Project Adventure and Self Concept of Academically Talented Adolescent Boys

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Abstract

This was a pilot study to examine the efficacy of an adventure based experience and self concept in academically talented adolescents. High school senior boys (N = 142) ages 16-17 years at a private school in the Boston area participated in a one-day Project Adventure course and took the Student Self-Concept Scale preintervention and postintervention and rated themselves on their self-confidence and the importance of self-concept attributes. Project Adventure is a series of group graded outdoor activities designed to challenge the participant and facilitate group problem solving. The scale measures adolescents' self-confidence and their performance expectations regarding behaviors or attributes in the areas of self-image, academic and social. The composite self-confidence score was significantly improved ($p < .001$) at the conclusion of the experience. The students' evaluations of the importance of self-concept increased significantly for academic ($p = .002$) and social ($p < .001$) but not for self-image ($p = .14$). The outcome confidence scale measures the students' evaluations that their behavior will result in a specific outcome increased significantly for academic ($p = .005$) and social ($p = .004$) but not for self-image ($p = .10$). This was a pre-experimental (one group, pretest-posttest) design conducted as a pilot study in the area of academically talented students in a private school.

The purpose of this pilot study was to examine the efficacy of Adventure Based Counseling (ABC) and self-concept in academically above average adolescent boys in a private school. Self-esteem refers to the value that one holds toward oneself or a person's overall judgment of the self (Briggs, 1974; Rosenberg, 1979; Wylie, 1979). Overall efficacy of Adventure Based Counseling (ABC) and its relationship to self-esteem have been investigated. Cason and Gillis (1994) conducted a meta-analysis of ABC and reported an overall rate of improvement to be 12.2%. Davis-Berman and Berman (1994) looked at self-efficacy, behavioral difficulties and locus of control at post-test and at long term follow up and found that improvements were maintained over time (one and two years). The conceptual framework of ABC is based on several counseling theories including the following; behavioral, cognitive, and experiential learning. Behavioral theory is evidenced in a stimulus activity which provokes a response which is reinforced by the group. Modeling and imitation are reinforced in the group process. The Cognitive perspective is represented in the group as it defines rules; problem solves and processes group work. The affective perspective is played out as the group constructs a full value contract, encourages members to take risks and place themselves into a state of disequilibrium and then process the risk taken (Schoel, Prouty, & Radcliffe, 1988). Psychological benefits reported include new confidence in oneself, increased willingness to take risks, improved self-concept, and enhanced skills in leadership, logical reasoning and greater reflective thinking (Priest & Gass, 1997).

Psychological characteristics have been assessed in gifted students and different clusters emerged, one group 16% had a low overall self-concept (Dixon, Cross & Adams, 2001). Often it has been thought that gifted adolescents posses good self-concepts secondary to their academic success, but self-esteem is specific to the domain. Exceptional performance in one area may have a

positive impact in that area but may have a negative impact on other academic self-concepts (Plucker & Stocking, 2001). Grades begin to slide downhill in some academically talented students in their senior year of high school (Ponsford & Lapadat, 2001). In fact, negative self-perceptions and feelings that one is different make academically talented students at risk for social adjustment problems (Ablard, 1997). There has not been a study of Project Adventure with academically above average students. This study was a pilot study that investigated if a Project Adventure program improved self-concept with academically talented students. These students are assumed to possess self-confidence and self-efficacy because they perform well academically when in fact they may not. If the academically talented do not have a concomitant high self-esteem then an increase in self-esteem and self-efficacy would be expected with a Project Adventure experience.

Method

Participants

The administration from a private school, enrolling students with above average GPA's in the Boston area volunteered their senior class of boys to participate in the project adventure course. Students ($N = 142$) senior boys ages 16 to 17 years of age were the participants. The families' socioeconomic level was predominately upper middle-class and mostly Caucasian.

Instruments

Student Self-Concept Scale.

The Student Self-Concept Scale (SSCS) was administered (Gresham, Elliot & Evans-Fernanez, 1993). Level 2 of the scale was used because it is standardized on high school age students. The SSCS is a self-report measure comprised of questions dealing with self-efficacy and self-esteem. Two areas closely associated with self-concept are subjective task value and outcome expectations. Students rate 50 items on the degree of *self-confidence* in performing certain behaviors (self-efficacy) or in having certain culturally valued personal attributes (self-esteem). The self confidence ratings are made on a 3 point scale: 0 (*not at all),* 1 *(not sure),* or 2 *(confident)*. These same 50 items are again rated in terms of the subjective task value *importance* these behaviors or attributes hold for them. Importance ratings are made on a 3 point scale; 0 (*not important),* 1 *(important),* or 2 *(critical)*. The importance rating dimension helps one to identify the consistency between what students feel confident in possessing or doing and what the students value in terms of attributes and behaviors. The last area is *outcome confidence* with 15 items. This is a degree of confidence that performing certain behaviors or possessing certain attributes will lead to specific outcomes. Each outcome measure is rated on a 3 point scale: 0 (*not at all),* 1*(not sure),* or 2 *(confident)*. A lie scale is included to detect "fake good". The content domains of the above three areas are *self-image, academic***,** and *social*. There are two different composite scores. A self-confidence composite and an outcome confidence composite are derived from the sums of the self-confidence subscales scores and the outcome confidence subscale scores respectively. Raw scores are converted to standard scores (mean of 100 and a standard deviation of 15) and percentile rank.

Reliability

Two types of reliability are estimated; coefficient alpha and test-retest. Internal consistency coefficient alpha reliabilities range from .77 to .92 for both the self-confidence composite and for the outcome confidence composite. Subscale estimates are lower, as expected because they are based on fewer items. Depending on the subscale, they range from a low of .55 for outcome confidence in academic to a high of .86 in importance of academic. Excluding the low academic alpha all other subscale estimates are above .67.

Test-retest reliabilities were on two occasions separated by approximately four weeks. The self-confidence subscale ratings, ranged from a

stability coefficient of .77 on social, to the composite rating of .84. The importance subscale ratings ranged from 69 to .72. Outcome confidence subscales ratings had a composite of .72.

Validity

The SSCS used several validation strategies; content, social, criterion-related and construct validity studies. Content: Experienced researchers and practitioners nominated a pool of items, from which the SSCS was selected. Social: The subjective task value was used to compose a table showing the importance ratings for students in grades 3-12. Criterion-related: The SSCS had been correlated with the Social Skills Ratings System (SSRS), Child Behavior Checklist, Coopersmith Self-Esteem, the Piers-Harris Children's Self-Concept Scale. The results of the SSRS and the SSCS suggest a moderate relationship between the SSCS confidence ratings and self-reported social skills as measured by the SSRS. The strongest correlations were the SSCS social subscale with the SSRS empathy subscale (r =.47) and the SSCS academic subscale with the SSRS self-control subscale (r =.53). SSCS and the Child Behavior Checklist (CBCL) relationship resulted in the strongest correlation between the SSCS academic self-confidence subscale and the CBCL school performance scale (r = *.62)*. A strong negative correlation was found between the SSCS academic self-confidence ratings and the CBCL externalizing scale (r = -.62). In general moderate negative correlations were demonstrated between SSCS self-confidence subscale and composite ratings and CBCL problem scales. SSCS and the Coopersmith Self-Esteem Inventories showed the strongest correlation with the CSEI total self score and the self-concept composite (r = .54). Moderate correlations were demonstrated between SSCS subscale self-confidence ratings and CSEI total self score. Correlations of the SSCS academic and social subscales with the CSEI school/academic and social scores are relatively low. The SSCS and the Piers-Harris Children's Self-Confidence Scale ratings ranged from .36 to .64. All correlations for all validity studies are included in the manual. Construct Validity: Tables are provided for correlations between the SSCS and the subscales of the Tennessee Self-Concept Scale. Subscales and the total raw score for self-confidence and outcome confidence ratings are provided. Moderate to high correlations between the self-confidence and outcome confidence ratings are shown.

Project Adventure Activities

Trolley Walk Four 4x4's, no more than 6ft, with an equal number of footropes inserted through the boards at 12" intervals. The group must walk a prescribed course with their right feet placed on one of the 4x4's, and their left feet on the other, holding onto the ropes. If any member falls off, the group returns to the starting point to begin again.

All Aboard A 2'x2' platform that is built on 4x4s. The group must attempt to get all the members on the platform for a specific period of time without touching the ground.

Trust Fall A platform ranging from 2 to 4' above the ground from which an individual falls backwards into the arms of spotters. This is a graded activity that begins with fall backwards into the arms of a spotter while on the ground and then progresses to a group of spotters.

Spiders Web A prefabricated rope web strung between two trees made up of 17 openings. The object is for the group to get all members though the web without touching the rope.

The Wall A smooth surfaced wall from 10' to 12', which has a platform, built in the back and top on one side. The platform allows for a standing surface once an individual has climbed over the top. The goal is to get all members of the group over the wall.

Electric Fence A wire or rope 3' off the ground. The object is to get all of the members of the group over the fence while staying connected to each other.

Toxic Waste A tire tube with 8-10 long ropes (10') tied around the tube and coming off the tube

in a spindle formation. There is a box on the ground 2' square, with various shaped objects dispersed all over the ground within the circumference of the 1' circle. Group members each hold a rope and take a position around the circle. Once in position, no one can move his/her feet. The group goal is to pick up all the objects and place them in the box using the tire tube.

Stepping Stones 1' square Styrofoam block. The group can only step on the stepping-stone to get from point A to B, with one less block than there are members. The goal is to get all members from point A to point B.

Four Way Tug of War This is a traditional tug of war with 4 different groups in competition against each other.

Group Juggling Circle of participants tosses a ball across the circle to a teammate, saying the person's name. The sequence is continued until everyone is able to remember all members' names.

Warp Speed This activity is similar to Group Juggling except the goal is for the group to devise strategies to increase performance speed.

This is a sample of the activities that the groups performed throughout the day. The activities were all low elements performed on the ground.

Procedure

The participants were assigned to their group by counting off numbers one through ten. The course was a one day low level course comprised of activities which included the following elements; sense of adventure, a high level of expectation, success orientation, atmosphere of mutual support, a sense of fun, group problem solving, and group reflection and evaluation. The boys were divided into groups of ten by counting off numbers and randomly assigned a leader, who has been trained by Project Adventure. All groups performed the same set of Project Adventure elements. Pretests and posttests were administered to assess their feelings and thoughts concerning self-confidence, the participants' estimation of importance of three areas, and their self-expectations concerning the three measures (self-image, academic and social self).

The posttests were administered one week after the experience. The rationale for administering the posttest one week later was to avoid a halo effect that may have been evident if the instrument was administered on the same day as the activities.

Prior to starting the day the members are asked to formulate individual goals and group goals for the project. They are also asked to indicate a measurable means to assess if the goals were accomplished. The group then decides on rules of operation for the group. The leader debriefs after each activity and at the conclusion of the program. The purpose of the activities is to promote group process. Examples of facilitating process questions are the following:

1. Did the group accomplish the task? If so, how?
2. Did you feel that you were listened to? When?
3. Was there a group leader?
4. Did the group listen to each other?
5. What worked well? What did not work? Why?

These are just some examples of the process questions that the leader will ask the group to promote insightful thinking on the part of the group.

Results

The composite score comparison of the mean difference for the pretest and posttest for the self confidence was (M = -5.17, SD = 16.49), t(141) = -3.64, p<.001. The composite scale is composed of all the self-confidence subscales; self-image, academic and social. The self-image mean difference for the pretest and posttest group scores was (M = -3.29, SD = 14.44), t(141) = -2.71, p = .007. The self-confidence in academics mean score comparison for pretest and posttest was (M = -4.35, SD = 13.84), t(141) = -3.74, p<.001. Lastly the self-confidence in social was (M = -3.25, SD = 14.47), t(141) = -2.67, p = .008 as presented in Figure 1.

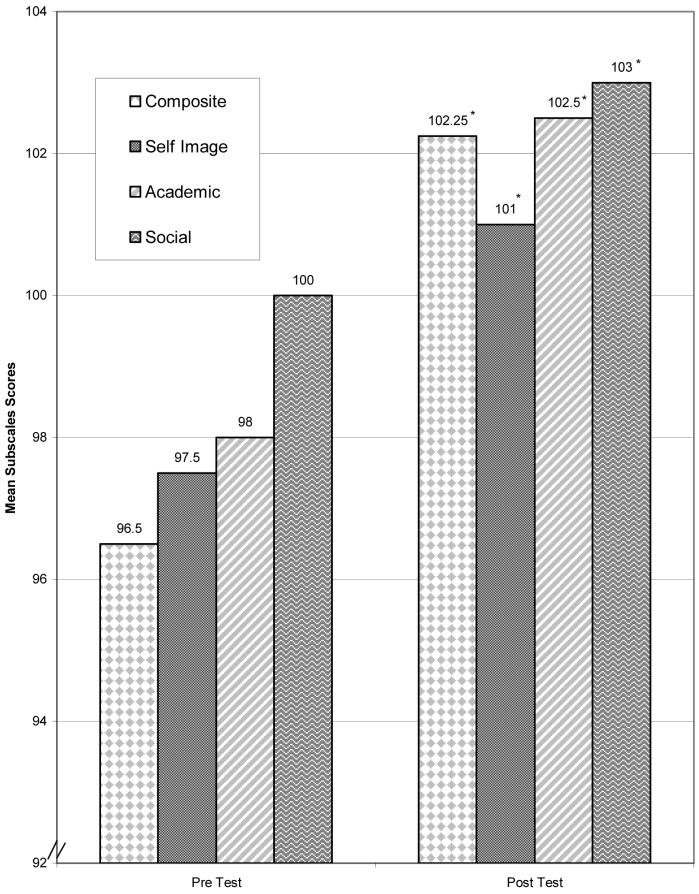

Figure 1. Mean scores for (N = 142) high school senior boys on student self confidence scales. * p < .01.

The importance scale measures a person's evaluation of the importance of the three areas. There is no composite scale for this area. Importance of self image did not increase (*M* = -2.33, SD = 18.7), t(141) = -1.49, p = .14, but the academic rating and the social were significant; (*M* = -3.30, SD = 12.24) t(141) = -3.22, p = .002 and (*M* = -4.77, SD = 13.68), t(141) = -4.15, p<.001. Lastly, the outcome confidence scale measures the adolescents' expectations that their behavior will result in a specific outcome. Self image was not significant; (M = -0.37, SD = 2.69), t(141) = -1.66, p =.100. The academic and social scales were significant; (M = -5.2, SD = 2.48), t(141) = -2.5, p = .005 and (M = -4.09, SD = 1.69), t(141) = -2.88, p = .004 as presented in Table 1.

Table 1.

Outcome Confidence Scale

Source	Mean Diff	SD	Sig
Self Image	-0.37	2.69	.100
Academic	-5.20	2.48	.005
Social	-4.09	1.69	.004

Discussion

The purpose of this study was to examine the efficacy of Adventure Based Counseling (ABC) and self-concept in academically average to above average adolescent boys. There has been little research with athletics influencing self-concept with the academically talented adolescent. Usually, the focus with this group is on academic achievement and content focused on teaching. It is often assumed that this population possesses positive self-concepts secondary to their academic achievements. But they often are subjected to intense academic pressure to perform at the pinnacle of achievement and thus may perceive themselves as "not living up to expectations" of parents, teachers and themselves. Some academically capable students' grades begin to fall in their last couple of years of high school, secondary to their relationship with their teachers and the attribution that they perceive to choices they have made (Ponsford & Lapadat, 2001). These authors found choice was highly valued and if there was not a willingness on the part of teachers to adjust and facilitate choice these students were less motivated. One hallmark of Adventure Learning is choice, which is echoed in the six National Physical Education Standards as developed by the National Association of Sport and Physical Education (NASPE, 2004). The academically talented often have their course of studies dictated to them due to the high expectations of parents and teachers. This study was a pilot to investigate athletic challenge as a vehicle to improve self-concept with a group of senior high school boys. Academic self-confidence does not necessarily translate into a positive social sense of self or one's overall self-confidence. Not infrequently the achieving student does not "fit in" with the other students socially and adventure activities can serve as a vehicle for all students to work together and relate.

Self-concept was measured by the Student Self Concept Scale. This scale measures a person's self confidence in his/her ability to perform certain behaviors and/or possess certain attributes in the areas of self image, academic and social. The pretest and posttest difference in the students' evaluation of their self confidence was significantly different in all three areas of self-confidence and on the composite score of self-confidence. Students' self-confidence ratings increased in self-image, academic and social ability. This is consistent with prior research demonstrating improvements in self-esteem (Cason & Gillis, 1994; Davis-Berman & Berman, 1994 & Priest & Gass, 1997). The participants are asked to compose goals for the day and analyze their success in completion of these goals. This activity may foster an introspection of self in terms of confidence. The students must work together on the group initiatives and the "geek" if not athletic may be the one to solve the dilemma and thus become more valued in the group. This change in group acceptance may result in the student feeling a sense of greater self-confidence and social acceptance, which may be the reason for the present findings. This understanding and respect for differences is another NASPE standard, which is an integral part of the adventure learning.

The importance scale ratings did not change for the amount of value they placed on self-image but did for academic and social. The participants may have come to value more the group's evaluation of the members and their contribution to the goals being achieved. The school is a private high school and academics are very important. The outcome confidence scale indicates the expectations that a person has regarding his/her belief that his/her behavior or the traits possessed will impact a specific outcome. Changes indicated participants endorsed greater self-efficacy in the areas of academics and social but not in self-image. The social expectation change may be a direct consequence of the group process. Again, self-image, as rated by the participant was not as important as how the participant envisioned the group perceived him or how s/he performed

academically. Here the participant envisioned that he/she could impact a change in his/her social aspects and academics. This is an area, as mentioned previously, that some academically talented high school students feel inept in other than academics (Dixon, Cross & Adams, 2001).

The changes in the scale responses by the group indicated that the students rated an increase in self-confidence in their self-image, confidence in academics and social. No change occurred in the ratings on the two self image scales which measure the importance of self image & belief in changing it. Academic and social were rated as more important after the adventure experience. Expectations that their behavior would result in a change in their social standing increased.

To date, most research in the areas has been with average students or below average students. The participants in this study were from a private high school and were adolescents that are usually considered average to above average with a college orientation. This pilot study was to break ground in a different area of Adventure learning research to test the feasibility of further study in this area.

Limitations

Findings from the present study indicate that an intervention as short as a single workshop may have an impact on self-concept. It was a pre-experimental (one-group, pretest-posttest design). These findings would be strengthened by conducting further study; using an experimental design with a control group. Such a design would allow firmer conclusions to be drawn regarding the changes in self-concept and attribute the change to Project Adventure.

Conclusions

There has been little research with athletics influencing self-concept with the academically talented adolescent. Usually, the focus with this group is on academic achievement and content focused teaching. It is often assumed that this population possesses positive self-concepts secondary to their academic achievements. But they often are subjected to intense academic pressure to perform at the pinnacle of achievement and thus may perceive themselves as "not living up to expectations" of parents, teachers and themselves. Positive changes occurred in the seniors' self-ratings of self-confidence in their self-image, academics and social self.

Adventure activities are not intended to supplant the current curriculum, but to enhance the Physical Education experience. Physical educators are committed to teaching the mind and body. Adventure learning presents a challenge to the physical domain and to all five senses, not just the academic as many of these students are accustomed. The Physical Education curriculum must be adaptable to differing class sizes, compositions and scheduling demands. Panicucci, Hunt, Kohut, Rheingold and Constable (2003) have developed an Adventure Curriculum for Physical Educators to implement with high school students aligned with the National Physical Education Standards as guided by the National Association for Sport and Physical Education (NASPE). The Physical Education curriculum should be sequenced and tied to these national standards. Some of the objectives speak directly to the identity of the participant, such as demonstrate responsible personal and social behavior and ability to use effective interpersonal skills. The Adventure initiative is completed successfully only after the entire group has completed the challenge. This would stimulate a diverse group of students representing the full continuum of academic abilities to learn to work together, think critically and come to value the diverse skills each member of the group brings to the table. The decision-making skills of the non-athletic student such as goal setting, risk-taking and problem-solving are areas that may come to be valued by the group and simultaneously result in this student gaining a sense of social inclusion. Respect for differences may grow out of these cooperative experiences. Physical Education classes that are composed of heterogeneous groups of students

may come to share a sense of community. Future potential employers cite interpersonal skills, being a team player one of the most important qualities they want in their employees (Panicucci et al., 2003).

Academically talented students not infrequently are highly competitive among themselves. The Adventure curriculum via the GRABBS system is uniquely tailored to the group by the Physical Education leader (Schoel, Prouty, & Radcliffe, 1989). If the group is competitive among themselves the leader can choose activities that are group based and require cooperation for the successful completion of the activity or impose a rule for the activity that require the group to cooperate. The GRABBS system is composed of evaluating the group, choosing and sequencing activities that coincide with the level of the group's development and readiness. GRABBS is *goals* of the group, *readiness* both physically and emotionally, *affect* or feelings of the group, *behavior* of the group, *body* both state and physical readiness, *setting* environmental conditions, and *stage* of the group. For example if one had a group of adolescents with obesity then the rules and props for the activity might be more forgiving.

Adolescence is a developmental time for risk-taking due to the new found cognitive skills of Personal Fable or thinking one is invulnerable (Elkind, 1997). Adventure learning requires the teen to assess risks, to avoid harmful activities, to embrace experiences that may provide the individual with critical learning and growth opportunities which is crucial for teens (Panicucci et al., 2003). Creative problem solving and leadership skills are important. The students are required to critically think about the meaning of leadership and for these academically talented young men it may come to mean more than excellent grades. The Physical Educator can use Adventure Based Physical Education to promote a sense of community and an appreciation of individual differences in heterogeneous groups of students that often think that they have nothing in common. This curriculum can be used as demonstrated in this study to promote a greater sense of the social self and self confidence. The academically talented student may come to learn that he/she can contribute and even lead in a domain that they had not thought possible. The GRABBS system allows the curriculum to be adapted to any skill or developmental level of a group.

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