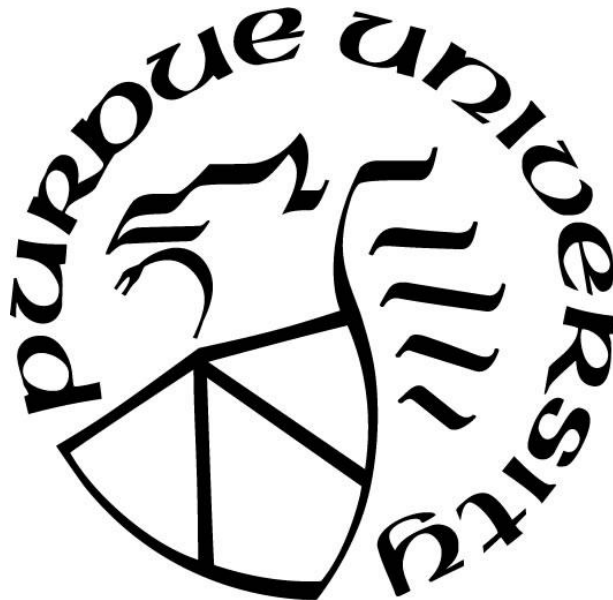
by

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For I know the plans I have for you, declares the LORD, plans for welfare and not for evil, to give you a future and a hope.

Jeremiah 29:11

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

The purpose of this research was to develop and validate an instrument designed to assess programming of youth development organizations. The instrument can be used by leaders of youth development organizations to monitor the organization's performance in developing productive and engaged citizens. This research viewed youth development organizations as a microsystem that youth interact with (Bronfenbrenner & Morris, 2006). A complete review of the literature on youth development organizations was conducted to determine the components of positive youth development organizations. The resulting conceptual framework consisted of project, skills and knowledge, community contribution, high-density experiences, environment, non-parental adult, and near-peer role models.

An item pool was developed based on the literature available on youth development organization programming. This item pool was reviewed by experts in youth development organization programming and inclusion. Then the items were entered into two tools to assess grammar and concise language. Third, the items were administered to a small sample then analyzed for correlations and contributions to reliability. Items were eliminated if they correlated too highly with other items and if they did not contribute to the reliability of the scale. Fourth, the items were administered to a broader sample and correlations and reliability measures were analyzed again with more items removed. Finally, the items were administered to another sample and analyzed for multicollinearity and reliability. The final sample took the survey a second time and responses were compared based on paired t-tests to establish test-retest reliability.

The 15-item instrument exhibits appropriate measures of validity and reliability to recommend its usage by youth development organization leaders to evaluation programming. The instrument is parsimonious so leaders can add program-specific questions while avoiding participant fatigue. A complete version of the instrument is available in the appendices.

CHAPTER 1.   INTRODUCTION

In the early part of the 20th century, nationally sponsored youth organizations such as Girl Scouts, Boy Scouts, 4-H, and FFA were created to fulfill the need to further develop the youth of our country beyond what was being provided in school and within their homes (Mahoney, Larson, & Eccles, 2005). As they enter their second century, it is critical for youth development organizations to articulate the positive benefits of enrollment to parents, sponsors, community members, and other stakeholder groups to justify their existence. Often times, youth development organizations turn to testimonials and demographic information to explain their impact and breadth of programming. Greene, Lee, Constance, and Hynes (2013) called for more research to discover the contributing factors to youth engagement to inform programs on how to increase participation and provide the best possible programming. Cabrera-Nguyen (2010) wrote of the need for instruments with demonstrated reliability and validity to be developed as tools for practitioners to use to select evidence-based interventions best matched to the needs of their clients.

Steinberg and Lerner (2004) noted there are four defining features of current positive youth development perspectives. First, the empirical study of adolescence emerged as a relational field of inquiry where the individual interacts with a system and vice versa. This is in accord with the Bioecological Model of Human Development where the person acts on the microsystem just as the microsystem acts on the person and there is no hierarchical relationship between the person and microsystem.

The second feature of youth development perspectives builds on the first where the microsystem is seen to provide the structural and functional bases of plasticity (Steinberg & Lerner, 2004). Plasticity, in terms of developmental systems, is the potential for change throughout development that exists because of mutually beneficial relationships between the developing person and his or her environment (Lerner et al., 2005). For Positive Youth Development (PYD) plasticity allows the person to act as an agent in his or her personal development (Steinberg & Lerner, 2004). The positive youth development perspective holds that youth are not without resources or power. They can be active in shaping their own development and directing their course.

According to Steinberg and Lerner (2004), the third distinctive feature is the view that problem behaviors are now seen as a larger array of outcomes characterizing the relations between adolescents and their contexts. As such, programs should be designed to develop the whole child

and not singularly focus on preventing one problem (Catalano, Bergland, Ryan, Lonczak, & Hawkins, 2002). According to Durlak et al. (2007), PYD adopts a holistic view of development encouraging consideration of a youth's physical, personal, social, emotional, intellectual, and spiritual aspects.

The fourth trend in research is to evaluate the efficacy of programs and policies targeted to improving the lives of youth (Steinberg & Lerner, 2004). Research on organization's policies and programs can take the form of applied developmental science that produces community-based, change-oriented recommendations. This research on programs and policies should provide actionable recommendations so the lives of youth will be improved.

1.1 Research Purpose

The purpose of this research was to develop and validate an instrument designed to assess programming of youth development organizations. The instrument can be used by leaders of youth development organizations to monitor the organization's performance in developing productive and engaged citizens. Challenges for creating an instrument come from many areas, such as having a clear definition of what a youth development organization is (Roth & Brooks-Gunn, 2003a). Roth and Brooks-Gunn (2003c), called for the need to gather evidence on which features of a youth development organization should be dropped and of those remaining, which should carry the most weight in making program design decisions. Another challenge to the development of an instrument is the variety of approaches, preventative or positive, taken by organizations to assist youth (Catalano, Ryan, Lonczak, & Hawkins, 2002) and the many different forms of the organizations (Mahoney, Larson, & Eccles, 2005). According to Roth and Brooks-Gunn (2003b), creating an instrument will require the researcher to take a comprehensive approach to understanding the program, including questions regarding both implementation and program outcomes.

There are two research objectives for this study. These objectives and a brief discussion of each objective follow.

1.2 Research Objectives

This section contains the research objectives for this study and an accompanying explanation for each objective.

Objective #1 To determine the validity of the developed survey instrument.

I reviewed the literature on youth development organizations, positive youth development perspective, and the Bioecological Model of Human Development defined by Bronfenbrenner and Morris (2006). Through this review of the literature, I compiled the necessary components for youth development organizations to enable positive change in the lives of their members. A large pool of items was developed based on the literature review to establish content validity. Some of the items came directly from the articles as the authors paraphrased their guiding questions. Other items were derived from my interpretation of the text by focusing on key phrases. This study used DeVellis's (2012) approach to scale development. Youth development experts reviewed and provided feedback on the instrument regarding the face validity of the items.

Objective #2 To determine the reliability of the developed survey instrument.

Cronbach's alpha was calculated as evidence of internal consistency for the instrument. Evidence of reliability over time was gathered through analyzing the paired samples t-test of scores within participants who took the instrument two times.

1.3 Target Audience

The target audience intended to use the instrument created in this study is leaders of youth development organizations, boards of directors, funding agencies, school officials, parents, and youth. First, the leaders and boards of directors will be interested in using the instrument to determine which areas of their organization are performing well and which need a stronger focus of resources. Funding agencies, school officials, parents, and youth can use the results produced by this instrument to inform themselves about the effectiveness of the organization in each domain.

1.4 Youth Development Organizations of Focus

This study focused on four youth development organizations. I selected these four organizations because of their national prominence and programming which used positive youth development perspectives. The information provided in the following sections gives a high-level view of selected national youth organizations. Each section will focus on one organization and include background demographic information, information about the organization's purpose, statements about implementing positive youth development research-based practices, and the overall administration. When possible, budget information was retrieved from Charity Navigator (2020a). Charity Navigator catalogs the financial health of more than eleven hundred charities.

1.4.1 Boy Scouts of America

On its homepage, Boy Scouts of America claims to be one of the nation's largest and most prominent values-based youth development organization (Boy Scouts of America Home, 2020). The information in Table 1.1 is sourced from the Boy Scouts of America About the BSA (2020), Boy Scouts of America Mission & Vision (2020), and, Charity Navigator (2020b).

Table 1.1 *Boy Scouts of America Background Information*

Date Founded	1910
Mission Statement	The mission of the Boy Scouts of America is to prepare young people to make ethical and moral choices over their lifetimes by instilling in them the values of the Scout Oath and Law.
Vision Statement	The Boy Scouts of America will prepare every eligible youth in America to become a responsible, participating citizen and leader who is guided by the Scout Oath and Law.
Oath	On my honor I will do my best To do my duty to God and my country and to obey the Scout Law; To help other people at all times; To keep myself physically strong, mentally awake, and morally straight.
Number of Youth Served	114,304,329
Ages of Youth Served	5 - 20
Gender Distribution of Youth	All male until 2018
Race Distribution of Youth	Not found
Number of Paid Staff	1,100 National Council employees, 5,800 local council employees
Number of Volunteers	1.2 million adult volunteers
Budget	Revenue $239,799,973; Expenses $273,514,888

The Chief Scout Executive leads 1,100 BSA National Council employees and 5,800 local council employees. Their structure includes paid national and local employees and local volunteers. The BSA National Council receives funding from scout supply sales, membership fees, grants from foundations, legacies and bequests, and corporate sponsorships (Boy Scouts of America How Scouting is Funded, 2020).

On their website (Boy Scouts of America Research, 2020) the organization provides links to a number of independent research studies including ones on the benefits of scouting and summer camp outcomes. BSA provides a matrix of how the Search Institute's 40 Development Assets are applied in Scouting. The 40 Developmental Assets is a published instrument used to promote

community change to create opportunities for youth to build their skills (Benson, Leffert, Scales, & Blyth, 2012).

1.4.2   4-H

4-H is one of the nation's largest positive youth development organizations (4-H Home, 2020). Information presented in Table 1.3 was found on the organization website (4-H Youth Development and Mentoring Programs, 2020; Find & Enroll in a 4-H Club, 2020; Charity Navigator, 2020e).

Table 1.2 *4-H Background Information*

Date Founded	1902
Mission Statement	4-H empowers youth to reach their full potential, working and learning in partnership with caring adults.
Vision Statement	A world in which youth and adults learn, grow and work together as catalysts for positive change.
Motto/Pledge	I pledge my head to clearer thinking, My heart to greater loyalty, My hands to larger service, and my health to better living, for my club, my community, my country, and my world.
Number of Youth Served	Over 6,000,000
Ages of Youth Served	8-18
Gender Distribution of Youth	Not found
Race Distribution of Youth	Not found
Number of Paid Staff	Not found
Number of Volunteers as Educators	611,800 volunteers, 3,500 professionals, and more than 25 million alumni
Budget	Revenue $35,993,939, Expenses $40,870,197

The 4-H website states 4-H programs follow research-based practices for positive youth development. On national and state levels, 4-H is involved with research being conducted at the

Institute for Applied Research in Youth Development at Tufts University (4-H Youth Development & Mentoring Programs, 2020).

4-H is operated by the Cooperative Extension System and the United States Department of Agriculture (4-H Leadership, 2020). It is led through partnerships with public and private entities which include the Cooperative Extension System, National Institute of Food and Agriculture within the United States Department of Agriculture, National 4-H Council, and the National Association of Extension 4-H Agents. The National 4-H Council is a private, non-profit partner with a council leadership team and board of trustees.

1.4.3   National FFA Organization

The National FFA Organization was once known as the Future Farmers of America. The National FFA Organization has state associations in the 50 states plus Puerto Rico and the U.S. Virgin Islands. Students are locally organized into chapters based in middle and high schools. Information in Table 1.4 was found on the organization website (FFA Membership, 2020; FFA Who We Are, 2020) and Charity Navigator (2020d).

Table 1.3 *National FFA Organization Background Information*

Date Founded	1928
Mission Statement	FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education.
Vision Statement	Students whose lives are impacted by FFA and agricultural education will achieve academic and personal growth, strengthen American agriculture and provide leadership to build healthy local communities, a strong nation and a sustainable world.
Motto	Learning to Do, Doing to Learn, Earning to Live, Living to Serve.
Number of Youth Served	629,367
Ages of Youth Served	12-21

Table 1.3 continued

Gender Distribution of Youth	47% Female; 53% Male
Race Distribution of Youth	67% is White; 22% is Hispanic/Latino; 8% is Black/African-American or American Indian; and 3% Asian, Pacific Islander or two or more races.
Number of Paid Staff	Over 11,000 local agricultural education teachers/advisors; not available for state and national staff
Number of Volunteers as Educators	Not available
Budget	Revenue: $18,044,315; Expenses: $16,806,496

There was no explicit reference to research on the National FFA Organization's website. On the conference page, there was the following statement indicating some of the premises of positive youth development such as skill building, "at events and conferences, FFA members hone leadership and character development skills that apply to real-life situations" (FFA Conferences, 2020).

National FFA employs a three-tier structure: national, state, and local. It is stated that the national organization is a support organization which does not control or supervise the state associations (FFA Who We Are, 2020). There are 52 state associations, one for each state plus Puerto Rico and the Virgin Islands. The national association is led by six student members. Other parts of leadership include an executive management team, board of directors, board of trustees, sponsors' board, and individual giving council. National FFA is not federally funded (Charity Navigator, 2020a).

1.4.4   Girl Scouts of America

Girl Scouts was founded to prepare girls to meet their world with confidence, character, and courage (Girl Scouts Our History, 2020). Girl Scouts is included in this study because their published curriculum aligns with the best practices found in research literature. Research by the Girl Scouts of America Research Institute uses vocabulary found in the positive youth development literature: supportive adults, skill-building, girls lead the activities, and girls make a

difference in the world (Girl Scouts of America Research Institute, 2020). It is also one of the most recognizable and largest youth organizations in the United States and international community. Information for Table 1.2 comes from the Girl Scouts of America Who We Are (2020), Girl Scouts of America Grade Level (2020), and Charity Navigator (2020c).

Table 1.4 *Girl Scouts of America Background Information*

Date Founded	March 12, 1912
Mission Statement	Girl Scouts builds girls of courage, confidence, and character, who make the world a better place.
Vision Statement	Not found
Promise	On my honor, I will try: To serve God and my country, To help people at all times, And to live by the Girl Scout Law.
Number of Youth Served	1.9 million
Ages of Youth Served	Grades K-12
Gender Distribution of Youth	All female
Race Distribution of Youth	Not found
Number of Paid Staff	Not found
Number of Volunteers	800,000
Budget	Revenue $94,543,136; Expenses $89,705,735

1.5 Delimitations

The population for this study was delimited by prior youth development organization affiliation, organization membership status, and accessibility for participation. Participants had to have been past members of at least one of these four: Boy Scouts, 4-H, FFA, and/or Girl Scouts. Additionally, they had to have been former members, but not necessarily alumni who completed a certain step or number of years of participation. Finally, recruitment was only from individuals who were currently affiliated with Purdue University as undergraduate students, graduate students, faculty, or staff.

1.6   Key Terms

The following terms as used in this research for specific purposes. I recognize many of these have varying and specific definition with whole bodies of literature. The following definitions are to assist the reader in understanding the application of these terms in this study

Agency Skills – cognitive tools and action schema that youth could use to help them achieve goals (Larson & Angus, 2011)

Mentor - Formal mentors are adults assigned to youth to offer guidance and support (Meltzer, Muir, & Craig, 2016).

Perspective – Research perspective is the use of a system of theories to approach research with specific intended outcomes. The positive youth development perspective seeks to promote positive outcomes versus punishments (Lerner, Almerigi, Theokas, & Lerner, 2005).

Role Model – Someone who is respected and admired (Murphy & Arao, 2001).

Theme – Categories of bodies of research literature found through deductive qualitative data analysis (Creswell, 2013).

Theory – Constructed to explain, predict, and understand phenomena. A theoretical framework includes concepts, definitions, and a body of existing literature (Abend, 2008).

Youth –Adolescent individuals who are of a maturity to try to set their own path (Lerner, 2004).

Youth Development Organization –This study refers to 4-H, Girl Scouts, Boy Scouts (BSA), and FFA specifically when using the term.

CHAPTER 2.   REVIEW OF THE LITERATURE

The purpose of this chapter is to describe and examine the theories and perspectives from the body of research literature on the topic of youth development organizations. This body of knowledge is rich regarding the presence of youth development organizations in promoting the development of youth but poor concerning how these organizations function in regards to the program design and delivery necessary to promote positive development. I followed the process described by Creswell (2013) for searching and determining the saturation point of my literature review.

In the course of conducting this review of the literature multiple key phrases, databases, and search engines were utilized to find sources. Some of the key phrases used include "youth development organization," "positive youth development," and "youth organizations." Next, "4-H," "FFA," "Boy Scouts," and "Girl Scouts" were appended to the end of these keywords to see if this pulled any new articles. The key phrases were entered into Google Scholar, ProQuest Dissertations and Theses Global, and Purdue University Library's general search query. Each time a search was conducted at minimum the abstracts of the first 15 articles were reviewed but more if the results remained relevant.

A fruitful method was to review the cited literature in particularly relevant articles and to keep following that method of scouring reference lists in journal articles until all of the relevant articles were found. To do this the publication was found in Google Scholar, the "cited by" was clicked, and the results were reviewed for additional relevant sources. This would sometimes yield additional current articles necessitating a repeat of the cycle. In addition, all articles referenced were reviewed for applicability.

Another tactic employed was to search for prominent scholars in the field. Searches of prominent scholars yielded new results of government reports or studies sponsored by foundations. In addition, these author searches yielded articles that did not come up with keywords possibly due to a difference in how the particular journal published the abstract.

Next was to search a few journals of youth development. The journals that yielded the most relevant articles were *Journal of Research on Adolescence, Applied Developmental Science, Developmental Psychology, Journal of Extension, Journal of Agricultural Education, Journal of Career Assessment, Journal of Adolescent Research, Journal of Adolescence, Journal of Youth*

Adolescence, and *Journal of Cognitive Education and Psychology.* Explicit searches were conducted in *The Handbook of Life-Span Development* and the *Handbook of Applied Development Science.* After following these steps as outline by Creswell (2013) and finding no new sources, the search for literature was concluded.

2.1   Theoretical Models

Research is guided by theory telling the story of how some phenomena in the world works (Maxwell, 2011). For this study of youth development organizations, two theories have been employed to guide the initial steps: Bioecological Model of Human Development and the Positive Youth Development (PYD) perspective. The Bioecological Model of Human Development focuses this research on the interaction between a youth development organization and a youth (Bronfenbrenner & Morris, 2006). The positive youth development perspective informs the proximal processes acting between the organization and youth. The following sections provide an overview of both models and how the two models guided this research.

2.1.1   Bioecological Model of Human Development

This research utilized the Bioecological Model of Human Development as the theoretical framework because it situates the youth development organization as a microsystem that will influence, and be influenced by, the person (Bronfenbrenner & Morris, 2006). What is essential to this study is the positioning of the person in their natural environment. According to Catalano, Ryan, Loncazk, and Hawkins (2002) the person-in-environment perspective articulated in the Bioecological Model of Human Development suggests the socializing influences of teachers, peers, and parents are primary to adolescent development, in addition to the standards and values of the youth's cultural group and community. One of the stated purposes of the Bioecological Model of Human Development is to provide scientific bases for the design of effective social policies and programs (Bronfenbrenner & Morris, 2006).

There are three overarching orientations for the Bioecological Model of Human Development. First, development refers to stability and change in the biopsychological characteristics of a person over their life course (Bronfenbrenner & Morris, 2006). Second, the

development of an individual within their lifetime is as important as the development of humans across generations. Third, a good theory must be practical and translate fully into research design.

The defining properties of the model are process, person, context, and time. Bronfenbrenner and Morris (2006) consider all of these properties to be dynamic and to have interactive relationships with each other. The theoretical understanding of interrelationship between the four properties means the choice of variables to represent each of the defining properties should be based on explicit assumptions of their presumed interrelations.

Process

First, process is defined as interactions between organisms and their environment. Bronfenbrenner and Morris (2006) narrow the focus further to proximal processes, which operate over time as the primary mechanisms to produce human development. The form, direction, and power of these proximal processes vary as a function of person, context, and time. Proximal processes occur as interactions between other people, objects, and symbols. Over the course of an individual's life, these interactions become increasingly complex and the youth becomes an agent of their own development.

Bronfenbrenner and Morris identified critical features of proximal processes. First, the person must engage in an activity for development to occur. Second, the activity must occur on a regular basis over an extended period. Third, the activity must become increasingly complex to continue to inspire development. Fourth, proximal processes are not unidirectional and there must be some degree of reciprocity. Fifth, proximal processes encompass interactions between other people, symbols, and objects. Sixth, for proximal processes to continue to be effective development aids they must increase in complexity.

Person

The component of person has three distinguishing characteristics: disposition, resources, and demand (Bronfenbrenner & Morris, 2006). A person's active behavioral dispositions can initiate or retard a proximal process within a particular developmental domain. Any disposition, which inhibits development of the person, is thought of as being developmentally disruptive. A developmentally disruptive disposition can range from impulsiveness and aggression to apathy

and feelings of insecurity. Developmentally generative characteristics are dispositions that set proximal processes in motion such as curiosity and readiness to defer instant gratification in favor of pursuing long-term goals.

Resources are the abilities, experiences, knowledge, skills possessed by a person that are utilized at a given stage of development for specific proximal processes to occur (Bronfenbrenner & Morris, 2006). The third component of person is demand, which invites or discourages reactions from the environment leading to or disrupting the operation of proximal processes, similar to the function of disposition. It is important to note that person is in two places in the model as both interacting with the proximal processes and as the overall product of development.

Context

In the Bioecological Model of Human Development, context is the immediate and remote environments in which proximal processes occur (Bronfenbrenner & Morris, 2006). These include symbols and cultural references that shape a person's perception of how they navigate and fit into the microsystem. In this work, youth development organizations use many symbols that resonate with members. These symbols, such as scout uniforms, may attract certain youth while deterring other to youth who do not identify with those symbols. Other examples include the meeting location. Where an organization chooses to meet, such as a church, school classroom, or gymnasium, contribute to the context experienced by the person.

Time

The fourth component, time, captures the temporal element necessary for human development (Bronfenbrenner & Morris, 2006). It is broken into three levels: micro, meso, and macro. Microtime is the continuous ongoing episodes of Proximal Processes. Mesotime is experienced in intervals such as days and weeks. Larger changes in societal expectations affecting a person's development are captured in macrotime.

Bronfenbrenner and Morris's (2006) Bioecological Model of Human Development also defines the systems which the Person experiences. Microsystems consist of those entities that are present in the life of an individual consistently over a period of time, such as parents, mentors, and teachers. The mesosystem is where the various microsystems of a person interact. The exosystem

is comprised of two or more systems where one of the systems is not directly interacting with the person. An example for a child, is a parent's coworker who will influence the mood of the parent but not directly interact with the child. The outermost system is the macrosystem which are the prototypes experienced by the person such as policies or cultural customs (Bronfenbrenner, 1977). Environment is conceptualized as a nested system of microsystem, mesosystem, exosytem, and macrosystem (Bronfenbrenner & Morris, 2006).
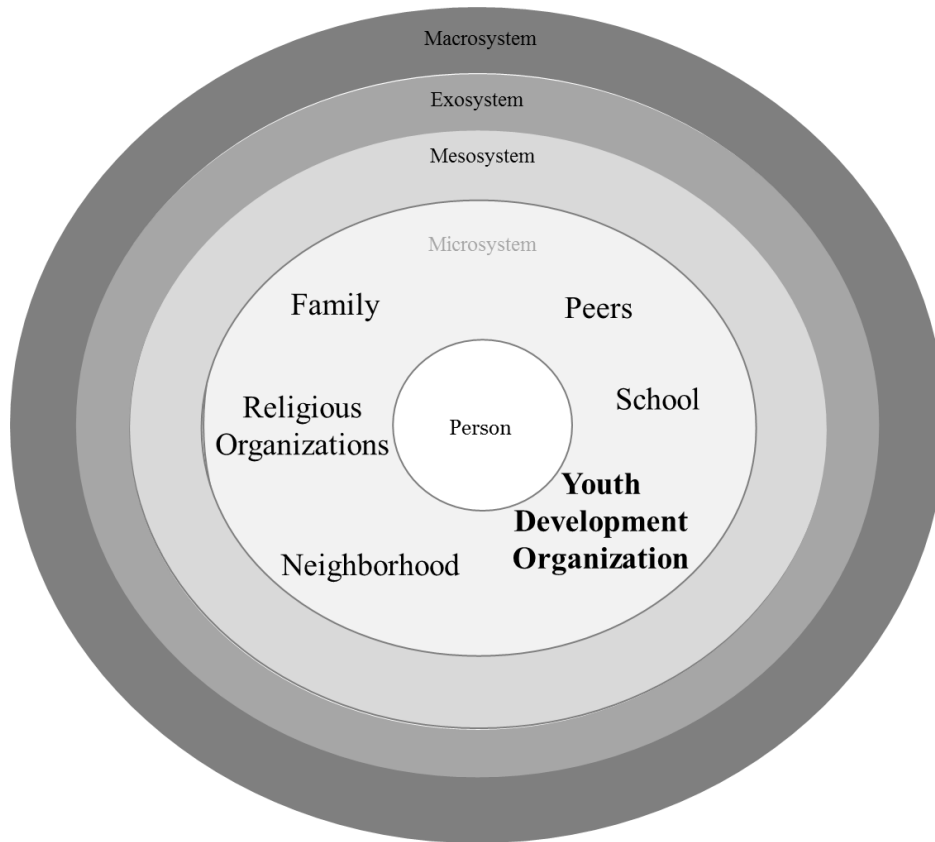
Figure 2.1. *Bronfenbrenner's Bioecological Model with possible microsystems for adolescents.*

2.1.2   Positive Youth Development Perspective

The notion that "problem-free does not mean fully prepared" succinctly describes the motivation of many positive youth development researchers to focus on how to create environments and programs to inspire the development of youth's potential (Pittman & Fleming, 1991 as cited in Catalano, Berglund, Ryan, Lonczk, & Hawkins, 2002, p. 11). Positive youth development encompasses our society's hopes for a nation of healthy, happy, and competent

adolescents on the path to satisfying adulthood (Roth & Brooks-Gunn, 2003b). Table 2.1 shows a few example descriptions of the Positive Youth Development (PYD) perspective.

Table 2.1 *Description of Positive Youth Development Perspective*

	Source
"Positive youth development emphasizes the strengths, resources, and potential of young people, and as a result, holds positive expectations regarding the contributions youth can make to society and to their immediate environments"	Durlak, J. A., Taylor, R. D., Kawashima, K., Pachan, M. K., DuPre, E. P., Celio, C. I., Berger, S. R., Dymnicki, A. B., & Weissberg, R. P., 2007, p. 270
Three key components of a positive youth development perspective, (1) a focus on youth strengths/assets and potential for positive individual development, (2) the value of supportive (asset-rich) contexts, and (3) bidirectional interactions between person and context	Snyder & Flay, 2012
Youth have the capacity to partner in the community-child relationship	Damon, 2004
Youth are a resource to be developed	Roth & Brooks-Gunn, 2003a
"First, positive youth development process in which young people's capacity for being motivated by challenge energizes their active engagement in development. Second, youth are producers of their own growth; development involves more than preventing problems; adults are most effective when they support the positive potentials within young people."	Larson, 2006, p. 677
"The positive youth development perspective is a strength-based conception of adolescence."	Lerner, Almerigi, Theokas, & Lerner, 2005, p. 10

The Positive Youth Development perspective is changing the view of adolescence as a time of storm and stress to a series of opportunities for development and that there is more than one trajectory through this period of significant development (Lerner, 2005; Lerner et al., 2005). According to Damon (2004), a positive youth development perspective emphasizes manifest possibilities rather than incapacities of youth.

A critical component of the youth development perspective is the desire to put research into action through programming and community-based activities. One of Damon's (2004) three

focus areas is the child-community partnership, which would activate the involvement and create a demand for scholarship in this area. Lerner, Fisher, and Weinberg (2000) encouraged the adoption of applied developmental science to child and adolescent researchers as a means to promote partnerships between scholarship and community collaboration to enhance the lives of vulnerable children and families. Steinberg and Lerner (2004) believed positive youth development scholarship is on the cusp of a third phase in development, which would mean an emergence of scientist-practitioner-policy maker collaboration.

2.1.3 Rationale for Using the Bioecological Model of Human Development and Positive Youth Development

I am using both the Bioecological Model of Human Development and PYD perspective because they complement one another and make unique contributions to this study. According to Steinberg and Lerner (2004), the late 1980s and early 1990s were a time of increased influence from ecological perspectives on human development, such as Bronfenbrenner's Bioecological Model of Human Development (1977), on youth development theories. The ecological perspective increased psychology researchers' interest in periods of the life span characterized by dramatic changes in the context of development which makes adolescence especially attractive (Steinberg & Lerner, 2004). This section explores instances where the Bioecological Model of Human Development and the PYD perspective make complementary and unique contributions to this study.

The Positive Youth Development perspective and Bioecological Model of Human Development complement one another. The first complement between the model and perspective is the notion youth have the resources to develop. A key component of the PYD perspective is plasticity. Plasticity is an individual's potential for systematic change (Lerner, Almergini, Theokas, & Lerner, 2005). The PYD perspective takes this further with the view that all young people possess strengths (Damon, 2004). Prior to positive youth development, youth were viewed as rudderless ships in the storm of adolescence (Benson, Leffert, Scales, & Blyth, 2012). Plasticity is represented in Bronfenbrenner and Morris' (2006) Bioecological Model for Human Development when the component of person is deconstructed into dispositions, resources, and demand. Both PYD and the Bioecological Model of Human Development assume human beings have the capacity to change (i.e. resources) but must also be ready to change (i.e. demand).

Second, both the Bioecological Model of Human Development and the Positive Youth Development perspective say youth are active in their own development. In the Bioecological Model of Human Development, the person interacts with proximal processes to activate or retard development. Bioecological developmental psychology and other fields the informed PYD perspective of the "bidirectional relations between individuals and their ecologies to capitalize on this plasticity" (Lerner et al., 2005, p. 11). In positive youth development, youth are viewed as being resilient and eager participants in their own development (Damon, 2004). Greene, Lee, Constance, and Hynes (2013) studied out-of-school activities and found when youth were engaged in the content they received higher benefit from the programming thus indicating an active participation is necessary for development. In addition, PYD perspective is that individuals will go through adolescence on different trajectories (Lerner, 2005). These are caused by differences based on biology, psychology, and societal factors. In the Bioecological Model of Human Development, this would be explained by differences in a person's dispositions, resources and demands (Bronfenbrenner & Morris, 2006).

The third complement is the viewpoint each person's uniqueness will affect the timing of their development. Lerner (2005) wrote that developmental systems allowed for dynamic modeling of human behavior to develop an understanding for the plasticity of human development and the relationship between individuals and their real-world ecological settings over their life span. Positive youth development also notes the differences in individual's development trajectory could be based on the relational process between the individual and multiple levels of the ecology (Lerner, 2005). The Bioecological Model of Human Development system of nested systems captured this interaction by recognizing the direct interaction from a microsystem and the influence from a macrosytem (Bronfenbrenner, 1977).

A fourth complement is the shared interest in the person-environment interaction. Positive Youth Development researchers Benson, Leffert, Scales, and Blyth (2012) attribute Bronfenbrenner's (1977) Bioecological Model of Human Development as providing the theoretical framework for the inclusion of community within the field of child and adolescent development. Positive Youth Development perspective views the adolescent as a full-partner, with responsibilities, in the community-child relation (Damon, 2004). Communities should articulate the expectations they have of their youth for the betterment of the community and development of the youth.

In the Bioecological Model of Human Development, the interaction between person and context is central to the activation and subsequent power of proximal processes (Bronfenbrenner & Morris, 2006). This two-way interaction encapsulates the person's disposition, resources, demand to determine what people, objects, or symbols will facilitate a proximal process. It is through context that microsystems act upon, and are acted upon, to generate proximal processes for human development. The Bioecological Model of Human Development captures the idea that the change possible in a person differs in magnitude based on the frame of mind the person is in the moment the opportunity is presented. An example of this would be the youth who attends the same summer camp year after year but on the third year they are finally in a place to develop a meaningful near-peer relationship.

Both the Bioecological Model of Human Development and Positive Youth Development perspective offer unique contributions to this planned research study. The Bioecological Model of Human Development established the place a youth development organization holds in a youth's environment. The PYD perspective elaborates on the interaction expected between a youth development organization and an individual youth. Through a meta-analysis of positive youth development programs, Durlak et al. (2007) noticed many interventions were designed to modify more than one microsystem and tried to create mesosystemic changes by forging partnerships between the microsystems in a community.

According to the Cornell Bronfenbrenner Center for Translational Research, the human ecology perspective informs the positive youth development philosophy (2015). The human ecology model focuses on behavioral change among youth based on changes within the environment where young people live and development. The unique contribution of this theory is the understanding that youth programs are microsystems that interact with the youth. The positioning of the youth program as a microsystem that also interacts with the parent-microsystem and school-microsystem also captures the possible interactions in the mesosystem as the youth progresses through their own unique path toward development.

2.2   Literature Pertaining to Youth Development Organizations

The focus of this study is on the youth development organization and not on the development of youth. The theoretical framework of the Bioecological Model of Human Development (Bronfenbrenner & Morris, 2006) and the Positive Youth Development perspective

both acknowledge the importance of institutions in enabling a youth's development. The PYD perspective contributes a wealth of research on what a youth development program should include and promote in order to foster positive youth development. Without positive youth development literature, this study would be starting from the beginning in the conceptualization of the research questions and design. Table 2.2 shows descriptions of youth development programs from positive youth development researchers.

Table 2.2 *Descriptions of Positive Youth Development Programs*

Description	*Reference*
Distinguishing characteristics of youth development programs are goals, atmosphere, and activities. Program atmospheres should be supportive, empowering, and include expectations for positive behavior. Program activities should include opportunities for youth to pursue talents and beneficial interests, build skills, and gain a sense of achievement.	Roth & Brooks-Gunn, 2003b, pp. 204, 219
"Themes common to success involved methods to strengthen social emotional, behavioral, cognitive, and moral competencies; build self-efficacy; shape messages from family and community about clear standards for youth behavior; increase healthy bonding with adults, peers, and younger children; expand opportunities and recognition for youth; provide structure and consistency in program delivery; and intervene with youth for at least nine months or longer."	Catalano et al., 2002, pp. 7-8
Programs must ideally (1) address both positive and negative behaviors; (2) be developmentally appropriate; (3) span several years, with carefully designed review, reinforcement, and extension; (4) be culturally sensitive; (5) be school- and classroom-focused, but extend beyond the school; (6) when appropriate, use peers to demonstrate skills and alter norms; (7) include proper training or personnel; (8) actively involve parents; (9) be designed with input from all stakeholders, including students; (10) include school improvement and reorganization components; and (11) incorporate ongoing evaluation at all programming stages.	Flay, 2002
"Effective programs tend to include professional development for implementation, interactive teaching strategies, direct teaching strategies, family and community involvement, and modeling and mentoring."	Berkowitz & Bier, 2007, p. 7
"Programs that incorporate skill-, social-, normative-, knowledge-, and value-based components are more likely to enhance social and emotional skills, attitudes, prosocial behaviors, and academic achievement."	Snyder, 2014,

Table 2.2 continued

A comprehensive positive youth development program includes (1) curricula to teach students prosocial and emotional skills and develop their intrapersonal strengths/assets; (2) activities to enrich environments (schools, families, and community) to support and reinforce the use of skills and positive behaviors by youth; and (3) activities to encourage the bidirectional influence of intrapersonal and environmental assets.	Snyder & Flay, 2012
Successful youth interventions are those that accomplish the following: (1) build strong adult-youth relationships; (2) have a clear, well-articulated philosophy about youth and what they want to accomplish; (3) build interventions upon a theory of youth development grounded in the research of what works and what does not work; (4) recognize the strengths of youth with whom they could work (even the most troubled young people) and build on those strengths; (5) recognize the resources (often the people) in the communities within which they work and recruit them to be part of the intervention; (6) actively involve young people in planning and carrying out the intervention; and (7) provide life skills beyond problem reduction.	Blum, 2003, pp. 246-247
PCAP Model: People (at least one adult in the lives of young people), Contributions (active involvement of young people in contributing to family, neighborhood, school, and community), Activities (productive and recreational activities for young people), and Place (a safe place free from drugs and violence, with adult supervision, where young people can congregate.	Blum, 2003, pp. 247-248
"Five Ps – (1) Place and pluralism: development is influenced by contexts. Environments have physical, social, cultural, and philosophical dimensions. (2) Partnerships: development requires partnerships among players – youth, family, service providers, and communities. (3) Possibilities and preparation: development is linked to the range and quality of appropriately challenging and supportive opportunities for exploration, learning, and individual growth. (4) Participation: Development requires engagement and active involvement of young people in family, school, and community activities. (5) People: engagement is mediated through people. Relationships are key."	Pittman & Zeldin, as cited in Blum, 2003, p. 248

The literature was reviewed on what youth development organizations are doing for the intentional positive development of youth. While reviewing the literature, I put sections and citations into a document and I organized these sections of text into groups. When I was done reading the literature, I reviewed the groups to see if they fit as one group or needed to be further split to be coherent themes. In identifying the themes, it was important they be actionable

components and supported by numerous research studies. Seven themes emerged through the course of analyzing and compiling the literature on youth development organizations. These themes informed the development of survey items. The remainder of Chapter 2 is organized around these themes.

2.2.1   Project

Decision-making, ownership, agency building, and program involvement longevity are all concepts, which appear throughout the literature on youth development programming (Greene, Lee, Constance, & Hynes, 2013; Larson, 1994; Nicholson, Collins, & Holmer, 2004; Roth & Brooks-Gunn, 2003a; Roth & Brooks-Gunn, 2003b). The opportunity for choice and responsibility given to adolescents sets a positive youth development tone (Roth & Brooks-Gunn, 2003a). It is critical for their development that youth need to experience ownership and gradually develop the ability to regulate this agency in order for them to activate their internal motivation and become producers of their own development (Larson, 2000). Dawes and Larson (2010) emphasized the role the programming and program leaders should play to help youth explore multiple opportunities and then develop authentic personal connection to their project of choice.

Larson and Angus (2011) wrote that project-oriented programs provide opportunities for youth to develop strategic thinking. Their research was focused on the development of agency skills, such as cognitive tools and action schema that youth could use to help them achieve goals. They noted three important features of projects as a way for youth to develop agency skills. First, is the concept that projects involve an arc of work, which involves, planning, monitoring, adjusting, and evaluating final results. Larson and Angus wrote that since projects are conducted over several weeks or months, there is a higher demand for youth to use means-end thinking and consider attributes and benefits of the project as well as emotions and values of the other stakeholders. Second, projects occur within a real-world context, which confronts youth with complex problems. They noted the real-world context could present ill-structured problems in a way youth would not experience in structured schoolwork. Youth have to employ ecological thinking to these real-world problems so they can develop the skills to adjust their planning based on the environment. The third feature is ownership. Projects give youth the opportunity to experience ownership and engagement with their project since it truly belongs to them. In research cited by Larson and Angus,

youth reported experiencing higher average levels of attention, investment, and intrinsic motivation for their project work than school work or other daily activities.

Granger (2008) wrote that youth development organizations offer opportunities for youth to participate in projects not possible within the school setting. Projects done in school have to meet time constraints of classroom schedule, semesters, and the school year. For projects involving livestock or plants this creates many challenges since optimal growing times may not fit in the school year and livestock need continual care. In addition, Granger noted that youth organizations can use the surrounding community as a resource. An example is an Eagle Scout project to do park beautification. A third advantage noted by Granger is the community can be the place to carry out the project as in finding a way for low income families to use vouchers to purchase produce at the local farmers market.

Larson (1994) wrote that skills developed from projects include learning how to endure frustration and disappointment, coordinate one's actions with others, and how to deal with a range of emotions. Larson further noted engaging in a project allowed youth to experience and overcome obstacles, which promotes the development of important skills needed in adulthood. For example, to achieve the highest recognition in Girl Scouts and Boy Scouts youth must work for years to achieve intermediate recognition prior to being approved to start on their final project (Boy Scouts, 2020; Girl Scouts, 2020). All of these intermediate projects help youth develop the means-end thinking and comfort with the arc of work necessary for a successful Gold Award or Eagle Scout project. In another context, FFA members earn four degrees building up to the organization's highest honor, American FFA Degree (FFA Degrees, 2020).

2.2.2   Skills and Knowledge Development

The skill-building activities offered by positive youth development organizations include leadership development, academic support, and health education (Roth & Brooks-Gunn, 2003b). There are three important features of skill-building activities: appropriately challenging, opportunity to build skills, and broaden the youths' horizons (Larson, 2006; Roth & Brooks-Gunn, 2003b). Roth and Brooks-Gunn (2003b) wrote that opportunities to build new skills in a way different from school helps broaden youths' exposure to new worlds. Lerner (2004) wrote that skill-building activities is one of the three most important practices of positive youth development organizations along with positive and sustained adult-youth relationships and leadership

opportunities. Bransford, Brown, and Cocking (as cited in Akiva, Cortina, Eccles, & Smith, 2013) wrote that active skill-building approaches in youth development have been linked with both motivation and increased transfer of knowledge across setting.

Greene, Lee, Constance and Hynes (2013) found the potential to build skills was an important predictor of whether a program would attract youth participation. In their study, they predicted youth engagement by staff quality, learning new skills, learning about jobs, learning about college, financial incentive, and participant demographic information. Staff quality and program content were found to be salient predictors of youth engagement. They determined that when youth saw how participation in the program would aid their future success they were more likely to be engaged. In addition, they found a significant interaction between age and program content where program content was more important to older students. This is an important finding for youth development organizations who often see a marked decline in membership in older youth (Anderson-Butcher, 2005; Anderson-Butcher, Newsome, & Ferrari, 2003). A second interesting finding was the negative relationship between financial incentives and program engagement but the findings are somewhat inconclusive because of the mixture of incentive structures and they did not capture the difference in motivating attendance and engagement. In a study by Akiva, Cortina, Eccles, and Smith (2013), support offered by youth development organizations for active skill building was associated with youth cognitive engagement. This relationship was found to be curvilinear because at the mid-level challenge activities the participants reported the lowest levels of cognitive engagement, which the authors hypothesized were due to insufficient attempts on the part of the staff to support active skill-building.

An often-used categorization for program goals are known as the five C's: competence, confidence, connections, character, and caring (Roth & Brooks-Gunn, 2003b). The outcome of competence includes goals of enhancing participants' social, academic, cognitive, and vocational skills. Roth and Brooks-Gunn described social competence as interpersonal skills such as communication, assertiveness, refusal and resistance, and conflict resolution. Youth development programs should provide environments and opportunities for youth to express their thoughts in ways, which are not possible in a formal classroom setting. For example, there is an opportunity to develop social competence for a Girl Scout when she arrives at camp and has to work together to assign the chores and sleeping arrangements with other girls attending the camp who may or may not be from her home troop.

2.2.3 Community Connection

Several researchers have noted the yearning of youth to contribute to their communities. Larson (2000) proposed for contribution to be added to Lerner's Five Cs framework of positive youth develop to recognize the importance of understanding how one contributes to community in the development of youth. Nicholson, Collins, and Holmer (2004) asked practitioners not to discount the talent and time of young people who see a need. Developing a civic identity is an important component toward the thriving of adolescents (Lerner, Dowling, & Anderson, 2003). Larson (2000) proposed that contributions will be recognized as alumni of positive youth development programs become adults and contribute to their own well-being and to the larger society.

Youniss, McLellan, and Yates (1997) wrote that participating in school government, writing for the school newspaper, and getting involved with a community service project teaches youth of the value of their individual contribution as well as the impact to be made through collective action. Youniss, McLellan, and Yates further noted the value for youth to witness the disciplined orchestration of these collective actions helps them understand the need to balance individual action with the larger group. These authors encouraged the involvement of youth in community issues as they begin to develop their own civic identity, which will continue through adulthood.

Many youth development organizations provide direct exposure to ideological orientations of contributing to the greater good of society (Youniss, McLellan, & Yates, 1997). For example, in the 4-H pledge members offer clearer thinking, greater loyalty, greater service, and better living for the benefit of society (National 4-H Council, 2020). At the National FFA Washington Leadership Conference, participants recite the motto "We'll do what we can with what we have where we are" when discussing and developing their Living to Serve Plan (National FFA Washington Leadership Conference, 2020).

2.2.4 High-Density Experiences

Rose-Krasnor (2009) labeled youth conferences, summer camps, and religious retreats as high-density experiences because they occur over a short period but can be a turning point in a youth's development. She wrote that these high-density experiences are characterized by lots of

activity and peer interaction, which creates an environment conducive to self and social development. In related research, Pancer, Rose-Krasnor, and Loiselle (2002) studied youth conferences as a context for engagement and found evidence of self-awareness and personal growth, empowerment, awareness raising, hope for the future, social relations: fun and friendship, and social relations: values and beliefs bringing people together.

Roth and Brooks-Gunn (2003b) determined only activities, which engaged youth in real, authentic and challenging ways should be considered in terms of aiding development. Examples provided by the authors of authentic activities include employment, leadership opportunities, and community service. Radhakrishna and Sinasky (2005) found growth experiences such as competitions, leadership training, and conferences were either important or very important to the 4-H alumni included in their study. These experiences are ways for youth to fail safely and are tremendous learning opportunities as the youth learns to make their way through the world (Brown, Roediger, & McDaniel, 2014). Some experiences are informal, such as travelling to a conference and sleeping away from your parents for the first time, and others are formal, such as a public speaking contest, but all experiences try to challenge the youth to reach beyond discomfort and embrace development.

Thurber, Scanlin, Scheuler, and Henderson (2007) found that youth had positive gains in developing positive identity, social skills, physical and thinking skills, and positive values and spirituality after a summer camp experience lasting one week. In a follow up survey six months later, they found youth had maintained or showed additional growth in all four domains. These findings provide evidence in support of Rose-Krasnor's (2009) definition of a high-density activity where the experience was full of activities and brief in duration.

2.2.5 Environment

Another theme in the literature on youth development organizations is the role in providing an appropriate environment for youth to flourish. Roth & Brooks-Gunn (2003b) outlined five dimensions of the environment conducive for the development of youth: (1) development of supportive relationships with adults and a sense of belonging among peers, (2) empower youth, (3) communicate expectations for positive behavior, (4) provide opportunities for recognition, and (5) program duration. An empowering environment occurs when youth are invited to engage in useful activities and can practice self-determination. Regarding communicating positive behavior,

programs should set a clear set of rules and the consequences for not following each rule. In this way, the program fosters prosocial behaviors as part of the normal environment.

Chang wrote "the youth-development context can be an oasis from slurs about race, ethnicity, religion, gender, sexuality and sexual identity, home language, body size and shape, and other common forms of discrimination against young people" (as cited in Nicholson, Collins, & Holmer, 2004, p. 60). A youth development organization should create a safe and supportive space where the youth can develop an identity and self-awareness separate from outside influences (Nicholson, Collins, & Holmer, 2004). Nicholson, Collins, and Holmer wrote "studies and anecdotal evidence suggest that these specially crafted settings in which young people have time away from being 'other' can help them develop their sense of confidence and competence—a sense that stays with them in the larger world" (2004, p. 60). Drawing upon Bronfenbrenner's Ecological System Theory (1979), this would mean creating a buffer between the youth and their exosystem and macrosystem. Indeed, Roth and Brooks-Gunn (2003b) wrote that an environment where youth feel they belong is what distinguishes youth development organizations from simply a youth program.

Included in the domain of environment is the sense of belonging, which youth development organizations can provide to youth. Lipsitz wrote of the need for youth to have a sense of belonging within their peer group (as cited in Nicholson, Collins, & Holmer, 2004). In research conducted by Gambone and Arbreton (1997) youth development organizations can provide the place for the peer relationships.

In addition, the staff of youth development organizations is important to developing this environment where youth feel they belong (Akiva, Cortina, Eccles, & Smith, 2013). The organizations create physically and psychologically safe places with a strong sense of membership, commitment, explicit rules and responsibilities, and expectations for success (Roth & Brooks-Gunn, 2003b).

Another important characteristic within the construct of environment is providing a sense of consistent permanence (Roth & Brooks-Gunn, 2003b). Zeldin, Kimball, and Price found in their study youth need access to a positive environment on a daily basis (as cited in Nicholson, Collins, & Holmer, 2004; Roth & Brooks-Gunn, 2003b). In a study by McLaughlin (2000), one of the most appealing aspects of an organization to youth was a safe space to meet daily and on weekends. Youth development organizations can offer structure to a youth's life, which may be lacking in

other areas. The weekly meetings with troops, clubs, and chapters give youth something to look forward to when they may be struggling in other aspects of their lives.

2.2.6 Non-Parental Adult

Youth development organizations offer opportunities for youth to form positive formal and informal relationships with non-parental adults (Greene, Lee, Constance, & Hynes, 2013; Larson 1994; Nicholson, Collins, & Holmer, 2004; Roth & Brooks-Gunn, 2003b). Non-parental adults are adults in the community or family members, such as aunts or grandparents, that youth form a relationship that is beyond caregiving. Youth development programs should create an environment of hope and the adult associated should convey belief in youth as resources to be developed (Roth & Brooks-Gunn, 2003b). Greene, Lee, Constance and Hynes (2013) found relatable adults were salient predictors to attracting youth to participate in youth development programs. Nicholson, Collins, and Holmer (2004) wrote meaningful relationships with adults contribute to the development of youth. Trusted adults who can be protectors, advisors, role models, and skill-builders are an important influence (Catalano et al., 2002).

The paradox for adult role models is the need to be deliberate in helping youth experience intentionality (Larson, 2006). In other words, adults need to help youth experience their own agency and resist trying to control the youth. According to Larson, "youth can benefit from input of a caring adult that helps them set realistic expectations and goals, get through stuck points, and choose situations in which they can experience success" (p. 685). Larson also found that working on a project with an adult, as opposed to a peer, helped the youth set longer-term goals and make stronger connections between tasks.

Bowers et al. (2014) wrote the relationship with a non-parental adult was consistent with the Bioecological Model of Human Development regarding the non-parental adult relationship exists within a microsystem with parents, teachers, and other important adults in the youth's life (Bronfenbrenner & Morris, 2006). Bowers et al. (1991) explained that most research is focused on the interaction between the youth and the non-parental adult. For their study, parenting profiles were studied as a potential moderating effect of the non-parental adult-youth relationship. The moderating effect was found to be significant with the children of more involved parents having strong relationships with non-parental adults.

Meltzer, Muir, and Craig (2016) found it to be important that the youth have an adult they chose to trust versus an assigned mentor. Meltzer, Muir, and Craig pointed out the need for youth to have a trusted adult as they develop independence from their parents. The youth in their study found their trusted adult embedded within their natural networks. Youth described trusted adults as someone who talked with them versus telling them what to do (Meltzer, Muir, & Craig, 2016). As compared to parent-child relationships which are described as vertical and peer relationships which are horizontal, relationships with trusted adults are both horizontal and vertical (Meltzer, Muir, & Craig, 2016). The trusted adult has a vertical-horizontal relationship because they have experience to elevate them but are not a final authority for the youth.

2.2.7   Near-Peer Role Modeling

Murphy and Arao (2001) defined near-peer role models as individuals (1) who are near in terms of age, ethnicity, gender, and interests; (2) with whom there is frequent social contact; and (3) whom one may respect and admire. This definition is based on Bandura's (1977) Social Learning Theory where it is proposed that individuals vicariously observe others similar to themselves successfully completing a task gain then believe they can also succeed. Bandura wrote that the effect on a novice of observing a master could be negative because the gap in expertise is too wide therefore making success seem unobtainable. Youth development organizations offer multiple opportunities for youth to observe someone similar to them on a regular basis so they can come to the realization this success is possible for them as well. In addition, these observations are done informally which further fulfills the notion of modeling where the individual is learning through observations (Bandura, 1977).

In a study by Murphy and Arao (2001), students were given a near-peer role model treatment regarding learning a foreign language. One of the conclusions from this study is that learners can set intermediate goals and be satisfied with small steps of progress through observing near-peer role models. This can also play out in youth development organizations which are typically organized by narrow age ranges so that the less experienced members are exposed to slightly more experienced members who would demonstrate the next small success toward the idealized version being molded by a more senior member of the organization.

Nicholson, Collins, and Holmer (2004) described near-pear relationships as occurring when older youth are gratified by passing on their knowledge and younger youth see them as

plausible role models. They described the youth development organization as having the structure to foster this relationship through formal and informal programming. In a study by Wood, Larson, and Brown (2009), older youth expressed developing more responsibility through the informal role of being a more experienced cast member or teammate. The advisors in Wood, Larson, and Brown's study reported noticing increased displays of leadership and positive example setting from the older students.

For example, in Girl Scouting a formal near-pear relationship can occur when a Cadet Girl Scout attends a Brownie Troop meeting to teach them some skill therefore assisting both parties in the completion of a badge. In 4-H, this may happen informally when an older member notices a junior 4-Her struggling with her showmanship animal and offers a few tips and encouragement just outside of the arena. Alternatively, a new FFA member may admire the public speaking skills of their chapter president and resolve they also want to run for a chapter office.

2.3   Summary

Within the literature, I found inspiration for the item pool to be tested in this study. Many of the studies included direct quotations from youth and program leaders. The questions asked by the researchers included in this review also informed the universe of items I attempted to populate in this item pool.

A review of the literature (Berkowitz & Bier, 2007; Blum, 2003; Catalano et al., 2002; Flay 2002; Pittman & Zeldin, as cited in Blum, 2003; Roth & Brooks-Gunn, 2003b; Snyder, 2014; Snyder & Flay, 2012;) revealed seven important components for a youth development program. These components are having a project of one's own, opportunities to gain skills and knowledge, developing a connection with the community, participating in a high-density experience such as camp, a suitable environment, connecting with an adult outside of one's family, and being a role model both for and by other youth near in age. Those seven themes emerged from careful sorting and reflection on the studies included in this review. As I was analyzing and sorting the studies, I kept in mind the practical implications of the themes and their titles. Practicality of the instrument is critical for the results to affect meaningful change in the youth development organizations. The themes need to be easily translated to a myriad of programs so they can revise the design and delivery accordingly.

The seven identified themes form the conceptual framework for meeting the purpose of this research. Conceptually, youth development organizations provide these components to their members through programming. Therefore, the developed instrument needed a scale to determine whether members perceived components were true to their experience and the degree of importance for their development members perceived each component. This conceptual framework, depicted in Figure 2.2, guided this study.
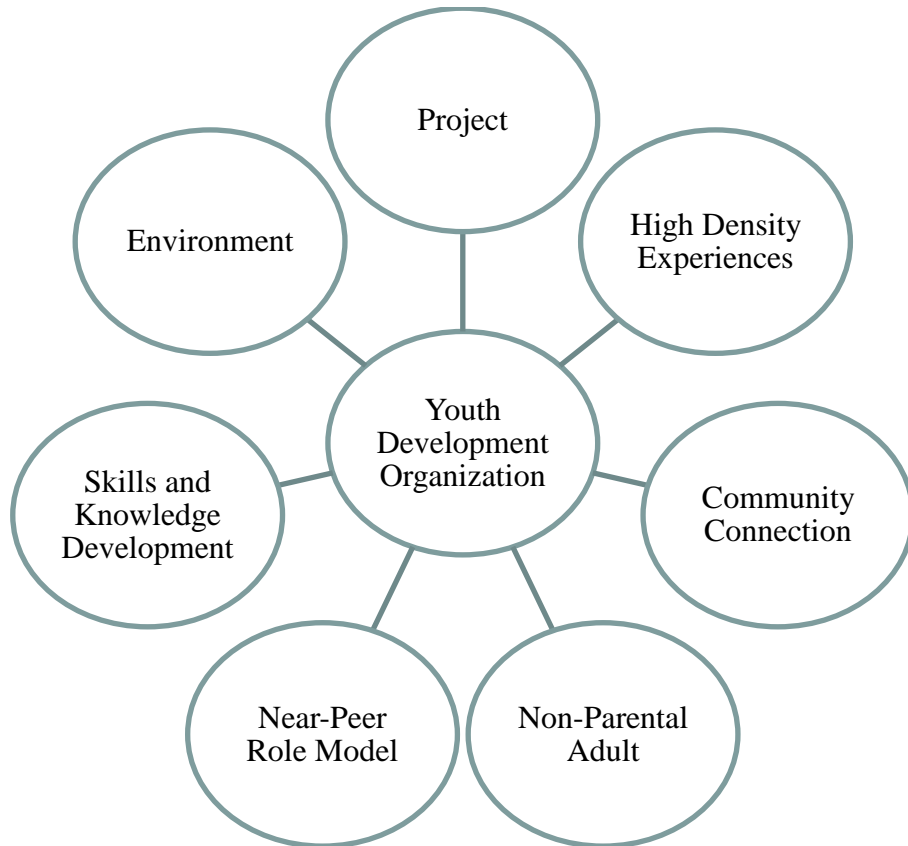
Figure 2.2 *Conceptual framework of a positive youth development organization's programming*

CHAPTER 3.   METHODOLOGY

This chapter details the research process in the order events occurred. First, was to establish validity through expert review. Second, the full item pool was pretested using the QUAID and Qualtrics ExpertReview tools to remove unclear language and double-barreled questions. Third, the items field tested with three samples. Finally, the items were analyzed as a full scale for reliability and multicollinearity.

3.1   Validity

According to DeVellis (2012), the first step in creating an instrument is to determine the latent variables to be measured for this study through a thorough review of research literature theory. This step is critical since content validity is built into the measure through the development of the items and any measure must adequately capture the specific domain of interest (Hinkin, 1995). The effort must be taken early in the study to conduct a thorough review of the literature and carefully select a theoretical framework informed the development of a universe of items which represents the underlying content of youth development organizations.

Development of a new instrument typically begins with thinking critically of how to establish validity (Nunnally & Bernstein, 1994). According to Nunnally and Bernstein (1994), the term validity denotes the scientific utility of how well an instrument measures what it purports to measure. Two important notions are captured in Nunnally and Bernstein's definition. First, in layman's terms, is to ask if we are asking the right questions? The second important notion in this definition concerns the ability of a scientist to make use of the instrument for the purposes it was created.

This study was to determine the theoretical relationship of youth development organization variables to the development perceived by alumni, construct validity is of concern (Cronbach & Meehl, 1955). According to Cronbach and Meehl (1955), construct validity must be investigated whenever no criterion adequately defines the quality to be measured. Two threats to construct validity are construct underrepresentation and construct-irrelevant variance (Messick, 1995). Messick writes underrepresentation is a threat when the assessment is too narrow and does not include dimensions of the construct. Regarding construct-irrelevant variance, Messick describes

this as a threat when the assessment is too broad; therefore, it contains excess reliable variance related to another construct.

3.2 Item Generation

After carefully defining each theme from the literature, the second step described by DeVellis (2012) was to generate an item pool of three to four times the size of the intended scale with the intent of having two to four items per component. The remainder of this section will represent the themes from the literature review in the previous chapter. Each theme's subsection will contain a definition of the theme, an example, and proposed items for the initial scale.

3.2.1 Theme: Project

Decision making, ownership, and program involvement longevity are all concepts which appear throughout the literature on youth development programming (Greene, Lee, Constance, & Hynes, 2013; Nicholson, Collins, & Holmer, 2004; Roth & Brooks-Gunn, 2003a; Roth & Brooks-Gunn, 2003b). These concepts can be captured within the underlying construct of having a project. For example, FFA members are expected to maintain records for a supervised agricultural experience (SAE) for one full calendar year in order to be considered for national recognition (National FFA Foundation, 2020).

Items for the Theme Project.

1. I had a project that lasted for more than a year.

2. I had a project that lasted for a significant length of time.

3. I had a project that was mine alone.

4. I was the primary decision maker for a project.

5. I was able to be the decision-maker for a project.

6. I got to choose the topic for a major project.

7. I designed a project including a timeline and the final result/product.

8. While in [YD Organization Name], I had my own project.

9. While in [YD Organization Name], I did a project for more than one year.

10. While in [YD Organization Name], I did a project that was not a school assignment.

11. While in [YD Organization Name], I chose to do a project outside of usual school time.

12. I did a project on my own through [YD Organization Name].

13. I had a project of my own through [YD Organization Name].

14. I had the opportunity to do a project through [YD Organization Name].

15. I worked on a project that was my own through [YD Organization Name].

16. I worked on a significant project for a year or more through [YD Organization Name].

17. I completed a project that I consider to be my own through [YD Organization Name].

18. I finished a project that I designed.

19. [YD Organization Name] encouraged me to have a significant project.

20. [YD Organization Name] gave me the resources to create my own project.

3.2.2   Theme: Skills and Knowledge Development

Greene, Lee, Constance and Hynes (2013) found the potential to gain skills was an important predictor of whether a program would attract youth participation. Roth and Brooks-Gunn (2003b) wrote that opportunities to practice new skills in a way different from school helps broaden youths' exposure to new worlds. In a study by Akiva (2012), support offered by youth development organizations for active skill building was associated with youth cognitive engagement.

Examples of skill and knowledge development through participation in a youth development organization include how to do the correct knot for the purpose in scouts. 4-H gives youth the opportunity to develop public speaking skills. FFA gives participants a chance to learn about care of different types of animals.

Items for the Theme Skills and Knowledge Development.

1. I learned skills that helped me succeed in school.

2. I learned skills that helped me get a job/into college.

3. I learned skills that helped me in my career.

4. I decided to join because of the skills I would learn.

5. I gained knowledge I still use now.

6. I developed skills that are meaningful to me currently.

7. I developed skills that had a lasting value.

8. Participating [YD Organization Name] taught me valuable skills.

9. [YD Organization Name] gave me the opportunity to learn new things.

10. I learned about things through [YD Organization Name] I otherwise would not have.

11. I chose to join [YD Organization Name] because of the skills they teach.

12. I learned a lot through [YD Organization Name].

13. Because of my involvement in [YD Organization Name], I gained skills and knowledge.

14. The skills taught to me in [YD Organization Name], I remember and use today.

15. I learned skills I otherwise would not have because of my participation in [YD Organization Name].

16. I learned things while participating in [YD Organization Name].

17. The knowledge I gained as a youth in [YD Organization Name] has benefitted me as an adult.

18. The skills I gained as a youth in [YD Organization Name] have benefitted me as an adult.

19. I felt proud about the skills I learned in [YD Organization Name].

20. I am proud of what I learned while participating in [YD Organization Name].

3.2.3   Theme: Community Connection

Several researchers have noted the yearning of youth to contribute to their communities. Nicholson, Collins, and Holmer (2004) asked practitioners to not discount the talent and time of

young people who see a need. Developing a civic identity is an important component toward the thriving of adolescents (Lerner, Dowling, & Anderson, 2003).

An example of community connection would be for a group of youth to clean up a park as service project. Another common example, are Eagle Scout projects for building benches on trails or in parks for others in the community to use.

Items for the Theme Community Connection.

1. I learned how to make a difference in the world.

2. I made a difference in my community.

3. I worked on projects that made a difference in my community.

4. Participating in [YD Organization Name], gave me the opportunity to contribute to my community.

5. One of the activities I most enjoyed were the community service projects.

6. I was excited to do community service projects.

7. I learned the importance of giving back to my community.

8. I learned how to give back to my community.

9. [YD Organization Name] showed me how to make a difference in the world.

10. [YD Organization Name] taught me how to make a difference in the world.

11. [YD Organization Name] taught me how to make a difference in my community.

12. [YD Organization Name] showed me how to make a difference in my community.

13. As a [YD Organization Name] member, I made a difference in my community.

14. I am more aware of the needs in my community because of [YD Organization Name].

15. I learned in [YD Organization Name] that my community needs me.

16. I learned in [YD Organization Name] that I can make a difference in my community.

17. As a member of [YD Organization Name], I contributed to the community.

3.2.4 Theme: High-Density Experiences

Roth and Brooks-Gunn (2003b) determined only activities which engaged youth in authentic and challenging ways should be considered in terms of aiding development. Examples provided by the authors of authentic activities include employment, leadership opportunities, and community service. Radhakrishna and Sinasky (2005) found growth experiences such as competitions, leadership training, and conferences were either important or very important to the 4-H alumni included in their study. These experiences are ways for youth to "fail safely" and are tremendous learning opportunities as the youth learns to make their way through the world (Brown, Roediger, & McDaniel, 2014). These experiences challenge the youth to reach beyond discomfort and embrace development.

Items for the Theme High-Density Experiences.

1. I attended a leadership conference/camp as a member of [YD Organization Name].

2. I attended conferences/camps without my parents.

3. I attended conferences/camps where I slept away from home.

4. I took a major trip with my chapter/troop/club.

5. I went conferences/camps and learned something about myself.

6. I went to conferences/camps and had a realization about myself.

7. I had an "ah ha" moment while at a conference or camp.

8. I attended conferences/camps where I was out of my comfort zone.

9. I attended conferences/camps with [YD Organization Name] and came home with new goals for my life.

10. I attended conferences/camps with [YD Organization Name] that I still reflect on now as an adult.

11. The conferences/camps held by [YD Organization Name] changed my life.

12. The conferences/camps held by [YD Organization Name] were important moments for my growth.

13. I went on retreats where I could really focus on myself and who I wanted to be.

3.2.5 Theme: Environment

Chang wrote "the youth-development context can be an oasis from slurs about race, ethnicity, religion, gender, sexuality and sexual identity, home language, body size and shape, and other common forms of discrimination against young people" (as cited in Nicholson, Collins, & Holmer, 2004, p. 60). A youth development organization should create a safe and supportive space where the youth can develop an identity and self-awareness separate from outside influences (Nicholson, Collins, & Holmer, 2004). Zeldin, Kimball, and Price found in their study youth need access to a positive environment on a daily basis (as cited in Nicholson, Collins, & Holmer, 2004). Nicholson, Collins, and Holmer wrote "studies and anecdotal evidence suggest that these specially crafted settings in which young people have time away from being 'other' can help them develop their sense of confidence and competence—a sense that stays with them in the larger world" (2004, p. 60). Drawing upon Bronfenbrenner's Ecological System Theory (1979), this would mean creating a buffer between the youth and their exosystem and macrosystem. Indeed, Roth and Brooks-Gunn (2003b) wrote that an environment where youth feel they belong is what distinguishes a youth development organization from simply a youth program.

Included in the theme of Environment is the sense of belonging, which youth development organizations can provide to youth. Lipsitz wrote of the need for youth to have a sense of belonging within their peer group (as cited in Nicholson, Collins, & Holmer, 2004). In research conducted by Gambone and Arbreton (1997) youth development organizations can provide the place for peer relationships. In addition, the staff of youth development organizations are important to developing this environment where youth feel they belong (Akiva, 2012).

Items for the Theme Environment.

1. I felt like my chapter/troop/club meeting was a home away from home.

2. I viewed the members of my chapter/troop/club as a sort of surrogate family.

3. Whenever I had free time, I would spend time with members of my chapter/troop/club.

4. I felt safe at meetings of my chapter/troop/club.

5. I felt like I belonged when I was with members of my chapter/troop/club.

6. The adults at my chapter/troop/club made me feel welcome.

7. Our meetings were held in a place I felt comfortable.

8. I felt like I could ask questions while with my chapter/club/troop I could not ask other places.

9. I felt I could just be myself when I was with my chapter/troop/club.

10. I felt liked when I was with my chapter/troop/club.

11. I felt physically safe when I was with my chapter/troop/club.

12. I felt emotionally safe when I was with my chapter/troop/club.

13. My chapter/troop/club was somewhere I wanted to be.

14. The members of my chapter/troop/club were my friends.

3.2.6   Theme: Non-Parental Adult

Youth development organizations offer opportunities for youth to form relationships with non-parental adults. Greene, Lee, Constance and Hynes (2013) found relatable adults were salient predictors to attracting youth to participate in youth development programs. Nicholson, Collins, and Holmer (2004) wrote meaningful relationships with adults contribute to the development of youth. Fisher and Stafford's (1999) Career Influence Inventory, designed to assess perceived influences on career development and planning, included the influence of adults as a contributing factor.

For this set of items, it was important to distinguish between the assigned formal mentors and the relationship of a trusted adult. Meltzer, Muir, and Craig (2016) found in their research that assigned mentors do not always develop into relationships which aid the youth. Keywords from Meltzer, Muir, and Craig's study are: assist, encourage, and believe.

Items for the Theme Non-parental Adult.

1. I had an adult in my [YD Organization Name], other than my parents/guardians, who cared about my success.

2. I had an adult in my [YD Organization Name], other than my parents/guardians, who made me feel like I could succeed.

3. I had an adult in my [YD Organization Name], other than my parents/guardians, who made me feel like I could succeed in my projects.

4. I had an adult in my [YD Organization Name], other than my parents/guardians, who cared about me as a person.

5. I had an adult in my [YD Organization Name], other than my parents/guardians, who helped me grow and develop.

6. I had an adult in my [YD Organization Name], other than my parents/guardians, who wanted what was best for me.

7. I had an adult in my [YD Organization Name], other than my parents/guardians, who served as a role model for me.

8. I had an adult in my [YD Organization Name], other than my parents/guardians, who expected me to keep trying when I faced obstacles.

9. I had an adult in my [YD Organization Name], other than my parents/guardians, who was interested in me.

10. I had an adult in my [YD Organization Name], other than my parents/guardians, who was both a friend and guide.

11. I had an adult in my [YDO], other than my parents/guardians, who didn't tell me what to do but helped me figure out my problems.

12. I had an adult in my [YDO], other than my parents/guardians, who gave good advice.

13. I had an adult in my [YDO], other than my parents/guardians, who was never pushy.

14. I had an adult in my [YDO], other than my parents/guardians, who didn't tell me what to do.

15. I had an adult in my [YDO], other than my parents/guardians, who would talk with me until I had worked through my problems.

16. I had an adult in my [YDO], other than my parents/guardians, who wanted me to do well in school.

17. I had an adult in my [YDO], other than my parents/guardians, who wanted me to do well with my projects.

18. I had an adult in my [YDO], other than my parents/guardians, who I worked on my projects with.

19. I had an adult in my [YDO], other than my parents/guardians, who listened to me.

3.2.7 Theme: Near-Peer Role Model

Nicholson, Collins, and Holmer (2004) described near-pear relationships as occurring when older youth are gratified by passing on their knowledge and younger youth see the older youth as plausible role models. They described the youth development organization as having the structure to foster this relationship through formal and informal programming. For example, in Girl Scouting a formal near-peer relationship can occur when a Cadet Girl Scout attends a Brownie Troop meeting to teach them some skill therefore assisting both parties in the completion of a badge. In 4-H, this may happen informally when an older member notices a junior 4-Her struggling with her showmanship animal and offers a few tips and encouragement just outside of the arena. Alternatively, a new FFA member may admire the public speaking skills of their chapter president and resolve they also want to run for a chapter office.

Items for the Theme Near-Peer Role Model.

1. I tried to set an example for younger youth.

2. I set the expectation for myself to be a good example to younger youth.

3. There were older youth I admired.

4. There were older youth who set an example I wanted to follow.

5. There were older youth who made me believe I could do more.

6. There was a youth a little older than me who helped me gain confidence.

7. There was a youth a little older than me who gave me good tips/advice.

8. There was a youth in my club/troop/chapter who I viewed as a role model.

9. There was a youth in my club/troop/chapter who I wanted to emulate.

10. There was a youth in my club/troop/chapter I tried to emulate.

11. There was a youth in my club/troop/chapter who took me under their wing.

12. There was a youth in my club/troop/chapter who I took under my wing.

13. I knew of another youth who tried to be like me.

14. Other youth asked me for advice and help.

15. I was aware there was someone looking up to me.

16. I was aware there was someone looking out for me.

17. I think the older youth in my club/chapter/troop were leaders for the younger members.

18. I think the younger members looked up to the older members of my club/troop/chapter.

19. I was a role model for younger members.

3.3   Pretesting

Presser and Kronick (2010) recommended conducting several formal evaluations of the survey instrument prior to distributing the survey. For this study, I employed three methods to test the 102-item pool prior to distributing surveys to participants. The first step was to establish face validity by having a panel of experts review the initial item pool. I conducted a series of interviews with three subject-matter experts who could address subject matter, word choice, and language in the context of the target national youth organizations. These individuals were identified by Dr. Talbert, dissertation committee chair, and myself from amongst our networks of professionals in youth development. The individuals were sent the survey as a Word document and as a link to preview it in Qualtrics. In the pre-meeting communication, I explained why they were selected to review the instrument and the current stage of development. The panel of experts were asked to view the item pool to confirm or invalidate the study's definition of the phenomenon (DeVellis, 2012). The experts were also asked their opinion on if some aspect of the phenomenon had been missed. Credentials of the experts and the notes from these interviews are located in Appendix A. Based on the expert feedback, items were added or reworded. Particularly of note, was the addition of items to the Environment theme to reflect programming efforts to make students feel both included and to create a space for them to interact with those seemingly different from them.

Second, I entered the full list of 102 the items into the Question Understanding Aid (QUAID) created by Graesser, Cai, Louwerse, and Daniel (2006). The QUAID compares words to several databases and does comparisons to identify issues with unfamiliar technical terms, vague or imprecise predicate or relative terms, vague or imprecise non-phrases, complex syntax, and working memory overload. This tool is available online and at no cost. It requires that each item be copied and pasted into a text box. The tool then indicates detected errors. DeVellis (2012) wrote the wording of each item must be clear and if an item is poorly worded it will affect the items

reliability to consistently measure the intended construct. For this study, items must be free of jargon so the instrument is useful across many organizations. Table 3.1 includes the definitions for QUAID feedback messages from the website. Based on the feedback from this tool, I reworded items the QUAID tool flagged and deleted those I was unable to reword. The results from using the QUAID tool are presented in Chapter 4.

Table 3.1 *QUAID Tool Feedback Message Term Definitions*

Unfamiliar Technical Terms:
There is a word or expression that may be unfamiliar to some respondents. The term may be rare in the English language. The term may involve an abbreviation or acronym (e.g., IRS, TVA) that is unfamiliar to some individuals and cultures. The term may contain a symbol that is not frequently used. The term may be misspelled. You need to decide whether the term is sufficiently unfamiliar that it will present a problem to your population of respondents.

Vague or Imprecise Relative Term:
There is an adverb, adjective, or main verb that refers implicitly to an underlying continuum or scale. However, the point on the continuum, or the value on the scale, may be vague, imprecise, or ambiguous. For example, sometimes, often, and rarely are relative adverbs that may present problems to the population of respondents. Will the respondents know how frequently the event needs to occur in order to count as frequently "Will respondents agree? Examples of relative adjectives are moderate, severe, and difficult. Examples of relative verbs are: try, work, and hurt. You need to decide whether the term is sufficiently vague, imprecise, or ambiguous that it will present a problem to your population of respondents.

Vague or Ambiguous Noun-Phrase
The referent of a noun-phrase, noun, or pronoun is unclear or ambiguous. For example, the referent of the word income may be vague. Does income include side jobs and interest from savings accounts? There is a tendency for abstract nouns to be vague because their meanings heavily depend on context. Ambiguous nouns sometimes have two or more senses, so the respondent may not know which sense is relevant to the question. For example, project may refer to a cluster of low-income houses or to a major work activity. An ambiguous noun may refer to two or more entities, so the respondent is uncertain which entity was intended in the question. For example, sibling may refer to the respondent's sibling or the sibling of the respondent's child. Pronouns (it, that, he) often have such ambiguities. You need to decide whether the term is sufficiently vague or ambiguous that it will present a problem to your population of respondents.

Table 3.1 continued

Complex Syntax
The grammatical composition is embedded, dense, ambiguous, or ungrammatical. When there is a problem with syntax, a respondent may have a problem comprehending what the question is. There are thousands of ways that a question can have a problem with its grammatical composition. For example, a verb may be missing. There may be too many clauses or adjectives to hold in memory by the time a main verb or noun appears. The verb may not agree with the subject noun in number (singular versus plural) or some semantic feature. It may be impossible to group the words in a coherent way that makes sense. You need to figure out why the question is syntactically complex and to decide whether it will present a problem to your population of respondents.

Working Memory Overload
Working memory is the immediate memory (short-term) that holds information while the respondent is comprehending the question. Human working memory is limited in capacity. Working memory may be overloaded and break down if the question requires the respondent to hold too much information in mind at the same time. Long questions do not necessarily impose a high load on working memory; a long question can be composed so that the respondent can periodically clear some of the space in the working memory buffer as the question is interpreted, word by word. On the other hand, a question of intermediate or short length, can place an extremely high load on working memory. You need to figure out why the question imposes a heavy load on working memory and to decide whether it will present a problem to your population of respondents.

Third, I used Qualtrics ExpertReview (2019) functionality that looks for issues in relation to survey error, methodology, and compliance assistance based on research the company has conducted itself or adopted from research design publications ("ExpertReview Functionality, 2019.) The ExpertReview functionality alerts for any double-barreled items by scanning for conjunctions. Then it looks at the question style of your survey so you can consider adjusting to be more respondent-friendly. The ExpertReview functionality provides suggestions on how to optimize for mobile devices. Then it tests for any errors in the survey such as display logic, piped text, scoring, final question, translatability, timing, and accessibility. It also gives a predicted duration and scores your survey according to their optimal time of less than nine minutes. Results from using ExpertReview are presented in Chapter 4.

3.4   Format for Measurement

The third step proposed by DeVellis (2012) is to determine the format for measurement. Surveys were administered online via the Qualtrics Research Suite Survey tool for which Purdue

University has a contract. For each item, participants were asked to respond to whether an item was true to their experience and important to their development. The scale for true was three points: true, neither true nor false, and false. The intent is for these to be used as categorical variables when analyzing the important scale. The scale for importance has five points: extremely important, very important, moderately important, slight important, and not at all important. The response format for importance is a five-point Likert type scale, which has enough variation to make statistical analysis possible (Preston & Colman, 2000) and is familiar to participants (Dillman, Smyth, & Christian, 2009). Each scale contained the particular attitude or belief of the construct (DeVellis, 2012).

The scale had the positive items on the left side of the scale so the direction is positive responses to negative. According to Liu and Keusch (2017), web surveys are susceptible to acquiescence response style bias and anchoring-and-adjustment due to scale direction effects. This is primarily because web surveys are only presented visually. For participants using a computer, they viewed the positive responses on the left and the negative responses on the right. For participants who accessed the survey on a mobile device, the positive responses are at the top of the list.

3.5   Recruitment

I recruited participants from Purdue University because these students would be past the age of participation in the four targeted youth development organizations. This was important to ensure participants in the study had completed their youth development experience. In addition, some of the items, particularly in skills, required some time to reflect on the value of what was learned through participation in the youth development organization. A limitation of recruiting from this population is their feedback may no longer be relevant to the youth development organization.

Participants for this study were recruited from Purdue University through various newsletters. These included the College of Agriculture Graduate Student Listserv, Purdue Graduate School newsletter, Purdue Today's website for research studies, Purdue Polytechnic Tech E-News, College of Agriculture WAS-UP, the department of Agricultural Science Education and Communication (ASEC) undergraduate student organization for agricultural education, and the ASEC undergraduate student organization for communication. Participants who participated in previous waves were asked to not participate again and efforts during recruitment were made to

not overlap populations. Participants were generally between the ages 18 and 34 and White with almost equal responses from males and females. Complete demographic information is provided in Table 4.1. I posted the purpose for the study, the need for former members of 4-H, BSA, Girls Scouts, and FFA to participate, a link to the current version of the survey, and contact information for Dr. Talbert and myself.

I recruited three samples. The first sample came from the ASEC current and recently graduated graduate students. Once I analyzed that data and removed items, I recruited a second sample from the College of Agriculture Graduate Student Listserv, the Purdue Today research study website, and the Purdue Graduate School newsletter. The third sample came from the Purdue Polytechnic E-News, College of Agriculture WAS-UP, and the ASEC undergraduate email lists. Participants in the third sample were asked to provide their email address at the end of the survey so they could retake the survey in two weeks. A unique identifier was used to match responses for those who participated in the retest.

3.6   Survey Order

Participants were initially asked to mark all the youth development organizations they had participated in during their youth. There was also the option of "Other" with a text box to explain. For each youth development organization indicated, the highest leadership position obtained and highest award was collected as an indicator of the depth and quality of their experience. Participants were asked to indicate the recentness of their experience. If more than one youth development organization was indicated, the participant was asked a follow up question to choose which organization they wished to take the survey. For the final sample, participants were asked for their email address so they could be sent a second link two weeks later for reliability testing.

Minimal demographic information was collected to be used to describe the samples. I was sensitive to using demographic questions that were inclusive. I followed the research of Hughes, Camden, and Yangchen (2016) regarding the best ways to ask about gender, race, education, and employment. See Table 3.2 for demographic questions.

Table 3.2 *Demographic questions*

How do you currently describe your gender identity?

○ Please specify: _____

○ I prefer not to answer

Which categories describe you? Select all that apply to you:

☐ American Indian or Alaska Native - For example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community

☐ Asian - For example, Chinese, Filipino, Asian Indian, Vietnamese, Korean, Japanese

☐ Black or African American - For example, Jamaican, Haitian, Nigerian, Ethiopian, Somalian

☐ Latinx, Hispanic, or Spanish Origin - For example, Mexican or Mexican American, Puerto Rican, Cuban, Salvadoran, Dominican, Columbian

☐ Middle Eastern or North Africa - For example, Lebanese, Iranian, Egyptian, Syrian, Moroccan, Algerian

☐ Native Hawaiian or Other Pacific Islander - For example, Native Hawaiian, Samoan, Chamorro, Tongan, Fijian, Marshallese

☐ White - For example, German, Irish, English, Italia, Polish, French

☐ Some other race, ethnicity, or origin, please specify:
_____

☐ I prefer not to answer

Table 3.2 continued

What is your current age?

○ Under 18

○ 18 - 24

○ 25 - 34

○ 35 - 44

○ 45 - 54

○ 55 - 64

○ 65 - 74

○ 75 - 84

○ 85 or older

○ Prefer not to answer

Which category best describes you?

○ Some high school

○ High school diploma or the equivalent (e.g., GED)

○ Vocational training

○ Some college credits

○ Associate's degree (e.g., AA, AE, AFA, AS, ASN)

○ Bachelor's degree (e.g., BA, BBA, BFA, BS)

○ Some post undergraduate work

○ Master's degree (e.g., MA, MBA, MFA, MS, MSW)

○ Specialist degree (e.g., EdS)

○ Applied or professional doctorate degree (e.g., MD, DDC, DDS, JD, PharmD)

○ Doctorate degree (e.g., EdD, PhD)

○ Prefer not to answer

○ Other, please specify: _____

Table 3.2 continued

Which of the following best describes your current employment status?

○ Employed full time

○ Employed part time

○ Unemployed looking for work

○ Unemployed not looking for work

○ Retired

○ Student

○ Other, please explain _____
Prefer not to answer

3.7   Item Analysis

Following analysis steps described by Field (2013), the first step was to calculate and inspect the correlation matrix. These correlations gave evidence on the strength and direction of the relationships between items. For the analysis of the first sample, I calculated the correlations and reliability statistics for each subscale. I analyzed the correlation matrix for values of $r > 0.8$. Items above the cut-off were removed.

3.8   Internal Consistency

I also eliminated items based on the *Item-Total Statistics* table reporting the *Cronbach's Alpha if Item Deleted* to remove those items which decreased the reliability of subscale (Cronbach, 1951). I repeated this same procedure for the second sample. At this stage I had reached saturation for removal of items based on correlations and item contribution to subscale reliability. For both of these samples, I only analyzed completed surveys so I could report demographic information.

3.9   Test-Retest Reliability

After the scale was optimized, I administered the survey to the participants of the third sample who provided contact information to establish test-retest reliability. Cronbach (1951) suggested the way to calculate a coefficient that indicates stability is to give the same test to the

same population after a given interval. The general recommendation for the interval between administering the test is between two weeks and one month (Waltz, Strickland, & Lenz, 2005 in DeVon et al. 2007). For this study, there were at least two weeks and no more than one month between test administrations. I administered the reduced instrument to a sample of undergraduate students recruited from Purdue University's Colleges of Agriculture and Polytechnic. I then sent the participants the same instrument two weeks later. I conducted a paired samples t-test for significant differences in their responses over time (Field, 2013).

3.10 Total Scale Analysis

Finally, I pooled all the responses from the three samples, including partial responses, for a total scale analysis. First, I wanted to determine if my sample size was adequate for analysis. The Kaiser-Meyer-Olkin measure is a measure of sampling adequacy with a value between zero and one (Worthington & Whittaker, 2006). If the Kaiser-Meyer-Olkin value is closer to one this is evidence of enough cases for sound analysis (Field, 2013).

I then looked at the determinant of the correlation matrix for issues of multicollinearity. If the determinant was less than 0.00001 multicollinearity would be an issue (Field, 2013). I reexamined the correlation matrix for items with correlations $r > .8$ or $r < .3$ to be removed from the analysis. After removing these items, I reran the analysis for correlations and Cronbach's α until multicollinearity was resolved and all items contributed to the Cronbach's α of the scale.

3.11 Optimize Scale Length

DeVellis's (2012) prescribed final step is to optimize scale length. Removing items to create the most parsimonious instrument will improve the practical uses of the scale because more participants will be inclined to begin and complete the instrument (DeVellis, 2012). This is especially important given the intended distribution of the scale via the web. Dillman, Smythe, and Christian (2009) wrote the current climate of survey participation is such that it is easy to reach participants via email but more difficult to engage them than when surveys were distributed in person due to reduced pressures from social exchange.

Wieland et al. (2017) proposed purifying multi-item scales through both statistical and judgmental criteria. The authors described statistical criteria as the use of quantitative data to

employ cut-off values and calculations of item contribution to the model. Judgmental criteria are a qualitative assessments of item wording regarding appropriateness and require practical domain knowledge. This further purification of the scale was necessary because of the potential desire for youth development organizations to add program-specific items when distributing the survey.

3.12 Institutional Review Board Approval

This research was approved by Purdue University's Institutional Review Board on May 8, 2018 and assigned IRB #1805020565.

CHAPTER 4.   RESULTS

This chapter details the analysis of the item pool through the scale purification process and the tests of reliability. The following is presented in the order the analysis was completed. A table of all the items and the scale purification process is in Appendix B. The final section shares the test-retest reliability.

4.1   Pretesting

In this phase of scale purification, I used two tools to analyze the items for clarity. First, I used the QUAID Tool which tests for unfamiliar, vague, or imprecise terms. The second tool was ExpertReview.

4.1.1   QUAID Tool

I entered all 102 items into the QUAID Tool website http://quaid.cohmetrix.com/ in September 2019. The QUAID tool provided feedback messages which are defined in Table 3.1. I reviewed all the items that had a feedback message other than "Question looks good to me." For items with another feedback message, I rewrote the item to address the concern. If this was not doable, the item was deleted. I then resubmitted the rewritten items and received "Question looks good to me" responses. Through this process 63 items were kept as written, 11 were deleted, and 28 were kept after rewriting. All of the feedback response messages for the 102 items in this study are in Appendix B.

4.1.2   Qualtrics ExpertReview

The Qualtrics ExpertReview tool is integrated into the research survey software. Items are analyzed prior to publishing the survey for distribution. The tool provides feedback on survey length and clarity. At this phase, the survey was too long and four items were flagged as having two components in one item. The Qualtrics ExpertReview flags all questions with conjunctions for further consideration. The following questions were removed from the instrument prior to

distribution to the first sample because they could not be rewritten to be unique from the other items.

> I designed a project including a timeline and the final result/product.
> I went to conferences/camps and learned something about myself.
> I went to conferences/camps and had a realization about myself.
> I went on retreats where I could really focus on myself and who I wanted to be.
> I had an adult who helped me grow and develop.
> I had an adult who was both a friend and guide.
> Other youth asked me for advice and help.

4.2   Survey Data Collection

This section details the results from the surveys completed by former members of 4-H, Boy Scouts (BSA), Girl Scouts, and FFA. To begin, a table of the demographic question responses is presented to show the composition of the samples (See Table 4.1). Second are the presentation of the results from the first sample and the items removed. Next, are the results from the second sample with a list and reason for items removed. Finally, is the presentation of the test-retest reliability results.

At the beginning of the survey, participants were asked to respond on questions to measure the depth and breadth of their participation with the youth development organizations. Over all the samples, 80 had participated in Boy Scouts, 172 had participated in 4-H, 100 had participated in FFA, and 118 had participated in Girl Scouts. After marking which organization, they had participated, they responded to questions about various achievements in the respective organizations. They were then asked to complete the remainder of the survey based on their experience with one youth development organization.

Table 4.1 *Demographic question responses for all three survey samples.*

	Sample 1	Sample 2	Reliability Sample
Completed Responses	44	88	97
Gender			
Female	29	47	60
Male	13	35	34
Transgender Female		1	3
Transgender Male		1	1
Race			

Table 4.1 continued

American Indian or Alaska Native	1	1	1
Asian	0	1	1
Black or African American	2	1	0
Latinx	0	2	0
Middle Eastern or North Africa	0	1	0
Native Hawaiian or Other Pacific Islander	0	0	0
White	40	72	94
Two or More	0	4	0
Prefer not to answer	0	2	0
Age			
Under 18	0	1	0
18 – 24	15	27	73
25 – 34	26	26	11
35 – 44	2	15	1
45 – 54	0	10	4
55 – 64	0	6	6
65 – 74	0	1	1
75 – 84	0	1	0
85 or older	0	0	0
Prefer not to answer	0	0	0
Education			
Some high school	0	1	0
High school diploma or the equivalent (e.g. GED)	0	2	2
Vocational Training	0	0	0
Some college credit	3	14	39
Associate's degree (e.g. AA, AE, AFA, AS, ASN)	1	3	9
Bachelor's degree (e.g., BA, BBA, BFA, BS)	6	15	29
Some post undergraduate work	5	17	2
Master's degree (e.g. MA, MBA, MFA, MS, MSW)	21	22	14
Specialist degree (e.g. EdS)	0	0	0
Applied or professional doctorate degree (e.g. MD, DDC, DDS, JD, PharmD)	1	2	0
Doctorate degree (e.g. EdD, PhD)	0	11	1
Employment			
Employed full time	16	39	20
Employed part time	4	6	15
Unemployed looking for work	0	2	1
Unemployed not looking for work	0	0	0
Retired	0	1	1
Student	23	39	59
Other	0	0	0
Prefer not to answer	0	0	0

4.2.1   Scale Purification: First Sample

The next phase in scale purification was to use data from respondents to remove items. The First Sample had 44 responses, which according to Field (2013), were sufficient to conduct statistical analyses. As a guide for purification, I established the criteria that items should contribute to the reliability of the scale and not be highly correlated with other items. Therefore, I removed items which values in the "Cronbach's Alpha if Item Deleted" column in the Item-Total Statistics tables were less than total Cronbach's Alpha. Next, I analyzed the Inter-Item Correlation Matrix and removed items with multiple r > .8 values. The remainder of this section lists, by theme, the items removed using the described process.

Projects

The following items were removed based on Item-Total Statistics:

I had a project that lasted for at least one year.

I had a project that lasted for a significant length of time.

I got to choose the topic for a major project.

I did a project that was not a school assignment.

I chose to do a project outside of usual school time.

Skills

The following items were removed based on Item-Total Statistics:

I decided to join because of the skills I would learn.

I learned skills in my chapter/troop/club that I would not have elsewhere.

Community

The following items were removed based on multiple $r > .8$:

I learned the importance of giving back to my community.

I learned that I can make a difference in my community.

Experience

The following item was removed based on Item-Total Statistics:

I took a major trip with my chapter/troop/club.

Environment

The following item was removed based on multiple $r > .8$:

The adults made me feel welcome.

Non-Parental Adult

The following items were removed based on multiple $r > .8$:

I had an adult who cared about my success.

I had an adult who made me feel like I could succeed.

I had an adult who cared about me as a person.

I had an adult who wanted me to succeed in school.

I had an adult who encouraged me to pursue my dreams.

I had an adult who made me excited about learning.

Near-Peer

No items were removed based on Item Total Statistics. The following items were removed based on multiple $r > .8$:

I admired the older youth in my club/troop/chapter.

The older youth in my club/troop/chapter helped me gain confidence.

The older youth in my club/troop/chapter were role models.

4.2.2   Second Sample Scale Purification Steps

Data from second sample respondents were used to continue with scale purification. The Second Sample had 88 respondents, which according to Field (2013), were sufficient to conduct statistical analyses. Continue this paragraph using the First Sample paragraph as a model. Continuing with scale purification, I again removed items until all the values in the "Cronbach's

Alpha if Item Deleted" column in the Item-Total Statistics tables that were less than total Cronbach's Alpha. Then I analyzed Inter-Item Correlation Matrix and removed items with multiple $r > .8$ values. I retained at least three items per sub scale per the guidelines from DeVellis (2012). Below are the items I removed for each theme and the reason.

Project

I did not remove any items per the "Cronbach's Alpha if Item Deleted" column statistics. I did remove the following items with correlations >.8:

I had a project that was mine alone.

I completed a project that I considered to be my own.

I was able to take ownership of a project.

Skills

I did not remove any items per the "Cronbach's Alpha if Item Deleted" column statistics. I did remove the following items with correlations >.8:

I learned skills that helped me in my career.

I developed skills that had a lasting value.

Community

I did not remove any items per the "Cronbach's Alpha if Item Deleted" column statistics. I did remove the following item with correlations >.8:

I enjoyed the community service projects.

Experience

I did not remove any items per the "Cronbach's Alpha if Item Deleted" column statistics. I did remove the following items with correlations >.8:

I attended conferences/camps without my parents.

The conferences/camps changed my life.

Environment

I did not remove any items per the "Cronbach's Alpha if Item Deleted" column statistics. I did remove the following items with correlations >.8:

I felt like I could ask questions while with my chapter/club/troop I could not ask in other groups.

I met people different from me.

Non-Parental Adult

I removed the following items per the "Cronbach's Alpha if Item Deleted" column statistics:

I had an adult who didn't tell me what to do.

I had an adult who would talk with me until I had thought through my problems.

I had an adult who didn't tell me what to do but helped me figure out my problems.

I had an adult who helped me with my projects.

I had an adult who served as a role model for me.

I also removed the following items with correlations >.8:

I had an adult who helped me grow.

I had an adult who expected me to keep trying when I faced obstacles.

Near-Peer

I did not remove any items per the "Cronbach's Alpha if Item Deleted" column statistics. I did remove the following items with correlations >.8:

I tried to set an example for younger youth.

I think the younger members looked up to the older members of my club

4.2.3 Third Sample and the Test-Retest for Reliability

At the conclusion of the second round of scale purification, I determined the subscales were reduced enough to measure for reliability over time (Field, 2013). I administered the revised survey to a new sample recruited from Purdue's Colleges of Agriculture, Polytechnic, and the University's page of research looking for participants. At the end of the third version of the survey, I collected 78 email addresses of participants willing to take the survey a second time. I emailed the survey

to them approximately two weeks later. With these responses, I conducted a paired samples t-test to determine significant correlations between the items over time. Table 4.2 displays the means, standard deviations, confidence interval, correlations with significance, t-value, and the degrees of freedom for each time.

Table 4.2 *Paired-Samples T-Test*

Item	Test		Retest		n	95% CI for Mean Difference		r	t	df
	M	*SD*	*M*	*SD*				r	t	df
I was the primary decision maker for the project.	1.89	1.06	1.91	1.07	46	-0.26	0.31	.60***	.016	45
I had my own project.	1.76	1.02	1.85	1.21	46	-0.26	0.44	.50***	.50	45
I finished a project that I designed.	1.78	1.00	1.74	1.06	46	-0.31	0.22	.63***	-.33	45
I learned skills that helped me in succeed in school.	1.77	1.05	2.02	1.11	47	-0.08	0.59	.45***	1.55	46
I learned skills that helped me get into college.	1.77	1.05	2.04	1.22	47	-0.02	0.57	.62***	1.91	46
I learned skills that helped me get a job.	1.60	0.83	1.96	1.10	47	0.14	0.59	.72***	3.25	46
I gained knowledge I still use.	1.28	0.62	1.55	1.00	47	0.02	0.53	.49***	2.16	46
I learned how to make a difference in the world.	2.19	1.01	2.15	1.20	47	-0.31	0.22	.67***	-0.32	46
I made a difference in my community.	2.00	1.06	2.11	1.30	47	-0.24	0.45	.50***	0.63	46
I did projects that made a difference in my community.	2.15	1.06	2.11	1.22	47	-0.37	0.28	.54***	-0.27	46
I was excited to do community service projects.	1.87	0.97	2.02	1.07	47	-0.12	0.42	.61***	1.12	46
I learned how to give back to my community.	1.74	0.90	1.89	1.14	47	-0.16	0.47	.49***	0.98	46

Table 4.2 continued

Made me aware of what I can do to help my community.	2.02	0.90	2.00	1.14	47	-0.26	0.22	.67***	-0.18	46
I learned I am responsible for my community.	2.28	1.17	2.02	1.13	47	-0.53	0.02	.67***	-1.86	46
I contributed to the community.	1.63	0.77	2.04	1.05	47	-0.14	0.68	.54***	3.08	46
I attended a leadership conference/camp.	2.72	1.71	2.67	1.51	46	-0.41	0.32	.72***	-0.24	45
While at a conference/camp, I had a chance to reflect.	2.65	1.37	2.70	1.46	46	-0.34	0.42	.59***	0.23	45
I attended conferences/camps where I was out of my comfort zone.	2.34	1.39	2.36	1.42	47	-0.32	0.36	.66***	0.13	46
I attended conferences/camps that I still reflect on.	2.49	1.38	2.49	1.47	47	-0.35	.035	.68***	0.00	46
After attending conferences/camps, I came home with new goals for my life.	2.77	1.48	2.77	1.52	47	-0.34	0.34	.68***	0.00	46
The conferences/camps were important moments of my growth.	2.49	1.41	2.47	1.42	45	-0.39	0.34	.63***	-0.12	44
I went on retreats where I could really focus on who I wanted to be.	2.83	1.48	2.72	1.43	46	-0.52	0.30	.56***	-0.54	45
I felt like the meetings were a home away from home.	2.77	1.34	2.80	1.40	47	-0.33	0.38	.62***	0.12	46
Whenever I had free time, I would spend time with other members.	2.66	1.15	2.72	1.28	47	-0.31	0.44	.45***	0.34	46
I felt safe at meetings.	1.96	1.23	2.00	1.14	47	-0.22	0.31	.69***	0.32	46
I felt like I belonged when I was with other members.	1.91	1.00	2.00	1.13	47	-0.20	0.37	.60***	0.61	46

Table 4.2 continued

Our meetings were held in a place I felt comfortable.	2.06	1.22	2.11	1.13	47	-0.30	0.38	.52***	0.25	46
I felt I could just be myself.	1.59	.75	1.98	.95	46	013	0.65	.50**	3.0	45
I felt liked when I was with my chapter/troop/club.	1.98	1.00	2.00	1.00	47	-0.33	0.37	.29^{ns}	0.12	46
My chapter/troop/club was somewhere I wanted to be.	1.85	.93	2.04	1.04	47	-0.05	0.43	.66***	1.60	46
The members were my friends.	1.81	.99	2.02	1.23	47	-012	0.54	.50***	1.30	46
I had an adult I could ask for help.	1.60	.74	1.79	.95	47	0.00	0.38	.74***	2.02	46
I had an adult who listened to me.	1.64	.82	1.89	.94	47	-0.05	0.56	.32*	1.70	46
I viewed my fellow members as an extended family.	2.62	1.33	2.68	1.34	47	-0.21	0.33	.76***	0.50	46
I made friends with people different from me.	2.06	1.05	2.13	1.14	47	-0.25	0.38	.52***	0.41	46
I had an adult who was interested in my success.	1.51	.86	1.77	.94	47	0.03	0.48	.64***	2.29	46
I had an adult who gave good advice.	1.47	.69	1.83	.99	47	0.12	0.60	.57***	3.03	46
I had an adult who wanted me to succeed in my projects.	1.66	.98	1.89	1.07	47	-0.03	0.50	.63***	1.80	46
I had an adult leaders or volunteer who looked like me.	3.76	1.36	3.46	1.27	41	-0.70	0.11	.52***	-1.45	40
I wanted to follow the example set by older youth in my club/troop/chapter.	2.41	1.19	2.20	1.17	46	-0.54	0.011	.57***	-1.35	45
The older youth in my club/troop/chapter made me believe I could succeed.	2.43	1.26	2.45	1.47	47	-0.38	0.42	.52***	0.11	46

Table 4.2 continued

The older youth in my club/troop/chapter gave me good advice.	2.19	1.01	2.47	1.25	47	0.01	055	.68***	2.05	46
The older youth in my club/troop/chapter took me under their wing.	2.42	1.34	2.49	1.38	45	-0.26	0.40	.68***	0.41	44
I took younger members in my club/troop/chapter under my wing.	2.07	1.16	2.20	1.22	46	-0.11	0.37	.77***	1.11	45
I was a role model for younger members.	1.93	1.12	2.13	1.34	46	-0.10	0.49	.68***	1.32	45
Other youth asked me for help.	2.11	1.11	2.23	1.24	47	-0.11	0.6	.77***	1.10	46
I was aware younger members looked up to me.	2.13	1.10	2.17	1.30	47	-0.23	0.32	.71***	0.31	46
I was aware someone was looking out for me.	2.15	0.93	1.98	1.01	47	-0.36	0.02	.79***	-1.83	46
I think the older youth in my club/chapter/troop were leaders for the younger members.	2.24	1.23	2.22	1.32	46	-0.30	0.26	.74***	-0.16	45

$^{ns}p>0.05,$ $**\,p<0.01,$ $***\,p<0.001.$

4.2.4 Total Scale Analysis

Field (2013) recommended removing items with low correlation of less than .3, high correlations of >.8, and closely looking at clusters of items. I removed the following items in a series of iterations of removing items, running the analysis, assessing, and then rerunning the analysis until the determinant value, a measure of multicollinearity, was less than the recommended 0.00001 (Field, 2013).

I had my own project.

I gained knowledge I still use.

I learned how to make a difference in the world.

I made a difference in my community.

I worked on projects that made a difference in my community.

I was excited to do community service projects.

I learned that my community needs me.

As a member, I contributed to the community.

I attended a leadership conference/ camp.

I attended conferences/camps where I slept away from home.

I attended conferences/camps where I was out of my comfort zone.

After attending conferences/camps, I came home with new goals for my life.

I attended conferences/camps that I still reflect on.

I viewed my fellow members as a second family.

Whenever I had free time, I would spend time with other members.

I felt safe at meetings.

Our meetings were held in a place I felt comfortable.

I felt I could just be myself.

I felt liked when I was with my chapter/troop/club.

My chapter/troop/club was somewhere I wanted to be.

The members were my friends.

There was an adult I could ask for help.

I made friends with people different from me.

I had an adult who gave good advice.

There was an adult who looked like me.

I set an expectation for myself to be a good example to younger youth.

There were older youth who made me believe I could do more.

There was a youth a little older than me who gave me good tips/advice.

There was a youth in my club/troop/chapter who took me under their wing.

There was a youth in my club/troop/chapter who I took under my wing.

I was aware there was someone looking out for me.

After extensive scale purification based on statistics, judgment, and parsimony the final instrument is fifteen items as one scale with at least one item from all the themes developed from the literature (Wieland et al, 2017). See Table 4.3. The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, KMO = .894 (Field, 2013). The reliability of the overall scale is α =.93. See Table 4.4 for the correlations between the items. Table 4.5 displays the coefficient

of determination which is a measure of the strength of the correlations and the percentage of the variation explained between two variables (Field, 2013). Davis (1971) labeled the magnitudes of the coefficient of determination to be interpreted as $.01 \geq r \geq .09$ = Negligible, $.10 \geq r \geq .29$ = Low, $.30 \geq r \geq .49$ = Moderate, $.50 \geq r \geq .69$ = Substantial, $r \geq .70$ = Very Strong, Review Appendix C for the list of items removed in the final analysis.

Table 4.3 *Descriptive Statistics of the Instrument for Youth Development Organization Forme*r *Member Perceptions* (*N = 206*)

Variables	*M*	*SD*	Range[a]
1. I was the primary decision maker for the project.	1.94	1.18	1 - 5
2. I finished a project that I designed.	1.93	1.24	1 – 5
3. I learned skills that helped me get into college.	2.03	1.27	1 – 5
4. I learned skills that helped me get a job.	2.02	1.29	1 – 5
5. I learned skills that helped me succeed in school.	2.03	1.25	1 – 5
6. I learned how to give back to my community.	1.83	1.01	1 – 5
7. Made me aware of what I can do to help my community.	2.01	1.08	1 – 5
8. The conferences/camps were important moments of my growth.	2.38	1.39	1 – 5
9. I felt like I belonged when I was with other members.	1.99	1.06	1 – 5
10. I had an adult who listened to me.	1.83	1.03	1 – 5
11. I had an adult who was interested in my success.	1.68	0.98	1 – 5
12. I had an adult who wanted me to succeed in my projects.	1.72	1.04	1 – 5
13. I wanted to follow the example set by older youth in my club/troop/chapter.	2.40	1.31	1 – 5
14. I was a role model for younger members.	2.11	1.24	1 – 5
15. I think the older youth in my club/chapter/troop were leaders for the younger members.	2.34	1.32	1 - 5

[a]Range: 1=Extremely important, 2= Very important, 3= Moderately important, 4=Slightly important, 5=Not at all important

Table 4.4 *Correlations of Items for Youth Development Organization Scale*

(N= 206)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. I was the primary decision maker for the project.	-														
2. I finished a project that I designed.	.79***	-													
3. I learned skills that helped me get into college.	.38***	.42***	-												
4. I learned skills that helped me get a job.	.48***	.49***	.77***	-											
5. I learned skills that helped me succeed in school.	.47***	.45***	.74***	.76***	-										
6. I learned how to give back to my community.	.42***	.42***	.45***	.51***	.50***	-									
7. Made me aware of what I can do to help my community.	.45***	.43***	.48***	.49***	.49***	.76***	-								
8. The conferences/camps were important moments of my growth.	.36***	.36***	.36***	.33***	.33***	.32***	.34***	-							
9.															

Table 4.4 continued

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10. I felt like I belonged when I was with other members.	.38***	.31***	.30***	.37***	.36***	.36***	.37***	.41***	-						
11. I had an adult who listened to me.	.32***	.36***	.45***	.46***	.40***	.31***	.36***	.36***	.48***	-					
12. I had an adult who was interested in my success.	.43***	.43***	.43***	.48***	.41***	.37***	.47***	.31***	.35***	.56***	-				
13. I had an adult who wanted me to succeed in my projects.	.41***	.38***	.48***	.53***	.43***	.42***	.50***	.36***	.42***	.59***	.81***	-			
14. I wanted to follow the example set by older youth in my club/troop/chapter.	.46***	.43***	.46***	.50***	.53***	.33***	.37***	.41***	.48***	.36***	.42***	.45***	-		
15. I was a role model for younger members.	.47***	.45***	.58***	.55***	.55***	.40***	.43***	.34***	.48***	.46***	.43***	.50***	.57***	-	
16. I think the older youth in my club/chapter/troop were leaders for the younger members.	.45***	.44***	.52***	.52***	.53***	.43***	.41***	.48***	.55***	.39***	.37***	.45***	.67***	.59***	-

***$p<.001$.

Table 4.5 *Coefficients of Determination of Items for Youth Development Organization Scale*

(N= 206)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. I was the primary decision maker for the project.	-														
2. I finished a project that I designed.	.62****	-													
3. I learned skills that helped me get into college.	.14**	.18**	-												
4. I learned skills that helped me get a job.	.23**	.24**	.59****	-											
5. I learned skills that helped me succeed in school.	.22**	.20**	.55****	.58****	-										
6. I learned how to give back to my community.	.18**	.18**	.20**	.26**	.25**	-									
7. Made me aware of what I can do to help my community.	.20**	.18**	.23**	.24**	.24**	.58****	-								
8. The conferences/camps were important moments of my growth.	.13**	.13**	.13**	.11**	.11**	.10**	.12**	-							
9. I felt like I belonged when I was with other members.	.14**	.10**	.09*	.14**	.13**	.13**	.14**	.17**	-						

Table 4.5 continued

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10. I had an adult who listened to me.	.10**	.13**	.20**	.21**	.16**	.10**	.13**	.13**	.23**	-					
11. I had an adult who was interested in my success.	.18**	.19**	.19**	.23**	.17**	.14**	.22**	.10**	.12**	.21***	-				
12. I had an adult who wanted me to succeed in my projects.	.17**	.14**	.23**	.28**	.18**	.17**	.25**	.13**	.18**	.35***	.37****	-			
13. I wanted to follow the example set by older youth in my club/troop/chapter.	.21**	.18**	.21**	.25**	.28**	.11**	.14**	.17**	.23**	.13**	.18**	.20**	-		
14. I was a role model for younger members.	.22**	.20**	.34***	.30***	.30***	.16**	.43***	.18**	.23**	.21**	.18**	.25**	.32***	-	
15. I think the older youth in my club/chapter/troop were leaders for the younger members.	.20**	.19**	.27**	.27**	.28**	.43***	.18**	.23**	.30***	.15**	.14**	.20**	.45***	.35***	-

*****Very Strong, ****Substantial, ***Moderate, **Low, *Negligible

Table 4.6 *Descriptive Statistics of the True to Experience Portion of the Scale*

(*N = 206*)

Variables	*M*	*SD*	Range[a]
1. I was the primary decision maker for the project.	1.34	.672	1 – 3
2. I finished a project that I designed.	1.29	.665	1 – 3
3. I learned skills that helped me get into college.	1.28	.604	1 – 3
4. I learned skills that helped me get a job.	1.38	.712	1 – 3
5. I learned skills that helped me succeed in school.	1.39	.700	1 – 3
6. I learned how to give back to my community.	1.15	.435	1 – 3
7. Made me aware of what I can do to help my community.	1.20	.488	1 – 3
8. The conferences/camps were important moments of my growth.	1.40	.683	1 – 3
9. I felt like I belonged when I was with other members.	1.31	.600	1 – 3
10. I had an adult who listened to me.	1.16	.471	1 – 3
11. I had an adult who was interested in my success.	1.09	.341	1 – 3
12. I had an adult who wanted me to succeed in my projects.	1.07	.316	1 – 3
13. I wanted to follow the example set by older youth in my club/troop/chapter.	1.46	.689	1 – 3
14. I was a role model for younger members.	1.29	.576	1 – 3
15. I think the older youth in my club/chapter/troop were leaders for the younger members.	1.36	.648	1 - 3

[a]Range: 1=True, 2= Neither True nor False, 3= False

4.3 Summary

I began by writing 102 items based on the literature and representing the seven themes. There were approximately 14 items per theme to be tested. First, these items were reviewed by three experts who provided feedback on phrases. For example, the experts from 4-H and FFA noted items that did not use terms familiar to members and proposed edits. After the expert review, I entered all the items into the QUAID tool to test for ambiguous language and removed 12 items. Next, I used the Qualtrics ExpertReview tool to look for items with multiple components and removed 6 items. I administered the survey to the first sample and removed 20 items based on contributions to reliability and correlations. Then I administered the revised survey to a second sample and removed 18 items. For the third sample, I administered the revised survey two times and conducted a paired samples t-test to gather evidence of test-retest reliability. No items were removed based on the paired samples t-test. Finally, I combined all of the responses from all three surveys on the remaining items to calculate potential issues of multicollinearity. From this final combined response pool, I removed 31 items. The final instrument has 15 items with 2 to 3 items per theme.

CHAPTER 5.　　CONCLUSIONS AND RECOMMENDATIONS

5.1　Introduction

This research study focused on gathering evidence of the validity and reliability for a survey instrument to be used by youth development organizations. Using a quantitative approach, I developed and validated an instrument to be used by leadership at youth development organizations to evaluate the program design and delivery. By administering this post-participation survey, leaders and administrators can determine if their programs are delivering experiences to participants based on the critical components of a youth development organization as defined by the literature. This chapter presents conclusions from the results and recommendations for practice and for future study.

5.2　Purpose of the Study

The purpose of this research was to develop and validate an instrument designed to assess programming of youth development organizations. The instrument can be used by leaders of youth development organizations to monitor the organization's performance in developing productive and engaged citizens. The research objectives were:

Objective #1 To determine the validity of the developed survey instrument.

Objective #2 To determine the reliability of the developed survey instrument.

5.3　Research Objective #1 Conclusion

The first research objective was to establish validity for a survey instrument to be used by youth development organizations. The final survey has evidence of face validity based on interviews with experts who provided feedback to hone and expand the item pool. The survey has evidence of content validity through the creation of a large item pool to represent the universe of content (DeVellis, 2012).

5.4   Research Objective #2 Conclusion

The second objective was to gather evidence of reliability for the proposed instrument. Using recommended procedures (Field 2013; Weilad et al., 2017), the pool was reduced to a final list of 15 items. The final Cronbach's alpha (.93) indicates the scale has high internal consistency (Field, 2013). The test-retest analysis of correlations indicates a high reliability (Field, 2013). Therefore, this 15-item survey instrument has evidence of reliability for use by youth development organizations to evaluate their programming.

5.5   Recommendations for Future Research

Future research in this area should proactively recruit participants from underrepresented populations. The recruitment for this study was done from one land-grant institution. Analysis was not conducted to compare differences in response to the items based on reported demographic information. These items should be administered and analyzed based on different grouping of socioeconomic, location, racial, ethnic, gender, and other demographic characteristics to see if there is evidence of validity and reliability within all groups.

Another suggestion for future research is to conduct a cluster or path analysis of the themes to determine if they are factors. Further quantitative analysis of the proposed themes may add to the evidence of distinct factors and their relationship to the concept of a youth development organization.

5.6   Recommendations for Practice

The scale has two portions, first to ask former members whether a certain item happened for them and then their rank of importance to their experience. Youth development organization leaders and program managers should consider both portions. Regarding whether a component happened or not is an indicator of design. For example, if participants indicate they did not have the opportunity to have their own project then leadership can review the curriculum design to see why participants report they are not having this experience. The second portion of the scale for former members to indicate importance reveals the success of delivering the program. For example, if former members indicate they did have a non-parental adult but it was not important is an

opportunity for program managers and leadership to review the training and support of these adults so the relationship can be richer and more beneficial to the youth.

Another recommendation for practice is to include questions indicating the length and depth of participation. Regarding the length, ask respondents to indicate the number of years of participation. For depth of participation, I recommend including questions to determine the highest honor achieved or level of participation experienced. These categorical variables of length and depth will help analyze the results. For example, breaking responses down by those former members who achieved a state and national recognition versus those who did not would help organization leaders understand the current level of needed depth to have opportunities for engagement.

A third recommendation is to consider the effect of timing when administering the instrument. If the survey is administered upon youth leaving the program their feedback will be fresh but they will not have much time to put what they learned into practice. This fresh feedback may be the most valuable in terms of continuous program improvement. However, administering the survey a few years after their eligibility expires for participation means the youth will have had time to reflect and put their experiences into practice.

5.7   Limitations

Participants were recruited from listservs of one public research institution. Granted a good portion of the participants were graduate students so we can reasonably assume they are not from strictly the state of Indiana. Attempts to recruit participants from other universities or organizational listservs were stymied because institutions try to protect their students and members from being overwhelmed with survey requests. While this is understandable, it does hamper recruitment of research participants. Additionally, the measures taken in response to the COVID-19 pandemic led to the termination of efforts to recruit a broader participation. It would be beneficial to future research for there to be central, national repository of studies looking for participants that could be advertised in newsletters for those who are inclined to support research efforts.

Another recommendation regarding contact information is for youth development organizations to collect contact information from social media accounts such as LinkedIn or Twitter so they can promote taking these surveys. A limitation to working with this population is

up to date contact information. High school students often abandon their personal email accounts to start new ones with more professional usernames. If youth development organizations, promoted the adoption of LinkedIn and Twitter then requested following the organization it would enable youth development organizations to do more follow up studies such as this one without overwhelming former members with email requests.

5.8   Researcher's Roles in the Youth Development Organizations

I have intimate ties to the national youth organizations focused on by this study. I am a lifetime member of the Girl Scout movement and earned my Gold Award, the highest honor in Girl Scouts, my senior year of high school. I was a 4-H member in Tennessee from age 10 to 18. I earned the VolState award, the highest honor for 4-Hers in Tennessee; four overall highpoint awards at the Tennessee 4-H State Horse Show; and my record books won at the junior and senior levels. I continue to volunteer for the 4-H horse program in Indiana. As a professional, I worked for the National FFA Organization for three years as the program evaluation and assessment manager conducting evaluations of educational, fundraising, and alumni-development programs. I am looking forward to being a Boy Scout den leader, troop leader for Girl Scouts, and volunteer leader in 4-H.

5.9   Further Research

Future research should try to intentionally recruit participants to represent more diverse backgrounds. This study recruited from one midwestern land-grant university and participants could choose to participate. It would be beneficial to this area of research for particular populations to be targeted in recruitment efforts. Another consideration for future study is to conduct a cluster or path analysis to further explore the seven components I identified in the literature. This study put forth based on the literature seven necessary components but future studies could test this suggestion through further sampling and quantitative analysis.

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APPENDIX A: EXPERT INTERVIEWS

During the spring of 2019, I interviewed three experts regarding their reaction to my survey instrument. These experts were identified through discussions with my committee chair. Their names are included here with their permission. The first expert, Dr. Steve McKinley, was chosen because of his scholarly knowledge of the 4-H Youth Development program. The second expert, Skylar Kantola, was chosen because she is one of Purdue's specialists in the LGBTQ community and could speak to the inclusiveness of the language used my survey. Shane Jacques was the third expert and he was chosen because of his time manager the National FFA State Officer program therefore positioned closest to members who experienced the full FFA program.

Dr. McKinley offered many suggestions to clarify and simplify the wording of items. Prior to our meeting, I exported a Word-version of my survey instrument for him to review in advance. He reviewed the document and tracked his initial impressions. During our meeting, I discussed the purpose of the survey instrument and the intended use. We reviewed all of his comments and he added more during the course of our discussion. At the conclusion of the meeting, he emailed me the document with all of his comments. Most of his comments were improvements to word choice. For example, he proposed changing the item "gave me the resources to create my own project" to "gave me the encouragement/opportunity to create my own project" and he explained that resources might be interpreted by the students as equipment; whereas, the youth development organization would think of resources in terms of project manuals, connections to experts, and educational materials.

Dr. McKinley noticed that I did not have any questions asking if the youth had an opportunity to meet someone different from them. This point came up during our discussion about the Environment theme. He suggested adding the item "I got a chance to meet people different than me."

When I asked Dr. McKinley, if we would consider adopting this instrument in its final form, he said he would with the intention of using this survey as a base and then adding more program-specific and open-ended questions to the end of the instrument.

Skylar Kantola focused on the demographic questions and the Environment theme because this is her area of expertise. For the demographic question Skylar recommended I move them to the back so that individuals were not primed to answer as a representative of their group. Skye also

suggested I make the gender question open text because there are many different ways for an individual to define their gender and it will be simple for me to clean the data when preparing for the final presentation. Skylar also noted I was using the term "Hispanic" which is a label created by the United States government and the proper term is LatinX. Regarding Employment, Skylar encouraged me to add an option for Other with open text to explain for people who cannot work and those who are working multiple part time jobs.

Skylar commented that it was good my questions in Environment were written from a positive perspective because this avoids triggers for those who are experienced problems. She suggested I add items to ask participants if they saw people who looked and spoke like them and who looked and spoke differently from them. She also suggested additions and revisions regarding having an adult who would listen to the youth's concerns.

Shane Jacques primarily discussed the administration and appearance of the survey. He suggested distribution should happen at least one year after completing the organization but no more than four. His rationale is youth need some time to process and appreciate the experiences but not so long to forget. Shane stressed the need for the survey to be mobile compatible because the youth he worked with expect to do everything from their phone. Shane noted the similarities between questions may make people compare their responses to be consistent. Based on this feedback, I changed from a matrix style question to a block for each question and pairs of multi-choice follow up for if true and how important.

Shane recommended removing references to the organization within the questions because when it is used by the organization people will be in the mindset of providing feedback to that organization.

APPENDIX B: TABLE OF QUAID TOOL FEEDBACK MESSAGES AND RESPONSES

The tables in this section detail the revision and elimination of items through the various steps of the analysis. The first table is the feedback and response from the QUAID tool. The second table shows the analysis of each item in the original pool throughout the scale purification process.

QUAID Tool Feedback Messages and Responses

Item	QUAID Tool Feedback Message	Response to Feedback	QUAID Tool Feedback Message, 2nd
I had a project that lasted for more than one year.	1. Vague or imprecise relative terms: Quantification ambiguity: more The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Quantification ambiguity: more,	I had a project that lasted for at least one year.	Question looks good to me.
I had a project that lasted for a significant length of time.	Question looks good to me.		
I had a project that was mine alone.	Question looks good to me.		
I was able to take ownership of a project.	Question looks good to me.		
I was able to take ownership of a project.	Question looks good to me.		
I got to choose the topic for a major project.	Question looks good to me.		
I designed a project including a timeline	1. Unfamiliar technical terms: timeline	Question deleted	

and the final result/product.	The following term may be unfamiliar to some respondents: timeline, in sentence 1 in the Question.		
I had my own project.	Question looks good to me.		
I did a project that was not a school assignment.	Question looks good to me.		
I chose to do a project outside of usual school time.	Question looks good to me.		
I completed a project that I considered to be own.	Question looks good to me.		
I finished a project that I designed and created.	Question looks good to me.		
I learned skills that helped me succeed in school.	Question looks good to me.		
I learned skills that helped me get into college.	Question looks good to me.		
I learned skills that helped me get a job.	Question looks good to me.		
I learned skills that helped me in my career.	Question looks good to me.		
I decided to join because of the skills I would learn.	Question looks good to me.		
I gained knowledge I still use.	Question looks good to me.		
I developed skills that are meaningful to me currently.	1. Unfamiliar technical terms: meaningful, currently The following term may be unfamiliar to some respondents: meaning ful, currently, in	Question Deleted	

	sentence 1 in the Question. 2. Vague or imprecise relative terms: Temporal ambiguity: currently The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Temporal ambiguity: currently, in sentence 1 in the Question.		
I developed skills that had a lasting value.	Question looks good to me.		
I learned skills in my chapter/troop/club that I would not have elsewhere.	Question looks good to me.		
I learned how to make a difference in the world.	Question looks good to me.		
I made a difference in my community.	Question looks good to me.		
I worked on projects that made a difference in my community.	1. Vague or imprecise relative terms: Vague verb: worked The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Vague verb: worked, in sentence 1 in the Question.	I did projects that made a difference in my community.	Question looks good to me.
One of the activities I most enjoyed were the community service projects.	1. Vague or imprecise relative terms: Frequency ambiguity: most	I enjoyed the community service projects.	Question looks good to me.

	The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Frequency ambiguity: most, in sentence 1 in the Question. 2. Vague or ambiguous noun-phrases: Abstract noun: activities The referent of the following nouns or pronouns may be vague or ambiguous		
	to the respondent: Abstract noun: activities, in sentence 1 in the Question.		
I was excited to do community service projects.	Question looks good to me.		
I learned the importance of giving back to my community.	Question looks good to me.		
I learned how to give back to my community.	Question looks good to me.		
Made me more aware of the needs in my community.	1. Vague or imprecise relative terms: Quantification ambiguity: more The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Quantifica	Made me aware of what I can do to help my community.	Question looks good to me.

	tion ambiguity: more, in sentence 1 in the Question. 2. Vague or ambiguous noun-phrases: Vague noun: aware; Vague Nouns: needs The referent of the following nouns or pronouns may be vague or ambiguous to the respondent: Vague noun: aware; Vague Nouns: needs, in sentence 1 in the Question.		
I learned that my community needs me.	1. Vague or ambiguous noun-phrases: Vague Nouns: needs The referent of the following nouns or pronouns may be vague or ambiguous to the respondent: Vague Nouns: needs, in sentence 1 in the Question.	I learned that I can help in my community.	Question looks good to me.
I learned that I can make a difference in my community.	Question looks good to me.		
As a member, I contributed to the community.	1. Vague or ambiguous noun-phrases: Vague Nouns: member The referent of the following nouns or pronouns may be vague or ambiguous to the respondent: Vague Nouns: member, in	I contributed to the community.	Question looks good to me.

	sentence 1 in the Question.		
I attended a leadership conference/camp.	Question looks good to me.		
I attended conferences/camps without my parents.	Question looks good to me.		
I attended conferences/camps where I slept away from home.	Question looks good to me.		
I took a major trip with my chapter/troop/club.	Question looks good to me.		
I went to conferences/camps and learned	Question looks good to me.		
something about myself.			
I went to conferences/camps and had a realization about myself.	1. Unfamiliar technical terms: myself The following term may be unfamiliar to some respondents: myself, in sentence 1 in the Question. 2. Vague or ambiguous noun-phrases: Vague noun: something The referent of the following nouns or pronouns may be vague or ambiguous to the respondent: Vague noun: something, in sentence 1 in the Question.	Question deleted.	
I had an ah-ha moment while at a conference/camp.	1. Unfamiliar technical terms: ah-ha The following term	Question deleted.	

	may be unfamiliar to some respondents: ah-ha, in sentence 1 in the Question.		
I attended conferences/camps where I was out of my comfort zone.	Question looks good to me.		
After attending conferences/camps, I came home with new goals for my life.	Question looks good to me.		
I attended conferences/camps that I still reflect on.	Question looks good to me.		
The conferences/camps changed my life.	Question looks good to me.		
The conferences/camps were important moments of my growth.	Question looks good to me.		
I went on retreats where I could really focus on myself and who I wanted to be.	Question looks good to me.		
I felt like the meetings were a home away from home.	Question looks good to me.		
I viewed my fellow members as a second family.	Question looks good to me.		
Whenever I had free time, I would spend time with other members.	Question looks good to me.		
I felt safe at meetings.	Question looks good to me.		
I felt like I belonged when I was with other members.	Question looks good to me.		
The adults made me feel welcome.	Question looks good to me.		

Our meetings were held in a place I felt comfortable.	Question looks good to me.		
I felt like I could ask questions while with my chapter/club/troop I could not ask other places.	1. Vague or ambiguous noun-phrases: Vague Nouns: place The referent of the following nouns or pronouns may be vague or ambiguous to the respondent: Vague Nouns: place, in	I felt like I could ask questions while with my chapter/club/troop I could not ask in other groups.	Question looks good to me.
	sentence 1 in the Question.		
I felt I could just be myself.	1. Unfamiliar technical terms: myself The following term may be unfamiliar to some respondents: myself, in sentence 1 in the Question.	No edits.	
I felt liked when I was with my chapter/troop/club.	Question looks good to me.		
I felt physically safe.	1. Unfamiliar technical terms: physically The following term may be unfamiliar to some respondents: physically, in sentence 1 in the Question.	Question deleted.	
I felt emotionally safe.	1. Unfamiliar technical terms: emotionally The following term may be unfamiliar to some respondents: emotionally, in sentence 1 in the Question.	Question deleted.	

My chapter/troop/club was somewhere I wanted to be.	Question looks good to me.		
The members were my friends.	Question looks good to me.		
There was an adult I could ask for help.	1. Vague or imprecise relative terms: Deictic term: there The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Deictic term: there, in sentence 1 in the Question.	I had an adult I could ask for help.	Question looks good to me.
There was an adult who listened to me.	1. Vague or imprecise relative terms: Deictic term: there The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Deictic term: there, in sentence 1 in the Question.	I had an adult who listened to me.	Question looks good to me.
I viewed my fellow members as an extended family.	1. Vague or ambiguous noun-phrases: Vague Nouns: family The referent of the following nouns or pronouns may be vague or ambiguous to the respondent: Vague Nouns: family, in	Question deleted.	

	sentence 1 in the Question.		
I made friends with people different from me.	Question looks good to me.		
I interacted with people different from me.	1. Unfamiliar technical terms: interacted The following term may be unfamiliar to some respondents: interacted, in sentence 1 in the Question.	I met people different from me.	Question looks good to me.
I viewed my club/troop as an extended family.	1. Vague or ambiguous noun-phrases: Vague Nouns: family The referent of the following nouns or pronouns may be vague or ambiguous to the respondent: Vague Nouns: family, in sentence 1 in the Question.	Questions deleted.	
I viewed my club/troop as a second family.	1. Vague or ambiguous noun-phrases: Vague Nouns: family The referent of the following nouns or pronouns may be vague or ambiguous to the respondent: Vague Nouns: family, in sentence 1 in the Question.	Question deleted.	
I had an adult who cared about my success.	Question looks good to me.		
I had an adult who made me feel like I could succeed.	Question looks good to me.		

I had an adult who cared about me as a person.	Question looks good to me.		
I had an adult who helped me grow and develop.	Question looks good to me.		
I had an adult who wanted what was best for me.	1. Vague or imprecise relative terms: Vague adjective: best The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Vague adjective: best, in sentence 1 in the Question.	Question deleted.	
I had an adult who served as a role model for me.	Question looks good to me.		
I had an adult who expected me to keep trying when I faced obstacles.	Question looks good to me.		
I had an adult who was interested in my success.	Question looks good to me.		
I had an adult who was both a friend and guide.	Question looks good to me.		
I had an adult who didn't tell me what to do but helped me figure out my problems.	Question looks good to me.		
I had an adult who would talk with me until I had worked through my problems.	1. Vague or imprecise relative terms: Vague verb: worked The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague	I had an adult who would talk with me until I had thought through my problems.	Question looks good to me.

	or imprecise: Vauge verb: worked, in sentence 1 in the Question.		
I had an adult who gave good advice.	Question looks good to me.		
I had an adult who was never pushy.	1. Unfamiliar technical terms: pushy The following term may be unfamiliar to some respondents: pushy, in sentence 1 in the Question.	Question deleted.	
I had an adult who didn't tell me what to do.	Question looks good to me.		
I had an adult who wanted me to do well in school.	1. Vague or imprecise relative terms: Quantification ambiguity: well The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Quantifica tion ambiguity: well, in sentence 1 in the Question.	I had an adult who wanted me to succeed in school.	Question looks good to me.
I had an adult who wanted me to do well in my projects.	1. Vague or imprecise relative terms: Quantification ambiguity: well The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Quantifica tion ambiguity: well,	I had an adult who wanted me to succeed with my projects.	Question looks good to me.

	in sentence 1 in the Question.		
I had an adult who worked with me on my projects.	1. Vague or imprecise relative terms: Vauge verb: worked The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Vauge verb: worked, in sentence 1 in the Question.	I had an adult who helped me with my projects.	Question looks good to me.
There was an adult who looked like me.	1. Vague or imprecise relative terms: Deictic term: there The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Deictic term: there, in sentence 1 in the Question.	I had an adult leader or volunteer who looked like me.	Question looks good to me.
I had an adult who encouraged me to pursue my dreams.	Question looks good to me.		
I had an adult who made me excited about learning.	Question looks good to me.		
I tried to set an example for younger youth.	Question looks good to me.		
I set an expectation for myself to be a good example to younger youth.	Question looks good to me.		
There were older youth I admired.	1. Vague or imprecise relative terms: Deictic term: there	I admired the older youth in my club/troop/chapter.	Question looks good to me.

	The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Deictic term: there, in sentence 1 in the Question.		
There were older youth who set an example I wanted to follow.	1. Vague or imprecise relative terms: Deictic term: there The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Deictic term: there, in sentence 1 in the Question.	I wanted to follow the example set by older youth in my club/troop/chapter.	Question looks good to me.
There were older youth who made me believe I could do more.	1. Vague or imprecise relative terms: Deictic term: there; Quantification ambiguity: more The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Deictic term: there; Quantification ambiguity: more, in sentence 1 in the Question.	The older youth in my club/troop/chapter made me believe I could succeed.	Question looks good to me.
There was a youth a little older than me who helped me gain confidence.	1. Vague or imprecise relative terms: Deictic term: there; Intensity ambiguity: little	The older youth in my club/troop/chapter helped me gain confidence.	Question looks good to me.

	The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Deictic term: there; Intensity ambiguity: little, in sentence 1 in the Question.		
There was a youth a little older than me who gave me good tips/advice.	1. Vague or imprecise relative terms: Deictic term: there; Intensity ambiguity: little The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Deictic term: there; Intensity ambiguity: little, in sentence 1 in the Question.	The older youth in my club/troop/chapter gave me good advice.	Question looks good to me.
There was a youth in my club/troop/chapter who I viewed as a role model.	1. Vague or imprecise relative terms: Deictic term: there The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Deictic term: there, in sentence 1 in the Question.	The older youth in my club/troop/chapter were role models.	Question looks good to me.
There was a youth in my club/troop/chapter who I wanted to emulate.	1. Unfamiliar technical terms: emulate The following term may be unfamiliar to	Question deleted.	

	some respondents: emulate, in sentence 1 in the Question. 2. Vague or imprecise relative terms: Deictic term: there The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Deictic term: there, in sentence 1 in the Question.		
There was a youth in my club/troop/chapter who took me under their wing.	1. Vague or imprecise relative terms: Deictic term: there The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Deictic term: there, in sentence 1 in the Question.	The older youth in my club/troop/chapter took me under their wing.	Question looks good to me.
There was a youth in my club/troop/chapter who I took under my wing.	1. Vague or imprecise relative terms: Deictic term: there The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Deictic term: there, in sentence 1 in the Question.	I took younger members in my club/troop/chapter under my wing.	Question looks good to me.

I knew of another youth who tried to be like me.	1. Vague or imprecise relative terms: Vauge verb: tried The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Vauge verb: tried, in sentence 1 in the Question.	I was a role model for younger members.	Question looks good to me.
Other youth asked me for advice and help.	Question looks good to me.		
I was aware there was someone looking up to me.	1. Vague or imprecise relative terms: Deictic term: there The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Deictic term: there, in sentence 1 in the Question.	I was aware younger members looked up to me.	Question looks good to me.
I was aware there was someone looking out for me.	1. Vague or imprecise relative terms: Deictic term: there The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Deictic term: there, in sentence 1 in the Question.	I was aware someone was looking out for me.	Question looks good to me.
I think the older youth in my club/chapter/troop	1. Vague or imprecise relative terms: Vague verb: tried	I think the older youth in my club/chapter/troop	Question looks good to me.

tried to be leaders for the younger members.	The following terms refer implicitly to an underlying continuum or scale, but the point or value on the scale is vague or imprecise: Vauge verb: tried, in sentence 1 in the Question.	were leaders for the younger members.	

APPENDIX C: TABLE OF ITEM POOL THROUGH ANALYSIS PHASES

The table in this section shows the journey of each item through pretesting, sample responses, and the final phase of making the scale parsimonious.

Total Item Pool Scale Purification

	Judgmental		Statistical		Parsimony
Item	**QUAID Response to Feedback**	**Qualtrics Expert Review**	**First Sample**	**Second Sample**	**Third Sample**
I had a project that lasted for more than one year.	Reword - I had a project that lasted for at least one year.	Passed	Deleted based on Item-Total Statistics	Not applicable	Not applicable
I had a project that lasted for a significant length of time.	Passed	Passed	Deleted based on Item-Total Statistics	Not applicable	Not applicable
I had a project that was mine alone.	Passed	Passed	Kept	Deleted based on $r > .8$	Not applicable
I was the primary decision maker for the project.	Passed	Passed	Kept	Kept	Kept
I was able to take ownership of a project.	Passed	Passed	Kept	Deleted based on $r > .8$	Not applicable
I got to choose the topic for a major project.	Passed	Passed	Deleted based on Item-Total Statistics	Not applicable	Not applicable
I designed a project including a timeline and the final result/product.	Deleted	Not applicable	Not applicable	Not applicable	Not applicable
I had my own project.	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues
I did a project that was not a school assignment.	Passed	Passed	Deleted based on	Not applicable	Not applicable

			Item-Total Statistics		
I chose to do a project outside of usual school time.	Passed	Passed	Deleted based on Item-Total Statistics	Not applicable	Not applicable
I completed a project that I considered to be own.	Passed	Passed	Kept	Deleted based on $r > .8$	Not applicable
I finished a project that I designed and created.	Passed	Reworded – I finished a project that I designed.	Kept	Kept	Kept
I learned skills that helped me succeed in school.	Passed	Passed	Kept	Kept	Kept
I learned skills that helped me get into college.	Passed	Passed	Kept	Kept	Kept
I learned skills that helped me get a job.	Passed	Passed	Kept	Kept	Kept
I learned skills that helped me in my career.	Passed	Passed	Kept	Deleted based on $r > .8$	Not applicable
I decided to join because of the skills I would learn.	Passed	Passed	Deleted based on Item-Total Statistics	Not applicable	Not applicable
I gained knowledge I still use.	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues
I developed skills that are meaningful to me currently.	Deleted	Not applicable	Not applicable	Not applicable	Not applicable
I developed skills that had a lasting value.	Passed	Passed	Kept	Deleted based on $r > .8$	Not applicable
I learned skills in my chapter/troop/club that I would not have elsewhere.	Passed	Passed	Deleted based on Item-Total Statistics	Not applicable	Not applicable

I learned how to make a difference in the world.	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues
I made a difference in my community.	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues
I worked on projects that made a difference in my community.	Reworded - I did projects that made a difference in my community.	Passed	Kept	Kept	Deleted; multicollinearity issues
One of the activities I most enjoyed were the community service projects.	Reworded - I enjoyed the community service projects.	Passed	Kept	Deleted based on $r > .8$	Not applicable
I was excited to do community service projects.	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues
I learned the importance of giving back to my community.	Passed	Passed	Deleted based on $r > .8$	Not applicable	Not applicable
I learned how to give back to my community.	Passed	Passed	Kept	Kept	Kept
Made me more aware of the needs in my community.	Reworded - Made me aware of what I can do to help my community.	Passed	Kept	Kept	Kept
I learned that my community needs me.	Reworded - I learned that I can help in my community.	Passed	Kept	Kept	Deleted; multicollinearity issues
I learned that I can make a difference in my community.	Passed	Passed	Deleted based on $r > .8$	Not applicable	Not applicable
As a member, I contributed to the community.	Reworded - I contributed to the community.	Passed	Kept	Kept	Deleted; multicollinearity issues
I attended a leadership conference/ camp.	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues
I attended conferences/camps without my parents.	Passed	Passed	Kept	Deleted based on $r > .8$	Not applicable

I attended conferences/camps where I slept away from home.	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues
I took a major trip with my chapter/troop/club.	Passed	Passed	Deleted based on Item-Total Statistics	Not applicable	Not applicable
I went to conferences/camps and learned something about myself.	Passed	Deleted	Not applicable	Not applicable	Not applicable
I went to conferences/camps and had a realization about myself.	Deleted	Not applicable	Not applicable	Not applicable	Not applicable
I had an ah-ha moment while at a conference/camp.	Deleted	Not applicable	Not applicable	Not applicable	Not applicable
I attended conferences/camps where I was out of my comfort zone.	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues
After attending conferences/camps, I came home with new goals for my life.	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues
I attended conferences/camps that I still reflect on.	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues
The conferences/camps changed my life.	Passed	Passed	Kept	Deleted based on $r > .8$	Not applicable
The conferences/camps were important moments of my growth.	Passed	Passed	Kept	Kept	Kept
I went on retreats where I could really focus on myself	Passed	Deleted	Not applicable	Not applicable	Not applicable

and who I wanted to be.					
I felt like the meetings were a home away from home.	Passed	Deleted	Not applicable	Not applicable	Not applicable
I viewed my fellow members as a second family.	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues
Whenever I had free time, I would spend time with other members.	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues
I felt safe at meetings.	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues
I felt like I belonged when I was with other members.	Passed	Passed	Kept	Kept	Kept
The adults made me feel welcome.	Passed	Passed	Deleted based on $r > .8$	Not applicable	Not applicable
Our meetings were held in a place I felt comfortable.	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues
I felt like I could ask questions while with my chapter/club/troop I could not ask other places.	Reworded - I felt like I could ask questions while with my chapter/club/troop I could not ask in other groups.	Passed	Kept	Deleted based on $r > .8$	Not applicable
I felt I could just be myself.	Passed; myself considered unfamiliar term.	Passed	Kept	Kept	Deleted; multicollinearity issues
I felt liked when I was with my chapter/troop/club.	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues
I felt physically safe.	Deleted	Not applicable	Not applicable	Not applicable	Not applicable
I felt emotionally safe.	Deleted	Not applicable	Not applicable	Not applicable	Not applicable
My chapter/troop/club	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues

was somewhere I wanted to be.					
The members were my friends.	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues
There was an adult I could ask for help.	Reworded - I had an adult I could ask for help.	Passed	Kept	Kept	Deleted; multicollinearity issues
I viewed my fellow members as an extended family.	Deleted	Not applicable	Not applicable	Not applicable	Not applicable
I made friends with people different from me.	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues
I interacted with people different from me.	Reworded - I met people different from me.	Passed	Kept	Deleted based on $r > .8$	Not applicable
I viewed my club/troop as an extended family.	Deleted	Not applicable	Not applicable	Not applicable	Not applicable
I viewed my club/troop as a second family.	Deleted	Not applicable	Not applicable	Not applicable	Not applicable
There was an adult who listened to me.	Reworded - I had an adult who listened to me.	Passed	Kept	Kept	Kept
I had an adult who cared about my success.	Passed	Passed	Deleted based on $r > .8$	Not applicable	Not applicable
I had an adult who made me feel like I could succeed.	Passed	Passed	Deleted based on $r > .8$	Not applicable	Not applicable
I had an adult who cared about me as a person.	Passed	Passed	Deleted based on $r > .8$	Not applicable	Not applicable
I had an adult who helped me grow and develop.	Passed	Deleted	Not applicable	Not applicable	Not applicable
I had an adult who wanted what was best for me.	Deleted	Not applicable	Not applicable	Not applicable	Not applicable
I had an adult who served as a role model for me.	Passed	Passed	Kept	Deleted based on Total Item Statistics	Not applicable

I had an adult who expected me to keep trying when I faced obstacles.	Passed	Passed	Kept	Deleted based on $r > .8$	Not applicable
I had an adult who was interested in my success.	Passed	Passed	Kept	Kept	Kept
I had an adult who was both a friend and guide.	Passed	Deleted	Not applicable	Not applicable	Not applicable
I had an adult who didn't tell me what to do but helped me figure out my problems.	Passed	Passed	Kept	Deleted based on Total Item Statistics	Not applicable
I had an adult who would talk with me until I had worked through my problems.	Reworded - I had an adult who would talk with me until I had thought through my problems.	Passed	Kept	Deleted based on Total Item Statistics	Not applicable
I had an adult who gave good advice.	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues
I had an adult who was never pushy.	Deleted	Not applicable	Not applicable	Not applicable	Not applicable
I had an adult who didn't tell me what to do.	Passed	Passed	Kept	Deleted based on Total Item Statistics	Not applicable
I had an adult who wanted me to do well in school.	Reworded - I had an adult who wanted me to succeed in school.	Passed	Deleted based on $r > .8$	Not applicable	Not applicable
I had an adult who wanted me to do well in my projects.	Reworded - I had an adult who wanted me to succeed with my projects.	Passed	Kept	Kept	Kept
I had an adult who worked with me on my projects.	Reworded - I had an adult who helped me with my projects.	Passed	Kept	Deleted based on Total Item Statistics	Not applicable
There was an adult who looked like me.	Reworded - I had an adult leader or	Passed	Kept	Kept	Deleted; multicollinearity issues

	volunteer who looked like me.				
I had an adult who encouraged me to pursue my dreams.	Passed	Passed	Deleted based on $r > .8$	Not applicable	Not applicable
I had an adult who made me excited about learning.	Passed	Passed	Deleted based on $r > .8$	Not applicable	Not applicable
I tried to set an example for younger youth.	Passed	Passed	Kept	Deleted based on $r > .8$	Not applicable
I set an expectation for myself to be a good example to younger youth.	Passed	Passed	Kept	Kept	Deleted; multicollinearity issues
There were older youth I admired.	Reworded - I admired the older youth in my club/troop/chapter.	Passed	Deleted based on $r > .8$	Not applicable	Not applicable
There were older youth who set an example I wanted to follow.	Reworded - I wanted to follow the example set by older youth in my club/troop/chapter.	Passed	Kept	Kept	Kept
There were older youth who made me believe I could do more.	Reworded - The older youth in my club/troop/chapter made me believe I could succeed.	Passed	Kept	Kept	Deleted; multicollinearity issues
There was a youth a little older than me who helped me gain confidence.	Reworded - The older youth in my club/troop/chapter helped me gain confidence.	Passed	Deleted based on $r > .8$	Not applicable	Not applicable
There was a youth a little older than me who gave me good tips/advice.	Reworded - The older youth in my club/troop/chapter gave me good advice.	Passed	Kept	Kept	Deleted; multicollinearity issues
There was a youth in my club/troop/chapter who I viewed as a role model.	Reworded - The older youth in my club/troop/chapter were role models.	Passed	Deleted based on $r > .8$	Not applicable	Not applicable
There was a youth in my	Deleted	Not applicable	Not applicable	Not applicable	Not applicable

club/troop/chapter who I wanted to emulate.					
There was a youth in my club/troop/chapter who took me under their wing.	Reworded - The older youth in my club/troop/chapter took me under their wing.	Passed	Kept	Kept	Deleted; multicollinearity issues
There was a youth in my club/troop/chapter who I took under my wing.	Reworded - I took younger members in my club/troop/chapter under my wing.	Passed	Kept	Kept	Deleted; multicollinearity issues
I knew of another youth who tried to be like me.	Reworded - I was a role model for younger members.	Passed	Kept	Kept	Kept
Other youth asked me for advice and help.	Passed	Deleted	Not applicable	Not applicable	Not applicable
I was aware there was someone looking up to me.	Reworded - I think the younger members looked up to the older members of my club	Passed	Kept	Deleted based on $r > .8$	Not applicable
I was aware there was someone looking out for me.	Reworded - I was aware someone was looking out for me.	Passed	Kept	Kept	Deleted; multicollinearity issues
I think the older youth in my club/chapter/troop tried to be leaders for the younger members.	Reworded - I think the older youth in my club/chapter/troop were leaders for the younger members.	Passed	Kept	Kept	Kept

APPENDIX D: SURVEY FOR YOUTH DEVELOPMENT FORMER MEMBERS

Please read the items and circle the response for each item for BOTH if this is true to your experience and if the item was important to your environment.	T = True N = Neither true nor false F = False	E = Extremely important V = Very Important M = Moderately important S = Slightly important N = Not at all important
	True	**Importance**
1. I was the primary decision maker for the project.	T N F	E V M S N
2. I finished a project that I designed.	T N F	E V M S N
3. I learned skills that helped me get into college.	T N F	E V M S N
4. I learned skills that helped me get a job.	T N F	E V M S N
5. I learned skills that helped me succeed in school.	T N F	E V M S N
6. I learned how to give back to my community.	T N F	E V M S N
7. Made me aware of what I can do to help my community.	T N F	E V M S N
8. The conferences/camps were important moments of my growth.	T N F	E V M S N
9. I felt like I belonged when I was with other members.	T N F	E V M S N
10. I had an adult who listened to me.	T N F	E V M S N
11. I had an adult who was interested in my success.	T N F	E V M S N
12. I had an adult who wanted me to succeed in my projects.	T N F	E V M S N
13. I wanted to follow the example set by older youth in my club/troop/chapter.	T N F	E V M S N
14. I was a role model for younger members.	T N F	E V M S N
15. I think the older youth in my club/chapter/troop were leaders for the younger members.	T N F	E V M S N