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Exploring the Positive Impact of 4-H Camp on Youth: Identifying Differences Based on a Camper's Gender, Years of Attendance, and Age

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Abstract: When substantiating the positive impacts youth attain through the 4-H camping experience, it is important to consider influencing variables. The findings of the research project reported here show that, from a parent/guardian's perspective, youth gain multiple benefits from 4-H camp experiences in the areas of leadership, character development, self-esteem, decision-making skills, independent living skills, and citizenship. Beyond showing that 4-H camp has positive impacts for youth, the study reveals the degree to which these improvements are dependent on a camper's gender, years of camp experience, and age.

Introduction

Today, there are more than 12,000 resident camps that exist within the United States that serve more than 11 million youth and adults annually (American Camp Association, 2008). Among these camps, are a large number of 4-H conducted residential camps. According to National 4-H Enrollment Statistics (USDA, 2003), 299,297 youth participated in overnight 4-H camps in 2003. Fifty-eight percent of these youth were female, and 42% were male.

In Ohio, 4-H resident camps retain large youth participation enrolling 45,549 youth (44% female and 56% male) in 479 camp sessions in 2007 (Ohio State University Extension, 2007). In Ohio, 4-H camp is utilized extensively as a delivery method for 4-H youth development activities. When promoting 4-H camp, Extension professionals often frame the camping experience as highly beneficial to a child's positive development. Research shows that 4-H camps generally have positive impact on youth, but Extension professionals need to build on this foundation with definitive data to show how variables such as gender, years of camp attendance

and camper's age effect camp experience.

According to the American Camping Association (1997), camp provides the forum for children to discover and explore their interests, values, and talents. Research shows, from a youth and parent perspective, that camp provides positive impacts for youth. Youth attending 4-H camp indicated their participation helped them acquire life skills and helped them most in making new friends, developing new skills, and becoming more independent and able to take care of themselves (Garst & Bruce, 2003). Furthermore, parents/guardians identified significant gains in their children in the areas of responsibility for actions, work responsibility, and increasing initiative as a self-starter (Garst & Bruce, 2003).

There is limited research comparing camp impact based on the age of the camper. Dorian and Chambliss (1994) found that youth aged 16-18 scored higher than youth aged 12-15 on both pre- and post-tests for self-esteem development stemming from a camp experience. Marsh (1999) reported a positive change across all age groups that participated in a camp program with a focus on enhancing self constructs, but noted some of the largest effects identified from individual cases were associated with the youth campers 6-10 years-of-age. Garton, Miltenberger, and Pruett (2007) found that older 4-H campers improved in areas of responsible citizenship, accepting differences, and the marketable skills of accepting responsibility and contributing as a member of a team. They also concluded younger campers learned the most about accepting differences, responsible citizenship, leadership, and communication during 4-H camp. According to the study, the life skill findings for both age groups in two different years were very similar.

Do boys and girls who attend 4-H camp receive the same positive impact from the experience? The question is relevant when designing camp programs, yet there has been very little research conducted in this area. The limited research that has been conducted suggests there are differences in how boys and girls benefit from the 4-H camp experience. A study by Arnold, Bourdeau, and Nagel (2005) explored gender differences in life skill development and camp satisfaction. The results of their research showed significant gender differences in life skills improved by youth from the camp experience. Girls rated "learning new things I like to do," "trying new things," and "cooperating with others" significantly higher than boys. The researchers concluded "it appears that camp offers a place for youth to learn and try new things, particularly for girls." Girls chose high-structured activities significantly more often than boys and showed higher rates of initiating social interaction than did boys."

Researchers chose to administer the multi-component, Web-based survey instrument to parents/guardians of Ohio 4-H campers. The purpose of the study was to explore how the positive impacts of 4-H camp vary among gender, years of camp attendance, and camper's age. The research questions below guided the study. There were 13 areas identified in the survey in which positive impact at camp was measured. The areas measured include: the development of independent living skills, self-esteem, leadership, social skills, spirituality, character, decision-making, health/safety, and citizenship. Research questions included:

1. Are there differences in the positive impact of Ohio 4-H camp based on a youth's gender?
2. Are there differences in the positive impact of Ohio 4-H camp based on the number of years children attend camp.
3. Are there differences in the positive impact of Ohio 4-H camp based on a youth's age?

Methods

There are 12 residential 4-H Camps operating in the state of Ohio. These camps service 88 Ohio counties, each of which has a 4-H program that is managed locally. A stratified random sample of counties in Ohio was selected to assure representation from each of the 12 Ohio camp facilities. Parents of participating campers throughout Ohio were invited to complete the on-line survey instrument through e-mail invitation using Zoomerang software. Surveys were sent to 712 parents. The researchers received 273 responses for a response rate of 38%.

The survey consisted of Likert-type multiple choice questions. The questions were designed to measure the development of independent living skills, self-esteem, leadership, social skills, spirituality, character, decision-making, health/safety, and citizenship. Parents were asked to indicate the level of impact camp had on each of these for their 4-H camper. Various demographic questions such as family income level, place of residence, and family size were also included in the survey to analyze subsets of the population and ensure diversity in the sample response. Cronbach's Alpha was used to determine the reliability of the instrument. The instrument had a reliability coefficient of .719. F scores were computed to measure the accuracy of the instrument's results. Standard deviations were computed to measure the variability of the data sets.

Findings

Responses represent 13 counties across the state of Ohio, with 40% of families residing on farms, 44% in small towns or other rural locations, and 17% living in larger towns or cities. Of the surveys collected, almost all (88%) were completed by the child's mother, 10% were completed by fathers, and 2% were completed by legal guardians. Results show that 36% of respondents sent a male camper and 64% of respondents sent a female camper. They ranged in age from 8 to 14 years. Of those completing surveys, 36% indicated that their child attended camp for 1 year, 20% for 2 years, and 44% for 3 years or more. The median family income was \$40,000 to \$80,000, and the median camp fee paid to participate in a summer 4-H camp was \$75 to \$150.

Positive Impact of 4-H Camp Based on Camper Gender

When evaluating positive impact of Ohio 4-H camps on participants, there were significant differences found between male and female campers. When rating the positive impact of developing independent living skills through camp experiences, 69% of respondents indicated their children increased those skills in a high to very high degree. Only 8% of respondents indicated their children did not improve or improved very little in the development of independent living skills. However, there was a significant difference in the development of independent living skills between males and females (Table 1). Parents/guardians of female campers reported that their children developed higher levels of independent living skills through the 4-H camp experience than did the parents/guardians of male campers.

Table 1.
Differences in "Independent Living Skills Development" at 4-H Camp Based on Gender

Gender	N	Mean	Standard Deviation	
Male	96	3.66	1.11	F = 10.21 Sig. = .002
Female	170	3.87	.85	
p ≤ .05; Scale 1-5 with higher scores reflecting higher positive improvements, as reported by parents/guardians				

When rating the positive impact of camp on the development of camper self-esteem, 70% of parents/guardians indicated their children increased self-esteem in a high to very high degree. A very small percentage (8%) of respondents indicated their children's self-esteem did not improve or improved very little. Female campers develop higher levels of self-esteem through camp programming compared to male campers based on parent/guardian responses.

Table 2.
Differences in "Self-esteem Development" at 4-H Camp Based on Gender

Gender	N	Mean	Standard Deviation	
Male	96	3.81	1.12	F = 15.11 Sig. = .000
Female	173	3.87	.84	
p ≤ .05; Scale 1-5 with higher scores reflecting higher positive improvements, as reported by parents/guardians				

For both boys and girls, the development of social skills was reported by parents/guardians as the indicator with the highest improvement. Of the parents/guardians surveyed, 75% indicated their children improved social skills from the 4-H camp experience to a high or very high degree. Only 4% of parents/guardians indicated there was no improvement or very little improvement in the social skills of their children after the camp experience. There were significant gender differences found when measuring the degree to which boys and girls improved their social skills at 4-H camp. According to the perceptions of the parents/guardians surveyed, the 4-H camp experience contributed more to the development of social skills in female campers than it did in male campers ($p < .05$), shown in Table 3. When comparing all the areas of improvement at camp based on gender, females had the highest mean (4.08) in social skill development. When comparing areas of improvement among male campers, their mean for improving social skills was 3.89.

Table 3.
Differences in "Social Skill Development" at 4-H Camp Based on Gender

Gender	N	Mean	Standard Deviation	
Male	96	3.89	1.05	F = 8.69 Sig. = .003
Female	173	4.08	.78	
p ≤ .05; Scale 1-5 with higher scores reflecting higher positive improvements, as reported by parents/guardians				

When evaluating the positive impact of character development in campers through the 4-H camp experience, 65% of parents/guardians indicated their children improved to a high degree or a very high degree. Only 7% indicated there was no improvement or very little improvement in positive character development within their children. There was a significant difference found between girls and boys as to the degree of improved character development. According to the parents/guardians, girls had higher levels of positive character development (mean of 3.86) as a result of the 4-H camp experience when compared to their male counterparts with a mean score of 3.68 ($p < .05$).

Table 4.
Differences in "Character Development" at 4-H Camp Based on Gender

Gender	N	Mean	Standard Deviation	
Male	96	3.68	1.11	F = 7.70 Sig. = .006
Female	173	3.86	.90	

$p \leq .05$; Scale 1-5 with higher scores reflecting higher positive improvements, as reported by parents/guardians

Positive Impact of 4-H Camp Based on Years Attending Camp

A one way analysis of variance (ANOVA) was conducted to determine if there were significant differences between the tenure of a camper and the reported level of improvement as a result of camp participation (Table 5). When comparing campers of different tenure at camp, the campers that attended for 4 years consistently scored higher means (3.82 or higher) across all six improvement areas with social skills being the highest improvement area with a mean of 4.33 ($p < .05$). Consistent with the gender findings in the survey, social skill improvement ranked the highest among all categories of campers and in all six areas ($p < .05$).

Table 5.

Differences in "Citizenship, Leadership, Decision-Making, Self-Esteem, Social Skill, and Character Development" Based on Years of Camping Experience at 4-H Camp.

Years as a camper		Citizenship	Leadership	Decision-Making	Self-Esteem	Social Skills	Character
F =		4.14	4.37	2.42	2.56	3.80	2.59
1	Mean	3.19	3.35	3.47	3.76	3.79	2.59
	SD	1.00	.991	.998	1.02	.962	1.07
2	Mean	3.20	3.43	3.43	3.69	3.94	3.72
	SD	1.07	1.02	.888	.843	.811	1.03
3	Mean	3.16	3.33	3.33	3.72	3.98	3.70
	SD	.898	.837	.837	.908	.811	.887
4	Mean	3.86	4.00	3.82	4.13	4.33	4.14
	SD	.833	.871	.863	.844	.844	.743
5	Mean	3.58	3.94	3.82	4.12	4.33	4.03
	SD	.969	1.03	.917	.960	.736	.810
6	Mean	4.11	4.33	4.13	4.50	4.63	4.38
	SD	.782	1.00	1.12	.756	.518	.744
<p>$p \leq .05$; Scale 1-5 with higher scores reflecting higher positive improvements, as reported by parents/guardians</p>							

Positive Impact of 4-H Camp Based on Age of Camper

Researchers grouped campers into three age categories for the purpose of evaluation. The groups consisted of campers age 8-10, campers age 11-12, and campers 13-15. There was only one statistically significant difference found between campers in different

age categories when evaluating the positive impact Ohio 4-H camps had on participants. The highest positive improvement that was significantly different based on the age of camper, as reported by parents/guardians, included the development of leadership as a result of camp programming.

When rating the positive impact of leadership through camp experiences, 54% of parents/guardians indicated their children increased those skills in a high to very high degree. Only 11% of parents/guardians indicated their children did not improve or improved very little in the development of leadership skills.

A one-way analysis of variance (ANOVA) was conducted to determine if there were significant differences between the age of the camper and the reported level of improvement in leadership as a result of camp participation. It was found that campers in the 13-15 year age range improved their leadership skills to a higher degree than the other two age categories. Results indicated the 8-10 year old campers had the least reported improvement in leadership among the three age categories.

Table 6.
Differences in "Leadership Development" at 4-H Camp Based on Age of Camper

Camper Age	N	Mean	Standard Deviation	ANOVA
8-10	66	3.27	.969	F = 3.78
11-12	106	3.61	.900	
13-15	95	3.62	1.10	
p ≤ .05; Scale 1-5 with higher scores reflecting higher positive improvements, as reported by parents/guardians				

Conclusions

Parents/guardians in the survey reported here shared that their campers generally made improvements in the areas of independent living skills, self-esteem, leadership, social skills, character development, decision-making, and citizenship as a result of attending 4-H camp. Interestingly, the degree to which the campers improved these identified areas was found to be relative to gender, years of camp attendance, and age, according to parents/guardians. For professionals who provide camp programming for youth, it is important to understand how the diversity among campers makes a difference in how youth interpret the camp experience. 4-H Camp planners need to consider such variables in order to cultivate a camp experience that has the best probability of developing young leaders.

Traditionally, 4-H camping has been engrained in local 4-H programming in Ohio. Much like our traditional 4-H enrollment, camp enrollment is generational. Relying on word of mouth promotion may quickly become antiquated as the choices of extra curricular activities increase and compete for youth's time and family income. It has become essential for residential camps to highlight why their programs are meaningful investments for children. The findings of the research reported here can be used as empirical proof that 4-H camps indeed provide positive impacts for youth. More important, variables such as gender, years of attendance, and age of the camper influence the degree of the positive impact.

These highlights need to be emphasized in marketing strategies, camper recruitment, and camper retention efforts. As program marketing strategies are developed to recruit campers and retain campers, it is important to acknowledge that parents/guardians play a critical role in the decision to enroll their children as residential campers. The results of this research can serve as a tool for marketing camp programs by providing evidence of positive youth development stemming from the camping experience in the areas of independent living skills, self-esteem, leadership, social skills, spirituality, character, decision-making, health/safety, and citizenship.

When exploring ways to retain campers, the more years children attend residential camps, the more they generally improve in citizenship, leadership, decision-making, self-esteem, social skills, and character development. The researchers believe the age of the camper should be an important and relevant variable in residential camp programming design, as well. The greatest impact of leadership development among campers occurs in the 13-15 year old range according to the study. Camp programs should be designed to actively engage 13-15 year old campers in leadership roles throughout their camp experience.

There are a variety of settings at residential camps that can facilitate such leadership development. Teen campers can be nominated to serve as junior counselors, team leaders, skit leaders, and so on. The study shows that older youth are developing more leadership skills by attending 4-H camp, yet enrollment trends in Ohio 4-H camps indicate a declining interest in camping among older 4-H members. This trend lends itself to the need for camps to continually market their programs with an emphasis on attracting and retaining older campers.

The researchers suggest further studies to explore why differences exist in the impact between the explored variables of gender, years of attendance, and age of campers. Although the 12 4-H camps in Ohio provide a venue for generalized 4-H youth development activities, it is important to acknowledge they each have independent programming and offer diverse experiences. Among the camps included in this survey, each has unique curriculum, staff, and facilities that may provide explanation for the differences found in the study. Extension professionals must take into account how camp programming, facilities, and staff affect youth differently.

The study reported here focused on parental/guardian perceptions of their children's camp experience shortly after the conclusion of camp. It is important to consider possible differences in a child's own response to a similar survey. Last, the duration of time between the camp experience and the survey may be relevant. Typically, children leave camp on a high note. Excited about camp, they are likely to share those positive experiences with parents, and thus, it may be reflected in the survey completed by parents/guardians.

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