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Self-Esteem Assessment of Adolescents Involved in Horsemanship Activities

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Self-Esteem Assessment of Adolescents Involved in Horsemanship Activities

Abstract

The study reported here was designed to determine if participation in horsemanship activities is associated with change in self-esteem and other developmental competencies. The study examined 122 adolescents, aged 12-18 years, who participated in the Florida 4-H Horsemanship School during summer 2005. The results found a small but significant change in self-esteem after the adolescents participated in the 6-day residential horsemanship program. It is important to consider the findings of the study when designing a horsemanship school curriculum for adolescents. Equine activities also may provide beneficial results to youth, including increased self-esteem, physical exercise, and positive youth development.

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Introduction

Adolescence is a tumultuous time. During this critical phase, it is important to examine new ideas that help promote positive youth development. Arnett (2007) describes self-esteem as an adolescent's "capacity for evaluating their fundamental worth as a person." Self-esteem development is an important component of adolescence. Many factors in an adolescent's life can influence change in self-esteem, such as: school, peers, and family (Arnett, 2004). Self-esteem change can be both positive and negative; therefore, it is extremely important to emphasize positive developmental change and strive to prevent negative developmental change. A number of techniques have been used to help create positive developmental change in self-esteem. Many of these methods for positive development are seen in the form of self-esteem development programs, which are commonly delivered through schools and clubs (Arnett, 2004).

A varied approach is required to effectively influence positive self-esteem development in a diverse population of adolescents. Arnett (2007) states that enhancing self-esteem can also lead

adolescents to a change in identity or "in their perceptions of their capacities and characteristics and how these fit into the opportunities available to them in their society."

Extended periods of time working with and riding horses can create positive changes in adolescents (Smith, 2004). Activities (for example, saddling, feeding, and riding horses) can be powerful in affecting personal horsemanship attributes, including: motivation, responsibility, confidence, anxiety, and mood. By participating in horsemanship activities, adolescents can learn new skills and gain experiences useful for positive self-esteem development (Iannone, 2003). In 2003, the influence of a vocational and therapeutic riding program on severely emotionally disturbed adolescents was evaluated and found that participation in horsemanship activities was very beneficial for developing adolescent self-esteem (Iannone, 2003).

The purpose of the study reported here was to focus on the impact of horsemanship activities on adolescent self-esteem. Using an exercise and self-esteem model (Sonstroem & Morgan, 1989), the study specifically examined the impact of horsemanship activities on:

- Self-esteem,
- Personal horsemanship attributes, and
- Physical competence and physical self-acceptance of adolescents.

Purpose of the Study

The purpose of the study was to assess whether self-esteem changed for participants involved in horsemanship classes during the 6-day program. Pre-test and post-test questionnaires were used to assess personal horsemanship attributes, such as responsibility, confidence, motivation, anxiety, and mood, in relation to each individual's involvement in horse related activities. Physical competence and physical self-acceptance were also evaluated. Specifically, the research questions of this study are as follows.

- Are levels of adolescent self-esteem increased by participation in horsemanship activities?
- Are levels of adolescent personal horsemanship attributes increased by participation in horsemanship activities?
- Are levels of adolescent physical competence increased by participation in horsemanship activities?
- Are levels of adolescent physical self-acceptance increased by participation in horsemanship activities?

Framework

Sonstroem's Exercise and Self-Esteem Model (1989) specifically deals with physical competence and how it strongly influences self-esteem. There are links in this model between physical activity and motivation, responsibility, confidence, and goal-achievement (Sonstroem & William, 1989). The model proposes that "as participants engage in greater amounts of activity and become more familiar with their responses to exercise, they are better able to construct personal self-efficacy judgments" (Sonstroem & William, 1989, p.333). This model also emphasizes that physical self-efficacy, physical competence, and physical self-acceptance will lead toward an elevated view of one's global self-esteem. Through structured physical activities, people can achieve a greater confidence in themselves and their abilities.

Methods

The study examined 122 adolescents, aged 12-18 years, who participated in the Florida 4-H Horsemanship School during the summer of 2005. Information describing the study was mailed to all 137 pre-registered youth in care of their parents, where 122 participants took part in study. All of the youth who were involved in the study voluntarily agreed to participate and had received parental consent prior to completing any instruments in relation to this study.

The design of this study was quasi-experimental. It consisted of these components: (1) the Florida 4-H Horsemanship School was the intervention; (2) the participants of the Florida 4-H Horsemanship School were not randomly selected to enroll in one of the four six day sessions; (3) all participant were required to be exposed to the treatment, hence there was no opportunities for a control group comparison; and (4) both a pre-test and post-test were used to examine changes in variables. The variables in the study included one independent variable (horsemanship activities) and four dependent variables (self-esteem, personal horsemanship attributes, physical competence, and physical self-acceptance).

All study sample participants participated in standard horse-related activities. These activities included: cleaning stalls, feeding horses, haltering and leading horses, grooming and saddling horses, and riding horses. Each student was prepared to work and ride with his or her horse approximately 5 to 7 hours per day. Experienced riding instructors provided professional

instruction throughout the week of Horsemanship School. Riders were placed in groups based on ability and style of riding. The daily riding groups promoted acquisition of new skills through structured lessons.

Instrumentation

The design of the self-developed questionnaire was a paper and pencil instrument entitled the "Survey of Youth Participating in Equine Activities" (Ferguson, Barnett, & Swisher, 2006). A pilot test was conducted on the questionnaire in order to improve its contents. First a panel of experts consisting of two youth development faculty members and one animal sciences faculty member reviewed and critiqued the instrument prior to administration at the site. In addition to the panel of experts, a small group of young college students (19-21 years) who were involved in horsemanship activities while adolescents also reviewed and critiqued the instrument prior to administration. The questionnaire was used for both the pre-test and post-test. The survey was designed to measure demographics, self-esteem, personal horsemanship attributes, physical competence, and physical self-acceptance.

The Survey of Youth Participating in Equine Activities questionnaire consisted of five scales. The scales are all five-point Likert-like format (Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree), except for Rosenberg's Self-Esteem Scale, which is a four-point Likert-like format (Strongly Agree, Agree, Disagree, and Strongly Disagree) (Rosenberg, 1986). The first scale consisted of demographic questions relating to the participants. The Rosenberg's Self-Esteem Scale followed this, leading into a scale consisting of questions assessing personal horsemanship attributes. These questions examined how participants felt about horse related activities in relation to responsibility, motivation, confidence, anxiety, and mood. The following scale was used to assess the students' physical competence of horsemanship activities; depending on the skill level of the rider. The final scale consisted of questions evaluating physical self-acceptance in relation to horsemanship skills. The pre-test internal consistency coefficient (Cronbach's Alpha) from these composites was 0.885. The Cronbach's Alpha without the Rosenberg's Self-Esteem Scale was 0.880. The post-test Cronbach's Alpha for the total composite was 0.914, and without the Rosenberg's Self-Esteem Scale was 0.909.

Findings

The Sample

The demographic data included gender, age, and non-horse related activity involvement in spare time. Of this sample, 108 (88.5%) of the respondents were female, and 13 (10.7%) of the respondents were male. The respondents ranged in age from 12-18 years, with the mean age of 14.03 years. Overall, 54.9% of adolescents played sports, 16.4% partook in service projects, 40.2% worked, 20.5% participated in religious groups, 51.6% watched television, 45.1% surfed the Internet, 77.9% spent time with friends, and 36.1% were involved in other activities. Of these activities, several (such as sports, service projects, etc.) give a boost in self-esteem; however, participants in the study were in a residential environment without exposure to any of these extraneous activities that may have affected their self-esteem.

The horsemanship factors measured respondents' number of years of horseback riding, frequency of horseback riding, number of times attended Horsemanship School, and skill level or riding classification. The participants' number of years of horseback riding was as follows: less than one year, 1.6%; 1 year, 2.5%; 2 years, 5.7%; 3 years, 4.1%; 4 years, 10.7%; 5 years, 9.8%; 6 years, 9.0%; 7 years, 13.9%; and 8 years or more, 42.6%. Of the participants surveyed, a total of 2.5% rode at least once a month, 10.7% rode twice a month, 61.5% rode once a week, and 25.4% rode multiple times a week. Forty-eight respondents (39.3%) of the Florida 4-H Horsemanship School reported this was their first time attending, 27 (22.1%) attended once, 20 (16.4%) attended two times, 10 (8.2%) attended three times, 7 (5.7%) attended four times, 10 (8.2%) attended five or more times. A total of 6.9% of participants' horsemanship skill were classified as beginner, 39.2% were classified as intermediate, and 53.9% were classified as advanced.

Self-Esteem and Horsemanship Activities

Are levels of self-esteem increased by participation in horsemanship activities? Comparing the pre- and post-test, there was a small, but significant change (Table 1). The Paired Samples t -Test was used to determine whether the mean changes between the self-esteem pre- and post-test scores was significant. Because participants agreed to be residential for the entire duration of the program, data was not coded such that a matching t-test would be used. Some unexpected attrition occurred (two participants dropped out due to unforeseen circumstances). Therefore, pre-participation (n=122) and post-participation (n=120) reflect these differences; however, they do not significantly effect the analysis results.

The Paired Samples t -Test revealed that the mean difference between pre-test test and post-test was -.067, which was significant as was shown by the p value ($p=.008$). Thus, it appears that participation in the program may have had an effect on adolescents' self-esteem. Although it cannot be stated conclusively that the program caused an increase in self-esteem, participants were residential for the 6-day program duration in which the pre-test was on Day 2 (before they

began horsemanship activities); the post-test was on Day 6 (at the end of the horsemanship activities). Participants were not exposed to any other programmatic treatments during this time frame. Due to this sequestering condition, therefore, the increase in post-test to pre-test scores implies that the horsemanship activities most likely had some positive influence on their self-esteem.

Table 1.
Comparison of Rosenberg's Self-Esteem Scale Before and After Participation in Horsemanship Activities

| Rosenberg's Self-Esteem Scale Statements | Pre Participation (pre-test) | | | Post Participation (post-test) | | |
|---|-------------------------------------|--------------------------|-----------|---------------------------------------|--------------------------|-----------|
| | <i>N</i> | <i>Mean</i> ¹ | <i>SD</i> | <i>N</i> | <i>Mean</i> ¹ | <i>SD</i> |
| Rosenberg's Self-Esteem Scale Total Score ³ | 122 | 3.25 | .71 | 120 | 3.31 | .69 |
| On the whole, I am satisfied with myself. | 122 | 3.35 | .51 | 120 | 3.48 | .53 |
| At times I think I am no good at all. ² | 122 | 2.89 | .84 | 120 | 3.11 | .75 |
| I feel that I have a number of good qualities. | 122 | 3.43 | .51 | 119 | 3.50 | .50 |
| I am able to do things as well as most other people. | 122 | 3.30 | .65 | 119 | 3.34 | .66 |
| I feel I do not have much to be proud of. ² | 122 | 3.43 | .68 | 120 | 3.48 | .69 |
| I certainly feel useless at times. ² | 121 | 3.07 | .82 | 118 | 3.13 | .77 |
| I feel that I'm a person of worth, at least on an equal plane with others. | 122 | 3.34 | .54 | 119 | 3.39 | .56 |
| I wish I could have more respect for myself. ² | 122 | 2.81 | .81 | 119 | 2.88 | .83 |
| All in all, I am inclined to feel that I am a failure. ² | 121 | 3.59 | .65 | 119 | 3.52 | .65 |
| ¹ Mean was based on a 1-4 scale where 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. ² Items were reversed coded. ³ The italicized and bold phrase describes the total mean score of all 10 statements that comprise the Rosenberg Self-Esteem Scale. | | | | | | |

Personal Horsemanship Attributes and Horsemanship Activities

Are levels of personal horsemanship attributes increased by participation in horsemanship activities? The pre-test test mean for the personal horsemanship attributes scale was 4.07 (SD=1.03), which indicated that the participants had a high level of personal attributes prior to their horsemanship participation in the Florida 4-H Horsemanship School. The post-test mean score for the personal horsemanship attribute was 4.05 (SD=1.00). The mean score for the personal horsemanship attributes was comprised of mean scores from the attributes of responsibility, confidence, decrease of anxiety, elevation of mood, and motivation. The pre-test test mean for the responsibility attribute was 4.61 (SD=.70), the confidence mean was 4.21 (SD=.89), the anxiety mean was 3.53 (SD=1.11), the mood mean was 3.85 (SD=1.12), and the motivation mean was 4.08 (SD=.98). The post test mean score for the responsibility attribute was 4.55 (SD=.74), the confidence mean was 4.20 (SD=.81), the anxiety mean was 3.54 (SD=1.08), the mood mean was 3.86 (SD=1.08), and the motivation mean was 4.09 (SD=.970). There were not statistically significant changes in any of the personal horsemanship attributes between pre-test and post-test.

Through comparison of the pre-test test (M=4.07) and post-test (M=4.05) means of the personal horsemanship attributes, the research question, are levels of personal horsemanship attributes increased by participation in horsemanship activities, was rejected because there was not an increase in mean score from the pre-test test to the post-test. Thus, participation in this program did not increase adolescents' personal horsemanship attributes.

Physical Competence and Horsemanship Activities

Are levels of physical competence increased by participation in horsemanship activities? The pre-test test mean score for the physical competency scale indicated that the participants had a high level of physical competence prior to participation in the study (M=4.21, SD=.94). There was a

slight increase in the post-test mean score for the physical competence, 4.24 (SD=.90); however, it was not found to be significant.

Adolescent Physical Self-Acceptance and Horsemanship Activities

Are levels of adolescent physical self-acceptance increased by participation in horsemanship activities? The post-test total mean score for physical self-acceptance was 4.22 (SD=.72). This was a slight increase from the pre-test mean score of 4.21 (SD=.74); however, there was not a significant change.

Table 2 provides a summary of the paired samples t-Test of the four dependent variables: (1) self-esteem, (2) personal horsemanship attributes, (3) physical competence, and (4) physical self-acceptance.

Table 2.

Samples t-Test for Pre- and Post-test Results for Dependent Variables (self-esteem, personal horsemanship attributes, physical competence, and physical self-acceptance).

| | Mean Difference | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | t | df | Sig. (1-tailed) |
|---|-----------------|----------------|-----------------|---|-------|--------|------|-----------------|
| | | | | Lower | Upper | | | |
| Pre Post (Self-Esteem) | -.067 | .941 | .027 | -.120 | -.013 | -2.435 | 1187 | .008** |
| Pre Post (Personal Horsemanship Attributes) | .023 | 1.24 | .025 | -.027 | .073 | .909 | 2391 | .182 |
| Pre Post (Physical Competency) | -.030 | 1.293 | .049 | -.125 | .066 | -.610 | 708 | .271 |
| Pre Post (Physical Self-Acceptance) | -.005 | 1.018 | .042 | -.087 | .077 | -.121 | 593 | .452 |
| *Significant at a .05 level (1-tailed) | | | | | | | | |
| **Significant at a .01 level (1-tailed) | | | | | | | | |

Other Significant Findings

Another area that the researcher examined in this study was the relationship between self-esteem and the personal horsemanship attributes. A linear regression model was used to examine this relationship. The post-test linear regression model of personal horsemanship attributes (independent variable) and self-esteem (dependent variable) provided evidence of a strong relationship between personal horsemanship attributes and self-esteem. The relationship between personal horsemanship attributes and self-esteem was moderately strong positive (Beta=.571) with a level of significance of .01. This shows a positive relationship between the two variables. For example, as the personal horsemanship attributes increase by 1, self-esteem increases by .571. This positive relationship provided evidence that if a youth's personal horsemanship attributes are high, then according to the regression model, it can be predicted that the youth's self-esteem level will also be high.

Table 3.

Linear Regression of Personal Horsemanship Attributes and Self-Esteem (Pre- and Post-Test)

| | Unstandardized Coefficients | Standardized Coefficients | Beta | t | Sig. (1-tailed) |
|--|-----------------------------|---------------------------|------|-------|-----------------|
| | B | Std. Error | | | |
| Pre-Test (Personal Horsemanship Attributes) | .516 | .085 | .487 | 6.102 | .000 |
| | | | | | |

| | | | | | |
|--|------|------|------|-------|------|
| Post-Test (Personal Horsemanship Attributes) | .571 | .076 | .571 | 7.550 | .000 |
|--|------|------|------|-------|------|

Discussion and Implications for Practice

Self-esteem change was found to be statistically significant after the adolescents participated in horsemanship activities. While these findings cannot be proven as causal, results do indicate that there was a higher self-esteem after the youth attended the 6-day residential horsemanship activities. Due to the fact that the adolescents were confined to the program site for these 6 days and that they rode and worked their horse an average of 6 hours per day, it is highly likely that the horsemanship activities were responsible at some level for this change.

These results further add to the literature on the effects of horseback riding on positive youth development outcomes. The literature base points to changes in self-esteem of emotionally disturbed adolescents as a result of participation in therapeutic horseback riding programs (Iannone, 2003). The study reported here moves the literature forward by examining a population of typical 4-H youth who have been riding horses for several years to find that they have both: (a) high baseline self-esteems; and (b) increased self-esteems after the 6-day in-residence horsemanship activities. The fact that their already high self-esteem became even higher leads us to conclude that their participation in these activities did possibly influence their self-esteem.

The study suggests that self-esteem may be influenced by horsemanship activities. Youth practitioners can use this knowledge to create youth development programs. The program designers can design specific programs to focus solely on adolescents and horsemanship activities. These types of programs can be used for all adolescents who are struggling to develop their self-esteem during adolescence. Populations that might especially benefit from such a program might include special needs children, depressed youth, suicidal adolescents, and those with body image issues. Extension agents, schools, and community youth workers could consider the lengths of such a program for all youth, as well as any with special needs when making program planning decisions. Considering these findings, other horsemanship activities could be incorporated into programs that adolescents are involved in through their school, 4-H clubs and camps, and other youth organizations.

The study also provides areas for future interest by youth researchers. Investigations are needed into the effects of horsemanship activities on other areas that influence youth. Even though many people use horsemanship activities to help adolescents, there is limited scientific research on its specific effects and developmental outcomes. Youth researchers could use the study reported here as a basis of comparison for further examinations on the potential impact that horsemanship activities have on positive youth development and self-esteem.

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