CLOVERLEAF COMMUNICATION APPREHENSION: INFLUENTIAL EXTENT OF THE 4-H PROJECT ACHIEVEMENT PROCESS

by

CHASITY DAWN TOMPKINS

(Under the Direction of Milton Garry Newberry, III)

ABSTRACT

Fear and anxiety are common repercussions of public speaking in youth. Previous research examined communication apprehension (CA) scores in older adolescents and young adults, yet few explored the extent of public speaking events among youth and none explored the 4-H community. The purpose of the study is to explore to what extent 4-H Cloverleaf Project Achievement (PA) influences communication apprehension among Cloverleaf 4-H members throughout Georgia. Quantitative research methods were used to conduct a questionnaire during the Cloverleaf PA. Descriptive and inferential statistics were used to analyze data collected at four Cloverleaf PA events across Georgia. Communication apprehension levels, including sub-score, total scores, and overall changes, along with their relationship to the demographic data was determined. Findings show that GA Cloverleaf PA does not help reduce CA levels within the respondents. The 4-H Experiential Learning Model provided a basis for interpreting the findings and recommendations for research and practice.

INDEX WORDS: Anxiety, Cloverleaf, Communication, Communication Apprehension, Project Achievement, Public Speaking, Youth Development, 4-H Experiential Learning Model, 4-H Relationship

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DEDICATION

This paper is dedicated to the younger version of myself – the one who kept silent during hard times, who was resilient in life, who never backed down on a challenge, and who strived to become the person she is today. I am dedicating this writing to the person I never thought I would become, to the person I never believed would succeed.

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CHAPTER 1

INTRODUCTION

Introduction

In Georgia, students who are in fifth grade get to start actively being involved in the 4-H program in their county. Some counties have different standards and allow 4-H participation starting in the fourth grade. Different grades are broken into sections: Seniors are 4-H members who are in high school (Grade 9 to 12), Juniors are 4-H members in middle school (Grade 7 and 8), and Cloverleafs are 4-H members who are in the fourth, fifth, and sixth grade. Extension staff are based on The University of Georgia campus and work in most of the counties to provide an encouraging and challenging leadership opportunity, while implementing the 4-H curriculum (Georgia 4-H, 2005). Every student in private, home, or public school can join 4-H in their home county. These members can also continue their journey throughout college and career, as collegiate or alumni members.

The members of 4-H clubs across Georgia have ample opportunities to be involved in public speaking events, workshops, meetings, programs, and team building activities. They must know how to effectively communicate to achieve their goals, in order to effectively strive in work and life (Department of Labor, n.d.). One way to do this is by combating communication apprehension (CA). Communication apprehension is best defined in research as “an individual’s level of fear or anxiety associated with either real or anticipated communication with another person or persons” (Daly, 1997).

Communication apprehension consists of four sub – scores, including group discussions, meetings, interpersonal conversations, and public speaking, as well as a total CA score (McCroskey, Beatty, Kearney, & Plax, 1985). When placed in uncomfortable situations for too long, stressed youth engage in more risk-taking behavior relative to controls, show an increased reward, and lowered cost sensitivity during decision-making (Jamieson, 2016).

Statement of Problem

Communication is often a two-way medium and knowing how to communicate with others is just as important as interpreting communication from others (Department of Labor, n.d.). All forms of communication, including verbal, aural, non-verbal, written, and visual, play a vital role in developing soft skills needed for youth to succeed in all stages of their lives (Department of Labor, n.d., & National Collaborative Workforce and Disability, 2011). Since most educators assume that these soft skills are introduced and built at home, school systems often remove building block standards that help teach these skills (National Collaborative Workforce and Disability, 2011). Having students work and learn in an environment where communication is not fostered, but is required, can lead to communication apprehension, where youth are not comfortable speaking or networking with those around them (Gardner, Milne, Stringer, & Whiting, 2005). When these skills are not learned, youth have a lesser chance of getting hired (Bercow, 2013 & National Collaborative Workforce and Disability, 2011).

The Georgia 4-H program is helping to bridge the gap between home life and school standards by basing their services toward youth in their core values of agriculture and the environment, family and consumer sciences, leadership, citizenship, and communication (Georgia 4-H and Georgia FFA Statement of Relations, 2006). One of the many ways Georgia 4-H aids in strengthening a youth's communication skill is through Project Achievement (PA). This event allows Georgia 4-H members to share a presentation with a group of people and a panel of judges and addresses each of the five forms of communication. Students enjoy participating in PA each year (Dr. Lori Bledsoe, personal communication), but currently, no study has shown the effect of PA on Georgia 4-H members communication apprehension.

This research study consisted of quantitative data collection methods that explored communication apprehension levels of fourth, fifth, and sixth graders within the four 4-H districts in Georgia. A meeting was held with faculty from the Georgia State 4-H Office in August of 2016 and it was determined that more research needed to be conducted on the Cloverleaf's Project Achievement and its success rate. Upon further research, the level of communication apprehension, instead of just public speaking anxiety, was addressed as a concern and as a gap in the literature. The target population for this study was 4-H members in grades 4^{th} – 6^{th}, who prepared a presentation related to a topic of their choice in one of over 50 areas to present to Cloverleaf Project Achievement (PA) in March of 2017.

Project Achievement (PA) is an event, where Georgia 4-H members decide on a topic based within over 100 research areas, research the information needed, and then

prepare a speech with visual aids (Katlyn LaVelle, personal communication). Some to all the responsibility for research, presentation, and delivery is on the Georgia 4-H members. By taking time from the curriculum to prepare and present, the level of communication apprehension felt by the Georgia 4-H member should change. Project Achievement includes the four sections of sub-scores within communication apprehension (group discussion, meetings, interpersonal conversations, and public speaking), so targeting these four constructs was more effective than just one.

The curriculum used during this process is implemented every year by the county's Extension Agent, staff, and leaders. The curriculum is created by the Extension Agent, staff, or leader by collecting documents and advice from current UGA Extension Specialists, 4-H lessons created by current and previous Specialists, and from their past involvement in this area. Every Agent, staff, and leader has their own way of preparing their members. For example, some may reach out to parents, guardians, or other family members for assistance, while others may even network with the teachers and staff within their school systems to create a joint effort (Nykita Howell, personal communication).

Thousands of Georgia 4-H members present their research every year at one or multiple Project Achievements. These opportunities provide a way for Georgia 4-H members to share learned knowledge or skills, while addressing the need of public speaking skills. It is assumed that the more a Georgia 4-H member participates and presents, the less anxious they will be when they should do it again, but no study has been conducted to prove if this is what is taking place in our Georgia 4-H members.

Purpose and Objective of Study

Before preparation for Project Achievement begins, the agents will meet with the Georgia 4-H members within their school system and follow through with the lesson plans in their curriculum. Throughout the curriculum process, Georgia 4-H members will be introduced to PA and the steps needed to begin preparation. Since every agent prepares in a different way, Georgia 4-H members may seek out help from outside sources. There are a few deadlines that the Agents must meet to register for events, but it may be up to the Georgia 4-H member to complete their individual projects and presentations. Because of this difference in teaching, some Georgia 4-H members may get to work right away, while others procrastinate.

The time it takes for a member to complete their project depends on when they start preparations and what their project is about. Cloverleaf members often showcase a topic of interest that they are learning about in school, within a club or organization, or with sports. They might start as early as January, which gives them a year or more to prepare for the next year's event. A member who waits until November or December to begin their work has between one and two months. The earlier a member starts conducting any research needed, the more time they have to prepare, recite, make changes, and learn more about their topic. These members may also have more time to present their project in front of multiple audiences for feedback, which they can use to their advantage.

The results of this research will help to determine if Georgia 4-H PA is in reducing communication apprehension. The data from this study may also provide

educators and 4-H agents with information relating to how they can change their curriculum or alter their learning environment to help reduce communication apprehension, while implementing a fun and creative way to conduct research. Since PA is an event for all Cloverleaf 4 – Her's, Extension Agents need to know more creative ways to combat CA, so that their Georgia 4-H members feel more comfortable presenting to a larger crowd.

The research questions:

1. To what extent does Cloverleaf Project Achievement influence youth's communication apprehension levels?
2. What is the effect of the amount of time 4-H PA participant spent on PA preparation on communication apprehension?
3. What is the effect of help a 4-H member receives on PA have on communication apprehension?
4. What is the relationship between demographic information and communication apprehension in 4-H PA participants?

Study of Hypothesis

This study will combine multiple ways of easing communication apprehension through various lesson plans. The PRCA – 24 questionnaire will be used to determine the total CA score and the sub-score for each individual (McCroskey et al., 1985). The null hypothesis is that the Georgia 4-H members will have a high level of communication

apprehension before they start preparing for their competition, but that their preparations within this program do not actually help reduce their level of communication apprehension. The alternative hypothesis is that, from the use of these lessons and curriculum, these Georgia 4-H members will have a high level of communication apprehension before they start preparing for their competition, but that this will lower after they go through the steps of preparation.

H_O – There will be no difference in communication apprehension between the pre-test and post-test scores among participants. *

H_1 - There will be a reduction in communication apprehension score between the pre-test and post-test among participants. *

* The decrease in CA is due to the program and all curriculum.

Limitations to the Study

The conclusions and implications drawn from this study are subject to the following limitations:

1. Since the Cloverleafs from Georgia 4-H were purposefully selected to be a part of this research prospectus, the results obtained cannot be assumed or generalized beyond the population of this study.
2. These results are limited to the extent of the content derived from the instruction used specifically for the sample in this program.

3. The school system calendar can run from early August to late May and each school program meets on different schedules, both in school and after school.
4. The curriculum used for this study was created by State Specialists and Extension Staff. Any additional curriculum or materials used could be created or adapted by the Extension Agent, staff, or leader, so reliability and validity were not measured.
5. The data for this study is self-reporting, so the data obtained it limited to what the Georgia 4-H member's want to and feel comfortable reporting.

Assumptions of the Study

The following assumptions were made for this study:

1. The Georgia 4-H members were honest in their responses for the questionnaire. The fact that they have no relationship with the evaluator presents little to no bias in the research conducted.
2. The Georgia 4-H members are familiar enough with public speaking and the anxiety caused to accurately judge their own source and levels.
3. The Georgia 4-H members involved in the study presented their research and information to the best of their ability.
4. Previously measured variables, such as learning styles, scientific reasoning, and content knowledge are accurately identified. Newly measured variables involving the level of public speaking anxiety were also identified correctly.

5. The Extension Agents delivered and covered all material to the best of their ability.
6. All Georgia 4-H members were awarded the same window of opportunity on when to begin working on their projects and presentations.

Definition of Terms

For this article, refer to the following definitions:

1. **Cloverleaf**: These are Georgia 4-H members in the fourth, fifth, or sixth grade.
2. **Communication Apprehension (CA):** This is "an individual's level of fear or anxiety associated with either real or anticipated communication with another person or persons" (Daly, 1997).
3. **Community**: the area in which the school systems reside in
4. **Curriculum**: This term refers to the set of lesson plans constructed by each individual Extension Agents, staff, and leaders. These lessons may consist of workshops about presentation how-to's, and poster designs, activity sheets that narrow down their presentation ideas, and the ability of using technology to research ideas and piece together their final touches. After research is complete, some agents may allow the Georgia 4-H members to work on their posters, write out their speeches, and then shorten their plan of action onto notecards.
5. **Demographic characteristics**: For this study and for use with the quantitative questionnaires, the following demographic information was collected: gender/sex, grade, race/ethnicity, district, and county.

6. **Project Achievement (PA):** This event "helps 4-Her's develop both oral and written communication skills while becoming knowledgeable in their topic of interest" (Georgia 4-H Foundation, 2016).
7. **Program:** This term refers to all aspects of materials covered during meetings of the individual Georgia 4-H clubs, including the lessons, curriculum, workshops, trips, and presentations.
8. **Public speaking anxiety (PSA):** This term, used as the base of this research study, can also be used interchangeably with speech anxiety or stage fright. PSA "involves a central fear of being scrutinized or evaluated by others. This fear is often accompanied by a variety of physical and emotional reactions that can significantly interfere with a person's ability to successfully give a speech or presentation, including intense feelings of anxiety, worry, nervousness, trembling or shaking, sweating, and/or dizziness" (UWSTOUT, 2016).

Summary

Chapter 1 explained the current issue with lack of communication skills and the possible presence of communication apprehension in youth. Furthermore, it explained PA in Georgia 4-H and how it affects youth participants. The members of 4-H clubs across Georgia have ample opportunities to be involved in public speaking events, workshops, meetings, programs, and team building activities. Georgia 4-H members in these settings must know how to effectively communicate to achieve their goals. This research study consists of quantitative data collection methods that explore communication

apprehension (CA) levels of fourth, fifth, and sixth graders within four districts in Georgia. The purpose of this study is to determine how Cloverleaf PA influences a youth's CA levels. This study will look at pre – and post – test data on CA levels through a questionnaire administered to individual Georgia 4-H members. The results of this research will help to determine if this way of learning is effective and does help reduce CA. Chapter 1 included background information on Georgia 4-H PA, the research questions, purpose, and objectives of this study, the significance of the study, a list of definitions, the assumptions of the study, and the limitations to the study. Chapter 2 will consist of a literature review further explaining the 4-H organization, Georgia 4-H program, communication apprehension, and the conceptual framework guiding the study.

CHAPTER 2

REVIEW OF LITERATURE

National 4-H Organization

The National 4-H Organization "is a community of more than 100 public universities across the nation that provides experiences where young people learn by doing" (4-H, 2017). As of 2017, 1.8 million urban, 1.6 million suburban, and 2.6 million rural youth were reached through the National 4-H Organization with over 500,000 volunteers putting in extra time and effort to keep this organization striving (4-H, 2017). Across the country, there are over 3,500 4-H professionals, including part time and full time faculty and staff, who help mentor all 6 million 4-Her's in positive youth development (4-H, 2017). The four H's in 4-H stand for Head, Heart, Hands, and Health and they lay a foundation for the values 4-H members build on throughout their programs (4-H, 2017). The pledge, which incorporated these four elements, is provided in English and Spanish to help target all youth across the country. The National 4-H Organization provides "hands-on, learn-by-doing, opportunities for everyone" through school and community clubs, in school and after school programs and 4-H camps (4-H, 2017).

Georgia 4-H Organization

Georgia 4-H is defined as "a world in which youth and adults learn, grow, and work together as catalysts for positive change!" (UGA Extension 4-H, 2017). Georgia 4-H strives "to assist youth in acquiring knowledge, developing life skills, and forming

attitudes that will enable them to become self-directing, productive and contributing members of society" (UGA Extension 4-H, 2017). Like the National 4-H Organization, Georgia 4-H accomplishes its mission by providing hands on learning experiences that focus on agricultural and environmental issues, leadership, citizenship, and communication (UGA Extension 4-H, 2017). The Georgia 4-H Organization is based on the University of Georgia campus, but serves most Georgia counties with the help of adult and teen leaders, who implement the 4-H curriculum (UGA Extension 4-H, 2017).

4-H Impact on Youth

4 – H members are given the opportunity to become involved in more activities than just Project Achievement. Every summer, at least three different types of camp are open to Georgia 4-H members to learn about beach ecology (Marine Resources Camp), survival skills in the wilderness (Wilderness Challenge Camp), meet new friends and learn and explore the role of 4 – H to members (Cloverleaf, Junior, or Senior Camp), or challenge themselves to attempt heart-racing goals (Extreme Camp). Throughout the school year, counties are encouraged to attend District Conferences, rallies, livestock shows, and leadership events (Katlynn LaVelle, personal communication).

Over the years, research has been conducted to learn more about how youth are impacted by 4 -H and its programming. Through the 4 – H camping experience, positive youth development has arisen in forms of leadership, character development, self-esteem, decision making skills, independent living skills, and citizenship (Hedrick, Homan, & Dick, 2009). A study done by Lewis, Murphy, & Baker (2009) showed that 4 – H

participation significantly contributed to a 4-H member's involvement in extracurricular activities in and out of school, leadership growth, care towards others, and how they view themselves through self-confident, character, and empowerment.

Youth who hold a leadership position within the group or club have an increased positive youth development impact. The 4-H members who serve in these positions have better knowledge and appreciation of life skills through their trainings than those who do not have the training (Tassin, Higgins, & Kotrlik, 2010). Other members of 4 – H are impacted too! These 4-H members have higher grades, are more likely to assist when others need a hand, form and hold better relationships with adults, are confident in themselves, have a greater positive outlook on life, and view the world in a better way compared to youth who do not participate in 4 – H (Goodwin, Carroll, & Oliver, 2007).

The National 4-H Organization held a True Leaders Shout Out online in 2016 which allowed youth to share positive messages and photos or videos using a specialized hashtag to bring acknowledgment to a young true leader (The 4-H Grow True Leaders Campaign, 2016). Over 300 youth participated and were asked to use social media to share their ideas of a true leader. Through this, youth communicated their thoughts through words on their phones or electronic devices. The 4-H Organization is incorporating communication, in different forms, across all platforms and issues, but there is still little evidence that shows the influential extent of communication apprehension among these youth.

An idea expressed by Jones et al. (2013) was to use 4-H as a catalyst to enhance quality for Hispanic individuals, including youth. The National 4-H Organization has

taken the steps to increase diversity and enhance all students' perception of agriculture, but membership indicates that 4-H programs still are not meeting the needs of the growing Hispanic population across the country (Jones et al., 2013). The mass production and distribution of information does not work for all audiences, but the increase of Spanish translated materials helps target the audience who may benefit from the program's positive outcomes (Jones et al., 2013). A stronger concerted effort must be applied within these communities to reach these youth and advocate for culturally responsive teaching (Jones et al., 2013).

Communication Apprehension in Youth

Research in elementary classrooms focuses on creating confidence so that "public speaking can be cultivated through initial nonthreatening activities, followed by gradually more complex challenges throughout the school year" (Boyce, Alber-Morgan, & Riley, 2007). There is even more trouble though when dealing with urban students, in the elementary classroom, because "the students have very complex lives which may hinder their successful completion of the basic speech course" (Glaser, 2008). It is important to encourage "relationship-building through assignments, exercises, and class lectures [that] helps students support one another, stay motivated, and enjoy the class" (Glaser, 2008).

A study conducted in 2014 tested 29 students within a small public high school located in the Pacific Northwest of the United States to determine the communication apprehension levels within at-risk youth (Jones). For this study, at-risk students were

defined as a student who had less than 80% attendance, had one or more failing grades in a core course, and scored below the minimum on a standardized State test (Jones, 2014). The PRCA-24 was used in this study, along with the Communication Competence Test (CCT) and the Verbal Aggression Interpersonal Modal and Measure (VIAM). It was determined that at-risk youth may need more assistance in developing communication skills in meetings, groups, interpersonal interactions, ad public speaking, to be able to self-monitor and read social cues within their environment (Jones, 2014). The results concluded that at-risk youth may need more programs and one-on-one work with teachers to build these skills up to match those of their peers who are not deemed at-risk, but the study did not show how these others students perceived their communication apprehension levels, which is important to note (Jones, 2014).

The school environment plays a vital role in fostering the prevention of communication apprehension (Holbrook, 1987). Freidman (1980) interviewed 30 elementary and secondary school teachers and determined that a healthy classroom created a warm environment that combatted communication apprehension at the same time, by helping the students get to know each other, have students speak in groups, and presenting from their seats. Students who do not address their communication apprehension have a greater tendency to face emotional educational, and social consequences (Holbrook, 1987).

Communication Apprehension

There comes a point in every person's life where they must communicate, whether verbally or nonverbally, with another individual or group of individuals. Research puts people into two categories: those who talk too much and those who have stage fright (Daly, 1997, p. 205). Those who have stage fright have more in common with the rest of society than they might think because "social anxiety disorder is one of the most commonly occurring mental health disorders" (Damer, Latimer, & Porter, 2010). This is more prevalent in school age children, who experience more stress through verbal questioning, and has more of an impact on social-emotional functioning leading up until adulthood (Mathewson et al, 2012).

Anxiety from public speaking is a leading cause of slowing academic progress since excess stress can have negative effects on learning (Mathewson et al, 2012). Several research studies have been conducted on the anxiety of public speaking, but they focus on either high school and college students or on foreign language instruction (Tsiplakides & Keramida, 2009; Shao, Yu, & Ji, 2013; Hui-ju & Ting-han, 2013). Although others often think that people can sense nervousness when speaking, research suggests that "behavioral observation is least useful as a measure of communication apprehension" (Daly, 1997, p. 195). If a speaker does not want to pretend to be confident, there are several ways to aid in overcoming this communication apprehension.

Some of the most common ways of facing these fears include arriving early to the location and getting a feel of the room, rehearsing the presentation beforehand, concentrating on the content to be presented, and relaxing (Pieszak, 2009). Another

effective way of combating communication apprehension is to have the students draw their feelings or fears, share those among the group, and then discuss what they found interesting or what they can relate to (Rattine-Flaherty, 2014). It is also strongly encouraged to seek out opportunities to speak, instead of trying to find ways to avoid it (Wrench, Goding, Johnson, & Attias, 2012).

When addressing what types of skills employers are looking for in their employees, soft skills have recently started to override tactical skills (Comstock, 2015). The number one soft skill demanded is communication, including the ability to write and speak in a professional manor (Comstock, 2015). One of the most common, preventable mental illnesses includes communication apprehension (CA), which can prevent someone from getting hired, even with top marks and great references (Bodie, 2010; Comstock, 2015). Combating CA may take months or years, so addressing it in youth at an early age may take some of the stress off in later years.

In a study conducted by LaRochelle et al. (2016) on doctor of pharmacy students, it was determined that African-American students had lower levels of overall CA and lower sub-construct scores of CA compared to Whites and Asians (LaRochelle et al., 2016). This result "may be attributed to the fact that the sample was obtained from a university with a large minority population" and for minorities, "campus racial composition can positively influence socialization and other psychosocial factors" (LaRochelle et al., 2016). This large minority atmosphere may create a more comfortable environment for those students, which increases confidence in identity (LaRochelle et al., 2016).

PRCA – 24 Scale

The Personal Report of Communication Apprehension (PRCA-24) is a 24 item, 5-step, Likert type scale that measures levels of communication apprehension in group discussions, meetings, interpersonal conversations, and public speaking. This scale is self-reporting and participants are encouraged to "work quickly" and "record their first impression" (McCroskey et al., 1985). According to a study by Keaten et al. (1993), "the internal consistency of the PRCA was high" having a Cronbach's alpha of .93. An original nationwide sample was conducted on the PRCA-24 with a total number of 8,879 respondents (Levine & McCroskey, 1990).

Within the field of human communication, communication apprehension is frequently researched (Levine & McCroskey, 1990), but it is rarely studied in the context of youth development. The work of McCroskey and the PRCA – 24 scale has been challenged by researchers in the past, but there is no mention in the text if CA is "trait of an individual or a response to the situational elements of a specific communication transaction" (Gardner, Milne, Stringer, & Whiting, 2005). It is important to also note that any work conducted on CA is subject to measurement of oral communication fear and anxiety alone; any written communication apprehension should be measured with the Writing Apprehension Test (WAT) (Daly & Miller, 1975; Gardner, Milne, Stringer, & Whiting, 2005).

The Need for Research

Specifically, no research has been found that links communication apprehension levels of youth or that tests for a change over time. There has also been no research found that explores the change in CA levels within 4 – H youth during one or multiple public speaking events. It has been shown that 4 – H is a positive youth development program, but the need for increase social skills, public speaking readiness, and decrease anxiety has not been addressed. The 4 – H organization and their stakeholders, agents, and volunteers are training the youth to be better leaders, but we do not know how the Georgia 4-H member's feelings toward public speaking, meetings, personal conversations, and interviews are changing during this process.

Theoretical Framework

For the purpose of this research, the 4 – H Experiential Learning Model (Figure 2.1) is being used as the theoretical framework. Norman and Jordan (2012) stated that "4-H youth development relies heavily upon the five steps of the experiential learning model to teach life skills." This five – step model has five steps emerged within a three-cycle flow and was adapted from Kolb's Experiential Learning Model, which only has four steps (Davis, Stripling, Stephens, & Loveday, 2016).

Kolb's model ties in three models of the experiential learning process: the Lewinian Model of Action Research and Laboratory Training, Dewey's Model of Learning, and Piaget's Model of Learning and Cognitive Development (Kolb, 1984). It is broken into a continuous realm of four ideas that encompass a form of learning. Stage 1:

Sensory motor – enactive learning, Stage 2: Representational – Iconic, Stage 3: Stage of Concrete Operations – Inductive, and Stage 4: Stage of Formal Operations – Hypotheticodeductive. Kolb (1984) theorized that "learning is best conceived as a process, not in terms of outcomes." Kolb (1984) defined experiential learning as "the process whereby knowledge is created through the transformation of experience."

The 4 – H Experiential Learning Model engages 4-H members in these stages and knowledge levels, but with a do-reflect-apply way of thinking. The student is faced with an experience (1), they share their reaction (2), process (3), generalize (4), and apply (5). Norman and Jordan (2012) believe that "Providing an experience alone does not create experiential learning. Experiences lead to learning if the participant understands what happened." Experiential Learning in 4 – H can be achieved through life skills, presentations, holding meetings, and interviewing (Norman & Jordan, 2012). These same skills are addressed in the four sub – groups of communication apprehension meetings, interviews, group discussions, and public speaking. Using the 4 – H Experiential Learning Model connects the process of Cloverleaf Project Achievement to the understanding of the communication apprehension youth have during that time, which was addressed in the questionnaire.

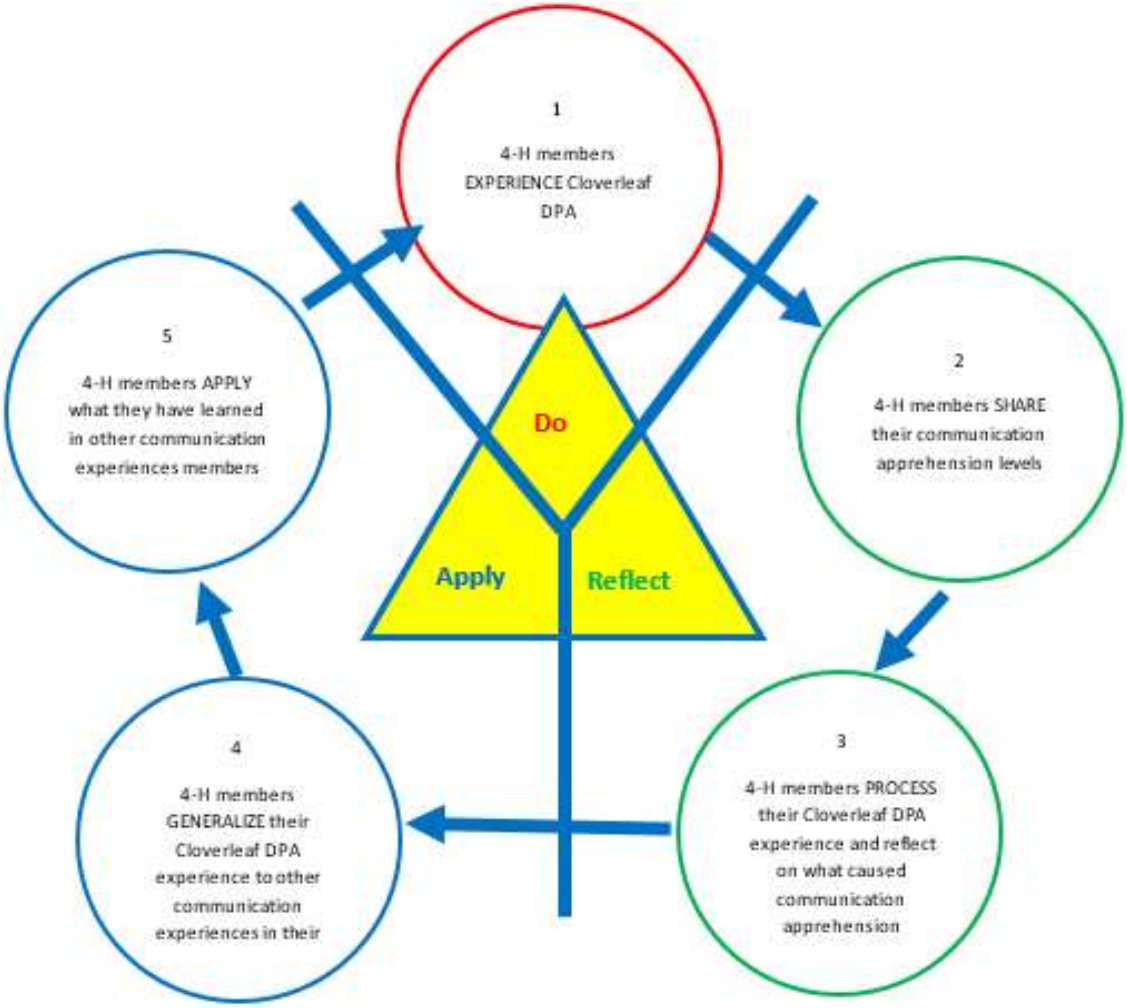

Figure 2.1: The 4-H Experiential Learning Model with relation to Cloverleaf PA

There are five stages within this model: Stage 1: Experience, Stage 2: Share, Stage 3: Process, Stage 4: Generalize, and Stage 5: Apply. Each of these five stages aligns with a step needed to prepare for PA and what the 4-H member goes through after reflecting on their communication apprehension levels. The cycle presented in model is continuous, meaning that Georgia 4-H members can relate their experiences to real-life situations to help improve their presentation skills for future endeavors.

In the Experience stage, youth can prepare and present at Cloverleaf PA. This stage includes all aspects of PA, from selecting a topic to developing a project and planning the presentation. This is the stage where a student can experience an activity and perform the required duties to achieve their goals. The act of presenting is what allows a student to determine how they feel in terms of communication apprehension.

In the Share stage, youth can address their communication apprehension levels with the questionnaire administered. While data was collected after presenting, it was also collected before the results of the event were announced. This may have formed more or less of a doubt in the member's mind, because they were not yet assured of their placings. The reactions they were feeling after finally presenting were still in place while they completed the questionnaire. Members did not have time to go talk or reflect with their parents, friends, or Agents to change or boost their confidence.

The Process stage allows the 4-H member to think through their Cloverleaf PA experience. This is the time where the 4-H member reflects on what caused their communication apprehension levels to either increase, decrease, or remain the same. Georgia 4-H members may critically analyze their location, audience, preparation,

speeches, and/or visual aids. A strength versus weakness type of understanding, in comparison to other presenters, may bring forth information of communication apprehension to the 4-H member. From this, the member will be able to address what they think they did well compared to what they think others did well and what they could improve on.

In the Generalize stage, the 4-H member connects their Cloverleaf PA experience to other communication experiences in their lives. This is where the 4-H member focuses on how their current experience at Cloverleaf PA relate to events that occur in their everyday lives. These experiences can be found at home, in school, with sports, involvement in other organizations, in public, or within 4-H. In this stage, 4-H members also spend time thinking about how their communication apprehension levels differ in different environments and why there is a change.

The Apply stage lets 4-H members apply what they have learned in other communication experiences. They can take the information provided from their reflection and apply the findings in a similar or different experience, including practice for and participation in the following year's Cloverleaf PA. They will be able to address the concerns expressed or the changes in communication apprehension to create an understanding that best fits their needs. Their ability to apply allows the next years' experience to be engaging, while addressing communication apprehension.

Summary

Chapter 2 presented prior literature discussing communication apprehension and communication apprehension in youth. There comes a point in every person's life where they must communicate, whether verbally or nonverbally, with another individual or group of individuals. Research in elementary classrooms focuses on creating confidence so that "public speaking can be cultivated through initial nonthreatening activities, followed by gradually more complex challenges throughout the school year" (Boyce et al., 2007). Within the field of human communication, communication apprehension is frequently researched (Levine & McCroskey, 1990), but it is rarely studied in the context of youth development.

Chapter 2 also presents literature on 4-H programs. Through the 4 – H camping experience, positive youth development has arisen in forms of leadership, character development, self-esteem, decision making skills, independent living skills, and citizenship (Hedrick et al., 2009). Specifically, no research has been found that links communication apprehension levels of youth or that tests for a change over time. There has also been no research done to explore the change in CA levels within 4 – H youth during one or multiple public speaking events. Following the conceptual model, Chapter 3 will be presented with a discussion on the research designed methods for this study.

CHAPTER 3

METHODS AND PROCEDURES

Introduction

Chapter 1 detailed the current issue regarding communication apprehension. Chapter 2 described the theoretical framework, the relevant literature, and conceptual framework behind the study. Here, chapter 3 describes the research design, data collection and analysis, instruments, measures of validity, and reliability behind the instruments, study target population, and the sampling procedure for this study. The purpose of this study was to examine Georgia 4-H member communication apprehension levels among fourth, fifth, and sixth grade 4-H members in each of the four districts of Georgia and to explore how and if the changes in levels could be related to length of preparation time and assistance. The research questions are addressed by analyzing the data collected from a retrospective post/pre- test questionnaire, which also included demographic items. This questionnaire was conducted at four Cloverleaf Project Achievements in March of 2017 representing a convenience sample. The data collected will be instrumental in planning, implementation, and evaluation of 4-H youth public speaking programming across the state.

Research Design

Communication apprehension levels can be used to assess current class or organizational fears and to evaluate the programming. The PRCA – 24 (McCroskey et al.,

1985) had been previously used in college classrooms and within adult groups, but there was little data on it being used with youth, so the first step of the research process was to calculate the reliability of the assessment with youth. The researcher reached out to a local 4-H club and had the Program Assistant administer a copy of the questionnaire to 30 Cloverleaf 4-H members as a pilot test.

After the pilot test was completed, reliability scores were computed and it was determined that the revised questionnaire could be used in youth group settings. The coefficient alpha was calculated to be .76, which is deemed a strong measure of reliability. Further research, including a literature review and needs assessment, was conducted on the need and importance for the research questions and planning began. The researcher met with several stakeholders and they began making steps toward finalizing the research design.

Georgia 4-H members were asked to complete a questionnaire after they finished presenting their projects. The survey was two-pages, front and back. The first page was a welcome statement from the researcher and included IRB information, a voluntary reminder, and a key for pages 2 and 3. Pages 2 and 3 contained the same questionnaire, the PRCA -24, which contains 24 statements about the four quadrants of communication apprehension with a 5-point Likert scale from Strongly Disagree to Strongly Agree. The fourth page asked two demographic items and three personal involvement items.

Since each of the four districts were holding Cloverleaf PA's all on the same Saturday, the researcher reached out to 4-H Extension Agents, staff, and leaders for help. The Northwest, Southwest, and Southeast districts assigned Agents who collected the

data. The researcher, as well as the major advisor, collected data for the Northeast district. The Agents did receive a monetary incentive for their work in the form of a gift card along with all the materials needed to administer the questionnaires.

During their time at the Northeast Cloverleaf Project Achievement, the researcher and major advisor set up a table in the hallway between the auditorium and the concession stand and cafeteria area. The table contained printed copies of the questionnaires, pens, pencils, and a statement of purpose on official letterhead. Georgia 4-H members were encouraged to visit the table after their presentations. The other three districts had individual classrooms set up for data collection. Georgia 4-H members were routed to this classroom after presentations and encouraged to stay and participate. No Georgia 4-H member was forced to answer the questionnaire, but Georgia 4-H members who were routed to the room with their peers were more likely to complete the assessment.

All questionnaires were collected by the administrating assistant at the end of the day and returned all the questionnaires to a collection box, which was secure mailed back to the researcher. Their responses were then organized, sorted, reviewed, and recorded in Excel. Each questionnaire had a unique identifier code on each page in case the staple were to fall out or the pages were to rip. The unique identifier included an abbreviation for the district and a three-digit code. The questionnaires with an identifier that had been marked with a red slash were removed by the researcher, because this was sign used by the collector to alert of a Georgia 4-H member who had completed the questionnaire

without parental consent. The final document was transposed into IBM SPSS Statistics 22, where it was analyzed.

Purpose of the Study

This research looked look at pre – and post – test data on communication apprehension levels through a questionnaire administered to individual Georgia 4-H members. This questionnaire will also collect demographic data and preparation data. The purpose of this study was to determine how Cloverleaf PA influences a youth's communication apprehension levels. The research questions:

1. To what extent does Cloverleaf Project Achievement influence youth's communication apprehension levels?
2. What is the effect of the amount of time 4-H PA participant spent on PA preparation on communication apprehension?
3. What is the effect of help a 4-H member receives on PA have on communication apprehension?
4. What is the relationship between demographic information and communication apprehension in 4-H PA participants?

The following objectives will be addressed by quantitative methods in this study:

1. Describe the demographic characteristics of Georgia 4-H PA participants.
2. Determine the pre – and post - levels of communication apprehension in Georgia 4-H members.
3. Describe the relationship between communication apprehension and demographic characteristics of Georgia 4-H PA participants.

Variables of Interest

The context variables for this study include demographics, involvement, length of preparation, and assistance in preparation. The demographic data collected included grade, county, gender, and ethnicity. Involvement data includes any school, personal, professional, or community club, organization, group, or team that the Georgia 4-H member is involved with. Some examples provided for this were the Boys and Girls Club, the YMCA, a church group, a youth group, or a school club or organization. The length of preparation was calculated in two months' segments. Assistance in Preparation and about who assisted the member (parents, grandparents, other family members, Extension Agent/PA, and/or an additional coach/mentor) and how often they assisted (not at all, one day a month, two days a month, one day a week, more than one day a week, or almost every day). These items were important in the data collected because these were the items that differed for each member. These are the qualities the researchers deemed that make each student unique.

The Process Variables include PRCA – 24 Total Score, PRCA – 24: Group Discussion Score, PRCA – 24: Meetings Score, PRCA – 24: Interpersonal Conversations Score, PRCA -24: Public Speaking Score, and Change in Levels of Communication Apprehension. These variables are determined by the member's questionnaire and determine the extent of communication apprehension for each member. The total score is calculated by summing the four sub-scores. The Group Discussion, Meetings, Interpersonal Conversations, and Public Speaking Scores are calculated using specific equations based on the individual items. The Change is computed by subtracting the pre-test scores from the post-test scores. A negative change reveals a decrease in CA and a positive change reveals an increase in CA (McCroskey et al., 1985).

Population and Sample

The target population of this study include the Cloverleaf 4-H members across Georgia, with youth spanning 4th through 6th grade. A convenience sample was used in the study, because not every Georgia 4-H member could be reached and the researchers were unable to compare the respondents to the study target population. Georgia 4-H members who attended one of the four Cloverleaf Project Achievement in March of 2017 were given the opportunity to answer the two-page, front and back questionnaire. Parents did receive a research consent form with their packet of information about PA. The parental consent form was available as an option for the member to opt – out of data collection. The youth assent form then gave the choice to the member and let them decide

whether they wanted to complete the assessment. They were instructed to talk with their Agent, staff, or leader if there were any concerns about the study.

Any Georgia 4-H member whose parents did not feel comfortable with them taking the assessment were made known by adding a red color dot to their name tags. The Georgia 4-H member was not deterred from taking the questionnaire, but their questionnaire was excluded from the data collection. Georgia 4-H members were also given the opportunity to make the decision for themselves to complete the questionnaire, since it was completely voluntary.

Table 3.1 displays the response rates for the PRCA – 24 at the Georgia Cloverleaf PAs. For the Northwest district, 146 of the 200 members present answered a questionnaire, making a 73.0% response rate. The Northeast district had 64 questionnaires returned from the 327 members present, which led to a 19.5% response rate. The Southwest had the highest response rate with 74.2% from 199 of the 268 members present returning a questionnaire. The Southeast had 141 questionnaires returned with 350 members present, which provided a 40.2% response rate. Overall, there were 550 questionnaires collected from 1,145 members. This created a 48.0% response rate.

Table 3.1

PA PRCA – 24 Response Rates by Districts

District	Number of Georgia 4-H Members in Attendance	Number of Questionnaires Returned	Response Rate
Northeast	327	64	19.5%
Northwest	200	146	73.0%
Southeast	350	141	40.2%
Southwest	268	199	74.2%
TOTAL	1,145	550	48.0%

Instrumentation

The main focus of this study is a quantitative measurement using a self-reporting questionnaire by James C. McCroskey. The Personal Report of Communication Apprehension (PRCA-24) is a 24 item, 5-step, Likert type scale that measures levels of communication apprehension in group discussions, meetings, interpersonal conversations, and public speaking. According to a study by Keaten et al. (1993), "the internal consistency of the PRCA was high" having a Cronbach's alpha of .93. Another study conducted with 25,000 college students showed "the alpha reliability for the scale was estimated to be .97, somewhat higher than the .93-.95 usually obtained" (Beatty, Kearney, McCroskey, & Plax, 1985).

A final score for each sub-group is calculated by adding and subtracting certain lines. These numbers can range from a low of 6 to a high of 30, with any score above 18 indicating some degree of apprehension. The overall Communication Apprehension (CA) score can be determined by adding up all four sub-group scores (Table 3.2). This score

will range between 24 and 120. According to McCroskey et al. (1985), scores between 24 and 55 indicate a low level of CA, between 55 and 83 indicate a moderate level of CA, and between 83 and 120 indicate a high level of CA. For this study, scores between 24 and 55 indicate a low level of CA, between 56 and 83 indicate a moderate level of CA, and between 84 and 120 indicate a high level of CA (Beatty et al., 1985), because all scores (i.e. 55, 83) needed to be able to separate into a specific category.

Table 3.2

PRCA – 24 Construct Sub Scores and Scoring Formulas

Sub Scores	Scoring Formula
Group Discussions	= 18 + (scores for items 2, 4, & 6) – (scores for items 1, 3, & 5)
Meetings	= 18 + (scores for items 8, 9, & 12) – (scores for items 7, 10, & 11)
Interpersonal Conversations	= 18 + (scores for items 14, 16, & 17) – (scores for items 13, 15, & 18)
Public Speaking	= 18 + (scores for items 19, 21, & 23) – (scores for items 20, 22, & 24)

Note: low CA = 24 – 55; medium CA =56-83; high CA = 84-120

The entire questionnaire was used for this study and the original five point Likert scale ranging from strongly agree to strongly disagree was implemented. This was used twice as a retrospective post/pre-test. The Georgia 4-H members were not required to complete the scoring, as this was done for them after their answers have been collected. Additional questions addressing demographics, such as gender, ethnicity/race, district, etc., along with questions about club or organizational involvement and PA preparation and assistance, were asked on a second page to collect contextual information. All communication documents and the questionnaire were approved by the University of

Georgia Institutional Review Board (IRB). IRB approval documentation is included (see Appendix A for 4-H member recruitment letter and see Appendix B for PRCA-24 retrospective post/pre-questionnaire).

Measures and Scoring

A pilot test was conducted with 30 Cloverleaf 4-H members in one county of Georgia to test for internal consistency, a measure of reliability, of the PRCA-24 among youth. To reduce measurement error, these members did not have the chance to retake the questionnaire for use in this research assignment. The coefficient alpha was calculated to be .76, which is deemed a strong measure of reliability. Cronbach's alpha, a measure of internal consistency of how closely related a set of items are as a group (UCLA, 2017), was used to measure reliability and the score found means that the 24 items used in the PRCA-24 have a consistency with each other and were used so that they measure the same things, but were not created in a way that they asked the same question 24 times.

The responses were coded per the PRCA – 24 standards (Strongly Disagree = 1, Disagree = 2, Undecided = 3, Agree = 4, and Strongly Agree = 5) and entered into Excel (McCroskey et al., 1985). The demographic items were also coded as followed:

- For data analysis, Male = 0, Female = 1.
- Each ethnicity was given its own column and it was decided that a Georgia 4-H member who was NOT self-identified as that ethnicity = 0, and a Georgia 4-H member who DID self-identify as that ethnicity = 1.

- Georgia 4-H members who were involved in any other clubs or organizations were given a 1 and Georgia 4-H members who were not were given a 0. Of the clubs and organizations listed: Boys and Girls Club = 1, YMCA = 2, Church Group = 3, Youth Group = 4, School Group or Organization = 5, and Other = 6.
- When it came to length of time preparing for PA: 1 – 2 months = 1, 3 – 4 months = 2, 5 – 6 months = 3, 7- 8 months = 4, 9 – 10 months = 5, and 11 or more months = 6.
- The last question was set up in the form of a matrix with parents, grandparents, other family members, Extension Agent/Program Assistant, and An Additional Mentor/Coach as the focus for each item. If this person were to help: almost every day = 5, more than one day a week = 4, one day a week = 3, two days a month = 2, one day a month = 1, and not at all = 0.
- The only other data collected was County name and grade. These items were given the code expressed on the paper.

Data Analysis

Both the computer data and the answer sheets have been placed in a secure location, where they will be kept for no more than six months past the day of collection. At this time, the documents will be destroyed. The pre – and post – test data were analyzed using descriptive statistics and then they were compared to each other using

correlational and inferential analyses to see if their public speaking anxiety changed and how.

After regrouping and coding each item in the questionnaire, the data was entered into IBM SPSS 22 software for analyses. For each item and the demographic data, descriptive statistics were calculated. Descriptive statistics take the information from data collections and summarize it in a way that reduces it to a simpler form that is understandable and that does not distort the information (Agresti & Finlay, 2009). This calculation includes frequencies (how often an item appears), reliability by use of Cronbach's alpha (the internal consistency), means (the averages), standard deviation (how far a certain item is from the average), and standard error of the means (the accuracy of the sample for a population). New variables were created by computing the scores for each of the four sub-groups within communication apprehension (CA) and a score for the Georgia 4-H member's total level of CA. Frequency, reliability by use of Cronbach's alpha, means, standard deviation, and standard error of the means were also calculated for these new variables.

Inferential statistics were also calculated during the analysis. Paired t-tests, which is used to compare two population means (Agresti & Finlay, 2009), were computed to compare each of the four sub-groups with each other. Analysis of variance (ANOVA) tests (Agresti & Finlay, 2009), which test the significance of the differences between means of three or more constructs, were used to compare levels of sub-group and total communication apprehension (CA) scores with other involvement, months of preparation, and assistance in preparation. Independent samples t-tests, which compares

the means of two independent constructs, were used to compare levels of CA within grade, gender, and ethnicity (Rochon, Gondan, & Keiser, 2012). Pearson's correlation relationships, which is a statistical measure of how closely two variables are related (Wall Emerson, 2015), were found for each sub-group construct and total CA levels with age, gender, and ethnicity. Items were not ran through a regression analysis, because these constructs proved to have no strong statistically significant correlation with each other.

Summary

Chapter 3 discussed that the researcher could collect data to learn more about levels of communication apprehension (CA) among fourth, fifth, and sixth grade Cloverleaf 4 – H members across the State of Georgia. Data was compiled from a self-reporting, retrospective questionnaire given to Georgia 4-H members after completing their presentation for Cloverleaf PA. The data was analyzed using IBM SPSS Statistics 22 after coding was finalized through Excel. Through this study, programming, planning, implementation methods, and evaluations can be used to encourage youth participation in public speaking events. Participation in events, like PA, can change the levels of CA among Georgia 4-H members in a variety of ways. Chapter 4 will discuss the results found from the data analysis process.

CHAPTER 4

RESULTS

Introduction

Chapter 1 detailed the current issue regarding communication apprehension. Chapter 2 described the theoretical framework, the relevant literature, and conceptual framework behind the study. Chapter 3 describes the research design, data collection and analysis, instruments, measures of validity, and reliability behind the instruments, study target population, and the sampling procedure for this study. Here, Chapter 4 lists the findings of the results from the analyzed data following the procedure discussed in Chapter 3. Descriptive and inferential statistics were calculated based on the research questions and reliability and correlation of the data. The results found describe the three objectives of this study. The first section describes the demographic characteristics of Georgia 4-H PA participants. The second section determines the pre – and post - levels of communication apprehension in Georgia 4-H members. The third section describes the relationship between communication apprehension and demographic characteristics of Georgia 4-H PA participants. These objectives help determine what influential extent Cloverleaf PA has the communication apprehension levels of Georgia 4-H members.

Research Objective 1

The first objective of this study was to describe the demographic characteristics of Georgia 4-H PA participants. Table 4.1 shows 49.1% of respondents were female, 58.0%

were in the fifth grade, and 54.2% of respondents were White. Many respondents (62.0%) were involved with other clubs or organizations. In addition, 36.2% of respondents were in the Southwest district.

Table 4.1

Participant Demographic Statistics

Characteristic	*f*	%
Gender		
Male	112	20.4
Female	270	49.1
Prefer not to answer	168	30.6
Grade		
Third	1	0.2
Fourth	44	8.0
Fifth	319	58.0
Sixth	178	32.4
Prefer not to answer	8	1.5
Ethnicity		
White	298	54.2
African American	162	29.5
Asian	9	1.6
American Indian or Native American	20	3.6
Native Hawaiian or Pacific Islander	4	.7
Other	25	4.5
Prefer not to answer	32	5.8
Involvement in other clubs or organizations		
I am involved	341	62.0
I am not involved	162	29.5
Prefer not to answer	45	8.2
District distribution of respondents		
Northeast	64	11.6
Northwest	146	26.5
Southeast	141	25.6
Southwest	199	36.2

Note: calculated total percentages for each characteristic round to 100%

Research Objective 2

The second objective of this study was to determine the pre – and post - levels of communication apprehension in Georgia 4-H members. Table 4.2 displays the posttest and pretest data on each of the four constructs of the PRCA-24, detailing respondent communication apprehension levels after and before presenting in Cloverleaf PA. Table 4.3 displays total CA scores for the pre- and post-test data, and Table 4.4 displays the overall change in CA levels.

When analyzing each of the four sub-scores, any score over 18 indicates some degree of CA. Table 4.2 shows 72.6% of respondents had a score over 18 in the pre-test Group Discussion construct, 69.1% had a score over 18 in the pre-test Interpersonal Conversation construct, and 57.9% had a score over 18 in the pre-test Public Speaking construct. Table 4.2 also shows 69.8% of respondents had a score over 18 in the post-test Group constructs, 62% in post-test Meetings construct, 64.7% in the post-test Interpersonal Conversation construct, and 59.3% in the post-test Public Speaking construct. Table 4.3 shows 52.5% had moderate levels of CA overall, and 45% had high levels of CA overall, before presenting at PA. Table 4.3 also shows 49.3% had moderate levels of CA overall and 48.7% had high levels of CA overall, after presenting at PA.

The range of change overall in Table 4.4 falls between -39.00 and 52.00. Georgia 4-H members with a negative overall change experienced a decrease in CA felt after presenting their projects at PA. Of the total respondents, 37.5% had a negative change and 52.5% had a positive change. The positive change felt determines that there was a

greater feeling of CA after presenting at PA. Their levels of CA were higher in their post-test scores than in their pre-test scores.

Table 4.2

Respondent Posttest and Pretest PRCA-24 Construct Score Statistics

Characteristic	Posttest Construct Data %	Pretest Construct Data %
Group Discussions		
Scores less than or equal to 18	30.2	27.4
Scores greater than 18	69.8	72.6
Meetings		
Scores less than or equal to 18	38.0	35.3
Scores greater than 18	62.0	64.7
Interpersonal Conversations		
Scores less than or equal to 18	35.3	30.9
Scores greater than 18	64.7	69.1
Public Speaking		
Scores less than or equal to 18	40.7	42.1
Scores greater than 18	59.3	57.9

Note: There was a lower item response rate in the Meetings construct for the pretest.

Table 4.3

Respondent PRCA-24 Overall Scores

Characteristic: Overall Communication Apprehension Levels	
Pre-Test Scores	%
Low	2.4
Moderate	52.5
High	45.0
Post-Test Scores	%
Low	2.0
Moderate	49.3
High	48.7

Note: low CA = 24-55; medium CA = 56-83; high CA = 84-120

Table 4.4
Respondent Change in PRCA-24 Overall Scores between Posttest and Pretest

Characteristic: Change in Communication Apprehension Levels	%
Negative Change: Decrease in CA	37.5
No Change: No Change in CA	1.0
Positive Change: Increase in CA	52.5

Research Objective 3

The third objective of this study was to describe the relationship between communication apprehension and demographic characteristics of Georgia 4-H PA participants. These relationships were analyzed with descriptive and inferential statistics. Table 4.5 displays the reliability of the constructs with the use of Cronbach's alpha. The reliability statistic for study was 0.807. The reliability would increase to 0.852 if grade was removed and to 0.840 if the overall change was removed, but these are two very important pieces of data collection.

Table 4.5
Reliability and Descriptive Statistics

	α if deleted	*n*	*M*	*S.D.*
Grade	.852	550	6.60	11.25
Pre – Test				
Group Discussion	.795	550	21.37	4.18
Meetings	.791	550	20.87	4.67
Interpersonal Conversations	.788	550	21.48	4.83
Public Speaking	.791	550	20.02	4.98
Total	.773	550	83.75	15.47
Post-Test				
Group Discussion	.783	550	21.98	4.69
Meetings	.779	550	21.23	4.76
Interpersonal Conversations	.781	550	21.38	4.73
Public Speaking	.780	550	20.85	5.06
Total	.727	550	85.45	16.66
Change	.840	550	1.70	12.65

Note: PRCA-24 Overall α = .807

Table 4.6 shows the information from paired samples t-tests analyzed within pairs of the four pre-test sub-score constructs with their respective post-test sub-scores. Table 4.7 shows the information from paired samples t-tests analyzed within pairs of the pre-test and post-test overall scores. The confidence interval was set to 95%, which meant a maximum of 5% of error was accounted for. The null hypothesis was that the paired population means were equal and the alternative hypothesis was that the paired population means were not equal. The t-table value used was 1.960 and it was determined that the null was rejected in Table 4.6 for the Group Discussion and Public Speaking constructs. The same t-table value was used for Table 4.7, where the null was also rejected. This concludes that there was a significant average difference between pre- and post- Group Discussion scores (t=3.363, p = 0.001), between pre- and post- Public Speaking scores (t=4.561, p<0.01), and between overall CA scores (t=3.153, p<0.002).

Table 4.6

Paired Samples t-test Comparing Construct Scores of Communication Apprehension Levels

Post-Test – Pre-Test Construct Pairs					
Pairs	*n*	*M*	*S.D.*	*t*	*p*
Group Discussions	550	.61	4.26	3.363	0.001
Meetings	550	.36	4.23	1.944	0.052
Interpersonal Conversations	550	-0.10	4.40	-0.542	0.588
Public Speaking	550	.83	4.27	4.561	0.00

Table 4.7

Paired Samples t-test Comparing Total Communication Apprehension Level

Post-Test – Pre-Test Total CA Pair					
Pair	*n*	*M*	*S.D.*	*t*	*p*
Total CA Level	550	1.70	12.65	3.153	.002

A one-way ANOVA, shown in Tables 4.8 – 4.14, describes the relationship between the overall change (dependent variable) and involvement in other clubs or activities, 1-2 months, 3-4 months, 5-6 months, 7-8 months, 9-10 months, or 11 or more months of preparation, and parent, grandparent, other family member, Extension Agent/PA, or additional coach/mentor assistance, respectively. The null hypotheses for each of the relationships within the involvement and preparation category was that the mean for students who did not comply (0) equaled the mean for students who did comply (1), which also equaled the mean for students who chose not to answer (99). The null hypothesis for the assistance category was that the means for each level of assistance were equal [not at all (0) = one day a month (1) = two days a month (2) = one day a week (3) = more than one day a week (4) = almost every day (5)]. Both result in a F value equal to 1.00. The alternative hypothesis was that one or more of the means were not equal, resulting in a F value of more than 1.00. Involvement ($F = 1.592$, $p = 0.204$), 1-2 months ($F = 1.863$, $p = 0.156$), 3-4 months ($F = 2.467$, $p = 0.086$), 5-6 months ($F = 1.672$, $p = 0.189$), 7-8 months ($F = 4.794$, $p = 0.009$), 9-10 months ($F = 1.716$, $p = 0.181$), 11 months or more ($F = 1.510$, $p = 0.211$), parent ($F = 1.246$, $p = 0.081$), grandparent ($F = 2.685$, $p = 0.014$), other family member ($F = 1.494$, $p = 0.178$), Extension Agent/PA ($F = 2.193$, $p = 0.042$), and additional coach/mentor ($F = 1.305$, $p = 0.253$) had F values greater than 1.00. Evidence exists to suggest that a true difference exist between the means, which means that the null hypothesis could be rejected for these categories and that all the means were not calculated to be equal.

Table 4.8

Analysis of Variance (ANOVA) for Total Change in Communication Apprehension and Involvement

Are you involved with any other clubs or organizations?	*n*	*M*	*S.D.*	*F*	*p*
No	162	2.11	11.51		
Yes	341	1.97	12.49	1.592	0.204
I prefer not to answer	45	-1.48	17.09		

Table 4.9

Analysis of Variance (ANOVA) for Total Change in Communication Apprehension and Months of preparation

Number of months spent in preparation	*n*	*M*	*S.D.*	*F*	*p*
1-2 months					
No	150	2.66	14.03		
Yes	353	1.74	11.30	1.863	0.156
Prefer not to answer	45	-.48	17.09		
3-4 months					
No	409	1.62	12.47		
Yes	95	3.55	10.73	2.467	0.086
Prefer not to answer	45	-1.48	12.66		
5-6 months					
No	471	2.06	11.71		
Yes	33	1.000	17.77	1.672	0.189
Prefer not to answer	45	-1.48	17.09		
7-8 months					
No	499	2.13^{A}	12.01		
Yes	5	-12.20^{B}	20.84	4.794	0.009
Prefer not to answer	45	$-1.48^{A, B}$	17.09		
9-10 months					
No	503	2.00	12.18		
Yes	1	-5.00	-	1.716	0.181
Prefer not to answer	45	-1.48	17.09		
11 months or more					
No	491	1.91	11.95		
Yes	12	4.083	19.81	1.510	0.211
Prefer not to answer	45	-1.48	17.09		

Table 4.10

Analysis of Variance (ANOVA) for Total Change in Communication Apprehension and Assistance

How much time did your Parent(s) help you prepare?	*n*	*M*	*S.D.*	*F*	*p*
Not at All	79	1.48	14.29	1.246	0.281
One Day a Month	30	1.90	14.06		
Two Days a Month	21	3.85	7.03		
One Day a Week	59	0.13	11.75		
More Than One Day a Week	106	3.84	10.25		
Almost Everyday	209	1.59	12.43		
I prefer not to answer.	45	-1.48	17.09		

Table 4.11

Analysis of Variance (ANOVA) for Total Change in Communication Apprehension and Assistance

How much time did your GranPArent(s) help you prepare?	*n*	*M*	*S.D.*	*F*	*p*
Not at All	324	2.90	11.31	2.685	0.014
One Day a Month	31	2.29	15.30		
Two Days a Month	14	6.14	9.89		
One Day a Week	38	1.78	6.94		
More Than One Day a Week	45	-0.08	13.52		
Almost Everyday	52	-3.05	16.02		
I prefer not to answer.	45	-1.48	17.09		

Table 4.12
Analysis of Variance (ANOVA) for Total Change in Communication Apprehension and Assistance

How much time did your Other Family Member(s) help you prepare?	*n*	*M*	*S.D.*	*F*	*p*
Not at All	286	2.51	11.99	1.494	0.178
One Day a Month	21	4.38	13.49		
Two Days a Month	20	4.30	10.53		
One Day a Week	51	2.33	9.47		
More Than One Day a Week	60	2.80	11.66		
Almost Everyday	66	-1.15	14.87		
I prefer not to answer	45	-1.48	17.09		

Table 4.13
Analysis of Variance (ANOVA) for Total Change in Communication Apprehension and Assistance

How much time did your Extension Agent or Program Assistant help you prepare?	*n*	*M*	*S.D.*	*F*	*p*
Not at All	189	3.62	11.99	2.193	0.042
One Day a Month	52	2.09	11.34		
Two Days a Month	18	4.77	9.94		
One Day a Week	30	-1.48	11.64		
More Than One Day a Week	79	1.93	11.57		
Almost Everyday	106	0.56	13.54		
I prefer not to answer	45	-1.48	17.09		

Table 4.14
Analysis of Variance (ANOVA) for Total Change in Communication Apprehension and Assistance

How much time did any other coach or mentor help you prepare?	*n*	*M*	*S.D.*	*F*	*p*
Not at All	311	2.67	11.94	1.305	0.253
One Day a Month	11	4.45	11.20		
Two Days a Month	10	3.00	13.11		
One Day a Week	31	-1.19	11.44		
More Than One Day a Week	52	1.76	12.03		
Almost Everyday	87	0.4253	13.40		
I prefer not to answer	45	1.17	12.69		

Table 4.15 displays an independent samples t-test analyzed with grade level, gender, and ethnicity. An independent samples t-test was used to determine if the two-group means were significantly different. The null hypothesis was that the means for each item within each demographic were equal ($3^{rd} = 4^{th}$, $4^{th} = 5^{th}$, $5^{th} = 6^{th}$, male = female, and not identifying as a specific ethnicity = identifying as a specific ethnicity). The alternative hypothesis was that the items were not equal. The t-table value used for comparison was 1.960. The null hypothesis could not be rejected for the change from 3^{rd} to 4^{th} grade (t = 0.154, p = 0.879), the change from 4^{th} to 5^{th} (t = 1.746, p = 0.082), the change from 5^{th} to 6^{th} grade (t = -0.323, p = 0.747), the movement from male to female (t = -0.332, p = 0.740), the identifier of non-Asian to Asian (t = -2.665, p = 0.008), the identifier of non-White to White (t = -0.999, p = 0.318), and for the identifier of no other ethnicity to another ethnicity not listed (t = -2.590, p = 0.010). Evidence exists to suggest that the

two-group means between the identifier of non – African American (M = 3.29) to African – American (M = -0.74) ($t = 3.503$, $p = 0.001$) are significantly different.

Table 4.15

Independent Samples t-test

Overall CA Change

Constructs	*n*	*M*	*S.D.*	*t*	*p*	*Cohen's d*
Grade						
3rd	1	.00	-	.154	.879	-
4th	44	-1.59	10.23			
Grade						
4th	44	-1.59	10.23	-1.746	.082	0.30
5th	319	1.93	12.82			
Grade						
5th	319	1.93	12.82	-0.323	.747	0.03
6th	178	2.32	13.02			
Gender						
Male	112	2.07	10.21	-0.332	.740	0.03
Female	270	2.53	13.16			
Ethnicity – American Indian						
Does Not Identify	483	1.79	12.23	-1.877	.061	0.46
Identifies	20	7.00	9.94			
Ethnicity – Asian						
Does Not Identify	494	1.80	12.09	-2.66	.008	0.82
Identifies	9	12.66	13.51			
Ethnicity – African American						
Does Not Identify	340	3.29	11.64	3.503	.001	0.32
Identifies	162	-0.74	12.90			
Ethnicity – Native Hawaiian						
Does Not Identify	499	1.93	12.21	-1.402	.162	0.95
Identifies	4	10.50	3.69			
Ethnicity – White						
Does Not Identify	202	1.36	12.55	-0.999	.318	0.09
Identifies	298	2.47	11.97			
Ethnicity – Another Ethnicity						
Does Not Identify	478	1.67	12.23	-2.590	.010	0.58
Identifies	25	8.12	9.57			

The correlations between the overall change and grade, gender, and ethnicity are displayed in Table 4.16. Grade had a negative, negligible relationship (r = -0.041). Gender had a negative, negligible relationship *(*r = -0.078). Identifying as African American had a negative, negligible relationship (r = -0.079). Identifying as White had a negative, negligible relationship (r = -0.076). No linear regression model can be analyzed, because the demographic items do not have a very strong (-0.70 to -0.99 or 0.70 to 0.99) or moderately (-0.40 to -0.69 or 0.40 to 0.69) statistically significant relationship with the overall change.

Table 4.16

Pearson Correlation Statistics in Relation to Overall Change

Constructs	N	r	Sig. (2-tailed)
Grade	550	-0.041	0.341
Gender	550	-0.078	0.068
Ethnicity – American Indian	550	-0.077	0.073
Ethnicity – Asian	550	-0.076	0.075
Ethnicity – African American	550	-0.079	0.065
Ethnicity – Native Hawaiian	550	-0.076	0.074
Ethnicity – White	550	-0.076	0.074
Ethnicity – Another Ethnicity	550	-0.076	0.076

Frequencies (Table 4.17) were calculated for each degree of overall CA change (negative, no change, and positive change felt) in relation to the demographic item collected. After presenting at Cloverleaf PA, 59.0% of males had a positive change in CA, 53.8% of females had a positive change, and 54.2% of fifth graders had a positive change in CA, which means their overall CA levels increased. Of the African – American

population (162), 45.1% of respondents had a negative change in overall CA and 55.4% of the White population (298) had a positive change in overall CA levels. A majority (353) of respondents prepared for their presentation in one to two months and of those, 50.5% had a positive change in overall CA levels.

Table 4.17
Participant Change in Overall CA Levels

Construct	*N*	%
Gender		
Male	112	
Negative Change: Decrease in CA	38	33.9
No Change: No Change in CA	8	7.1
Positive Change: Increase in CA	66	59.0
Female	270	
Negative Change: Decrease in CA	99	36.6
No Change: No Change in CA	26	9.6
Positive Change: Increase in CA	145	53.8
I prefer not to answer.	166	
Negative Change: Decrease in CA	69	41.6
No Change: No Change in CA	20	12.0
Positive Change: Increase in CA	77	46.4
Grade		
Fourth Grade	44	
Negative Change: Decrease in CA	21	47.7
No Change: No Change in CA	6	13.6
Positive Change: Increase in CA	17	38.7
Fifth Grade	319	
Negative Change: Decrease in CA	118	37.0
No Change: No Change in CA	28	8.8
Positive Change: Increase in CA	173	54.2
Sixth Grade	178	
Negative Change: Decrease in CA	62	34.8
No Change: No Change in CA	19	10.7
Positive Change: Increase in CA	97	54.5
Ethnicity		
American Indian or Native American	20	
Negative Change: Decrease in CA	5	25.0
No Change: No Change in CA	4	10.0
Positive Change: Increase in CA	11	65.0
Asian	9	
Negative Change: Decrease in CA	1	11.1
No Change: No Change in CA	1	11.1
Positive Change: Increase in CA	7	77.8
African American	162	
Negative Change: Decrease in CA	73	45.1
No Change: No Change in CA	19	11.7
Positive Change: Increase in CA	70	34.2

Native Hawaiian or Pacific Islander	4	
Negative Change: Decrease in CA	0	0.0
No Change: No Change in CA	0	0.0
Positive Change: Increase in CA	4	100.0
White	298	
Negative Change: Decrease in CA	104	34.9
No Change: No Change in CA	29	9.7
Positive Change: Increase in CA	165	55.4
Another Ethnicity	25	
Negative Change: Decrease in CA	7	28.0
No Change: No Change in CA	0	0.0
Positive Change: Increase in CA	18	72.0
Activity Involvement		
Involvement	341	
Negative Change: Decrease in CA	128	37.5
No Change: No Change in CA	30	8.8
Positive Change: Increase in CA	183	53.7
Preparation Time		
One to Two Months	353	
Negative Change: Decrease in CA	135	38.2
No Change: No Change in CA	40	11.3
Positive Change: Increase in CA	178	50.5
Three to Four Months	95	
Negative Change: Decrease in CA	28	29.5
No Change: No Change in CA	6	6.3
Positive Change: Increase in CA	61	64.2
Five to Six Months	33	
Negative Change: Decrease in CA	12	36.4
No Change: No Change in CA	3	9.1
Positive Change: Increase in CA	18	54.5
Seven to Eight Months	5	
Negative Change: Decrease in CA	4	80.0
No Change: No Change in CA	0	0.0
Positive Change: Increase in CA	1	20.0
Nine to Ten Months	1	
Negative Change: Decrease in CA	1	100.0
No Change: No Change in CA	0	0.0
Positive Change: Increase in CA	0	0.0
More Than Ten Months	12	
Negative Change: Decrease in CA	4	33.3
No Change: No Change in CA	0	0.0
Positive Change: Increase in CA	8	66.7

Summary

Chapter 4 discussed the results found after analyzing the data collected during the four district Cloverleaf PA events. Descriptive and inferential statistics were used as a way of analyzing the data to help reach a conclusion to the three objectives of this study. Frequencies, reliability, means, standard deviations, paired samples *t* – test, independent samples *t*- tests, ANOVA, and correlations were calculated to present the findings. During this analysis, descriptions of the demographic characteristics of Georgia 4-H PA participants were found, the pre – and post - levels of communication apprehension in Georgia 4-H members was determined, and the relationship between communication apprehension and demographic characteristics of Georgia 4-H PA participants was described. Chapter 5 includes a synopsis of the findings from the research study. It also contains a summary of the conclusions, limitations, and future recommendations for research and future recommendations for practice.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Introduction

Chapter 1 detailed the current issue regarding communication apprehension. Chapter 2 described the theoretical framework, the relevant literature, and conceptual framework behind the study. Chapter 3 describes the research design, data collection and analysis, instruments, measures of validity, and reliability behind the instruments, study target population, and the sampling procedure for this study. Chapter 4 listed the findings of the results from the analyzed data following the procedure discussed in Chapter 3. Here, Chapter 5 includes a synopsis of the findings from the research study. It also contains a summary of the conclusions, limitations, and future recommendations for research and future recommendations for practice.

Synopsis of the Research Study

According to Lewis et al., (2009), 4-H participation significantly contributes to a 4-H member's involvement in extracurricular activities in and out of school, leadership growth, care towards others, and how they view themselves through self-confident, character, and empowerment. Possessing self-confidence is one way to help combat high levels of communication apprehension, which appear in group discussions, meetings, interpersonal conversations, and through public speaking (Pieszak, 2009). Georgia 4-H members are awarded the opportunity to attend Project Achievement, which focuses on

each of these four situations in some way. More rigorous research is needed to determine the influential extent that PA has on communication apprehension levels in Georgia 4-H members.

Currently, there is limited information on the impact of public speaking events on communication apprehension in youth and no research can be found that compares pre- and post- test scores of the PRCA-24 after presenting at an event like PA. With the concern arising that the youth of our society need to learn soft skills, such as communication, at an early age, to succeed in school, work, and life, research on communication apprehension levels in youth is paramount to understanding the degrees of apprehension and how to better alter the curriculum for practice (Comstock, 2015).

Synopsis of the Purpose and Objectives

The purpose of this study was to determine the influential extent of the 4-H Project Achievement process on communication apprehension levels in Georgia 4-H members. The main objectives are:

1. Describe the demographic characteristics of Georgia 4-H PA participants.
2. Determine the pre – and post - levels of communication apprehension in Georgia 4-H members.
3. Describe the relationship between communication apprehension and demographic characteristics of Georgia 4-H PA participants.

Theoretical Framework

The 4-H Experiential Learning Model (Figure 2.1) created from Kolb's Experiential Learning Model (Davis et al., 2016) was used as the theoretical framework for this study. This five – step model flows through a three-step cycle that remains continuous throughout youth development, so that Georgia 4-H members can relate their experiences to real-life situations to help improve their presentation skills for future endeavors. This study focused on addressing the first two steps of the model: experience and share. The Georgia 4-H members prepared and presented at Cloverleaf PA (experience) and could answer a questionnaire about the communication apprehension levels (share). It was then the responsibility of the student to process what their triggers were, generalize their experience, and apply these experiences to other aspects of their lives, since the study did not record that information at this time. The Do-Reflect-Apply flow allows youth to have the opportunity to keep reconnecting ideas as they experience new events or when they move up to Junior PA the following year.

Review of the Methodology

The population of this study was collected by a convenience sample of participants who attended and competed at one of the four district Cloverleaf Project Achievement events on Saturday, March 25, 2017. There were 1,145 students at these events. The original sample size was 556, but six of these questionnaires had to be removed due to the lack of parental consent. The final sample size used for data collection was 550 Georgia 4-H members. Data collection consisted of implementing the

use of two page, two-sided paper copy questionnaires. This study used no method in contacting participants, since the Georgia 4-H members were already going to be at the survey location. The members in the Northeast district were introduced to the researcher prior to beginning their presentations. The members in the Northwest, Southeast, and Southwest district were introduced to their data collector in the same manner. A final response rate of 48.0% (n=550) was achieved during collection. The following conclusions and recommendations can only be generalized to sample of Georgia 4-H members in this study.

The independent variables in this study were (a) gender, (b) grade level, and (c), ethnicity, (d) involvement in other clubs or organizations, (e) time spent preparing, and (f) assistance from outside sources. The dependent variables were communication apprehension sub-scores, CA total scores, and total change. The Statistical package for the Social Sciences (SPSS), version 22.0, was used to analyze descriptive and inferential statistics following the objectives of the study. Objective one was analyzed using descriptive statistics. Objective two was analyzed using both descriptive and inferential statistics. Objective three was analyzed using inferential statistics, including paired samples t-tests, independent samples t-tests, analyses of variance or ANOVA, and correlation).

Key Findings and Implications

Previous research suggested that youth who have more experience presenting and being involved with public speaking will become less apprehensive through practice and

simulation (Boyce et al., 2007; Glaser, 2008; Holbrook, 1987; & Jones, 2014). This quantitative study focused on Georgia 4-H members who prepared and presented at Cloverleaf PA events across the state. These 4-H members were able to share their communication apprehension levels felt before and after presenting the day of their event and sub-scores, overall CA levels, and overall change in CA were calculated.

There is no accessible data on the overall demographics on all the Georgia 4-H members across the state, so comparisons to the data obtained cannot be determined. Many the participants (62.0%) were also involved in another club or organization. Influential extent of PA on a Georgia 4-H members CA level may be biased by this involvement, because these members may have more opportunities to speak publicly or work in groups, which leads to a boost in confidence (Pieszak, 2009). Of those students who stated that they were involved (341), 53.7% had a positive change in overall CA levels. This does not align with previous research (Goodwin et al., 2007; Hedrick et al., 2009; & Tassin et al., 2010) which suggests that people who are more involved within clubs and organizations possess lower CA levels than those who are rarely involved. It could be possible that these results occurred because of the age group of the sample. These 4-H members are still young and just learning about 4-H as an organization. They might not know how to apply their experiences from other organizations into their experiences here.

A higher percentage of members had some degree of communication apprehension within Group Discussions (72.6), Interpersonal Conversations (69.1), and Public Speaking (57.9) than within Meetings (64.7), before they presented. These high

scores suggest that group discussions, interpersonal conversations, and public speaking may not be intertwined in the youth's curriculum base or that they may not be a target objective. This study determined that 2.4% of the members had a low overall CA level, 52.5% had a moderate overall CA level, and 45.0% had a high overall CA level. Knowing the members pre - presentation scores can help determine the overall change.

After presenting their information, Group Discussions lowered to 69.8% and Interpersonal Conversations lowered to 64.7%. These slight changes suggest that PA focused a small fraction of time on group discussions and interpersonal conversations. It could also suggest that PA does not influence a member's CA levels in these areas. Students had an increase of CA within Meetings (62.0%) and Public Speaking (59.3%). This does not align with research previously conducted on 4-H youth. According to Tassin et al. (2010), members who actively participate are said to be comfortable with speaking in meetings and with public speaking. The overall CA scores changed to 2% of respondents feeling low levels, 49.3% experiencing moderate feelings, and 48.7% of respondents felt high levels. Many of the respondents (52.5%) had a positive Total CA score after presenting at PA, which means that their CA levels increased. From the others, 1% had no change in Total CA level and 37.5% experienced a decrease in scoring, which means they felt more confident instead of more apprehensive.

In relation to Cloverleaf PA, the positive Total CA levels reveals that PA may not be doing what it hopes to accomplish with these particular students. Based on the findings of the study, Cloverleaf PA is not showing the ability to help reduce CA levels, based on these findings. The data analysis brought forth some information that does not

make logical sense. During the process of preparing for PA, the overall CA levels should have decreased (Holbrook, 1987; Pieszak, 2009; Rattine-Flaherty, 2014; Wrench et al., 2012).

It was determined that these results had an additional confounding variable that was not predicted and that the questionnaire did not account for. Georgia 4-H members completed this questionnaire after presenting their projects and before the results had been announced during the awards ceremony. A member who does not know the results and where they placed, after presenting and watching others present, may have an increased CA level because of the pressure of comparing themselves.

A time – series data analysis could record and help create a trend for CA data over time, to determine how the members truly felt. Data collection would occur the day of the event, within a week, and within a month (time frames can vary). This allows the researcher to analyze the result based on a time – series average, which considers the high levels of CA they may be feeling that day and the low - level CA that they may feel over time. The member may have varying levels of CA based on their environment and this may change as time, location, and environment change.

The reliability of the 12 constructs was calculated to be 0.807, which means that the internal consistency between the items is high, but not high enough that they are all asking the same question. The grade level and overall change in CA would cause the reliability to increase to 0.852 and 0.840, respectively. This means that identifying within a specific grade should have no effect on a member's CA score and the overall change in CA may not have a great effect on the final analysis. These two pieces of information are

needed to draw conclusions for the objectives, so they were not removed for further analysis. The grade level helps divide members into specific categories and the overall change in CA levels was the key purpose of this study.

More members (*n* = 353) spent 1-2 months preparing for PA compared to those who worked for three or more moths (*n* = 197). From the members who admitted to having parental assistance (*n* = 471), 22.5% stated that their parent(s) helped them more than one day a week and 44.3% had help almost every day. From the members who admitted to having grandparent assistance (*n* = 226), 19.9% stated that their grandparent(s) helped them more than one day a week and 23.0% had help almost every day. Of the members who received assistance from other family members (*n* = 264), 22.7% had help more than one day a week and 25.0% had help almost every day. Many members (*n* = 361) had help from Extension Agents or PA's and 29.3% said the assistance was provided almost every day. A small number of members (*n* = 239) received assistance from another coach or mentor and 36.4% of that help was provided almost every day. These results were not found in other studies exploring communication apprehension (Pieszak, 2009; Rattine-Flaherty, 2014; & Wrench et al., 2012), but an increase of time preparing, assistance with presentations by someone close to the presenter, and an increase in the amount of time someone helped the presenter were key factors that help reduce CA levels (Pieszak, 2009; Rattine-Flaherty, 2014; & Wrench et al., 2012). The more time youth prepare their presentations and spending time rehearsing with someone with a strong relationship with them may help to increase confidence and decrease CA levels when it is time to present at PA.

A majority of males (59.0%), females (53.8%), and those who preferred not to answer (46.4%) had a positive change in overall CA levels, which means that their levels increased after presenting. The majority of the fourth graders (47.7%) had a negative change in overall CA levels, but fifth graders (54.2%) and sixth graders (54.5%) felt a positive overall change. This also defies previous research, since older students are said to have lower CA levels due to experience (Damer et al., 2010; Glaser, 2008; & Mathewson et al, 2012). The older members present at PA might have had experience in previous years with PA and they had already been present to know what to expect in the presentation rooms and the awards ceremony. The Agent, staff member, or volunteer may have presented PA to their members as a public speaking opportunity, but left out the competition side of the event. Members who know this competition side may feel more CA because they want to earn that gold medal.

The majority of the American Indian (65.0%), Asian (77.8%), Native Hawaiian (100.0%), White (55.4%), and Another Ethnicity (72.0%) students had a positive change in overall CA levels. The overall high trend seen here is not supported by general research, which expresses great interest in lower CA levels after presenting at an event of this nature (Pieszak, 2009; Rattine-Flaherty, 2014; & Wrench et al., 2012). The African – American students (45.1%) had a negative change. Research on doctoral of pharmacy students suggested that a decrease in overall CA levels can be attributed to the high minority population (LaRochelle et al., 2016). While these students are a minority in 4-H, they were among the majority at PA, which could account for an increase in self-confidence (LaRochelle et al., 2016).

Of the students who prepared for one to months (353), 50.5% of respondents had a positive change in overall CA levels. This positive change can also be seen with students who prepared for three to four months (n = 95, 64.2%) and five to six months (N = 33, 54.5%). Statistically significant data could not be calculated for students who prepared for seven months or more. Research suggests that more time invested in presenting leads to a decrease in CA levels (Pieszak, 2009; Rattine-Flaherty, 2014; & Wrench et al., 2012). The high scores from this study suggest that other factors that can affect Georgia 4 – H members CA levels may come into account. For instance, Cloverleaf PA could add an extra burden of anxiety in the members, which could help contribute to the higher CA scores in the post – test. The measurement used in this study was not sensitive enough to measure for these factors.

Recommendations for Research

Current literature called for more public speaking practice engagements with youth (Goodwin et al., 2007; Lewis et al., 2009; & Tassin et al., 2010) and research studies focusing on communication apprehension in youth (Glaser, 2008; Holbrook, 1987; & Jones, 2014). This research focused on Georgia Cloverleaf 4-H members overall change in CA levels for each sub-score and total CA after presenting at the Cloverleaf PA events across the state through a quantitative questionnaire. This data creates insight to how public speaking affects youth and how 4-H plays a vital role in combating CA, while providing leadership training, professional development, and environmental outreach

services (Goodwin et al., 2007; Hedrick et al., 2009; Lewis et al., 2009; & Tassin et al., 2010).

Since statistically significant data was not collected during this questionnaire for time spent preparing for seven months or more, it is recommended that further studies be done to determine this. Data could help show if more time spent preparing lead to an increase or decrease in overall CA levels. This could exhibit information that related length of time spent preparing with overall CA levels, which could further research with this topic, such as optimum PA preparation time, or to a different topic, such as the benefit or harm of college public speaking courses.

More research needs to be conducted on Georgia 4-H member's feelings about being present at a PA event and the motivational factors that lead to their willingness to participate. Research suggests that the environment in which youth are in plays a vital role fostering the prevention of CA (Holbrook, 1987). If a positive environment between leaving their county and arriving to their presentation room is fulfilled, the youth may not have the necessary confidence to combat their CA. Also, research on return rates of these members can help determine if the increase in CA levels effects future participation. One piece of information this study did not take into consideration is the placement, or awards, these members received. Each project within PA is awarded a first, second, and third place winner, who receives a ribbon. Research on the change in CA levels with regards to these placements can determine the influential extent of earning an award on these levels. This could lower the CA that may have been artificially increased during the event.

Research also needs to be conducted on the last three steps of the 4-H Experiential Learning Model in relation to PA (Figure 2.1). This study only captured information for the first two steps, which only target one and a half of the three cycles. Further analysis of the Process, Generalize, and Apply steps can determine how and if a 4-H member is following through with the learning model and how they are using it to apply PA to their other life experiences. Creating a unique identifier for each 4-H member and collecting data each year can determine CA trends over time, involvement in 4-H over the years, if a member is placing or not with more practice, and how their practice and assistance patterns change.

Recommendations for Practice

A high percentage (52.5%) of Georgia 4-H members had an increase in communication apprehension after competing at the Cloverleaf Project Achievement in March. Of the remaining members, 1.0% experienced no change and 37.5% experience a decrease in CA levels. Different practices and applications need to be presented to members to help lessen the impact of CA in the members. Providing more opportunities for members to participate in group discussions, attend meetings, hold interpersonal conversations, and speak in public settings are strongly encouraged ways of reducing CA levels that also align with Georgia 4-H goals (Wrench et al., 2012). Taking into a youth's personality type or learning style can help the educator find practices, curriculum, and activities that best fit each member.

Another way to help members reduce their CA levels would be to have them arrive early to the location and get a feel of the room they are presenting in, rehearse the presentation beforehand, concentrate on the content to be presented, and relax (Pieszak, 2009). The classrooms or presentation rooms can be opened or unlocked before the day begins and the members can have a set amount of time, before the introductions begin, to free flow these areas. Having the members draw up their feelings or fears, share those among a group they are comfortable being with, and then discuss what they found interesting or what they can relate to with their peers has also been a proved way to assist in decreasing CA levels (Rattine-Flaherty, 2014). This can be accomplished at 4-H meetings, at home, or with friends on the bus ride over.

It is recommended that the gender and school system question be added to the demographic section. Copies of the questionnaire in Spanish would also be useful in gaining respondents who are English Language Learners (ELL). With more time, gaining the trust of the Extension Agents or PA's for each county would be crucial for attracting member participation. Reaching out to these stakeholders by email can let them know more about the questionnaire, the need for the research, and what they can do to help. Providing them with incentives may boost response rates. Finding a way to gain trust among the members is vital, as well. Georgia 4-H members may face the apprehension of being evaluated, if they do not fully understand the purpose of the research study.

Contacting the PDC's prior to the event to determine the setup of the event is also recommended. They can provide a list of the number of members that will be in each room or competing in each category. The questionnaires can then be counted and placed

in the judge's packets. Upon completion of the presentations, judges can pass out, administer, and collect the questionnaires. This provides each member with a greater opportunity to participate and a higher response rate to be achieved.

It was also brought to the researcher's attention, after the data analysis was completed, that students, who resided in a county that employs a Vista agent, were required to complete an additional assessment based on their experiences with Cloverleaf PA, while in attendance. The students in these counties could voluntarily fill out the questionnaire used for this study, but were required to answer the other 1 page assessment. While the other assessment was shorter, it was also administered by an Agent, PA, or Vista that the student knows and has been in contact with. This was a person of trust, who might have also brought them to PA and helped them prepare. It is recommended that a full schedule of the day, including any additional assessments to be completed, be accessed by the researcher. It could then be determined if data should be collected the same day, but many at a different time, or within a few days after PA.

Sending out the research questionnaire within a set period (one week, two weeks, or a month) after PA could reduce the stress on the 4-H member. It could also provide a better analysis of how the student felt, since data would be collected after awards were announced and members know how they placed. The researcher could also collect data the day of PA and again within that set period and average the scores together, since data the day of PA reflects more apprehension and data collected later reflects more calm feelings.

A qualitative post interview or focus group could be implemented within weeks or a month after the PA event. Here, the researcher could speak with Georgia 4 – H members who participated in PA to determine what factors caused the greatest anxiety, assess how the levels of CA have changed, and learn more about how members are applying the 4 – H Experiential Learning Model. This would also give the members a chance to hear from other members about how they were feeling and what could be done to combat those feelings (Rattine-Flaherty, 2014).

Limitations

The researcher was not able to be present at each of the four PA events, because they were held on the same Saturday, during the same time frame. This required the researcher to reach out to the district Program Development Coordinators (PDCs) to seek out assistance. A meeting was held with the (PDCs) to discuss the research, the gap in the literature, the assistance needed, and the plan of action. It was decided that an Agent, staff member, or leader from each district would be selected to represent as the data collector. A job description was typed up detailing the roles, requirements, and duties of the data collector and shared with the PDC's who then shared with their county Extension Agents. An Agent within the Northwest, Southeast, and Southwest district was chosen and CITI training was completed.

Each of the four districts collected data in a different way, since each had a different layout of the school and schedule. The data collector at the Northeast PA had a table between the auditorium, concession stand, and cafeteria. Georgia 4-H members

were encouraged to approach the table and answer the questionnaire as they finished with their presentations. The other three districts had a data collection classroom, where students were transported as a group after everyone completed their presentations. These three districts had a higher response rate, because all the members were lead to the data collection site with their peers. They did not have time to wander around, find their parents or friends, or get distracted by the events at PA.

The members in the Northeast district could locate their parents or friends prior to filling out the questionnaire. This presented the data collector with both a pro and con. Members who filled out the questionnaire could go to their friends and tell them about it, which might encourage them to visit the table. Members who brought their parents relied on their parents to assist them in filling out the questionnaire. This could lead to biased data, since the parents were influencing how the member responds. The parents might assume their Georgia 4-H member has more or less communication apprehension than the member believes, but the presence of the parent might alter their confidence. This down time also allowed the members to clear their head by attending the carnival before being administered the questionnaire.

The members in the Northwest, Southeast, and Southwest districts were led to a classroom with the other members in their presentation prior to being released back with their family and friends. Members were not allowed to clear their head or receive down time to reflect on their CA levels. They did not have parents or guardians to rely on to assist them with filling out the questionnaire. The proximity of those who presented with

them while filling out the questionnaire could have increased the CA levels, because of a lack in confidence.

The questionnaire itself was presented with several flaws, leading to measurement error in the study. Measurement error is the difference between the estimate produced and the true value because respondents gave inaccurate answers to questionnaire items due to poor question and questionnaire design (Dillman, Smyth, & Christian, 2014). Several members had trouble understanding the retrospective approach and had to start over. Highlighting the main introduction to each page would have beneficial in catching the member's eye. With the increase use of technology in our society, an online survey through a source, such as Qualtrics, may have been more useful in collecting data quicker and may have been useful during the analysis process. However, the school systems lacked Wi-Fi and computers or other devices needed for implementation of an online questionnaire. A demographic item on the type of school setting a member is a part of was left off the questionnaire. Data about whether a member is home-schooled, in public school, or part of a private school could help determine the influential extent. The researcher also forgot to include the gender demographic question and applied a sticker to the back side of the questionnaire, but its visibility was low.

The above recommendations for Extension Agents, Program Assistants, or other educators reflect the findings from this study. The recommendations assume that, based on the literature, there will be benefits, including a decrease in communication apprehension levels, for members who actively seek participation, guidance, and assistance with Cloverleaf PA, even if the results are not shown immediately after

presentations. There will also be benefits for the educators when the recommended practices are implemented. Implementation will vary by Agent, PA, or educator and barriers in place. However, increase engagement, practice, addressing feeling of apprehension early on, and finding ways for youth to best become at ease are effective methods that may help decrease overall CA scores.

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APPENDIX A.

Georgia 4 – H District Map

APPENDIX B.

IRB approval

Phone 706-542-3199

The University of Georgia

Office of the Vice President for Research
Institutional Review Board

APPROVAL OF PROTOCOL

February 13, 2017

Dear Milton Newberry:

On 2/13/2017, the IRB reviewed the following submission:

Type of Review:	Initial Study
Title of Study:	Cloverleaf Communication Apprehension: Influential Extent of the 4-H Project Achievement Process
Investigator:	Milton Newberry
IRB ID:	STUDY00004238
Funding:	None
Grant ID:	None

The IRB approved the protocol from 2/13/2017 through 2/12/2022.

In conducting this study, you are required to follow the requirements listed in the Investigator Manual (HRP-103).

Sincerely,

Dr. Gerald E. Crites, MD, MEd
University of Georgia
Institutional Review Board Chairperson

APPENDIX C.

Assent Script for Participation in Research

Cloverleaf Communication Apprehension: Influential Extent of the 4-H Project Achievement Process

I am doing a research study to learn about how well your time spent preparing for Cloverleaf Project Achievement helped reduced your levels of communication apprehension, which is a level of fear or anxiety associated with communication with another person or persons. We are asking you to be in the study because you are a 4th, 5th, or 6th grade student who prepared for Cloverleaf Project Achievement during the past year. If you agree to be in the study, you will be asked to take a survey that will last about 10 – 15 minutes.

You do not have to say "yes" if you don't want to. No one, including your parents, will be mad at you if you say "no" now or if you change your mind later. We have also asked your parent's permission to do this. Even if your parent says "yes," you can still say "no." Remember, you can stop at any time. Your grades in school will not be affected whether you say "yes" or "no." Your participation in your 4-H chapter will also not be affected whether you say "yes" or "no."

I will not use your name on any papers that I write about this project. I will only use the information you share after I combine the data from all the participants. This data will have a special passcode on it, so that no one else can obtain access to it.

You can ask any questions that you have about this study. If you have a question later that you didn't think of now, you can contact Chasity Tompkins at CTompkins@uga.edu or speak with your Extension Office.

Thank you!

Chasity Tompkins

Chasity Tompkins
Master of Agricultural and Environmental Education
Agricultural Leadership, Education, and Communication
College of Agricultural and Environmental Sciences
The University of Georgia

APPENDIX D.

PA: PRCA-24 Retrospective Post/Pre Questionnaire

DPA: PRCA – 24 Questionnaire ID:

Thank you for completing this survey!

I am doing a research study to learn about how well your time spent preparing for Project Achievement helped fear or anxiety connected with talking with another person or persons. I am asking you to be in the study because you are a student who prepared for Project Achievement. This survey will last about 10 – 15 minutes.

Complete the questions below and read the instructions carefully before beginning the survey.

Instructions

What county are you with? _____

What grade are you in? 4th 5th 6th

This instrument has 48 statements. The first 24 questions are about how you felt before you started to work on your Project Achievement for this year (the one you presented today). The next 24 questions are about how you feel about yourself now that you have presented your Project Achievement.

Please chose the answer choice that best applies to your feelings. Please work quickly. Record your first impression.

Key:
SA: Strongly Agree
A: Agree
U: Undecided
D: Disagree
SD: Strongly Disagree

DPA: PRCA – 24 Questionnaire ID:

Before I began working on my DPA project…

	Question	Response				
1	I dislike participating in group discussions.	SA	A	U	D	SD
2	Generally, I am comfortable while participating in group discussions.	SA	A	U	D	SD
3	I am tense and nervous while participating in group discussions	SA	A	U	D	SD
4	I like to get involved in group discussions.	SA	A	U	D	SD
5	Engaging in a group discussion with new people makes me tense and nervous.	SA	A	U	D	SD
6	I am calm and relaxed while participating in group discussions.	SA	A	U	D	SD
7	Generally, I am nervous when I have to participate in a meeting.	SA	A	U	D	SD
8	Usually I am calm and relaxed while participating in meetings.	SA	A	U	D	SD
9	I am very calm and relaxed when I am called upon to express (talk about) an opinion at a meeting.	SA	A	U	D	SD
10	I am afraid to express (talk about) myself at meetings.	SA	A	U	D	SD
11	Communicating (Talking) at meetings usually makes me uncomfortable.	SA	A	U	D	SD
12	I am very relaxed when answering questions at a meeting.	SA	A	U	D	SD
13	While participating in a conversation with a new acquaintance (friend), I feel very nervous.	SA	A	U	D	SD
14	I have no fear of speaking up in conversations.	SA	A	U	D	SD
15	Ordinarily (Normally) I am very tense and nervous in conversations.	SA	A	U	D	SD
16	Ordinarily (Normally) I am very calm and relaxed in conversations.	SA	A	U	D	SD
17	While conversing (talking) with a new acquaintance (friend), I feel very relaxed.	SA	A	U	D	SD
18	I am afraid to speak up in conversations.	SA	A	U	D	SD
19	I have no fear of giving a speech.	SA	A	U	D	SD
20	Certain parts of my body feel very tense and rigid (stiff) while giving a speech.	SA	A	U	D	SD
21	I feel relaxed while giving a speech.	SA	A	U	D	SD
22	My thoughts become confused and jumbled (messy) when I am giving a speech.	SA	A	U	D	SD
23	I face the prospect (I have the ability) of giving a speech with confidence.	SA	A	U	D	SD
24	While giving a speech, I get so nervous I forget facts I really know.	SA	A	U	D	SD

DPA: PRCA – 24 Questionnaire ID:

After I finished presenting my DPA project…

	Question	Response				
1	I dislike participating in group discussions.	SA	A	U	D	SD
2	Generally, I am comfortable while participating in group discussions.	SA	A	U	D	SD
3	I am tense and nervous while participating in group discussions	SA	A	U	D	SD
4	I like to get involved in group discussions.	SA	A	U	D	SD
5	Engaging in a group discussion with new people makes me tense and nervous.	SA	A	U	D	SD
6	I am calm and relaxed while participating in group discussions.	SA	A	U	D	SD
7	Generally, I am nervous when I have to participate in a meeting.	SA	A	U	D	SD
8	Usually I am calm and relaxed while participating in meetings.	SA	A	U	D	SD
9	I am very calm and relaxed when I am called upon to express (talk about) an opinion at a meeting.	SA	A	U	D	SD
10	I am afraid to express (talk about) myself at meetings.	SA	A	U	D	SD
11	Communicating (Talking) at meetings usually makes me uncomfortable.	SA	A	U	D	SD
12	I am very relaxed when answering questions at a meeting.	SA	A	U	D	SD
13	While participating in a conversation with a new acquaintance (friend), I feel very nervous.	SA	A	U	D	SD
14	I have no fear of speaking up in conversations.	SA	A	U	D	SD
15	Ordinarily (Normally) I am very tense and nervous in conversations.	SA	A	U	D	SD
16	Ordinarily (Normally) I am very calm and relaxed in conversations.	SA	A	U	D	SD
17	While conversing (talking) with a new acquaintance (friend), I feel very relaxed.	SA	A	U	D	SD
18	I am afraid to speak up in conversations.	SA	A	U	D	SD
19	I have no fear of giving a speech.	SA	A	U	D	SD
20	Certain parts of my body feel very tense and rigid (stiff) while giving a speech.	SA	A	U	D	SD
21	I feel relaxed while giving a speech.	SA	A	U	D	SD
22	My thoughts become confused and jumbled (messy) when I am giving a speech.	SA	A	U	D	SD
23	I face the prospect (I have the ability) of giving a speech with confidence.	SA	A	U	D	SD
24	While giving a speech, I get so nervous I forget facts I really know.	SA	A	U	D	SD

DPA: PRCA – 24 Questionnaire ID:

1. Please specify your ethnicity:
   - ○ American Indian or Native American
   - ○ Asian
   - ○ Black or African American
   - ○ Native Hawaiian or Pacific Islander
   - ○ White
   - ○ Other _____

2. Besides 4-H, are you involved in any other clubs or organizations?
   - ○ Yes (Go to Question 3)
   - ○ No (Skip to Question 4)

3. If you are involved in other clubs or organizations, please select them below:
   - ○ Boys and Girls Club
   - ○ YMCA
   - ○ Church Group
   - ○ Youth Group
   - ○ School Club or Organization
   - ○ Other _____

4. How many months did you spend preparing for Project Achievement?
   - ○ 1-2 Months
   - ○ 3-4 Months
   - ○ 5-6 Months
   - ○ 7-8 Months
   - ○ 9-10 Months
   - ○ More than 10 Months

5. How much time did the following people spend assisting you in the Project Achievement preparation?

	Almost Everyday	More Than One Day a Week	One Day a Week	Two Days a Month	One Day a Month	Not at All
Parent(s)	○	○	○	○	○	○
Grandparent(s)	○	○	○	○	○	○
Other Family Member(s)	○	○	○	○	○	○
Extension Agent/Program Assistant	○	○	○	○	○	○
An Additional Mentor/Coach	○	○	○	○	○	○