EFFECTS OF 4-H YOUTHS' PROSOCIAL DEVELOPMENT ON ACADEMIC

ACHIEVEMENT IN NORTH-FLORIDA COUNTIES

by

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Dedication

I can do all things through Christ who strengthens me. To my husband, Billy, and my children,

Judson and Reagan Lee. Without their understanding and encouragement, I would not have

persevered.

Acknowledgments

It is hard to fathom that the descendant of poor, rural, and oftentimes illiterate farmers would have the opportunity to present a research study for an Ed.D. degree. This process is grueling and humbling, and I would like to take this opportunity to thank my committee for their support, advice, and encouragement. Dr. Schutts introduced me to the statistics I have used in this research during my Statistics II class. I would have never attempted to tackle a quantitative research study without the foundation he built and the corrective guidance he provides. Dr. Fogarty has always been willing to act as a sounding board offering guidance and wisdom when it was needed most. I cannot thank her enough for the time she has dedicated to talking with me through my questions and the invaluable advice she has afforded to me. Dr. Decubellis has been my straight shooter, and his guidance pointed me in the right direction when I needed answers. His no-nonsense, practical approach helped clear away some of the mystery shrouding this process and helped me to know I was on the right path. Finally, I would like to thank the UWF curriculum and instruction program for scaffolding this process as I completed coursework in order to make this final task more manageable.

Table of Contents

List of Tables

List of Figures

Abstract

Placing youths' academic achievement over prosocial skill development is stunting youths' social and emotional growth. Research shows that the 4-H youth organization promotes prosocial skill development in youth. The purpose of this cross-sectional correlational study was to examine the relationship between the intensity of participation in a 4-H youth program and the development of prosocial behavior in nine to 12-year-olds in three North Florida counties. The research is framed by Arnold's 4-H thriving model which operationalizes the outcome variables that contribute to positive youth development. The researcher used Bronfenbrenner's ecological systems theory to support Arnold's model. The researcher sampled public school, 4-H youth from three North Florida counties between the ages of nine and 12. A convenience sample of 4-H youth ($N = 72$) completed the Bridge-PYD survey to evaluate their presentation of positive development while the 4-H leaders and corresponding classroom teachers completed the Child Trends Survey to reveal youths' prosocial presentation in the two environments. Included in the data collection are measures of youths' most recent reading and math scores on the Florida Standards Assessments (FSA). Moderation analysis demonstrated a significant moderation effect, $p < .001$, indicating that the relationship between prosocial development and academic achievement is moderated by the intensity of 4-H participation. The results conclude that North Florida 4-H youths presented high prosocial skill development in addition to academic success as measured by the FSA. This study serves as a resource for youth development practitioners and an examination of current education mandates.

Chapter 1: Introduction

With each Federal and State legislative bill, school districts across America narrow their

curriculum to meet the demands of the most current legislation. The education reforms that

answer the legislative requirements focus primarily on core instruction in reading, writing, and

mathematics (Fink & Geller, 2016). Despite recent reforms, student achievement rates are

relatively stagnant (Corrigan et al., 2013; Florida Department of Education, 2019; Oberle et al.,

2014; Reardon et al., 2018). The attempt to narrow the curriculum to raise academic test scores

has excluded prosocial education components that would further students' social and emotional

development, resulting in higher academic achievement (Higgins-D'Alessandro, 2011, 2012).

Scales et al. (2006) gave evidence that the integration of social, emotional, and academic

learning increases academic outcomes for all youths. The prosocial education that is missing in

many traditional public school curricula is prevalent in out-of-school programs. Youths involved

in the 4-H organization have access to prosocial skill development that has been shown to

enhance their academic performance and promote youths' development in essential life skills

(Ellsworth et al., 2017; Flores-Lagunes & Timko, 2015; Hershberg et al., , 2014; Lerner et al.,

2005).

Youths gain prosocial skill development in programs that exist outside of the traditional

public school. Research has linked prosocial skill development and academic achievement to

extracurricular activities, including sports, affiliation to a religious organization, and community

programs (Lerner et al., 2014; Shernoff, 2010). The 4-H youth development program exists in

communities all over the country as an extracurricular activity for students ages five to 18.

Participants in the 4-H youth organization develop characteristics of prosocial education through

personal development and service to others (Peterson et al., 2014). 4-H participation is associated

with youths' higher levels of academic achievement in addition to skill development in the areas of self-respect, teamwork, communication, responsibility, and healthy lifestyles (Anderson et al., 2015; Ellsworth et al., 2017; Flores-Lagunes & Timko, 2015; Hershberg et al., 2014; Lerner et al., 2005).

The purpose of this cross-sectional correlational study was to examine the relationship between the intensity of participation in a 4-H youth program and the development of prosocial behavior in nine to 12-year-olds in three North Florida counties. This study investigated if the intensity of participation in a 4-H youth program moderates the relationship between prosocial skill development and academic achievement. This study also examined whether student's prosocial skill development differs depending on whether it is assessed in the classroom or the 4-H environment. Identifying prosocial skills that are transferred to new environments and contribute to academic success may positively affect a greater population of students. The results of this study may be used to increase 4-H and education practitioner knowledge of youth development prior to 12 years old. This study's results may also influence future curriculum development to include prosocial skill development for elementary youths. This chapter presents a discussion of the study's background and context, problem statement, purpose statement, and an overview of the theoretical models followed by the research questions and hypotheses. Following this section is a discussion of the study's assumptions, delimitations, and limitations, the significance of the study, related definitions of terms and variables, and the study's organization. The chapter concludes with a summary of the study.

Background and Contextualization of the Issue

Prosocial skill development is linked to positive youth outcomes. Achievement levels in Florida's public school youths remain stagnant (Florida Department of Education, 2019). In

addition, decreases in student engagement could be linked to the dismantling of supplemental education components and missing prosocial opportunities that link youth and knowledge. Youths can obtain opportunities for prosocial development through community organizations such as the 4-H youth organization.

Prosocial Skill Development

Prosocial education, a comparatively new term created in 2009, represents educating the whole-child socially, emotionally, physically, and academically (Higgins-D'Alessandro, 2012; Straub, 2012). Researchers have not reached a consensus on a formal term, but synonyms include character education, moral development, positive youth development (PYD), youth empowerment, positive psychology, civic education, service-learning, prevention, social-emotional learning, 21st century skills, soft skills, and non-cognitive skills (Battistich, 2008; Bier et al., 2016; Jones et al., 2017; Osher et al., 2016). Higgins-D'Alessandro (2012) defined prosocial education as curriculum, teaching, and student learning combined with relationships, climate, and the social bonding that enables communities to be both cohesive and adaptable.

Students who are taught prosocial skill development exhibit improvement in their social and emotional well-being as well as their academic success (Corrigan et al., 2013). Although education administrators may worry that shifting the focus from core subjects impedes students' academic growth, they should be cognizant that public school was not initially intended to focus solely on academics (Kidron & Osher, 2012; Shields, 2011). The founding fathers believed that education should be responsible for generating critical thinkers and civic leaders (Greenberg et al., 2017). Youths' education in social, emotional, and civic curricula is positively correlated to the youths' ability to learn and solve problems (Cohen, 2014). Case studies involving middle school implementation of prosocial education have been shown to decrease absences, decrease

behavioral referrals, increase graduation rates, and increase test scores (Fink & Geller, 2016). Academics without prosocial education limit youths' full potential (Corrigan et al., 2013). For example, scared straight tactics, popular in the 1980s, aimed toward avoidance of problem behaviors that led to an increase in negative behaviors because the youths were not given the necessary prosocial skills (Moore, 2017). Including prosocial education in a student's development leads to improved social-emotional outcomes, which also enhances the school culture and overall academic success (Elias, 2014a; Higgins-D'Alessandro, 2012). For youths to be successful, caring adults must model acceptable social, civic, and ethical behavior while the youths are taught the required skills (Elias, 2014b).

In recent decades, public education has focused on remediation and response when a student issue is identified. However, prosocial skills development has also been identified as a form of prevention and a way to create access to academic success for all youths (Corrigan et al., 2013). In 2018, the U.S. Department of Health and Human Services signaled a step in this direction when they issued a bulletin that advocated for the use of PYD to address bullying. Advocates for prosocial programs cite youth benefits that include increased school engagement, a decrease in conduct concerns, and an increase in self-assurance (Greenberg et al., 2017). There is also research to support that students' skill development in "soft skills" has led to an improvement in standardized assessments (Elias, 2014a).

While prosocial education is noticeably absent in many public schools, community organizations provide a rich context that aid families and schools in helping youths to build capacity in prosocial education (Benson, 2012; Lerner et al., 2017). Out-of-school programs are often outside of academic demands, which allows the programs to embrace social and emotional goals, making them a natural place for youths to learn prosocial skills (Hurd & Deutsch, 2017).

Youth-selected activities create a backdrop of positive development that combines intrinsic motivation and skill development leading to a decrease in delinquent behavior and an increase in achievement and self-control (Larson, 2000; Lerner et al., 2017).

The 4-H Youth Organization

The 4-H youth organization began to serve American youths in 1902 and continues today with over 6 million members between the ages of five to 18 (Borden et al., 2014; Calvert et al., 2013). In Florida, almost 200,000 youths are served through the 4-H organization annually (University of Florida IFAS Extension, 2018a). Parents enroll their children in local 4-H clubs by completing enrollment paperwork with the 4-H leader and paying nominal dues. 4-H members participate through club meetings, summer camps, school enrichment events, and after-school programs in suburban, urban, rural locations, and military installations around the world (Ferrari et al., 2009). There are more than 540,000 volunteers and 3,500 youth educators (Kinsey, 2013; Lerner et al., 2014).

The 4-H youth organization aims to develop youths into responsible, productive citizens (Florida 4-H, n.d.). Florida 4-H "aspires to be the leading youth development program that creates positive change in youth, families, and communities" (Florida 4-H, n.d.). The 4-H youth program promotes eight essential elements: positive relationships with caring adults, a safe learning environment, inclusive environment, engagement, opportunities for mastery, the ability for youths to become active participants, opportunities for self-determination, and opportunities to value and practice service to others (Astroth, 2014; Cassels et al., 2015; Kress, 2014; Meyer & Jones, 2015). The eight essential components are classified into mastery, independence, belonging, and generosity, which are also addressed in prosocial education (Cassels et al., 2015).

4-H youth are instructed through a "learn-by-doing" approach (Florida 4-H, n.d.). The 4-H curriculum design nurtures youths' development of life skills while also supporting positive relationships and social development through hands-on exploration of citizenship, healthy living, and science (Haas et al., 2015). The 4-H youth organization creates an environment where youths can naturally develop prosocial skills that result in youth leadership and contributions to the community (Baney & Jones, 2013; Henness et al., 2013). The youths have an opportunity to attend leadership training conferences, learn and practice the art of public speaking, and take on leadership roles in their clubs and their communities (Zanolini et al., 2013). 4-H contests provide a forum for youths to practice their new skill sets in photography, performing arts, shooting sports, livestock exhibitions, and other events based on what is available in the local community. Adult volunteers guide 4-H youths in community service projects that may consist of assisting local shelters and low-income residents, community beautification projects, and mentoring other youths (Henness et al., 2013).

4-H Participation and Prosocial Skill Development

4-H members have been shown to have higher levels of prosocial skill development as well as a greater academic achievement when compared to peers who are not 4-H members (Ellsworth et al., 2017; Flores-Lagunes & Timko, 2015; Hershberg et al., 2014; Lerner et al., 2005). Lerner et al. (2005) conducted longitudinal research that lays the groundwork for contemporary research connecting the 4-H youth program with positive youth development and is also known as the 4-H study of positive youth development. Lerner et al.'s (2005) findings supported the 4-H youth program's contribution to higher school engagement, increased youth contributions to the community, and more positive relationships as compared with youths who do not participate in 4-H. The 5Cs of competence, confidence, character, caring, and connection

embodied positive youth development and was evident in 4-H members (Lerner et al., 2005). Lerner et al. (2010) included social, cognitive, and vocational attributes in the definition of competence. Hershberg et al. (2014) utilized the qualitative data from Lerner et al.'s longitudinal study to demonstrate that students' academic competence increases with the amount of time they participated in the 4-H program. Students indicated higher confidence in their academic abilities in ninth and 12th grade as compared to when they were sixth-grade students (Hershberg et al., 2014). The 4-H study of positive youth development (4-H PYD) by Richard Lerner and colleagues was conducted at a national level and included Florida 4-H participants. Measures of academic achievement in the 4-H PYD study were limited to youth self-report—not school grades or standardized test results. The only research to correlate Florida 4-H students to a standardized assessment validated a relationship between 4-H participation and academic achievement; the researchers found a statistically significant, positive relationship between a 4-H member's level of participation and Florida Comprehensive Assessment Test scores, a former standardized assessment given to public school students. In other words, youths who participated in 4-H earned fewer level ones and twos on the Florida Comprehensive Assessment Test as compared with their peers who did not participate in 4-H (Flores-Lagunes & Timko, 2015). Additional studies at the national level link 4-H to essential character development skills such as integrity, higher decision-making skills, responsibility, sportsmanship, and time management (Davis et al., 2016; Ellsworth et al., 2017).

Prosocial Skill Development and Academic Achievement

There is research to support the assertion that prosocial skill development contributes to academic gains indirectly through social-emotional programs. Emerging research is beginning to show that prosocial education could be the missing link to raising academic achievement

(Higgins-D'Alessandro, 2012; Jones et al., 2017). Lemberger et al. (2018) measured students receiving social-emotional learning against a control group and found an increase in reading and math that exceeded the expected growth as well as the control group on the Common Core Interim Assessments. Elias (2014a) attributed social-emotional learning programs with increasing youths' standardized assessments by 10 and half points, and a meta-analysis of 213 studies attributed social-emotional learning with an 11% gain in academic performance (Durlak et al., 2011). Durlak et al. (2011) also concluded that social-emotional learning generated medium effect sizes for test scores and grades. Finally, Corcoran et al. (2018) determined that social-emotional learning is predictive of academic achievement and produced moderate effects for reading (.25) and math (.26) with a smaller effect size seen in science (.19).

The current policies requiring short-term academic outcomes are not always aligned to the prosocial education goals and threaten youths' opportunities for exploration and development in non-cognitive areas (Bier et al., 2016; Corrigan, 2012; Higgins-D'Alessandro, 2012; Hurd, & Deutsch, 2017). Studies show that the lack of prosocial education leads to the absence of social connections resulting in lower academic achievement and student engagement (Oberle et al., 2014). Positive attributes emerge when measurement outcomes focus less on the academic product. Advocates for prosocial programs cite youth benefits that extend beyond academic achievement, including increased school engagement, a decrease in conduct concerns, and an increase in self-assurance (Greenberg et al., 2017). Prosocial education has been attributed to reducing many of society's problems such as bullying, truancy, dropout rates, and risk behaviors (Battistich, 2008; Fink & Geller, 2016).

Gaps in the Literature

A review of the existing literature reveals a need for additional research on the influence the 4-H youth program has on youth prosocial skill development as it complements academic achievement. A comprehensive list of available research related to 4-H youth outcomes shows that research to support the structure and function of 4-H programming is still needed (Arnold, 2018a; Arnold & Gagnon, 2019; Hamilton, 2014; Maley et al., 2016). A substantial amount of 4-H research exists, but it is often used to relay topic-specific content, like nutrition instruction, and rarely enters scholarly research (Hamilton, 2014). Existing studies focus on measuring student attitudes about the 4-H program and do not identify elemental foundations for 4-H, such as the essential elements, that are directly responsible for prosocial skill development (Arnold, 2018a; Hurd & Deutsch, 2017). Many studies, including the 4-H PYD study, are limited in scope as a result of the exclusive recruitment of youth participants who are 12 years and older (Anderson et al., 2015; Baney & Jones, 2013; Bolshakova et al., 2018; Lee & Horsley, 2017; Ratkos & Knollenberg, 2015; Sumner et al., 2018; Zanolini et al., 2013). The imposed age restriction excludes a large population of 4-H members (University of Florida IFAS Extension, 2018b). Furthermore, the primary focus on the youth participant fails to account for any relationships that exist across multiple settings.

Foundational literature for prosocial education is much broader and comprehensive because of the shifting terminologies that exist (Battistich, 2008; Bier et al., 2016; Jones et al., 2017; Osher et al., 2016). The literature calls for the inclusion of prosocial skill development in youths but often fails to impact policy change (Corrigan et al., 2013; Elias, 2014b). To meet the parameters of the current educational climate for academic achievement and prevention of delinquent behaviors, much of the existing research has been focused on extinguishing or

preventing unwanted behavior (Straub, 2012). The generic takeaways do not provide practitioners with practical applications to encourage prosocial development in youths.

This study seeks to uncover a deeper understanding of youth prosocial development through the 4-H program across settings of out-of-school time and in-school time. The data analysis explores correlations between 4-H youths' intensity of participation in the program and their prosocial development and academic success. Moreover, academic success was not indicated by youths' self-report as has occurred in many PYD studies; rather, FSA scores are the academic success variable of interest. The conclusions generated from this analysis provide practitioners with applications that translate to youth development work across diverse forms of program implementation. The participant age span incorporates youths between the ages of nine and 12 to assess positive impacts on younger students than have been assessed before including performance on the FSA.

Problem Statement

Current education policies requiring short-term academic outcomes, such as performance on high stakes tests, are not always aligned with the prosocial education goals that promote whole-child development including cognitive skills such as perseverance, grit, and resilience (Bier et al., 2016; Bridgeland et al., 2013; Corrigan, 2012; Higgins-D'Alessandro, 2012). The curriculum that is focused only on core subjects and ignores social and emotional learning does not foster well-being or developmentally appropriate educational practices, which can lead to poor academic success (Bridgeland et al., 2013; Gubi & Bocanegra, 2015; Higgins-D'Alessandro, 2012). Elementary school curricula and instruction are structured to emphasize core academic content and are not structured to provide youths with prosocial skill development, which negatively impacts academic achievement. The implemented public school curriculum

excludes social and emotional learning by focusing solely on reading, math, and science achievement (Corrigan et al., 2013). In Florida public schools, the social sciences incorporate social skills at the elementary level, but since it is not assessed on the FSA, the instruction time is sacrificed for the assessed academic areas. Two of the selected North Florida counties utilize state adopted social studies materials to implement social studies standards. The national textbook company materials address Florida's social studies standards as they pertain to geography and history, but the standards do not address prosocial skills. One county embeds social studies within the 150-minute reading block by utilizing informational texts.

The lack of prosocial skills among America's youths could be called a "crisis of character" (White, 2015, p. 127). Prosocial education can be compared to a flu vaccine in the sense that it is preventative for student well-being (Greenberg et al., 2017). The selective focus on academics may contribute to the current crisis of school violence, bullying, depression, and poor academic performance (Osher et al., 2016). These crises are often addressed through remediation to eliminate bad behaviors or prescribed interventions, all with minimal results (Higgins-D'Alessandro, 2012; Hyson & Taylor, 2011; Osher et al., 2016). Addressing the missing prosocial components such as communicating, critical thinking, and problem-solving may be the key to raising youth in the United States from below to above average in 21st century skills as well as protecting youths from mental health crises (Davis et al., 2016). Research exists to support the rewarding effects of prosocial education and the contribution to academic achievement. An examination of the social-emotional curriculum utilized with elementary school students demonstrated that incidental benefits, such as increased academic performance, occurred when the social-emotional curriculum was implemented (Jones et al., 2017). Recent societal shifts require the community to reexamine the need for prosocial education in multiple

contexts to develop youths who thrive (Catalano et al., 2004). Many community organizations have recognized the need to develop the whole-child and have responded by incorporating prosocial skills in conjunction with facilitating youths' cognitive, social, and physical development.

This research examines youths' prosocial skill development through the 4-H program in selected North Florida counties. The study examined the relationships between 4-H youths' intensity of participation in the program and their prosocial skill development and academic achievement. Additionally, the study examined whether the type of environment determines the prosocial behaviors students exhibit.

Purpose Statement

The purpose of this cross-sectional correlational study was to examine the relationship between the intensity of participation in a 4-H youth program and the development of prosocial behavior in nine to 12-year-olds in three North Florida counties. This study investigated if the intensity of participation in a 4-H youth program moderates the relationship between prosocial skill development and academic achievement. This study also examined whether student's prosocial skill development differs depending on whether it is assessed in the classroom or the 4-H environment.

Overview of Theoretical Framework and Methodology

Arnold's 4-H thriving model works to explain youths' development. The multidimensional view of prosocial skill development within the 4-H context is supported by Arnold's 4-H thriving model, which highlights the role youths play within their development. The following discussion of the theoretical framework leads to the chosen methodology.

PYD evolved from the applied developmental science (ADS) discipline and the developmental systems theory (Snyder & Flay, 2012). Traditional researchers, such as G. Stanley Hall and Erik Erickson, focused on negative indicators of adolescent development (Lerner et al., 2013). Adolescence was viewed through the lens of prevention science as a time of trial and stress and measured in substance abuse usage and delinquency rates. This idea permeated through American culture and caused practitioners to focus on interventions and prevention (Lerner et al., 2013). In the early 1990s, some researchers abandoned this model and adopted a more optimistic approach to adolescent growth (Lerner et al., 2013). The PYD theory can be studied through multiple frameworks, including The Search Institute's Developmental Assets Model and Lerner's 5Cs of competence, confidence, connection, character, and compassion/caring (Lerner et al., 2003; Lerner et al., 2005). In 2018, Arnold developed the 4-H thriving model to illustrate how youths move from the developmental context through the thriving trajectory to meet developmental and long-term outcomes.

Theoretical frameworks that utilize PYD all include three components. First, environments are nurturing and supportive while maintaining expectations that are developmentally appropriate to the child's age (Benson et al., 2007; Hershberg et al., 2014; Lerner et al., 2013; Snyder & Flay, 2012). The environment includes long-term and genuine relationships between youths and adults. The second component comprises youths' involvement in life skills development, academic improvement, and personality development (Benson et al., 2007). The PYD theory recognizes youths as they grow and develop and emphasizes the primary role youths play in their development (Benson et al., 2007). The final component allows the youths to pursue activities that complement their interests and talents, including activities that make positive contributions to their communities (Benson et al., 2007; Hershberg et al., 2014;

Lerner et al., 2013; Snyder & Flay, 2012). These three components are what Lerner et al. (2013) termed the "big three."

A model of PYD that was created to be specific to examining the 4-H program is Arnold's (2018a) 4-H thriving model. This model was created by Mary Arnold to elucidate the nuances of 4-H program practices as they influence youth thriving outcomes that research based on the 5Cs model failed to capture. In short, Lerner's research on PYD in the 4-H program found outcome differences between youths who participated in 4-H and those who did not. However, Learner and Arnold did not examine the process. Arnold (2017) termed this lack of understanding the process by which 4-H youths achieved such outcomes as a "black box" and developed her model to trace PYD developmental contexts through elements of youth engagement to defined outcomes. Similar to Bronfenbrenner's nested ecologies, youth sparks are held within the PYD program quality principles, which are nested inside of developmental relationships (Arnold, 2018a). Youth engagement is the link between developmental contexts and youth outcomes. Youth engagement is defined as openness to challenges, growth mindset, a positive sense of purpose, awareness beyond materialistic purposes, prosocial orientation, optimistic emotionality, and goal management (Arnold, 2018a). Developmental outcomes include academic success, social competence, personal standards, contribution, connection, and personal responsibility (Arnold, 2018a). The model also specifies long-term outcomes as academic or vocational success, civic engagement, employability, economic stability, happiness, and well-being (Arnold, 2018a).

Arnold's model details how the developmental context can be traced through specific characteristics resulting in PYD outcomes. Bronfenbrenner's ecological systems theory (EST), with an emphasis on proximal processes and the collective research for PYD, is cited as an

understood premise in Arnold's thriving model for 4-H youth development programs (Arnold, 2018a). The EST theory is embedded within the 4-H thriving model. The 4-H thriving model and EST work in conjunction to provide the framework needed to view youths' participation in the 4-H organization and the environmental outcomes that may exist. Youths' capability to develop prosocial skills through positive and productive adolescence is captured in the thriving trajectory that defines the necessary components to achieve PYD outcomes. The novelty of this model prevents the use of empirical research as guidance on the 4-H thriving model's implementation. However, Arnold's specificity in developmental contexts, the thriving trajectory of processes, and the developmental outcomes provide clarification to existing PYD constructs and create natural boundaries for this study.

The 4-H thriving model serves as the appropriate framework for this study. Arnold's (2018a) model addresses the need to educate youths in prosocial orientations and to present appropriate challenges to achieve social and academic outcomes that are missing in the Florida public school setting. Arnold's (2018a) model emphasizes the developmental context to promote youth thriving. This study's research questions examining academic and prosocial outcomes that are evident in the 4-H thriving model's developmental outcomes, and academic success is considered a long-term outcome. While Arnold (2018a) identifies developmental contexts based on 4-H youth programs, Bronfenbrenner's foundational theory, EST, supports this study's investigation into youths' presentation of prosocial behavior within the classroom and the 4-H mesosystem. Intensity is a contributing variable to the idea of youth engagement illustrated in Arnold's (2018b) model. The idea of intensity can be traced through PYD to Scales et al.'s (2006) idea of constructive use of youths' time. Scales et al. (2006) used eight categories to identify youth nutrients, ultimately showing that the more nutrients the youth possessed, the

greater their developmental outcomes. This study draws on Arnold's (2018a) 4-H thriving model as well as the model's supporting theories to achieve a unique set of variables that expand on the understandings surrounding youths' prosocial development.

This research is a quantitative, cross-sectional design. The quantitative design decreases subjectivity, and the cross-sectional approach affords a timely collection of survey responses (Creswell, 2012). This study measured observable youth experiences using survey research collected from both youth and adult participants. 4-H youths' participation intensity was correlated with development outcomes, including prosocial behaviors and academic achievement.

Research Questions and Hypotheses

The following is the overarching question for this research: How does the intensity of participation by nine to 12-year-old youth in a North Florida 4-H youth program, as well as the difference between in-class and out-of-class environments, affect prosocial skill development and student academic achievement? The secondary research questions are addressed below.

> **RQ1:** What is the difference in prosocial skill development, as measured by the Child Trends Survey, between nine to 12-year-old youth in the classroom and in a 4-H environment?
>
> H_0: There is no difference in youths' prosocial behavior, as measured by the Child Trends Survey, between nine to 12-year-old youth in the classroom and in a 4-H environment.
>
> H_1: The prosocial behavior among nine to 12-year-old youth in the classroom differs from the prosocial behaviors among nine to 12-year-old youth in a 4-H environment, as measured by the Child Trends Survey.

RQ2: What is the relationship between the intensity of 4-H youth participation and prosocial skill development outcomes, as measured by the Bridge-PYD survey, controlling for age, gender, and race?

H_0: There is no relationship between the intensity of 4-H youth participation and prosocial skill development outcomes, as measured by the Bridge-PYD.

H_1: There is a relationship between the intensity of 4-H youth participation and prosocial skill development outcomes, as measured by the Bridge-PYD.

RQ3: To what extent does the intensity of participation in a 4-H youth program moderate the relationship between prosocial skill development and academic achievement, controlling for age, gender, and race?

H_0: Intensity of participation in a 4-H youth program has no moderating effect on the relationship between prosocial skill development and youths' academic achievement.

H_1: Intensity of participation in a 4-H youth program has a moderating effect on the relationship between prosocial skill development and youths' academic achievement.

Assumptions of the Study

Working with multiple participants requires several assumptions (Roberts, 2010). This research assumes that the participants answered the survey honestly and accurately. To validate this assumption, the purpose of the study, the directions for completing the survey, and methods of confidentiality were thoroughly explained to all participants. Initially, in this study, 4-H clubs were randomly selected to complete the survey for representative sampling. The low response rate led the researcher to invite all clubs within the three counties to participate. This type of non-probability sampling limits generalizations but still produces meaningful information to answer this study's research questions (Creswell, 2012). Finally, it is assumed that the adults completing

the survey were familiar with the youth participants and can present the adolescents' prosocial skill development accurately.

This study is built from foundational research attributing prosocial skill development to 4-H participation. Lerner et al. (2005) conducted a longitudinal study linking 4-H participation to higher school engagement, positive relationships, and increased contributions to the community. 4-H has also been correlated to youths' development of responsibility, work ethic, decision-making skills, and sportsmanship (Avent & Jayaratne, 2017; Davis et al., 2000; Ellsworth et al., 2017; Sage et al., 2018). Lerner et al. (2005) found positive prosocial outcomes in fifth-grade youths, leading the researcher to believe that positive prosocial outcomes could exist in younger 4-H youths. The premise of this study assumes that there is a positive correlation between the two variables of 4-H participation and prosocial skill development with participants in a younger age range. The hypothesis has included a two-tailed test to examine the possibility that there is a negative correlation between the two variables when it is explored with participants in a younger age range.

Delimitations and Limitations of the Study

Delimitations specify what will be included and excluded from the study (Roberts, 2010). The delimitations assist the researcher in defining the focus of the study (Roberts, 2010). This study's delimitations control for youth population demographics. Participants recruited for this study include only youth ages nine to 12, as 4-H membership drops sharply in middle and high school (Baney & Jones, 2013; Decubellis, 2018). A comprehensive literature review showed only a handful of studies of 4-H youths that included youths younger than 12, and only one of those studies examined prosocial skills and relationships in the 4-H program (Lewis et al., 2009).

This study classifies 4-H members as active members in good standing with a county-sanctioned 4-H club. Youths not enrolled in a Florida public school were excluded from this study.

The location is vital to selecting the correct delimitations (Roberts, 2010). Three North Florida counties were selected based on their student population, 4-H membership population, and location to the University of Florida's Institute of Food and Agricultural Sciences (IFAS), the guiding organization for the 4-H program. The selected counties also represented rural, suburban, and urban settings.

The timing of this study was deliberately selected to be conducted in late summer and early fall. Conducting this study in the first semester of school and the initial 4-H enrollment period for the new year ensured an accurate representation of youth 4-H participation and performance on standardized test scores. The FSA scores are typically released mid-summer, and most students do not obtain official copies of their scores until the first quarter of school. Also, surveying students within the initial 4-H enrollment period ensured a larger sample population. Youth 4-H participation in late spring and summer may taper as activities and contests end.

Limitations affect the study and are typically held within the chosen methodology (Roberts, 2010). Many limitations of this study stem from the quantitative methodologies selected for data collection and data analysis. A limitation of correlational studies is the inability to locate the causation. This study utilized survey research, which is subject to participant perception and low response rates (Coughlan et al., 2009). Non-responses affect the final data analysis. Efforts were made to visit each site and thoroughly explain the procedures. The researcher did not retain control over the participants' environmental conditions as the survey was completed. Some youth participants needed adult assistance when completing the survey. Variations in noise, time allotment for survey completion, the amount of adult assistance needed,

and participants' feeling about completing the survey may have affected the overall results. Initially, the researcher attempted to sample the selected population randomly. The low response rate from 4-H club leaders led the researcher to openly invite all club participation from each of the selected counties. Volunteer participation in the study led to a convenience sample and may not lead to an accurate representation of the greater youth population (Creswell, 2012). Inaccurate representation of the population limits the ability to generalize the results outside of the study's scope. In an attempt to collect as many responses as possible, the survey was personally distributed to the youth and adult 4-H participants in five clubs, with the other clubs electing to administer the survey without the researcher present. Finally, the scope of this research was limited to the six weeks allotted for data collection, impeding the longitudinal component advocated by Bronfenbrenner (Tudge et al., 2009). The limited time allowed for data collection may have hindered the opportunity to gather a larger sample of youth and adult participants.

Significance of the Study

This study design introduced three novel concepts to prosocial skill development in youths. The inclusion of students younger than age 12 assists researchers in tracing prosocial skill development into adolescence, beginning from middle childhood at age nine. Existing literature surrounding 4-H and PYD lack participants from middle childhood. Furthermore, researchers recognize there is a nebulous boundary concerning age groups within the PYD framework and have questioned if PYD applies to earlier stages of development (Tolan et al., 2016). Using Bronfenbrenner's EST, the researcher measured the youths' presentation of prosocial skill development in two environments. Previous studies that measured across the mesosystem include the home environment as one of the settings (Hamilton, 2014). This study

measured a new concept of prosocial skill development within the 4-H environment and the school environment to see if prosocial skills are evident in both environments. The data collected in this research presented new relationships between 4-H youth participation and academic achievement as measured by the FSA. Previous studies have correlated academic achievement to students' grades or to previous standardized tests that are no longer used to test Florida's students. Linking current standardized tests that measure and evaluate student and school success to prosocial education is necessary to validate the benefits of this education.

The thorough literature review accompanied by the study results may increase youth practitioners' awareness of the need for prosocial skill development in youths. This research adds to the body of knowledge by educating practitioners on the need to recognize the positive characteristics present in today's youths. Curran and Wexler's (2017) comprehensive review of PYD published in the *Journal of School Health* testifies to the obligation practitioners have to develop an interdisciplinary understanding when examining youth development. Since the concept of prosocial education ensures students have the necessary life skills to become productive citizens, the shift in focus from strictly academics to all elements of prosocial education benefits all practitioners who work with youths (Fink, & Geller, 2016; Wentzel, 1991).

The results of this study may increase practitioners' cognition on the importance of youths' environmental systems. The examination of youth community organizations may be a novel idea for many educators. Awareness of other influences on youth development could encourage a stronger connection across all youths' environmental contexts. Trained volunteers, not professional educators, lead many 4-H clubs. Highlighting the positive effects of 4-H participation could raise awareness of the critical role adult mentors play in youths' lives.

This study may be used to support curriculum changes at the state and local levels as well as policy changes and funding for community organizations. Educators, parents, students, citizens, and legislatures advocate for safe, engaging, and productive school environments. Researchers have taken on a more positive outlook and seek to promote both adolescent development and social policy as a mutually beneficial relationship, especially within the field of PYD (Lerner et al., 2013). Recent events surrounding school violence have led researchers and educators to call for policy changes to embed prosocial skills into education (Bridgeland et al., 2013). Prosocial education embodies character development that is mostly absent in the public school curriculum. Research surrounding prosocial education rarely identifies specific variables that are responsible for the promotion of prosocial skills (Ramey & Rose-Krasnor, 2012). Furthermore, this research may support the call to examine policy changes that have mandated strict adherence to core academic instruction and excluded soft skills such as prosocial skill development (Corrigan et al., 2013). Finally, the National 4-H Council and the U.S. Department of Agriculture fund the 4-H program nationally (Anderson et al., 2015; Hamilton, 2014). This study may be used to support additional funds for youth community organizations to increase the positive effects under a broader range of youth interests.

Definitions of Terms

Academic Achievement

The term is defined in this study as meeting benchmarks on Florida's standardized reading and math assessment (FSA). Students are considered proficient after receiving a score of a level three, four, or five on the annual spring assessment (Florida Department of Education, 2019).

Prosocial Education

The term is defined in this study as a combination of content-specific learning, character development, and social skills development (Higgins-D'Alessandro, 2012).

Definitions of Measures and Variables

The measures and variables are derived from the research purpose and questions. Youths' prosocial skill presentations within the classroom and within the 4-H club environment are compared using the Child Trends Survey. The youths' intensity of 4-H participation is compared to the youths' PYD score, as measured by the Bridge-PYD survey. Finally, this study also examines the moderate influence of youths' intensity of 4-H participation on the relationship between prosocial skill development and academic achievement.

Youths' Prosocial Skill Presentation

This variable is measured using survey results from the Child Trends Survey. Each classroom teacher and 4-H volunteer completed the Likert type scale on youths' exhibition of prosocial skills. The adults' evaluation of the youths' prosocial skill presentation was converted to a scale ranging from one to four and served as the correlated variables in the paired t-test.

E*nvironment*

For the paired t-test analysis, the classroom and 4-H club represent the categorical independent variable in Research Question 1.

Participation Intensity

This variable is an interval variable represented by the average number of hours that the youths participates in 4-H activities per month. Each youth chose one hour or less, two hours, three hours, four hours, or five hours or more. This variable served as the independent variable

for the regression analysis used in research questions two and the moderator variable in Question 3.

Positive Youth Development

Youths' development in competence, confidence, connection, character, and caring/compassion is measured on the Bridge-PYD survey on a scale from one to four. This dependent variable is used in the multiple linear regression for Research Questions 2 and 3.

Academic Achievement

This variable is measured using the FSA benchmark score for reading and math. The FSA scores for reading and math acted as an independent variable for Research Question 3 and are reported on an ordinal scale from one to five.

Control Variable

Student demographics such as race, gender, and age were included in the linear regression. Control variables need to be neutralized to limit their effect on the dependent variable (Creswell, 2012).

Confounding Variables

Confounding variables cannot be controlled in a quantitative study (Creswell, 2012). This study does not attempt to control for youth background or home environment. The first nine years of life are crucial to youths' development, and innumerable factors stem from the youths' interaction with various environmental contexts. Youth environments outside of the classroom and 4-H organization influence each youth participant. Conducting environmental research outside of the laboratory presents the researcher with several variables that are difficult to control. The characteristics of prosocial skill development measured in this study are embedded within the youths themselves. This research examines the environments that foster the youths'

expression of prosocial characteristics. Therefore, the researcher accepts the person within the influences in which they currently exist (Bronfenbrenner, 1992). The benefits of observing participants within the natural environment while accepting additional environmental influences may lead to more significant findings than research conducted in a single context and controlled environments (Bronfenbrenner, 1979).

The leader and teacher's familiarity with the youths may influence survey response. It is not unusual for parents to lead 4-H clubs for youths that include their children. In such cases, the survey responses for each 4-H leader would include the parent perspective as well, a variable not accounted for in this research. Classroom teacher participation may vary as well, depending on student and teacher relationships and the amount of time each student spends in their teachers' classrooms.

Furthermore, participation in additional out-of-school activities may be a confounding variable. A student may participate in additional extracurricular activities, including sports and church activities. The 4-H organization acknowledges a significant dropout rate for youth participation as students reach middle and high school. The dropout rate could be attributed to additional extracurricular activities that are offered in middle school. The population of participants recruited for this study were in elementary school or just entering middle school. The recruitment of younger participants may restrict the number of students participating in extracurricular activities outside of the 4-H youth organization. Excluding students who participate in more than one extracurricular activity would have severely limited the sample population.

Organization of the Study

This study is organized into five chapters. The outline of the study provided in Chapter 1 begins with the study introduction. The background and contextualization of prosocial skill development identified the current status of prosocial skill development and the necessity for this study, along with gaps in the literature. The purpose statement follows the problem statement. An overview of the 4-H thriving model discusses the theoretical framework and the selected methodology. The research questions and hypotheses are presented before a discussion on the assumptions of the study, along with delimitations and limitations that affect the scope of the study. Chapter 1 continues with a discussion on the significance of the study and the definition of relevant terms, measures, and variables. Chapter 1 concludes with the chapter summary.

Chapter 2 presents the topical literature and theoretical literature reviews. The topical literature review begins with an extensive discussion of prosocial education and the 4-H youth organization as a medium for youth development. Chapter 2 also includes a discussion of prosocial skill development in terms of intensity and the relationship between prosocial skill development and academic achievement. The topical literature review concludes with a look into current elementary curricula. Additionally, Chapter 2 includes the theoretical framework for the 4-H thriving model. Chapter 2 concludes with the chapter summary.

Chapter 3 presents the study's procedures and methods. The chapter begins with the research design and site selection. Next, the population sample and sampling method provide the reader with an understanding of the selected participants included in this study. A discussion of ethical issues and permissions leads to a look at the data sources utilized in this study. A look at the research protocol and instrumentation progresses into an analysis of the data collection procedures. An in-depth discussion of the researcher's positionality clearly explains the

researcher's role in this study, a role that leads to research validity. Chapter 3 concludes with the expected data analysis and the chapter summary.

Chapter 4 introduces the data analysis and results of the study. The chapter explores the participants that were included in Research Question 1, the data preparation, presentation of results, and analysis of results. The discussion of participants, the data preparation, the presentation of results, and the analysis of results are repeated for Questions 2 and 3. The chapter concludes with the chapter summary.

The concluding Chapter 5 includes the summary, conclusions, implications, and suggestions for future research. The study summary encompasses the study's major results. The study's conclusions accompany the interpretation of results and implications for scholarly literature, current policy, and professional practice. The study implications also include unexpected results. Chapter 5 continues with suggestions for future research concerning participants, instrumentation, and data collection. The chapter concludes with a discussion of the study's limitations and the researcher's reflexivity. After Chapter 5's summary, the references and appendices are presented.

Chapter Summary

Newly adopted standards are missing elements of collaboration, communication, creativity, and critical thinking in realms outside of reading and math (Elias, 2014a). The added emphasis on academic requirements prevents instructional time from being used to promote prosocial skill development. Academic achievement in the form of high marks on standardized test scores has excluded essential life skills that students need to be productive citizens (Nichols & Valenzuela, 2013). Without being allowed the opportunities they need to develop prosocial skills, students will not have the necessary skills to be successful socially and emotionally (Elias,

2014b). Community organizations such as the 4-H youth organization include opportunities for youths to develop prosocial skills. The answer to increasing youth development of prosocial skills may already exist in community organizations. The purposeful inclusion of prosocial skills in the 4-H youth curriculum assists youths in developing life skills while supporting positive personal and social development (Haas et al., 2015).

This study was framed by the 4-H thriving model, which supported the study of prosocial and academic outcomes for 4-H youths. The recent development of Arnold's (2018a) 4-H thriving model provided a fresh perspective to view 4-H youth development and emphasizes youths' participation. Incorporating Bronfenbrenner's contributing EST called attention to the youths' prosocial behavior in dual environments. Including EST as an embedded theory supported the context of the classroom and 4-H environment in addition to recognizing any ecological transitions that may have occurred across the mesosystem.

This study examined the intensity of 4-H youth participation and the youths' development of the 4-H thriving model outcomes of prosocial skills and the relationship to their academic achievement. This study also inspected whether their prosocial skill development differs between the classroom and 4-H environments. The cross-sectional quantitative study employed survey research to quantify student characteristics of prosocial skill development in the classroom and 4-H environments. The quantitative measures also quantified youths' academic achievement in the form of reading and math FSA scores. The resulting statistical analysis determined the relationships that exist between the intensity of 4-H youth participation and prosocial and academic outcomes. The conclusions and implications of this research expanded the literature on the development of PYD in youths younger than 12 and increased the awareness for prosocial skill development across the youths' environmental contexts.

Chapter 2: Review of the Literature

The crisis exhibited in youths today can be attributed to more extensive social policies that are woven into public school students' educational fabric (Nichols & Valenzuela, 2013). The social policies that insist on student and teacher accountability are outside of the students' realm but still require student participation in high-stakes tests to the exclusion of prosocial skill development (Neal & Neal, 2013). In 1979, Bronfenbrenner noted the absence of building responsibility in American youths, and this trend continues in a broader context today. The environmental factors that influence student development in all context levels are worthy of closer inspection. This study examines 4-H youths' prosocial development across environments to inform current practices and guide policy.

This chapter begins with a thorough exploration of the topical research on prosocial education, PYD, and the 4-H youth organization. Prosocial education's history and current implementation grant background information for youths' opportunities in prosocial education today. The complexity of PYD is demonstrated through a brief description of program principles followed by a description of current research trends. The link between prosocial education and PYD is investigated by comparing prosocial education and PYD. Finally, the 4-H youth organization is carefully traced from its history to its current implementation before current 4-H research, including 4-H's link to PYD and prosocial education, is discussed.

The remainder of the chapter expands on Arnold's 4-H thriving model. The 4-H thriving model constructs are detailed, followed by Arnold's influences, theory evolution, and significant constructs. The recent publication of the 4-H thriving model limits discussion of current proponents and critics along with current research but does allow for the discussion of the

application of PYD in current research. Finally, the framework for the 4-H thriving model is applied to this study, and the chapter concludes with the chapter summary.

Topical Literature Review

Prosocial Education

Prosocial education is a relatively new term created in 2009 to encompass the education of the whole-child (Higgins-D'Alessandro, 2012; Straub, 2012). The idea of prosocial education compares a student's education to a two-sided coin dually instructing academics and social-emotional learning (Higgins-D'Alessandro, 2012). Prosocial education can be thought of as the informal education students receive that may be conveyed under conduct on the report card with terms like "conscientious" and "helpful" (Bier et al., 2016). The commonalities that exist between PYD and prosocial education is evidenced in the multiple examples of literature that use social-emotional learning, character education, and PYD as near-synonyms (Lerner, 2018; Lerner et al., 2017; Moroney & Devaney, 2017; Taylor et al., 2017; Tolan et al., 2016). Prosocial education's multifaceted traits have been classified and defined by several authors. One of the most comprehensive attempts to clarify the various terms can be found in Baehr's (2017) work. Baehr (2017) defined moral character as selflessness and charity, civic character as tolerance and decorum in the community, performance virtues as self-discipline and persistence, and patience outcomes as intellectual virtues, reflected in open-mindedness and inquiry. The assorted terminologies jointly represent the general terms of honesty, integrity, civic duty, and doing what is good because it serves a good purpose (Bier et al., 2016; Oberle et al., 2014; Shields, 2011). Prosocial education incorporates all of these ideas in addition to the notions that the acts are voluntary and intended to benefit others (Lisinskienė & Lochbaum, 2018; Spinrad & Gal, 2018).

History. Despite the relative newness in prosocial education, the fundamental ideas

behind the concept have existed since the ancient Greeks (Straub, 2012). In the United States,

prosocial education can be traced back to Puritan schools and is seen in John Locke's ideas for

morality and rational thinking in colonial boys (Straub, 2012). American statesmen in the 1700s

and 1800s saw the need for public education to inform future citizens of their civic duties and

included a focus on obedience to inform immigrants on American customs (Kidron & Osher,

2012; Shields, 2011). The next significant contribution to prosocial education came from John

Dewey's ideas of promoting democratic education (Straub, 2012). Similar to the early American

statesmen, Dewey saw the schools' opportunity to educate children in their civic duties.

However, Dewey took his ideas a step further by endorsing the idea that schools should also

operate as a microcosm of a democratic society (Dewey, 1998; Shields, 2011; Straub, 2012).

The 1960s brought controversy into the instruction of prosocial ideas. Parents began to

question the school's role in instructing their children in morals and character development

(Kidron & Osher, 2012). The rift continued with the 1970s landmark case to exclude religion

from schools. To avoid conflict, many schools began to exclude the direct instruction of values

and morals (Berkowitz et al., 2012; Kidron & Osher, 2012). This controversy splintered the

evolving field of prosocial education. Social-emotional learning emerged in the last two decades

sharing many of the same attributes as Character Education (Osher et al., 2016). The second

branch of prosocial education known as civics education must contend with conflicting schools

of thought. Some advocates call for instructing students on the government's roles and

responsibilities while also instructing democratic ideals (Elias, 2014b; Shields, 2011). Others call

for the advancement of social justice and empowering citizens (Elias, 2014b; Shields, 2011).

Apprenticeships and on-the-job training informally assisted schools in developing prosocial

skills until the push for college-ready students phased these programs out to near extinction (Higgins-D'Alessandro, 2012). Even today, there remains a fear that teachers will indoctrinate children in ways that are contrary to parental beliefs (Kidron & Osher, 2012). The U.S. Department of Education has recently attempted to avoid controversy by shifting the focus of their coveted grant programs from character education to school climate (Berkowitz et al., 2012).

 Current implementation. Prosocial schools build caring classrooms that can authentically engage students through each child's interest (Baehr, 2013; Battistich, 2008). Prosocial classrooms "foster the development of students' psychological characteristics that motivate and enable them to act in ethical, democratic, and socially effective and productive ways" (Berkowitz et al., 2012, p. 72). A prosocial education initiative advanced by the Association for Supervision and Curriculum Development (2020) encourages teachers to educate the physical, emotional, social, and academic child instead of focusing on producing only high achieving students (Baehr, 2013). Prosocial education is more about encouraging the healthy development of intellectual virtues through meaningful practice than the memorization of facts or the definitions of values (Baehr, 2013; Baehr, 2017; Shields, 2011). Freeing teachers to focus on developing a student's character naturally generates long-term learning in contrast to academic-only instruction (Shields, 2011). The incorporation of open-mindedness, collaboration, and curiosity organically produce intellectual virtues such as communicating, logical thinking, interpreting, scrutinizing, questioning, and reflecting (Baehr, 2013; Baehr, 2017; Shields, 2011). Instructing children in prosocial education conjoined with academics will be the only way students will achieve lifelong learning (Baehr, 2017).

 Out-of-school programs are a natural place to develop prosocial skills. The adult and youth connections and the out-of-school program's ability to function without mandatory

academic mandates create caring and engaging environments that reduce the risk of failure (Hurd & Deutsch, 2017). More than 10 million children spend time in some type of out-of-school program (Afterschool Alliance, 2014). The popularity of out-of-school programs and adolescent sports teams suggests the importance that non-academic instruction plays in a student's development. Out-of-school programs include 4-H as well as Boy and Girl Scouts, YMCA programs, youth sports leagues, religious organizations, and special interest clubs supported by schools or communities (Lerner et al., 2014). Many out-of-school programs intentionally incorporate prosocial education through systematic instruction and most enhance youths' prosocial skills by cultivating the development of eight components: safety, structure, youth belonging, positive social norms efficacy, skill-building, integration of the youths' family, school and community, and nurturing and support (Hurd & Deutsch, 2017). In addition to providing prosocial education, out-of-school programs have been cited as opportunities for youths to advance gaps in their learning through enrichment experiences (Leos-Urbel, 2015; Thiry et al., 2017). The relationships formed throughout school programs serve as the nutrients to prosocial education. Program staff often come from the youths' community, and many times staff in afterschool programs are closer to the youths' age (Hurd & Deutsch, 2017). Shared interests in the community lead to informal conversations between the adult and youth participants providing optimal opportunities for adults to advance prosocial skills through modeling and discussion (Hurd & Deutsch, 2017). In addition to adult and youth relationships, instilling prosocial skills in youths require safe and structured learning environments that can directly communicate values through a positive message over a period of time (Elias, 2014b). However, even out-of-school programs have difficulty measuring youth prosocial benefits using traditional methods of

measuring achievement. The PYD theory has offered prosocial education a chance to reevaluate how youth development is examined.

Prosocial Education and Positive Youth Development

This study suggests that specific elements of prosocial education are part of the underlying processes for PYD. The evaluation of prosocial skills within a PYD framework supports cohesion among the various developmental systems. Social competence, social-emotional learning, PYD, and positive psychology, share significant commonalities, including descriptions and measurement tools (Tolan et al., 2016). A progression to incorporate character as an indicator of PYD can be seen in recent work by Lerner et al. (2017), which positions PYD and character development under the broader framework of the developmental systems theory. The PYD theory seeks to achieve fundamental elements of prosocial education by promoting relationships along with social, emotional, moral, behavioral, and cognitive competence, in addition to fostering resilience, spirituality, and self-efficacy (Catalano et al., 2004). The PYD theory also promotes a belief in the future, and opportunities for prosocial involvement (Catalano et al., 2004).

PYD and elements of prosocial education share commonalities in their historical evolution with the implementation strategies seen in today's curriculum. The history of social-emotional learning, character education, positive psychology, and PYD can be traced through three decades of developmental science research despite coming from different disciplines and philosophies (Moroney & Devaney, 2017; Tolan et al., 2016). Researchers acknowledge that these elements are merging into common characteristics and are beginning to be implemented in a similar fashion (Moroney & Devaney, 2017). An examination of the social-emotional curriculum implemented both in the United States and internationally uncovered a connection

between PYD and social-emotional learning. School-based prevention strategies combined with PYD approaches are shown to improve the school culture and increase student social and emotional outcomes (Greenberg et al., 2003). Explicit instruction of social-emotional learning produced positive gains in PYD indicators such as attitude and well-being and was still evident up to 195 weeks after the program's conclusion (Taylor et al., 2017). Through the application of PYD and prosocial education, positive outcomes transcended the youths' race, socioeconomic status, and even school location. According to Lerner (2018), "Character development involves attaining the feelings, thoughts, and skills needed to act coherently across time and place to serve self and others in mutually beneficial, positive ways" (p. 267). Lerner's (2018) descriptors for character development, including mutually beneficial relationships and positive cognitive, social, and emotional learning hold the same values as prosocial education (Bier et al., 2016; Higgins-D'Alessandro, 2012; Lisinskienė & Lochbaum, 2018; Oberle et al., 2014; Shields, 2011; Spinrad & Gal, 2018). Character can also be seen as a building block for youth thriving and contribution that occurs within the individual's environmental context; and character calls on the individual to morally and behaviorally do the right thing (Callina & Lerner, 2017; Lerner, 2018). Research showing successful character development initiatives, including mentors, occasions to practice new skills, and opportunities to take leadership roles within various ecological contexts, mimics PYD principles (Lerner, 2018).

Youth clubs, athletic opportunities, and creative arts provide ecological assets to thriving youths (Agans et al., 2014). Youth programs that practice high-quality PYD naturally incorporate prosocial skill development in addition to social-emotional learning and character development (Moroney & Devaney, 2017). Just as Dewey advocated for youths to actively participate in learning, youths must also experience and engage in prosocial education (Kress,

2014). Therefore, the components of social awareness, responsible decision-making, and relationship skills evidenced in social-emotional learning outcomes can be combined with character development to compose prosocial education (Tolan et al., 2016).

The 4-H Youth Organization

The 4-H youth program is an intuitive youth organization that reflects the needs of the community while allowing participants to develop life skills, build leadership skills, and practice good citizenship skills within a safe learning environment (Borden et al., 2014; Cassels et al., 2015; Jones & Skogrand, 2014; Kinsey, 2013). Youths in the United States rate below the average for essential life skills such as analyzing, communicating, and problem-solving. The 4-H program generates valuable life skills such as communication, relationship building, goal setting, responsibility, and independence all while in a safe environment that promotes belonging (Anderson et al., 2015; Borden et al., 2014; Davis et al., 2016; Radhakrishna et al., 2013). The 4-H program allows for student choice, authentic engagement, and time to work toward mastery. 4-H effectively develops the whole-child socially, emotionally, cognitively, and physically using developmentally appropriate methods.

4-H Youth Organization's History. The 4-H program has existed for more than 100 years (Borden et al., 2014). The 4-H program began with the Morrill Act of 1862 when land-grant universities were established in support of agricultural education outreach programs to local communities (Borden et al., 2014; Downey et al., 2014). Originally known as "corn clubs" for boys and "tomato clubs" for girls, Florida's various 4-H youth organizations were recognized through state land-grant opportunities in 1909 and became training grounds for democratic and civic education (Hamilton, 2014; Kress, 2014; University of Florida IFAS Extension, 2013). At the Federal level, the 1914 Smith-Lever Act formally established the cooperative extension

system within the United States Department of Agriculture (USDA) in conjunction with state and county grants. The USDA and grant systems funds the 4-H program to this day (Anderson et al., 2015; Hamilton, 2014; University of Florida IFAS Extension, 2013). The 1960s brought the racial integration of 4-H clubs and the combining of boys and girls into the same clubs. Around the same time, 4-H programs moved out of the school setting and began to function as separate clubs led by adult volunteers in order to comply with a federal mandate (University of Florida IFAS Extension, 2013). The current 4-H youth program continues to serve youths as extensions from land-grant universities.

The National 4-H Council directs the 4-H youth program for each state. In Florida, the University of Florida is responsible for coordinating the Florida 4-H youth program. Initially, Florida A&M served the African American youths, while Florida State served the White girls, and the University of Florida served the White boys. When the clubs combined in the 1960s, the University of Florida established an associate dean position to function as the official extension service of the parent organization for 4-H programs (University of Florida IFAS Extension, 2013). In 1996, a state 4-H office was established to provide leadership for statewide programs, including communication, marketing, accountability, facility management, scholarships, and curriculum (University of Florida IFAS Extension, 2013). Florida is divided into five regions, with each region supporting their respective counties through extension agents and professionally trained 4-H youth educators in addition to community volunteers.

4-H Youth Organization's Membership. As America's largest youth organization, the 4-H organization serves over six million youths in 3,000 counties nationally. More than 3,500 professionally trained youth educators and 540,000 volunteers support youths ages 5–18 (Downey et al., 2014; Kinsey, 2013; Lerner et al., 2014). The program boasts more than 25

million alumni, including many well-known scientists, politicians, athletes, business leaders, entertainers, and a United States President. The 4-H youth program exists in all geographic communities, as shown in Table 1.

Table 1

2017-2018 National 4-H Membership

Residence location	National 4-H membership	Florida 4-H membership
Cities	1.25 million	56,254
Towns and suburbs	1.75 million	99,781
Rural communities	2.9 million	44,542

Note. Data from University of Florida IFAS Extension (2018b).

The Florida 4-H program shares many similarities with the National 4-H program. The 2017-18 Florida 4-H annual statistical snapshot shows that almost 200,000 youths are served through the Florida 4-H program (University of Florida IFAS Extension, 2018a). Students in grades kindergarten through fifth-grade make-up 71% of the membership. Youth participation rates drop off sharply in middle and high school (Baney & Jones, 2013; Decubellis, 2018). The Florida 4-H program is also a geographically diverse program with 22% of youths living in small towns or farms, 25% living in towns and suburbs, and 53% living in suburbs and cities with populations greater than 50,000. The Florida 4-H youth is made up of 73% White youths and 20% African American youths. Florida's 4-H ethnic make-up is 76% Non-Hispanic youths and 24% Hispanic youths. Membership by gender is almost evenly split, with 51% female members compared to 49% male members (University of Florida IFAS Extension, 2018a).

4-H Youth Organization's Curriculum. The adaptability of the 4-H curriculum to meet local needs may be a crucial contributing factor to the organization's endurance. Unlike

traditional curricula, 4-H does not have to abide by specific curriculum demands or assessment accountability and is free to offer a broad range of activities (Hurd & Deutsch, 2017). 4-H can connect with youths through preferred curricula such as science, technology, engineering, arts, and math; and as the number of family farms has decreased, the 4-H youth organization has expanded the program to incorporate urban and suburban youths with gardening, financial literacy, STEM activities, and civic engagement (Hamilton, 2014; Kress, 2014).

The 4-H curriculum offerings meet the youths' interests at many levels while also developing essential life skills. The National 4-H curriculum can be categorized into four broad components, including healthy living, science, citizenship, and agriculture (University of Florida IFAS Extension, 2018b). Reviewing the literature reveals an exhausting list of 4-H offerings including (a)robotics, (b) quilting, (c) raising livestock, (d) outdoor skills, (f) shooting sports, (g) gardening, (h) photography, (i) public speaking, (j) fashion, (k) animal science, (l) computer science, (o) geology, (p) astronomy, (q) community service, (r) ATV safety, (s) performing arts, (t) sewing, (u) money management, (v) marine science, (w) woodworking, (x) sportfishing, (y) food and nutrition, and (z)dog training (Henness et al., 2013; Jones & Skogrand, 2014; Schmitt-McQuitty et al., 2014; Zanolini et al., 2013). Progressive education roots lay the foundation for the inquiry-based, experiential learning that allows 4-H students to experience the authentic application in the program (Schmitt-McQuitty et al., 2014). Curricula in the 4-H program are also focused on the development of life skills through the eight essential elements shown in Figure 1. The elements are categorized into mastery, independence, belonging, and generosity which are also encompassed in prosocial education (Cassels et al., 2015; Kress, 2014). Additional elements, such as interdependence and multicultural experiences have been suggested but not formally adopted (Astroth, 2014; Haas et al., 2015).

Figure 1

The Eight Essential Elements of 4-H

Four Key Concepts	
Belonging	**Mastery**
Positive Relationships with a Caring Adults An Inclusive Environments A Safe Environment	Engagement in Learning Opportunities for Mastery
Independence	**Generosity**

Opportunities to See Oneself as an Active
    Participant in the Future
Opportunities for Self-Determination
	Opportunity to Value and Practice Service for
	    Others

Note. Reprinted from "Promoting the Essential Elements of 4-H Youth Development Through an

Experiential Learning Model," by S. Meyer and K.R. Jones, 2015, *Journal of Extension 53*(5), p.

2. Reprinted with permission (Appendix A).

      The hands-on exploration seen in 4-H curricula design is based on Kolb's experiential

learning. According to Kolb and Kolb (2005), experiential learning creates a process to

transform experience into knowledge. The learner can construct knowledge by incorporating new

experiences with previous knowledge (Baker et al., 2012; Kolb & Kolb, 2005). The experiential

learning design allows 4-H youths to learn through the cycle of experiencing, reflecting,

thinking, and acting (Kolb & Kolb, 2005). The idea of Kolb's experiential learning is to move

learners beyond just experiencing learning. Learners are encouraged to connect their learning to

thinking (Baker et al., 2012). 4-H curricula embrace the idea of connecting the learning to direct

experiences by creating safe learning spaces allowing expert guidance, interactive dialogue, and

ample time to develop expertise in a self-directed learning path (Kolb & Kolb, 2005). The

emphasis on hands-on, self-directed learning, and the time provided to youths to develop mastery

is in contrast to the traditional public school curricula. The experiential environment must

present opportunities to act, reflect, think, and feel (Kolb & Kolb, 2005). 4-H curricula are specifically designed to assist youths in developing life skills, as seen in Figure 2, while supporting positive personal and social development through hands-on exploration of citizenship, healthy living, and science (Haas et al., 2015).

Figure 2

The 4-H Targeting Life Skills Model Developed by Hendricks (1998)

Note. Reprinted from "Targeting Life Skills in 4-H (4-H FS 101.9)," by M.N. Norman and J.C. Jordan, 2006, Retrieved from https://4h.org/wpcontent/uploads/2016/02/101.9_ Targeting_Life_Skills.pdf. Reprinted with permission (Appendix A).

There is great flexibility in 4-H's delivery models, as seen in Figure 3. Youths are served through summer camps, afterschool clubs, monthly evening club meetings and school education visits (Cassels et al., 2015; Downey et al., 2014; Haas et al., 2015; Henness et al., 2013; Kinsey, 2013; University of Florida IFAS Extension, 2009). Participants can explore their sparks through

the 4-H curriculum by self-selecting their programs based on their area of interest (Henness et al., 2013; Scales et al., 2011). In Florida, four residential camps situated around the state provide leadership retreat weekends and weeklong summer camps. The push for healthy food and nutrition education for today's youths has granted funding for 4-H educators to instruct youths during school hours as an educational outreach program. Health and nutrition, along with other school enrichment programs, reach more than 155,000 Florida youths (University of Florida IFAS Extension, 2009; University of Florida IFAS Extension, 2018a). More than 50,000 Florida youths are served through special interest programs or organized clubs (University of Florida IFAS Extension, 2018c). The organized 4-H club is considered the highest degree of 4-H participation leading to the most significant number of positive outcomes.

Many times, 4-H youth experiences culminate in a contest or a leadership opportunity. Youths may compete in "skillathons" for various skill sets such as livestock breed identification or equipment identification (Davis et al., 2016). The long-term 4-H youth livestock project encourages youths to set goals for personal development by requiring youths to select animals to train, groom, maintain records of, properly feed and provide for long-term health care (Anderson, et al., 2015; Ellsworth et al., 2017; Mueller, 2014; Wooten et al., 2013). County, regional, and state contests provide opportunities for youths to exhibit skill sets for events like photography, performing arts, public speaking, livestock exhibition, or shooting sports. In Florida, the Tropicana speech is conducted annually in elementary schools all over the state to encourage the practice of public speaking for students in fourth and fifth grades. The contest culminates with regional winners from across the state competing at the Florida State Fair (University of Florida IFAS Extension, 2009).

Figure 3

Approaches to 4-H Youth Development
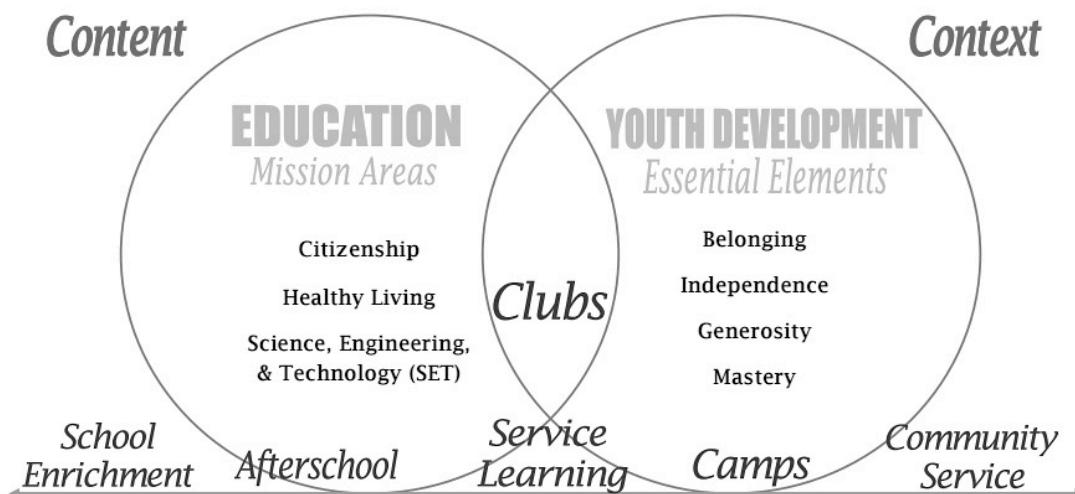
Note. Reprinted from *Louisiana 4-H: 4-H Framework* by C. A. Kress and adapted by A. Coolman & J. Fox, 2020, Retrieved from https://www.lsuagcenter.com/topics/kids_teens/ get%20involved/join/why_join_4h/4-h_framework. Reprinted with permission (Appendix A).

4-H and Prosocial Skill Development. The copious amount of research that has been conducted through 4-H participation contributes to shared understandings of the benefits of 4-H membership. These results replicate much of the PYD research in terms of prosocial and academic outcomes, community involvement, and the power of relationships in youth development. The research also presents opportunities for improvement in both the 4-H youth organization and data collection methods.

Perhaps the most studied component of 4-H is the youths' prosocial development. The eight-year longitudinal research conducted by Lerner et al. (2005) forms a foundation for contemporary research linking 4-H to PYD and results in higher school engagement, positive relationships, and increased contributions to the community. Lerner et al. (2005) hypothesized that positive youth development is cultivated through the 5Cs, competence, confidence,

character, caring/compassion, and connection that are exhibited in the 4-H program. Youths'

increase in PYD attributes translate into healthy development (Lerner et al., 2014). Other

researchers discuss the role 4-H plays in the development of character skills such as

responsibility, work ethic, decision-making, stress management, and sportsmanship (Avent &

Jayaratne, 2017; Davis et al., 2000; Ellsworth et al., 2017; Sage et al., 2018).

     4-H youth participants report high amounts of satisfaction and skill-building throughout

their 4-H programs. Surveyed youths agree 4-H's impact has challenged them to develop their

leadership skills, exposed them to higher education, and impacted their career choices (Anderson

et al., 2015; Davis et al., 2016; Maley et al., 2016; Zanolini et al., 2013). Cassels et al. (2015)

surveyed 4-H youths in three counties and found that more than 90% of the youths felt they were

contributing to their club, were happy when other members did well, were comfortable

participating in meeting activities, and were confident in their leaders. Similarly, Haas et al.

(2015) studied 6,000 4-H youths to discover that the longer youths were in 4-H, the more life

skills they gained; females reported an increase in decision-making more so than males, as well

as a greater increase in critical thinking, communication, goal setting, and problem-solving. New

Jersey youths cited new friendships, feeling welcomed, and respect as positive indicators of their

4-H participation (Kinsey, 2013). Also, a 4-H master gardening program increased workforce

skills such as punctuality and attitude in at-risk youths between fifth and eighth grades (Cutz et

al., 2015). 4-H members' social media accounts serve as testaments to youths embracing

Lerner's 5Cs, as researchers have found media posts on topics of responsibility, empathy,

gratitude, and leadership (Lee & Horsley, 2017). Surveyed 4-H parents also present similar

conclusions noting that 4-H offers a safe place to develop valuable life skills, and the program

made a positive impact on the family (Radhakrishna et al., 2013). Content-specific outcomes such as livestock projects and nutrition education exist as well.

Livestock projects naturally integrate STEM activities and promote cognitive growth in addition to prosocial behaviors. Livestock evaluation, health care, nutrition decisions, and reproduction represent the sciences, while herd management, record keeping, and marketing reflect technology. Raising animals requires youths to make contributions beyond themselves and provides a context to take on new perspectives (Mueller, 2014). Youth development can be traced through social relationships, work ethic, problem-solving skills, empathy, and teamwork as well as higher stress management and an increase in self-worth, prosocial skills that are evident in animal projects (Davis et al., 2000; Ellsworth et al., 2017; Mueller, 2014). Mueller (2014) went on to state that youth-animal relationships promote social relationships with people by serving as a practice point for social skills such as reciprocity and caring behaviors. The exhibition of the animal can foster a sense of healthy competition, encourage a feeling of achievement and develop compensation-loss-based skills necessary to overcome the disappointments in life (Baney & Jones, 2013; Mueller, 2014). A unique factor in showing livestock is the contextual relationships adolescents develop with diverse people who share the same interests regarding the animals that might challenge the youths to develop resilience when the animals are uncooperative or become ill (Davis et al., 2000; Mueller, 2014). Finally, Davis et al. (2000) identified 4-H youths that demonstrated sportsmanship in losing and humbleness in winning, both established prosocial values.

4-H health and wellness programs improve nutrition awareness as well as physical well-being. Downey et al. (2014) surveyed 4-H members between the ages of nine and 19 and reported increased healthy habits and physical exercise as compared to non-4-H members. A

garden-based curriculum used with youths ages seven and eight and 12 through 19 to promote

nutrition, fitness, and gardening skills saw teens meet self-efficacy outcomes as well as an

increase in nutrition, fitness, and gardening knowledge (Bolshakova et al., 2018). Cognitive skill

transfer exists in 4-H programming, as seen in the 4-H PALS PYD afterschool program's ability

to teach fifth grade and sixth-grade youths to make healthy choices in their homes and schools

(Riciputi et al., 2019).

      4-H and Academic Outcomes. Academically, research has shown that students

participating in 4-H have higher levels of academic achievement as compared to their non-4-H

peers (Ellsworth et al., 2017; Flores-Lagunes & Timko, 2015; Hershberg et al., 2014; Lerner et

al., 2005). Leos-Urbel (2015) noted that afterschool programs can play an essential role in

closing the achievement gap for low socioeconomic and racial subgroups; this effect signifies the

vital role 4-H may play in reducing disparities in addition to raising all youths' achievement.

Qualitative research indicates students expressed higher confidence in their academic capabilities

in the ninth and 12th grades compared to sixth-grade students; this result suggests that students'

academic confidence increases with the amount of time they have spent in the 4-H program

(Hershberg et al., 2014). Data from Lerner et al.'s (2005) longitudinal study has been used to

trace 4-H youths' level of social connection to increased school engagement leading to academic

success (Chase et al., 2015; Li et al., 2010). After controlling for confounding variables, Flores-

Lagunes and Timko (2015) confirmed a causal relationship between 4-H participation and higher

scores on the Florida Comprehensive Assessment Test, a previous reading and math standardized

assessment given to Florida students. A statistical significance exists for 4-H members' level of

participation, which resulted in greater on-level and above-level Florida Comprehensive

Assessment Test scores (Flores-Lagunes & Timko, 2015). 4-H is also making an impact on

female perceptions of STEM content by counteracting the negative attitude that generally

develops as girls age (Wang & Billington, 2016). Interestingly, a greater focus on purposeful

engagement in out-of-school programs correlated to lower test scores for elementary and middle

school students, suggesting 4-H self-directed study might present higher academic achievement

(Leos-Urbel, 2015).

4-H and Civic Duty and Community Contributions. 4-H program goals include

developing caring members who are responsible and contributing members of the community

(Sage et al., 2018). Youths are encouraged to extend themselves into service to both the

community and others. 4-H members have volunteered in their community more often than non-

4-H peers through events such as planting trees, building ramps at senior centers, gathering and

delivering materials for local shelters, teaching money skills to preschoolers, planting a

community garden for low-income residents, establishing a food drive, and developing an

African-American heritage museum (Avent & Jayaratne, 2017; Henness et al., 2013; Peterson et

al., 2014). Over 4,000 4-H youths cited improvement in their public speaking skills, organizing,

and planning as well as a more positive attitude toward adult and youth partnerships and

community involvement as a result of their community service (Peterson et al., 2014). Civic

responsibility complements the contribution curriculum in the 4-H program. 4-H creates an

environment in which youths can naturally develop leadership skills (Baney & Jones, 2013;

Henness et al., 2013). Community contribution and civic engagement join youth and adults in a

common purpose and promote a stronger community bond (Henness et al., 2013).

4-H and Relationships. Adult participation in the 4-H program is a critical element to the

program's success, and the adults often connect well with the youths because they come from the

same community (Borden et al., 2014; Radhakrishna et al., 2013). The adults can promote

prosocial education by allowing youth autonomy and choice while also providing structure and supervision (Hurd & Deutsch, 2017). Weybright et al. (2016) spoke to the 4-H program's ability to foster youth-adult partnerships and to build youths' self-efficacy; the program creates an environment for creating positive social change, structure, a sense of ownership, and the adult's ability to scaffold the youths' new learning, all of which Roth and Brooks-Gunn (2016) required for quality youth programs. Adult mentors set high expectations, make themselves available to the youths', and focus on the youths' personal development as well as their skill development in addition to encouraging youths to persevere through tough projects (Henness et al., 2013; Voigt et al., 2014). Also, youths can see professionalism, teamwork, time management, and decision-making modeled by adults (Calvert et al., 2013). Youths' ability to have a voice, to participate in the decision-making, and to build a relationship with an adult mentor is evidence of prosocial skill development (Weybright et al., 2016). 4-H increases youths' quality relationships with content experts, caring adults, and peers through meaningful projects that require the youths to use cognitive knowledge to solve identified issues (Kinsey, 2013; Rice et al., 2016). The relationships formed through the 4-H youth program also allow youths to increase their social capital (Kinsey, 2013).

4-H Critiques and Recommendations. Several themes emerge from the 4-H literature that calls for needed improvements. The 4-H youth organization recognizes the need for more diverse youths to participate in the organization. Youths of color and youths with disabilities are underrepresented in the 4-H organization (LaVergne, 2015). A dilemma of sorts exists for the 4-H organization as the organization attempts to adapt to youths in the 21st century while also staying true to the organization's mission and vision (Borden et al., 2014). Identifying barriers and actively working to find solutions led to a youth survey that showed that some non-members

felt excluded in the 4-H program, but current members are primarily in favor of greater diversity within the organization (Avent & Jayaratne, 2017; Sumner et al., 2018). Barriers to participation in 4-H, as with other out-of-school programs, include lack of family awareness about the program, scheduling conflicts, parental perception of 4-H, the absence of role models that reflect the served youths, and transportation issues that prevent youth participation (Avent & Jayaratne, 2017; LaVergne, 2015). One researcher suggested that 4-H leaders should partner with the school community to gain a better understanding of how to work with diverse youths (LaVergne, 2015).

Despite the positive results in the reviewed literature, some researchers have expressed criticism with the current research finding and components of the program. Many of the studies used to evaluate out-of-school programs, including 4-H, are not evaluating curricula or specific activities. Researchers are using research methods that do not link prosocial components to the program (Anderson et al., 2015; Hurd & Deutsch, 2017; Mueller, 2014). Hurd and Deutsch (2017) called for the expansion of what is considered effective practices for youths into a broader context. Revising the definition of "effective practices" to include more social-emotional components may reveal prosocial factors that contribute to academic achievement. An exhaustive list of available research related to 4-H youth outcomes indicates that existing evidence is weak, and extensive research is still needed (Maley et al., 2016).

4-H research uses a variety of methodologies to create a complete picture, but common weaknesses exist. Much of the existing 4-H literature cannot generalize the authors' works outside of the 4-H youth development field. For example, Roland and Fisher's (2016) article on teaching husbandry skills to 4-H students, published in the *Journal of Extension,* was little more than a lesson plan in written form. The narrow audience for 4-H literature could be hindering

meaningful research that will move PYD research from investigating if PYD is occurring to investigating why it is occurring (Roth & Brooks-Gunn, 2016). Youth organizations, especially 4-H, provide extensive PYD opportunities, and researchers must become more meaningful in determining how to collect data and share it with diverse audiences. Selected participants also present difficulties generalizing to the greater population because of small sample sizes or an oversampling of White youths (Anderson et al., 2015; Lerner, 2018; Ratkos & Knollenberg, 2015). Lerner et al. (2014) admonished researchers for focusing on available participants and reiterate that the purpose of the research is to affect public policy for all learners.

4-H literature, as with PYD and prosocial literature, would benefit from a standardized framework to evaluate all programs' effectiveness (Downey et al., 2014). A standard framework would make program-to-program comparisons more meaningful and reveal population differences that could allow for differentiation within the curriculum. Finally, the selected populations in 4-H studies typically begin with adolescents and exclude middle-childhood years. The goal of PYD is to understand the first three decades of development, a goal that will require researchers to examine participants younger than the typical population studied (Lerner, 2018). Tolan et al. (2016) challenged the restriction of PYD to specific developmental periods and suggest that examining PYD outside of the typical framework will add to the field's understanding of how PYD development occurs across development. 4-H has been used as a backdrop in many PYD studies, but the participant population generally relies on older youths. By including youths from middle childhood, researchers may discover common origins of prosocial skill development, informing PYD research, adolescent development, and 4-H programming.

Prosocial Skill Development Programs and Intensity

There are notable differences in prosocial skill development programs. Social-emotional learning is most evident in school performance components that help the youths to be successfully engaged in academic pursuits, and social-emotional learning begins with the classroom as the primary environment (Greenberg et al., 2017; Tolan et al., 2016). Social-emotional learning addresses early and middle childhood, while PYD is typically associated with adolescence (Tolan et al., 2016). The PYD theory and positive psychology advocate for a positive approach to youth development, while social-emotional learning and social competence frameworks advocate for the absence of problem behaviors (Tolan et al., 2016). The ideas behind PYD are evidenced through characteristic assets. In contrast, social-emotional learning and social competence are seen through skill orientation (Tolan et al., 2016). An examination of the social-emotional learning curriculum implemented in elementary schools showed that programs tend to focus on emotional or social outcomes and include few cognitive outcomes such as goal setting or planning (Jones et al., 2017). These minor differences in the prosocial continuum could be addressed through a common framework, a technique that would lead to better alignment in data collection, and the ability to compare outcomes.

Research surrounding PYD, prosocial skill development, social-emotional learning, and character development share similar outcomes. The strengths-based outlook of PYD is a natural approach to create a supportive environment for youths to practice their social-emotional learning within context (Moroney & Devaney, 2017). Each social-emotional learning, PYD, social competence, and positive psychology framework share commonalities in elements of self-control, self-confidence, youth engagement, efficacy, and establish moral and social boundaries, although these elements are emphasized stronger in some frameworks than others (Tolan et al.,

2016). Curran and Wexler (2017) included school-based social-emotional learning programs and topics such as cultural awareness, healthy choices, and civic engagement as evidence of PYD. The inclusion of examples like healthy choices may be unconvincing regarding PYD and may confuse the efforts that are being made to build consensus, but there is room for a compromise. Calls for a common framework with a shared language between the multiple approaches or a local framework that reflects community needs are being made (Moroney & Devaney, 2017). Research questions and measured outcomes of prosocial education mimic PYD outcomes, and there is a clear need to compare frameworks and eliminate redundancies (Lisinskienė & Lochbaum, 2018).

Youths' interaction with these programs can be measured through intensity, also referred to as "dosage." A meta-analysis conducted by Corcoran et al. (2018) analyzed over 40 research studies for low intensity, fewer than 75 minutes a week, and high-intensity school-based social-emotional implementation. Corcoran et al. (2018) concluded that school-based social-emotional curriculum did not correlate to program intensity. Conversely, Hansen and Larson (2007) examined out-of-school program intensity. Intensity was shown to account for 9% of the variance and demonstrated a linear relationship between positive experiences and dosage. Lynch et al.'s (2016) study credited Hansen and Larson (2007) as contributing to the intensity variable. Lynch et al. (2016) included intensity with the understanding that an increase in youths' interaction with positive developmental processes would also increase positive developmental outcomes.

Prosocial Skill Development and Academic Achievement

The stagnant student achievement in Florida and across the U.S. is often compared to countries around the world. Higgins-D'Alessandro (2011) attributed the sluggish academic gains

to the cultural attributes that exclude prosocial education to promote high academic achievement. In the U.S., students view academic success as an inherent ability that humans are born with while their Asian counterparts are educated to value the contribution of prosocial skills such as determination, hard work, and overcoming failure as factors in academic achievement (Higgins-D'Alessandro, 2011).

There is renewed interest in including prosocial skills back into core education components. The promising correlation between youths' social and emotional well-being with academic success could account for the inclusion of prosocial language in the recent Every Student Succeeds Act (Moroney & Devaney, 2017). However, there is a lag between reform policy and school-level implementation. Florida public schools require standardized testing in reading, math, and science beginning in third grade (Florida Department of Education, 2019). However, critics argue that schools do not have time for non-cognitive instruction. In today's education climate, success is measured in quantifiable test scores, not in the quality of education (Shields, 2011). Implemented school programs must be evidence-based, generating measurable gains in cognitive areas. Public schools endeavor to compensate for the lack of instructional time by embedding prosocial components within other tested subject areas. Nevertheless, social studies and the associated prosocial elements are untested and, as a result, often untaught.

There is research to support prosocial skill development contributes to academic gains indirectly through social-emotional programs, and emerging research is beginning to show prosocial education could be the missing link in closing the achievement gap (Higgins-D'Alessandro, 2012; Jones et al., 2017). Lemberger et al. (2018) measured students receiving social-emotional learning against a control group and found an increase in reading and math that exceeded the expected growth as well as the control group on the Common Core Interim

Assessments. Elias (2014a) attributed social-emotional learning programs with increasing youths' standardized assessments by 10 and half points. A meta-analysis of 213 studies attributed social-emotional learning with an 11%-point gain in academic performance (Durlak et al., 2011). Durlak et al. (2011) also concluded that social-emotional learning generated medium effect sizes for test scores and grades. Finally, Corcoran et al. (2018) concluded that social-emotional learning is predictive of academic achievement and produced moderate effects for reading (.25) and math (.26) with a smaller effect size seen in science (.19).

The current policies requiring short-term academic outcomes are not always aligned to the prosocial education goals and threaten youths' opportunities for exploration and development in non-cognitive areas (Bier et al., 2016; Corrigan, 2012; Higgins-D'Alessandro, 2012; Hurd, & Deutsch, 2017). Positive attributes emerge when measurement outcomes focus less on the academic product. Advocates for prosocial programs cite youth benefits that include increased school engagement, a decrease in conduct concerns, and an increase in self-assurance (Greenberg et al., 2017). Allowing researchers to shift the outcome measurements to match the core principles of prosocial education could produce significant results for prosocial education. Prosocial education has been attributed to reducing many of society's problems such as bullying, truancy, dropout rates, and risk behaviors (Battistich, 2008; Fink & Geller, 2016). Studies show that the lack of prosocial education leads to the absence of social connections, resulting in lower academic achievement and student engagement (Oberle et al., 2014).

Structure of Elementary Curricula

The academic pressure placed on many public schools makes it difficult to promote moral development or lifelong learning through the curriculum. The adoption of Common Core Standards raised the academic bar for many states, but prosocial education is casually reflected

in the new expectations. Florida standards require that some form of social-emotional curriculum be implemented within the schools. However, a quick check of Cpalms.org, the repository for Florida curriculum standards, shows a handful of social-emotional standards throughout the kindergarten through 12th-grade curriculum. Florida's course mandates require elementary schools to provide youths with an uninterrupted 90-minute reading block, 60-minute math block in addition to writing, science, social studies, and intervention times. After lunch, special areas (art, physical education, and music) and the 30 minutes of mandated physical activity, there is no time left in the six-hour and 40-minute day to implement activities outside of the core subjects.

Schools are cognizant of the importance of prosocial education and attempt to meet youths' needs through a variety of implementation methods. Often, schools will embed prosocial education through a school-wide culture that is delivered through programs such as The Leader in Me, Advancement Via Individual Determination (AVID), or Positive Behavioral Interventions and Supports (PBIS; Corcoran et al., 2018). Many times, these programs are not implemented with fidelity, and significant variances in implementation are exposed at the school-level (Durlak et al., 2011). Other systems attempt to address specific groups or classrooms, which result in fragmented implementation (Oberle & Schonert-Reichl, 2017). In addition, the program implementation often falls to the school's guidance counselor, who is simultaneously handling many administrative and managerial duties (Lemberger et al., 2018).

When one listens to educators speak, the terms they use to achieve student engagement are synonymous with virtues or character traits that are not found in academic content. This hidden curriculum can be seen in the relationships students make, the types of student collaboration used, and the overall school culture (Shields, 2011). The intention behind this demonstrates educators' wishes to teach to the whole-child, not merely to present facts and

figures to be memorized (Higgins-D'Alessandro, 2012). Parents value teachers who instill positive characteristics to put their children on successful paths. The idea is to make sure students are ready for life, not just academic success (Fink & Geller, 2016). However, many barriers exist for teachers to implement prosocial education within the classroom. Teachers cite a lack of resources, diminishing administrative support, loss of instructional time, and lack of training (Oberle & Schonert-Reichl, 2017). Educators receive professional development on how to instruct students academically but not how to positively effect change in the student's character development (Fink & Geller, 2016). In a nationally representative sample of teachers, fewer than half reported social and emotional curriculum was taught in their schools (Bridgeland et al., 2013). The rigorous academic demands, teachers' wariness at implementing another curriculum and educators' attempt to avoid controversy has pushed prosocial education outside of the school setting and into the community where morals and civic engagement become a natural fit (Ettekal et al., 2015; Hurd & Deutsch, 2017; LaSalle, 2015).

Topical Literature Review Summary

The link between 4-H participation and students' success has been established. 4-H has proven to increase students' prosocial education, allowing youths to explore needed life skills with the guidance and support of caring adults. Evidence of transfer of 4-H youths' prosocial learning is limited, and while prosocial education is shown to increase academic competence, the link between 4-H and academic achievement remains weak and is rarely linked to standardized assessments (Corrigan et al., 2013). Much of the 4-H literature that exists traces a relationship between 4-H participants and prosocial education factors in older youths. Critical research relating 4-H activities to specific outcomes can be examined through Arnold's 4-H thriving model that will grow the existing body of knowledge.

Theoretical Framework

The 4-H Thriving Model

Arnold's (2017, 2018a) model operationalizes PYD and accepts PYD's fundamental premises. Examination of Arnold's model requires a brief discussion of the relational developmental systems metatheory as well as PYD to place Arnold's 4-H thriving model within a broader philosophical context. As an extension of developmental system theories, relational developmental systems reject the nature versus nurture dilemma and embraces holism allowing for an integration of multiple disciplines to assist in the explanation of human development (Bowers et al., 2015; Lerner, 2019; Lerner et al., 2016). Relational developmental systems models share the premise that individuals and context share a reciprocal relationship, and Urie Bronfenbrenner's EST is often cited as a contributing theory to PYD, a subset of the RDS metatheory (Duerden & Witt, 2010; Hamilton, 2014; Lerner, 2019; Lerner et al., 2014; Lerner et al., 2016).

Urie Bronfenbrenner's ideas presented through EST serve as one of the foundational pieces for all developmental system theories examining human development (Lerner, 2005). Bronfenbrenner theorized the ecological environment consists of several systems that directly and indirectly affect human development (Bronfenbrenner, 1979). Lerner's work in the PYD field increasingly references Bronfenbrenner bringing EST back to the forefront for youth development within ecological contexts (Callina & Lerner, 2017; Lerner, 2018; Lerner, 2019). Recent trends have also moved character development into the RDS metatheory, demonstrating the alignment between PYD and EST in conjunction with prosocial skill development (Callina & Lerner, 2017). A brief synopsis of EST is presented below to assist in framing the youths' dual environments that were examined in this study.

Bronfenbrenner's Ecological Systems Theory. The major constructs in Bronfenbrenner's theory evolved from 50 hypotheses presented in his 1979 book. The ecological systems are nested within one another and act systematically instead of linearly (Bronfenbrenner, 1979). The individual's developmental change was contingent upon the process, person, context, and time (Tudge et al., 2009).

Ecological Validity. Ecological validity is the idea that the research is valid if the environment in which the research is conducted in has not been influenced by the researcher and is conducted in the most natural setting possible (Bronfenbrenner, 1979).

Human Development. Human development is a process of interaction that increases in complexity within the ecological environment that promotes active engagement (Bronfenbrenner, 1979).

Relationships. Relationships and personal interactions form a cornerstone of EST. Bronfenbrenner (1979) discusses that many relationships will begin dyadically but will evolve to become N + 2 systems. Dyadic relationships may include observational dyads, joint activity dyads, or primary dyads (Bronfenbrenner, 1979).

PPCT. PPCT is the "process-person-context-time (PPCT) model" (Tudge, 2016, p. 195).

Proximal Process. This process serves as the most significant instrument for human development in the environment over time (Tudge et al., 2009).

Person. Initially, a person referred to the developing person solely within the context of the environment or the experience that was occurring. In Bronfenbrenner's later writings, he recognized the person's biological and genetic attributes that could be affected by the person's given environment (Bronfenbrenner, 2001).

Context. The contexts are divided among the four interrelated systems: micro, meso, exo, and macrosystems.

Microsystem. The microsystem is the most immediate setting to the developing individual (Bronfenbrenner, 1979). The microsystem can be seen as activities, relationships, or roles experienced by the developing person within a given physical setting (Bronfenbrenner, 1979).

Mesosystem. The mesosystem connects two or more settings through the developing person's interrelations (Bronfenbrenner, 1979). The relationships that exist between two contexts or the individuals within two contexts are held within the mesosystem (Bronfenbrenner, 1979). The classroom and 4-H club settings in this study are represented at the mesosystem level. The developing person is affected by the interactions between microsystems or the larger systems that they are nested within (Bronfenbrenner, 1979). The mesosystem may complement the developmental process if the individual's role in the different settings is productive and positive (Bronfenbrenner, 1979). Interactions within the mesosystems can be seen through four types of participation. The most basic interaction is the individual's multi-setting participation. Interactions within the mesosystem can be seen in youth relationships that exist between the home, school, and an afterschool group.

Exosystem. The exosystem is an environment that does not include the developing person as a participant (Bronfenbrenner, 1979). Despite the individual's exclusion from the exosystem, the events that occur in the exosystem may affect the individual within their microsystems.

Macrosystem. The macrosystem encompasses the micro, meso, and exosystems. This structure embodies a culture or subculture's belief systems or ideologies (Bronfenbrenner, 1979).

Time. Time is an essential element in Bronfenbrenner's bioecological theory. Time can be categorized into micro time, meso time, and macro time (Tudge et al., 2009).

Bronfenbrenner's work concerning the individual within the environment provides a foundational theory by which to study prosocial behavior. This study regresses to Bronfenbrenner's 1979 version of EST to focus on the individual within the context. This study wishes to establish the ecological trajectory of an individual's prosocial skill development within the context of the 4-H youth organization and the traditional classroom setting. The ecological trajectory can be established if the prosocial skill development is evident in the classroom setting as well as the 4-H club setting. This study incorporates the EST elements of ecological validity, ecological transitions, and emphasize youth within the mesosystem.

Positive Youth Development Context. Three distinct phases of PYD can be traced from the initial work in the 1990s to the research occurring today (Roth & Brooks-Gunn, 2016). The term positive development began appearing in juvenile justice literature as early as 1947 and is evident in some 1960s social policy, but PYD did not gain traction until the 1980s (Benson et al., 2007; Roth & Brooks-Gunn, 2016). It was during the 1980s that researchers started to see that program models that focused on risks and prevention began to contribute to the initial risk behaviors (Benson et al., 2007). An increase in risk behaviors caused researchers to investigate PYD as an alternative to the prevailing deficit models. Community organization and development, human development, and social and community change all contribute to the development of PYD (Benson et al., 2007). The initial phase of PYD research was refined in the 2000s when researchers shifted their focus to finding specific proximal processes such as civic engagement, purpose, and leadership although links to specific program features that produce PYD outcomes remain rare (Benson et al., 2007; Roth & Brooks-Gunn, 2016). Roth and Brooks-

Gunn (2016) suggest that contemporary PYD research began in the mid-2010s, signifying the third phase of PYD that is evolving to more refined research questions.

Today, multiple PYD frameworks have arisen from PYD's interdisciplinary approach to youth development. Pioneers for PYD included Richard Lerner, Jacqueline Lerner, Peter Benson, Jacquelynne Eccles, Jeanne Brooks-Gunn, William Damon, Reed Larson, Robert Scales, and Stephen Hamilton (Tolan et al., 2016). Two dominant frameworks for PYD include Lerner's 5Cs and the Search Institute's Developmental Assets Profile (DAP) that was developed by lead researchers, Benson and Scales. Lerner's 5Cs are perhaps the most well-known PYD framework in the 4-H setting (Arnold, 2018a). The DAP developed by the Search Institute incorporates Bronfenbrenner's EST and Lerner's theories of human development (Scales et al., 2016). Arnold draws upon both frameworks in the development of the 4-H thriving model.

Positive Youth Development Constructs. Arnold's (2018a) 4-H thriving model is found within the PYD principles set forth by Lerner et al. (2005) and Benson et al. (2007). The PYD theory counteracts the theories that explore youth development through a deficit model and instead shifts the focus from at-risk youth development to all youth development (Benson et al., 2007). The PYD theory is centered on a strengths-based approach and hypothesizes that youths, given the right assets, supports, relationships, and programs, can thrive (Caldwell & Witt, 2018). The PYD theory works on the premise that youths do not develop through turbulent adolescence that calls for management and prevention, but instead, youths are resources full of positive potential that need caring contexts with warm relationships to help them thrive (Bowers et al., 2015). All youths have innate strengths, and all contexts hold developmental assets (Agans et al.,

2014; Benson, 2012). The PYD theory has been synthesized by numerous authors and under a varying number of principles. Most researchers can agree to six main principles.

- All youths are capable of positive development.

- When youths are engaged in positive relationships and contexts that nurture their development, there is a greater potential for a positive trajectory. Similar to Bronfenbrenner's chronosystem, PYD also implies that development is seen over time.

- The benefits of PYD are magnified when youths are involved in multiple nutrient-rich relationships and contexts. Youth development is contingent on the youths' interaction with ecological contexts. Smith et al. (2017) utilize the term "ecodevelopmental" to describe settings that foster PYD.

- All youths benefit from positive relationships and contexts, which help to decrease the disparities in race, ethnicity, gender, and socioeconomic status. The methods used to promote PYD in the various populations may be differentiated based on local needs. An important factor in PYD is youth-adult relationships. These developmental relationships provide the youths with a bidirectional bond that encourages respect and trust as well as a shift over time that increases the complexity of the relationship and allows the youths to participate in decision making while developing autonomy.

- Formal programs, as well as informal community systems, serve as practical methods to deliver PYD. The PYD researchers aim to understand developmental change within environmental contexts, including school, family, and out-of-school programs.

- Youths are primary participants in their development and may serve as resources to themselves and others (Arnold, 2018a; Arnold & Ferrari, 2018; Benson et al., 2007;

Benson, 2012; Bowers et al., 2015; Lerner et al., 2014; Park, 2004; Scales et al., 2008; Scales et al., 2011).

In addition to these six principles, Scales et al. (2011) identified the link between context and outcomes as thriving. Benson and Scales (2011) derived thriving from a developmental systems theory and hold that thriving occurs from contextual, bidirectional relationships that promote prosocial growth and can nurture youths' sparks resulting in character development. Sparks are defined as "a passion for a self-identified interest or skill, or a capacity that metaphorically lights a fire in an adolescent's life, providing energy, joy, purpose, and direction" (Scales et al., 2011, p. 264).

Arnold's (2018a) model is a synthesis of existing literature with many of her constructs drawing from Scales et al.'s (2011) ideas of thriving and Lerner et al.'s (2014) PYD premises to create a working model for 4-H practitioners. The 4-H thriving model is an alternative to Lerner's 5Cs and the Search Institute's indicators of thriving in an attempt to clarify the indicators that drive the thriving process (Arnold, 2018a). The 4-H thriving model was developed in response to a need for a model to guide underlying program theory as a result of practitioners' difficulty in implementing and analyzing Lerner's 5Cs (Arnold, 2018a). Arnold (2018a) retained Lerner et al.'s (2016) assumptions that youths' interactions with their environment is bidirectional and mutually beneficial while also incorporating Scales et al.'s (2011) unique qualities of thriving and Eichson's work with identity formation (Arnold, 2017). As seen in Figure 4, Arnold (2018b) added academic motivation and success, high personal standards, reduced risk behaviors, and healthy choices to Lerner's 5Cs as part of 4-H desired program outcomes.

Figure 4

The 4-H Thriving Model
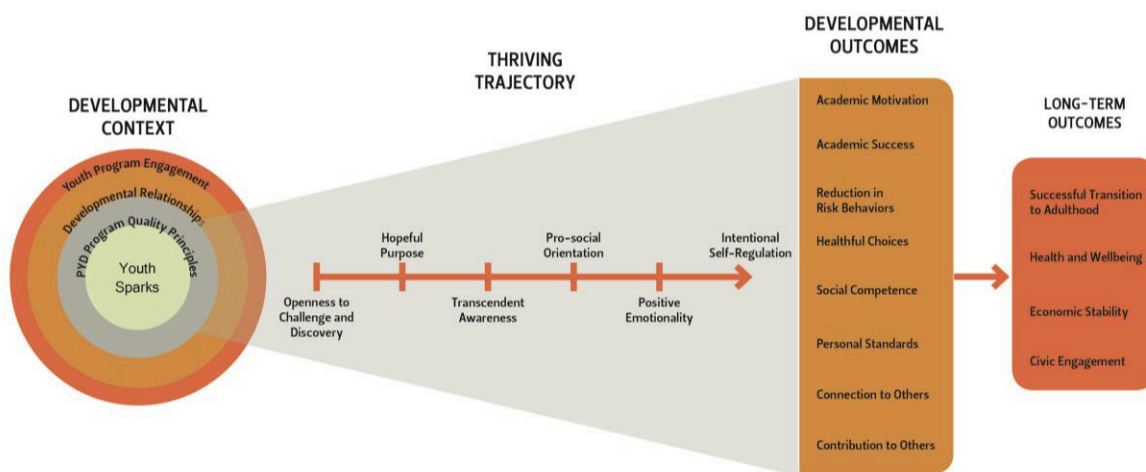
Note. Reprinted from "The 4-H Thriving Model Promotional Materials," by M. E. Arnold, 2018b. Retrieved from https://health.oregonstate.edu/thriving-model/promotional-materials. Reprinted with permission (Appendix A).

The 4-H thriving model views development within ecological contexts and relies on the youths' interactions within the systems (Arnold, 2018a). Arnold's (2018a) 4-H thriving model proposes that thriving is the mediating factor for the 4-H program and can articulate the process that results in positive developmental outcomes. The 4-H thriving model requires youths to be engaged in self-selected youth projects over time with adult support (Arnold, 2018a). Engagement in youth-selected activities with the support of adult volunteers qualifies 4-H as a developmental context and emphasizes the need for youths to participate in the program because mere presence does not constitute thriving (Arnold, 2018a). The recent development of Arnold's model in 2018 prevents any discussion on the implementation and refinement of the model over time.

Previous Positive Youth Development Studies. Arnold's model has not yet been tested through a published research study. However, the preceding PYD frameworks have been exhibited through numerous qualitative and quantitative studies with a wide variety of audiences. The previous discussion in this chapter holds the outcomes for PYD in prosocial skill development. The following discussion focuses on the studies involving youth thriving since it is most closely aligned to Arnold's 4-H thriving model.

Since 2006, Scales et al. have explored PYD through youth developmental assets, with each study building on previous understandings. The initial longitudinal study with 370 students in grades 7-9 showed that students with higher levels of developmental assets had significantly higher GPAs than students whose developmental assets decreased throughout the study (Scales et al., 2006). In 2008, Scales et al. examined the relationship between youths' assets and PYD outcomes and conclusively determined that the more assets youths possess, the better the youths' outcomes were. The multilevel sampling of youths ages six through 17 showed children with a greater amount of promises fared better than others, with girls showing more promises than boys (Scales et al., 2008). Youths who had more developmental assets were positively and linearly linked to a higher number of developmental outcomes (Scales et al., 2008). The positive developmental outcomes were magnified as youths experienced the nutrients in multiple contexts like family, school, community, and peers (Scales et al., 2008). The 2008 study also found that the level of promises strongly predicted the youths' demographics and demonstrated that youths do not have equal access to nutrient-rich relationships and contexts (Scales et al., 2008). A Harris Poll survey conducted in 2011 with a representative survey of 15-year-old youths in the U.S. confirmed previous findings that suggest youths experiencing positive relationships and constructive activities across multiple contexts hold positive outcomes (Scales et al., 2011).

Scales et al. (2011) also demonstrated that youths' sparks contribute to the PYD outcomes and benefit society in general. Scales et al.'s (2016) evaluation of over 50 Developmental Asset surveys administered across the world confirms initial results that youths with more developmental assets demonstrate more significant PYD outcomes, including civic engagement, physical and mental well-being, and character strengths.

Criticisms of Positive Youth Development. Arnold's (2018b) 4-H thriving model builds coherence in the PYD field that continues to lack conceptual clarity. The current phase of PYD research intends to find the relationships that exist between the individual and the context that can promote thriving (Arnold, 2018a). Arnold's (2018a) model defines the processes that occur within the thriving trajectory and labels the desired outcomes. It is hoped that standard measurements will unfold from the 4-H thriving model that will allow the field a chance to find meaningful comparisons, leading to better differentiation within program implementation. The recent presentation of Arnold's 4-H thriving model requires that the more established theory of EST be used in order to define the ecological contexts studied in addition to youths' prosocial development.

The inconsistencies in PYD constructs have led to a wide variety of measurement tools and youth indicators, making research outcomes challenging to compare (Tolan et al., 2016). Roth and Brooks-Gunn (2016) called for the current PYD research to begin focusing on the comparison of program outcome effectiveness as well as the integration of prevention and promotion programs. The PYD theory must embrace a holistic approach to their research designs and data collection to capture the ecological factors that help youths to thrive (Hamilton, 2014).

In order to accurately represent the PYD constructs, youth development outcomes, rather than the lack of risk behaviors, should be reported as positive indicators rather than the lack of

risk behaviors. Common indicators require a common language and a common framework to serve as a standard of comparison. Furthermore, researchers must advocate for common positive indicators that are adaptable to varying development periods. Increased dialogue amongst practitioners will assist in finding common social values (Benson, 2012). Once common indicators can be agreed upon, the next step in advancing PYD is to begin to ask probing questions that will reveal how program settings promote positive developmental outcomes (Roth & Brooks-Gunn, 2016).

Theoretical Applications to the Study

The 4-H thriving model provides a comprehensive look into examining youths' development, including their academic and prosocial development. The focus on positive outcomes for human behavior supports the proactive measures that encompass development for the whole-child, not just one aspect such as academic achievement: "In this manner, sparks, relational opportunities, and empowerment are hypothesized to work together to influence growth in adolescents' prosociality" (Scales et al., 2011, p. 265).

The concept of prosocial skill development can be found woven throughout the 4-H thriving model. The 4-H thriving model holds that there are dynamic processes at work in youth development, requiring an in-depth exploration of the thriving trajectory and the environmental context (Benson et al., 2007). A person's development cannot be explained through only genetics or the environment. Youths' ecological contexts are made up of relationships with family and peers in addition to societal institutions such as schools, religious organizations, and out-of-school programs, a structure which is reflected in Arnold's 4-H thriving model (Lerner et al., 2003). Furthermore, the role of the 4-H youth organization within the youths' mesosystem may assist the student in their development of trusting relationships, responsibility, and goal setting

within the classroom environment, all characteristics of prosocial behaviors that may lead to academic achievement (Bronfenbrenner, 1979). The comparison of students' prosocial skill presentations within the 4-H club against the students' presentations of prosocial skills within the classroom reveals ecological similarities and differences that occur within each setting.

Arnold's (2018a) 4-H thriving model defines the variables that are examined in this study. The youths' thriving trajectory is driven through program engagement or participation intensity while measuring academic and prosocial outcomes. Cohen (2014) addressed the need to implement character education over multiple ecological contexts earlier than many PYD programs address. The idea that the developing person may transition their skill set within the mesosystem exemplifies Bronfenbrenner's (1979) supporting EST theory. The evaluation of prosocial skills in dual contexts forces future researchers to question if the skills are not present in additional contexts, does it make the PYD outcome true?

Chapter Summary

This chapter reviewed the existing literature surrounding prosocial education, PYD, and 4-H in addition to an examination of Bronfenbrenner's EST theory as well as Arnold's 4-H thriving model. Educating a child socially, emotionally, and academically provides benefits to the youths, the educators, the school culture, and society. A requirement for youths to thrive in a civil society requires a system to teach and encourage positive character, social, and virtue development (Elias, 2014a; Lerner, 2018; Pekel et al., 2018). Society is responsible for providing environments in which youths can explore and engage in new learning that is also effective in helping the youths build character and a moral identity (Ramey & Rose-Krasnor, 2012). The PYD theory promotes youth thriving, which allows them to be a contributing member to society (Lee & Horsley, 2017). By examining systems that can provide these types of environments to

youths, practitioners, and policymakers may be able to replicate these essential elements into other areas of youths' lives. Prosocial skill programs, such as 4-H, provide the necessary assets youths need to be successful in school and life. The crisis that is found in youth development today may be best addressed through quality prosocial skill programs (Greenberg et al., 2017).

Bronfenbrenner's foundational work on EST continues to influence theorists today through the DST and PYD. It is challenging to explain youth development without considering the youths' environmental context. Bronfenbrenner's EST allows for closer examination of youths' prosocial skill development and possible links to academic achievement. This research employs the 1979 version of EST to examine youths' development within the mesosystem context along with Arnold's (2018a) 4-H thriving model to define and measure prosocial behaviors in two ecological contexts. Previous PYD studies involving youths' development have focused on youths' perception, the belief in a contextual impact, and if the context provided an actual impact (Ramey & Rose-Krasnor, 2012). The methods used in existing studies are employed to predict future risk instead of linking the context to the development (Lopez et al., 2015). Very few studies have identified the specific contexts that produce positive impacts on youths' lives. The broad scope of EST has provided researchers with an opportunity to compare macrosystems but does not provide data to account for contextual differences. Ramey and Rose-Krasnor (2012) speculated that the lack of studies on contextual variables could be due to the theoretical models that exist for studying youth development. Arnold's 4-H thriving model identifies the developmental context, the thriving trajectory, and the developmental outcomes and long-term outcomes to assist researchers in describing and measuring PYD outcomes. By limiting the scope of research to the mesosystem, the design for this study sheds light on the

youths' prosocial skill development and academic achievement within the mesosystem as well as interrogates the data to find curricular variables linked to prosocial skill development.

Chapter 3: Procedures and Methods

The purpose of this cross-sectional correlational study was to examine the relationship between the intensity of participation in a 4-H youth program and the development of prosocial behavior in nine to 12-year-olds in three North Florida counties. This study investigated if the intensity of participation in a 4-H youth program moderates the relationship between prosocial skill development and academic achievement. This study also examined whether student's prosocial skill development differs depending on whether it is assessed in the classroom or the 4-H environment. Survey research was used to quantify the data collected from 4-H participants, classroom teachers, and 4-H advisors in three North Florida counties. The following was the overarching question for this research: How does the intensity of participation by nine to 12-year-olds youth in a North Florida 4-H youth program, as well as the difference between in-class and out-of-class environments, affect prosocial skill development and student academic achievement? The secondary research questions are addressed below.

RQ1: What is the difference in prosocial skill development, as measured by the Child Trends Survey, between nine to 12-year-old youth in the classroom and in a 4-H environment?

H₀: There is no difference in youths' prosocial behavior, as measured by the Child Trends Survey, between nine to 12-year-old youth in the classroom and in a 4-H environment.

H₁: The prosocial behavior among nine to 12-year-old youth in the classroom differs from the prosocial behaviors among nine to 12-year-old youth in a 4-H environment, as measured by the Child Trends Survey.

RQ2: What is the relationship between the intensity of 4-H youth participation and prosocial skill development outcomes, as measured by the Bridge-PYD survey, controlling for age, gender, and race?

H_0: There is no relationship between the intensity of 4-H youth participation and prosocial skill development outcomes, as measured by the Bridge-PYD.

H_1: There is a relationship between the intensity of 4-H youth participation and prosocial skill development outcomes, as measured by the Bridge-PYD.

RQ3: To what extent does the intensity of participation in a 4-H youth program moderate the relationship between prosocial skill development and academic achievement, controlling for age, gender, and race?

H_0: Intensity of participation in a 4-H youth program has no moderating effect on the relationship between prosocial skill development and youths' academic achievement.

H_1: Intensity of participation in a 4-H youth program has a moderating effect on the relationship between prosocial skill development and youths' academic achievement.

This chapter explores the elements of this study's procedures and methods. The following sections discuss the research design, site selection, and the participant population. The chapter continues with a discussion of the sample and the sampling methods. Permissions and ethical considerations are addressed as well as the description of data sources collected through survey instruments, research protocols, data collection procedures, and researcher positionality. The chapter continues with the discussion of the research validity and the data analysis used in this study. The study concludes with the chapter summary.

Research Design

This research employed a quantitative, cross-sectional design. Quantitative research

presents research in an objective fashion that allows the reader to examine the data and form

their own opinions (Creswell, 2012). The objectivity in quantitative data collection builds

confidence in the study's conclusions. However, quantitative research is unable to evaluate the

circumstances or relationships that exist within the research (Creswell, 2012). The cross-

sectional approach to quantitative research provides timely information that can be collected in a

shorter amount of time than longitudinal studies (Creswell, 2012). Cross-sectional designs are

limited in their ability to track changes or trends that occur over time (Creswell, 2012).

Subsequently, this research is supported by the quantitative, cross-sectional design that allows

the researcher to measure current academic and prosocial behaviors in the sample 4-H youth

population. The Likert type scale eliminates the researcher's and the participants' abilities to

interpret meaning. Instead, youths' prosocial behavior and academic achievement are presented

to measure the group as a whole instead of examining participants at the individual level

(Creswell, 2012).

The quantitative methods used in this study measured observable youth experiences in

two environments in order to create an understanding of the correlation between 4-H

participation and student success. Survey research was used for three participant roles in the

mesosystem. Surveys were distributed to the youths, the youths' 4-H leader, and the youths'

classroom teacher to collect demographic information as well as evidence of youths'

development and achievement scores on the FSA. The cross-sectional survey design for student

surveys involved data collection in analyzing statistical, correlational tests.

The distributed surveys measured academic achievement and prosocial development within two environments. Explanatory correlational studies attempt to determine the amount of covariance that exists between variables (Creswell, 2012). The explanatory correlational study is non-experimental and allows the researcher to examine variables using a single point in time and does not require that participants be divided into groups to analyze data (Creswell, 2012). Limitations to correlational research designs include the inability to prove causation. Existing program research evaluates the program but cannot determine specific components that contribute to successes or failures (Hurd & Deutsch, 2017). Research measuring social-emotional outcomes in out-of-school activities can be difficult because it is often based solely on attendance, which is not compulsory (Hurd & Deutsch, 2017). Positive outcomes require not only attendance but also quality programming and youth participation (Hurd & Deutsch, 2017).

The cross-sectional survey research employed in this explanatory correlational study extends what is known about 4-H youth participation to explore youths' exhibition of prosocial behaviors in the 4-H club as well as the traditional classroom. The level of the youths' intensity of participation moves beyond mere attendance within the 4-H organization. Youths' intensity of participation was correlated with youths' positive development and academic success. Finally, adult surveys identified whether the youths' presentation of prosocial skill development is evident in the 4-H setting as well as in the classroom setting.

Site Selection

The selected North Florida counties, Gilchrist, Alachua, and Marion, provided a continuum of demographics to sample the youth population. Gilchrist County is considered a rural North Florida county with fewer than 18,000 inhabitants and only 49 people per square mile (United States Census Bureau, 2018a). Approximately 90% of the residents are White, 5%

Hispanic, and 5% African American (United States Census Bureau, 2018a). Gilchrist County is

characterized by small towns and a vast amount of farmland. Gilchrist County has two public

elementary schools and two public middle-high schools, not including virtual and private schools

(Florida Department of Education, 2018). Gilchrist's neighboring county, Alachua, has over

265,000 residents with a 60% White population, 10% Hispanic, and 20% African American

population (United States Census Bureau, 2018b). There are approximately 40 public schools

within Alachua County and 32 schools that serve youths within the age range of this study

(Florida Department of Education, 2018). Alachua County contains a mixture of urban,

suburban, and rural areas that consists of pockets of affluence and poverty. The University of

Florida is within Alachua County and helps to define the population characteristics described

above. Finally, Marion County, Florida, holds the greatest population and land size in this study.

Approximately 354,000 people live within the 1,585 square miles in Marion County, and Marion

County is not classified as a rural county (United States Census Bureau, 2018c). A mixture of

urban, suburban, and rural areas also defines Marion County. There are over 50 public schools in

Marion County, 44 of which serve youths that could be included in this study (Florida

Department of Education, 2018). The city of Ocala is within Marion County and is

simultaneously known for sweeping horse farmland and urban schools with many inner-city

issues. Marion County's population is 70% White, 14% Hispanic, and 14% African American

(United States Census Bureau, 2018c).

This research employed the assistance of 4-H county extension agents to gain access to 4-H participants. The 4-H county extension agent is the Institute of Food and Agricultural Science

(IFAS) representative and is appointed by the University of Florida to oversee each county's 4-H

youth development program. The Gilchrist, Alachua, and Marion County 4-H agents are

knowledgeable of the 4-H program's adult mentors and leaders and youth participants. Each agent was emailed an initial introduction, along with a request for assistance in gaining access to clubs located within their county. Initial responses were slow for two counties, and a follow-up phone call was made. Since this research simultaneously sought the teachers' input as well as the 4-H leaders' input on the selected youths, it was necessary to work with the school districts within each county. Each county is organized differently and run by individual county managers who required unique criteria to obtain permissions. In Gilchrist County, the Assistant Superintendent granted access to survey classroom teachers whereas the two larger counties, Alachua and Marion, granted approvals through research and accountability directors. Alachua and Marion County's research requests are posted to the school districts' website. The appropriate forms were completed and submitted to the responsible directors. In Gilchrist County, the Assistant Superintendent responded to an email request to collect teacher responses within the county.

Gilchrist, Alachua, and Marion counties are near the University of Florida, which oversees the 4-H program, and all contain a robust 4-H membership roster. The racial, gender, and socioeconomic demographics for each county presented a better opportunity to obtain the best participant sampling. Geographical proximity to the researcher allowed for face-to-face contact in order to initiate the request and follow up with survey responses throughout the research study.

Population

The 2017-18 Florida 4-H annual statistical snapshot shows that the Florida 4-H youth program serves almost 200,000 Florida youths (University of Florida IFAS Extension, 2018a). Florida 4-H female membership of 51% is slightly higher than the female public school

membership of 49% (Florida Department of Education, 2018; University of Florida IFAS Extension, 2018b). In Florida, students in kindergarten through fifth-grade make-up 71% of the 4-H membership. Table 2 shows Florida 4-H membership for kindergarten through fifth grade as 11% of the total Florida public school population for that age group. 4-H youth participation rates drop sharply in middle and high school (Baney & Jones, 2013).

Table 2

2017-2018 Florida Youth Population by Grade

Grade level	Florida 4-H membership	Florida public school
Elementary (K-5)	142,854	1,278,267
Middle school (6-8)	43,505	641,812
High school (9-12)	13,585	851,767

Note. Data from Florida Department of Education (2018) and University of Florida IFAS Extension (2018b).

The racial and ethnic make-up of the Florida 4-H organization is generally representative of the Florida public school population. Table 3 shows Florida public school membership compared to that of the Florida 4-H youth program. One discrepancy in the comparison data is the percentage of White youths in Florida 4-H compared to that in Florida public schools. The Florida 4-H organization does not include Hispanic as a race category. Instead, ethnicity is reported as Hispanic or Non-Hispanic. When Hispanic membership is accounted for in the Florida 4-H data, the White membership is closer to 51% (University of Florida IFAS Extension, 2018b).

Table 3

2017-2018 Florida Youth Population by Race/Ethnicity

	4-H membership	Public school
	%	%
Race		
White	73.0[a]	38.0
African American	20.0	22.0
Asian	1.8	2.7
Hispanic	24.0	33.0
American Indian/Pacific Islander	0.3	0.2
Two or More Races	4.5	3.5
Unknown	2.9	[b]

Note. Data from Florida Department of Education (2018) and University of Florida IFAS Extension (2018b).

[a] Includes Hispanic and Non-Hispanic identifying race as White.

[b] Not reported.

Sample

Youth participation in the 4-H youth organization in Alachua, Gilchrist, and Marion counties makes up almost 3% of the total 4-H membership in Florida and less than 1% of all Florida public school students. Table 4 depicts 4-H enrollment by communities in the studied counties. The female enrollment is 52% in Gilchrist County and 55% for both Alachua and Marion counties. Interestingly, while Alachua holds a greater population of students, the 4-H youth membership is less than half of rural Gilchrist County.

Table 4

2017-2018 Sampled Youth 4-H Membership

Location	Alachua County	Gilchrist County	Marion County
Cities	145	3	2,202
Towns & Suburbs	43	109	1,012
Rural Communities	310	903	808
Total	498	1,015	4,022

Note. Data from University of Florida IFAS Extension (2018b).

This study sought participants from ages nine to 12 in an attempt to capture FSA reporting scores in reading and math. Since FSA does not begin until the third grade, this study has excluded students younger than nine years old. Students in this age range are typically enrolled in third through seventh grades. Third grade is the first year in which students take the FSA, so there is a chance that some nine-year-old participants will not have an FSA to report. Florida has mandatory third-grade retention for FSA reading scores of a level one. Excluding third grade, students may inadvertently skew the FSA score reports to prevent level one and level two students from being reported. Table 5 demonstrates that the largest sample population for 4-H youth participants comes from the elementary age group. 4-H youth participation in grades third through seventh grades in Alachua County totals 274 students, in Gilchrist County 543, and in Marion County 2,828. The total youths for all three counties within the selected grade levels is 3,645 (University of Florida IFAS Extension, 2018b).

Table 5

2017-2018 Sampled Youth 4-H Participation by Grade

Grade	Alachua County	Gilchrist County	Marion County
Elementary (K-5)	294	887	3,364
Middle School (6-8)	128	66	322
High School (9-12)	76	59	284

Note. Totals may not match county 4-H totals because of special or home-schooled students.

Data from University of Florida IFAS Extension (2018b).

Table 6

2017-2018 Sampled Youth 4-H Population by Race/Ethnicity

	Alachua County	Gilchrist County	Marion County
	%	%	%
Race			
White [a]	80.0	85.0	68.0
African American	10.0	10.0	26.0
Asian	< 1.0	< 1.0	1.0
Hispanic	6.0	10.0	17.0
American Indian/Pacific Islander	1.0	0.0	< 1.0
Two or More Races	5.0	3.0	3.0
Unknown	2.0	< 1.0	1.0

Note. Data from University of Florida IFAS Extension (2018b).

[a] This number includes Hispanic and Non-Hispanic.

The selected counties are meant to represent the larger Florida 4-H youth population. The racial make-up of Alachua, Gilchrist, and Marion counties are presented in Table 6. Similar to the state data presented in Table 3, when Hispanic is included in the race category, Alachua reports a population of 74% White, Gilchrist reports 75% White, and Marion reports 50% White. Even with the adjustments, Alachua and Gilchrist still report a higher population of White youths and fewer African American and Hispanic youths. Marion County more closely matches Florida's 4-H youth demographics.

The research objectives, research questions, and overall research design drive the participant sample selection (Onwuegbuzie & Collins, 2007). This study intended to achieve adequate representation of the population through the appropriate sample size (Onwuegbuzie & Collins, 2017; Teddlie & Yu, 2007). Sampling methods were carefully selected to attempt to ensure the participants were characteristic of the population to inform generalizations (Onwuegbuzie & Collins, 2017). The target sample is a subset of the 145,961 4-H youths in third grade through seventh grade. The target sample includes 1,225 4-H youth club and afterschool participants from three North Florida counties.

Assuming a confidence interval of 90% with a 5% margin of error and a 0.3 effect size, a minimum of 55 surveys are needed for multiple linear regression analysis (Faul et al., 2009). For the paired t-tests data analysis, a minimum of 27 paired samples are required, assuming a two-tailed hypothesis with a confidence interval of 80%, a 5% margin of error, and a 0.5 effect size (Faul et al., 2009). When comparing the mean of two groups, an effect size of .5 is standard (Creswell, 2012). The researcher sought to oversample the population by collecting 100 independent youth surveys and 50 paired surveys from classroom teachers and 4-H leaders.

Sampling Method

Non-probability sampling techniques were employed to collect quantitative data. Initially, random sampling was attempted through a systematic sampling from organized community clubs and afterschool clubs in Alachua, Gilchrist, and Marion counties. Random sampling gives each participant an equal chance of being selected, Random sampling reduces the opportunity for bias and increases the chance to represent the population adequately (Creswell, 2012). Random sampling may not always result in a fair representation of the population and true random sampling is difficult to achieve (Creswell, 2012). At the onset of this study, the county extension agents were approached for a list of existing clubs within the county. The club list for each county was then assigned a random number in the excel software. The list was sorted from least to greatest to select the top five clubs from each county, and an invitation was extended to participate in the study. Many clubs were non-responsive to the invitation or exclusively served private or home-schooled students. The survey invitation was then expanded to all clubs located within the three counties. Volunteer participation in this study generated a convenience sample of participants (Creswell, 2012). Convenience samples stem from non-probability sampling techniques and include accessible participants that are willing to participate (Creswell, 2012). Convenience samples limit the researcher's ability to generalize results but can still generate meaningful data to answer the research questions (Creswell, 2012).

Selected participants were currently enrolled in a Florida public school in addition to the 4-H youth organization. Membership in a Florida public school system ensures youth participate in the FSA, allowing for a standard method of reporting for academic achievement in reading and math. The researcher made contact with club leaders by phone or email to arrange the date and time of the visit. The researcher attempted to attend all of the 4-H club meetings to present

the premise of the study and verbally explain the consent forms to the youths in the selected

category. The 4-H leaders were approached first for written consent, followed by the parents, and

then the selected youths. A total of 81 surveys were completed from 10 different 4-H clubs in

Marion County ($n = 29$), Gilchrist County ($n = 44$), and Alachua County ($n = 8$).

Ethical Issues/Permissions

Approvals and permissions were granted from the University of West Florida's (UWF)

Institutional Review Board (IRB) as well as each county's school board office (Appendix B).

Conditional research approvals were granted in the summer of 2019 from Alachua, Gilchrist, and

Marion counties. This research was subject to a full IRB review. Upon final approval from

UWF's IRB in early September, the consent was relayed to all three county offices, and official

consent to research within the county was given (Appendix C). There was a need to extend the

teacher surveys by one week in Marion and Alachua counties. Consent was received to send

survey invites the first week of November by both county offices.

Interaction with participants, data collection involving survey research, and resulting

statistical analysis may present the researcher with ethical issues. This researcher was granted

permission to copy and distribute the Child Trends and Bridge-PYD survey instruments from the

original researchers (Appendix D). Researchers are required to obtain informed consent prior to

data collection (Roth-Cline & Nelson, 2013). Parents provided researchers with consent to

survey the youths, and it was the researcher's responsibility to obtain youth assent to participate

in the study (Roth-Cline & Nelson, 2013). Youth assent was presented at the youths' level of

understanding, and youths were made aware of their right to refuse participation verbally and in

writing. Consent forms were collected from the adult participants as well as the parents of the

youth participants (Appendix E). Youth assent forms were presented to the youths at an

elementary readability level to ensure that youths could comprehend the form (Appendix E). The purpose and effects of the study were provided in the informed consent provided to parents, teachers, and 4-H club leaders. Youth assent forms were distributed and discussed with the youths before the survey administration. Permissions were collected from all participants prior to obtaining any survey information. The collection of survey data infers sensitive information that may be transmitted to the researcher. This researcher assumes responsibility in assuring all participants that the study will maintain confidentiality and ensures all returned surveys, once data are entered, are properly destroyed with electronic data stored in a secure file.

The statistical analysis that occurs as a result of the survey data may present a new set of ethical dilemmas. The postpositivist view holds that ethical considerations are extrinsically controlled systematically through research validity (Lincoln & Guba, 2005). Non-responses and missing data, and the method used to address the missing data, are reported in this study (Creswell, 2009). Creswell (2012) stated that correlational research is required to address appropriate controls for gender, age, and race when analyzing the data. The data used for correlational research must come from an adequate sample size, and any unusual results, contradictory results, or measurement errors are reported (Creswell, 2012).

Data Sources

A cross-sectional survey design using a Likert-type scale served as the source for data collection in this quantitative study. Two surveys were used. One survey was used with the youths to measure prosocial skill development, and one survey asked the 4-H leaders and the classroom teachers to reflect on the 4-H youths' presentation of prosocial skills within 4-H club and classroom environments.

The advantages of a cross-sectional survey include an increase in the response rate and avoidance of bias by preselecting participant responses (Tolmie et al., 2011). Survey research can typically be completed in fewer than 15 minutes, which reduces the burden for participants, and the rating scales used in surveys are generally understood, leading to fewer mistakes in participant responses (Creswell, 2009). The cross-sectional design only requires participants to complete one survey during a single point in time, reducing the burden on the participant. Finally, applying a closed response on the survey enables the researcher to easily quantify and analyze the data collected (Creswell, 2012).

Survey research is susceptible to missing data and non-responses. Some participants failed to adequately complete the survey by intentionally or unintentionally leaving portions of the survey blank. The researcher cannot account for the participants' feelings about completing the survey, and the Likert scale does not provide the participants with flexibility in answering the questions (Creswell, 2012). Additionally, response rates for survey research may be low (Creswell, 2009).

Survey research requires the researcher to anticipate and plan for missing data and non-responses. Ensuring all participants are given explicit directions on how to complete the survey may reduce response errors. For this study, the researcher attempted to personally distribute youths' surveys to prevent missing data and non-responses. Youths not involved in the survey were engaged in an alternative activity to complete while peers completed their survey. Non-responses were reported to reduce the possibility of bias in the study (Onwuegbuzie & Collins, 2017). Missing data in survey responses were addressed through mean substitution by averaging the mean subscale in that youths' survey (Roth, 1994).

The survey responses collected from the youth and adult participants represent the behaviors and beliefs of the sampled population about youths' development. The FSA data collected from the parents on the parental consent form represents the students' academic proficiency in reading and math. The quantified survey responses were entered and analyzed using the SPSS software to establish descriptive statistics and relationships between the variables.

Description of Research Protocol/Instrumentation

Two surveys were used during the data collection phase of this study. One survey was administered to the youths' 4-H leader and classroom teacher to establish youths' prosocial skill development. The other survey was presented to the youths for a self-report on their development.

Since social and emotional competencies seen in social-emotional learning domains support PYD outcomes, the Child Trend survey was used for the adult participants in this study (Child Trends, 2014; Taylor et al., 2017; Tolan et al., 2016). The Child Trends Survey was developed to measure a student's social and emotional skill set (Child Trends, 2014). The survey was designed for adults who work with kindergarten through fifth-grade students and is appropriate for sixth and seventh-grade students to measure self-control, persistence, and self-confidence. The survey instrument received feedback from experts in the field of social-emotional learning, performance management, and survey design along with practitioners. The instrument was also field-tested by Yale researchers to check for item reliability (Child Trends, 2014). The 12 questions ask teachers to rate students on a scale from one to four. The Cronbach's alpha is listed for each portion of the survey with self-control at .82, persistence at .92, and social competence at .97. A test of internal consistency was run on the responses

collected in this survey. The Cronbach's alpha analysis shows the Child Trends Survey has a high level of internal consistency with self-control at .91, persistence at .92, and social competence at .93. The overall Cronbach's alpha for the Child Trends Survey responses collected from this sample population is .95. The survey is accompanied by a full page of directions that are easy to follow and required less than five minutes to complete. The accompanying student survey developed by Child Trend did not extend to older students easily and lacked the depth of information needed to understand a student's prosocial skill development concerning PYD.

Youth participants completed the Bridge-PYD survey (Lopez et al., 2015). The Bridge-PYD survey instrument was developed in response to the lack of appropriate surveys for youths between the age of seven to eighteen. This survey measures the youths' positive development while also capturing evidence of their prosocial skill development. The survey was designed for use with at-risk youths and youths involved in community organizations (Lopez et al., 2015). The Bridge-PYD survey was field-tested using 140 youths between the ages of seven to 18 from the Bridge Project, a program designed to serve at-risk youths in public housing (Lopez et al., 2015). The scale was measured for reliability using Cronbach's alpha, and the overall scale measured .92, which includes competence (.80), confidence (.75), character (.84), connection (.81), and caring/compassion (.88). Criterion validity was established using afterschool staff and expert reviews (Lopez et al., 2015). Reliability in this sample ($n = 72$) was .89, which includes competence (.69), confidence (.72), character (.65), connection (.79), and caring/compassion (.76). The Bridge-PYD survey presented the youths with short statements, and youths selected "NO!, no, yes, or YES!" responses. Response statements were then quantified into ordinal data. The youths were generally able to complete the 40-question survey in fewer than 15 minutes

(Lopez et al., 2015). This study also included fixed-response items in the survey to collect demographic data such as race, gender, the intensity of 4-H participation, and the 4-H curriculum the youth participates in the most. The youths were also instructed to identify their school and classroom teacher so that the classroom teacher may be surveyed as well. Student FSA scores for reading and math were collected from the parental consent forms.

Data Collection Procedures

Before beginning the data collection, the researcher established contact with each gatekeeper. Contact with each county's 4-H extension agent was made at least one month before the data collection began to allow time for approvals and possibly face-to-face meetings. Initially, extension agent contact was difficult through email, and phone call follow-ups were conducted. Initially, extension agent contact was difficult through email, and phone call follow-ups were conducted. Two of the three extension agents were able to provide the researcher with a contact list for clubs in their county. A third county extension agent was new to the position and required additional time to produce a current contact list. Emails were sent in mid-September to the first five clubs on each county's randomly selected list. The 4-H club leader response rate was poor and required the principal researcher to reach out to the 4-H extension agents. The list was expanded to include all available clubs in each county, and the extension agent was included in each invitational email to demonstrate that the extension office was aware of and supported the research.

The data collection phase was scheduled for over two months. The surveys were administered to the selected sample participants and 4-H youth leaders simultaneously. The youths completed a paper-pencil version of the survey, and adult assistance was allowed. Youth 4-H leaders also completed the surveys with traditional paper and pencil format as well. Once the

youth surveys were collected, an electronic notice was sent to the classroom teacher signifying

parent permission had been granted to obtain information on the selected student and requesting

the teacher to complete an electronic survey on the identified youth. The electronic survey

prevented non-responses by requiring an answer to all components. Follow-up emails were sent a

week later for all non-responses from the adult participants. Survey links remained valid for one

month after the initial email except for clubs surveyed in late October and early November.

Survey links sent in late October were only valid for two weeks.

Returned surveys were stored in secure locations. Youth and 4-H leader surveys were

collected and secured in a locked storage drawer until they could be entered into the excel

database. The surveys were coded and then entered into the password protected database. Once

entered, the paper surveys were destroyed. Electronic surveys were collected using the Qualtrics

software system that was only accessible through a protected password. Once all online surveys

were collected, the responses were downloaded into the password protected excel database. Any

identifiable information was coded, and the online responses were deleted. All identifiable data

were coded before the excel database was uploaded into the SPSS software.

Researcher Positionality

The research paradigm guides the researcher in designing and implementing the study

design. A paradigm can be compared to a set of beliefs held by the researcher (Guba & Lincoln,

1994). The chosen paradigm influences the theory's role in the study, research methods used,

perceptions, and communication of the data and resulting inferences (Hathaway, 1995). The

study's paradigm assists the reader in understanding the researcher's worldview and the study's

framework with which to view the problem (Guba & Lincoln, 1994).

The quantitative design proves to be the best method to examine prosocial skill development through a careful analysis of the collected data in order to generate new knowledge. Quantitative research is grounded in a positivist paradigm. The positivist paradigm presents the researcher with logical approaches to the problem and systematic methods attempt to disclose reality (Arghode, 2012). The postpositivist paradigm emerged from the traditional positivist paradigm. Postpositivism retains the logical and objective approach to the problem, but also accepts the influences of an individual's reality and recognizes absolute truth is elusive. The evolution of positivist to postpositivist moved the researcher from full acceptance of the hypothesis to failing to reject the hypothesis at the study's conclusion (Creswell, 2009). This research design utilized a combination of positivist and postpositivist paradigms.

Epistemological

The positivist researcher believes accurate knowledge can be systematically created through careful experimentation and observation (Hathaway, 1995). Truth is sought through a structured measurement of the participants. The researcher identifies a problem and works to find a solution to that problem by isolating the data sets into a testable hypothesis (Creswell, 2009). Knowledge is driven by theories that are testable and intended to be substantiated or revised (Creswell, 2009).

The positivist epistemological framework does not allow for the construction of knowledge through researcher and participant collaboration or anecdotal observations. Truths are meant to be collected, measured, and presented, leaving no room for exploration about why those truths exist. Quantitative researchers using the positivist epistemological framework are tasked with making sure their research methods are impeccable and reproducible, but they do not attempt to answer why the truths exist.

The positivist epistemological framework offers the researcher and the reader an opportunity to find truths through systematic, logical steps. The scientific method is used to explore the research problem. Carefully constructed research using controlled methods may result in "common truths" (Hathaway, 1995, p.548). Collected data are considered a quantifiable representation of human truths (Hathaway, 1995). The research results in principles that can trace relationships and be generally applied to other situations in new settings bearing similar variables (Arghode, 2012; Hathaway, 1995).

Ontological

Ontologically, this research study embraces the postpositivist paradigm. Postpositivism recognizes that reality can be logically and rationally explained but may still be imperfectly known because of the human element. The researcher's role is to remain detached from the participants and the environmental context in order to present reality as factual and free from bias (Hathaway, 1995). The survey instrument used in this research assisted the researcher in explaining the studied reality that restricts subjective inferences. It is recognized that the analytic method used and resulting conclusions may present an alterable reality based on imperfect human conclusions (Guba & Lincoln, 1994). Allowance for other interpretations of reality is the reason the alternative hypothesis is not accepted but will fail to be rejected.

Postpositivism assumes that all aspects of reality are measurable and observable. Postpositivism cannot account for abstract forms of reality and assumes reality exists externally. Conceptual understanding of reality is not explored through intrinsic mechanisms, which limits the hypothesis to testable and observable realities (Lincoln & Guba, 2005).

The ability to determine patterns and relationships and represent the quantifiable results is an asset to postpositivist quantitative research (Hathaway, 1995). Practitioners and policymakers

are conditioned to accept numeric representations of an existing phenomenon. The acceptance of quantitative data can be seen throughout American culture in political poll numbers and rating reviews when shopping online. Reality, as it exists in this research, can be logically and methodically explained as well as represented through numeric results based on pre-established confidence intervals. The full results of this research provide the reader with an opportunity to consider the reality of the phenomenon for themselves.

Axiological

The postpositivist axiology places the researcher's role as an objective observer of the problem. The researcher is expected to design the study, conduct the research, and report the results without influencing the reader (Lincoln & Guba, 2005). Researcher objectivity is ideal, but postpositivist recognizes that complete objectivity is not possible to preserve (Guba & Lincoln, 1994).

Postpositivism acknowledges researcher subjectivity but does not provide an acceptable framework to address reflexivity within the study. Reflexivity within postpositivist quantitative research can be seen as a problem and a source of bias (Lincoln & Guba, 2005). Researchers are expected to be value-free throughout the context of the study to avoid bias. This approach could be challenging to maintain as an accepted method by the postpositivist framework.

A pivotal component of Bronfenbrenner's EST is the role of the observer in the context. Bronfenbrenner concluded that the observer influences the study just by being present. The postpositivist axiology can account for the researcher's role in the environment while also affording research conditions to maintain objectivity. Postpositivist researchers depend on reliability and validity to decrease the researcher's subjectivity in the study.

The postpositivist quantitative research must maintain objectivity throughout the research process. Subjectivity is often seen as a problem and a source of bias (Lincoln & Guba, 2005). As a quantitative researcher operating under the postpositivist axiology, the researcher is removed from the contexts of the data collection, and analysis occurs through open disclosure and systematic and methodical techniques.

This research positions the researcher with familiar topics and organizations, but steps have been taken to limit the researcher's familiarity with participant selection. The researcher holds familiarity with the 4-H youth organization as a parent with youths who have participated in 4-H activities. Also, the researcher's position within a public school offers perspective into the lack of curriculum needed to further youths' prosocial skill development. This familiarity may grant the researcher insider status regarding the chosen variables, but the researcher remained an outsider to the participants. The selected counties in North Florida are unfamiliar to the researcher, and the gatekeepers are unfamiliar personally and professionally. The researcher did not sample participants from her school district to maintain impartiality. A full analysis of the data includes a systematic review of contradictory evidence along with open disclosure of any experiences the researcher may have that could influence data collection and analysis (Creswell, 2009). Contradictory evidence is thoughtfully presented and thoroughly addressed.

Research Validity

Internal validity in this study is threatened through low survey response and missing data. Cross-sectional surveying and participant recruitment attempt to control for internal validity. While youth and 4-H leader surveys were collected in person, the classroom teacher survey relied on email communication, which limited the teacher response rate. The researcher attempted to mediate these threats through pre- and post-contact with participants and clear,

standardized instructions (Field, 2013). The researcher was present at 4-H club meetings to assist in clearly explaining directions to the youths as well as to serve as a resource to clarify item questions. Issues of maturation and attrition have been mediated through the one-time cross-sectional design.

External validity is required to generalize the results outside of the surveyed population. Inadequate sampling procedures or low response rates may result in poor selection from the target population. Methodical sampling procedures to survey a participant pool that is representative of the target population were attempted to control for external validity and protect the ability to generalize the study's results. The parent report data collected on FSA achievement produced less than the required sample size. Any generalizations made from statistical analysis concerning student academic achievement only apply to youths that participated in this study.

The quantitative data conformed to content validity standards by implementing surveys tested in previous research (Creswell & Clark, 2017). The Child Trends and PYD-Bridge surveys report content validity through expert and practitioner reviews (Child Trends, 2014; Lopez et al., 2015). Reliability in this study conveys the understanding that the instruments can produce the same results across multiple settings (Field, 2013). As stated previously, both survey instruments also report high reliability of Cronbach's alpha scores for the entire survey instrument and each subsection (Child Trends, 2014; Lopez et al., 2015).

Reliability depends upon the researcher's ability to control for extraneous variables. The researcher did not retain control over the participants' environmental conditions as the survey was completed. Variations in noise, time allotment for survey completion, and participants' feelings about completing the survey may have affected the overall results. To increase reliability, the surveys used in this study were administered with the same instructions within a

similar time frame in all three counties. The researcher communicated with each gatekeeper 4-H county extension agent to ensure a consistent message to participants. The researcher maintained the responsibility to ensure that data were correctly entered in order to generate the correct output. A visual inspection was used through multiple trials to ensure the data had been entered correctly.

Data Analysis Techniques

The survey data collected from the youth and adult participants were analyzed for descriptive statistics and a correlational relationship due to the non-experimental research design. The correlational design seeks to describe relationships and patterns between the independent and dependent variables (Tolmie et al., 2011). The quantitative data analysis cannot identify causation; rather, it explored correlational statistics through multiple linear regression and the paired t-test (Creswell, 2012; Field, 2013; Tolmie et al., 2011).

The returned surveys were entered into an SPSS database to analyze and report on participants' descriptive statistics. Descriptive statistics enable researchers to make sense of the data by creating an organization for the information (Evans, 2014). Summarizing the data with descriptive statistics revealed the scope of the research and provided the reader with the reported research with an opportunity to draw individual inferences (Evans, 2014). Descriptions for the youth survey include means, medians, standard deviations, and comparisons for demographic representation, survey results, the intensity of 4-H curriculum participation, and assessment scores. A visual inspection of the data using a histogram and scatterplot was used to check for skewness and kurtosis as well as normality (Singh, 2007). Descriptive statistics were also used to compare the means between the 4-H leader observations of student-specific prosocial skill development and the teacher's observations.

The paired t-test examines teacher and 4-H leader responses on student's prosocial skill presentation in their respective settings. Paired t-tests assume the data are normally distributed in addition to interval data for the dependent variable (Field, 2013). The survey results were converted to interval data for each grouped indicator for self-control, persistence, and self-confidence. Paired t-tests also assume that there are no outliers and that the distribution of the differences is normally distributed (Field, 2013). Distribution of the differences was checked by computing the differences between the scores and checking for normal distribution in the resulting sums (Field, 2013).

Multiple linear regression and a moderation analysis were conducted on the survey and FSA data. The multiple linear regression analysis was run three distinct times with youths' intensity of participation acting as the independent variable. The Bridge-PYD surveys were measured against youths' 4-H participation intensity, as indicated by hours per week and youths' prosocial presentation. The dependent variables consisted of composite PYD scores as well as subscale averages. The multiple linear regression analysis allowed the researcher to control for age, gender, and race when evaluating the correlation (Creswell, 2012). The moderation analysis examined the relationship between 4-H youths' prosocial development and academic achievement as it is moderated by their participation intensity using Hayes' (2018) PROCESS macro in SPSS. Moderation suggests that the relationship between two variables is significantly influenced by the third variable (Field, 2018). Each multiple linear regression analysis and moderation analysis met eight assumptions.

- The dependent variable will be continuous.

- The independent variable will be continuous or categorical.

- There is an independence of observations. The independence of observations was measured using Durbin-Watson. Values were between the acceptable levels of 1.0 and 3.0.

- There is an established relationship between the dependent and independent variables that is linear. Linearity was assessed using scatterplot and partial regression plots.

- The data needs to be checked for homoscedasticity. This data was evaluated by plotting the studentized residuals and the unstandardized predicted values.

- The data must not show multicollinearity. The data lacked multicollinearity as established through tolerance and variation inflation factor values.

- There must be no significant outliers. Outliers remained in the data set as they fell within the 5% margin of error.

- The data should show that residuals are approximately normally distributed. Normal distribution of the data was confirmed through a visual inspection of a normal q-q plot (Field, 2013).

Violations of these assumptions limit the ability to generalize the results. The data conformed to the required assumptions. The resulting summary models reveal r, R^2, the adjusted R^2, the F ratio, and the statistical significance of tests.

Ethical considerations remained at the forefront of data collection and analysis. Any attempts to clean the data without explicitly addressing the outliers or missing data are unethical (Roberts, 2010). In the case of missing data on survey responses, surveys containing more than three missing responses on the Bridge-PYD youth survey were eliminated. The PYD surveys with three or fewer missing responses were treated with the mean substitution by averaging the mean score for the youths' individual subscale (Roth, 1994). Outliers that fell within the 5%

margin of error remained in the data set (Field, 2013). Removing the case was only done with good reason and was explained in the data analysis.

Chapter Summary

The quantitative methods utilized in this research were used to explore existing relationships between the intensity of 4-H participation in three North Florida counties and youth success as seen in their prosocial skill development and academic achievement. This research aims to retain validity and reliability throughout the study by using random sampling and cross-sectional surveys. The researcher addressed ethical considerations through careful collection of consent and assent forms and thoughtful data collection procedures. The Bridge-PYD survey accompanied by the Child Trends Survey provides an evaluation of youths' prosocial development as well as the youths' self-evaluation of their development. The resulting data collected from adult participants yielded the necessary information to make inferences on the youths' prosocial presentation within the 4-H club and the classroom setting.

Through a positivist and postpositivist paradigm, this research analyzed data from the completed surveys to draw meaningful conclusions. The youth surveys attempted to find correlations between 4-H youth participation intensity and PYD as well as academic achievement through multiple linear regression. The paired t-test considered the relationships between the classroom teacher and adult 4-H leader evaluation of the youths' prosocial skill presentation. This study also explored the relationship between selected 4-H curriculum activities and youth prosocial skill development. This study contributes to the literature by evaluating middle childhood development within the PYD out-of-school time context.

Chapter 4: Data Analysis and Results

The purpose of this cross-sectional correlational study was to examine the relationship between the intensity of participation in a 4-H youth program and the development of prosocial behavior in nine to 12-year-olds in three North Florida counties. Using the Bridge-PYD survey for youths and the Child Trends Survey for adults, the collected data were analyzed from 4-H participants, classroom teachers, and 4-H leaders in three North Florida counties. The data were analyzed to answer the following overarching question for this research: How does the intensity of participation by nine to 12-year-old youth in a North Florida 4-H youth program, as well as the difference between in-class and out-of-class environments, affect prosocial skill development and student academic achievement? Additionally, the data were used to address the secondary research questions.

RQ1: What is the difference in prosocial skill development, as measured by the Child Trends Survey, between nine to 12-year-old youth in the classroom and in a 4-H environment?

H_0: There is no difference in youths' prosocial behavior, as measured by the Child Trends Survey, between nine to 12-year-old youth in the classroom and in a 4-H environment.

H_1: The prosocial behavior among nine to 12-year-old youth in the classroom differs from the prosocial behaviors among nine to 12-year-old youth in a 4-H environment, as measured by the Child Trends Survey.

RQ2: What is the relationship between the intensity of 4-H youth participation and prosocial skill development outcomes, as measured by the Bridge-PYD survey, controlling for age, gender, and race?

H₀: There is no relationship between the intensity of 4-H youth participation and

prosocial skill development outcomes, as measured by the Bridge-PYD.

H₁: There is a relationship between the intensity of 4-H youth participation and prosocial

skill development outcomes, as measured by the Bridge-PYD.

RQ3: To what extent does the intensity of participation in a 4-H youth program moderate

the relationship between prosocial skill development and academic achievement,

controlling for age, gender, and race?

H₀: Intensity of participation in a 4-H youth program has no moderating effect on the

relationship between prosocial skill development and youths' academic achievement.

H₁: Intensity of participation in a 4-H youth program has a moderating effect on the

relationship between prosocial skill development and youths' academic achievement.

This chapter reviews the analyzed data and presents the results. A description of

participants followed by the data preparation and presentation of results are discussed for each

research question. The results for each research question are thoroughly analyzed, and the

chapter concludes with the chapter summary.

Research Question 1

Youths' prosocial presentation was measured in the 4-H environment and the classroom

contexts using the Child Trends Survey. Child Trends is a 12-question survey that measures

youths' composite prosocial skills through three subscales. The first subscale, persistence, is

measured in Questions 1, 2, and 6. The second subscale, self-control, is measured in Questions 3

through 5. The final subscale, social competence, is measured in Questions 7 through 12. 4-H

leaders and classroom teachers completed the Child Trends Survey for each of the participating

youths.

Description of Participants

The 4-H leader and classroom teacher had a significant return rate. Ninety-six percent of the 4-H leader surveys were returned. After receiving the youth surveys, the classroom teachers were emailed a link to complete the same Child Trends Survey through the Qualtrics online platform. Fifty-four percent of the teacher surveys were submitted. Once teacher surveys were completed, 37 surveys were able to be paired in SPSS to conduct the paired t-test analysis. Male and female youths are almost evenly represented. However, Table 7 shows that White youths were over-represented at 86.5%. (M age = 9.81; M grade = 4.14).

Table 7

Description of 4-H Youth Participants with Paired Adult Surveys

Demographic	Frequency f	Percent %
Gender		
Female	18	48.6%
Male	19	51.4%
Grade		
3	9	24.3%
4	15	40.5%
5	12	32.4%
6	1	2.7%
Age		
9	19	51.4%
10	7	18.9%
11	10	27.0%
12	1	2.7%
Race		
White	32	86.5%
Other Races	5	13.5%

Note. Gender coded as Males = 0 and Females = 1 and race is coded as White = 0 and Other Races = 1.

Data Preparation

The composite Child Trends mean data were prepared to check for paired t-tests assumptions. First, difference scores were calculated to inspect outliers. One outlier was detected that was more than two lengths outside the boxplot and was removed from the analysis. The difference scores for the teacher and 4-H leader survey averages were normally distributed, as assessed by the Shapiro-Wilk test ($p = .84$).

Presentation of Results

4-H youths scored higher on the Child Trends Survey when measured by classroom teachers ($M = 3.38$, $SD = .62$) than by 4-H leaders ($M = 3.31$, $SD = .58$). When the classroom teacher reported on youths' overall presentation of prosocial skills, there was a mean increase of .07, 95% CI [-.13, .27]. The mean scores between the teacher and 4-H leader Child Trends Survey are not statistically significant ($p = .45$), which leads to a failure to reject the null hypothesis. The mean results from the Child Trends Survey are reported in Figure 5 and Figure 6.

Figure 5

The Simple Bar Means of Survey Results by Gender
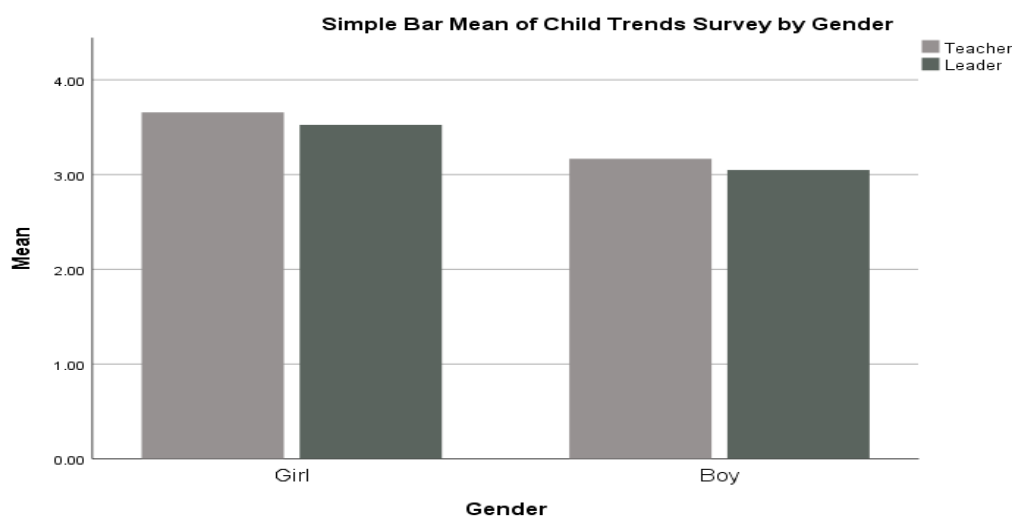
Figure 6

The Simple Bar Means of Survey Results by Age
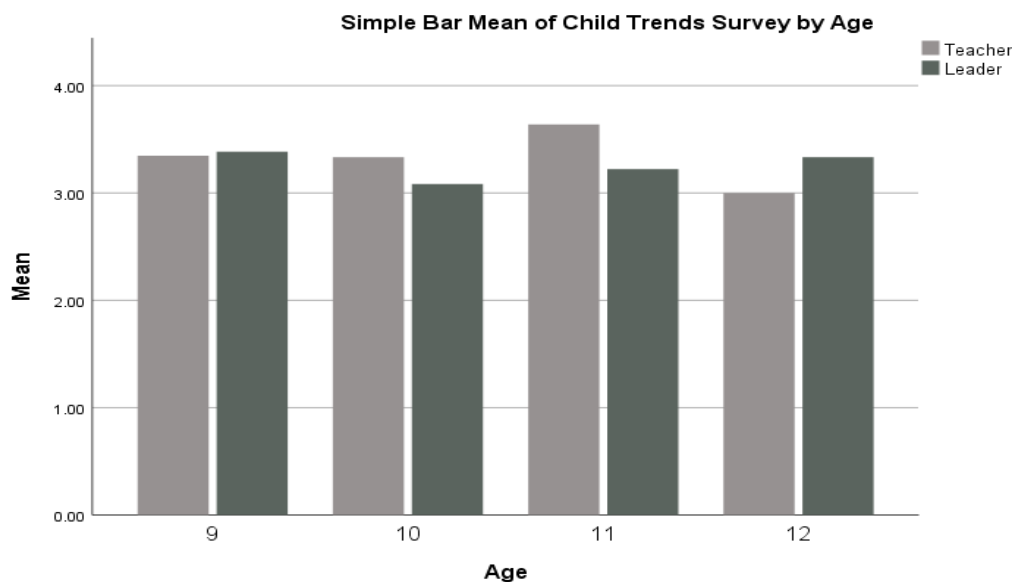
Analysis of Results

The mean scale score between the classroom teachers and the 4-H leaders both show a high level of youth prosocial skill presentation. On average, 4-H youths present similar prosocial outcomes within the 4-H club and the traditional classroom setting (Arnold, 2018b). The high PYD averages support existing literature suggesting that 4-H youths demonstrate prosocial outcomes (Lerner et al., 2005; Lerner et al., 2014; Maley et al., 2016). The minimal difference between the means shows that the youths are carrying their PYD development across contexts. This result is a representative example of an ecological transition for developing youths (Bronfenbrenner, 1979).

The data support existing PYD literature, which notes gaps in PYD by gender. When these data are examined by gender, the surveys show that girls present prosocial skills at a higher level than boys in both the 4-H club and the classroom contexts. This result is consistent with Scales et al.'s (2008) conclusion that girls experience more PYD indicators than boys.

An important addition to PYD literature may be seen in the data comparison of middle childhood youths to adolescent youths. The 11-year-old age group presented higher prosocial skills in the classroom than the 4-H club. This data suggests that PYD presentation could be consistent in early adolescence and may support Scales et al. (2008) research showing younger youths hold more PYD indicators than older youths. Much of PYD's previous studies center on adolescent youths. However, PYD premises hold that all youths may benefit from developmental contexts that produce positive outcomes (Arnold, 2018a; Benson, 2012; Benson et al., 2007; Scales et al., 2008).

The data are subject to sampling error. The variation in 4-H leader response rate and classroom teacher response rate may signify a response bias. Teachers might not have completed the questionnaire if the student was not able to be favorably scored. On one occasion, during the data collection phase, it was brought to the researcher's attention that the 4-H youth leader was related to one of the participants. The small sample size limits any generalizations beyond the scope of this study.

Research Question 2

4-H youths' intensity of participation was examined against the Bridge-PYD survey scores. 4-H youths' access to PYD in the 4-H program has been previously established. However, many questions remain as to how youths' participation affects PYD. This research conducted a multiple linear regression to measure youths' participation intensity in their PYD development.

Description of Participants

Between mid-September and early November, a total of 81 youth surveys were returned. Examining the data revealed two youth participant surveys needed to be removed from the data

set because they did not include the independent variable, intensity of participation, in their responses. Further inspection showed seven youths with four or more missing responses in the Bridge-PYD instrument, and the surveys were removed from the data set. The remaining 72 surveys were collected from 10 different 4-H clubs in the three selected counties. Gilchrist accounted for 54% of the surveys returned, Marion county accounted for 36%, and Alachua youths returned 10% of the surveys. Of the 72 youth participants, 37 (51.4%) were female, and 35 were male (48.6%).

Table 8

Description of Youth Participants in PYD Survey

Demographic	Frequency f	Percent $\%$
Gender		
Female	37	51.4%
Male	35	48.6%
Grade		
3	13	18.1%
4	32	44.4%
5	21	29.2%
6	4	5.6%
7	2	2.8%
Age		
9	37	51.4%
10	15	20.8%
11	15	20.8%
12	5	6.9%
Race		
White	55	76.4%
Other Races	17	23.6%
County		
Alachua	8	11.0%
Gilchrist	36	50.0%
Marion	28	39.0%

Note. Gender coded as Males = 0 and Females = 1 and race is coded as White = 0 and Other

Races = 1.

The sampled youth population shown in Table 8 presents the sampled population in the

three selected counties. White youths made up the largest percentage (76.4%) of youths

surveyed. As expected, a small proportion of the surveys were completed by middle school

youths (8.4%), and 44.4% of the youths were in fourth grade (*M* age = 9.83; *M* grade = 4.31).

Data Preparation

Preliminary data treatment included replacing missing data with the subset mean and

reverse coding. The Bridge-PYD survey instrument is divided into five subscales for the 5Cs of

PYD. Competence is measured in Questions 1 through 8. Confidence is measured in Questions 9

through 18. Connection is recorded in Questions 19-25. Character is reflected in Questions 26-

34, and the Care/compassion subscale are the remaining Questions 35-40. Missing question data

were replaced with the youths' mean score from that item's subscale. The researcher intends to

preserve the youths' subscale rating consistency. Questions 12, 14, 25, and 26 were also reverse

coded within the SPSS database to interpret the counter stated sentence items correctly. The

youths' PYD score was averaged for the composite scale, and each of the five subscales listed.

Before the multiple linear regression was run, the race category was converted to dummy

variables as it is a nominal category. In addition, mean scores were run for age, gender, and race.

The initial test of assumptions examined the youths' composite Bridge-PYD average. The

Durbin-Watson statistic of 1.79 (*n* = 72) showed an independence of residuals. The researcher

assessed the assumption of homoscedasticity using a plot of studentized residuals versus

unstandardized predicted values. Based on that graph, the researcher found support for that

assumption. Tolerance levels greater than 0.1, and variance inflation factors less than 5 showed

there was no multicollinearity. The data were normally distributed. A check of the data showed 12 cases that were between .2 to .5 leverage values. These data points represent a medium risk but remained in the data set. Cook's Distance showed no influential cases. The researcher assessed the assumption of linearity using partial regression plots and the plot of studentized residuals versus predicted values. Based on those graphs, the researcher found support for that assumption.

The first subscale test of assumptions was performed on the Care/compassion subscale. The researcher assessed the assumption of independence among the residuals using the Durbin Watson statistic. The observed value of 1.83 ($n = 72$) was within the acceptable limits ($1.0 < d < 3.0$; Field, 2018) to support that assumption. A check of the data showed 12 cases that were between .2 to .5 leverage values. These data points remained in the set, and Cook's Distance showed no influential cases. The researcher assessed the assumption of homoscedasticity using a plot of studentized residuals versus unstandardized predicted values. Based on that graph, the researcher found support for that assumption. The researcher assessed the assumption of linearity using partial regression plots and the plot of studentized residuals versus predicted values. Based on those graphs, the researcher found support for that assumption. Tolerance levels greater than 0.1, and variance inflation factors less than 5 showed there was no multicollinearity. These data were normally distributed.

The initial test of assumptions for the subscale Character subscale from the Bridge-PYD scores data showed there was an independence of residuals. The researcher assessed the assumption of independence among the residuals using the Durbin Watson statistic. The observed value of 1.95 ($n = 72$) was within the acceptable limits ($1.0 < d < 3.0$; Field, 2018) to support that assumption. A check of the data showed one outlier. The data point did not exhibit a

high leverage value and remained in the data. A check of the data showed 12 cases that were between .2 to .5 leverage values. These data points remained in the set, and Cook's Distance showed no influential cases. The researcher assessed the assumption of homoscedasticity using a plot of studentized residuals versus unstandardized predicted values. Based on that graph, the researcher found support for that assumption. The researcher assessed the assumption of linearity using partial regression plots and the plot of studentized residuals versus predicted values. Based on those graphs, the researcher found support for that assumption. Tolerance levels greater than 0.1, and variance inflation factors less than 5 showed there was no multicollinearity. These data were normally distributed.

The initial test of assumptions for the Connection subscale from the Bridge-PYD scores data showed there was an independence of residuals. The researcher assessed the assumption of independence among the residuals using the Durbin Watson statistic. The observed value of 1.5 ($n = 72$) was within the acceptable limits ($1.0 < d < 3.0$; Field, 2018) to support that assumption. A check of the data showed one outlier. The data point did not exhibit a high leverage value and remained in the data. A check of the data showed 12 cases that were between .2 to .5 leverage values. These data points remained in the set, and Cook's Distance showed no influential cases. The researcher assessed the assumption of homoscedasticity using a plot of studentized residuals versus unstandardized predicted values. Based on that graph, the researcher found support for that assumption. The researcher assessed the assumption of linearity using partial regression plots and the plot of studentized residuals versus predicted values. Based on those graphs, the researcher found support for that assumption. Tolerance levels greater than 0.1, and variance inflation factors less than 5 showed there was no multicollinearity. These data were normally distributed.

The initial test of assumptions for the subscale Confidence subscale from the Bridge-PYD scores data showed there was an independence of residuals. The researcher assessed the assumption of independence among the residuals using the Durbin Watson statistic. The observed value of 2.01 ($n = 72$) was within the acceptable limits ($1.0 < d < 3.0$; Field, 2018) to support that assumption. A check of the data showed one outlier. The data point did not exhibit a high leverage value and remained in the data. A check of the data showed 12 cases that were between .2 to .5 leverage values. These data points remained in the set, and Cook's Distance showed no influential cases. The researcher assessed the assumption of homoscedasticity using a plot of studentized residuals versus unstandardized predicted values. Based on that graph, the researcher found support for that assumption. The researcher assessed the assumption of linearity using partial regression plots and the plot of studentized residuals versus predicted values. Based on those graphs, the researcher found support for that assumption. Tolerance levels greater than 0.1, and variance inflation factors less than 5 showed there was no multicollinearity. These data were normally distributed.

The initial test of assumptions for the subscale Competence subscale from the Bridge-PYD scores data showed there was an independence of residuals. The researcher assessed the assumption of independence among the residuals using the Durbin Watson statistic. The observed value of 1.83 ($n = 72$) was within the acceptable limits ($1.0 < d < 3.0$; Field, 2018) to support that assumption. The data showed 12 cases that were between .2 to .5 leverage values. These data points remained in the set, and Cook's Distance showed no influential cases. The researcher assessed the assumption of homoscedasticity using a plot of studentized residuals versus unstandardized predicted values. Based on that graph, the researcher found support for that assumption. The researcher assessed the assumption of linearity using partial regression

plots and the plot of studentized residuals versus predicted values. Based on those graphs, the researcher found support for that assumption. Tolerance levels greater than 0.1, and variance inflation factors less than 5 showed there was no multicollinearity. These data were normally distributed.

Presentation of Results

The researcher conducted a multiple linear regression analysis on the relation of the composite Bridge-PYD scores to 4-H youths' participation intensity, age, race, and gender. The results indicate R^2 for the total model was 4.6%, with an adjusted R^2 of -.01 %. Youths' 4-H participation in hours combined with age, race, and gender did not statistically predict their composite PYD scores, $F(4, 67) = 0.81$, $p = .52$. Regression coefficients are presented in Table 9.

Table 9

Summary of Composite Bridge-PYD Multiple Regression Analysis

Variable	b	$SE\ b$	ß	p	95% CI
4-H Hours	-.01	.03	-.03	.84	[-.06, .05]
Age	-.04	.04	-.13	.37	[-.12, .05]
Gender	.09	.07	1.28	.21	[-.05, .24]
Race	.01	.09	.01	.92	[-.16, .18]

Note. *N = 72*

A multiple linear regression analysis was conducted on the relation of the subscale for Care/compassion from the Bridge-PYD scores to 4-H youths' participation intensity, age, race, and gender. The results indicate R^2 for the Care/compassion subscale was 10.4%, with an adjusted R^2 of 6.0%. Youths' 4-H participation in hours combined with age and gender did not statistically predict their Care/compassion PYD scores, $F(4, 67) = 0.48$, $p = .75$. Regression coefficients are presented in Table 10.

Table 10

Summary of Care and Compassion PYD Multiple Regression Analysis

Variable	b	*SE b*	ß	p	95% CI
4-H Hours	-.03	.04	-.10	.48	[-.09, .05]
Age	.03	.06	.06	.65	[-.11, .12]
Gender	.10	.10	.12	.32	[-.09, .30]
Race	-.07	.12	-.07	.57	[-.30, .17]

Note. *N = 72*

A multiple linear regression analysis was conducted on the relation of the subscale of Character from the Bridge-PYD scores to 4-H youths' participation intensity, age, race, and gender. The results indicate R^2 for the Character subscale was 4.5%, with an adjusted R^2 of -.01%. Youths' 4-H participation in hours combined with age, race, and gender did not statistically predict their Character subscale scores, $F(4, 67) = 0.80$, $p = .53$. Regression coefficients are presented in Table 11.

Table 11

Summary of Character PYD Multiple Regression Analysis

Variable	b	*SE b*	ß	p	95% CI
4-H Hours	-.01	.03	-.06	.67	[-.08, .05]
Age	-.08	.05	-.21	.14	[-.17, .05]
Gender	.08	.09	.11	.38	[-.12, .25]
Race	.02	.11	.02	.85	[-.20, .24]

Note. *N = 72*

A multiple linear regression analysis was run on the relation of the subscale of Connection from the Bridge-PYD scores to 4-H youths' participation intensity, age, race, and gender. The results indicate R^2 for the Connection subscale was 5.3%, with an adjusted R^2 of 0.0%. Youths' 4-H participation in hours combined with age, race, and gender did not

statistically predict their Connection subscale scores, $F(4, 67) = 0.93$, $p = .45$. Regression

coefficients are presented in Table 12.

Table 12

Summary of Connection PYD Multiple Regression Analysis

Variable	b	$SE\ b$	$ß$	p	95% CI
4-H Hours	-.05	.04	-.18	.21	[-.12, .03]
Age	-.01	.06	-.03	.82	[-.13, .10]
Gender	.06	.10	.08	.53	[-.13, .26]
Race	.08	.12	.08	.51	[-.16, .31]

Note. $N = 72$

A multiple linear regression analysis was run on the relation of the subscale of

Confidence from the Bridge-PYD scores to 4-H youths' participation intensity, age, race, and

gender. The results indicate R^2 for the Confidence subscale was 3.9%, with an adjusted R^2 of -1.9

%. Youths' 4-H participation in hours combined with age, race, and gender did not statistically

predict their Confidence subscale scores, $F(4, 67) = 0.67$, $p = .61$. Regression coefficients are

presented in Table 13.

Table 13

Summary of Confidence PYD Multiple Regression Analysis

Variable	b	$SE\ b$	$ß$	p	95% CI
4-H Hours	.00	.04	.01	.97	[-.07, .07]
Age	-.08	.06	-.18	.20	[-.18, .06]
Gender	.11	.10	.13	.30	[-.10, .31]
Race	.01	.12	.01	.92	[.23, .25]

Note. $N = 72$

A multiple linear regression analysis was run on the relation of the subscale of

Competence from the Bridge-PYD scores to 4-H youths' participation intensity, age, race, and

gender. The results indicate R^2 for the Competence subscale was 6.0%, with an adjusted R^2 of

0.6%. Youths' 4-H participation in hours combined with age, race, and gender did not

statistically predict their subscale scores for Competence, $F(4, 67) = 1.36$, $p = .24$. Regression

coefficients are presented in Table 14.

Table 14

Summary of Competence PYD Multiple Regression Analysis

Variable	b	$SE\ b$	ß	p	95% CI
4-H Hours	.05	.03	.19	.18	[-.02, .11]
Age	-.06	.05	-.14	.31	[-.16, .05]
Gender	.13	.09	.17	.15	[-.05, .32]
Race	-.01	.11	-.10	.93	[-.23, .21]

Note. *N = 72*

Analysis of Results

The multiple linear regression shows there is no correlation between 4-H participation

intensity and Bridge-PYD scores. The statistical results lead to a failure to reject the null

hypothesis. 4-H participation hours and age demonstrated a negative but non-significant

correlation to the composite Bridge-PYD average. These results run contrary to Lynch et al.'s

(2016) Boy Scout study, where the researchers found that the individual's activity level was the

strongest predictor of character. The negative correlation to 4-H hours may point to a saturation

level. Youths who participate in 4-H, to the exclusion of other PYD opportunities, could

negatively impact prosocial development if these activities lead to an increase of individual

projects. Age also carried a negative correlation to the character, connection, confidence, and

competence subscales. Nine-year-old youths presented the highest overall PYD mean ($M = 3.55$)

as well as the highest character ($M = 3.64$) and confidence ($M = 3.50$) subscales. By contrast, the

12-year-old youths held the highest mean for the competence subscale ($M = 3.50$), and there was

an increase in the mean score for 11-year-olds in the connection ($M = 3.63$) and character ($M = 3.59$) subscale. This data supports the analysis from Research Question 1 and Scales et al.'s

(2008) research demonstrating that younger youths may present more PYD indicators. Keeping in mind that the survey did not collect length of 4-H participation, the negative correlation to age and specific subscales may point to missed opportunities for youths at a younger age.

The inspection of mean averages by race and gender presented some surprising results. Female youths held a higher overall PYD mean, and the highest mean in all subscales, supporting previous research that PYD presents in females greater than males (Haas et al., 2015; Scales et al., 2008). The collected data mirrored previous 4-H research with an overrepresentation of White youths (LaVergne, 2015). However, an examination of mean scores by race demonstrated that White youths held lower means than Other Races in the overall PYD survey as well as every subscale except confidence. The mean scores may reveal that 4-H youths from minority communities may benefit from 4-H participation which results in higher PYD outcomes (Arnold, 2018a; Scales et al., 2008). The relatively small sample size that included non-White participants limits the generalization of these results. However, the push to ensure that 4-H and PYD programs are culturally relevant requires a closer examination of these results.

Research Question 3

The relation between youth participation in 4-H, and reported FSA scores, demonstrative of student academic success, were assessed using moderation analysis. Florida FSA scores are reported as a scaled score and an achievement level. The parent consent form requested that parents report the achievement levels for each subject: reading and math. The achievement level ranges from a one to a five with a score of three indicating student proficiency. In 2019, 57% of third through fifth grade reading students scored a Level 3 or above statewide, and 54% of sixth through eighth grade reading students scored a Level 3 or above (Florida Department of Education, 2019). In math, 62% of third through fifth-grade students scored a Level 3 or above

statewide, and 59% of sixth through eighth-grade students scored a Level 3 or above (Florida

Department of Education, 2019).

Description of Participants

Parent response for student FSA scores was limited. Twenty-four surveys reported FSA

reading scores, and 23 FSA math scores were reported out of the 81 returned youth survey forms

and accompanied parent permission forms. Table 15 depicts the FSA distribution for math and

FSA reading. The 24 returned surveys shown in Table 16 were overwhelmingly from White

youths, with more female than male scores were reported (*M* age = 10.13; *M* grade = 4.67).

Table 15

Sampled Population's Florida Standards Assessment Scores Distribution

FSA Score	Frequency *f*	Percent %
Reading		
1	1	4.2%
2	2	8.3%
3	8	33,3%
4	7	29.2%
5	6	25.0%
Math		
1	0	0%
2	3	12.5%
3	3	12.5%
4	9	37.5%
5	8	33.3%

Note. *N = 24 for reading. N = 23 for math.*

Table 16

Description of 4-H Youth Reporting Florida Standards Assessment Scores

Demographic	Frequency f	Percent %
Gender		
Female	14	58.3%
Male	10	41.7%
Grade		
4	12	50.0%
5	9	37.5%
6	2	8.3%
7	1	4.2%
Age		
9	10	41.7%
10	4	16.7%
11	7	29.2%
12	3	12.5%
Race		
White	22	91.7%
Other Race	2	8.3%
Hours		
1	9	37.5%
2	3	12.5%
3	1	4.2%
4	1	4.2%
5 or more	10	41.7%

Note. Gender coded as Males = 0 and Females = 1 and race is coded as White = 0 and Other Races = 1.

Data Preparation

The researcher prepared these data, and all assumptions were examined before the moderation analysis was run. The SPSS Process macro (Hayes, 2018) was used to examine if the intensity of 4-H participation moderated the relationship between FSA scores and prosocial skills presentation. Before these data were examined, the race category was converted to dummy

variables as a nominal category with zero representing White youths and one representing other races. Gender was also converted to nominal categories, with zero representing boys and one representing girls. In addition, mean scores were run for age, gender, and race. The participant samples were tested using bootstrap estimates from 5,000 samples.

Presentation of Results

Regression analysis was conducted to investigate if the intensity of 4-H participation moderates the relationship between achievement on the FSA and prosocial development. When examining math achievement in 4-H youths, a significant moderation effect is present in these data, $b = 1.03$, 95% CI [.55, 1.50], $t = 4.58$, $p < .001$, indicating that the relationship between prosocial development and math achievement is moderated by intensity of 4-H participation ($n = 23$, $M = 3.04$, $SD = 1.90$). Table 17 details the coefficients and confidence intervals.

Table 17

Linear Model of Predictors of Math Achievement

Predictor	b	SE	t	p	95% CI
Constant	5.64	1.36	4.15	.001	[2.76, 8.53]
Intensity	-.05	.07	-.70	.49	[-.21, .11]
Prosocial development	.30	.42	.72	.48	[-.58, 1.18]
Gender	1.00	.35	2.87	.01	[.26, 1.74]
Race	1.11	.40	2.77	.01	[.26, 1.96]
Age	-.23	.13	-1.76	.10	[-.50, .05]
Intensity x Prosocial development	1.03	.22	4.58	<.001	[.55, 1.50]

Note. $R^2 = .60$, $n = 23$

To interpret this moderation effect, the researcher examined the simple slopes of three models. The model for prosocial development as a predictor of math achievement when intensity was low (1.15 hours) shows there is a significant negative relationship between prosocial development and math achievement, $b = -1.65$, 95% CI [-2.84, -.46], $t = -2.94$, $p = .010$. The model for prosocial development as a predictor of math achievement shows that when intensity was at the mean (3.04 hours) there is a non-significant positive relationship between prosocial development and math achievement, $b = 0.30$, 95% CI [-0.58, 1.180], $t = 0.72$, $p = .480$. The model for prosocial development as a predictor of math achievement when intensity was high (4.94 hours) indicates a significant positive relationship between prosocial development and math achievement, $b = 2.25$, 95% CI [0.92, 3.57], $t = 3.59$, $p = .002$. Figure 7 illustrates the relationship between math achievement and youths' prosocial development as it is moderated by 4-H intensity.

Figure 7

Simple Slopes Graph of the Regression of Math Achievement on Prosocial Development at Three Levels of 4-H Participation Intensity (Hours)
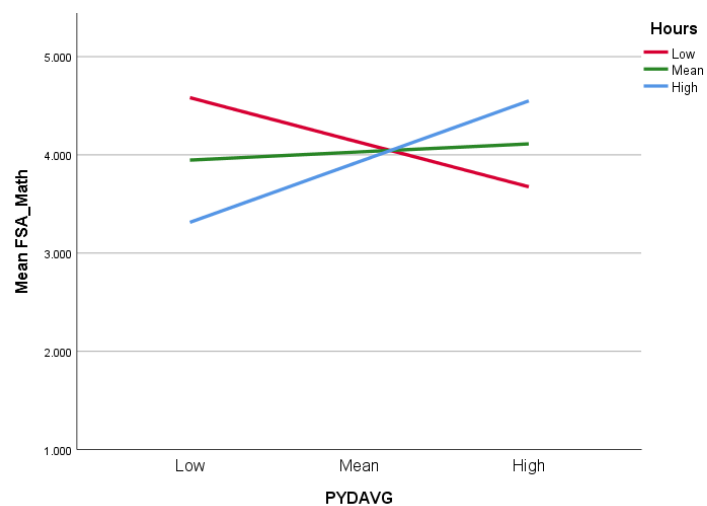
Note. When intensity is low (red line), there is a significant negative relationship between prosocial development and math achievement. At the mean value of intensity (green line), there

is a non-significant positive relationship between prosocial development and math achievement.

When intensity is high (blue line), there is a significant positive relationship between prosocial

development and math achievement.

Examination of 4-H youths' reading achievement shows a significant moderation effect is

present in these data, $b = 0.96$, 95% CI [.50, 1.42], $t = 4.42$, $p < .001$, indicating that the

relationship between prosocial development and ELA achievement is moderated by intensity of

4-H participation ($n = 24$, $M = 3.00$, $SD = 1.87$). Table 18 details the regression coefficients as

well as the confidence intervals.

Table 18

Linear Model of Predictors of Reading Achievement

Predictor	b	SE	t	p	95% CI
Constant	2.28	1.58	1.45	.17	[-1.05, 5.60]
Intensity	.09	.22	4.42	<.001	[.50, 1.42]
Prosocial development	-.51	.38	-1.35	.20	[-1.32, .29]
Gender	1.40	.30	4.74	<.001	[.78, 2.03]
Race	.92	.41	2.27	.04	[.07, 1.77]
Age	.05	.16	.33	.75	[-.28, .38]
Intensity x Prosocial development	1.028	.224	4.58	<.001	[.55, 1.50]

*Note.* $R^2 = .65$, $n = 24$

The researcher examined the simple slopes of three models to interpret the moderation

effect. The model for prosocial development as a predictor of reading achievement when

intensity was low (1.14 hours) indicates a significant negative relationship between prosocial

development and reading achievement, $b = -2.31$, 95% CI [-3.45, -1.17], $t = -4.26$, $p = .001$. The

model for prosocial development as a predictor of reading achievement when intensity was at the mean value of intensity (3.00 hours) shows there is a non-significant negative relationship between prosocial development and ELA achievement, b = -0.51, 95% CI [-1.32, 0.29], t = -1.35, p = .20. The model for prosocial development as a predictor of reading achievement when intensity was high (4.90 hours) shows there is a significant positive relationship between prosocial development and ELA achievement, b = 1.28, 95% CI [0.07, 2.49], t = 2.24, p = .04. Figure 8 illustrates the relationship between reading achievement and youths' prosocial development as it is moderated by 4-H intensity.

Figure 8

Simple Slopes Graph of the Regression of ELA Achievement on Prosocial Development at Three Levels of 4-H Participation Intensity (Hours).
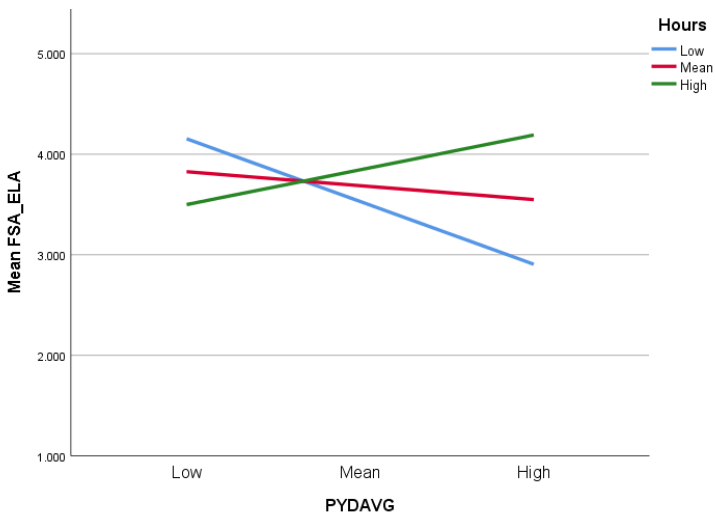
Note. When intensity is low (blue line), there is a significant negative relationship between prosocial development and reading achievement. At the mean value of intensity (red line), there is a non-significant negative relationship between prosocial development and ELA achievement. When intensity is high (green line), there is a significant positive relationship between prosocial development and ELA achievement.

Analysis of Results

The moderation analysis for reading and math achievement resulted in an acceptance of the alternative hypotheses. These results suggested that the relationship between prosocial development and math achievement emerged in 4-H youths with either low- or high-intensity levels. The Johnson-Neyman zone of significance further illustrated that the threshold for significance ended at 1.77 hours (Johnson & Neyman, 1936). As the intensity of participation increased, the relationship between prosocial development and math achievement remained non-significant until the value of intensity was at least 3.69 hours. The results also suggested that the relationship between prosocial development and reading achievement emerged in 4-H youths with either low or high levels of intensity of participation. The Johnson-Neyman zone of significance further illustrated that the threshold for significance ended at 2.69 hours (Johnson & Neyman, 1936). As the intensity of participation increased, the relationship between prosocial development and math achievement remained non-significant until the value of intensity was at least 4.75 hours.

The results for Research Question 3 provided new research to base a link between 4-H youths and academic achievement. This 4-H youth participant sample had an overall FSA reading proficiency of 81.4% and an FSA math proficiency of 84.6%. These student proficiency percentages outperformed the state averages and Alachua, Marion, and Gilchrist county FSA averages. Previous research showed that 4-H youths have higher academic achievement compared to non-4-H youths (Ellsworth et al., 2017; Flores-Lagunes & Timko, 2015; Hershberg et al., 2014; Lerner et al., 2005). However, only Flores-Lagunes and Timko (2015) tied Florida 4-H youths to academic achievement on a standardized achievement test instead of grades and grade point averages. This data updates Florida 4-H youths' performance to the new standardized

test given to Florida public school youths. Furthermore, this data identifies variables that contribute to North Florida 4-H youths' academic achievement,

The collected data and resulting analysis are restricted. This study originally assumed that the FSA results were reported accurately by the parents and were not subject to non-response bias. Youths may not have completed an FSA assessment during the 2018-2019 school year, or parents may have withheld the FSA information because of youths below level performance. The small sample size prohibited the ability to generalize these results outside of the sampled population. The data analysis conducted for Research Question 3 can only link 4-H participation and academic achievement. The results did not suggest causation between the two variables.

Chapter Summary

This chapter presented the results from this study's three research questions. Research Question 1 explored youths' presentation of prosocial skills within two contexts. The paired t-test data concluded with a failure to reject the null hypothesis as the means on the Child Trends Survey average between teachers, and 4-H leaders were similar. Research Question 2 assessed youths' prosocial skills using the Bridge-PYD survey concerning their level of 4-H participation. The results indicate a failure to reject the null hypothesis. Nevertheless, the data did provide support for previous results that PYD presents in females differently than males. The multiple linear regression performed for Research Question 3 also presented interesting results that support PYD in younger youths. The final analysis explored research question three and was found to be statistically significant, resulting in an acceptance of the alternative hypothesis. The moderation analysis found that 4-H youths' intensity of participation moderates their academic achievement and prosocial development. The final chapter in this study uncovers the major results and corresponding conclusions as well as implications for this study.

Chapter 5: Summary, Conclusions, Implications, and Suggestions for Future Research

The final chapter of this study presents closing thoughts. The chapter begins with a summary of the study and major results. Next, the research study's conclusions and the researcher's interpretation of the results are presented. This study's implications are thoroughly discussed, which leads to a discussion on suggestions for future research. Chapter 5 closes with an examination of the limitations and reflexivity of this research and concludes with a chapter summary.

Summary and Major Results

Youths who exhibit prosocial skills, sometimes called soft skills, demonstrate positive indicators in their social and emotional well-being as well as in their academic development (Corrigan et al., 2013). Recent trends in public education attempt to intervene in social crises, which include school violence, disproportionate academic performance, and socially unacceptable behavior (Higgins-D'Alessandro, 2012; Hyson & Taylor, 2011; Osher et al., 2016). Prosocial education has been shown to positively affect youths' academic performance in addition to communication, critical thinking, and general character development (Davis et al., 2016; Jones et al., 2017). Communities have come to rely on supplemental programs to provide youths with prosocial education that is missing in public schools (Benson, 2012; Lerner et al., 2017). America's largest youth organization, the 4-H youth organization, affords youths the ability to practice and refine character development, social relationships, and opportunities for self-improvement (Haas et al., 2015; Kress, 2014). The purpose of this cross-sectional correlational study was to examine the relationship between the intensity of participation in a 4-H youth program and the development of prosocial behavior in nine to 12-year-olds in three North Florida counties.

This research is grounded in Arnold's 4-H thriving model and supported by Bronfenbrenner's EST. Arnold's (2018a) 4-H thriving model operationalizes the link between Bronfenbrenner's nested ecologies and youth developmental outcomes. Arnold's (2018a) model specifies how developmental outcomes such as academic success, social competence, contribution, connection, and personal responsibility are achieved through the thriving trajectory. Bronfenbrenner's EST provides the foundation for Arnold's 4-H thriving model and helps to frame the research conducted in this study.

This correlational research study examined 4-H youths' participation and their levels of student success. Public school 4-H youth ages nine to 12 in three North Florida counties were surveyed. This research sought to answer the overarching question for this research: How does the intensity of participation by nine to 12-year-old youth in a North Florida 4-H youth program, as well as the difference between in-class and out-of-class environments, affect prosocial skill development and student academic achievement? The secondary research questions were also addressed.

RQ1: What is the difference in prosocial skill development, as measured by the Child Trends Survey, between nine to 12-year-old youth in the classroom and a 4-H environment?

RQ2: What is the relationship between the intensity of 4-H youth participation and prosocial skill development outcomes, as measured by the Bridge-PYD survey, controlling for age, gender, and race?

RQ3: To what extent does the intensity of participation in a 4-H youth program moderate the relationship between prosocial skill development and academic achievement, controlling for age, gender, and race?

Two surveys were administered to adult and youth participants (n = 72) between mid-September and early November. The Child Trends Survey was used to collect information from the youths' 4-H leader and classroom teacher. The Child Trends Survey is used to measure self-control, persistence, and self-confidence (Child Trends, 2014). The 12-item survey asked teachers and 4-H leaders to rate students on a scale from one to four. Youth participants completed the Bridge-PYD self-reporting survey (Lopez et al., 2015). The youth surveys also contained fixed-response items to collect demographic data such as race, gender, and the intensity of 4-H participation. Student FSA scores for reading and math were obtained through the parental consent forms.

This correlational study investigated the relationship between the intensity of 4-H youth participation and student success in 4-H youths. For the first Research Question, the youths' presentation of prosocial skill development was examined in both the classroom and 4-H club contexts. The data used to explore the relationship between youths' prosocial skill presentation in the 4-H club and the classroom presented a mean increase of .07 (p = .45) from the 4-H leaders survey to the classroom teacher's survey. The failure to reject the null hypothesis supports Bronfenbrenner's idea of ecological transitions for developing youths. 4-H youths are presenting similar prosocial skills within both contextual environments, the 4-H club, and the traditional classroom setting. Research Question 2 explored youths' 4-H participation and their presentation of prosocial skill development, $F(4, 67) = 0.81$, p = .52). The data resulted in a failure to reject the null hypothesis but did prompt support for previous research concerning PYD development based on gender. For the final Research Question, the moderating effect of 4-H youths' intensity of participation on academic achievement and prosocial skill development was analyzed. The results indicate a statistically significant negative relationship for low intensity and a positive

relationship for high 4-H participation intensity for both reading and math. The statistical significance of the third Research Question leads to an acceptance of the alternative hypothesis.

Conclusions

This research examined 4-H youths' participation and their academic success. Previous studies, including Lerner et al.'s (2013) comprehensive 4-H study, indicate 4-H youths present higher prosocial skills and academic achievement than their peers. The data collected support North Florida 4-H youths' prosocial skill presentation as well as academic success. The survey results demonstrated that prosocial skills are evident in dual ecological settings. Furthermore, this research expanded the existing body of PYD literature with evidence of PYD development in middle childhood youths.

North Florida 4-H youths presented high PYD survey means in addition to academic success as measured by the FSA. The Bridge-PYD survey included PYD elements of prosocial norms, character development, social competence, emotional competence, cognitive competence, behavioral competence, and opportunities for prosocial involvement (Catalano et al., 2004; Tolan et al., 2016). 4-H youths produced high mean averages on the Bridge-PYD. The relationship between 4-H youths' academic achievement and prosocial development is moderated by their intensity of participation. When intensity is low, there is a significant negative correlation between prosocial development and academic achievement. When intensity is high, there is a significant positive correlation between prosocial development and academic achievement. These relationships hold true in both reading and math achievement levels.

Classroom teachers and 4-H leaders Child Trends Survey inspected youths' prosocial skill presentation in two environments within the youths' mesosystem. Taylor et al. (2017) called for an investigation into multiple perspectives from the various relationships within youths'

lives. The inclusion of two perspectives from youths' relationships serves as a reminder that PYD and prosocial education is best for youths when it occurs in multiple ecological contexts (Cohen, 2014). Youths in this study presented prosocial skills within both environments. Youths' presentation of prosocial skills was slightly higher in the classroom than the 4-H club. Girls presented higher prosocial skills than boys in both the classroom and the 4-H club environment. Lerner (2018) recognized the gender discrepancies that exist in PYD development and that girls often benefit more from organizational PYD opportunities than boys.

The Bridge-PYD survey showed evidence of PYD development among all youths who completed surveys. Nine-year-old youths presented the highest overall Bridge-PYD mean score. Moore (2017) advocated for the expansion of PYD across race, gender, and age. The survey mean scores extend the effects of PYD into middle childhood. The Bridge-PYD also showed higher mean scores for 4-H minority youths. Higher PYD scores are linked to a decrease in risk and problem behaviors (Lerner et al., 2013).

Interpretation of Results

Youth Success

Youth success is evident in 4-H youths' prosocial skill presentation, as measured by the Bridge-PYD, as well as academic achievement, as measured by the FSA. Most notable is 4-H youths' FSA achievement. The relationship between prosocial development and math achievement becomes statistically significant when youths spend at least 3.69 hours in 4-H activities. 4-H youths need at least 4.75 hours to show a positive relationship between prosocial development and reading achievement. The positive correlation between 4-H participation and prosocial and academic success signify developmental outcomes identified in Arnold's (2018a) model. The 4-H clubs appear to be meeting the needs of the youths they serve by providing

opportunities for prosocial skill development. The overall high Bridge-PYD survey mean scores, and FSA achievement levels that were obtained from various 4-H youths signify that there is no correct approach to prosocial skill development.

The significant correlation between 4-H participation intensity and student success, among youths who devote about 5 or more hours a month to 4-H activities, signals a new foundation for 4-H research. The analysis reveals a clear link between 4-H youths and prosocial skill development based on gender, age, and sometimes race. The results also indicate that 4-H holds promise for the youths on standardized achievement tests. However, previous researchers advised that attendance alone does not promote prosocial skills (Hurd & Deutsch, 2017; Moroney & Devaney, 2017). 4-H youths' intensity of involvement, measured in hours, does not signify engagement or program quality (Hurd & Deutsch, 2017). The club level conditions should continue to be interrogated to assist researchers in identifying the complex dynamics that are active in youth development.

Prosocial Skills Across Ecological Contexts

The results of this study suggest that 4-H youths' prosocial skill development is evident in multiple contextual ecologies within the youths' mesosystem. The Child Trends Survey implies that classroom teachers and 4-H leaders observed similar prosocial skills in 4-H youths that can cross ecological contexts. The presentation of prosocial skills within dual environmental contexts points to an ecological transition (Bronfenbrenner, 1979). Youths' prosocial skill presentation in the mesosystem displays a pattern in their prosocial development.

This study did not investigate the environmental contexts to differentiate the promotion of prosocial skills within each environment. Youths may have been able to present more prosocial skills during the traditional school day than the 4-H club simply because of the amount

of time the youths spend in school and the type of tasks they are required to complete. The activities conducted during 4-H events may not provide youths opportunities to present specific prosocial skills such as waiting their turn in line or solving problems with peers without prompting.

Prosocial Skill Presentation in Youth

The Bridge-PYD means held consistently high for youths of all ages and races. No mean in the overall Bridge-PYD survey or corresponding subscales ranked below 3.0 on a range of 1 to 4. 4-H participation intensity showed a negative correlation to the overall Bridge-PYD survey and each of the subscales. This may be attributed to the inability to capture engagement through hours of participation. A key component to PYD is the dynamic factors that influence youths' development within multiple contexts and through multiple relationships (Benson, 2012; Benson et al., 2007; Scales et al., 2008).

Age was also negatively correlated to the youths' overall Bridge-PYD survey and each of the subscales except for the Care/compassion subscale. The presence of PYD in middle childhood and early adolescence may be evident through positive social interactions (Jones & Deutsch, 2012). It is not surprising that prosocial skills serve as evidence of PYD. The 4-H organization is designed to gradually release autonomy to the youths so that they may participate in the democratic process (Arnold, 2018a). The scaffolded learning that occurs in younger youths is gradually removed to provide opportunities for youths to practice their new knowledge independently. The negative correlation could signify the need to closely monitor youths' progression through the program to ensure they are adequately supported in their prosocial development.

Implications

The purpose of this quantitative cross-sectional, correlational study was to evaluate 4-H youths' participation and their levels of student success. The research gave insight into 4-H youths' prosocial development, academic achievement, and the youths' presentation of prosocial skills in dual contexts. The research also examined any relationships 4-H activities held with youth development. This section discusses implications for scholarly literature, current policies, and professional practices.

Implication for Scholarly Literature

This research adds to the 4-H and PYD literature by expanding the age in which PYD is considered, building on the prosocial benefits of the 4-H youth organization, and demonstrating ecological transitions for prosocial skills. The results of this study simultaneously confirm and contradict previous results. This study also adds to the body of knowledge by presenting new results for 4-H youths and youth development.

Previous PYD literature focused exclusively on youth development for adolescent youths. Lerner et al. (2013) and Scales et al. (2006) incorporated fifth-grade students and older into their studies. A majority of the students included in Scales et al. (2006) and Lerner et al. (2013) were in middle and high school. Tolan et al. (2016) recognized that PYD could apply to earlier stages of development. This study confirms that PYD indicators for older youths are present in middle childhood. The existence of PYD in younger children has been recognized before (Cohen, 2014). This research supports previous researchers in their attempt to recognize PYD before the adolescent phase of development (Tolan et al., 2016). The PYD theory has the adaptability to span ages, race, and environmental contexts (Moore, 2017). The acknowledgment

of PYD at earlier stages provides theorists the prospect to trace PYD indicators throughout all of youth development.

This study also supports the literature related to the presence of PYD in male and female youths. The data discrepancies between genders were noted in Scales et al.'s (2008) and Lerner et al.'s (2013) conclusions. This study presented gender inconsistencies from a new perspective. Previous literature used self-reported youth surveys to identify a gender gap. In this study, gender differences were noted in the 4-H leader and classroom teacher observations, with reports from both parties indicating higher PYD scores for females.

The literature surrounding 4-H youths has demonstrated higher levels of student success. Previous research on 4-H youth achievement is primarily based on qualitative measures or student self-reporting (Ellsworth et al., 2017; Hershberg et al., 2014; Lerner et al., 2005). A notable exception is a quantitative study that did support a relationship between 4-H participation and higher scores on standardized achievement tests (Flores-Lagunes & Timko, 2015). This study confirmed that 4-H youths in North Florida exceeded the state and district averages for FSA achievement. This study makes the 4-H youths' academic performance relevant to the current accountability climate that exists for public schools and the youths they serve by aligning 4-H performance to current testing instruments. 4-H youths' success through prosocial skill development is evident as well. 4-H youths' development in prosocial skills is well documented in prior studies (Avent & Jayaratne, 2017; Davis et al., 2000; Ellsworth et al., 2017; Lerner et al., 2014; Sage et al., 2018). This study confirms high PYD indicators in 4-H youths that spans age, race, and gender and adds to the body of knowledge by presenting adult perspectives into the literature.

Finally, there is evidence of 4-H youths' prosocial skill development as an ecological transition. Hamilton (2014) used the out-of-school contextual environment as one setting and the home as the evidence of transfer. Radhakrishna et al. (2013) introduced parent perspectives into 4-H literature. To the researcher's knowledge, this study is the only 4-H study that has used two of the youths' environments within the mesosystem and did not include the home environment. The results of this study build a scholarly understanding of 4-H youths' mesosystems by incorporating classroom teacher perspectives as well as the 4-H leader perspective. This study denotes the prevalence of 4-H youths' prosocial skill presentation in dual settings. The presence of prosocial skill development in both the 4-H club and the classroom environment points to youths' prosocial skill development. According to Bronfenbrenner (1979), the youths' ability to exhibit prosocial skills in dual contexts marks an ecological transition.

Implication for Current Policy

Youths are exposed to a vast amount of negative influences and traumatic events, in their schools, in their homes, and neighborhoods, yet they persevere with community assistance. There are forces in youths' lives that promote a positive developmental trajectory. It is the community's responsibility to ensure that systems are in place to promote a positive path. The evidence of high PYD indicators among the 4-H youths shown in this study highlights the need for youths to have access to out-of-school prosocial opportunities. Community organizations allow youths to learn and practice prosocial skills that are meaningful to other environmental contexts (Benson, 2012). The research presented in this study does not identify causation for the youths' positive indicators. Still, the results of this research do suggest that 4-H participation provides opportunities for youths to practice prosocial skill development. Additional resources are needed to provide youths with contextual environments to build prosocial skill development. Contextual environments could include additional 4-H

opportunities that reach a broader audience through a greater variety of curriculum offerings. Since out-of-school opportunities are typically self-selected, this concept can be expanded to other areas, including sports, arts, sciences, and music.

The practice of prosocial education must shift from intervention to whole-child education. There is a large amount of overlap between the prosocial education field and youth intervention. Youth intervention alone shows minimal results in protecting youths from risk behaviors (Higgins-D'Alessandro, 2012; Hyson & Taylor, 2011; Osher et al., 2016). Prosocial education and intervention can work simultaneously to promote all youths' development, not just that of youths who need protection from negative influences. Prosocial opportunities challenge the inequities in adolescence (Scales et al., 2008). For the participants in this study, the high PYD mean scores among minority youths illustrated protection from risk factors. The fields of education, youth development, and mental health may benefit from a shared understanding of adolescent development that is supported by prosocial education for all youths.

The results of this study highlight the need for the public school curriculum to embrace the idea of prosocial education. The academic disparities and mental health crises that plague the school system are not solved through sterile curriculum implementation that serves only youths' academic needs. In 2013, Corrigan et al. issued a call to infuse soft skills into the mandated public school curriculum. This call has yet to be answered in many public schools. The lack of prosocial education in public school challenges youths' ability to develop essential critical thinking skills and could be contributing to the current mental health crises seen in today's youths. A shift in public education policy from an academic-only curriculum that results in high stakes testing to the inclusion of prosocial education benefits students' well-being and school culture. The formal implementation of prosocial education within the traditional school day may coincide with an increase in student engagement and academic performance and a decrease in

bullying, anxiety, and student withdrawal (Jones et al., 2017). The inclusion of prosocial

standards for all grade levels must be accompanied by formal permission from the educational

policymakers to implement the prosocial standards without being penalized for sacrificing core

academic time.

Implications for Professional Practice

Youth development is personal and is affected by numerous variables. Therefore,

prosocial education that youths receive should be personalized as well. Lerner (2019) proposed

the idea of individualizing youths' PYD. The existing prosocial education delivery models are

not designed to meet youths' individual needs in the classroom or in many out-of-school

environments. A refinement in the form of all youth practitioners' work, guided by youths' needs

and identified best practices, would help the youths grow in prosocial skill development.

Providing youths with a prosocial skill needs assessment would assist in diversifying the

curriculum for all youths. Education professionals strive to deliver personalized academic

education. Personalized education should be expanded to include youths' prosocial growth in all

areas of the mesosystem.

All practitioners that work with children would benefit from open communication and

shared practices. Education professionals are largely unaware of the research supporting

prosocial education and of the valuable work that is being done in the community to support

youth development. Likewise, adults working with youths outside of the school setting are

unacquainted with professional practices that could improve their way of work. The problem-

solving cycle that is driving data collection and improvement in instructional practices could

benefit the work that is occurring in the community. Periodic review of youths' presentation of

prosocial skills would assist youth development professionals and 4-H leaders in identifying

areas of their program that are working. If all practitioners communicated what is working for the youths in the community, the professional resources would expand for the youths' mesosystems, possibly resulting in more significant prosocial skill development. Opening the lines of communication with youths' mesosystems would give each practitioner valuable insight into the youth development that is occurring in their community.

The use of inclusive practices would reach a culturally diverse youth population. Youths who are already prepared academically and socially are likely to engage in out-of-school activities (Roth & Brooks-Gunn, 2016). The 4-H organization has taken great strides to become more inclusive to all youths. The 4-H organization and all out-of-school community organizations should continue to diversify their participant populations. Surveying youths in the community about their passions and needs may enlighten the process. The PYD theory protects youths from risks that occur in adolescents. Broadening PYD's reach benefits youths currently in a PYD program in addition to the culturally diverse participants.

Unexpected Results

This study yielded two unexpected results. The first unexpected finding is the moderating effect of intensity of participation on prosocial skill development and FSA achievement. The FSA math results did not show a significant effect from prosocial development or intensity alone. In the case of the FSA ELA results, the independent variable is not significant, while the moderating variable, intensity of participation, is significant. Lynch et al. (2016) found that individual participation positively influenced youth development within the Boy Scout organization. The significant moderating variable, 4-H youth participation, may indicate the academic benefits of 4-H. The second unexpected result is the elevated student achievement rate on the FSA. This result is subject to parent response error. Only 24 of the 72 surveys contained

FSA scores. The lack of parent response could be attributed to parents' forgetting their youths'

FSA scores or to the parents' unwillingness to share low score reports. The results of the FSA

reports are encouraging but cannot be generalized outside of this study. The connection between

4-H youths' participation and their performance on standardized testing is worthy of closer

inspection.

Suggestions for Future Research

This research question raised many questions about youth development and 4-H

participation. The scholarly literature would benefit from a closer examination of both 4-H

participants and non-participant. Future research should also focus on improved survey

instruments and data collection that will further the scholarly literature.

Participants

Conducting comparison surveys on student success between pre-adolescent 4-H

participants and non-participants will expand the literature surrounding 4-H participants. 4-H

youths have been compared to non-4-H peers in prior research. Future research endeavors should

strive to retain classroom teachers' perspectives on 4-H youths' prosocial development and to

extend this understanding by comparing 4-H youths to non-4-H participants. The comparison

group will allow for broader generalizations surrounding 4-H youths and prosocial development.

This comparison could be extended to include FSA achievement score comparison between

groups as well.

The effects of 4-H and prosocial education are difficult to measure in marginalized

youths. As the issue of cultural bias is confronted, the research surrounding marginalized youths

should be updated (Hurd & Deutsch, 2017). As seen in this research, the low response rates from

minority youths make it difficult to draw meaningful quantitative conclusions. Qualitative

research focused on marginalized 4-H youths may offer more insights into hindrances to participation and benefits of all PYD programs, specifically 4-H participation.

Instrumentation

It has been stated in much of the previous literature that survey instrumentation continues to lag behind prosocial and PYD theory development. The Bridge-PYD survey was the most developmentally appropriate survey available. Existing instruments that include adult evaluations of youths' prosocial skill presentation are focused mainly on youths' prosocial display in the classroom setting and do not translate to other environments within youths' mesosystems. Arnold's (2018a) 4-H thriving model presents exciting next steps in the fields of 4-H research and evolving PYD theory. Aligning survey instruments that can transfer to middle childhood and adolescent youths would be a bold advancement in associating theory to meaningful research conclusions. There is a need for reliable and valid survey instruments that are both developmentally appropriate and sensitive to the PYD indicators found in Arnold's (2018a) 4-H thriving model. The youth surveys should be complemented with adult and even peer surveys that offer the researchers insight into multiple perspectives on the sample youths' development.

Data collection

Future quantitative examinations of the 4-H youth organization may better define levels of student success. Underreported FSA scores diminish this study's ability to generalize the conclusions on 4-H youths' overall academic achievement. Future studies that utilize existing databases and do not rely on self-reporting or parent reporting will be able to validate the conclusions without the risk of sampling errors. 4-H county rosters could be provided to school district research and accountability offices, which could then provide a researcher with verified

FSA score reports. The copy produced for the researcher need not hold identifiable information for the selected youths.

Many 4-H and PYD research studies have conducted pre- and post-correlational research. It is time to update this research using valid survey instruments. The results of this data can be used in the problem-solving process to guide program implementation and increase communication in the mesosystem. The correlational components can also be used to track an individual's progression through PYD elements. Tracking individuals through pre- and post-correlational surveys would allow theorists to trace PYD development as well as provide practitioners with insight on how to individualize each youth's PYD experiences.

Limitations and Reflexivity

The survey design limits the inferences made from this study. The reliance on a convenience sample and a minimal sampling size, in spite of high response rates among those contacted, hinders the results in this research. The small sampling size limits the characteristics examined in this population and does not allow for generalizations (Creswell, 2012). It is challenging to trace prosocial skill transfer (Furman & Sibthorp, 2014). The use of correlational statistics does not account for causation or for the contextual origin of factors surrounding student success.

The survey instrument and research timing could be improved in future studies. The youths had difficulty understanding that they were only to select one response for each item. A revision to a ranking system or open response may correct future errors. The selection of another independent variable such as years in 4-H or the quality of the 4-H club may have made a greater contribution to the scholarly literature. The timing of this survey did not align with the release of FSA reports to parents. Initially, the researcher intended to collect surveys in early September,

near the time parents receive FSA reports sent home from the public schools. A hurricane delayed many club meetings and expanded the time between parents' receiving score reports and the survey collection. This delay and the amount of non-responses for FSA scores require the results of Research Question 3 to be carefully considered.

This researcher gained immense knowledge in formal writing and statistical procedures. The astonishing amount of reading and learning through trial and error has emboldened this researcher's knowledge base. Prosocial skill development and youth have become ardent topics to read about, write about, and discuss for this researcher. This researcher began the program with little statistical knowledge and was convinced that qualitative research was always the best option for research studies. The researcher's retrospective examination into her personal beliefs revealed that this researcher values quantitative results. What followed was an arduous journey to understand and perform the necessary statistical measures needed to answer valuable research questions.

The personal interactions throughout this process provided the most enlightenment. There is a genuine connection between individuals during scholarly pursuits. However, this researcher was surprised by the level of mistrust that existed at the club level. Sometimes, it was difficult to convince the club leaders that this research was not intended to expose the leader or the youths. This example of mistrust was an exception to the researcher's experience. As a whole, class professors, committee members, peers, and even the county 4-H agents were exceedingly helpful, knowledgeable, and supportive. The interactions that occurred throughout this process confirm that the best learning not only comes from the literature, but also comes from contextual relationships.

Chapter Summary

This quantitative correlational study explored 4-H youths and their levels of student success. Overall, 4-H youths exhibit high levels of prosocial skill development and academic success. 4-H youths, and particularly minority youths, exhibit high PYD means as measured by the Bridge-PYD survey. 4-H youths exhibit prosocial skills in dual environments: the traditional classroom setting and the 4-H club settings.

In this study, previous research trends were observed in this study in addition to new results. This study confirmed both a variation in male and female PYD presentation and overall high PYD development of 4-H youths. The results from this research offer new evidence of 4-H youths' prosocial skills in dual environments within the mesosystem and can be linked to Bronfenbrenner's ecological transitions in his EST theory. The results of this study confirm that there is evidence of PYD development in younger youths.

There are implications for the results of this study in public policy and professional practice. Prosocial education has become a community undertaking. The community must rise to the occasion and serve youths throughout their development through whole-child education that promotes positive development. This research serves as a call to expand opportunities to experience prosocial education within the traditional school day and throughout community programs. Enhanced opportunities for youths to experience prosocial learning can be accomplished through open communication within the youths' mesosystem and the revision of the public school curriculum to allow for prosocial skills instruction. Furthermore, all programs should continue their efforts to create an inclusive environment for youths from all backgrounds.

This study holds several limitations. The convenience sample and small sample size prohibit any generalizations beyond the selected participants. Survey instrumentation could also

be improved to align theory and research. Finally, the self-reporting achievement scores would be better supported by utilizing existing databases.

Prosocial education holds promise in educating youths to be socially, emotionally, and academically prepared for the future. The systems that are currently in place are failing to provide youths with quality prosocial education leading to sluggish academic achievement throughout the United States. This research supports the positive impact mentors are making in youths' lives and calls for an expansion of prosocial skill opportunities for the sake of our youths.

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Appendices

Appendix A: Copyright Permissions

Emily Hancock <ebh8@students.uwf.edu>

Copyright Permission for the 4-H thriving model

Arnold, Mary Elizabeth <mary.arnold@oregonstate.edu>   Mon, Jan 6, 2020 at 12:12 PM
To: Emily Hancock <ebh8@students.uwf.edu>

Dear Emily

I am delighted to have you use the 4-H Thriving Model as part of your dissertation research, and this e-mail can serve as my permission to do so. The most current graphics are available at: https://health. oregonstate.edu/thriving-model (under promotional materials). There is a good possibility that these graphics will change as the work on the 4-h Thriving Model is ramping up with the new year. Please check this website before finalizing your dissertation to ensure you have the most up to date graphics.

Best wishes,
Mary

Mary E. Arnold, Ph.D.
Professor I Youth Development Specialist
Oregon State University
541-737-1315(V)

[Quoted text hidden]

UNIVERSITY of WEST FLORIDA
STUDENTS

Emily Hancock <ebh8@students.uwf.edu>

Copyright Permission

Kress, Cathann A. <kress.98@osu.edu>   Thu, Jan 30, 2020 at 10:54 AM
To: Emily Hancock <ebh8@students.uwf.edu>

Dear Emily

I wish you well as you complete your dissertation. With regard to the model I outlined for approaches, I created that while at USDA and consider it to be work in the public domain. I do appreciate citing my development of the model in the materials in which it is included. All the best to you as you continue your work!

Thank you

Cathann Kress

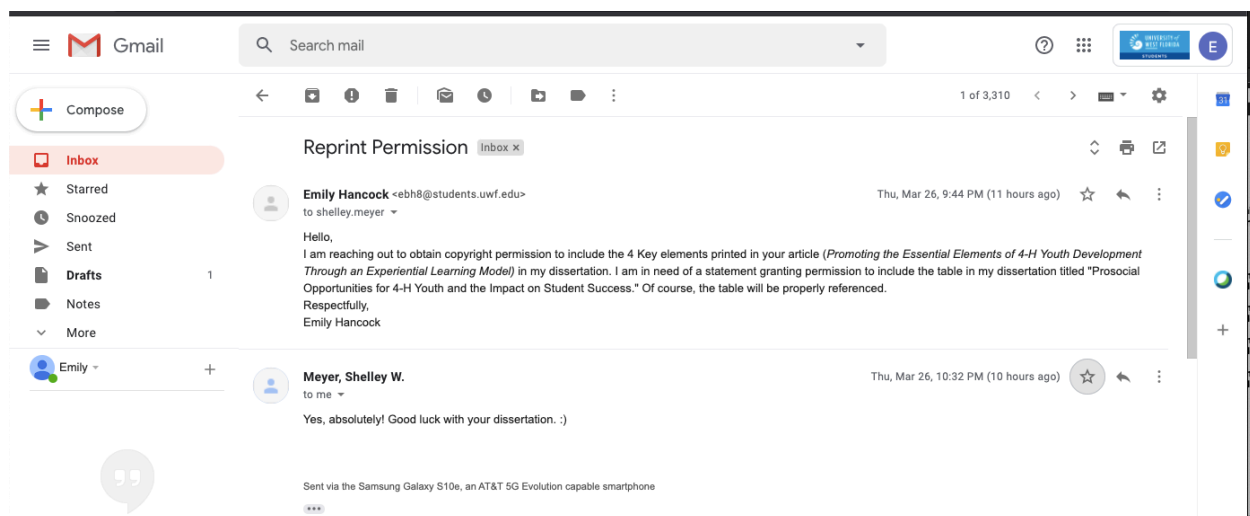**Cathann A. Kress, Ph.D.**
Vice President for Agricultural Administration & Dean
College of Food, Agricultural, and Environmental Sciences
140 Ag Administration | 2120 Fyffe Road | Columbus, OH 43210
614-292-6164 Office
kress.98@osu.edu

Twitter: @cathannkress

THE OHIO STATE UNIVERSITY
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

150 1870 2020

— We Sustain Life —

[Quoted text hidden]

Reprint Permission   Inbox ×

Emily Hancock <ebh8@students.uwf.edu>   Thu, Mar 26, 9:44 PM (11 hours ago)
to shelley.meyer

Hello,
I am reaching out to obtain copyright permission to include the 4 Key elements printed in your article (*Promoting the Essential Elements of 4-H Youth Development Through an Experiential Learning Model*) in my dissertation. I am in need of a statement granting permission to include the table in my dissertation titled "Prosocial Opportunities for 4-H Youth and the Impact on Student Success." Of course, the table will be properly referenced.
Respectfully,
Emily Hancock

Meyer, Shelley W.   Thu, Mar 26, 10:32 PM (10 hours ago)
to me

Yes, absolutely! Good luck with your dissertation. :)

Sent via the Samsung Galaxy S10e, an AT&T 5G Evolution capable smartphone

Appendix B: IRB Approval

UNIVERSITY *of*
WEST FLORIDA

Ms. Emily Hancock   September 05, 2019

Dear Ms. Hancock:

The Institutional Review Board (IRB) for Human Research Participants Protection has completed its review of your proposal number IRB 2020-023 titled, "Prosocial Opportunities for 4-H Youth and the Impact on Student Success ," as it relates to the protection of human participants used in research, and granted approval for you to proceed with your study on 09-04-2019. As a research investigator, please be aware of the following:

* You will immediately report to the IRB any injuries or other unanticipated problems involving risks to human participants.

* You acknowledge and accept your responsibility for protecting the rights and welfare of human research participants and for complying with all parts of 45 CFR Part 46, the UWF IRB Policy and Procedures, and the decisions of the IRB. You may view these documents on the Research and Sponsored Programs web page at http://research.uwf.edu. You acknowledge completion of the IRB ethical training requirements for researchers as attested in the IRB application.

* You will ensure that legally effective informed consent is obtained and documented. If written consent is required, the consent form must be signed by the participant or the participant's legally authorized representative. A copy is to be given to the person signing the form and a copy kept for your file.

* You will promptly report any proposed changes in previously approved human participant research activities to Research and Sponsored Programs. The proposed changes will not be initiated without IRB review and approval, except where necessary to eliminate apparent immediate hazards to the participants.

* **You are responsible for reporting progress of approved research to Research and Sponsored Programs at the end of the project period 12-20-2019. If the data phase of your project continues beyond the approved end date, you must receive an extension approval from the IRB.**

* If using electronic communication for your study, you will first obtain approval from the authority listed on the following web page: https://uwf.edu/offices/institutional-communications/resources/broadcast-distribution-standards/.

Good luck in your research endeavors. If you have any questions or need assistance, please contact Research and Sponsored Programs at 850-857-6203 or irb@uwf.edu.

Sincerely,

Dr. Matthew Schwartz, Assistant Vice President
Research Administration

Dr. Carla Thompson, Chair, IRB for
Human Research Participant Protection

Appendix C: School District Approvals

Parrish, Ronda
May 14, 2019 at 12:27:50 PM EDT
To: Emily Hancock
RE: Follow up to dissertation request

Hello Emily,

I asked my Human Resources Officer to review your request.

She said to make sure the process involved parental consent.

Again, thank you for your interest.

We are approving your request.

Ronda Parrish

From: Emily Hancock [mailto:ebh8@students.uwf.edu]
Sent: Wednesday, May 08, 2019 7:11 PM
To: Parrish, Ronda
Subject: Follow up to dissertation request

Good Evening,

My name is Emily Hancock and I am a doctoral student (as well as an administrator in Levy County). I apologize for the repeat email. I know this is an extremely busy time of year, but I was wondering if you had any time to consider my request below. I will begin my formal dissertation proposal in May. My research is focused on prosocial skill development for 4-H students between ages 9-12 and will mostly focus on the 4-H member in the club setting. However, a piece of my research is investigating if prosocial skills are evident in the classroom as well. This would require the classroom teacher to complete a short survey on the 4-H student identified in the classroom (of course this is after all parent permissions have been obtained). To gather an adequate sample size, I am hoping to investigate members from Marion, Alachua, and Gilchrist Counties. I was wondering if my research requiring input into 4-H student development is amenable to the Gilchrist County School District and if the school district has a formal approval process. I would be happy to discuss my research with you in greater detail if more information is needed.

Thank you,

Emily Hancock

(813) 967-7953

Research Request Inbox ×

Emily Hancock   Wed, Jul 10, 7:33 PM (5 days ago) ☆
Good Evening, I would like to officially submit my research request. If hard copies are preferred, I will be happy to submit in t...

Jeffry Charbonnet   12:41 PM (8 hours ago) ☆ ↩ ⋮
to me ▾

Dear Emily,

Your application is conditionally approved by Alachua County Public Schools pending approval by the UWF IRB.

Also, the decision to participate in the teacher survey will be left up to each individual classroom teacher.

Sincerely,
J. Charbonnet

•••

Marion County Public Schools
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School Counseling and Assessment
21.5 S.E. 6th Street • Ocala, FL 34471
(352) 671-7157 • Fax (352) 671-7587
F.R.S (800) 955-8770 (voice) • (800) 955-8771 (TTY)

July 16, 2019

Emily Hancock
6691 SE 200th Ave
Morriston, Florida 32668

Dear Ms. Hancock:

I have received your application to conduct research entitled *Prosocial Opportunities for 4-H Youth and the Impact on Student Success*. Your proposal takes into consideration the standard safeguards associated with a request to conduct scholarly research and it complies with our district criteria for a research request.

Please consider this letter as <u>conditional approval</u> for you to conduct your project within the Marion County Public Schools as you have proposed with the following considerations:

- <u>Final approval will be contingent upon receipt of documentation of IRB approval from your institution</u>
- Approval from this office does not obligate principals of the selected schools to participate in the proposed research
- This document MUST be attached to ALL correspondence in its entirety AND presented during any electronic communications, face-to-face meetings and reviewed prior to any research
- All information obtained for the purpose of your research must be dealt with the highest level of confidentiality
- Upon completion of your research, please provide this office with a copy of the results

Please notify me if you need to make any substantial changes in your research project as it is implemented in our district. You have my best wishes for a successful project.

Regards,

Jonathan McGowan. M. Ed.
Director of School Counseling and Assessment

~ An Equal Opportunity School District ~

Appendix D: Survey Instrument Permissions

Copyright Clearance Center

RightsLink®

Home | Create Account | Help

LOGIN

If you're a copyright.com user, you can login to RightsLink using your copyright.com credentials.

Already a RightsLink user or want to learn more?

Gratis Reuse

Permission is granted at no cost for use of content in a Master's Thesis and/or Doctoral Dissertation. If you intend to distribute or sell your Master's Thesis/Doctoral Dissertation to the general public through print or website publication, please return to the previous page and select 'Republish in a Book/Journal' or 'Post on intranet/password-protected website' to complete your request.

BACK | CLOSE WINDOW

Kelley Bennett   January 15, 2019 at 8:28 AM

To: Emily Hancock

RE: Contact from ChildTrends Website

Hello,

You are welcome to use Child Trends' work, so long as you properly credit Child Trends. If you need some sort of documentation granting permission, please draft a letter stating that Child Trends is giving you permission to use our work. then, send that letter back to me.

Best,

Kelley

Kelley Bennett | Communications Assistant

7315 Wisconsin Ave, Ste 1200W | Bethesda, MD 20814

ph: (240) 223-9205 | kbennett@childtrends.org

To get the latest research on children and youth, sign up for our newsletter here.

-----Original Message-----

From: Emily Hancock <no-reply@childtrends.org>

Sent: Sunday, January 13, 2019 3:10 PM

To: Kelley Bennett <kbennett@childtrends.org>

Subject: Contact from ChildTrends Website

Someone has contacted you on the Child Trends website with the following details:
Name: Emily Hancock
Name: ebh8@students.uwf.edu
Name: 8139677953
Name: University of West Florida
Name: Good Afternoon,
 I am interested in using the social and emotional survey tool published in July of 2014 for my dissertation. I am wondering if any special permissions are needed to distribute the survey to participants. Please feel free to contact me with any questions.

 Emily Hancock

Appendix E: Consent Forms

Adult Consent Form
Prosocial Opportunities for 4-H Youth and the Impact on Student Success

Description of the research

Hello! My name is Mrs. Emily Hancock and I am a student at the University of West Florida. I am trying to learn about how children develop prosocial skills. A child you work with has been asked to participate in the study because he/she is a 4-H member between the ages of 9-12 and enrolled in public school. The youth has been asked to complete a short survey at their 4-H club meeting. As a 4-H advisor/classroom teacher, I am requesting for you to complete a short survey about the prosocial skills that you see this child exhibit. The survey should take no more than five minutes to complete. I hope this study will help researchers understand how 4-H membership helps children develop prosocial skills in the 4-H club and at school.

Risks and discomforts

There are no known risks associated with this research.

Protection of confidentiality

All identities will be protected. Your name will not be collected, and your completed survey will not be shared. No one's identity will be revealed in any publication resulting from this study.

Voluntary participation

Participation in this research study is voluntary. You may refuse to participate, and you may withdraw from the study at any time. The child will not be penalized in any way.

Contact information

If you have any questions or concerns, please feel free to contact me at ebh8@students.uwf.edu or at (813) 967-7953.

If you have any questions regarding your rights as a research participant, please contact, Institutional Review Board University of West Florida, (850) 474-2824.

By signing below, you are agreeing that:
- you have read this consent form (or it has been read to you) and have been given the opportunity to ask questions and have them answered
- you have been informed of potential risks and they have been explained to your satisfaction.
- you understand University of West Florida has no funds set aside for any injuries you might receive as a result of participating in this study
- you are 18 years of age or older
- your participation in this research is completely voluntary
- you may leave the study at any time. If you decide to stop participating in the study, there will be no penalty to you and you will not lose any benefits to which you are otherwise entitled.

Signature_____ Date_____

Printed Name_____

CHILD ASSENT

Prosocial Opportunities for 4-H Youth and the Impact on Student Success

Hello! My name is Mrs. Emily Hancock and I am a student at the University of West Florida. I am trying to learn about how children grow socially. You have been asked to participate because you are a 4-H member enrolled in public school. If you decide to participate in this study, you will be asked to complete a short survey. This study will take place at your next 4-H meeting and should take about fifteen minutes of your time. I hope this study will help me to understand how 4-H membership helps children grow socially in your 4-H club and at school.

You are encouraged to answer all of the questions honestly, but if something makes you uncomfortable, you do not have to answer. You do not have to be in this study if you don't want to and you can quit the study at any time. No one will get mad at you if you decide you don't want to participate.

Other than Mrs. Hancock, no one will know your answers, including your teachers, 4-H advisor, and parents. If you have any questions, just ask Mrs. Hancock.

This research study has been explained to me and I agree to be in this study.

_____   _____

Youth's Signature for Assent   **Date**

Check which applies to be completed by person conducting assent discussion):

☐ The participant is capable of reading and understanding the assent form and has signed above as documentation of assent to take part in this study.

☐ The participant is not capable of reading the assent form, however, the information was explained verbally to the subject who signed above to acknowledge the verbal explanation and his/her assent to take part in this study.

_____

Name of Person Obtaining Assent Print

_____   _____

Signature of Person Obtaining Assent   **Date**

Parental Permission for Participation of a Child in a Research Study
Prosocial Opportunities for 4-H Youth and the Impact on Student Success

Description of the research and your child's participation

Hello! My name is Mrs. Emily Hancock, and I am a student at the University of West Florida. I am trying to learn about how children develop prosocial skills. Your child has been asked to participate because he/she is a 4-H member between the ages of 9-12 and enrolled in public school. If your child participates in this study, he/she will be asked to complete a short survey. This study will take place at your 4-H meeting and should take about fifteen minutes to complete. Your child's 4-H advisor and classroom teacher will then be asked to complete a survey about the prosocial skills they see your child exhibit. I hope this study will help researchers understand how 4-H membership helps children develop prosocial skills in the 4-H club and at school. In addition, it is requested that you share your child's most recent FSA results in reading and math to help evaluate 4-H student's academic success.

Risks and discomforts
There are no known risks associated with this research.

Protection of confidentiality

Your child's identity will be protected. Your child's name will be collected, and his/her 4-H advisor and classroom teacher will complete identical surveys concerning the presence of prosocial skills in their environments. Your child's identity will not be revealed in any publication resulting from this study.

Voluntary participation

Participation in this research study is voluntary. You may refuse to allow your child to participate or withdraw your child from the study at any time. Your child will not be penalized in any way should you decide not to allow your child to participate or to withdraw your child from this study.

Contact information

If you have any questions or concerns, please feel free to contact me at
ebh8@students.uwf.edu or at (813) 967-7953.

Consent
I have read this parental permission form and have been given the opportunity to ask questions. I give my permission for my child to participate in this study.

Participant's signature_____ Date:_____

Child's Name:_____

Child's Name _____

FSA Math 2019 Score _____ (1-5)

FSA ELA 2019 Score _____ (1-5)