

A Reason to Reason: Motivations Influencing Youth Participation in 4-H State Horse Judging

Jamie Brianne Putnam
University of Florida
jbbird@ufl.edu

Alexa J. Lamm
University of Florida
alamm@ufl.edu

Brittani G. Kirkland
University of Florida
bgkirkland@ufl.edu

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Assessing the motivational factors driving youth to become engaged and devoted to a state 4-H horse judging program will assist in allowing extension professionals to better facilitate programs geared towards promoting higher levels of achievement, life and career readiness, and professional success. Using the Self-Determination Theory (SDT) as the theoretical framework, this study used a questionnaire administered to a purposive sample of the 2016 Colorado, Florida, and Texas state 4-H horse judging contestants facilitated by Colorado State University, the University of Florida, and Texas A&M University ($n = 71$). Intrinsic motivation was found to be the highest motivator followed by extrinsic motivation and perceived confidence. The top four intrinsic items that most strongly influenced respondents were wanting to learn something new, liking horses, being interested in learning about horses, and desiring to gain more confidence speaking in public. The top three extrinsic items were taking time to study with their team, doing well for their team, and it helping them become more competitive for scholarships in general. Respondents were most confident about choosing the most suitable horse for a specific discipline or purpose, answering general questions about horses, and choosing the best quality horse based on the form and function of the animal. Incorporation of these motivational factors into horse judging program coaching techniques could result in greater engagement and devotion of senior 4-H horse judging participants. Likewise, utilizing these specific motivation factors as foundational elements in horse judging program development can allow extension professionals to reach a larger youth audience, enabling them to promote positive lifestyle development and career preparedness through horse judging programs.

Introduction

Youth programs associated with agriculture have been used by extension professionals to engage and educate youth through agricultural events for decades (Lancaster, Knobloch, Jones, & Brady, 2013). Horse judging is an example of one of these events, and is recognized at the collegiate level for potential scholarship opportunities (Equestions Horse Judging Answers, 2015). Individuals participating in 4-H horse judging contests are required to rank a set of four horses according to the standards set by the breed organization the horse belongs to for the discipline (or class) being exhibited. These classes include circumstances where the conformation of the horse is judged, as well as those where the athletic ability of the horse is judged (University of Florida, Department of Animal Science, 2016a). The purpose of horse judging is to give youth the opportunity to participate and actively learn about the equine industry while developing personal, professional, and social skills (Anderson & Karr-Lilenthal, 2011; Nash & Scant, 2005; Ward, 1996). Life skills such as leadership, sportsmanship, and handling pressure are also skills they may obtain (Anderson & Karr-Lilenthal, 2011). Additionally, research shows 4-H animal science programs have positive influences on decision-making, positive self-esteem, responsibility, and relating to others (Rusk, Martin, Talbert, Balschweid, 2002; Ward, 1996). Horse judging programs also promote the pursuit of careers in an agricultural-related industry by providing participants with hands on experiences (Nash & Scant, 2005).

Many studies have investigated the benefits and motivational factors associated with

youth events such as participation on judging teams. In a study by Nash and Scant (2005), the majority of animal judging alumni agreed their youth judging experiences played influential roles in their personal success. Lancaster, Knobloch, Jones, and Brady (2013) focused on the intrinsic factors associated with motivation and the resources team members utilized to prepare for agricultural events. Assessing the motivational factors driving youth to become engaged and devoted to a 4-H horse judging program will assist in allowing extension professionals to better facilitate opportunities and programs geared towards promoting higher levels of achievement, life and career readiness, and professional success (Anderson & Karr-Lilienthal, 2011; Nash & Scant, 2005; Ward, 1996). Additionally, capitalizing on specific motivation factors relating to best coaching practices, social involvement, intrinsic desires, and award/recognition opportunities will assist in facilitating the 4-H purpose of promoting positive lifestyle development (Anderson & Karr-Lilienthal, 2011; Nash & Scant, 2005; Ward, 1996).

Literature Review

Self-Determination Theory (SDT) was used as the theoretical foundation for the study (Ryan & Deci, 2000a) and motivation served as the central theme. SDT has been correlated with types of motivation (e.g. amotivation, extrinsic, intrinsic) with specific outcomes related to performance, persistence, and well-being (Deci & Ryan, 2008; Ryan & Deci, 2000a). Deci and Ryan (1985) designed SDT to organize cognitive, affective, and behavioral variables using constructs in motivation. The three basic needs in SDT include: competence, autonomy, and relatedness (Ryan & Deci, 2000a). The satisfaction of these needs is a determining factor of the type of motivation influencing an individual (Ryan & Deci, 2000b).

Deci and Ryan (1985) referred to competence as “the accumulated result of one’s interactions with the environment, of one’s exploration, learning, and adaptation” (p. 27). Perceived competence, or self-efficacy, is often mentioned in relation to extrinsic motivation whereas competence refers to intrinsic motivation (Ryan & Deci, 2000b). Autonomy is described by Deci and Ryan (1985) as the level to which “people use available information to make choices and to regulate themselves in pursuit of self-selected goals” (p. 154), referring to the propensity of an individual to act as an initiator of his or her own behavior (Patrick et al., 2007). In SDT, motivations and behaviors described as self-determined are associated with more autonomous socio-environments (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004) and have been correlated with improved individual learning, performance, and persistence (Deci & Ryan, 2000b; Vansteenkiste et al., 2004). The third basic need in SDT, relatedness, is defined as the need to feel both connected with and understood by others (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). In other words, self-determined behavior is enhanced in individuals feeling a sense of belonging in correspondence to a group (Ryan & Deci, 2000b). In terms of SDT, contexts facilitating relatedness between an individual and another individual or group are positively correlated with self-determined motivation (Ryan & Deci, 2000a). Contexts combining competence, autonomy, and relatedness are illustrated in the literature to satisfy an individual’s innate basic need to demonstrate self-determined behavior (Deci & Ryan, 2008a; Deci & Ryan, 2008b; Ntoumanis, 2001; Ryan & Deci, 2000a; Ryan & Deci, 2000b; Vansteenkiste et al., 2004).

Motivation is used to describe the “energization and the direction of behavior” (Deci & Ryan, 1985, p. 7). Intrinsic motivation is defined as “the doing of an activity for its inherent satisfactions rather than for some separable consequence” (Ryan & Deci, 2000b, p. 56).

Individuals who are intrinsically motivated participate in self-determined behaviors due to personal interest in the activity itself based on the activity's alignment with personal values and beliefs (Deci & Ryan, 2008b; Ntoumanis, 2001). Intrinsically motivated behavior requires the fulfillment of all three basic needs: competence, autonomy, and relatedness (Brière, Vallerand, Blais, & Pelletier, 1995). Outcomes associated with individuals described as intrinsically motivated have been described through research to be persistent, have greater psychological health and well-being, show more self-regulatory behavior, illustrate a natural inclination towards mastery, assimilate more readily, and have a more spontaneous interest in exploration (Deci & Ryan, 1985; Patrick et al., 2007; Ryan & Deci, 2000a; Ryan & Deci, 2000b; Vansteenkiste et al., 2004).

Ryan and Deci (2000b) defined extrinsic motivation as an activity "done in order to attain some separable outcome" (p. 60). Extrinsic motivation is illustrated by an individual engaging in a behavior as a means to an end and not for self-determined reasoning (Ntoumanis, 2001) such as obtaining a tangible reward or avoidance of punishment (Deci & Ryan, 2008a). The main difference between intrinsic and extrinsic motivation is the level of autonomy associated within the context of the environment (Deci & Ryan, 1985; Ryan & Deci, 2000a; Vansteenkiste et al., 2004). Outcomes associated with the introduction of autonomy in an extrinsically motivated context have been supported through research to show improved performance levels, greater persistence, and more depth to learning as compared to more controlled environments (Ryan & Deci, 2000a; Ryan & Deci, 2000b).

While perceived confidence is not a motivation factor, it is a direct result of both intrinsic and extrinsic motivation (Ryan & Deci, 2000). Research in SDT has supported a positive relationship between confidence levels and perceived competence (Patrick et al., 2007). Competence directly correlates with SDT as a basic and innate psychological need (Deci & Ryan, 1985) and is one of the three basic needs associated with intrinsic motivation (Ryan & Deci, 2000b). Research in Positive Youth Development theory has recognized that high competency and confidence are supporting elements in a positive youth lifestyle (Lerner et al., 2005; Zarrett & Lerner, 2008).

Purpose and Objectives

The purpose of this research was to identify the motivational factors that influenced youth to participate in a 4-H horse judging program. The target population was youth ages 14 - 18 (or senior level competitors) that participated in a state 4-H horse judging contest. The sample was a census of 4-H senior level competitors at the Colorado, Florida, and Texas state horse judging contests. The objectives were to:

1. Determine the demographic characteristics of senior 4-H state horse judging participants.
2. Identify motivation factors that influenced youth to participate in a senior 4-H horse judging program.
3. Identify if a relationship existed between intrinsic motivation, extrinsic motivation, and perceived confidence factors in youth at state 4-H horse judging contest.

Methods

The current study was descriptive and correlational exploring motivations of senior level respondents at state 4-H horse judging contests. The study used a questionnaire administered to a purposive sample of the 2016 Colorado, Florida, and Texas state 4-H horse judging contestants facilitated by Colorado State University, the University of Florida, and Texas A&M University. Respondents at the Colorado contest were invited based on the individual team selection process that varied between each county (Colorado State University Extension, 2016). Teams at the Florida contest were invited by either placing at a qualifying contest or being selected by their county as one of two teams permitted to represent each county (University of Florida, Department of Animal Science, 2016c). Teams at the Texas contest were invited by placing in the top three at the district level of competition (Texas A&M Agrilife Extension, 2016). The questionnaire was administered to a total of 132 respondents at the Colorado, Florida, and Texas state 4-H horse judging contests, and a total of 71 individuals received parental consent and completed the questionnaire for an overall response rate of 53.8%. According to the literature, this response rate would be considered adequate for a youth focused study (Nulty, 2008).

The researcher adapted a questionnaire developed by Lancaster et al. (2013) to measure motivation type through the lens of SDT (Deci & Ryan, 1985). Florida contestants completed the questionnaire using computerized tablets, whereas Colorado and Texas respondents completed the questionnaire on paper. The instrument was distributed in person by the researcher. The questionnaire was reviewed and approved for age appropriate content and validity by a panel of experts. Pilot testing occurred to increase validity using a sample of youth and collegiate horse judging team alumni from the University of Florida, with a total of 19 respondents. The survey instrument was approved by the University of Florida's Institutional Review Board.

The demographic information in this study was presented in a check all that apply or multiple-choice question style. Data from the demographic questions was examined using descriptive statistics. The scale items referring to the motivation constructs were sorted into three groups based on characteristics of motivation referenced in the literature review: intrinsic motivation factors ($n = 7$), extrinsic motivation factors ($n = 14$), and perceived confidence factors ($n = 8$) (Deci & Ryan, 1985; Ryan & Deci, 2000a, 2000b). An index for each motivation factor was measured using a five-point Likert-type scale adapted from a preexisting questionnaire and the pilot study data (Lancaster et al., 2013; Perloff, 2009). The index for the scale was labeled 1 = *strongly disagree*, 2 = *disagree*, 3 = *neither agree nor disagree*, 4 = *agree*, and 5 = *strongly agree*. Since perceived confidence has been attributed to both intrinsic and extrinsic motivation within the literature, this variable was left as its own construct to avoid confounding the intrinsic and extrinsic motivation variables (Ary et al., 2010; Deci & Ryan, 1985; Ryan & Deci, 2000b) and the index for the scale was labeled 1 = *no confidence*, 2 = *slightly confident*, 3 = *confident*, 4 = *very confident*, 5 = *extremely confident*. Frequency counts were calculated for responses to each Likert-type scale item and placed into one of three groups categorized by the real limits of the scale. The real limits of the intrinsic and extrinsic scale were 1.00 – 2.49 = *strongly disagree/disagree*, 2.50 – 3.49 = *neither agree nor disagree*, and 3.50 – 5.00 = *agree/strongly agree*. The real limits of the personal confidence scale were 1.00 - 2.49 = *no confidence/slightly confident*, 2.50 – 3.49 = *confident*, 3.50 – 5.00 = *very confident/extremely confident*. The means and standard deviations for each motivation factor group were calculated based on the real limits of the motivation factor scales using SPSS. Percentages were calculated using the number of responses for each scale category group divided by the total sample number provide a comparison for each motivation factor index. The reliability of the instrument was calculated

during pilot testing using Cronbach's alpha using SPSS. Constructs for motivation factor were evaluated to determine the reliability of the instrument. According to Ary et al. (2010), reliability for research purposes should have a Cronbach's alpha score of at least .70 or higher. Pilot test data revealed constructs to be reliable with a Cronbach's alpha value of .809 for intrinsic motivation, .838 for extrinsic motivation and .947 for perceived confidence.

Objective three determined if a relationship existed between any of the motivation factors. A Pearson's correlation (r) was run on the values to assess the strength of relationships between the variables. To determine the strength of the relationship, the relationships were ranked from negligible to perfect. A relationship with a negative or positive correlation coefficient of .01 to .09 was considered negligible, .10 to .29 was considered low, .30 to .49 was considered moderate, .50 to .69 was considered substantial, .70 to .99 was very high, and 1.0 was considered a perfect relationship (Miller, 1994).

Results

Demographics

The majority of respondents in the study were white (93%), female (81.6%), in ninth and tenth grade (57.3%) and were between the ages of 14 to 16 (76.5%) (Table 1). Only 7.4% of the sample indicated they were Hispanic/Latino(a)/Chicano(a).

Table 1
Demographic characteristics

	<i>n</i>	%
Sex		
Male	13	18.6
Female	57	81.4
Grade Level		
8th or below	1	1.5
9th	23	33.8
10th	16	23.5
11th	15	22.1
12th	13	19.1
Age		
13 or under	1	1.5
14	17	25
15	21	30.9
16	14	20.6
17	13	19.1
18	2	2.9
Hispanic/Latino(a)/Chicano(a)	5	7.4
Race		
American Indian or Alaskan Native	2	2.8
Black or African American	0	0.0
Asian or Pacific Islander	3	4.2
White	66	93.0

Other	0	0.0
State		
Colorado	31	43.7
Florida	9	12.6
Texas	31	43.7

Describe Motivational Factors

The intrinsic motivation item frequencies are listed in Table 2. The top four intrinsically inclined items that most strongly influenced respondents in this study to participate on a 4-H horse judging team were wanting to learn something new, liking horses, being interested in learning about horses, and desiring to gain more confidence speaking in public. The overall mean intrinsic motivation score was ($M = 4.51$, $SD = .43$) indicating respondents agreed/strongly agreed with the intrinsic motivation items.

Table 2
Intrinsic motivations

Item	Strongly Disagree/Disagree %	Neither Agree or Disagree %	Agree/Strongly Agree %
I want to learn something new.	0	1.4	99.6
I like to see new places.	2.8	15.5	81.7
I like horses.	0	2.8	97.2
I am interested in learning about horses	0	2.8	97.2
I see horses being a part of my life in the future.	2.8	9.9	87.3
I want to gain more confidence speaking in public.	4.2	4.2	91.6
I was willing to take time to study alone.	5.6	24.0	70.4

The extrinsic motivation item frequencies are listed in Table 3. The top three extrinsically inclined items that most strongly influenced respondents in this study to participate on a 4-H horse judging team were taking time to study with their team, doing well for their team, and it helping them become more competitive for scholarships in general. The overall mean extrinsic motivation score was ($M = 4.16$, $SD = .73$) indicating respondents agreed/strongly agreed with the extrinsic motivation items.

Table 3
Extrinsic motivations

Item	Strongly Disagree/Disagree %	Neither Agree or Disagree %	Agree/Strongly Agree %
My coach encouraged me to be on the team.	9.8	21.2	69.0
My friends were participating.	24.0	23.9	52.1

I have previous work experience with horses, and thought that I would do well.	2.8	8.5	88.7
My parents/guardians wanted me to participate.	8.4	23.9	67.7
I want to be recognized for my horse judging ability.	4.2	24.0	71.8
I want to win awards.	9.9	19.6	70.5
I was willing to take time to study with my team.	0	7.0	93.0
I wanted to do well for my team.	1.4	5.6	93.0
I wanted to do well for my 4-H club.	4.1	9.9	86.0
It will help me be more competitive for scholarships in general.	2.8	4.2	93.0
I show horses, which led to an interest in judging.	18.3	5.6	76.1
It will help me get into college.	2.8	14.1	83.1
It will help me be more competitive for collegiate judging scholarships.	4.2	18.3	77.5
It will help me be more competitive for scholarships in general.	2.8	4.2	93.0

The perceived confidence item frequencies are listed in Table 4. The three perceived confidence items that respondents in this study identified to be the most confident in completing were choosing the most suitable horse for a specific discipline or purpose, answering general questions about horses, and choosing the best quality horse based on the form and function of the animal. The overall mean perceived confidence score was ($M = 4.01$, $SD = .55$) very confident/strongly confident with the perceived confidence items.

Table 4
Perceived confidence item frequencies

Item	No Confidence/Slightly Confident %	Confident %	Very Confident/Extremely Confident %
Answer general questions about horses.	5.7	12.9	80.4
Answer questions about horse anatomy/characteristics.	15.7	25.7	58.6
Answer questions about equine facility management.	25.7	20.0	54.3
Answer questions about feeding nutrition.	20.0	27.1	52.9
Identify breeds of horses.	10.0	14.3	75.7

Identify differences among horses in comparison.	1.4	20.0	78.6
Choose the most suitable horse for a specific discipline or purpose.	4.2	12.9	82.9
Choose the best quality horse based on the form and function of the animal.	2.9	17.1	80.0

Relationship between Motivational Factors

The strongest relationship among variables was classified as very substantial in strength and were visible between the intrinsic and extrinsic index ($r = .69$). Other notable relationships were classified as moderate and were visible between the perceived confidence index variable and extrinsic index score ($r = .31$). All of the correlation coefficients previously discussed were considered significant at the 0.01 level (Table 5).

Table 5
Relationships between motivational factors

	Intrinsic index	Extrinsic index	Perceived confidence index
Intrinsic index	1.00	.69*	.12
Extrinsic index	.69*	1.00	.31
Perceived confidence index	.12	.31*	1.00

Note: * $p < 0.01$.

Conclusions and Discussion

The demographics revealed underrepresented characteristics in regards to race, with American Indian or Alaskan Native and Asian or Pacific Islander having the lowest representation. In terms of ethnicity, there was an underrepresentation of Hispanic/Latino(a)/Chicano(a). Also, an underrepresentation of males was revealed. One possible connection to this finding pertains to a national study which sought to identify and describe the demographic characteristics of the average 4-H volunteers, state specialists, and agents in 4-H programs (Culp, McKee, & Nestor, 2005). The results from this study indicated the average 4-H volunteer, state specialist, or agent in 4-H programming to be white, females in their 40's who work full-time jobs (Culp et al., 2005). If this trend is still currently occurring nationwide, the lack of diversity in leadership in the 4-H organization could be a factor in the absence of the representation of minority groups. In this circumstance, it is important to note that the data from the sample regarding demographic information should not be generalized to the target population of all senior level 4-H state horse judging participants nor all senior level 4-H horse judging participants in any of the states represented.

Overall, the highest average motivation factor frequency was the intrinsic motivation. Most notably, the scale item with the lowest positive response in terms of frequency counts was the idea of studying alone. This lower level of agreement could have been attributed to the

framing of the question compared to the other intrinsic motivation item frequencies. The most positively accepted was “I want to learn something new.” This response was supported by the literature describing intrinsic motivation and an internal locus of causality (Ryan & Deci, 2000b). Individuals showing an internal locus of causality are likely to exhibit satisfaction and personal enjoyment in what they do (Ryan & Deci, 2000b). This assumption is complimented by the next two highest scale items: “I like horses” and “I am interested in learning more about horses.” The connection between horses and an internal locus of causality further increases the validity of the construct in the context of this study (Deci & Ryan, 2008; Ryan & Deci, 2000b).

In regards to the extrinsic motivation frequency values, the top three frequencies could be divided into team member influence and desire for scholarship. There was a difference in the competitiveness for general scholarships responses when compared to collegiate judging scholarships. This trend could be attributed to the tendency for individuals who are motivated by extrinsic factors to experience burnout more rapidly than those motivated by intrinsic factors (Deci & Ryan, 2008; Ryan & Deci, 2000b). In addition, the team-oriented tendency which showed some of the highest frequencies of agreement was starkly contrasted by the high level of frequencies in the disagreement category for the statement “My friends were participating.” This reduced desire to participate based on friends participating could be based on the idea that their friends are not interested in participating, therefore the respondent gave an answer based of an objective scenario rather than his/her preference of being around friends.

In reference to the perceived confidence frequency values, the top three categories were “choose the most suitable horse for a specific discipline or purpose,” “answer general questions about horses,” and “choose the best quality horse based on the form and function of the animal”. All of these items are directly linked with the expectations associated with horse judging (Colorado State University Extension, 2016; Texas A&M Agrilife Extension, 2016; University of Florida, Department of Animal Science, 2016b). The lowered average frequency exhibited by respondents for the perceived confidence construct could have been related to the two questions in the construct not as directly related to horse judging which had the lowest overall frequency for the *very confident/extremely confident* category: “answer questions about feeding nutrition” and “answer questions about equine facility management”. Since these two scale items might have been viewed as out of context based on the central idea of the current event the respondents were engaging in, the lower percentages of overall frequencies in the *very confident/extremely confident* category could have been a residual effect.

Objective three determined if a relationship existed between any of the motivation factors by using a multiple linear regression analysis. A very substantial correlation was found between intrinsic motivation and extrinsic motivation. This finding alludes to the positive influence intrinsic motivation has on extrinsic motivation. This suggests that those who are intrinsically motivated are more likely to have extrinsic motivation or that motivation is not exclusive. Another relationship was identified, providing a relationship between perceived confidence and extrinsic motivation. This relationship was classified as moderate and suggests that those with greater personal confidence are motivated by extrinsic factors.

Limitations to this study included sample sizes when comparing to the target population, transferability of the reliability of the constructs from the pilot study date to the questionnaire administered to the youth respondents, and the time in which the questionnaire was administered

at the contest could have affected the results of the study. Since the questionnaire was administered after the respondent completed his/her last reasons set, the individual could have experienced mental fatigue or resentment from the intensity of the contest which could have resulted in an inaccurate self-report of motivation factor influencing the individual to participate at a state 4-H horse judging contest.

Implications

One of the practical implications to take away from the findings was the importance of extension professionals to advertise positive youth development programs like horse judging to a more diverse population. The professional and life skill enhancement that can be developed through involvement in a horse judging program and programs similar to it have been repeatedly cited in the literature (Anderson et al., 2014; Nash & Scant, 2005). Careful note should be made to the trend of white females as the majority of the sample in two key states which are among the top competitors in the collegiate horse judging industry (Colorado State University, College of Agricultural Sciences: Animal Sciences, 2016; West Texas A&M University). The current study could offer extension professionals insight into the recruitment of a more diverse generation of horse judging participants through data pertaining to which minorities are present.

The current study has implications for coaches. By having an in depth understanding as to what types of motivation factors might be present within each individual member of a team, the coach could more effectively tailor his/her teaching methods to preventing burnout (Deci & Ryan, 2008; Ryan & Deci, 2000a). Not only is it important to appeal to individual motivation factors of a team, but it is also important for the coach to understand how these motivation factors amongst different individuals on the team might build upon one another. The coach could consider coming up with exercises that promote relatedness to prevent burnout (Ryan & Deci, 2000b).

Recommendations

Based on the homogenous nature of the sample in the current study, more research should be conducted on how gender might affect motivation type. Best coaching and team management practices could then be developed based on the themes identified in gender among participants to help prevent individual burnout in competitive 4-H activities. More research on gender and motivation could also investigate differences in perceptions of how scale items are framed.

This study found correlations between intrinsic and extrinsic motivation factors. Due to the relationship found, it is recommended that these factors not be viewed exclusively when choosing team members. Pairing a team based on intrinsic motivation alone could result in potential burnout due to lack of extrinsic motivation (Ryan & Deci, 2000b). In contrast, teams paired strictly based on extrinsic motivation, could lack intrinsic motivation. Personal confidence was also found to have a relationship with extrinsic motivation. This finding suggests that personal confidence can be increased through extrinsic factors, such as team and coach relationships and potential for future advancement. It is encouraged that coaches be cognizant of these extrinsic effects on personal confidence and utilize this motivation to build personal confidence levels in team members.

In order to improve the generalizability of the current study this research should be replicated at state contests around the country. Following this, a meta-analysis of the results from all the states could be assessed and compared. In a similar fashion, this research could be conducted at the national and county level. In addition, a comparative study between 4-H and FFA teams could assess motivation factors present in individuals who seek solely out of school activities versus those who have it already built into their school curriculum.

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