Wilderness Alternative for Youth (WAY), conducted by the Pacific Crest Outward Bound School, is a treatment program for adjudicated youth that integrates wilderness or adventure therapy with a community-based component. Participants were 115 boys and girls, aged 13-18, recommended by court counselors and screened for appropriateness by Outward Bound representatives. Subjects were randomly assigned to experimental and control groups. The experimental group participated in a 3-week program involving adventure activities and community service activities. The control group did not participate in these activities. Both groups completed a battery of psychometric tests four times: pre-course, post-course, and 3-month and 1-year follow-ups. Parents, teachers, and court counselors completed behavioral data forms at follow-ups. Repeated measures technique was used to analyze the data. There were no significant differences between groups over time on drug use, alcohol use, discipline problems in school, or criminal allegations pending. However, the experimental group had significantly more positive results than the control group on 10 of 33 psychometric scales and behavioral assessments: locus of control, asocial orientation, manifest aggression, values orientation, immaturity, withdrawal-depression, social anxiety, repression, parent assessment of child's dependency, and counselor assessment of child's peer relations. Participants, parents, and county caseworkers reported very positive opinions of WAY. (SV)
Assessing the Impact of the Wilderness Alternative for Youth Program:

An Outward Bound Program for Adjudicated Youth

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Abstract

This is a synopsis of the results of a three year research effort designed to assess the impact of the WAY Program conducted by the Pacific Crest Outward Bound School.

WAY is an acronym for "Wilderness Alternatives for Youth," and it represented a newly conceived treatment program for adjudicated youth which was designed to integrate an intervention strategy known as Wilderness or Adventure Therapy, with a community-based component. The term "Wilderness" in the WAY title refers to the wilderness/adventure element of the program; "Alternative" refers to the fact that participation in this program represented one of several options available to the pool of youth offenders from which these subjects were selected, and "Youth" refers to the population for which this program was designed to serve, i.e., young people 14 to 17 years of age.

The 115 participants in this study were randomly assigned to either the Control or Experimental group. Data on these subjects were gathered through four basic strategies, i.e., 1) a battery of self-report instruments administered prior to and several times after the WAY experience, 2) collateral measures in the form of questionnaires administered to parents, teachers and counselors, 3) a review of school and court records for specific and official behavioral data, and 4) a formal qualitative investigation of all aspects of the program.

Complementing the interview process associated with the qualitative component, SPSS/PC+ Repeated Measures analyses and Crosstab analyses were used to examine data extracted from the self-report, collateral and behavioral instruments.

The results of the SPSS/PC+ Repeated Measures analyses revealed statistically significant interactions, at or beyond the .05 level, between the Control and Experimental group subjects for the following scales:

- Locus of control
- Inmaturity
- Asocial orientation
- Withdrawal-depression
- Manifest aggression
- Social anxiety
- Values orientation
- Repression
- Parental assessment of their child's dependency, and
- Counselor assessment of their client's peer relations.

Though SPSS Crosstab procedures revealed no statistically significant differences between the Control and Experimental groups on a variety of behavioral measures, the results of the structured interviews which were conducted with more than 17 individuals associated with the project, did provide important insight into the global impact of the WAY program and these behavioral measures.

More specifically, the structured interviews not only revealed a great deal of support for the WAY program among participants, significant others of program participants, and county caseworkers, but in addition, a powerful and critical overarching treatment effect which suggested that though Experimental group members may have reverted to old patterns of behavior upon returning from WAY, because they had experienced success on Outward Bound while doing constructive, positive and extraordinary things, and simultaneously learned alternatives to their dysfunctional behaviors, they now knew 1) that they could change if they so desired, and 2) that there was a better world available to them. Thus, the statistically significant changes recorded on the various psychometric instruments seem to be indicative of profound and fundamental changes which have taken place in the hearts and minds of the WAY participants, i.e., changes which are essential precursors to behavioral changes.

In summary, it appears that the impact of WAY was real, positive, appreciated by those who participated, and fundamental to future psycho-emotional growth and behavioral changes for the population served.
Introduction

“Most reformatories fail to reform ... they make no appreciable reduction in the very high recidivism rates that are expected for chronic offenders.” Yet the authors of these words also suggest that programming options which hold great potential in the treatment of these difficult populations are those which utilize adventure in their treatment program.

Support for this assertion can be found in the research literature, though the value of many of the studies cited in these anthologies have been questioned on the integrity of their research designs.

To address these design concerns, a comprehensive research effort on the Wilderness Alternative for Youth (WAY) program, developed by the Pacific Crest Outward Bound School, was developed. This research effort incorporated both quantitative and qualitative components.

Research Structure

Subjects: All individuals who volunteered to participate in WAY, and who were recommended by court counselors, were screened by an Outward Bound representative for appropriateness, e.g., those on psychotropic medications or with a recent history of suicide ideation were not permitted to participate. Those individuals accepted into the program were then randomly assigned into a control or experimental group. Members of the Experimental group participated in a three week wilderness program which utilized adventurous activities, such as camping, hiking, mountaineering, caving and rock climbing, along with community service activities, as part of the treatment modality; those assigned to the Control group did not participate in this program.

Design: Members of both the experimental and control groups were administered a battery of 33 scales from the following six psychometric instruments: The Self-description Questionnaire, the Jesness Inventory, The Student Attitude Questionnaire, Nowicki Locus of Control, the PRF Achievement motivation scale. They subjects were administered these instrument at four times during the study: T1—Pre-course, T2—Immediate post-course, T3—Three month post-course, and T4—One year post-course. Additionally, parents, teachers and court counselors were asked to complete a behavioral data form discussing behaviors such as drug and alcohol use and school attendance, as well as the Child and Adolescent Adjustment Profile at the T3 and T4 data points.

Research Results

SPSSPC repeated measures were performed on the forty, 13 to 18 year old boys and girls for whom complete T1 through T4 data-sets were available. For these individuals, statistically significant treatment by scale interactions at or beyond the .05 level were revealed for the following 10 scales: Locus of control, Asocial orientation, Manifest aggression, Values orientation, Immaturity, Withdrawal-depression, Social anxiety, Repression, Parental assessments of their child’s dependency and Counselor assessments of their client’s peer relations. Below, discussion is presented on these scales.

Locus of control: Figure 1 graphically represents mean score data T1 through T4 for both the Experimental and Control groups. The higher the score on this scale, the more the individual is externally oriented. Growth, i.e., maturation, would thus be indicated by a lowering of the score.
An examination of Figure 1 suggests that, over the course of the year, both the Experimental and Control group members indicated an increasing orientation to an internal orientation. Though this be true, the pattern of change evidenced in Figure 1 suggests that at T2 the Experimental group experienced something which caused a greater shift away from an external orientation than was experienced by the Control group. This shift might be interpreted as an impact of Outward Bound in terms of personal empowerment. Though by T3 the Experimental group rebounds to a level similar to the Control group, thus indicating, perhaps, that the participants' reintegration into their communities and families proved to be a challenge, by T4, the Experimental group readjusts to those realities and enjoys a reaffirmation of their increasing orientation toward internal controls.

Asocial Orientation: Figure 2 graphically represents mean score data T1 through T4 for both the Experimental and Control groups. The higher the score on this scale, the more the individual behaves in an asocial manner. Growth, i.e., maturation, would thus be indicated by a lowering of the score.
Statistically equivalent at the start of the study (T1), members of the Experimental group seem to exhibit increasing levels of asocial feelings from the T2 through T3 test administrations over the Control group. Interestingly, at the T2 data point, Control group members reported feelings of asocial attitudes in the decline yet at T3 through T4 they are characterized by increasing levels of asocial perspectives. This stands in contrast to the T4 data point for the Experimental group at which point the Asocial score drops dramatically. One possible interpretation of these findings is that upon return from their Outward Bound experience, the members of the Experimental group found the reintegration into their home-lives somewhat frustrating and dissatisfying—hence the increasing levels of asocial perspectives. In turn, this may imply that the Experimental group members found their Outward Bound experience positive by contrast to their home-life. Building on this, the dramatic drop in asocial perspectives evident at the T4 for the Experimental group may indicate that though they were frustrated upon their return from Outward Bound, they were able to draw upon the attitudes and prosocial perspectives taught while on WAY and activate them in their lives by T4.
Manifest Aggression: Figure 3 graphically represents mean score data $T^1$ through $T^4$ for both the Experimental and Control groups. The higher the score on this scale, the more the individual is aware of feelings of anger and hostility. As this scale measures awareness, it is difficult to determine whether lower levels indicate a lessening of feelings of anxiety or greater denial, or conversely, whether a higher score reveals growing levels of aggression or simply an increased awareness of feelings of aggression.

Figure 3

![Manifest aggression graph](image)

<table>
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<tr>
<th>Treatment by Aggression</th>
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<th>MS</th>
<th>F</th>
<th>Sig.</th>
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<td>233.28</td>
<td>3</td>
<td>77.76</td>
<td>5.30</td>
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With these caveats in mind, the patterns of change evidenced in Figure 3 suggest that something happened on the Outward Bound experience which caused the Experimental group to report reduced feelings of manifest aggression. Though it may be argued that the reduction of such feelings could be indicative of increasing levels of unawareness, this interpretation does not seem likely given the concomitant reduction on the Repression scale. Thus a more likely interpretation may be that feelings of aggression were actually reduced for the Experimental group, and reduced in such a way as to be durable over time.
**Values orientation**: Figure 4 graphically represents the mean score data for the Values orientation sub-scale. A higher score on this scale indicates a tendency to share opinions and values characteristic of the lower socioeconomic classes, e.g., "including the trouble, luck and thrill motifs; ... gang orientation; the toughness ethic; and the desire for early or premature adulthood."11

Figure 4

![Graph showing values orientation over time](image)

The pattern of change evidenced in Figure 4 suggests that, though both the Experimental and Control groups seem to be shifting their value orientation away from those associated with lower socioeconomic classes, it appears that something happened on the Outward Bound course which caused a more dramatic and durable shift.
Immaturity: Figure 5 graphically represents the mean scores for the Immaturity sub-scale. The higher the score the more immature the attitudes held by the respondents.

<table>
<thead>
<tr>
<th>Treatment by Immaturity</th>
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<th>MS</th>
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<td>104.36</td>
<td>3</td>
<td>34.79</td>
<td>2.61</td>
<td>.05</td>
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It is interesting to note that, though both the Experimental and Control group members exhibit increasing levels of immaturity during the course of the study, two distinct differences appear between the two groups. More specifically: 1) at the T^2 data point, the Experimental group appears to exhibit more mature attitudes while the Control group members report increasingly immature attitudes, and 2) at the T^4 data point, Experimental group members appear to be reporting scale scores fully 2 points less than those reported by Control group members. Thus, though both groups seem to be reporting greater immaturity levels, the Experimental group is exhibiting less of a decline in this area than Control members.
Withdrawal-depression: Figure 6 graphically represents the mean data for this subscale. Growth would be indicated by a lowering of the score whereby such growth would be characterized as a lessening of feelings of depression and coping strategies marked by withdrawal.

![Withdrawal-depression Graph]

An examination of Figure 6 reveals two distinct patterns of change, i.e., a steady improvement (decline) of scores for the Experimental group which contrasts with a relatively stable score-pattern for Control group from T1 through T3, which is punctuated by a marked increase in withdrawal-depression at the T4 data point. Thus it appears that the Experimental group is either feeling less depressed than their Control counterparts, and/or they are coping with depression in ways other than withdrawal. This, in turn, may indicate that WAY created opportunities for other intervention strategies to be effective.
Social anxiety: Figure 7 graphically represents mean data for this scale. Consistent with the finding that members of the Experimental group are withdrawing less, so, too, do they seem to be feeling more comfortable in social encounters.

Figure 7

Social anxiety

![Graph showing mean data for social anxiety through different test administrations.]

<table>
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<tr>
<th>Treatment by Social Anxiety</th>
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This fact is evidenced by the dramatic improvements in the social anxiety scale scores T1 through T4. This marked linear improvement, in turn, stands in contrast to a steady growing level of social anxiety reported by Control group members. Moreover, and with regard to the Control group, just as there appears to be an increase in the feelings of withdrawal, so, too, is that accompanied by increased levels of social anxiety.
Repression: Figure 8 graphically represents changes on this sub-scale. Increasing scores indicate increasing feelings of anger, frustration and rebellion.

Figure 8

Repression

![Graph showing Repression scores over Test Administration phases T1, T2, T3, T4.](image)

<table>
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<th>Treatment by Repression</th>
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Interestingly, the WAY experience seems to have markedly reduced the reported levels of repression for the Experimental group; thus at the T2 data mark, whereas members of the Control group reported higher repression scores, members of the Experimental group reported lower scores. And though there appears to be some loss of growth in this area, the Experimental group continues to report lower scores than their Control counterparts throughout the study.
CAAP—Parental Assessment of dependency: Figure 9 graphically represents the mean data for this CAAP sub-scale. As this instrument was a post-treatment assessment, only two data points, i.e., $T_3$ and $T_4$, are available.

Figure 9

CAAP- Parental assessment of dependency

![Graph](image)

Interestingly, though mean scores drop between $T_3$ and $T_4$ for the Control group, scores increase, albeit slightly, for the Experimental group. This shift toward more dependency on the part of Experimental group members is, given all the indications of the research which points to a positive effect of the WAY experience, may be suggesting that members of the Experimental group are opening themselves up to more parental support, i.e., more than they had done in the past; thus dependency might be indicative of children and adults assuming more role appropriate relationships. In turn, the decline of Control group scores may indicate either increasing emancipation by the young people from their parents or increasing alienation (withdrawal). This latter interpretation seems most likely given the Withdrawal-depression and Social anxiety scores reported previously.
CAAP—Counselor assessment of peer relationships: Figure 10 graphically represents the mean data for this CAAP sub-scale. As with the previous CAAP scale, by design only $T^3$ and $T^4$ are available.

Figure 10

CAAP—Counselor assessment of peer relations

<table>
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<td>24.78</td>
<td>5.56</td>
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The results of this aspect of the study indicates that counselors are noting a dramatic decline in peer relationships between Control group members and their peers while such a decline is not markedly noted for the Experimental group members.
Chi-square Assessments of Selected Behavioral Factors—SPSS/PC+ Crosstab procedures were used to ascertain whether there were indications of any treatment effect on the following behavioral measures: Drug use, Alcohol use, Discipline problems in school, and Criminal allegations pending.

The results of these analyses revealed that no statistically significant differences were evident between the Control and Experimental groups for these measures. With regard to this finding, the following is presented as points of information:

• 21 percent of each group had criminal allegations pending,
• 62 percent had consumed alcohol,
• 58 percent had used some form of illegal drug,
• 46 percent had discipline problems in school.

Though the aforementioned statistics are disappointing, and appear to stand in contrast to some of the growth implied by the statistically significant gains achieved on the battery of psychosocial scales reported previously, there are some interesting and mitigating points which emerged in the naturalistic component of this study which may cast these findings in a more positive light.

More specifically, complementing comments made by WAY participants and their parents which indicated that the WAY experience was worthwhile and had resulted in positive, albeit subtle behavioral and attitudinal changes, the following quotes from WAY students point up the value of WAY in the long-term, and its unique place in supporting other treatment efforts:

"When I got back from WAY I still ended up doing drugs and getting in trouble. I wanted to go back so badly after the course. When I told people what I did nobody understood and I started to think maybe it wasn't as great as I thought. But Outward Bound gave me a glimpse of what I could do. It showed me how good I could be. Before that everything was hopeless. Outward Bound was my one time I could point to that I excelled."

"When I was in drug treatment I reflected on the WAY course a lot. I tried to do in treatment what I did on the course—excell. I don't think I could have had a successful treatment if I hadn't gone on the course. No, definitely not. Before that I felt like I couldn't do anything. After the course I knew I could do anything. It was like, I knew I could quit drugs if I wanted to, but I needed the tools to know how."

SUMMARY OF FINDINGS AND CONCLUSIONS

This study resulted in a number of interesting findings which indicate that the WAY program, conducted by the Pacific Crest Outward Bound School, had a real and potent effect on those who participated in the experimental treatment, i.e., the WAY program itself.

More specifically, rigorous statistical procedures revealed significant positive changes between the Control and Experimental groups on 10 of 33 well validated and reliable scales from a variety of test instruments, i.e., statistically significant positive changes were noted on the following scales:
• Locus of control,
• Asocial orientation,
• Manifest aggression,
• Values orientation,
• Immaturity,
• Withdrawal-depression,
• Social anxiety,
• Repression,
• Parental assessment of their child's dependency, and
• A counselor’s assessment of a child’s peer relations.

While noting these findings, it is also important to note that these results represent changes over a one-year time span, and that during preliminary reports changes on these scales were, by and large, not significantly different from the changes reported by members of the Control group. Thus it appears that WAY had a real, measurable and positive treatment effect in the long-term.

When considering this, it is also important to consider the fact that no real treatment effects were identified for a host of behavioral measures, e.g., school attendance, contacts with the law or drug and alcohol use. Thus it appears that though psychological growth had occurred, as evidenced by the scale-score changes, these changes had not translated into measurable differences in concrete behaviors. Though disappointing, the results of the structured interviews provide insight into this phenomenon.

In particular, through the interview process it was revealed that the students had a very positive time on WAY. But more importantly, the nature of the experience, i.e., the blend of challenge, adventure, and teamwork facilitated by skilled and caring leaders (i.e., the Outward Bound instructors), gave the students an experience of a lifetime—an experience upon which they continue to reflect upon and draw strength from—an experience which gave them a glimpse into a better and more positive side of the world and themselves.

Thus an important seed of hope and possibility was planted by the WAY program—a seed which is perhaps registered not only by their comments, but changes revealed on the psycho-social instruments used in the quantitative aspects of this study. As thinking and feeling differently are usually precursors to behaving differently, the narratives by WAY participants which point up the impact of WAY, complemented by the statistically significant changes between control and experimental group members on various instruments, may indicate that thinking and feeling changes are taking place—essential changes which support and nurture change-efforts by the individual as well as augment efforts of other treatment programs.

References


End Notes


3 Young people who were considering WAY were told that there were two WAY options, i.e., a short course and a long course. The short course consisted of a three hour ropes course experience whereas the long course consisted of a three week wilderness experience. The experimental treatment was the long course. The short course was provided to ease the disappointment of those who chose WAY but were assigned to the Control group.


12 This stands in contrast with a Gallup poll which indicates that an average of 25% of youth, 13 to 15 years of age, use alcohol. (Bezilla, R. The Gallup Study on America's Youth 1977-1988, The Gallup Organization, Inc.: Princeton, NJ, 1988.)

13 This stands in contrast with a Gallup poll which indicates that an average of 11% of youth, 13 to 15 years of age, use marijuana. (See Bezilla, Ibid.)
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