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Influence of 4-H Horse Project Involvement on **Development of Life Skills**

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Abstract: Four-H horse project members who competed in non-riding horse contests were surveyed to evaluate the influence of their horse project participation on life-skill development. Contests in which youth competed included Horse Bowl, Demonstrations, Public Speaking, and Art. Youth indicated a positive influence on both life-skill development and horse knowledge. Eighty-six percent indicated they strongly to moderately agreed their life skills were enhanced. Youth participating in these types of projects utilized the horse as a tool to increase their science-based knowledge combined with life-skill enhancement to make them more productive young people.

Introduction

Life-skill development through hands-on learning is a cornerstone of 4-H youth programs. 4-H projects embrace youth life-skill development by providing means to encourage young people to become responsible, productive citizens (Ward, 1996). Participation in the 4-H horse project and non-riding competitive horse-related contests are tools for youth to develop life skills such as leadership, sportsmanship, and handling pressure while simultaneously enhancing their horse knowledge. For youth to successfully compete in these contests, there is much preparation, organization, dedication, and teamwork involved. Ward (1996) previously reported positive influences on life skills such as decision-making, positive self-esteem, responsibility, and relating to others by alumni of 4-H Animal Science projects such as quiz bowl, judging events, and skillathons.

The objectives of the study reported here were to evaluate the influence of the 4-H horse project on life skills, knowledge, and future plans by youth participating in non-riding horse contests.

Materials and Methods

The 4-H Horse Stampede is a single-day event in which the statewide non-riding horse contests for Demonstrations, Public Speaking, Horse Bowl, and Art are held. At the Stampede, youth may compete in multiple contests because Demonstrations and Public Speaking contests are conducted in the morning and Horse Bowl competition (teams of four to five members) is held in the afternoon. Art exhibits are displayed and judged throughout the day.

An on-line survey (Polldaddy.com, 2010) was developed for participants competing at the 2010 4-H Horse Stampede. The survey gathered demographic information such as gender, age group, and years in 4-H. Participants responded to a variety of questions on a five-point Likert scale. Questions were categorized to ascertain the influence participation in the 4-H horse project had on development of life skills, increased general horse knowledge, and future educational plans.

The Nebraska 4-H Horse Stampede was held in the Animal Science building at the University of Nebraska-Lincoln, and the computer laboratory was made available throughout the event for participants to complete the survey at any time during the day. Additionally, the survey remained accessible on-line for 10 days following the event. Responding to the survey was on a completely voluntary basis. All survey procedures were approved by the University of Nebraska â Lincoln Institutional Review Board.

Results and Discussion

Nearly 50% (44/90) of 2010 4-H Horse Show Stampede participants responded to the survey, with 93% (42/45) completing it on-site and the remaining three respondents completed the survey within 2 days of the event. The majority of respondents (68%, 30/44) were between 13 and 16 years of age, and 93% (41/3, female/male) were female. In the Nebraska 4-H horse program, youth must be at least 12 years of age to participate in any state level contest except Art. Most, 66% (29/44), of the participants had been in 4-H for more than 5 years, with 20% (9/44) 3 to 4 years, and 14% (6/44) 2 years or less.

Results of this survey indicate participation in a 4-H horse project had a positive influence on life-skill development for youth who participated in non-riding horse contests. Eighty-six percent of respondents indicated they moderately to strongly agree their life skills were enhanced. The life skills that appeared to be influenced the most included 1) handling pressure, 2) respecting officials, 3) sportsmanship, 4), goal setting, 5) self-motivation, and 6) leadership (Table 1).

Table 1. Influence of 4-H Horse Project Participation and Life Skills

	Meana	SD
My 4-H project helped me learn to handle pressure.	4.64	0.78
I am courteous to judges and other officials related to my 4-H project.	4.56	0.96
I have learned good sportsmanship from my 4-H project in horses.	4.53	0.88
My 4-H horse project helped me set goals.	4.52	0.86
My 4-H project has improved my self-motivation.	4.51	0.88
I am a better leader because of my involvement with horses.	4.51	0.88
Working with horses encouraged me to try new things.	4.48	0.93
I have become more dependable through my 4-H project with horses.	4.44	1.08

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Working with my horse helped me to realize the importance of learning and following rules.	4.44	0.98
Through my 4-H project I learned to organize my time and plan ahead.	4.33	0.99
I have learned a greater responsibility by working with a horse.	4.25	1.24
I know of volunteer opportunities through my experiences with my 4-H horse project.	4.23	1.04
4-11 horse project.		
I have given a speech at least once because of my 4-H project with horses.	3.93	1.52
^a 1 = strongly disagree, 2 = moderately disagree, 3 = agree, 4 = moderately agree,		

5 = strongly agree, n=44

Other studies have reported positive influences of life-skill development and 4-H animal projects and club membership (Fox, Schroeder, & Lodl, 2003; Smith, Swinker, Comerford, Radhakrishna, & Scheidt-Hoover, 2006; Ward, 1996). In a survey of 4-H alumni involved in animal science projects, a positive influence on life skills such as the spirit of inquiry, decision-making, ability to relate to others, public speaking, positive self-esteem, and the ability to accept responsibility were reported (Ward, 1996).

Eighty-three percent of youth responding to the survey either moderately to strongly agreed participation in the 4-H horse project increased their horse knowledge (Table 2). The survey contained questions addressing the application of basic scientific principles to nutrition, health, reproduction, anatomy, and genetics. Results of the survey suggest youth demonstrated a greater understanding of science, engineering, and technology (SET) and appreciate how they apply to their project area. Understanding better horse-care procedures (mean = 4.61) and increased horsemanship skills (mean = 4.62) ranked the highest in increasing horse knowledge.

Furthermore, 89% of youth indicated they planned to make changes related care of their horses as a result of their increased horse knowledge. Other programs (Nadeau, Alger, Hoagland, and Chameroy, 2004; Rusk & Machtmes, 2002) have utilized various means to increase animal knowledge, thus also enhancing SET learning. Nadeau, Alger, Hoagland, and Chameroy (2004) utilized a multiple-choice exam to identify strengths and weaknesses in subject areas of 4-H Horse Project members. Certain science-based topics were identified as highly knowledgeable (health, disease, breeds anatomy, and physiology) and other subjects as areas of "need" (reproduction, history, evolution), which could be used for future programming efforts.

Table 2. Influence of 4-H Horse Project on Increased Horse Knowledge

	Meana	SD
My 4-H horse project increased my horsemanship skills.	4.62	0.78
As a result of what I've learned in 4-H, I understand better care procedures for my horses.	4.61	0.99
I understand proper personal behavior around a horse.	4.51	1.00

I am routinely watching for the signs of a healthy animal and note the general health of my horse.	4.48	1.02
I understand the amount of time it takes to care for a horse.	4.42	0.89
I know what nutrients are and why they are important.	4.41	1.08
I have a better understanding of normal vital signs (respiration rate, heart rate, temperature) of a horse.	4.41	1.04
I better understand the anatomy of a horse.	4.38	1.01
I am better able to understand science concepts when they are related to a horse.	4.34	1.06
I provide most of the care for my horse.	4.32	1.09
My horse had a health check during the past year.	4.31	1.09
I understand the importance of proper training of a horse.	4.24	1.23
I know how to choose a proper diet for my horse.	4.23	1.19
I am better aware of the proper diet for my horse.	4.21	1.04
I am aware of how much it costs to maintain a horse.	4.19	1.16
I can explain how genetics affects the color of my horse.	4.12	1.19
I am aware of responsible breeding practices for a horse.	4.07	0.96
I know what vaccinations are required for a horse.	4.05	1.10
$^{a}1$ = strongly disagree, 2 = moderately disagree, 3 = agree, 4 = moderately agree, 5 = strongly agree, n=44		

The 4-H horse project appears to have excellent recruiting potential to academic programs. The majority (80%, mean = 4.21) indicated they moderately to strongly agreed in realizing some relationship and benefit to their future college plans (Table 3). Rusk & Machtmes (2002) indicated a similar benefit in teaching on-campus Animal Science Workshops. These results indicate 4-H horse project members who participate in non-riding horse contest support life-skill and career-development goals that are a key long-term objective of the National 4-H organization and that can assist youth in making educated career choices to help them become productive citizens.

Table 3.Relationship of 4-H Horse Project on Future College Plans

	Meana	SD
I have traveled to UNL's campus at least once as a result of my 4-H project in horses.	4.41	1.32
I can see a connection between my horse 4-H project and at least one college major.	4.24	1.11

^a 1 = strongly disagree, 2 = moderately disagree, 3 = agree, 4 = moderately agree, 5 = strongly agree, n=44			
I want to go to college to study horses because of my experiences in 4-H.	3.97	1.23	
I feel better prepared for college because of my 4-H project with horses.	4.22	1.12	

Conclusions

The value of connecting kids with horses has been understood by horse enthusiasts for decades and was validated when youth who excelled in horsemanship skills demonstrated a positive relationship in developing life skills such as decision-making, thinking, communicating, goal setting, and problem solving (Smith et al, 2006). Additionally, Slocum (2004) reported youth who participated in both riding and non-riding horse events scored greater on a Youth Leadership Life Skills Developmental Scale than youth who competed in only one or the others. The non-riding events that 4-H horse project members participate in help to create a motivational positive learning environment for youth to learn scientific principles and encourage career exploration. Youth participating in these types of projects utilized the horse as a tool to increase their science-based knowledge combined with life-skill enhancement to make them more productive young people.

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