

RESIDENTIAL WILDERNESS PROGRAMS: THE ROLE OF SOCIAL SUPPORT IN INFLUENCING SELF-EVALUATIONS OF MALE ADOLESCENTS

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ABSTRACT

This qualitative study explores the aspects of a residential wilderness experience that informed self-evaluations in male adolescents, ages 12-16. To assess change in self-evaluations and program factors associated with change, qualitative interviews were conducted with adolescents upon entry to the program and four months later. Participants' responses suggested that self-evaluation improved in relation to specific factors in the residential wilderness program. Specifically, increased levels of social support provided through cooperative experiences and opportunities for emotional expression helped participants develop a more positive sense of self. Findings contribute to our knowledge of specific program components offered by residential wilderness programs that are associated with positive adjustment in adolescents.

One of the most important tasks during adolescence is the development and maintenance of a strong sense of self. Positive self-evaluations are essential components in the development of one's sense of self (Harter, 1999; Rosenberg, 1985). Adolescents with negative self-evaluations are at greater risk for anti-social behavior, academic failure, peer rejection, and depression (Bird, Canino, Davies, Zhang, Ramirez, & Lahey, 2001; Dearing, 2004; Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; Ladd, 2005). Families, schools, and communities may seek out interventions to address negative self-evaluations and problem behaviors of adolescents. School-based and community-based interventions are often successful in addressing negative self-

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evaluations and problem behaviors in youth (Farmer, Compton, Burns, & Robertson, 2002; Harter, 1999). However, not all adolescents benefit from these interventions, and some youth may require more intense intervention outside their communities. Therapeutic wilderness programs¹ provide one alternative context that may be effective in addressing negative self-evaluations and promoting the healthful development of self for at-risk youth (Davis-Berman & Berman, 1994; Garst, Schnieder, & Baker, 2001).

Residential wilderness programs may be effective for youth who display problem behaviors due to the programs' emphasis on high levels of social support provided through group activities, emotional expression, and social interactions (Davis-Berman & Berman, 1994; Miller & Sachs, 1992). Interventions that enhance social support contribute to the development of positive self-evaluations (Kagan, 1990; Short, Sandler, & Roosa, 1996). However, researchers have not specifically investigated which aspects of a residential wilderness program might promote social support and thus influence self-evaluations. Identifying the specific components of prevention or intervention approaches that are effective in addressing negative self-evaluations may help researchers identify cost-effective ways to address problems that at-risk adolescents are experiencing. This study contributes to the existing literature by identifying specific aspects of a residential wilderness program that were associated with changes in male adolescents' self-evaluations.

SELF-EVALUATIONS

Negative self-evaluations (i.e., low self-esteem and low social competence) may contribute to the development of problem behaviors (Aunola, Stattin, & Nurmi, 2000; Donnellan et al., 2005). Self-evaluations are individuals' descriptions of their personal attributes and involve both global as well as domain-specific characteristics (Harter, 1999). Self-esteem, a global characteristic, is described as individuals' overall evaluation of their value as a person. Symbolic interaction theory suggests that social support from the environment influences adolescents' internalization of positive or negative feelings about the self (Larossa & Reitzes, 1993). Adolescents who enter wilderness programs may come from environments lacking in social support (Davis-Berman & Berman, 1994) and as a result have internalized negative feelings about the self that influence problem behaviors.

Social competence is also an important component of self-evaluation that has been associated with the development of problem behaviors (Marcus & Kramer, 2001; Parker & Asher, 1987). Generally, the measurement of social competence assesses domain-specific judgments pertaining to individuals' skill level in their social environments (Harter, 1999). Vaughn and Hogan (1990) proposed a model of social competence, which suggested that the interaction of four components (positive relationships with peers, accurate age-appropriate social cognitions, an absence of maladaptive behaviors, and the effective use of social skills) resulted in socially competent behavior. Positive relationships with peers, as evidenced by peer social support, have been associated with fewer problem behaviors and social competence (Bierman & Furman, 1984; Collarossi & Eccles, 2003). Peer rejection, which may be construed as a lack of support from peers, also has been associated with a lack of social competence (Dodge et al., 2003; Hymel, Rubin, Rowden, & Lemare, 1990). Furthermore, social environments that support socially incompetent behaviors (e.g., aggression) may promote a lack of social competence (Cairns, Cairns, & Neckerman, 1989; Farmer, Pearl, & Van Acker, 1996; Cairns & Cairns, 1991; Chang, 2004). The current study examines the effect of peer relationships on social competence for participants in a residential wilderness program.

THE ROLE OF SOCIAL SUPPORT IN SHAPING SELF-EVALUATIONS

Self-evaluations are malleable and thus open to change through intervention (Block & Robins, 1993; Harter, 1998). It is primarily through the changing social environment that individuals alter their conceptions of self. Social support from others, particularly parents, teachers, peers, and close friends is a critical factor in the maintenance of healthful self-esteem and social competence (Demaray, Malecki, Davidson, Hodgso, & Rebus, 2005; Dubois, Burk-Braxton, Swenson, Tevendale, Lockerd, & Moran, 2002). Social support refers to the provisions (attachment to others, social integration, and sense of alliance) afforded by and obtained through social relationships in the environment (Weiss, 1974). Individuals who receive support from multiple sources have a more positive sense of self (Harter, 1999).

Self-evaluations of adolescents who display problem behaviors can be altered through activities that increase social support (Demaray & Malecki, 2002; Pelsma, Hawes, Costello, & Richard, 2004). Social support may be promoted in adolescents' environments through the increased use of cooperative activities, opportunities for emotional

expression, and encouragement of positive peer relations. Residential wilderness programs offer an environment that promotes social support through these activities.

Cooperative Activities

Cooperative activities create an opportunity for peers to provide support for positive self-evaluations. At the core of wilderness programs are group connections promoted through engagement in cooperative activities. Adolescents enrolled in the current program engaged in activities (e.g., ropes courses, group chores) designed to promote cooperative experiences. Environments that utilize cooperative group experiences lead to the development of more positive self-evaluations (Slavin, 1987; Solomon, Battistich, Kim, & Watson, 1997). Although there is no empirical research that suggests a relationship between social support promoted through cooperative activities and self-evaluations, wilderness programs do increase cooperative behaviors among participants (Glass & Benshoff, 2002; Miller & Sachs, 1992) which may increase social competence.

Positive Peer Relationships

Positive self-evaluations are promoted through positive peer relationships that offer increased levels of peer support (Guevremont & Dumas, 1994; Robinson, 1995). Harter (1999) demonstrated that among adolescents perceived parent and classmate support are the greatest predictors of global self-worth. Peer support may be more salient than adult support in adolescent judgments about their self-esteem (Laible et al., 2000; Lord, Eccles, & McCarthy, 1994). Furthermore, social support from classmates may be more important to the development of self-worth than is support provided in close friendships (Harter, Stocker, & Robinson, 1995). These findings have important implications for interventions aimed at changing conceptions of self in adolescents and are consistent with the use of peer support in residential wilderness programs to bring about positive change in evaluations of self (Garst et al., 2001).

Opportunities for Emotional Expression

Wilderness programs provide group experiences (e.g., campfire circle) that allow participants opportunities to express their emotions with the hope that it will lead to increases in personal and interpersonal skills (Russell, 2001). Emotional expression has been characterized as verbal or nonverbal expressions of individuals' feelings that may serve several important developmental functions (e.g., develop-

ment of coping skills, self-understanding, and the promotion of positive interpersonal relationships (Kennedy-Moore & Watson, 2001). Emotional expression elicits social support from significant others (Garai-gordobil, 2004) and has been associated with increases in self-esteem (Mallinckrodt, 1989). Social support in the context of emotional expression may be particularly influential in promoting self-esteem because individuals are able to express themselves and have their feelings validated (Short et al., 1996). No empirical studies have evaluated the effect of social support in the context of emotional expression on self-evaluations of participants enrolled in residential wilderness programs. However, one might hypothesize that opportunities for emotional expression may help participants feel more supported and thus increase positive feelings about self.

PURPOSE

The current study employed qualitative methods to gain insight into the effect of an established residential wilderness program on the self-evaluations of participants. Qualitative interviews with participants enrolled in the residential wilderness program were used to gain insight into the following questions: (a) What aspects of self-evaluations did participants perceive as changing over the four-month period? and (b) In what ways are changes to participants' self-evaluations associated with activities that promote social support in the residential wilderness program?

METHOD

Participants

Participants included 13 male adolescents, ages 12 through 16, who voluntarily enrolled in a year-long residential wilderness program for boys located in the southeastern United States. The current study focused on male adolescents because boys are more likely to exhibit behavioral problems (American Psychiatric Association, 1994) and seek treatment at residential wilderness programs (Russell, 2001). Of the participants 23% identified themselves as African American and 77% as Caucasian. The socioeconomic background of participants was not available.

Based on the information provided in program literature, common characteristics of adolescents enrolled in the program included defi-

ance of authority, behavioral problems, low self-esteem, poor communication skills, and low academic achievement. Many of the boys participating in the program had DSM-IV diagnoses before entering treatment; the most common diagnoses were oppositional defiant disorder, conduct disorder, ADHD, and secondary substance abuse. Criteria for admission to the program included an IQ of 85 or higher, no previous acts of fire setting or animal cruelty, no sexually aggressive behavior, and a primary DSM diagnosis other than substance abuse. The adolescents and their families had sought treatment for mental health issues in the community, but treatment was not successful. As a result, parents chose this residential wilderness program as an alternative means of treatment.

Program Description

The residential wilderness program where the study was conducted is founded in the belief that male adolescents need guidance to succeed in life—guidance provided through education, an experiential component, family services (home visits and family counseling sessions are encouraged), and therapeutic services. Central to successful completion of the program is the role of the group in shaping the social and emotional development of participants. For the duration of the program, the group (8-10 adolescents) serves as participants' support system and helps individuals work through behaviors and problems that brought them to the program. The development of the group as a support system is fostered through daily rituals and activities. These include various group activities: problem solving, daily chores, cooking meals at the campsite, living in cabin-like structures, and participating in campfire circle at night to share the accomplishments and frustrations of the day. In addition, the boys engage in experiential activities such as ropes courses, extended hiking trips, canoe trips, and day trips. Experiential activities help develop problem-solving skills which can be applied to resolving individual or group problems. The successful interactions within the group and improvement in problem-solving skills help improve the adolescents' rate of progress through the program. As they progress, they are given greater leadership roles which ideally increases their self-esteem and serves as a model to new participants.

Progress through the program is also determined by individual goals that adolescents have set with their family service worker. These range from working on family and peer relationships. Progress on individual and group goals is reviewed during weekly team meetings with key staff. These determine if participants will progress to the next stage

of their treatment. In the final stage of the program, boys are expected to have met the following goals: learn to communicate and develop healthful relationships; develop a sense of responsibility for one's actions by developing a sense of empathy and understanding for others; and reunite with their families. Once adolescents have progressed through all stages, they work toward a transition to their home community. Upon reentry into the community, they continue to attend voluntary after-care with the wilderness program.

Study Design

Participation was voluntary and required informed consent from the parent. All those who entered the program between the months of November and March were asked if they wished to take part in the research study. Of those entering the program during this period, 60% agreed to participate. Of the adolescents entering the program during this period, 60% agreed to participate. Adolescents attended interviews on two separate occasions; once upon entrance into the program and then four months later. The interviews consisted of follow-up questions to survey instruments and a semi-structured interview. A graduate student who was unaffiliated with the program and who had training in qualitative interviewing conducted all interviews.

Qualitative Instruments

Follow-up questions. At Time 1 and Time 2, participants completed the Self-Perception Profile for Adolescents (*SPP-A*; Harter, 1988). This measure consisted of forced choice questions designed to measure domain-specific judgments of competence in nine domains, as well as global self-worth. Harter suggested that follow-up questions to the *SPP-A* can be developed so that participants can reflect upon the basis of their self-evaluations. Participants' responses on the *SPP-A* were used as probes to allow them to reflect on their feelings of general self-worth, close friendships, and behavioral and social competence. Specifically, adolescents were asked to elaborate on their answers to a specific probe (e.g., "some teenagers are often disappointed with themselves but other teenagers are pretty pleased with themselves") by describing the basis of their feelings and the factors in the past and present environment that contributed to these self-evaluations. Sample follow-up questions to the *SPP-A* included "What aspects of the previous environment made it hard or easy for you to make friends?" (to assess social competence at T1) and "has this program contributed to feelings about your self?" (to assess self-worth at T2).

Semi-structured interview. An interview was developed by the principal investigator to evaluate participants' perceptions of the aspects of the wilderness program that contributed to a change in their self-evaluations. To assure content validity of conversations with staff at the program, a review of the literature on interventions designed to address self-evaluations, and research on wilderness programs guided the development of the semi-structured interview. The interview protocols used at Time 1 and Time 2 were similar but included the following variations. First, at Time 2, a list of activities was presented and participants were asked about the role of each in the development of their social competence and self-esteem. Second, responses given at Time 1 guided the development of participants' interview at Time 2. For example at Time 1, participants detailed the problem behaviors that had brought them to the program. During the Time 2 interview, participants reflected on how the program might have helped address specific problems listed at Time 1. (See Cook, 2004 for the complete interview protocols.) Sample questions from the Time 1 interview included "Can you tell me about some of the issues you are struggling with?" and "How do you think this program might help you overcome some of these issues?" Sample questions from Time 2 included "Do you think that your ability to get along with others has changed over the last few months? How?" and "Is there one thing to which you would attribute a change in your self?" Interviews lasted approximately one hour.

RESULTS

The current study had two main objectives: to evaluate participants' perception of change in self-evaluations over the four-month period and to identify the specific aspects of residential wilderness programs that participants felt were most responsible for changes in self-evaluations.

Coding

Audiotapes were transcribed verbatim within one week of the interview. Prior to the first interview, preliminary codes included peer relations, self-esteem, feelings of low competence, poor social skills, and social support. A two-step process to analyze Time 1 interviews then followed. Transcripts were read and quotations that supported the preliminary codes identified. Other relevant codes emerged and were added. Once all interviews were coded, each transcript was reviewed

a second time, and the revised codes applied. To enhance the credibility of the findings, the interviews were analyzed for responses that both confirmed and disconfirmed the established codes (Patton, 2002).

A similar process was used to analyze the second round of interviews. The coding scheme established at Time 1, as well as preliminary codes related to the intervention literature, formed the basis of analyses for the Time 2 transcripts. Preliminary codes at Time 2 included cooperative activities, social support, performance accomplishments, modeling, and skill development. Related themes emerged during the first round of analysis and were used as codes in the second analysis of the transcripts. Once all transcripts from the Time 1 and Time 2 interviews were analyzed, individual transcripts were compared to detect changes in participants' perceptions over the four-month period.

Results are organized into two sections. The first presents findings that address participants' thoughts on how their self-evaluations changed over the four-month period. Themes (e.g., social skills, aggression, and level of voice) are presented in reference to the constructs they influenced (i.e., self-esteem or social competence). The second section presents findings regarding aspects of the program that participants believed helped bring about changes in their self-evaluations.

Changes in Self-esteem

Levels of self-esteem. To evaluate changes in self-evaluations, participants' reflections on self-esteem change during the four months are presented. During the Time 1 interviews, several participants made statements about their dissatisfaction with themselves and other self-deprecating remarks that suggested a sense of low self-esteem.

I don't really feel like I have talents or anything like that. (ID 04)

I feel pretty disappointed with myself mainly because of the choices I made. (ID 05)

I honestly feel like I should not be around. (ID 06)

I am disappointed because I am screwed up and I am in here. I was bad to my mom and it makes me feel bad about myself. (ID 11)

At the time of the second interview, all participants who manifested low self-esteem upon entry to the program reported that their self-esteem was more positive because of time spent in the wilderness program. Furthermore, during the course of the interview, five partici-

pants (57%) who had not previously disclosed feelings of low self-esteem indicated that they felt better about themselves, suggesting an increase in self-evaluations.

A lot of the things that we do here give you a sense of accomplishment which helps in making me feel better about myself. (ID 04)

This place is helping me with my self-esteem. I just feel much happier and more energetic than when I first got here. (ID 06)

This place makes you feel stronger mentally and physically. It helps you be able to deal with things in a positive way. (ID 09)

I am feeling a lot better about myself. I want to do more with my life now. (ID 11)

Responses suggested that participants' self-evaluations changed over the four months of program participation. Their willingness to discuss changes in self-esteem at Time 2 but not at Time 1 implied that they were not able to admit to feelings of low self-esteem early on in the program. This inability to express feelings of self may have been because participants felt a lack of "voice" upon entrance to the program.

Changes in level of voice. Participants described difficulty "being themselves" before entering the program. During adolescence, conflicting roles lead individuals to question what constitutes the true self. The true self is often overshadowed by the false self and results in adolescents experiencing a "loss of voice." Gilligan (1982) described it as the suppression of true thoughts and feelings. Loss of voice has been associated with negative self-evaluations (Johnson, 1995). Many participants struggled with voice suggesting that levels of self-esteem may have been low during the first interview.

In the past I did not feel like people understood me. I was not able to be myself because people did not understand where I was coming from. (05)

I thought that I would not be accepted the way that I was so I put up a front. (ID 11)

To be honest I will change a little bit of myself to be friends with someone and that is what makes all my relationships superficial. (ID 12)

During the second interview, participants indicated that they had found their real voices, mostly because of expressing themselves.

I am able to open up. I used to be very closed up and I did not talk to many people and I did not feel like I could be myself before coming here. (ID 04)

I didn't usually express my feelings to people outside of here because I thought it made me soft and I had to keep up an image but I learned here that there is no point because it is not really who you are. (ID 05)

Before I come here I was nervous and scared to be myself and it (the group) helped me feel more comfortable in sharing stuff about me. (ID 11)

The theme of voice is intriguing in this sample of boys since loss of voice has traditionally been discussed as an issue for girls (Gilligan, 1982). However, more recent research has acknowledged the role voice plays in the lives of adolescent males (Harter et al., 1998). Participants' responses at Interview 1 suggested that true self-expression did not occur in their previous environments. It is likely that their ability to gain a sense of voice resulted from opportunities in the program to open up and express true feelings.

Changes in Social Competence

Another aspect of self-perception that changed positively over the four months was participants' social competence. Analyses of interview data revealed two primary social domains (social skills and aggressive behavior) with which participants struggled at the beginning of the program. Participants perceived that positive changes occurred in these domains during their time in the program.

Changes in social skills. In the first interview, participants indicated that they experienced difficulty interacting with others due to lack of social skills.

I did not like being around people so I shut myself in a room all day. I felt like people were not responsive to me. (ID 05)

Uh, I am always quiet, and if I do talk a lot it is either not the right thing to say or I end up arguing. (ID 06)

My personality makes it hard for me to make friends. I always want to talk and sometimes I cannot shut up, I guess that can be a problem. (ID 11)

During the second interview, all participants were asked if their ability to get along with others had changed as result of participation

in the program. The vast majority (92%) who had noted a problem with social skills at entry into the program, indicated that it had helped them with their relationships with others. Furthermore, those who had not explicitly admitted to social skill problems four months earlier credited the program with helping in their relationships with others.

I am being more mature with people and not as hyper. I can control myself much better. (ID 04)

A lot of things here have helped me learn how to respond to people. (ID 06)

I have learned the right way to word things and bring it to a person, so that we can get along. (ID 07)

This place helps in learning how to deal with people in the right way. (ID 11)

Participants' responses at Time 2 suggested that the program taught social problem-solving skills, supporting research which suggests that teaching these skills is an effective intervention for increasing social competence (Guevremont & Foster, 1993; Shure, 1981)

Changes in aggressive behaviors. During the interviews, the theme of aggression emerged as an issue with which participants were struggling. Aggression has been found to be a form of social incompetence (Dodge, Pettit, McClaskey, & Brown, 1986). During the first interview, participants indicated that they needed to work on managing their anger.

If people start messing with me and running their mouth, I get mad at them and act out. (ID 13)

I get into a lot of fights. I argued a lot with people, but like I did not think that I had trouble getting along with them. (ID 01)

Um, one thing that I am here to work on is that I have some pretty bad anger management. Sometimes I yell at people. Sometimes I say nasty things. (ID 07)

During the second interview, all of the participants who were initially struggling with aggressive behaviors were asked if and how the program had helped address this problem. All who had discussed anger problems at Time 1 reported that they had learned to control their anger and were less aggressive than they had been four months earlier.

They say there has been a big change with my anger and I feel it too. (ID 13)

I don't argue as much. I have learned to bring things to people without yelling. (ID 01)

I have been doing a ton better on my anger management. (ID 07)

Aggression may result from deficits in social cognition (Dodge et al., 2003; Egan, Monson, & Perry, 1998), a theme expressed in participants' reflections. This may be a result of peer rejection (Dodge et al., 2003) or being in situations that promote aggressive behavior (Chang, 2004; Farmer & Cadwallar, 2000). It is unclear whether participants' past social environment was reinforcing their aggressive behaviors. What is clear is that the context of the program did not support the use of aggressive behaviors (as might be suggested by models that view peer contagion as a problem in interventions), and that participants began to change their behaviors because of time spent in the program.

Key Program Features

A main objective of the current study was to uncover specific aspects of the residential wilderness program participants perceived as influencing their self-evaluations. During the Time 2 interview, a list of program activities was read to participants, who then reflected on which activities helped bring about changes in their self-esteem and social competence. Three features emerged as important, and participants described how they helped them improve in these areas; these were social support, cooperative activities, and emotional expression.

Social support. Central to the philosophy of wilderness programs is their reliance on the group to provide social support to encourage changes in negative behaviors (Davis-Berman & Berman, 1994). During the second interview, participants described the importance of social support from peers in the program.

Just the support from others in the group is what has helped me feel accepted here. (ID 01)

At the ropes course you have to have someone there to help you out so that you don't fall, so that helps build relationships. (ID 07)

Planned trips help (in relationships) because you support one another and motivate one another to get through the trip. (ID 08)

I would attribute me changing to the relationships with people here and realizing that there are people that care about you. (ID 11)

We hiked the Appalachian Trail and you help each other out and the group comes back a whole lot more supportive of each other. (ID 12)

Peer relationships were critical to participants feeling accepted and supported. All of the above comments, with the exception of ID 01, were generated during the portion of the interview when participants were asked if specific activities influenced positive changes in social competence. Responses suggested that participants credited peer support during group activities to the development of socially competent behaviors. This discussion of social support from peers is especially interesting given that at Time 1, participants identified a lack of social support in their past environments as a factor in their enrollment in the wilderness program.

I think that if my previous environment would have had the support maybe I could have done the right thing. (ID 03, Time 1)

Well a lot of people bashed me down and were not giving me a chance to tell how I felt. I wasn't being supported. (ID 06, Time 1)

The people that I hung out with did not really accept me for who I am and they were trying to bring me down. They were not there to put something stable under my feet. (ID 07, Time 1)

Maybe if I would have had more of a positive role model or relationship with my father I might have been able to do the right thing. (ID 09, Time 1)

Participants' recognition of the lack of social support before program participation, and their acknowledgment of the role social support played in the promotion of adaptive behaviors through specific program features is striking.

Cooperative activities. Important sources of social support in residential wilderness programs are cooperative activities. These increase self-esteem and social competence (Ciampa, Farr, & Kaplan, 2000; Rubin, 1999; Slavin, 1987). During the second interview, participants indicated that the cooperative aspects of the program helped them develop positive relationships within their group and to be more accepting of peers in general.

Yeah the stuff here (group consequences) puts pressure on you to build relationships, so when you are doing something together you want to accomplish it, or your behavior affects everyone around you. (ID 04)

Yes, it taught me (ropes course) how to work with people equally, teamwork and stuff like that. The whole thing here is that if someone messes up it affects the group and this helps you realize that all your actions affect other people. (ID 09)

Yeah activities here have helped in relationships by working on group and teamwork. (ID 12)

I think that this place helps (build trust) by having to be around people so much and accomplish things together. (ID 07)

Participants recognized the emphasis the program placed on group. Interestingly, participants' responses did not explicitly address the role of cooperative activities in relation to self-esteem and social competence but instead discussed the effect of group activities on relationship development and trust. It is noteworthy that they highlighted the importance of group activities to their peer relationships, since in the Time 1 interview, many identified difficulties with peer relations as a source of their general problems.

I think a lot of people I hung out with in my last environment were making it hard for me to do the right thing. (ID 04)

All my friends did drugs so it made it hard for me to do the right thing. (ID 09)

The crowd that I was hanging with really got me into a lot of stuff. I pushed true friends away because of it. (ID 10)

Positive peer relationships support the healthy development of self (Berndt & Keefe, 1995; Colarossi & Eccles, 2003; Newcomb, 1990). Adolescents who have negative peer relationships and who experience peer pressure report lower levels of self-esteem (Brendgen, Bukowski, Vitaro, 2000; Dielman, 1987). The current findings suggest that cooperative activities that promoted prosocial values enabled participants to develop more positive peer relationships which may have led to improvement in their social competence and self-esteem.

Expressing emotions. Perhaps the most unexpected influence on self-esteem, from the participants' perspective, was the emphasis the program placed on expressing emotions. Although not a theme originally anticipated, allowing adolescents to express their true feelings may increase levels of voice, a construct linked to self-esteem (Harter et al., 1998). The expression of feelings is also an integral part of establishing interpersonal relationships. Specifically, emotional expression in a group setting may have led participants to develop empathy, which

contributes to the development of positive interpersonal relationships during adolescence (Schonert-Reichl, 1993). Opportunities for emotional expression may have created a context in which other participants were able to provide feedback and empathy which resulted in improvement in social competence. Finally, emotional expression can elicit social support, which may promote the development of self-esteem (Garaigordobil, 2004).

One of the main things that helps me here is group at night. We all open up to people and you get to express your feelings . (ID 02)

Whenever we put our feelings out there we learn that that is a great way to develop a relationship. (ID 04)

Yes, (campfire group) helps just because I never expressed my feelings before and it helps with that and makes me feel better. (ID 12)

I had so much anger built up inside me and they made me realize that I do not have to let it build up, if I just let it out and express it all the time, I will feel much better. (ID 13)

Responses indicated that self-esteem grew largely because of opportunities for self-expression, typically at campfire group. Furthermore, expression of emotions helped self-evaluations by enhancing the development of relationships and may have helped curb aggression.

I had a pretty bad anger problem before and I have worked on that just by talking about it, approaching group members in the right way. Letting it go instead of holding it all in has helped me a lot. (ID 09, Time 2)

Before I would not have put up with all these people's crap. I would just automatically fight someone if they pissed me off, but now I find better ways to express it through group. (ID 11, Time 2)

DISCUSSION

Research often overlooks adolescents' perceptions of why specific interventions are successful or unsuccessful at changing problem behaviors. The current study provides valuable insight into male adolescents' perceptions of aspects of a residential wilderness program that brought about change in self-evaluations over a four-month period. Specifically, participants expressed that positive changes in self-esteem and social competence resulted from activities that promoted high levels of social support.

Changes in Self-Evaluations

Reflections from participants suggested there was a change in self-evaluations over the four-month period. Specifically, in reference to social competence, participants described a positive change in social skills and peer relations at the Time 2 interview, four months after entry into the program. Both social skills and peer relations influence social competence (Vaughn & Hogan, 1990). Interestingly, upon entry into the program, participants cited more problems with social skills than with peer relationships. The majority of participants did not feel they were socially isolated before entry into the program. This finding is consistent with research suggesting that adolescents who display maladaptive social behaviors may not be lacking in peer relations (Cairns & Cairns, 1991; Farmer, 2000). Specifically, adolescents who are aggressive are not socially isolated but may affiliate with peers who are also aggressive. Participants' responses during both interviews indicated relationships with peers in their home environment revolved around problem behaviors. This finding supports the conclusion that socially competent behaviors improved because of changing perceptions associated with aggression and social skills but not necessarily an increase in acceptance by peers.

Responses further suggested that self-esteem increased over the four months. Although few participants explicitly admitted to low levels of self-esteem, they made statements which revealed negative feelings about their abilities and revealed a lack of voice in relation to self-esteem. Negative feelings expressed by participants changed because of time spent in the program, as evidenced by reflections during the Time 2 interview. Furthermore, upon entry into the program, they expressed their inability to be themselves. Four months later, they cited a positive change in their ability to be true to themselves. Level of voice is a correlate of self-esteem (Harter, 1999; Johnson, 1995). Future research needs to clarify the role level of voice plays in the development of self-esteem in residential wilderness programs.

Social Support as a Mediator of Program Activities on Self-Evaluations

The second purpose of the interviews was to assess perceptions of the aspects of residential wilderness programs that helped change self-evaluations. Responses suggested that the promotion of social support through cooperative activities and emotional expression helped explain change in self-evaluations. Furthermore, social support was the only element the majority of participants expressed as lacking in their previous environment but was present in the program—suggesting that social support was particularly salient in bringing about changes in self-evaluations.

Participants' responses suggested that social support during group activities may have explained the influence of cooperative activities on self-perceptions. This finding has been discussed in previous literature (Cowie & Berdondini, 2001). Furthermore, past research supports the finding that social support helps in the development of socially appropriate behaviors (Harter, 1999; Johnson & Johnson, 1999). Cooperative experiences within the group might have also served to promote self-esteem. Participants' responses indicated that higher levels of peer support during cooperative activities contributed to positive feelings of self.

Peer support during adolescence is important to the development of a healthful sense of self (Bierman & Furman, 1984; Fry & Rothlisberger, 1996). Responses supported this finding and suggested that the increase in social support offered by residential wilderness programs may be more important than other factors in bringing about changes in self-esteem. Further support for this claim comes from the role that social support played in emotional expression during the course of the program. In the current study, emotional expression occurred in the confines of the group. Emotional expression through group therapy can lead to the enhancement of self-esteem and help in relationships with peers (Mishna, 1996). Responses suggested that emotional expression created an environment of support where participants could work through their problems. This environment in turn may have contributed to an increase in participants' self-esteem and competence in relationships with peers.

In summary, the results offer reasonable support for the finding that self-evaluations changed because of specific aspects of the residential wilderness environment. Emotional expression was more influential in shaping self-esteem, whereas cooperative activities were more important in the development of social competence. Participants' responses suggested that social support is important in the development of self-evaluations and explained the effect of cooperative activities and emotional expression on self-evaluations.

Implications

Focusing on the specific aspects of the program that were successful in changing self-evaluations has important implications for practice. Perceptions regarding self-esteem and social competence change can be incorporated into school and community interventions. Several general strategies, such as increased social support and the use of cooperative activities, are used in the school context to promote social competence and self-esteem. However, more specific activities cited

as helpful in addressing self-perceptions in the residential wilderness setting (e.g., extended wilderness trips, ropes course activities, stage goals, and campfire circle) could be incorporated into school-based interventions.

Aside from the specific activities employed in residential wilderness programs, it is also important to consider what it is about the environment in these settings that makes it easier for adolescents to change their self-evaluations. Residential wilderness programs focus on changing both the behaviors of participants and their cognitions. In the current study, responses indicated that cognitions and behaviors changed because the social environment supported prosocial behaviors. Furthermore, although many interventions offered in schools and communities provide adolescents with skill development but do not actually change the social environment. To effectively change problem behaviors, the social environment must also change so that newly learned adaptive behaviors are promoted and rewarded (Bullis, Sprague, & Walker, 2001; Farmer, 2000). Residential wilderness programs recognize the importance of not only changing the self-evaluations of at-risk students but also changing the context that may be supporting or ignoring their behavior.

Limitations and Future Directions

This study supports the research that suggests residential wilderness programs result in positive changes for male adolescents. Moreover, this study addressed the specific aspects of the program participants found to be particularly salient in increasing their social competence and self-esteem, an area largely overlooked in research. However, there are limitations to the current study, and several additional areas of research appear warranted.

Time 2 interviews were conducted at the end of four months. The program where the study was conducted typically lasted 9 to 12 months. As a result, the study was unable to explore the extent to which positive gains in the wilderness setting generalized to the home environment. Currently, few studies investigate the effect of such programs longitudinally and post-program. Future research should explore participants' transition to the home environment.

Furthermore, future research needs to take into account the effect of wilderness programs on different populations of students. For example, a similar avenue of research could be explored comparing the experience of female adolescents in residential wilderness programs to that of male adolescents. Research suggests interventions aimed at changing social competence and self-esteem need to consider gender differences to change these constructs (Diedrick, 1988; Harter, 1999).

Finally, the current study only assessed social support in regard to the residential environment. Future research on residential programs should measure the extent to which the home environment provides social support during the duration of the program. It is possible that adolescents in the wilderness program who received more support from the home environment experienced a more positive outcome from the intervention.

FOOTNOTE

¹Wilderness programs (e.g., outdoor therapeutic, residential wilderness therapy programs, outdoor education programs, and adventure-based programming) share general philosophies and core components including (a) an emphasis on group process, (b) challenges that increase in difficulty, (c) therapeutic techniques, (d) use of natural consequences as learning and therapeutic tools, and (e) defined stages through which individuals progress sequentially (Russell, 2001). Adolescents participating in wilderness programs attain goals that include increases to self-esteem, cooperation, independence, increased sense of responsibility for self and others, greater awareness of dysfunctional behavior, increase in trust, and development of new ways to recreate (see Davis-Berman & Berman, 1994 for a full review). A key component of wilderness programs to help participants meet these goals is a focus on the development of supportive relationships.

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