

THE EFFECT OF PERCEPTIONS OF SUPPORT FOR AUTONOMY, RELATEDNESS, AND COMPETENCE ON INTEREST IN CAMP FOR ADOLESCENT GIRLS

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Abstract.—Understanding whether young people perceive camp to be supportive of their needs for autonomy, relatedness, and competence (ARC) is important for camp administrators and staff as they plan and structure opportunities for positive youth development. We conducted a study during the summer of 2006 at a Girl Scout camp in Pennsylvania. Through hierarchical linear regression analyses, we explored how motivation to attend camp, the camp's support for individuals' autonomy, relatedness and competence, motivation to attend camp, and the interaction of these variables predicted girls' interests in camp. Results showed that support for ARC from counselors and peers was significantly and positively predictive of interest in camp. However, level of interest was also associated with motivation to attend camp; internal motivation was significantly and positively related to interest, while amotivation showed a significant negative relationship. External motivation was not significantly associated with interest in camp. Findings suggest that camp administrators and staff need to work to make camp intrinsically appealing to girls before they arrive at camp, and to specifically target those campers who

report being externally motivated or amotivated to attend camp by supporting their needs for ARC.

1.0 INTRODUCTION

Structured contexts for youth development offer opportunities to explore identities, develop skills and interests, exert autonomy, and experience intrinsic motivation. Young people's accomplishment of these developmental tasks can lead to sustained engagement and perseverance in other contexts (Hunter & Csikszentmihalyi, 2003; Larson, 2000). Camp is one context in which a supportive climate can foster developmental outcomes for young people. Bialeschki et al. (2003) concluded that elements of camp culture (including opportunities, camp structure, staff, and campers) promoted many of the intended outcomes of camps. These elements mirror what Grolnick et al. (1997), and Hidi and Renninger (2006) have identified as environmental elements that lead to intrinsic motivation and engagement. Environments that support autonomy, allow for relatedness with others, and structure experiences for competence are those that will lead to internal regulation of motivation (Grolnick et al., 1997).

When one is internally motivated to engage in an activity, one is interested in the activity. Young people who follow their interests initiate their own behavior (Deci, 1992). Interest is defined as a psychological state that can serve as a "predisposition to re-engage content that applies to in-school and out-of-school learning" (Hidi & Renninger, 2006, p. 111). Camps desiring to develop long-term engagement and appreciation of the outdoors can benefit from identifying program elements that have the potential to influence interest and prevent participant drop-out and program failure.

The purpose of this study was to explore how precamp motivation to attend camp predicts interest in camp at the end of camp, and to understand the effect of perceptions of support for autonomy, relatedness, and competence (ARC) from counselors, activities and peers, on campers' interest in camp. Figure 1 depicts the conceptual model guiding the study, which examines the main and interactive effects of motivation to attend camp and ARC support from peers, counselors, and activities on interest in camp.

2.0 METHODS

2.1 Data Collection

Thirty-two girls ages 12-15 and five adult volunteers pilot-tested questionnaires for readability and provided feedback during a volunteer work weekend before camp began. In addition, two Girl Scout staff members reviewed and commented on the questionnaire. The first author then administered questionnaires to groups of campers in the dining hall, cabins, or the recreation center at the end of their 2-week camp sessions. Once they agreed to participate, girls were read a standard introduction to the study and given the questionnaire. They asked clarifying questions as needed. The process took about 15 minutes per group.

2.2 Measurements

Participants completed the questionnaires on the last day, or second-to-last day of each camp session. Motivation was measured using an adapted version of the Free Time Motivation Scale for Adolescents (Baldwin & Caldwell, 2003) in a retrospective pretest approach (i.e., campers were asked to think back to before camp started). To simplify analyses, scales measuring intrinsic motivation (i.e., doing something for its own sake) and identified motivation (i.e., doing something because it is in accordance with one's identity) were combined to measure internal motivation. External motivation and amotivation were measured as reported by Baldwin and Caldwell. The motivation scale consisted of questions related to why campers came to camp: *amotivation* (four items, e.g., "I don't know why I came to camp"), *external* (four items, e.g., "My parents/guardians expected me to go to camp"), *internal* (four items, e.g., "Camp is

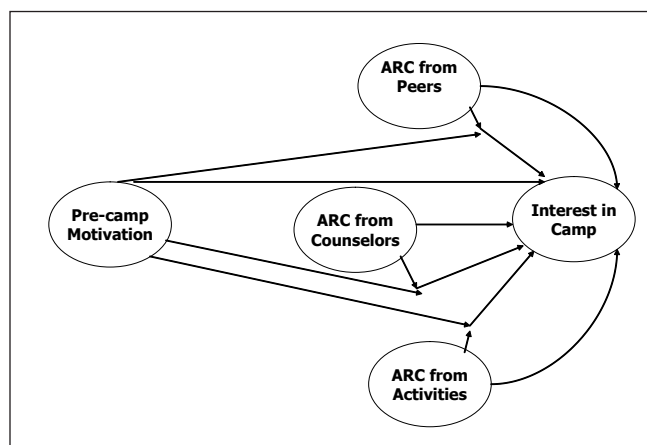


Figure 1.—Analysis model of direct and interactive effects of motivation to attend camp and ARC supports from peers, counselors and activities on interest in camp.

important in my life"). A high score on the dimension of amotivation indicated a lack of motivation, or acting without purpose. A high score on external motivation meant that the camper reported attending camp to gain rewards or to avoid negative consequences. A high score on internal motivation indicated that the camper reported high levels of intrinsic and identified motivation.

Campers' perceptions of support for their ARC needs in three areas (activities, counselors, and peers) were measured using a post-test approach. The scales were adapted from the Learning Climate Questionnaire developed by Williams and Deci (1996) to understand the degree to which learning contexts are perceived to be supportive of students' autonomy. Three items for each area of support (i.e., autonomy, relatedness, competence) were developed for peers, counselors, and camp activities. In total, 27 items were used to measure camp climate. A principal components factor analysis with Varimax rotation was performed on these adapted scales, and measures for autonomy, relatedness, and competence loaded into one score (ARC) for three factors. Other studies have found that autonomy, relatedness, and competence consistently yet differentially contribute to the prediction of outcomes (LaGuardia et al., 2000; Patrick et al., 2007; Reis et al., 2000). In this study, factors represented the level of total perceived ARC support from peers (eigenvalue=3.376), counselors (eigenvalue=1.763) or

camp activities (eigenvalue=1.288), respectively. Each factor consisted of three items and approximately 64 percent of the variance was explained by these three factors.

Perceived support for ARC for each domain was measured by three items on a 7-point scale in which one indicated perceptions of low support and seven indicated high support. Activity autonomy support focused on within-activity perceptions, (e.g. “I was pressured while doing the activities”). Activity relatedness centered on peer pressure within camp activities, (e.g. “I was pressured by girls to do things”). Competence in activities was measured by feelings of success (e.g. “I understood what I needed to do to be successful in the activities”).

Perceptions of counselor support for autonomy, relatedness, and competence were similarly measured. Counselor autonomy support focused on inclusion of campers in decision-making, (e.g. “I could express myself to my counselors”). Relatedness with counselors centered on perceptions of opportunities for connectedness with others, (e.g. “My counselors gave me the chance to make friends”). Perceptions of competence were measured by how much counselors were seen to be supporting campers’ efforts and providing appropriate feedback (e.g. “My counselors made sure I really knew what I needed to do”).

Peer autonomy support focused on feelings of choice within the group (e.g. “Other girls respected the decisions I made”). Peer relatedness centered on the quality of relationships between campers (e.g. “I was able to be open with other girls”). Competence was measured by perceived levels of support from peers (e.g. “Other girls showed that they were confident I could do well at camp”).

Interest in camp was measured by four items, and measured value- and feeling-related valences in individual and situational camp experiences (e.g., “I was usually in a good mood at camp;” and “I wanted to be somewhere else besides camp most or all of the time”) in a post-test approach (Krapp, 2002).

3.0 RESULTS

3.1 Participant Characteristics

The sample for this study was 143 girls enrolled in two-week horseback riding or general programs at a residential Girl Scout camp in northeastern Pennsylvania. All girls (77 percent response rate) who received parental consent completed the questionnaires. They ranged in age from 9 to 15 years old ($M=11.8$) and had a range of 0-9 weeks ($M=3.3$) of previous camp attendance. Sixty-seven percent were white or Caucasian, 24 percent were black or African American, and the rest identified as Latina, Asian, or other.

3.2 Regression Analyses

Table 1 shows the descriptive statistics for all measures used in the study. Measures for internal motivation, counselor support for ARC, peer support for ARC, activity support for ARC, and interest were positively skewed above the mid-point for each measure. Conversely, mean scores for measures of external motivation and amotivation were negatively skewed above the mid-point. Not unexpectedly, the skew of the scores reflect a sample that tended to want to be at camp, rather than felt forced to attend. All measures but activity support met acceptable levels of internal consistency ($\alpha > .60$; Cortina, 1993).

Once data were cleaned and factor analyses were performed, study variables were examined for intercorrelations to rule out multicollinearity issues and to examine bivariate relationships among the study variables (see Table 2). An examination of the table reveals that among the variables, Pearson’s r is

Table 1.—Descriptive statistics for measures used in analyses (n=143)

Scale Name	# Items	Range	Mean	SD	α
Interest	4	1-7	4.759	1.404	.777
Counselor ARC	3	1-7	4.916	1.453	.716
Peer ARC	3	1-7	5.094	1.405	.882
Activities ARC	3	1-7	6.231	0.769	.526
Intrinsic motivation	4	1-7	5.524	1.240	.676
External motivation	4	1-7	1.953	1.191	.637
Amotivation	4	1-7	2.548	1.461	.668

Table 2.—Bivariate correlations among the study variables (n=143)

	1.	2.	3.	4.	5.	6.
1. Interest	—	—	—	—	—	—
2. Counselor ARC	.536**	—	—	—	—	—
3. Peer ARC	.395**	.417**	—	—	—	—
4. Activity ARC	.206*	.299**	.204*	—	—	—
5. Internal motivation	.306**	.276**	.211*	.057	—	—
6. External motivation	-.149	-.086	-.150	-.111	-.249**	—
7. Amotivation	-.311**	-.136	-.160*	-.107	-.103	-.163*

* $p < .05$ (2-tailed); ** $p < .01$ (2-tailed)

below .60 for all relationships. On a bivariate level, interest was positively and significantly correlated with ARC scores for counselors ($r=.536, p<.01$), peers ($r=.395, p<.01$) and activities ($r=.206, p<.05$), as well as internal motivation ($r=.306, p<.01$). Interest was negatively and significantly correlated with amotivation only ($r=-.311, p<.01$).

A series of hierarchical linear regressions was conducted. The interactions among combined ARC support variables for activities, counselors and peers, and the ARC variables with precamp motivation were regressed on interest in camp. Independent

variables were entered as blocks into the regression model with ARC support variables entered first, followed by motivation to attend camp, and then the interaction terms for the specific ARC support variables and motivation to attend camp. Independent variables were removed from blocks if they did not significantly contribute to the variance associated with the dependent variables to yield the most parsimonious regression models. Overall, three separate regression models were tested. Table 3 shows the results of the multiple regression analyses for each motivation variable.

Table 3.—Multiple regression analyses predicting interest in camp (n=143)

Variable	r	R ² Δ	B	SE B
Model with internal motivation (R ² = .330)			.870	.529
Block 1	.568	.313***		
Counselor ARC			.401***	.075
Peer ARC			.190*	.076
Block 2	.609	.021*		
Motivation			.172*	.082
Model with external motivation (R ² = .312)			1.779	.476
Block 1	.568	.313***		
Counselor ARC			.431***	.074
Peer ARC			.199*	.077
Block 2	.572	.004		
Motivation			-.079	.083
Model with amotivation (R ² = .357)			2.343	.471
Block 1	.568	.313***		
Counselor ARC			.402***	.072
Peer ARC			.193*	.074
Block 2	.609	.048**		
Motivation			-.214**	.066

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Across motivation types, ARC support from counselors and peers was positively and significantly associated with interest in camp; activity support of ARC was not significant. These two variables account for approximately 31 percent of the variance in interest in camp. In models containing internal motivation and amotivation, a significant main effect for motivation to attend camp was found. Internal motivation was positively and significantly associated with interest ($B = .190, p < .05, Adj. R^2 = .021$), while amotivation had the opposite effect ($B = -.214, p < .01, Adj. R^2 = .048$). External motivation was negatively, but not significantly associated with interest in camp. No interactive effect between the motivation and ARC support variables was found.

4.0 DISCUSSION AND IMPLICATIONS

Two major findings emerge from the analyses. First, the peers and counselors at camp were seen as being supportive of campers' needs for ARC and subsequent interest in camp. Second, motivation to attend camp had a significant bearing on interest in camp following in-camp ARC support from counselors and peers; this suggests that precamp dispositions are a powerful influence to overcome.

Not surprisingly, this study suggests that the influences of counselors and peers were important in achieving higher levels of interest in camp. While camp activities were distinct from the relationships with people that were experienced within the activity, within-activity support was not associated with interest in camp. Given these findings, it appears that activities are the context of interest development, while feeling connected to others in the activities is the mechanism. These relationships were seen to be important sources for the development of interest in camp. Other studies on the salience of adolescent girls' friendships in other out-of-school time (OST) contexts also support this finding (e.g. Dwyer et al., 2006; Loder & Hirsch, 2003; Watson et al., 2000).

Of the two relationship-based supports (peer and counselor), the support from counselors had the greater impact on campers' reported interest in camp.

These findings support the growing body of literature that suggest that adults leading structured activities are influential in the lives of young people (Larson et al., 2005). Positive relationships between young people and non-parental adults in their lives can also improve their health and well-being (Grossman & Bulle, 2006). Youth program settings such as summer camps, after-school programs, and sports can be contexts where supportive adults provide opportunities for ARC and can influence young peoples' interests in these programs. As evidenced in this study, high levels of support can even counter the effects of initial amotivation and external motivation. The structure of OST programs lends itself to the development of these important developmental processes, for there is a greater opportunity for young people to engage in relationships with nonparental and nonteacher adults in a nurturing, informal, and respectful climate during OST. However, the effect of these relationships on interest is enhanced when young people are internally motivated to participate in the activity or program.

Taking these conclusions into consideration, several practical implications for camp administrators and staff emerge. Camps should focus on building internal motivation in campers before camp starts, as motivation is a strong influence on interest. The promotion of internal motivation could be achieved through precamp open houses, communication with campers about expectations, and connection of campers' existing interests with those opportunities found at camp. These methods would be particularly useful for young people who are amotivated or strongly externally motivated to attend camp. Camps can also solicit information from campers' families such as their levels of motivation to attend, homesickness concerns, etc. This information can be shared with counselors who can also receive training and support for creating interest. Once camp begins, care must be taken with those campers who appear to be less than fully internally motivated to attend camp, so as not to scare them away. The strong influence of counselors can make or break campers' interest in camp, depending on campers' motivation to be there. Counselors can help amotivated and externally

motivated campers find elements of camp that align with their preexisting interests, and give them space to synthesize their own camp experiences.

At camp, counselors create climates that can support campers' needs for autonomy, competence, and relatedness. Autonomy-supportive interaction styles are characterized by adults being sensitive to young people's needs and providing choices (Soenens & Vansteenkiste, 2005). Adults can support autonomy by: providing information about options and actions; acknowledging feelings; incorporating student perspectives into activities; providing optimally challenging tasks; providing structure and guidance that demonstrate the reasons for certain behaviors; and minimizing a performance-based climate (Eisenman, 2007). Competence-supporting experiences can lead to self-determined motivation to continue participation (Ntoumanis, 2005; Standage et al., 2003). Contexts that support young people's needs for competence are those that have a high quality of relatedness with adults who appropriately organize activities to maximize skill-building, provide effective positive feedback, and create feelings of self-efficacy.

While relatedness is a need that can be met within the provision of autonomy and competence, there are some steps that adults can take to meet the needs of young people to feel related and connected to others. For example, Murray (2002) suggests the following for improving relationships: recognize that young people need to feel supported by adults; provide them with opportunities to learn positive relationship skills with adults; learn more about young people's backgrounds, interests, and communities; develop increased awareness of group interactions; and model and expect appropriate behavior. Camp administrators should hire, train, and support staff who are skilled instructors, and who interact with young people in a comfortable, caring, and respectful manner (Grossman & Bulle, 2006).

There are some limitations to this study. As this study was done at one camp, results cannot be generalized to all camps, or even to all girls' camps. This study was exploratory, and a cross-sectional design was used;

future research would benefit from a more quasi-experimental design with pre-, post-, and follow-up tests. Finally, there may have been a social desirability response bias as the girls were at the end of their sessions and experiencing the high that comes at the end of an intensive experience. However, we felt that this retrospective pretest approach (Pratt et al., 2000) was appropriate because it illuminated girls' lived experiences at camp as they reflected on their precamp self-assessments of their motivations to attend camp. This study demonstrates a need for more research on patterns of preinvolvement motivations, as well as on strategies that staff can employ in meeting young people's needs for autonomy, relatedness, and competence. The development of interest in positive youth development contexts such as summer camp is important for young people as they internalize the positive values promoted in such settings. These findings help further research on youth development by elaborating on how interest in positive activities is developed.

5.0 CITATIONS

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