

YOUTH LEADERSHIP DEVELOPMENT IN TEXAS 4-H FOOD AND NUTRITION
PROGRAM

A Thesis

by

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ABSTRACT

Leadership is an elusive term that has evolved over time. Thus, leadership has a broad definition; nevertheless, leadership development is essential during adolescence as these individuals prepare to be functioning adults in society. Out-of-school time (OST) programs, such as 4-H, are ideal for fostering an environment that allows youth to gain and grow leadership skills. Current literature discusses the importance of multiple components to develop leadership, but a comprehensive theory is needed. More importantly, a theory that is theoretically sound and supported with empirical evidence for leadership development in youth is essential. Therefore, the youth leadership development conceptual model by Redmond & Dolan (2016) is a theory composed of core program components—authentic opportunities, mentor access, motivation, and mastery—that come together to guide youth in developing leadership. With the help of this model and the assessment of program duration, educators can identify the core leadership development elements of a 4-H program. The purposes of this study were to (a) examine the relation between program duration and leadership development, (b) assess the relation between program duration and involvement in the four program components of leadership development, and (c) determine if the four program components predict leadership development. Data was collected through a questionnaire sent to Texas 4-H members in the food and nutrition program as a sample case. Multiple regression and correlational analyses were conducted to identify the relation between the variables. The correlation between program duration and leadership skills was statistically significant. The correlations between duration and program components were significant as well. Authentic opportunities and mastery were significant predictors of leadership. However, when program duration was included as a control variable, none of the program

components significantly predicted leadership, although the overall model significantly predicted leadership. The interrelationships of the program components supported the youth leadership development conceptual model (Redmond & Dolan, 2016) as these components and duration do not predict leadership independently but together foster leadership development. Overall, youth practitioners should design programs with these key components and encourage program duration in youth to gain valuable skills.

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1. INTRODUCTION

Kouzes and Posner (1995) wrote that “leadership is an affair of the heart.” Leadership is such an important skill in being successful but can come with challenges. Therefore, helping youth grow and develop their leadership is crucial in ensuring a better future. Leadership can mean different things to different people because of diverse definitions. Many adult leadership theories focus on leadership styles and end results, without the discussion of fostering leadership skills (MacNeil, 2006). Youth leadership research is similar to adult leadership research in that the term differs in meaning to different people. However, youth leadership research lacks in identifying concepts of authority such as making decisions and having a voice, both of which are needed for true leadership development.

Another flaw in youth leadership research is the abundance of theories and models that leave out essential parts in the growth of leadership skills (MacNeil, 2006). Yet, one comprehensive theory includes many elements necessary in leadership development for youth. Redmond and Dolan (2016) designed a conceptual model of youth leadership development to fill the gaps in youth leadership research into one idea. This conceptual model uses a three-part system of skills development, environmental conditions, and commitment to action to grow leadership abilities in youth.

Furthermore, out-of-school time (OST) programs, such as 4-H, are ideal scenarios for youth to grow their leadership skills. OST programs serve 7.7 million youth every day across the country (Centers for Disease Control and Prevention, 2021). With these types of numbers, practitioners can impact a large number of future leaders with the correct program design. The youth leadership development conceptual model (Redmond & Dolan, 2016) can be applied to the

4-H food and nutrition project as the program follows the model's components. The variety of aspects and activities of the 4-H food and nutrition program are theorized to foster leadership development.

Leadership research and theories, while broad, have gaps that expose weaknesses in leadership development. For example, leadership needs to be fostered to be successful but lacks in understanding the specifics in the developmental stage of leadership in youth. 4-H is a prestigious organization that has an abundance of studies showing the skills youth gain from participation in its programs. Using the youth leadership development model, one can highlight the core components of fostering leadership. Looking into what specific aspects of the 4-H food and nutrition program contribute to leadership development can help shape the future of the organization and future participants.

2. LITERATURE REVIEW

I begin my literature review by explaining the most prevalent adult leadership theories and issues with this wide array of research. Then, I introduce theoretical discussions of youth leadership followed by a comprehensive model to provide a framework for leadership development in youth. Out-of-school time (OST) activities and the 4-H organization will be discussed as opportune times for youth to grow and develop leadership skills. Next, the Food and Nutrition program of 4-H Extension will be dissected to show the practical application of the theoretical framework of youth leadership development. I conclude the literature review with hypotheses to empirically test the theoretical framework using data collected from 4-H Food and Nutrition program participants.

2.1 Adult Leadership Theories

The evolution of leadership definitions dates back to the beginning of the 20th century, which was the start of the dramatic increase in leadership research (Northouse, 2018). Many authors have proposed theoretical approaches to comprehend the complexity of the leadership process (Bass, 2008; Bryman, 1992; Bryman et al., 2011; Day & Antonakis, 2012; Dinh et al., 2014; Gardner, 1990; Hickman, 2016; Mumford, 2006; Rost, 1991). Thus, the term “leadership” has been widely used with a myriad of definitions (Rost, 1991). Due to growing global factors and generational differences, leadership fits many different descriptions.

Leadership theories have been categorized into trait, behavior, situational, and relational in addition to new leadership approaches (Northouse, 2018). The first category of trait leadership theories emphasizes the particular characteristics and qualities that a leader individually exhibits,

which includes charismatic leadership and The Great Man theory (Northouse, 2018). The next category, leadership behavior theories, focuses on specific actions that leaders exhibit (Northouse, 2018). A major theory in this category is Blake and Mouton's (1985) managerial grid, where the leadership behaviors are a matrix of two-axes: concern for people and concern for production. Situational leadership theories are the third category and refers to understanding the needs of followers and the developmental stages within the organization such as path-goal theory and contingency theory (Hersey & Blanchard, 1976; Hersey et al., 1979). The category of relational leadership, in theory, will produce positive results if high-quality relationships are occurring. However, this theory views leadership as a relational process where the ability and authority of the leader can persuade individuals to overcome challenges and problem-solve issues (MacNeil, 2006; Heifetz & Neustadt, 1994). The last category is new approaches to leadership research that are trying to fill the gaps that still exist in understanding the concept. The newer outlook on leadership is not focusing on results, but instead on an individualistic approach to how leaders shape their followers over time. The modern leadership theory is moving away from leadership as a concept in one person to a concept that focuses on the relationship between or among individuals (Astin & Leland, 1991; Bolman & Deal, 1991; Hope & Timmel, 1984).

With over 66 theories, the field of adult leadership needs an inclusive theory (Mango, 2018). These theories are placed into a variety of categories due to the noticeable differences in the leader's focus. While a broad array of theories are mentioned, the discussion merely stems around the actions and end result. The research on adult leadership is more often observed through the context of practicing leadership instead of it being developed (MacNeil, 2006). Clearly, adult leadership theories leave out how leadership skills are grown. Practicing leadership

over time allows for an individual to truly evolve into an effective leader and impact more people along the way. However, research does not dive into how to foster and develop leadership in a person.

2.2 Youth Leadership Theories

When one specifically looks at young people as leaders, the description of leadership is slightly different. Similar to adult leadership, the term youth leadership also varies in the use of definition; thus, researchers highly recommend consistency in this area (MacNeill, 2006; Conner & Strobel, 2007). Youth leadership can be thought of as a group of competencies that youth use to lead (Zeldin & Camino, 1999; Edelman et al., 2004). However, another perspective is viewing youth leadership as the abilities young people use to lead or motivate others to work together toward a common vision (Wheeler & Edlebeck, 2006). This study defines leadership as the process of developing skills through real-life experiences of opportunities and commitment to learn and grow those skills over time. No matter the definition of leadership, there is a variety of youth leadership development models that help guide practitioners in designing leadership activities for youth.

The difference in focus on skills and knowledge instead of practice is what divides youth leadership from adult leadership theories (MacNeil, 2006). Literature on youth leadership development usually focuses on leadership ability such as knowledge, talents, and skills without looking closer at authority like influence, decision-making, and voice (MacNeil, 2006). Adult leadership theories leave out authority due to the “at-risk” portrayal youth receive in society. This stereotype has led to a lack of trust with youth in their decision-making, their voice in the community, and their influence on others. Adult leadership researchers realize that leadership is fostered and developed through practice; therefore, youth leadership should model this same

design (MacNeil, 2006). In addition to the lack of research about developing leadership in a real sense, another difference is the potential for leadership seen in adolescents. Youth are distinguished as a futuristic model of leadership instead of a current one (Gardner, 1990). This is because teenagers are typically perceived as rebellious and in need of extra attention during this period (MacNeil, 2006). Thus, society thinks adolescents will learn leadership now and practice it later in life (Gardner, 1990). A need is apparent for a comprehensive model that includes skill development, opportunities for action, and environmental conditions allowing youth to develop and practice leadership during adolescence and before adulthood.

When looking at educational models for youth leadership development, many focused solely on one component such as skill development (Zeldin & Camino, 1999; Ricketts & Rudd, 2002; Roberts, 2009; Wang & Wang, 2009), opportunities for action (Heifetz & Neustadt, 1994; Boyd, 2001; Klau, 2006; Brendtro, 2009), or authentic opportunities to practice leadership (Kahn et al., 2009) without the consideration of the other components (Redmond & Dolan, 2016). Nevertheless, one comprehensive youth leadership development model by Ricketts and Rudd (2002) discusses three important stages in developing leadership. The first stage is awareness which is when youth first learn about leadership due to a lack of it in their current environment. The next stage is interaction, where youth are able to explore leadership in a variety of ways and different outcomes. The last stage is integration, which allows for youth to grow and develop their independent leadership skills and abilities (Ricketts & Rudd, 2002). This model includes a three-part system about how youth develop leadership but lacks the crucial guidance and supervision of adult leaders during this time of growth (van Linden & Fertman, 1998). Adult leaders provide a core component in youth leadership development, serving as important mentors in steering the individual in a positive direction.

2.2.1 Youth Leadership Development Conceptual Model

Literature about youth leadership theory models suffers from the lack of comprehensive theories. Only one leadership development model incorporates the development of skills, opportunities to act, authentic opportunities, and adult support.

The conceptual model for youth leadership development by Redmond and Dolan (2016) identifies the necessary set of skills youth should develop and, in the right context, have the opportunity and experience to take meaningful action in their local community (Figure 1). The first section of the model emphasizes the importance of skill-building, especially in the areas of social and emotional intelligence, collaboration, articulation, and insight and knowledge (Redmond and Dolan, 2016). A solid foundation of skills and competencies play a critical role in evolving youth into leaders (Van Linden & Fertman 1998; Northouse 2004). The second portion is providing authentic and genuine experiences for leadership practice and having direct access to helpful mentors who can give guidance to the youth (Redmond & Dolan, 2016). This is aligned with Bronfenbrenner's (1979) idea that the ecological context in which young people develop should emphasize the importance of supportive environmental conditions to allow growth in these individuals. The last section emphasizes the necessity of action for leadership development to occur. Action involves motivating others to be a part of a common vision and to master at least one new skill set (Redmond & Dolan, 2016). The intertwining of skill development, environmental conditions, and commitment to action is the ideal scenario to foster youth leadership development (Redmond & Dolan, 2016).

Redmond and Dolan (2016) designed this conceptual model to fill gaps left by previous research. This comprehensive youth leadership development model combines the necessary components of skill building, environmental conditions, and independent action of youth into

one complete blueprint. The model uses a strong theoretical foundation mixed with important elements from previous literature to facilitate and grow youth into successful leaders (Redmond & Dolan, 2016).

2.3 Applying Youth Leadership Development Model in Out-of-School (OST) Setting

Out-of-school time (OST) youth programs can be influential in a young person's life by providing ideal scenarios for leadership to be developed (Witt & Caldwell, 2018). Research has documented the positive association between the duration of adolescents' involvement in an OST program and productive developmental outcomes (Lynch et al., 2016). Three aspects of duration positively influence youth due to their involvement in the program. These are the psychological adjustments developed through high-quality relationships with adults and peers (Fredricks & Eccles, 2005), the collection of physical, cognitive, emotional, and interpersonal skills from consistent practice of these abilities in the OST program environment (Bohnert et al., 2010), and identity shaping through the solid commitment to at least one OST program (Fredricks & Eccles, 2005). The longer the individual participates in the program, curriculum exposure increases which then increases the success of the organization's mission (Eccles & Roeser, 2011; Hansen et al., 2003; Larson et al., 2006; Lerner et al., 2009).

With the appropriate duration and corresponding accumulation of program resources and experiences, youth leadership programs are perfect opportunities for youth to develop effective and quality leadership skills to use in their communities (Edelman et al., 2004). These programs can offer experiential training to increase leadership understanding and practice ethical leadership behaviors such as critical thinking and teamwork (Fertman & van Linden, 1999). However, the core elements of OST activities that foster leadership development with positive

results are authentic opportunities, mentor access, mastery, and motivation (Redmond & Dolan, 2016).

Mentoring is a developmental process in a relationship between two individuals, one more experienced than the other, with the sole purpose of developing the mentee (Bearman et al., 2007; Eby & Allen, 2008). The mentoring process includes being open to receiving support, assistance, and advice (Uchino, 2009). Mentoring has been recognized as a valuable element in the leadership development of the mentees (Campbell et al., 2012; Dugan & Komives, 2010; Hastings et al., 2015; Komives et al., 2009). Research has shown that the unique and personal experiences of each relationship with a proper mentor greatly impacts leadership development in youth (Allen & Eby, 2011; Chopin et al., 2012; Day & Liu, 2019; Dugan & Komives, 2007, 2010; Hastings et al., 2015; Komives et al., 2009). Therefore, access to such a mentor is extremely important in helping adolescents develop leadership by their being inspired to continue and achieve goals along the way (Sosik & Godshalk, 2000; Godshalk & Sosik, 2007). OST programs need a mentoring component to positively influence youth, especially in the development of their leadership abilities (Rhodes & DuBois, 2008).

Authentic opportunities for youth participation means a genuine experience of being involved in making real decisions (Hart, 1992). Galdwell (2008) explains that youth with access to real opportunities are successful in developing their leadership skills over time. Taking on true responsibility in leadership allows for authentic practice and learning by actually doing (Redmond & Dolan, 2016). OST activities need real, genuine experiences for youth to exhibit true leadership during adolescence. OST environments can provide a safe space for young people to learn from their leadership practice.

Redmond and Dolan (2016) explain how motivation is an important component of leadership. Kouzes and Posner (1995) emphasize that to exhibit leadership, one must have a passionate commitment to achieving their set goal. This means that focusing on inspiring followers to accomplish goals is a needed element in leadership (Daft, 2011). This motivation can be either internal or external, but the interest needs to be stimulated by the leader. Inspiring others into action includes youth creating a vision with meaning and purpose to foster individual leadership skill development (Kouzes & Posner, 1995). OST programs are perfect scenarios for incorporating motivation within leadership development activities and for youth to learn how to motivate others as a leader.

To master something, one must stick with it by having persistence, reflection, and the ability to learn from previous experiences (Coyle, 2009). Mastery includes having the determination to overcome challenges and continuing on by learning to be better. Moreover, determination is a key aspect of leadership (Roberts, 2009). To develop leadership, youth must learn how to be persistent to push through any obstacle that may arise. Too, youth are encouraged to reflect to learn from their previous mistakes (Kouzes & Posner, 1995). OST activities can be used to allow youth to consistently and continuously grow their leadership skills by reflecting and growing in a secure environment.

2.4 Sample Case of Youth Leadership Development through the Texas 4-H Food and Nutrition Program

The 4-H organization was created for the sole purpose of educators wanting to influence farmers and ranchers to use newly developed technologies. The 4-H organization nationalized in 1914 after the Cooperative Extension System was created to bridge the gap between the research done at land grant universities and the work done by agriculturalists every day. The program

focuses on “hands-on” learning by creating community clubs where the members could gather to work together to discuss current issues (4-H, 2021). In creating program materials for youth, Kolb’s (1984) experiential learning model emphasizes how learning is a process whereby knowledge is created through experience. 4-H uses the frame of this model in delivering its programs to participants who are both experiencing and processing the activities (Norman & Jordan, 2006). Now, opportunities for 4-H members include out-of-school activities, in-school enrichment programs, clubs, and camps that support a variety of program areas such as civic engagement, healthy living, STEM, and agriculture (4-H, 2021). 4-H is an exemplary OST program that puts youth leadership development at the center of its vision.

The first national longitudinal study of the 4-H program was led by Dr. Richard Lerner from Tufts University in 2002 (Lerner & Lerner, 2013). This resulted in the first rigorously tested framework for the organization. Their research suggested that youth participation in 4-H activities offered meaningful leadership opportunities, positive relationships with adults, and critical life skill-building activities. The developmental outcomes from this study led to the five C’s of youth development (Lerner et al., 2003); caring, character, connection, confidence, competence, and eventually, contribution, are now distinguished critical outcomes of positive youth development. Therefore, high-quality OST youth programs have core characteristics that foster individual context relations in a safe environment (Lerner, 2004). These “Big 3” characteristics by Lerner (2004) are steady positive relationships between youth and adults, life skill-building activities, and opportunities for the youth to use the skills learned in both a participant and leader status in that individual’s community. 4-H uses both Lerner’s “Big 3” (2004) characteristics to foster positive development and the five C’s (Lerner et al., 2003) to develop leadership in youth.

The 4-H organization, as a trademark OST program that serves more than six million youth every year (Texas 4-H, 2021), has continued to strive for opportunities to practice leadership skills of youth with authentic and meaningful leadership roles (Worker, 2014). These skills are developed through the four components of leadership development: authentic opportunities, mentor access, motivation, and mastery. Leadership life skill development increases as 4-H members have the chance to experience leadership roles past the club level (Bruce et al., 2004). This study found a positive impact on the development of youth leadership. Participants are able to enhance their developing leadership skills by taking on more responsibility in new leadership experiences (Bruce et al., 2006). Additionally, Radhakrishna and Doamekpor (2009) discuss information from participants that emphasized how 4-H participation was the most helpful in leadership skill development. Of these participants, involvement in their communities was also higher than others not involved in the organization. The study even emphasized 4-H alumni continuing to actively exhibit leadership skills and civic-related activities. Overall, the 4-H program has been shown to make a positive impact on youth.

Moreover, 4-H has previously shown the impact the organization has on youths' leadership development. Boyd et al. (1992) found in a study about Texas 4-H that 4-H members had higher leadership development than non-members. This finding agreed with another study by Heinsohn and Cantrell (1986) who emphasized that 4-H members may be participating in a wider range of leadership development activities due to the structure of this OST program. Furthermore, a study discussed that participation in different 4-H leadership activities predicted leadership development among the members (Seevers & Dormody, 1994). Enhancing leadership development activities in OST programs can lead to more youth developing leadership at a

younger age. Therefore, this distinguished OST program has proven to produce leadership skills within the youth involved.

2.4.1 4-H Food and Nutrition Program

The first food and nutrition program dates back to 1912 when “tomato clubs” were organized as girls’ clubs in the organization (History of Texas 4-H Youth Development Program, 2018). That same year, a report labeled that 2,283 girls in canning clubs were able to can 14,074 tomatoes (History of Texas 4-H Youth Development Program, 2018). In Texas 4-H, the food and nutrition program falls under the Family & Community Health project area and gives youth an opportunity to grow their knowledge and skills in both cooking and personal nutrition domains. 4-Hers learn safety in the kitchen, all while preparing and cooking nutritious meals and snacks. These learning experiences discuss nutrition for reduction of risk of chronic diseases, food purchasing, food safety, and related careers in this area (Texas 4-H, 2021). Participants in this program have learning experiences, as well as the opportunity to compete in related topic contests like Food Show and Food Challenge.

2.4.2 Application of the Youth Leadership Development Conceptual Model in 4-H

The food and nutrition program participants follow the youth leadership development conceptual model by Redmond and Dolan (2016) through each and every step. To be considered participants of the food and nutrition program in Texas, the members will have to complete six or more learning experiences. These can include but are not limited to, project meetings, workshops, tours or field trips, food demonstrations, cooking schools, or career shadowing.

These activities contribute to the skill-building foundation of the leadership development model (Redmond and Dolan, 2016). 4-Hers learn social and emotional intelligence from working with others when practicing cooking, preparing, and learning about food and recipes (Roberts,

2009). Most of the time, youth work together during this learning experience which leads to finding their individual strengths and weaknesses. Collaboration is seen as the participants have to solve problems, make decisions, and deal with conflict resolution during these experiences in the kitchen (Kouzes & Posner, 1995). Specific insight and knowledge are gained through the different activities and meetings where the youth are exposed to new information about food and nutrition (Mumford et al., 2000). By participating in the different activities, youth working in groups will gain articulation skills by communicating with one another in different formats and by explaining their newly learned information to others (Ricketts & Rudd, 2002). Having these learning experiences lays a foundation within the youth to deeply understand food and nutrition knowledge, work in an efficient team by being open to others' ideas, be able to communicate their thoughts and listen, and exhibit self-awareness and empathy based on the previous experiences. Together, the six or more learning experiences build and develop these skills within the participants to create a solid base for the individual (Redmond and Dolan, 2016).

The second layer is the environmental conditions in which youth successfully develop. These ecological contexts include authentic opportunities and mentor access in which young people have the opportunity to experience during the food and nutrition program (Redmond and Dolan, 2016). Genuine opportunities for these participants include using real ingredients to make a real, nutritious meal. Giving youth the opportunity to use real knives, real stoves and ovens, and real raw meats will result in an authentic experience for the participants to show off their skills (Kahn et al., 2009). Additionally, during the learning experiences and competition practices, youth will be in contact with adults who will act as guides (Sosik & Godshalk, 2000; Godshalk & Sosik, 2007). Whether these be parent volunteers, adult volunteers, teen volunteers, or county Extension agents, youth will have access to individuals who can give advice, wisdom,

and support as the youth learn and act. With real opportunities and a helpful mentor, youth will be able to use their skills in a genuine way to exhibit the competencies obtained (Redmond and Dolan, 2016).

The last section of the model is the commitment to action which includes mastery and motivation (Redmond and Dolan, 2016). Leadership development in the food and nutrition program allows for mastery by providing the chance to compete in competitions (Coyle, 2009). Food Show, Food Challenge, Family and Community Health (FCH)/ Food and Nutrition Quiz Bowl, Record Book, and Educational Presentations are the variety of activities youth are able to participate in. These competitions allow the participants to show off their skills and learned experiences by competing against peers. Practice for these competitions requires the persistence of the youth day in and day out to master this topic. On the flip side, a reflection on mistakes is necessary for competitors to learn from previous experiences to continue to get better. To be successful in these competitions, youth have to be motivated to be the best they can be at their particular skill set (Coyle, 2009). Finding and defining the individual's purpose to continue to be better is essential. With internal motivation, participants will shine by being examples for their peers. Role models can be motivation for others as well and will be seen as a leader to many. With the solid foundation of skills, youth will have the chance to show off skills with assistance from an adult, and motivate themselves plus others to master a particular skill set (Redmond and Dolan, 2016).

4-H food and nutrition participants will develop their own individualized leadership skills from specific roles in this project area alone. Opportunities during or after the project learning experiences give youth authentic chances to exhibit their skills and show their commitment to their community. Options available can include assisting their county Extension agent, assisting

a volunteer, mentoring other 4-H members, coordinating community service activities related to food and nutrition, and presenting to stakeholders. Clearly, 4-H members are actively portraying the Youth Leadership Development Conceptual Model (Redmond and Dolan, 2016).

2.5 Conclusion of Literature Review

Leadership is widely researched but lacks the discussion of developing these skills within individuals. Youth leadership also is missing important aspects of leadership when diving into developing skills in youth. However, with the use of the youth leadership development conceptual model, Redmond and Dolan (2016) offer a framework for a large youth serving organization. The 4-H foods and nutrition program offers participants an opportunity to develop leadership skills as well as a chance to show off these skills in a real scenario. Youth will participate in the program where the curriculum is based upon positive youth development principles to learn about cooking, food preparation, kitchen techniques, and food label tips to spark youth's interest in this topic. Participants have the opportunity to learn and practice positive behaviors related to food safety (Diehl et al., 2010). These activities are led by both adults and older member volunteers to build a foundation of knowledge from a variety of learning experiences. The program also offers opportunities to lead in their community during outreach experiences using the newly acquired skills. By looking into previous literature, a gap revealed the need for understanding what specific 4-H programs foster leadership development. Additionally, identifying the core components of a youth program can help practitioners know the specifics of developing leadership in youth.

2.6 Hypotheses

To enrich the understanding about whether the 4-H Food and Nutrition program can promote leadership development among participating youth, I will examine three hypotheses: 1. I

expect a longer duration of participants' involvement in the 4-H Food and Nutrition program to be positively associated with their acquisition of leadership skills and abilities; 2. I expect a longer duration of participants' involvement in the 4-H Food and Nutrition program to be positively associated with their perceived engagement with core program components relevant to leadership development (i.e., mentor access, authentic opportunities, motivation, and mastery); 3. I expect the four core program components to positively predict participants' leadership, after controlling for participants' age, gender, and duration of program involvement.

3. METHODS

3.1 Population Sample and Procedures

As a part of a larger study evaluating the effects of the Texas 4-H foods and nutrition program on youth participants, a database was used to generate 18,466 participants between the grades of 6 to 12 from the 2019-2020 Texas 4-H enrollment year. Then, using Constant Contact, an invitation email was sent to each parent email to provide an introduction of the study and the parental consent form. Of the 18,269 emails successfully delivered, 5,441 were opened, 514 parents provided parental consent and child assent forms, and 424 youth provided valid responses to the survey during a two-week data collection from February 9- 23, 2021. The email included a link to the questionnaire in Qualtrics and was considered active during this time to accept participant responses. The first 150 respondents received a \$15 Amazon gift card and all respondents were entered into a drawing for a set of Apple AirPods valued at \$200.

The participants included in the study were 290 4-H members who have experienced at least one year in the Food and Nutrition project from the sample of 424. All of the participants were between the ages of 11 and 19 and had 1 to 10 years of experience in the 4-H organization. Of these youth, 86.55% identifies as white, 66.2% as female, and had 1 to 10 years of experience in the Food and Nutrition program.

3.2 Instrument/ Measures

The questionnaire items in the study were specifically designed for youth as young as eleven years old to capture their engagement in representative activities of the Texas 4-H foods and nutrition projects, as well as their leadership. Items that are specifically relevant to the four

core program components highlighted by the conceptual model of youth leadership development (Redmond & Dolan, 2016) were transformed and aggregated to represent youth engagement in each program component. The measurement of each variable analyzed in this study is explained in detail below. Redmond and Dolan's (2016) conceptual model of youth leadership development.

3.2.1 Duration in the Texas 4-H Food and Nutrition Project

Duration is the amount of time (measured in years) each participating youth spent in the program area of food and nutrition as a 4-H member. Respondents used a 10-point sliding scale from 1 to 10 to report the number of years of their program participation.

3.2.2 Authentic Opportunities

The opportunities for authentic experiences scale was designed to identify the instances when members were immersed in a real activity to apply learned knowledge and skills. This scale comprised three items to indicate whether the 4-H member had participated in them—food demonstrations, food show and food challenge practices, and coordinating food and nutrition-related community service activities. The first two items, food demonstrations and competition practices, consist of experiences where youth used real food, real tools, and real techniques, to demonstrate abilities. These first-hand experiences are genuine opportunities for participants to exhibit their authentic skills. Last, when coordinating community service activities within the project, the 4-H member is using this real experience to exemplify leadership. Youth will deepen their leadership skills while actively participating in planning a community event for others. For these three items, participants indicated which project or leadership activity they participated in during their food and nutrition project by stating “yes” or “no.” The score for this measure

ranged from 0-3 as the sum from each answer. Cronbach's Alpha of 0.609 showed good reliability of the scale.

3.2.3 *Mentor Access*

The mentor access scale consisted of items that focus on the interaction between the participant and an adult. Mentor access was assessed by two binary items to indicate whether the 4-H member had participated in career shadowing or interviewing a professional. Career shadowing and interviewing a professional are common activities that participants in the food and nutrition program could participate in during their project. These items allow for youth to have a one-to-one experience with an adult. This develops a relationship between the participant and the adult mentor that creates access to support for leadership development for youth. For the items, participants were able to select which project activity they participated in during the food and nutrition project by answering "yes" or "no." All answers were coded as a 0 for answering "no" and a 1 for "yes." The score for this measure will be the sum of the two answers, thus ranging from 0-2. This scale's reliability is 0.672.

3.2.4 *Motivation*

The motivation scale measured the participant's motivation to continue developing skills and demonstrating role model behaviors to peers. The motivation subscale used four items asking whether the 4-H member had participated in educational presentations, presenting to stakeholders, project committee, or mentoring other 4-H members in the project. The first two items of educational and stakeholder presentations demonstrates the motivation of the participant in wanting to be a leader in the organization. By taking the initiative to spread information about a specific topic, prime leadership skills are being exhibited. Furthermore, the third item of serving on a project committee showcases the individual's leadership through the core purpose

of planning and motivating others to take action. Lastly, as a mentor to other 4-H members, these participants are showing a solid base of motivation to be a role model to others around them. The commitment to wanting to lead others in the community and spread knowledge about a topic shows leadership within the individual. For these items, participants were able to select “yes” or “no” to each activity they participated in during the food and nutrition project. The score for this measure is the sum of the four answers and ranges between 0 and 4. The reliability of this scale is 0.653.

3.2.5 *Mastery*

The mastery scale consisted of items that dissect the participant’s skill-based competition in the foods and nutrition project. Participants were asked to report the number of years they participated in Food Show, Food Challenge, FCH/Food and Nutrition Quiz Bowl, Educational Presentation, and Record Book at the county, district, and state levels. As the county-, district-, and state-level competitions were increasingly selective and challenging, each level was coded and weighted differently. The county level was coded as a 1 as long as the participant competed at least one year in that competition. The district level was coded as a 2 and the state level was coded as a 3. The 4-H member received the highest number as their score for each competition. In other words, participants’ higher levels of competition participation received higher scores to show mastery within that contest. The mean of scores across all four activities was used to indicate participants’ level of mastery, ranging from 0-3. The reliability for this measure is 0.634.

3.2.6 *Leadership*

The leadership scale measured youth’s thoughts and reflections about how 4-H impacted their personal development. For this scale, six items used were from the 4-H organization to determine if participants were gaining leadership skills. The items required that the 4-H members

responded with their level of agreement with statements such as "I am more comfortable speaking with others and working in a team since joining the organization. Also, these items asked if the members became more confident in their leadership skills and "more active in the community. This measurement consists of a 7-point sliding scale with 1 being strongly disagree and 7 being strongly agree that the participants used to respond to the statement. These leadership scores will be the mean of the answers to the items of the scale. This scale had good reliability with Cronbach's Alpha of 0.895.

3.3 Data Analysis

SPSS was used to clean and analyze the data set. For the first hypothesis concerning the relation between program duration and youth leadership, a correlational analysis was conducted between the variables. As for the second hypothesis, a correlational analysis was conducted to examine the relation between the four program components and program duration. For the last hypothesis, a hierarchical multiple regression analysis was conducted, with the four program components as the independent variables and youth leadership as the dependent variable.

4. RESULTS

The descriptive information from the study is shown in Table 1. The average age of the sample is 14 years old ($M= 14.04$, $SD= 2.02$) showing a younger group since the survey was sent to participants from 11-18 years old. Gender was coded as 1 for male and 2 for female; therefore, the sample consisted of 67% female ($M= 1.67$, $SD= 0.47$). The average years of participation in Texas 4-H was 5 years ($M= 5.28$, $SD= 2.43$) and in the food and nutrition program was almost 4 years ($M=3.9$, $SD= 2.47$). Thus, it can be inferred that these participants joined 4-H as soon as they were eligible in third grade. The results are discussed in three sections associated with each hypothesis.

4.1 Hypothesis 1: Duration of involvement in the 4-H Food and Nutrition program to be positively associated with leadership skills.

There is a statistically significant positive correlation between 4-H members' duration in the program and their leadership score ($p=.270$). Thus, the first hypothesis is supported that the longer the participants participated in the 4-H food and nutrition program, the greater leadership they reported possessing (Table 1). While this correlation is statistically significant, it is considered low in terms of effect size.

4.2 Hypothesis 2: Duration of involvement in the 4-H Food and Nutrition program to be positively associated with engagement in the core program components.

The correlational analysis used to identify if the program components and duration are associated did yield significant findings. The duration of participants' involvement in the 4-H food and nutrition program was positively associated with the participants' levels of mentor access, engagement with authentic opportunities, motivation, and mastery (*correlation*

coefficients= .31, .40, .51, .59, respectively, $p < 0.01$), with moderate to large effect sizes. Therefore, this second hypothesis was supported (Table 1). Additionally, the four program components of authentic opportunities, mentor access, mastery, and motivation did have significant correlations with each other (Table 1).

4.3 Hypothesis 3: The four core program components to positively predict leadership, after controlling for duration of program involvement.

A hierarchical multiple regression was conducted to examine whether the program components predicted participants' leadership skills. The first regression model had leadership as the dependent variable and the predicting variables were the program components of mentor access, authentic opportunities, motivation, and mastery. The model was significant that the program components together predicted leadership ($R = .367$, $Adj. R^2 = .123$, $F = 11.23$, $p < .001$), explaining 12.3% of the variances in leadership with a medium effect size. However, only authentic opportunities ($\beta = .148$, $p = .045$) and mastery ($\beta = .186$, $p = .010$) were significant predictors (Table 2).

In the second regression model, leadership was still the dependent variable and duration in the food and nutrition program was included as a control variable because one could participate in the food and nutrition program area without really being involved. When predicting leadership the model was significant at Step 1 with duration entered ($R = .270$, $Adj. R^2 = .070$, $F = 22.91$, $p < .001$). Further, the model retained significance at Step 2 when the program components of mentor access, authentic opportunities, motivation, and mastery were entered ($R = .373$, $Adj. R^2 = .124$, $R^2 \text{ Change} = .066$, $F = 5.54$, $p < .001$). However, none of the variables were significant in predicting leadership (Table 3). Thus, the third hypothesis was partially supported that although the four core program components significantly predicted leadership collectively, none of the

core program components were significant predictors by itself when program duration was included as a control variable. Only authentic opportunities and mastery were significant predictors when program duration was not included in the model.

5. DISCUSSION

Overall, developing leadership skills and abilities within youth happens over time within a program but how this process happens is still missing. While OST programs are clear outlines for practitioners to develop leadership skills (Edelman et al., 2004), specific parts of a program that foster leadership needs to be identified. This study investigated the program components of a youth development program to identify how leadership is fostered. Specifically, the 4-H food and nutrition program was focused on because of the prestige in the organization's credibility in developing young leaders (Boyd et al., 1992; Seevers & Dormody, 1994). Four core program components of mentor access, authentic opportunities, motivation, and mastery were investigated for their association with leadership based on Redmond and Dolan's (2016) youth leadership development conceptual model.

5.1 Key Findings and Connections to Previous Research

This study identified the positive relation between how long a 4-H member participated in the food and nutrition program and their leadership skills score. The first hypothesis was supported by showing a positive association between duration and leadership of participants. Therefore, the longer a participant participated in the 4-H foods and nutrition program, the more leadership abilities the member exhibited. This hypothesis is supported by previous research. Lynch et al. (2016) highlighted the positive correlation between an adolescent's active involvement in a program and the program's productive outcomes. This relates to the research about longer duration leading to more exposure of program materials to the participant (Eccles & Roeser, 2011). By being engaged in a program over time, youth will be introduced to more

information than a participant who was involved for a shorter time period. Additionally, different types of programs have different focuses and were shown by Hansen, et al., (2003) to have different positive outcomes in youth. This explains how an impactful program curriculum can affect youth who are actively participating. Also, Larson et al. (2006) reported how positive developmental experiences in a program are associated with program duration. Youth with positive experiences were engaged in a program longer than a participant who had negative experiences. A combination of duration, educational curriculum, strong program focus, and positive experiences can help youth gain valuable skills to be successful. Thus, youth actively involved in positive, curriculum-based programs over time can develop solid leadership skills and abilities to use in life. This previous literature supporting the relation between duration and leadership development also supports the study's finding of duration as a predictor of leadership.

The second hypothesis was supported by the positive correlations between the program components and program duration. Thus, a participant's duration in the program is associated with the core components relevant to leadership development. This finding parallels with previous research as the program components need time to foster the development of skills in youth. Programs that allow participants to bond with a mentor provide a positive influence and support to the individual in developing skills (Rhodes & DuBois, 2008). A high-quality relationship between the mentor and participant takes time to strengthen and truly be effective (Bearman et al., 2007). This supportive adult helps create authentic experiences for youth to comfortably practice their skills with guidance. Galdwell (2008) highlights that to successfully develop useful skills, youth need access to genuine opportunities. Over time, these skills will become developed as participants engage in more authentic experiences. Program duration

mixed with real opportunities and adult guidance gives youth a chance to exhibit motivation and mastery. Participants demonstrate motivation over time by continuing to practice learned skills (Kouzes & Posner, 1995). The longer youth are engaged in a program, the more chances they will have to inspire others with their acquired skills. Program duration also plays a role in mastering a skill set as determination is needed for development (Roberts, 2009). Engaging in mastery is a process that requires reflection of previous experiences and overcoming obstacles to individually grow (Kouzes & Posner, 1995). As supported in this study, these solid program components and the appropriate program duration provide youth the opportunity to develop skills and abilities (Edelman et al., 2004).

Additionally, there are significant associations among the program components of mentor access, authentic opportunities, motivation, and mastery. This supports the youth leadership development conceptual model (Redmond & Dolan, 2016) theorizes these components "go together" possibly due to the strong interrelationships. The bond between the program components highlights that the presence of each could be beneficial to the participant. The core program components are interlinked to give youth chances to demonstrate learned skills (Redmond & Dolan, 2016). Mentor access and authentic opportunities create safe environments that allow youth to continue to exhibit motivation and mastery of desired passions. The study emphasized the significant correlation of these four components with each other. Therefore, youth programs that focus on one of these program areas could have success with combining the components and creating a complete program for youth (Witt & Caldwell, 2018).

The study found that the program components of mentor access, authentic opportunities, motivation, and mastery are not all significant predictors of leadership in youth. However, authentic opportunities and mastery were significant in leadership development, when program

duration was not included in the model. This could tie back to previous literature on creating genuine experiences and mastering a skill set during leadership development. Galdwell (2008) emphasizes how youth need access to authentic opportunities to develop leadership skills and abilities. Participants who experience real chances to actively use their knowledge and skills will be able to strengthen their leadership abilities within a program (Kahn et al., 2009). Mastery includes participants to learn from previous experiences of practicing through reflection and persistence (Coyle, 2009). Roberts (2009) identifies individual determination as a key aspect in leadership. Authentic opportunities and mastery program components could be higher predictors of leadership than mentor access or motivation due to the association of hands-on practice. This idea is supported by Kolb's (1984) experiential learning model where knowledge is developed through learning experiences. 4-H programs are designed based on Kolb's model; therefore, practitioners should emphasize these components in youth programs to maximize developing leadership skills. Creating time for youth to be immersed in a genuine experience by practicing their skill set can allow mastery of those abilities as well. More authentic opportunities an individual has to strengthen their skills, the deeper level of mastery in leadership that person could potentially reach (Kahn et al., 2009). Hence, these two program components are supported in the prediction of leadership in food and nutrition program participants.

However, mentor access and motivation were not suggested to predict leadership development. This could be due to the involvement of others in these program components. Previous literature supports the presence of mentors and individual motivation during leadership development. Sosik and Godshalk (2000) highlight how having open access to a mentor is a crucial component for leadership development in youth. As for the motivation component, youth will also inspire others through a shared vision to succeed (Kouzes & Posner, 1995). Adult

mentors and the motivation of peers both include the presence of another human. These components rely on others to support them and to inspire individuals around them to deepen their own leadership skills. One reason these components do not predict leadership could be due to a lack of a present dyadic relationship with another person. Youth are able to engage in authentic opportunities and mastery individually so these components may be more accessible than mentor access and mastery.

The youth leadership development conceptual model by Redmond and Dolan (2016) currently does not have any empirical evidence to support the theory. These core program components are backed with literature to create a holistic approach (Redmond & Dolan, 2016). The environmental conditions of mentor access and authentic opportunities are based on Bronfenbrenner's (1979) ecological model in which youth develop. Both components emphasize the importance of opportunities for youth to practice and learn in a supportive environment. Motivation and mastery make up the commitment to action subgroup that allows youth to practice their skills and knowledge. Theoretically, this strengthens leadership within the individual to lead others (Kouzes & Posner, 1995) and master new skill sets (Coyle, 2009). The hierarchical multiple regression results that the models were statistically significant. The first model found only duration as an independent predictor of leadership. The next model controlled for duration and found that the program components and duration were not individual predictors of leadership. However, due to the model's significance, duration plus the program components do predict leadership when the variables are together. This explains the youth leadership development conceptual model's idea of needing all components to successfully develop leadership skills. The study's findings provide support to Redmond and Dolan's theory in developing leadership within youth with the interrelationships of the program components.

From these findings, practitioners should focus on program design to unlock potential skills. The longer duration the participant is engaged, the stronger development of skills the youth will demonstrate. To develop leadership, a curriculum focused on growing specific skills and abilities over the course of a longer duration would be beneficial for youth. The curriculum should be informative to participants during their time in the program. Practitioners should also design programs using all four program components with a solid curriculum and participant duration for a complete program. However, emphasizing authentic opportunities and mastery in youth programs should take priority as the predictors of leadership skills. With a foundation of skills, providing chances to use these skills through authentic opportunities with mentors present can lead to youth actively demonstrating motivation and mastery. This will maximize the skill development within youth when all components are combined.

5.2 Limitations

One limitation of this study is the response rate due to self selection within Texas 4-H members to submit the questionnaire. The number of youth enrolled in Texas 4-H for the 2019-2020 school year was not representative to the sample size. 18,269 emails were successfully delivered to parents of the participants and only 29.2% of the emails were opened. However, after data cleaning, n=424 for the total number of respondents which is 2.3% of the population. After filtering out the 4-H members who were not in the food and nutrition program, n=290 (68.4% of the sample). 4-H members who successfully answered all the questions showed motivation to participate. This shows a possibility of having stronger leadership skills than the general 4-H population. Thus, an assumption of higher leadership scores influenced by program duration was not supported.

Another limitation is the newly designed constructs for this study to evaluate leadership skills in youth. These scales were uniquely fabricated using the theoretical model and the common activities completed by participants during the program and this study failed to fully support this model through the 4-H food and nutrition program. These scales are based on the 4-H food and nutrition program which does not specifically state leadership as a designated project outcome. The food and nutrition program strives for the development of food and kitchen safety, nutrition knowledge, food purchasing, and related careers (Texas 4-H, 2021). Therefore, the program design is around food-related skills and abilities. While leadership skills are not one of the main focuses of this program, the 4-H organization values leadership as an overall outcome. Further development of these innovative constructs is encouraged to identify leadership skills being developed in the food and nutrition knowledge-focused program.

5.3 Recommendations for Future Research

Due to the low response rate from Texas 4-H members, future research should expand the outreach to more 4-H members. This could include using multiple years of enrollment or having more incentives for a larger sample size. Possibly sending out more studies for 4-H members to participate in could help increase the comfort level of parents and youth in answering questionnaires in the future.

Additionally, future research could replicate this study with a control group of youth not involved in 4-H or enrolled in a different OST program. This could highlight if 4-H is unique in developing leadership skills due to the specific program design. Identifying the solid program components in a different setting could set the youth organization apart or help other programs realize how they are serving youth in their program.

Lastly, future research should also discuss conducting a longitudinal study over multiple years to follow leadership development within youth. This could be done by starting with younger 4-H members and collecting data on their leadership skills through high school or after. The most important points in fostering leadership development within youth could be identified from analyzing multiple years. Finding the key activities or times when youth are most susceptible to practicing leadership skills within these four program components could be extremely helpful to practitioners. Since duration is an important factor in leadership development, a longitudinal study may be beneficial for researchers.

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Figure 1. Youth Leadership Development Conceptual Model

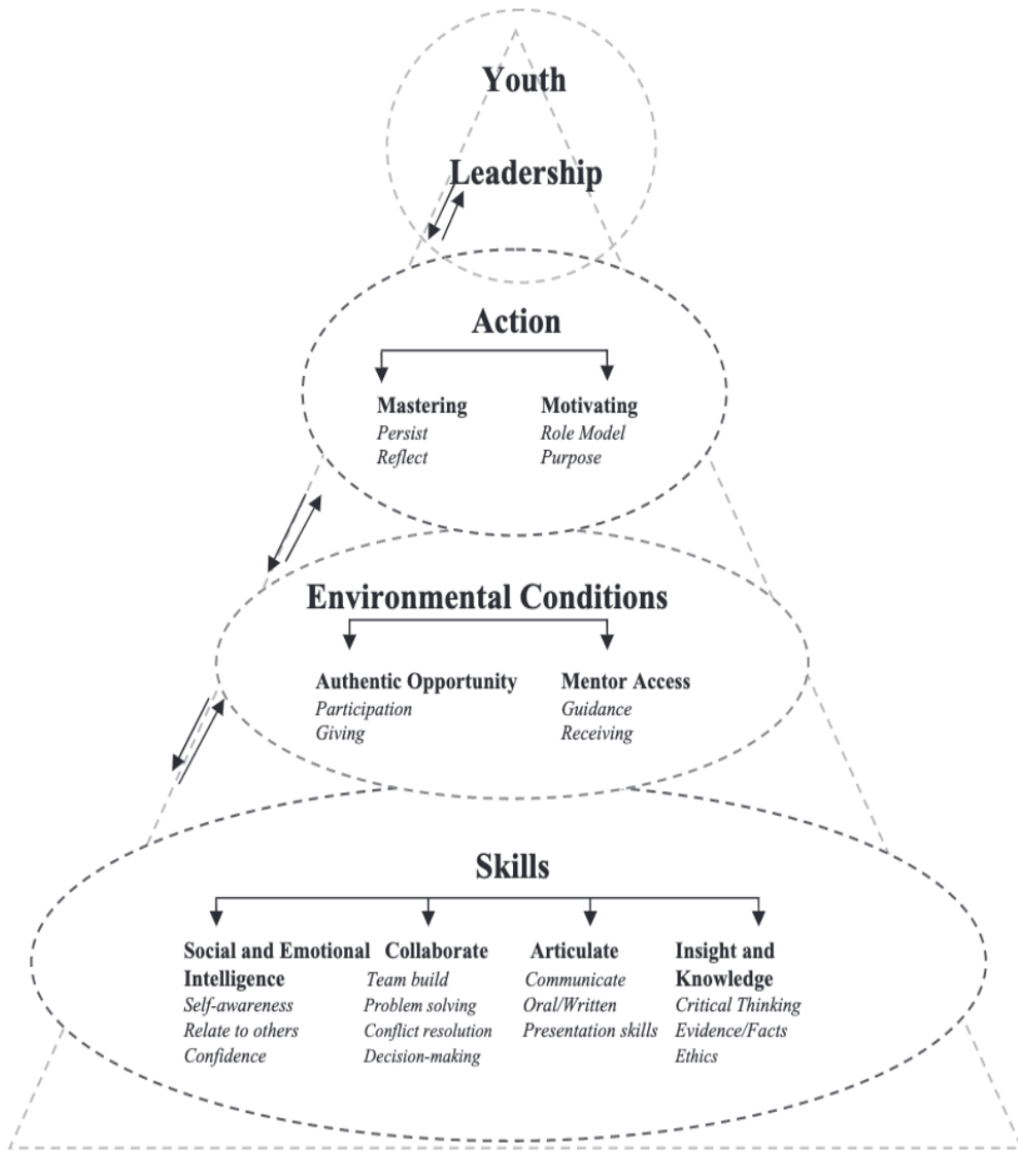
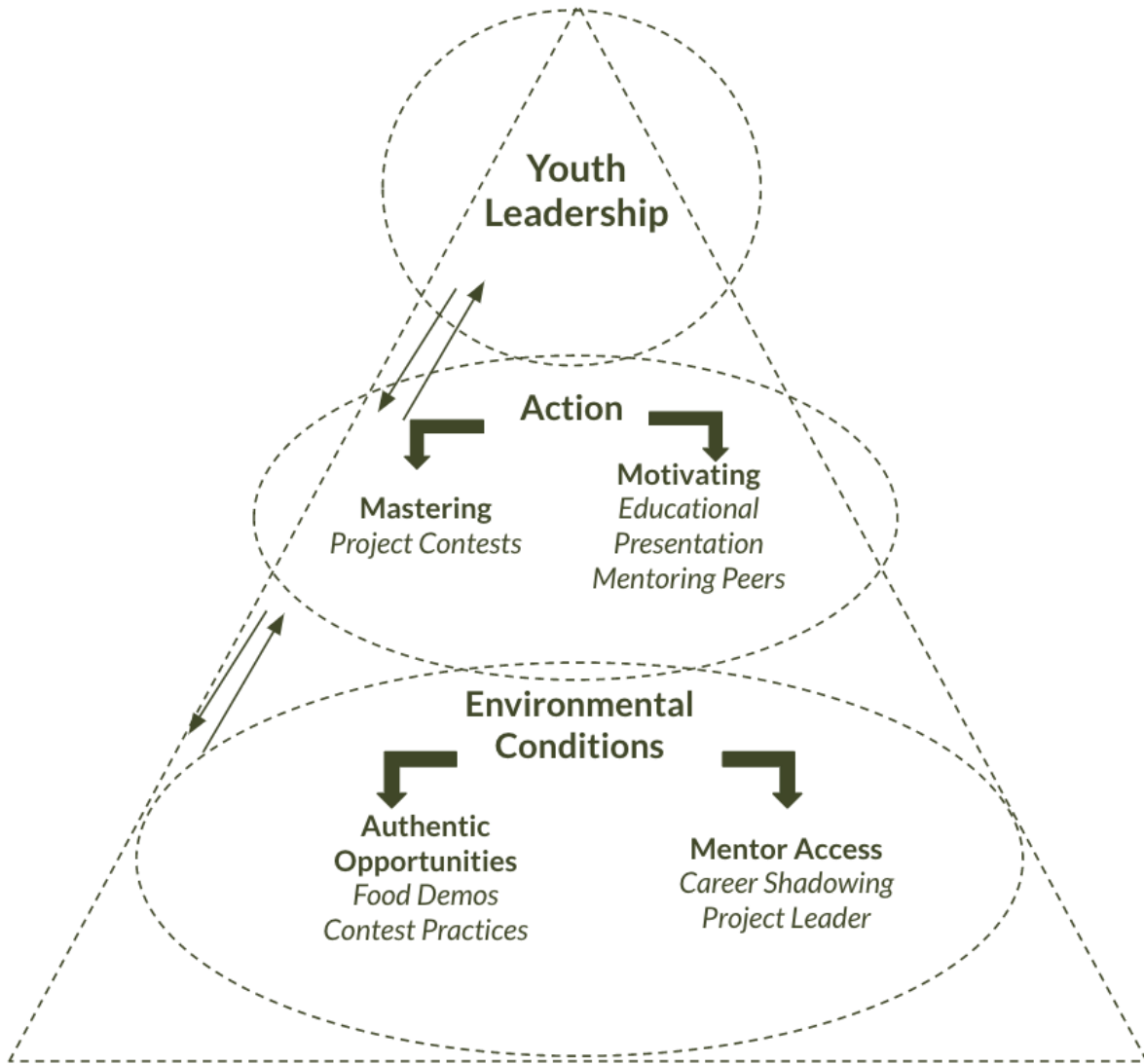


Figure 2. Conceptual Model Applied in 4-H Food and Nutrition Program



APPENDIX A

Table 1
Descriptive Statistics and Intercorrelations of Variables

	1	2	3	4	5	6	7	8	9
1. Age	1	-	-	-	-	-	-	-	-
2. Gender	-.041	1	-	-	-	-	-	-	-
3. Years in 4-H	.495**	-.082	1	-	-	-	-	-	-
4. Duration in F&N	.450**	-.027	.683**	1	-	-	-	-	-
5. Mentor Access	.168**	.010	.302**	.309**	1	-	-	-	-
6. Authentic Opportunities	.198**	.010	.304**	.399**	.534**	1	-	-	-
7. Motivation	.316**	-.114*	.440**	.509**	.526**	.553**	1	-	-
8. Mastery	.310**	-.071	.442**	.589**	.373**	.555**	.605**	1	-
9. Leadership	.092	-.001	.248**	.270**	.246**	.312**	.267**	.315**	1
<i>N</i>	290	288	290	290	288	288	288	288	288
<i>Mean</i>	14.04	1.67	5.28	3.90	.46	1.77	1.19	.768	6.13
<i>SD</i>	2.024	0.472	2.428	2.472	.714	.9487	1.185	.5598	.9498

**Significant at the 0.01 level.

*Significant at the 0.05 level.

Gender code: Male=1, Female=2

Table 2
Regression Analysis Predicting Leadership with Program Components
(N=288)

	<i>b</i>	<i>SE</i>	<i>Standardized</i> <i>B</i>	<i>p</i>
Mentor Access	.115	.091	.087	.204
Authentic Opportunities	.142	.071	.148	.045*
Motivation	.027	.061	.034	.655
Mastery	.315	.122	.186	.010*

Dependent Variable: Leadership

*Significant at the 0.05 level.

Table 3
Regression Analysis Predicting Leadership with Duration and Program Components
(N=288)

Model		<i>b</i>	<i>SE</i>	<i>Standardized B</i>	<i>p</i>
1	Duration	.105	.022	.270	<.001***
2	Duration	.034	.028	.088	.219
	Mentor Access	.114	.091	.086	.208
	Authentic Opportunities	.138	.071	.143	.053
	Motivation	.011	.062	.014	.859
	Mastery	.250	.133	.147	.061

Dependent Variable: Leadership
***Significant at the 0.001 level.

APPENDIX B

Supplemental Survey

Q1 Were you a Texas 4-H member during 2019-2020? (This survey should be completed by youth only.)

Yes (1)

No (2)

Skip To: End of Survey If Q1 = No



Q2 What is your first name?



Q3 What is your last name?



Q4 What is your email address?

Q5 Which county do you live in?

(1)

▼ Anderson (1) ... Zavala ~ 12 ~ South (762)



Q6 What is your five-digit zip code?

Q7 What is your current age?

11 12 13 14 15 16 17 18 19 20

()	
----	--

Q8 What is your gender?

(1)

▼ Male (1) ... I prefer not to answer (3)

Q9 Select the category which best describes your race.

(1)

▼ White (1) ... Multi-racial ~ ~ (21)

Q10 How many years have you been a member of **Texas 4-H**? (Excluding Clover Kids years)

0 1 2 4 5 6 7 8 10 11 12

()	
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Q12 Are you currently or have you ever participated in the **Texas 4-H Foods and Nutrition Project**?

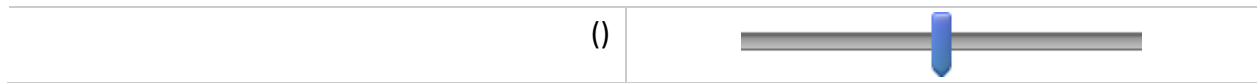
Yes (1)

No (2)

Skip To: Q20 If Q12 = No

Q14 How many years have you participated in the **Texas 4-H Foods and Nutrition Project**?
(Excluding Clover Kids participation)

0 1 2 4 5 6 7 8 10 11 12



Q15 Who led your Texas 4-H Foods and Nutrition Project? (Select all that apply)

County Extension Agent (1)

Adult Volunteer (2)

My Parent/Guardian (3)

Self-directed (4)

Teen Volunteer (5)

Other (6) _____

Q16 During your **Texas 4-H Foods and Nutrition Project**, please indicate the foods and nutrition activities you have participated in.

	Project Group Level (1)	County Level (2)	District Level (3)	State Level (4)
Project meetings (1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project workshops (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project related tours (3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project related field trips (4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interview with professional (5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Virtual learning experiences (6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Food demonstrations (7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cooking schools (8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Food Show and Food Challenge practices (9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Career shadowing (10)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Presentations by food and nutrition professionals (11)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q17 During your Texas 4-H Foods and Nutrition Project, please indicate any leadership roles you have participated in.

	Project Group Level Leadership (1)	County Level Leadership (2)	District Level Leadership (3)	State Level Leadership (4)
Educational presentations (1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Food demonstrations (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leading workshops (3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conducting tours (4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Presenting to stakeholders (5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project committee (6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coordinating food and nutrition related community service activity (7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mentoring other 4-H members in project (8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assisting County Extension Agent or other AgriLife faculty (9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assisting a volunteer (10)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

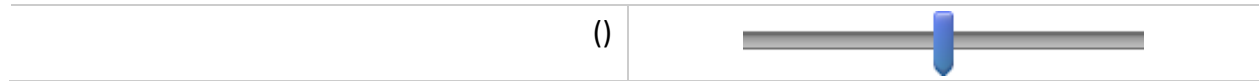
Q18 Please enter the number of years for any of the following foods and nutrition contests you participated in and at what level. If you did not participate in one of the categories or levels, leave blank.

	County: indicate number of years (1)	District: indicate number of years (2)	State: indicate number of years (3)
Food Show (1)			
Food Challenge (2)			
FCH/Food & Nutrition Quiz Bowl (3)			
Educational Presentation (4)			
Record Book (5)			

Q59 4-H has helped me feel more comfortable speaking with others.

Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

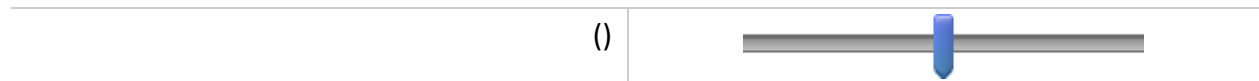
1 2 3 4 5 6 7



Q60 4-H has helped me become more confident in my abilities as a leader.

Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

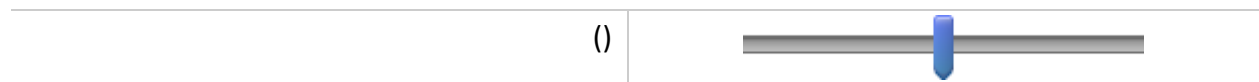
1 2 3 4 5 6 7



Q61 4-H has helped more become more comfortable working in a team.

Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

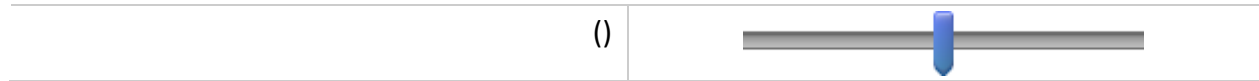
1 2 3 4 5 6 7



Q62 4-H has helped improve my ability and willingness to listen to others.

Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

1 2 3 4 5 6 7



Q63 4-H has helped me become more active in my community.

Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

1 2 3 4 5 6 7



Q64 4-H has helped me listen to others when working in a group.

Strongly Disagree Somewhat Disagree Neutral Somewhat Agree Strongly Agree

1 2 3 4 5 6 7

