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AN EVALUATION OF THE IMPACT OF A ONE-WEEK SUMMER CAMP EXPERIENCE ON PARTICIPANTS' SOCIAL SKILL DEVELOPMENT

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Introduction

Social skill development is emerging as an important issue for educators and practitioners in their work with adolescent youth. Within the summer camp industry, youth development researchers are beginning to focus more intentionally on the ability of summer camp programming to develop social skill capacity among its participants (Thurber, Scanlin, Scheuler, & Henderson, 2007). While research in camp settings has been occurring for several decades, much of the inquiry has been descriptive in nature (Henderson, Thurber, Scanlin, & Bialeschki, 2007) or focused on individual psychological traits such as self-esteem and self-concept. (Gillis & Speelman, 2007). More recently, however, social skill development has received more focused attention in both in and out-of-school settings, namely from researchers investigating the emerging theory of social and emotional learning (SEL), with the Collaborative for Academic, Social, and Emotional Learning (CASEL) foremost in this process (Durlak & Weissberg, 2007; Rimm-Kauffman & Chiu, 2007; Rimm-Kauffman, Fan, Chiu, & You, 2007; Zins, Bloodworth, Weissberg, & Walberg, 2004). Encouraged by this trend, researchers within the camping industry have called for a more intentional focus on promoting social skill development in their respective programming (Jordan, 1994; Nicholson, Collins, & Holmer, 2004).

In the youth development literature social skills are critical to the educational process of adolescent students and have been shown to be a fundamental asset for healthy psychosocial development and (Moote Jr & Wodarski, 1997; Scales, Benson, Leffert, & Blyth, 2000). Additionally, social skills serve as a preventative tool for future issues such as misbehavior in school, criminal conduct, dropping out of school, unhealthy stress, and violent behavior (Mahoney, Stattin, & Magnusson, 2001; Marsh & Kleitman, 2002). While acting as a deterrent to these problems, social skill development has also been shown to be a significant factor in current and future academic functioning and achievement (Eccles, Barber, Stone, & Hunt, 2003; Malecki & Elliot, 2002).

Within the camping and outdoor education literature, research findings are mixed regarding the impact of adventure-based programming on social skill development. A small number of studies have found no significant change in the social skill development of participants in adventure-based programs (Dickey, 1996; Michalski, Mishna, Worthington, & Cummings, 2003). However, other studies have shown positive gains in social development through such programming (Boyle, 2002; Guettal & Potter, 2000; Reefe, 2005), with more recent studies utilizing considerably larger sample sizes to enhance the significance of their findings (Henderson, et al., 2007; Thurber, et al., 2007). Given the increased focus on the relationship between camp programming and social skill development, this study aims to provide additional insight into this topic.

Theoretical Framework and Rationale for Study

The Construct of Social Development. Individuals are inherently social in nature and live within a variety of social milieus. A person's social development, behavior, and ability can be described in a multitude of ways depending the particular social context. As such, a wide variety of theories of social development and behavior exist from which to discuss these constructs. The primary theory used to conceptualize this construct in this study is Bandura's social cognitive theory (1986). Social cognitive theory asserts that individuals are neither solely driven by inner forces, nor completely influenced by outside external stimuli. Instead, social cognitive theory refutes the dualistic view of individual versus collectivism and views social behavior as both an individual and collectively influenced process that is dynamic in nature. Social cognitive theory claims that "human functioning is explained in terms of a model of triadic reciprocity in which behavior, cognitive and other personal factors, and environmental events all operate as interacting determinants of each other" (Bandura, 1986, p.18).

Social cognitive theory utilizes an "agentic perspective" toward human development, recognizing: (a) an individual's capacity to act on their own behalf and (b) the interdependence among individuals within groups and across cultures to cooperative on outcomes that cannot be accomplished on their own (Bandura, 2002). Under this perspective of social development, individuals need to possess effective social skills to interact with others, while also an adequate belief in their ability to exercise these skills appropriately to meet their needs. "Competent functioning requires both skills and self-beliefs of efficacy to use them effectively" (Bandura, 1986, p.391). As such, the two domains of *interpersonal* and *intrapersonal skills* are inextricably linked under Bandura's social cognitive theory. This study focuses on these two domains of social development in the context of a one-week summer camp experience.

Social Skill Development and Camp Programming. For the purposes of this study, social skill ability is defined as a person's ability to communicate and interact with others (Lopes & Salovey, 2004). Social skill development includes a number of sub-skills such as trust, empathy, problem-solving, and conflict resolution. The successful development and use of these skills is influenced by a number of factors related to the individual and his/her social context (Spence, 2003). Young people who have developed social competencies "often possess sound judgment and the ability to manage circumstances that benefit themselves and others in social situations" (Petersen & Leigh, 1990, p.100).

Given the importance of social skills in the lives of adolescents, creating opportunities to develop these skills is an important task for outdoor educators. The National Research Council (2002) has identified a number of characteristics associated with positive youth development efforts. These include physical and psychological safety, supportive relationships, a sense of belonging, positive social norms, and opportunities to build individual skills. Adventure-based and camp programs often possess many of these characteristics, and it has been argued that such programs are well suited to provide opportunities for prosocial development (Russell, 2003). Many camp programs traditionally begin with the setting of group behavioral norms and foster a sense of belonging by stressing the group process. In addition, camps traditionally use outdoor/experiential activities to focus directly on social skills such as communication, trust, problem solving, conflict resolution, and leadership (Gass, 1993). As opposed to more traditional

methods of instruction, learning in outdoor/experiential camp settings focuses directly on the social context (Quay, 2003), and as such, may have the ability to impact participants' social development in a meaningful way.

The educational theory of John Dewey is commonly cited as the philosophical underpinning of experiential education (Miles & Priest, 1999; Priest & Gass, 1997). Often unrecognized in the work of Dewey, however, is his overt emphasis on the relationship between a learner and her/his social environment. He states:

I believe that the school is primarily a social institution. Education being a social process, the school is simply that form of community life in which all those agencies are concentrated that will be most effective in bringing the child to share in the inherited resources of the race, and to use his own powers for social ends (Dewey, 1897, p. 79).

Just as Dewey espoused the social nature of learning within the school environment, today's camp environment also fits this description with its focus on experiential activities and social interaction. Camps provide a context for participants to develop socially in a way that is unique and powerful. As such, focusing camp programming on social skill development and tailoring research inquiries into the effects of camp programming on participants' social development is both conceptually valid and practically useful.

4-H Camp programming and social skill development. Just as the conceptual links between experiential learning, camp programming, and social skill development were explored in the previous section, it is important to note the specific connections between the University of New Hampshire (UNH) 4-H Camp programming philosophy and social skill development.

Health, Hands, Head, and Heart represent the four petals of the 4-H clover symbol and is used to symbolize the goal of 4-H camps to foster well-rounded development in their participants. More recently, the UNH 4-H Cooperative Extension has worked to focus efforts in each of these four areas to better guide program design and staff training efforts. The Health component of the 4-H Camp programming is focused on the theme of *belonging*. Within this theme are a variety of sub-themes such as self-esteem, self-responsibility, appropriate expression of feelings, and stress management. The Hands component is concerned with the goal of *mastery*. This area works on such sub-themes as volunteering, contributing to group effort, teamwork, self-motivation, and leadership. The Head aspect of the 4-H clover is focused on building *independence*. Within this theme are sub-themes such as decision-making, problem solving, goal setting, critical thinking, and resiliency. Finally, the Heart aspect of the clover strives to encourage *generosity*. This area stresses personal relations with sub-themes such as communication, cooperation, conflict resolution, empathy, concern for others, and sharing.

While these four components contain a broad range of goals and constructs, many are concerned with developing prosocial behaviors. This is consistent with the holistic nature of the 4-H camp experience as being a week of intense social interaction, often with unfamiliar peers in a physically and emotionally challenging environment. UNH 4-H Cooperative Extension is focused on being more intentional in promoting social skill development among the participants

of their summer camps. As such, a partnership was created with researchers from the UNH Outdoor Education program to evaluate the effectiveness of their programming in this domain.

Methods

Research Question. The major research question guiding this evaluation was: What effect does a one-week summer camp program have on the social skill development of its participants? Our hypothesis was:

Hypothesis 1: Participation in a one-week Bear Hill 4-H Camp experience will yield positive changes in participants' perceptions of their social skill ability as measured by the Social Skills Checklist (Gass, 2005).

Locus and sample. Evaluation of 4-H camp programming occurred during the summers of 2006 and 2007 at the Bear Hill 4-H Camp located in Allenstown, New Hampshire. This camp draws participants primarily from the greater Manchester and Seacoast areas of New Hampshire. In 2006, 176 campers (70 females and 106 males) participated in the study. Campers ranged in age from six to 16 years old with mean age being 11.25 years old. In 2007, 456 campers (264 females and 192 males) participated in the study. Campers ranged in age from six to 18 years old with the mean age being 11.5 years old. A 2007 breakdown of all UNH 4-H camp attendees home locations indicated that 4% live on farms, 51% live in rural areas, 34% live in towns (10,000-50,000 people), and 11% reside in urban settings (>50,000 people). While geographically diverse, the vast majority of participants identified themselves as White (97%), with only a small number identifying themselves as Black (2%) or Asian (1%).

In both 2006 and 2007, there were eight, six-day sessions of camp during which the evaluation was conducted. When campers arrived with their parent/guardian(s) to check-in to camp, they were presented with the opportunity to participate in the evaluation. If both parent/guardian(s) and the camper chose to participate, an active consent form was signed at this time. Bear Hill 4-H Camp programming consists of four activity sessions each day, which include activities such as canoeing, nature walks, swimming, arts and crafts, archery, and field games. Campers also have less-structured recreation time each day along with a closing evening activity such as a night hike or camp fire. Combined with the usual routines of meals, clean up, and relaxation time, these activities make up the typical day of programming at Bear Hill 4-H Camp.

Research Design. Both the 2006 and 2007 evaluations utilized a pre-experimental one-group pretest/posttest design (Creswell, 2003). No comparison groups were included in these evaluations. For the summer of 2007, a post-post-test measure was included at approximately three months after the post-test. The pre-test was administered on the second day of camp since the first afternoon was tightly scheduled with check-in and opening activities. The post-test was administered in the afternoon of the second-to-last day of camp since the last morning of camp was busy with departure preparations and closing activities. This research design was utilized to examine changes in social skill development over the course of these four days of camp at Bear Hill 4-H Camp. The four days of camp were the central programming days of the six-day camp experience. However, there are certainly limitations to this design. These issues will be discussed later in the article.

Instrumentation. The Social Skills Checklist (SSC) (Gass, 2005) was the quantitative instrument used to assess levels of social skill ability. The SSC is a 20-item self-report questionnaire utilizing a 6-point Likert scale. The SSC reports an overall composite score as well as subscale scores assessing intrapersonal and interpersonal skills. The intrapersonal subscale examines individual social behavior such as decision-making, goal setting, listening, and task initiation. The interpersonal subscale assesses participants' ability to interact with others through questions examining trust, cooperation, and communication skills. Overall reliability for the composite SSC is $\alpha = .92$, while the intrapersonal and interpersonal subscales scores are $\alpha = .85$ and $\alpha = .87$ respectively (Gass, 2005). The SSC also shows strong criterion validity (Russell, Gass, & Young, in submission) with the Life Effectiveness Questionnaire (LEQ) (Neill, Marsh, & Richards, in preparation). Pearson product correlations between total scores and subscales of these two instruments were statistically significant at the $p < .001$ level.

Data organization and preparation. Cabin leaders administered the SSC to participants at pre-test and post-test. Cabin leaders were trained on how to properly administer the instrument during staff training by the lead author. A research coordinator at Bear Hill 4-H Camp was responsible for collecting the questionnaires from the cabin leaders shortly after they were completed. In 2007, the post-post-test SSC was mailed to participants at their home address.

Once the data was received in the fall of 2006 and 2007, the lead author prepared the SSC questionnaires for analysis. Only consenting participants who completed both a pre-test and post-test SSC were included in the analysis. As noted previously, this resulted in 135 participants in the 2006 evaluation and 435 participants in the 2007 evaluation. For the post-post-test measure in the fall of 2007, 87 participants who had completed both a pre-test and post-test SSC during the summer submitted a post-pos-test SSC, representing a 20% response rate. Once these matched pairs were sorted for each week of camp, missing values for individual questions on the SSC were detected and replaced with the total sample mean score for each respective question. This method of managing small numbers of missing values is standard in social science research (Warner, 2008).

Results

Summer 2006 Results. As noted earlier, the central research hypothesis for both the 2006 and 2007 evaluations was as follows: Participation in a one-week Bear Hill 4-H Camp experience will yield positive changes in participants' perceptions of their social skill ability as measured by the Social Skills Checklist (Gass, 2005). Campers showed increases from pre-test to post-test in mean SSC overall scores, as well as in both intrapersonal and interpersonal subscales (Table 1).

To test whether or not these gains were statistically significant, paired samples t-tests were conducted. The results of this analysis show that participants' post-test SSC total scores were significantly greater than their pre-test scores ($t(137) = 3.38$, $p < .001$), $ES (d) = .29$). The standardized effect size indicates a small effect.

TABLE 1
2006 Mean SSC total and subscale scores

	Pre-test	Post-test
SSC Total Mean Score	94.98	96.83
SSC Intrapersonal Subscale mean Score	45.07	46.81
SSC Interpersonal Subscale Mean Score	49.91	50.03

To assess what role each subscale played in the overall increase in SSC total scores, paired samples t-tests were conducted separately for each subscale. Participants' intrapersonal post-test scores were significantly greater than their pre-test scores ($t(137) = 4.19, p < .001$), ES (d) = .37). The standardized effect size again indicates a small effect.

While participants' interpersonal post-test scores increased slightly, they were not significantly greater than their pre-test scores ($t(137) = .92, p > .05$), ES (d) = .08). Based on these follow-up subscale analyses, it seems that the overall change in participants' social skill ability was driven by gains in the intrapersonal realm.

Summer 2007 results. The 2007 summer evaluation tested the same research hypothesis as the 2006 evaluation. The post-post-test measurement allowed us to examine whether or not any initial changes in social skill ability were sustained over time using the scores of the 87 participants who completed this post-post-test SSC. Consistent with the 2006 data, campers showed increases from pre-test to post-test in mean SSC total scores, as well as in both intrapersonal and interpersonal subscales (See Table 2). However, scores among the 87 campers who completed the post-post-test SSC showed declines in all three categories.

TABLE 2
2007 Mean SSC total and subscale scores

	Pre-test	Post-test	Post-Post-test
SSC Total Mean Score	97.72	99.36	96.07
SSC Intrapersonal Subscale mean Score	46.44	47.88	45.85
SSC Interpersonal Subscale Mean Score	51.28	51.48	50.22

Paired samples t-tests were again used to determine if differences in SSC scores were statistically significant. Since an additional data collection point was included in the 2007 evaluation, paired samples t-tests were used to examine change over two time periods: 1) From pre-test to post-test among the 435 campers who completed both a pre-test and post-test SSC and 2) From post-test to post-post-test among the 87 campers who completed a SSC at all three data points. Participants' post-test SSC total scores were significantly greater than their pre-test scores ($t(434) = 4.37, p < .001$), ES (d) = .21). However, these initial gains at camp were not maintained

over time, but instead significantly declined at the post-post-test measurement as compared to their post-test scores at camp ($t(86) = 3.08, p < .01$), $ES (d) = .33$). Again, both standardized effect sizes show a small effect.

The roles of each subscale in the overall composite gains follow the same trends as seen in the 2006 analysis. Participants' intrapersonal post-test scores were significantly greater than their pre-test scores ($t(434) = 5.83, p < .001$), $ES (d) = .28$). However, these initial gains at camp were not maintained over time, but instead significantly declined at the follow-up measurement ($t(86) = 2.93, p < .01$), $ES (d) = .31$). Both standardized effect sizes show a similar small effect.

Following the trend in the 2006 evaluation, though participants' interpersonal post-test scores increased slightly from pre-test to post-test, these gains were not significantly significant ($t(434) = .95, p > .05$), $ES (d) = .05$). Participants' post-post-test scores continued to show a significant decline ($t(86) = 2.32, p < .05$), $ES (d) = .25$).

Discussion

The central aim of both the 2006 and 2007 evaluations was to assess the impact of a one-week summer camp experience at Bear Hill 4-H Camp on participants' social skill abilities. This study was designed to gain insight into the effectiveness of the camp programming and to suggest solutions on how they can enhance the social skill abilities of their participants.

Program outcomes and interpretation. The overall results suggest that Bear Hill 4-H Camp programming had a positive impact on the social skill development of its participants during their time at camp as measured by the SSC. This finding is consistent with previous research, which shows the benefits of camp experiences on the social development of youth (Boyle, 2002; Guettal & Potter, 2000; Henderson, et al., 2007; Reefe, 2005; Thurber, et al., 2007). As camp programs strive to demonstrate their effectiveness in domains such as positive social development, these results provide additional support for the claim that camps provide environments for the positive social development of adolescents.

There are a number of limitations, however, that should be kept in mind when interpreting these results. First, no comparison group was utilized for these evaluations. Therefore, these results are specific to Bear Hill 4-H Camp programming and cannot be generalized to other settings. Second, the length of time between pre-test and post-test (four days at camp) is quite small. It is reasonable to question the amount of change that can occur during this short period of time. Third, the small response rate of 20% by the post-post-test group makes it difficult to draw any conclusions about the effect of the camp programming over time. Fourth, since the pre-test was administered on the second day of camp in both the 2006 and 2007 evaluations, there is chance that these pre-test scores were elevated due to the fact that campers were already in the camp environment. In order to obtain an accurate pre-test score, campers should have completed the pre-test SSC in their home environments before arriving at camp. It is certainly possible that pre-test scores were elevated in both the 2006 and 2007 evaluations. This is particularly important to keep in mind when interpreting the post-post-test declines in the 2007 data, which may be more exaggerated since the post-post-test scores drop below the original pre-test score levels.

The possibility of elevated pre-test scores notwithstanding, the declines among the 87 campers from post-test to follow-up in the 2007 evaluation are significant. Interestingly, this finding is not entirely inconsistent with past research. In their review of one large study involving over 5,000 participants in 80 different camps, Henderson, Thurber, Scanlin, and Bialeschki (2007) noted that while campers generally improved in self-esteem, friendship skills, and independence from pre-test to post-test, some of these gains were not maintained over time. However, none of the follow-up declines decreased to levels lower than pre-test scores. If we take into consideration the possible elevated pre-test scores of the two evaluations in this project, the current results seem to be consistent.

The study by Henderson et al. (2007) also contains a noteworthy insight with regard to the difference between intrapersonal and interpersonal social skill development as noted in the current data. In the Henderson study, the category of Peer Relationships declined from pre-test to post-test. Given that the interpersonal subscale of the SSC is mainly concerned with constructs germane to relationships with peers, this finding lends perspective to the notable differences between campers' intrapersonal and interpersonal subscales scores in the current study. Henderson et al. (2007) explained the decline in peer relationships by suggesting the following:

...the decrease in peer relationships at camp could be due to the types of negotiations that children must address when they are living and playing with other children over a period of time. Perhaps these children were socially challenged at camp in ways that they were not challenged at home or school. Or perhaps the difficulty was in being away from their usual friends (p. 4).

Conclusion

Camp is an intense time of social interaction that some participants may not have previously experienced. This could be a plausible explanation of the lack of intrapersonal social skill development among the campers at Bear Hill 4-H Camp. However, these findings provide further motivation for camps to continue their intentional focus on interpersonal social skill development. To this end, Bear Hill 4-H Camp administration has used the results of these evaluations to identify specific interpersonal social skills such as trust, problem solving, and effective communication to link with appropriate activities at camp.

Social skill development is emerging as an important issue in the lives of today's adolescents and is being linked with important social and academic behaviors. Camps can provide an environment for healthy social development that is perhaps not present in the everyday lives of many youth. Given the inherent social nature of learning in the camp environment, camp programming can utilize this opportunity by intentionally focusing on the social development of their participants. The findings from the Bear Hill 4-H Camp study may provide further evidence that such programming can be successful in this endeavor. However, the follow-up declines noted in both this project and larger camp research studies (Henderson, et al., 2007) highlight the limitations of a brief camp experience on the lasting social development of camp participants. It seems logical that the absence of any intentional social skill programming outside of the camp environment will inevitably contribute to the depreciation of any initial gains realized through a camp experience. As such, emerging partnerships between summer camps and school are encouraged as one possible means to continue the healthy social development of today's youth.

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