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## Academic and Therapeutic Potential of the Sierra II Process: An Evaluation of an Adapted Outward Bound Diversion Program for Adjudicated Juvenile Delinquents

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ACADEMIC AND THERAPEUTIC POTENTIAL OF THE SIERRA II PROCESS:

AN EVALUATION OF AN ADAPTED OUTWARD BOUND  
DIVERSION PROGRAM FOR ADJUDICATED  
JUVENILE DELINQUENTS

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## ABSTRACT

### ACADEMIC AND THERAPEUTIC POTENTIAL OF THE SIERRA II PROCESS: AN EVALUATION OF AN ADAPTED OUTWARD BOUND DIVERSION PROGRAM FOR ADJUDICATED JUVENILE DELINQUENTS

Ronald Clifford Callahan  
Old Dominion University, 1989  
Director: Dr. Mark Fravel

The primary purpose of this study was to evaluate the effects of the Sierra II program on adjudicated juvenile delinquents. Specifically, this research measured the program's effect on the self-esteem, self-efficacy, locus-of-control, problem-solving skills, school behavior, and follow-on academic achievement. All study variables, except school behavior and follow-on academic achievement, received pre and post treatment assessments. Both school behavior and academic achievement received pre, post, six-month and twelve-month follow-up assessments. Individuals were assigned (by the court services staff) to an experimental group and a control group. In addition, prior Sierra group data were utilized to ascertain trend and statistical differences between the current treatment group and prior treatment groups. The experimental group participated in the six-month Sierra II program. The control group was involved in active, supervised traditional probation activities.

The Tennessee Self-Concept Scale, modified Internal-External Scale, and the Generalized Expectancy of Success

Scale were administered to both groups as a pre-test and post-test. The Means-Ends Problem-Solving Procedure was administered to the experimental group at the pre-test and post-test. Demographic, biographic, offense related, and school related data were collected on each study participant through use of Youth and School Data Forms.

The experimental group (n = 35) was 91% males and 9% females; 92% white and 8% black; average grade completion was eighth grade; age continuum was 13 to 17 years old; and average family income was \$25,000.00 (with a continuum from \$10,000.00 to \$65,000.00). The control group (n = 35) was 86% male and 14% female; 73% white and 27% black; average grade completion was seventh grade; age continuum was 13 to 17 years old; and average family income was \$16,000.00 (with a continuum from \$8,000.00 to \$20,000.00).

Data were analyzed primarily through the use of an ANOVA with repeated measures. Where appropriate, Matched T-Tests were performed in order to ascertain significance between paired data samples. The variable, self-esteem, showed a significant increase over the assessment periods. The variable, self-empowerment (defined as union between locus-of-control and self-efficacy), showed a significant increase in the measure of locus-of-control, but did not show a statistically significant difference in self-efficacy. Therefore, this variable can only be partially supported. The results of the variable, problem-solving skills, showed a significant increase over the assessment periods. The

results indicate that for the component variables related to school behavior and follow-on academic achievement, (negative comments, grade point average, absences/truancy, and discipline comments), only negative comments showed a significant change during the assessment periods. The research indicates that over time the Sierra II process was more effective in improving school behavior and grade point average, but that these changes did not meet study significance.

The findings of this research indicate that the Sierra II program had the theorized effect upon participants. However, further study should be undertaken to discriminate between the Sierra II components effecting behavior and achievement and those related to individual participant maturation.

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## DEDICATION

This study is dedicated to my family whose physical and financial support provides me with challenging educational pursuits, a clarity of intellectual vision, and the warmth and safety of peace, strength and harmony.

## ACKNOWLEDGEMENTS

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A very special thanks to my brother, Robert C. Callahan and the staff of the Va. Beach Juvenile Court System. This research could have never been completed without their technical support, programmatic expertise, and institutional knowledge.

Finally, this research is a clear tribute to the patience, encouragement, and tenacity of my wife, Liz. I would like to dedicate this dissertation with all my spirit and love to her.



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CHAPTER I  
INTRODUCTION AND STATEMENT OF THE PROBLEM

Introduction

The past twenty years have produced much rhetoric concerning the substantial personnel and financial resources directly committed toward replacing traditional institutions with community-based or adventure education programs as a means of rehabilitating adjudicated juvenile delinquents. These efforts have not gone unheeded. Today, nearly thirty percent of all troubled youths are placed in diversion programs. Many states now place less reliance on training schools and more on networks of community-based adventure education programs.

One approach to the treatment of adjudicated juvenile delinquents that has achieved considerable popularity is adapted Outward Bound programs. Sierra II, an adapted Outward Bound program processes under examination in this study, attempts to alter the juvenile's antisocial behavior by enhancing his self-confidence, self-image, and self-esteem through successful encounters and mastery-based challenges in the wilderness. This kind of education is the effective antidote for the indifference and insensibility bred into

modern youths by traditional educational and job-training programs.<sup>1</sup>

### Significance of the Problem

While the juvenile justice system has gathered considerable experience with adventure-based diversion programs and has seen some limited success in recidivism, much of that experience remains undocumented. Ironically, adventure-based programs have typically operated as extended appendages of larger, more traditional, training-school programs.<sup>2</sup> It is not surprising that such programs have had significant impact. Due to participant security and public safety concerns, these programs have primarily provided services to status offenders and incorrigible juveniles adjudicated delinquent by the court.<sup>3</sup>

It is clearly in the best interest of all local, state, and federal agencies contemplating the implementation of such programs to include in their policy and decision making processes conclusive data concerning the costs, benefits and intent of these programs.

As local and state emphasis in juvenile justice moves away from institutionalization toward more modern socio-psychological intervention and modeling processes focused on the adventure-based alternatives, the need for definite data on these programs becomes crucial to policy makers.

It is theorized that the availability of funds from the Juvenile Justice and Delinquency Prevention Act of 1974 when



added to community dissatisfaction with traditional institutionalized corrections, has created a rapid expansion and use of such adventure-based programs. Conservative estimates place the number of similar programs at 200 operational units serving between 8,000 to 12,000 adjudicated juveniles per year.<sup>4</sup> Still other sources estimated that 350 to 400 such service agencies offer similar programs. These programs are staffed and operated by organizations within the local juvenile court services, non-profit organizations providing contractual services to juvenile agencies and a few public for-profit organizations.

The increase in the number of resources expended for these programs has not been paralleled by an increase in rigorous examinations and evaluations of these programs. Consequently, careful analysis of a program's immediate, as well as long-term influence on participants must be undertaken. If subsequent benefits are derived from active participation in this type of program, these benefits must be amply documented. Juvenile justice system professionals involved in the decision-making process must have clear information on which to base their decisions. In light of the apparent absence of sound evaluative data on the impacts of these programs, the need for definitive research in this area is clear.

Traditional probation programs have had little success in reducing delinquent behaviors. Indeed, evidence indicates

that such programs push the delinquent in the direction of greater delinquency.<sup>5</sup> Becker's<sup>6</sup> conclusive work pointed to the importance of a juvenile delinquent, apprehended for the first time, having an alternative punishment choice. This opportunity is crucial in that it often determines whether continued delinquent behavior will develop. The opportunity for the first time offender to avoid being labeled a delinquent enhances the chance that the juvenile's self-concept may survive intact without significant psychological maladjustment. This conceptual opportunity is crucial given evidence which indicates once labeled and conditioned by society, the juvenile may be forced to accept this new status. Therefore, it is imperative as well as socially and economically judicious to provide a behavioral alternative in juvenile adjudication programs providing the offender an opportunity for continued, acceptable self-expression in order to prevent maladjustment in the juvenile self-concept.

Considerable promise in this self-concept continuum has been shown by delinquent participation in community-based adventure education programs. Such programs often provide opportunities enabling the participant to feel membership association, and at the same time feel free to examine individual social, psychological and physical behaviors in a peer related environment. The activities enhance the participant's behavior in dealing positively with conflict, stress, and confusion created by risky physical challenges.

Associated excitement and the thrill of the activity provide a means for the participant to express and achieve success, develop self-confidence, and improve self-concept. Researchers have often reported the positive results of community-based adventure activities for juvenile delinquents, underprivileged, and emotionally disturbed adolescents.<sup>7</sup> In summary, the research has indicated that the participant's behavior begins to evolve into those patterns and attributes fundamental to achievement, motivation, and mature social participation.<sup>8</sup>

Other research provides evidence that similar community-based programs offer a valuable aid in defining delinquency as well as a useful mechanism for preventing future delinquent behavior.<sup>9</sup> Indeed, Baer, Jacobs, and Carr have found that adapted Outward Bound program participation and completion is a useful predictor of recidivism.<sup>10</sup>

Additionally, research has shown that the components of a typical community-based adventure program have been successful in reducing recidivism and in improving the participant's self-esteem. There is, therefore, a need to evaluate different approaches to such programs and their effectiveness in dealing with delinquent behavior.

One need not look too far to see that a myriad of issues concerning the potential of adventure-based corrections exist. Clearly, little is known concerning the impact of adventure-based programming implemented as a separate process

for adjudicated juvenile delinquents. The question of program or process based affective change as it relates to behavioral manifestations (in both social and cultural environments) requires examination. The impact that program enhanced self-esteem and program developed problem-solving skills contribute to follow-on academic behavior and achievement must be examined. Finally, very little research has been devoted to the process of reintegrating youths back into the mainstream of the culture.

This evaluation study, based on Theobald's theory<sup>11</sup> is designed to provide information on the total integrated inputs (efforts), the total integrated outputs or participant outcomes (effectiveness), and the expenditure value ratio (efficiency) associated with program objectives. Outcome measurement is focused on the overall question of what the program produces in terms of follow-on socio-psychological behaviors and consequent academic achievement. In other words, are defined goals and enabling objectives and expected outcomes accomplished and are undefined outcomes exposed? Outcome measurement can be differentiated into immediate outcomes (those measurable upon completion of the program) and long-term outcomes (those measured at a later date). The terms proximal (immediate) goals and distal (long-term) goals have been used to make this distinction. This research will focus on a rigorous examination of both types of goals.

Other types of program assessment are concerned less with strict outcome measurement than issues of program process related to producing a given outcome. This evaluation will focus on data collection to measure outcomes or effects; however, a theoretical model describing the relationship between program components and outcome measures is discussed in CHAPTER II.

The Sierra II process is an adapted Outward Bound Adventure Education Program. The Sierra II process utilizes outdoor activities that are perceived as either physically or psychologically dangerous in a framework of safety and skills development. The process presents meaningful challenges for participants, thereby increasing personal satisfaction with one's self-concept, one's social and environmental conditions, and academic problem-solving capabilities. For participants, the Sierra II program is used either to divert them from costly incarceration or to supplement traditional treatment approaches.

The goals (Figure 1) of the Sierra II program are to inculcate within the participants an enhanced success orientation toward life. This successful orientation would include an acute awareness of personal fitness, a positively enhanced level of self-esteem, and a greater external measurement of self-empowerment. Self-empowerment, as defined by this author, includes the belief in one's ability to control both the internal and external course of events in

one's life and a strong external belief in one's ability to achieve desired goals. Additionally, this success orientation will enhance psychomotor coordination as exhibited in both affective and cognitive skills necessary to solve personal and interpersonal problems. The participant should then be functionally prepared to live in a more responsible manner within his/her environment.

AFFECTIVE CHANGE ----- (success Orientation)	
COGNITIVE CHANGE ----- (Problem-Solving Skills)	RESPONSIBLE CITIZEN
PSYCHOMOTOR MATURITY ----- (Challenge Mastery)	

Figure 1. The General Goals of the Sierra II Program

#### Statement of the Problem

The purpose of the study has been to conduct an in-depth examination of the effects of the Sierra II program on adjudicated juvenile delinquents. More specifically, the study measured the program's effect on self-esteem, self-empowerment, problem-solving skills, and behavior and achievement in a formal (traditional) educational environment.

### Hypothesis

The following three hypotheses were the primary focus of the study of the Sierra II program for adjudicated juvenile delinquents.

1. There would be a statistically significant positive difference noted in self-esteem, self-empowerment, problem-solving skills, and academic behavior and achievement between the experimental group and the control group measured by posttreatment instruments.
2. There would be a statistically significant positive change in self-esteem, self-empowerment, problem-solving skills, and academic behavior and achievement when pretreatment and posttreatment data of the experimental group were analyzed.
3. There would be no statistically significant positive correlation between the demographic variables of sex, race, age, and gains in self-esteem, self-empowerment, problem-solving skills, and academic behavior and achievement with the experimental group.

In addition to the main study hypotheses, the following secondary hypotheses were examined.

4. There would be a statistically significant difference between those methods of intervention used most often and those methods having the greatest perceived impact by the Sierra II staff

and the traditional staff. This observation will be made in an attempt to identify those techniques most useful to program and policy planning.

5. There would be no statistically significant difference in self-esteem, self-empowerment, problem-solving skills, and academic behavior and achievement between the experimental group and prior experimental groups posttreatment results.

### Study Instruments

This study will maximize the generalizability of study findings to the body of knowledge and field of study by utilizing nationally validated and reliable assessment instruments. The Rotter's Internal-External Locus-of-Control Scale (I/E)<sup>13</sup> will be used to assess changes in participant locus-of-control. The Fibel and Hale Generalized Expectancy of Success Scale (GESS)<sup>14</sup> will be used to ascertain pre/post treatment of expectancies held by subjects toward attaining desired objectives and goals. The Fitts Tennessee Self-Concept Scale (TSCS)<sup>15</sup> will be used to gain pre/post treatment characteristics of the subjects. The Platt and Spivack Means-Ends Problem Solving Procedure (MEPS)<sup>16</sup> will be used to measure changes in pre- to post-treatment problem solving skills. In addition, follow-on academic achievement will be ascertained from individual school records/information in accordance with guidelines in the Study Youth School Data Form.



### Limitations

This study is limited to male and female juvenile delinquents between the ages of 13 and 17 years of age who voluntarily participated in the Sierra II probation diversion program. This study is further delimited by the data collection instruments defined earlier in this chapter.

### Constraints

The Sierra II program uses a subjective intake and acceptance procedure coupled with an external voluntary participative contract between program staff, adjudicated juvenile, and juvenile court organization. This process and the possibility of selection bias therefore limits the generalizability of study findings. The socio-economic strata of Virginia Beach and the subsequent composition of the study populations further limit this study. The racial and financial profile of the populations are not reflective of national trends. In addition, data availability (or the window of information opportunity) was limited by legal and time (18 months) factors. Therefore, these restrictions may further limit the study.

### Definitions

For the purpose of this study, the terms listed below are operationalized as follows:

Adapted Outward Bound - A program or process utilizing concepts, principles, or methodologies characteristics of

Outward Bound Incorporated, but not an official part of that organization.

Control Group - The group of youths who are specifically restricted from participation in the experimental treatment program, but who otherwise are treated the same. Their performance is compared against those youths in the experimental group.

Experimental Group - The group of youths in this study who received the experimental program or special treatment.

Juvenile Delinquent - A legal term associated with a youthful offender processed through the juvenile justice system for some offense or violation of the legal code or for some type of antisocial behavior that places the youth in the child in need of services (CHINS) category.

Locus of Control - As defined by Rotter<sup>17</sup> is the belief that a reinforcement associated with behavior patterns follows from the internal forces (personal control events) or external forces (environmental control of events). Participants will be categorized as internal or external operatives based upon scores on selected items from the Rotter Internal-External Scale (I-E Scale).

Negative Results - When there is either a statistically significant difference in which the treatment group does worse, or when the results are not statistically significant. In either case, the treatment has not made a favorable impact upon the experimental group.

Not Statistically Significant - When any reported difference between the treatment and control groups is so small that it could have occurred by chance. It is concluded therefore that the treatment is not effective, and the approach is not supported.

Positive Results - When there is a statistically significant difference in favor of the treatment group having a better performance than the control group. Such results are beneficial to the youths in the treatment group and the approach utilized is supported.

Problem Solving Skills - As assemblage of cognitive skills identified in the research conducted by Spivack, Platt, and Shure which are prerequisite attributes for effective solution of interpersonal problems or structured analyses and resolutions of problems.<sup>18</sup> Participant score on the Means-Ends Problem-Solving procedure is used as a measure of competency on the most primary of these skills, means-ends thinking.

Recidivism Rate - The proportion of youths who are returned to custody as a result of delinquent behavior compared with the total number of youths released within the same period of time. Recidivism can involve a youth being rearrested, reassigned to probation, or recommitted to an institution.

Rehabilitation - This program or a set of programs provided for delinquent youths that have as their objectives

an increase in socially acceptable behavior and a complete cessation of unlawful behavior.

Self-Efficacy - As interpreted in research conducted by Bandura, the honestly held trust or confidence that one can adequately execute socially acceptable behavior prerequisite to producing a desired outcome.<sup>19</sup> For this study, an overall sense of efficacy will be represented by a score on the Generalized Expectancy for Success Scale.

Self-Empowerment - Individual acceptance and recognition that one has control over personal-type outcomes as measured by the I-E Scale and that achieving desired goals or outcomes is within one's capabilities as measured by the GESS. The operationalization of this term includes the dual conceptualization that one must take individual responsibility for the outcome of individual social behavior (Rotter's Internality) coupled with recognizing and believing in one's capabilities (Bandura's Self-Efficacy).

Self-Esteem - A multi-dimensional conceptualization of one's self-worth or self-image defined along a continuum from positive to negative. Research in this area clearly indicates that various aspects of self-esteem could be evaluated,<sup>20</sup> but participant scores on the Tennessee Self Concept Scale are used to ascertain a subject's level of self-esteem.

Statistically Significant Difference - When the results comparing the treatment group's and the control group's

performance are so far apart that the reported difference could only have occurred five or less times out of 100 by chance. Because of the low probability of occurring by chance, the difference is a result of some factor associated with the experiment. If matched or randomly assigned control groups were selected, the difference can be attributed to the effects of the experimental program. The statistically significant difference can be either positive or negative.

Subjects - The youths whose progress or lack of progress are measured in the study. Includes both control group and experimental group youths unless otherwise specified.

Treatment Group - Another way of referring to the experimental group. Still refers to the group of youths who receive the rehabilitation method under study.

Works - A program works if it both reduces negative, delinquent behavior and increases socially functional behavior to a statistically significant degree. For a program to be really effective, it should have documented results of success in more than one location or setting.

In addition to the operationalization of the prior terms, it is important to operationalize conceptually correlated sets of terms. Operational delineation of this set is as follows:

Knowledge - Most often used to define understanding or comprehension in the cognitive domain and even some affective conditions. It is used here-in as the sense in which

knowledge can be contrasted with comprehension and experience or valuation.

Contrasted Comprehension - A psychological state involving knowledge not only related items but of their relationships. Comprehension, again in terms of this contrast, involves a capacity to physically or mentally apply the appropriate rule, rubric or concept manifested to individualized environmental encounters.<sup>21</sup>

## ENDNOTES

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<sup>16</sup>J.J. Platt and G. Spivack, Manual for the Means-Ends Problem-Solving Procedure, (Philadelphia: Hahnemann Medical College and Hospital, 1975).

<sup>17</sup>J.G. Rotter, Generalized Expectancies for Internal Versus External Control of Reinforcement.

<sup>18</sup>G. Spivack, J.J. Platt and M.B. Shure, The Problem-Solving Approach to Adjustment, (San Francisco: Jossey-Bass, 1976).

<sup>19</sup>A. Bandura, Self-efficacy: Toward a Unifying Theory of Behavioral Change, Psychological Review 1977, 84, 191-215.



<sup>20</sup>W.H. Fitts, Manual, TSCS.

<sup>21</sup>Michael Scriven, "The Methodology of Evaluation."

## CHAPTER II

### REVIEW OF LITERATURE

Juvenile corrections and subsequent rehabilitation is a very complex subject. In addressing the subject area, this study examined a wide range of associated subject focuses. Consequently, this chapter examined the literature in six broad areas. The examination begins with a summative discussion on a number of study concepts that when combined form the theoretical basis underlying the treatment objectives of the Sierra II program. Self-concept, self-esteem, locus-of-control, self-efficacy, problem-solving, and academic achievement are examined and interrelated in the first section. In Section Two, juvenile delinquency as a term is clearly defined and causes associated with delinquency are discussed. The primary focus of this section, beyond definition of causal relationships, are in describing characteristic needs and biographical models of the delinquent. In Section Three, traditional juvenile corrections are examined and expanded to include reform efforts and diversion programs. In Section Four, Sierra II as a process is examined and research relevant to this study is reviewed. In Section Five, prior evaluations of the Sierra II process, including Outward Bound for juvenile

delinquents is provided. In the last section, Sierra II as an Affective Change process is examined, clarified, and modeled.

### Concept Development

#### Self-Concept

Modern, contemporary thought concerning the nature, philosophical origins, and ideological development and supposition on one's self-concept can be separated into two distinct orientations: the development self and the social self.<sup>1</sup> The philosophy supported by the developmentalist maintains that one's self-concept is roughly equated to one's inherited traits, biologically determined at birth, which develop over time as instincts to situations. These instincts, moral or otherwise, drive personality development as life's occurrences and the individual interact. In short, the developmentalist maintains that the emphasis, in self-concept, is pre-determined through biological development not social event.

In converse to the developmentalist model of self-concept is the social self model. The social self model maintains that one's self-concept is primarily reflective of one's social interactions with others. This interactive association enhances and directly influences the development and formulation of one's conceptualization of self.

The social-self philosophy can be further subdivided into two major associations within the social science milieu;

the strict behaviorist view promulgated by B. F. Skinner and the interactionist view promulgated by C. Cooley, G. Mead, H. Sullivan, E. Hoffman, and C. Rogers.

The behaviorists' view of the social self contends that an individual's conceptualization of self is more strongly formulated through interactions with others (outside influences/education) combined with what one learns through experiences. This approach emphasizes external forces as the primary component in one's conceptualization of self.

In contrast, the interactionists' view of the social self seem to completely reject the internal and biological emphasis of the developmentalist as well as the external determinism of the behaviorist. Instead, the interactionists maintain a more autonomous self-concept. In this definition, one's self is closely related to one's self awareness. This is in turn affected by the surrounding, immediate environment and also impacts directly the surrounding environment.

The contemporary literature of interactionists exemplify many of the atypical ideas of social self theorists. One's self-concept is the primary theoretical component of Meador and Roger's client-centered therapy.<sup>2</sup> The self defined by this literature is primarily one's view of one's self consisting of organized maxims of one's personal characteristics and one's interactive relationship to others. One's self concept in this definition is fluid and ever

evolving, but at any moment in time it is a finite entity which is somewhat definable in operational terms.<sup>3</sup>

Clearly this partial review is not intended to offer comprehensibility. It is provided to allow cursive understanding of the model upon which this research is based: the interactionist social self model. Although only limited literature has been provided at this point, further research will be examined later in this chapter. But, it is important to note the basic philosophy that the self is an "entity"; it is what one perceives about one's self. These perceptions of one's self arise from the entirety of experiences of the individual. In one view, the evolution of one's self is viewed as dynamic and ever changing. The self is responsive to feedback and recent evaluations initiated from life situations. In another view, the self is perceived as semi-permanent (not completely transposed as each new social situation is experienced). The self is clearly a multi-dimensional entity.

#### Self-Esteem

The most strategically acute factor influencing the development of self-concept is self-esteem. For decades psychologists and counselors have focused on low self-esteem and its cure. The pervasiveness of low self-esteem among juvenile delinquents is so extensive that one wonders if enough trained professional personnel are actually available to handle the afflicted. The number of juveniles who hobble

through life in inner turmoil and whose life potentials are mired in unhealthy self defences is of epidemic proportions. For these individuals, neurotic, self-impeding hang-ups are clearly a way of life.<sup>4</sup>

Unfortunately, this is a staggering indictment of our socialization and acculturation process. Clearly it is the role and assumed prerogative of parents to instill the fabric of high self-esteem in their children. Vast financial sums have been committed to academic and vocational skills development, but little out-of-the-house self-esteem development (affective skills) training occurs. Obviously one's evaluation to the question, "how do I feel about myself," impacts an individual's ability to properly function within and for the society.

Self-esteem has held the primary distinction in research focused on self-concept. This primary role has obstinatively been related to its function in determining behavior or its role in physical manifestations of cognitive perceptions.<sup>5</sup> In a more traditional research environment, a bipolar distinction has existed between research populations; high self-esteem and low self-esteem. Classification of individuals into one of those groups has occurred by way of a subjective evaluation of their responses and reactions to the social environment, task assignments and its achievement, internal and external criticisms, peer inter- and intra-relationships and a variety of other situations. Similar

studies of self-esteem have indicated that a perceived high level of self-esteem enhances one's ability and disposition to initiate action<sup>6</sup> and is clearly correlated with the performance variables associated with better grades, inter- and intra-personal competence, and task responsibilities.<sup>7</sup>

Speculation concerning the primary factors which affect the development of self-esteem has clearly been in existence since the development of modern psychological assessment. Freud placed emphasis on the overall relationship between early environment deficiencies and later social psychological problems noted. This frame of thought implies that the absence of such deficiencies is uniformly associated with acceptable socio-psychological development. This pattern of thought and action often reflects the underlining premise of traditional juvenile probation and counseling. However, recent research indicates that there are no uniformly apparent patterns of early developmental intervention associated with juveniles with high self-esteem. Indeed, Coppersmith<sup>8</sup> concluded that although the general factors associated with high self-esteem have been defined, that not all of these factors are essential to the development of self-esteem in any given juvenile, nor is the absence of a single factor sufficient to produce low self-esteem.

In an extensive review of the research in this area, Wylie<sup>9</sup> concluded that there are no true antecedent-consequent designs of study. Most studies clearly emphasize the

correlated responses of parental intervention and juvenile response. These studies are understandable for their desire to not place juveniles under potentially devastating physically and psychologically adverse circumstances. It is this gap in the research that this study will fill.

#### Locus-of-Control

The construct defined as "locus-of-control" became prominent with the publication of a monograph by Rotter.<sup>10</sup> In this publication, Rotter detailed his scale developed to assess the individual's generalized expectancies for internal versus external control of reinforcement (I-E Scale). This instrument was constructed within the context of social learning theory. In expounding on its use, Rotter wrote, "The effect of reinforcement following some behavior . . . is not a simple stamping-in process but depends upon whether or not the person perceives a causal relationship between his own behavior and the reward."<sup>11</sup> Internal control is defined as the perception of an event as contingent upon one's own behavior or one's relatively permanent characteristics. External control, on the other hand, indicates that a positive or negative reinforcement following some individual action is perceived as not being entirely contingent upon his or her own action but the result of chance, fate, or luck; or it may be perceived as under the control of powerful others and unpredictable because of the complexity of forces surrounding the individual.



Operationalization of this concept has been accomplished in Lefcourt's research.<sup>12</sup> Lefcourt's findings correlate locus of control with personal cognitive reactions and responses. The findings strongly suggest that internals exhibit greater life coping skills, greater personal effort toward task achievement, less persuasive resistance and less peer empathy than externals.

Further clarification of these points can be found in the Seligman<sup>13</sup> conclusions on learned helplessness as correlated to externality. Seligman concluded that learned helplessness (a socio-psychological feeling of impotency in which an individual effectively feels unable to alter the present environment) is characterized by low self-esteem, decreased motivation toward task achievement, and an increased level of apprehension and gloom. This study continues by expanding this conclusion on attributes and characteristics in maintaining that these external factors foster, if not develop, helplessness in an individual. At the present, the causal direction is not clearly defined, but regardless of the direction, it is apparent from the research that a feeling of helplessness and powerlessness are certainly attributed to external locus-of-control.<sup>14</sup>

Additional research on locus-of-control suggests that an array of areas of control exist and that some diffusion must occur if any research in the field is to be helpful.<sup>15</sup> An operational distinction has been defined and correlated

between one's belief in one's power to effectively control the personal environment and one's power to exert control both over direct and indirect associated environments.<sup>16</sup> The dimension of internal control as it affects the juvenile's belief in his or her ability to perform in a task-directed manner is an important element in this study.

### Self-Efficacy

Self-efficacy, as defined by Bandura,<sup>17</sup> is a theoretical means of explaining behavioral changes. Acquiring attitudes or modifying existing attitudes involves behavior modification. The domain principles that underlie changes in behavior (after experiences) are applicable to the acquisition or modification of cognitive skills. It is the application of these cognitive abilities to behaviorally demanding situations in a successful manner that self-efficacy explains. In a more concise definition, self-efficacy is the degree to which an individual is convinced that executed actions will actually produce desired outcomes. Although the relationship of a complex set of cognitive responses to needs is not always clear, the individual firmly believes that the cognitive reaction will be satisfying and lead to the desired outcome.

The importance of imitation and affective conditioning in the development of juvenile high self-efficacy have been noted in the literature.<sup>18</sup> In this study, the researcher maintained that the desired outcome is often perceived as a

motivational factor. As individual expectations over the apparent worth of the outcome increase, an individual (with high self-efficacy) is more likely to initiate cognitive skills to achieve the outcome. This factor of expectation worth is the central construct in self-efficacy theory. In addition to expectations and motivation, the cognitive capability (skill) of an individual to execute a specific cognitive attribute is a deciding factor in whether or not a reinforcement is received.

It has been suggested that the acquisition and modification of cognitive responses occurs through the method of successive approximations by means of a differential model environment.<sup>19</sup> The effectiveness of reinforcement procedures in altering and maintaining cognitive responses has been shown in many studies. Indeed, Bandura, Jeffery, and Gajdos found that processes and procedures utilizing modeling techniques (both social and peer oriented) provided a more powerful positive change factor than operant conditioning alone.<sup>20</sup> It is clear from the research that the relative importance of reinforcement to modeling social and moral judgement responses lies in the extent and focus of the model. Bandura<sup>21</sup> considers these interrelationships as common definitive factors in the development of self-efficacy and consequent cognitive actions.

Bandura provides further clarification of these constructs in maintaining that four primary modeling

techniques exist and provide for greater impact on cognitive behavior patterns: (1) performance-based modeling or participant self-directed cognitive behavior, (2) vicarious observation of others in similar situations, (3) verbal persuasion by autocratic sources, and (4) personal psychological management of individual attributes. Additional research by Fletzt, Landers, and Raeder suggests that performance-based modeling provides the greatest impact in the development of efficacy.<sup>22</sup>

The maintenance or acquisition of a generalized sense of self-efficacy provides the promise of influencing further behavior. Juveniles properly inspired would be more likely to actively pursue personal goals and to tackle problem situations. The acute parallels between self-efficacy theory and the Sierra II mastery experience make Bandura's work of primary importance to this study.

#### Problem-Solving

The literature on problem solving skills and attributes is extensive. A major focus of the research, as postulated by Davis<sup>23</sup> and D'Zurilla and Goldfried,<sup>24</sup> has been the cognitive skills and attributes of individuals faced with the solution and achievement of impersonal research tasks.

Of more importance to this study is the literature that distinguished between the cognitive skills and correlates affective attributes associated with earlier research on impersonal tasking. Research analysis provided by Spivack,

Platt, and Shure<sup>25</sup> suggests that impersonal tasking and subsequent achievement are more directly affiliated with affective measures operationalized in a social environment.

Spivack, et al.<sup>26</sup> identified the cognitive skills necessary in an interpersonal tasking environment. These skills include problem recognition or sensitivity, alternative problem resolution thinking, means-end thinking, consequential thinking, causal thinking, and perspective thinking. The identification of these terms has been followed in the literature with correlated social behavior.

In recent research by Elardo and Lubek;<sup>27</sup> Gotlib and Asarnow;<sup>28</sup> Platt, Spivack, Altman, Altman, and Peizer;<sup>29</sup> and Spivack, Platt, and Shure,<sup>30</sup> the absence of these attributes has been correlated with antisocial behavior. In support, Spivack and Shure<sup>31</sup> have concluded and provided evidence to support their conclusion that programs enhancing or providing acquisition of these attributes actually demonstrate an enhancement in behavioral assessment of socio-psychological adjustment as a direct correlation to the increase in attribute and efficacy level. This conclusion is extremely important in this study of the relative effectiveness of the Sierra II affective change model in altering socio-psychological cognitive behavior.

#### Academic Behavior and Achievement

It is important in this research to note that individual differences between juveniles occur not only with respect to

intelligence, creativity, and physical attributes but also occur in the form of cognitive manifestations of affective attributes. In relationship to this study, these cognitive manifestations are particularly important when they take the form of delinquent behavior correlated with inadequate academic achievement.

Research into this area defines several attributes associated with delinquent behavior that are suspect in academic achievement.<sup>32</sup> These attributes include:

- Lack of parental interest in the juvenile's future.
- Inadequate or inconsistent disciplinary model.
- Inadequate problem-solving skills.
- Individual instability on both affective and cognitive attributes.
- Resentment of authority.
- Emotional (affective) conflicts.
- Lack of means-end skills.
- Dysfunctional behavior patterns.

Additionally, research studies correlating academic achievement and juvenile delinquency have suggested that poor self-concept,<sup>33</sup> affective attributes engendered by social environment,<sup>34</sup> actual equality of opportunity to achieve in cognitive and affective domains,<sup>35</sup> and difficulty in the development of self-efficacy, self-esteem and an ego identity<sup>36</sup> are clearly antecedent factors correlated with inadequate academic achievement by juvenile delinquents.

In response to the literature on causative factors related to academic failure of juvenile delinquents, Horrocks<sup>37</sup> provides guidance on altering these causative attributes and enhancing follow-on academic behavior and achievement. His research identified twelve factors which could be associated with this causative effect. A summary of his findings follows:

1. Acceptance. The need to feel that others' attitudes toward one are favorable or positive. To feel that others respect, sanction, or approve of one. To be secure in the feeling that one is a worthy person in another's eyes. To feel that others regard one as equal. To feel that one is not rejected.
2. Achievement. The need to acquire, gain, receive, win, or strive to accomplish goals, tokens of status and respect, or knowledge. To attain, secure, prove, surmount through praiseworthy exertion.
3. Affection. The need to be loved, cherished, emotionally wanted for one's own sake; to receive unconditional love and affection. To receive emotional love from parents, relatives, friends or lovers.
4. Approval. The need to have others' behavior toward one indicate that one is a satisfactory person, or that one's deeds are satisfactory. To seek overt rewards or others' signs of approval. To be given overt

demonstration by others of one's worthiness. To avoid blame, criticism, punishment.

5. Belonging. The need to feel a part of a group or institution. To identify oneself with a person, group, institution, or idea. To be a member of a congenial group.
6. Conformity. The need to be like others, to avoid marked departure from the mode. To yield or conform to custom. To avoid being different in dress, behavior, attitudes, ideals.
7. Dependence. The need to have to ask for or depend on others for emotional support, protection, care, encouragement, forgiveness, help.
8. Independence. The need to be free of external control by friends, family, associates, and others. To do things in a self-determining manner, to make one's decisions to be self-sufficient, to rely on oneself.
9. Mastery-dominance. The need to control, to be in power, to lead, to manage, govern, overcome people, problems, obstacles. To influence the behavior, feelings or ideas of others.
10. Recognition. The need to be noticed, to become known. To avoid effacement of one's individuality. To be identified by others as a unique individual, to be distinguished from others. To find one's place, to be regarded as an important human being.



11. Self-realization. The need to function at one's ability level. To learn, understand, perform to the best of one's ability, to avoid performing at a mediocre level. To strive for increasingly better accomplishment within the limits of one's capacity.
12. To be understood. The need to feel in sympathetic rapport with parents, relatives, friends, associates. To feel as one with others. To feel free to express one's innermost thoughts and problems to one more persons without loss of affection or personal status. To feel that another identifies with oneself.

Of importance to this study are factors related to the goals of the Sierra II process. These factors (1,2,4,6,7,8,9,10,11,12) are correlated to the main outcome objectives of enhanced self-esteem, self-efficacy, self-concept, means-end thinking, problem-solving skills, and cognitive manifestations of affective attributes.

### Juvenile Delinquency

#### Definition and Causes

A clear definition and causative factors of juvenile delinquency continue to escape researchers, theoreticians and professionals in the field. There are recent research studies providing some guidance in quantifying, defining, and explaining juvenile delinquency.

The President's Commission on Law Enforcement and the Administration of Justice reports that one in nine youths,

one in six male youths, will be referred to the juvenile court before their eighteenth birthday.<sup>38</sup> The significance of the problem cannot be overstated. This study is primarily concerned with those youths referred to the juvenile court and adjudicated as delinquent. This definition of delinquency is operational not theoretical.

There is an acute awareness in this study, as well as in the literature that the adjudication process whereby a youth is labeled delinquent is inconsistently applied to cognitive behavior in all segments of society. There is research which supports the philosophy that there is a process of excluding or forcing delinquent cognitive behavior on juveniles by communities, institutions and especially public school systems. Public schools tolerate little disruptive behavior, resulting in truancy or a lack of legitimate academic activity or affiliation.<sup>39</sup> Empey's<sup>40</sup> findings support similar conclusions:

Know delinquents do not possess the requisite cognitive or social skills to cope with the school environment. They tend to score lower on intelligence tests when social class is held constant, and their organizational skills are less than nondelinquents. Thus, very early in their lives, they are sidetracked from the major institutional avenues leading from childhood to adulthood. They find themselves without the institutional activities that provide the kinds of support that make conventional activities more highly appealing than deviant ones. They are socially "defrocked," as it were.

In defining "delinquency" as opposed to "criminality" this study recognizes that in many cases, there is a

subjective moral judgement involved. Often responses and reactions that are not considered illegal for adults are treated as legal disobedience for juveniles.

Additionally, parents, school authorities, instructional personnel, law enforcement officers, and neighborhood adult associations often contribute to the court's decision to label a youth delinquent. Brazelton,<sup>41</sup> a United States district court judge summed it up:

Tired and apathetic (parents) readily abdicate their parental roles. Frequently, when a child runs away from home and is picked up by the police, his parents refuse to take him home, instead filing a "beyond control complaint." In such cases, the child may be held for weeks and months pending hearing on the complaint.

In reference to providing an operational definition of juvenile delinquent as a legal term, this study's definition of a juvenile delinquent is a juvenile under the age of 18 adjudicated by the court as delinquent. This task of defining delinquency is simple compared to the task of explaining the causes of delinquency.

The theories and research explaining delinquent behavior encompass an infinite number of issues. Much research emphasizes individual personality traits, still other focus on the period of childhood, while others implicate societal structure and its institutions.

Mead<sup>42</sup> argues that criminality does not, in and of itself, chisel away at the cohesiveness of society. Criminality, according to Mead, actually enhances this

cohesiveness by uniting non-criminal factions against criminals. Chapman<sup>43</sup> supports this basic premise:

The designation and social isolation of a relatively small group of victims permit the guilt of others to be symbolically discharged; identification of the criminal class and its social ostracism permits the reduction of social-class hostility by deflecting aggression that could otherwise be directed towards those with status, power, reward, and property. A special part of the ideological functions to prevent the designated criminal from escaping from his sacrificial role, and institutional record-keeping maintains his identity.

Becker<sup>44</sup> maintains that the creation of legal norms and social mores are important in an explanation of delinquency. Becker argues, convincingly, that society creates delinquent behavior by creating "rules of behavior whose infractions constitute delinquent behavior" and by enforcing these rules on particular social groups and labeling them as delinquents. Support of this theory can be found in Platt's<sup>45</sup> analysis of court action concerning these rules of behavior applied to juveniles.

The extreme abnormal percentage of adolescents in the delinquent population demands explanation. Erickson<sup>46</sup> associates this reality with an adolescent's loss or under-developed sense of self-concept or self-identity. Researchers<sup>47</sup> examining the adolescent period are united in suggesting that delinquency among adolescents is primarily associated with that youth's exclusion from full social participation in which a healthy self-concept is developed.

Cloward's and Ohlin's<sup>48</sup> research on socializing institutions and their affect on delinquency exposes societies inadequacies in providing equality of opportunity for juveniles to develop healthy self-concepts. In doing this, Cloward and Ohlin suggest that society reinforces delinquent behavior.

In related research, Empey<sup>49</sup> focuses on the school as the socializing institution and how it relates to the causes of delinquency. His findings are summarized in the following paragraphs:

Failure in school leads to strain and alienation. Juveniles who are doing badly in school acquire a peer and official identification as delinquents, which in turn causes stigma. This leads to feedback that reinforces the strain and alienation they are feeling. If this labeling theory is corrected, the problems lead to further identification as delinquents. This forces the juveniles to live up to certain roles to keep the image; a circular process.

In any neighborhood in one of our urban centers, or even in some of our rural areas, there are five major structures that affect juvenile behavior: (1) the system of formal norms - the rules that define who is delinquent and who is not; (2) the policies and practices of the police and the courts; (3) socializing institutions - family, church, school, and the neighborhood itself; (4) illegitimate institutions - violent gangs, for instance and, finally, (5) social control - the police. The socializing institutions in the ghetto tend to be intimately related with illegitimate institutions.

There is only one institution that cuts across all neighborhood differences: the school system. Thus, problems in the school are the prime contributors to delinquency, rather than the larger stratification system - social classes and so on - which are imposed upon the school. This is important because youth on the college track are

rarely involved. Those who begin to fail, start to identify with people who are not in the system, and yet they still look with admiration on those who succeed. Schools are where the action is; even dropouts congregate around schools. There is no acceptable social role for a youth not in school or at least in a school atmosphere.

The theories explaining delinquency, although disagreeing on the primary causes, postulated the same recommendation: (1) there is a clear evidence that supports the need to involve juveniles in accepted and legitimate social roles that provide an equality of opportunity for the juvenile to develop a healthy self-concept, self-efficacy and self-esteem;<sup>50</sup> and (2) there is a need to increase the availability of opportunities allowing juveniles to enhance their affective attributes related to problem-solving skills.<sup>51</sup>

It is clear to this author that the multi-faceted causation model of delinquent behavior cannot be resolved in this study. Instead, this study will examine the proximal goals of the treatment process as a factor influencing many of the causative attributes noted in the research.

### Delinquent Biography

#### Biographical Characteristics

The treatment program evaluated in this study has been classified as an adapted Outward Bound program. As such, the delinquent profile defined by the program is clearly important to the generalizability of study findings. It is important to note that since no clear definition of

delinquent characteristics and needs exist, that the treatment program goals have been carefully matched with the delinquent. There is research that provides guidance in this match.<sup>52</sup>

The resultant juvenile delinquent can be characterized as an individual with deficiencies in means-end-thinking and problem-solving skills, low self-concept (self-esteem and self-efficacy), and dysfunctional academic attributes. The literature examined concerning these deficiencies also includes examination of delinquent behavior from an overall perspective of dysfunctional cognitive responses.

#### Means-End Thinking and Problem-Solving Skills

Research conducted by Spivack and Levine<sup>53</sup> found multiple differences in cognitive means-end and problem-solving behavior between a categorized delinquent population and a non-delinquent population. The delinquent group showed consistent deficiencies in means-end thinking and problem-solving skills.

Supporting this conclusion, Chandler<sup>54</sup> noted a difference in vicarious observation and perspective-taking. It was documented in the study that delinquents demonstrated an obvious deficiency in that skill. In addition, Chandler<sup>55</sup> also noted that weaknesses in the delinquents' ability to initiate action (self-efficacy) related to decisions or in situations in an acceptable role-related manner. It has been documented that intervention focused on these deficiencies

has enhanced the delinquents' skills while reducing delinquent behavior.

Although the literature on interpersonal problem-solving in juveniles is limited, Yochelson and Samenow<sup>56</sup> have provided interesting insights into dysfunctional cognitive behavior and deficiencies in means-end thinking and problem-solving skills among adult criminals.

Their research lends support to the conclusion that means-end thinking and problem-solving skills are directly associated with socio-psychological adjustment. The contention that criminals and juveniles are more dysfunctional due to their relative deficiencies in these areas is clearly supported by the research.

Yochelson and Samenow<sup>57</sup> detailed the affective patterns and processes which find habitual exercise in the criminal mind. These patterns can be directly linked to those proposed by Spivack et al.:

- tubular vision and alternate problem resolution thinking
- inadequate or no planning or means-end thinking
- inadequate or no pro/con comparison or consequential thinking
- inadequate or no time perspective or causal thinking
- failure to place one in another's position or perspective thinking



The parallels between the concepts are remarkable and support rather convincingly the contention that unserviceable affective domain characteristics are clear indicators or explanations for dysfunctional criminal behavior.

Expanding the literature to include the juvenile delinquent, one could reasonably propose that dysfunctional cognitive behavior in juveniles can be associated with the same dysfunctional affective attributes. Research indicates that delinquents exhibit inadequate means-end thinking and problem solving skills and that cognitive patterns reflect these deficiencies and may lead to social maladjustment. The research further concludes that the presence of these skills leads to greater social adjustment.

#### Self-Concept

The term, as examined in this study, is actually a composite of self-esteem, self-efficacy, and self-image. In essence, self-concept is an individual's assessment of oneself. It is generally accepted that a positive self-concept is critical to socio-psychological adjustment.

Juveniles placed in a structured situation initiate responses and actions according to what they perceive as appropriate behavior in relationship to their own evaluation of what is acceptable, relative to their self-concept. To the extent that a juvenile understands the meaning of functional cognitive behavior relative to their self-concept, the juvenile will perceive himself as reacting in an

acceptable manner. Additionally, to the extent that the juvenile understands the concepts of acceptable cognitive behavior, the juvenile will evaluate his own behavioral manifestations of affective attributes and corresponding self-concept as desirable.

Hence, what is regard as desirable is actually a reflection of the juvenile's self-concept.<sup>58</sup> It has been suggested throughout the literature that a discrepancy between one's self-concept and the ideal self is an indication of dysfunctional cognitive and affective attributes.<sup>59</sup>

Fitts and Hamner's<sup>60</sup> examination of the research on delinquency and correlated self-concept provides evidence suggesting that juvenile delinquents characteristically exhibit a lower level of self-concept when compared with the non-delinquent. In related research, Balester<sup>61</sup> compared the self-concept of a delinquent population against a non-delinquent population. His findings are consistent with other researchers in that the delinquents consistently exhibited more negative images of self-concept than the non-delinquents. Deitche<sup>62</sup> utilized the Tennessee Self Concept Scale (TSCS) to compare a delinquent population and a non-delinquent population. The assessment of self-esteem, one of the scales on the TSCS, clearly indicated a statistically significant difference between the groups. Other research, utilizing the same instrument, supports the conclusion that

the delinquent scored lower on the self-esteem scale than the non-delinquent.<sup>63</sup> It has also been documented that repeat juvenile delinquents scored lower than first time offenders. A disturbing trend surfaces here concerning declining self-esteem scores and repeat offenders. Lefebner's study indicates that a direct correlation exists between a juvenile's exposure to the juvenile court system (including detention and probation) and a decreasing level of self-esteem.

Often associated with a juvenile's low level of self-concept is a pervasive, all encompassing, sense of failure. Research suggests that this prevailing sense of failure has provided the juvenile with dysfunctional affective reasoning, leading to an enhanced level of external locus-of-control.<sup>64</sup> Indeed, Seligman<sup>65</sup> maintains that attributing causality to external factors is a primary component in the juvenile's development of socio-psychological helplessness. The concept of helplessness exemplified in the juvenile's cognitive patterns results in an external locus-of-control, social and psychological powerlessness, and a low level of self-esteem. In an operationalized state of action, these factors, when combined, reinforce the juvenile's sense of helplessness and enhance, directly, the juvenile's belief in failure. The stronger the failure orientation, the less likely the juvenile is to initiate action or prevail in once initiated

action. Clearly, altering this state of affective reasoning should be a primary goal of juvenile corrections.

On the opposite end of the self-concept spectrum lies the juvenile delinquent with an insolence permeating his or her cognitive or affective domains. This individual clearly demonstrates that he or she believes that he or she is in complete control of his or her socio-psychological environment. In reality, this inflated sense of self is a manifestation of dysfunctional anger and socio-psychological power coercion.<sup>66</sup> These attributes are the resultant cognitive and affective patterns developed as an escape from the real sense of helplessness, futility, and worthlessness. This idealistic view of the self is maintained through a host of irresponsible and manipulative cognitive behavior patterns. This type of individual, as was the juvenile exhibiting a low self-concept, is in dire need of developing a realistic and positive self view.

#### Personal Accountability-Irresponsibility Spectrum

Researchers into the characteristics of criminals (including juvenile offenders) suggest that the juveniles' affective processes are responsible for their dysfunctional cognitive patterns.<sup>67</sup> On the accountability-irresponsibility spectrum, Yochelson and Samenow<sup>68</sup> maintain that the juvenile's primary thought processes lie more toward the irresponsibility side than the accountability side. This

observation is useful in examining, both affectively and cognitively, irresponsible associations with their actions.

This component of behavior in the juvenile delinquent is important in determining the manner in which corrective counseling is to be applied. Much of the research engenders an approach that attempts to relate present action and subsequent accountability to personal background and external attributes. On the other hand, Glasser argues for an alternative to corrective counseling.<sup>69</sup> Glasser suggests that although personal background and external factors influence present behavior, the juvenile should not be allowed excuses for dysfunctional behavior based upon these socio-psychological factors. Instead, the juvenile should be made accountable for affiliated behaviors. The focus of this theory of juvenile counseling therapy is to effectively move the juvenile from one end of the spectrum (negative/irresponsible side) to the other (positive/accountable side). Glasser<sup>70</sup> also maintains that this approach, typically called "tough-love," shows the juvenile that someone cares enough to help him or her reach personal responsibility for his or her actions. In essence, this enhances the juvenile's capabilities toward consequential, causative thought.

#### Institutionalized Juvenile Corrections

The U.S. Department of Justice has reported that 46,980 juveniles are living in public juvenile detention and

correctional facilities.<sup>71</sup> This represents a 5 percent increase over the 1975 census, but shows a downward trend from an alarming 54,729 peak reached in June 1971. Every year, according to the National Council on Crime and Delinquency (NCCD), "over 100,000 children from seven to seventeen inclusive are held in jails or jail-like places of detention."<sup>72</sup>

Few facilities provide adequate counseling, psychiatric or socialization (non-dysfunctional) services for the juvenile. Many have part-time professionals who do little more than diagnose new admissions or react to emergency situations.<sup>73</sup> Quality and individualized relevant subject-matter focused education or directly applicable vocational training are almost non-existent.<sup>74</sup>

Juveniles are confined for an average of 8.4 months. According to an NCDD report<sup>75</sup> only about 10 percent of the institutionalized population require detention or institutionalization. The federal Youth Development and Delinquency Prevention Administration has stated that "mildly delinquent youth or neglected children are being detained unnecessarily and harmfully in close association with sophisticated delinquents."<sup>76</sup>

Strict discipline, obedience, and physical and mental brutality prevail in these centers.<sup>77</sup> Research<sup>78</sup> suggests that such brutality occurs mainly as a result of the frustration of both untrained and underpaid staff personnel.

Clearly traditional juvenile correction and subsequent institutional confinement inflicts a process of degradation and results in a loss of self-concept.<sup>79</sup> Treatment through traditional institutional confinement has proved to be ineffective and personally dysfunctional in both the affective and cognitive domains. The institutional milieu often increases dysfunctional attributes and decreases the juvenile's self-concept by fostering the development of a criminal self-concept.<sup>80</sup>

### Sierra II Process

#### Background

Sierra II is an adventure-oriented program implemented for adjudicated juvenile delinquents. The program is modeled on the philosophical components of the world-wide Outward Bound movement.

Sierra II, as an adapted Outward Bound program, subscribes to the original constructs of the movement: The foremost task of education is to insure the survival of these qualities: an enterprising curiosity, an undefeatable spirit, tenacity in pursuit, readiness for sensible self-denial, and above all, compassion.<sup>81</sup>

The Sierra II program policy lists the program's primary objectives as,

to alter self-image, increase self-confidence and self-awareness and enhance self acceptance and peer acceptance (both active and passive). Sierra II is a catalyst for self-discovery and personal growth. In addition to physical skills each juvenile is

counseled in regard to trust, compassion, self-concept, self-image, personal responsibility, and leadership.<sup>82</sup>

Related Sierra II literature encompasses the additional objectives: decision-making skills, problem-solving (means-end) thought processes, inter/intra-personal communication skills, academic-vocational achievement awareness and stress management.

#### Adapted Outward Bound Program Research

It is apparent that the majority of research into the adapted Outward Bound processes has focused on the assessment of personality variables. Research<sup>83</sup> has concluded that, although there exists methodological and pedagogical weaknesses in the body of knowledge, self-esteem has been the most frequently assessed variable. Fletcher's<sup>84</sup> research of 3,000 program participants indicated that an increase in self confidence was one of the many significantly detailed changes noted in program participants.

In a study of 50 high school juniors involved in a similar program, Smith<sup>85</sup> assessed the follow-on (proximal) effects on academic attendance and achievement. Smith<sup>86</sup> concluded that although participants improved significantly ( $p = .05$ ) in their attendance and achievement, there was no statistically significant difference between the experimental and control groups.

Wetmore<sup>87</sup> utilized the TSCS to assess enhancements in self-concept of 291 juvenile males participating in an



Outward Bound program. A comparison of pre-test and post-test means indicated a significant positive change in 90 percent of the self-concept components ( $p < .05$ ). In addition, Wetmore<sup>88</sup> measured the professional staff's assessment of an individual's improvement. The Kelly and Baer Behavior Rating Scale was employed upon conclusion of the course. Wetmore found a positive correlation between the juvenile's score (and consequent self-evaluation) and the staff's evaluation of that juvenile.

Smith, Gabriel, and Anderson<sup>89</sup> developed a two-fold design to study the proximal effects of the Colorado Outward Bound school on juveniles. The primary design used a time-series format. An assessment tool developed by the researchers measured four constructs: self-esteem, self-awareness, self-efficacy, and peer acceptance. The study population consisted of 620 participants.

The second component of the study was the employment of an objective observer (no previous experience with the program), participating with no special privileges or designations who maintained a journal of the experiences and their effects.

The results of the research, as reported by Smith, Gabriel, Schatt & Padia<sup>90</sup> found a positive impact on the participants' "self-efficacy." The "self-esteem" scale showed an increase although not in all individuals. The

significance of "peer acceptance" was noticeable but weak. The study indicated no impact on "self-awareness."

#### Adapted Outward Bound Programs and Juvenile Delinquency

Adapted and Outward Bound programs have inculcated delinquents into the process since program inception. In spite of this fact, the availability of sound research into this area is minimal. Indeed, many of the studies conducted on such programs remain unavailable or unpublished.

The most important work in this area has been conducted by Kelly<sup>91</sup> and Kelly and Baer.<sup>92</sup> Juveniles involved in the program were males between the ages of 15 1/2 to 17 years of age. There were 120 participants involved. The participants were matched and then divided along IQ, race, religion, offense, area of residence and number of prior commitments. The experimental group received a 26 day treatment program (conducted at one of several sites) and were then paroled. The treatment has been summarized as follows: Outward Bound Schools expose the adolescent to severe physical challenge. The object is to build physical stamina and to push each individual to his physical limit. Thus, the adolescent is called upon to achieve beyond what he believed he was capable of, to demonstrate his competence in the most meaningful way by action.<sup>93</sup>

The control group of delinquents received no unusual treatment from correctional authorities except that some

remained institutionalized and some were released to supervised parole.

Researchers utilized the Jesness Inventory to assess changes in personality as a result of the treatment. Assessment analysis showed no statistical significance between changes noted in both groups although statistically significant results were noted within the experimental group.

The Connecticut Wilderness School was the subject of three separate studies. In 1975, Cytrynbaum<sup>94</sup> explained that in a six months follow-up the experimental group (Outward Bound processes) showed fewer arrests, less substance and alcohol abuse, and greater self-efficacy. Forty-nine adapted program school participants and a similar group of control participants (matched on race, age, sex and referral source) comprised the study group. In 1980, Gaston assessed the program's effect on self-efficacy and self-confidence. Gaston<sup>95</sup> found both components to be positively affected by the program. In Stewards 1978 evaluation,<sup>96</sup> (published 1981), twenty-four subjects were tested (pre-, post- and six-month follow-up) after treatment. The Jesness Inventory and the Gaston Delinquency Attitude Index were the Assessment tools. Results indicate that the Jesness Inventory subscales associated with interpersonal affective and cognitive reasoning showed significant positive gains between pretest and follow-up test ( $p < .10$ ). The presence of lasting

benefits as measured at the six-month follow-up is also important.

Collingwood<sup>97</sup> evaluated an adapted Outward Bound program associated with the Arkansas Rehabilitation Service. A variety of social, psychological, and physical fitness measures were employed in a pretest-posttest single group design ((N=21). Statistically significant positive changes were noted in physical fitness, self-concept, and locus-of-control.

Kimball<sup>98</sup> employed the TSCS to measure changes in self-concept among juveniles of the Wilderness Experience Program. Statistically significant changes were noted on self-esteem, personal self, cognitive behavior, neurosis, and general dysfunctionality. The lack of a control group as well as the variety of scales within the assessment tool utilized limits the importance of the finds to this study.

In aggregate form, the research associated with this focused literature has certainly been limited in both quantity and quality. There are several reasons for these shortcomings. Shortages in funding have forced much of the research to concentrate on easily accessible and measurable outcome variables, personality and recidivism. Examination of the body of knowledge by this author has produced two cautious conclusions: (1) participation in an Outward Bound or adapted Outward Bound program enhances a delinquent's

self-esteem and (2) reduces the likelihood of contact with the juvenile court system and peripheral organizations.

This researcher's study contributes to the literature in a variety of ways. First, and primarily, this study has employed a sound quasi-experimental research design in which control and experimental groups evolved from randomized pools of participants. Secondly, this study has utilized nationally accepted and validated assessment tools to measure constructs in addition to self-esteem. The measurement of changes in problem-solving skills, means-end thinking, efficacy, locus-of-control, and follow-on academic achievement have rarely been undertaken in other evaluations. Lastly, this study will provide a correlated link between the proximal goals of the treatment process and changes in the assessment constructs (as measured by the evaluation instruments). This correlation is provided in an attempt to validate the Sierra II Affective Change Model.

#### Sierra II: Three Dimensional Affective Change Model

The model presented in Figure 2 is a graphic illustration of Harmon's and Templin's<sup>99</sup> classification of instructional objectives and is used in this study to associate the Sierra II process to the study effects defined as program goals. This study will not attempt to validate the model. This study will utilize the model as a logical, structured rationale by which the independent variable

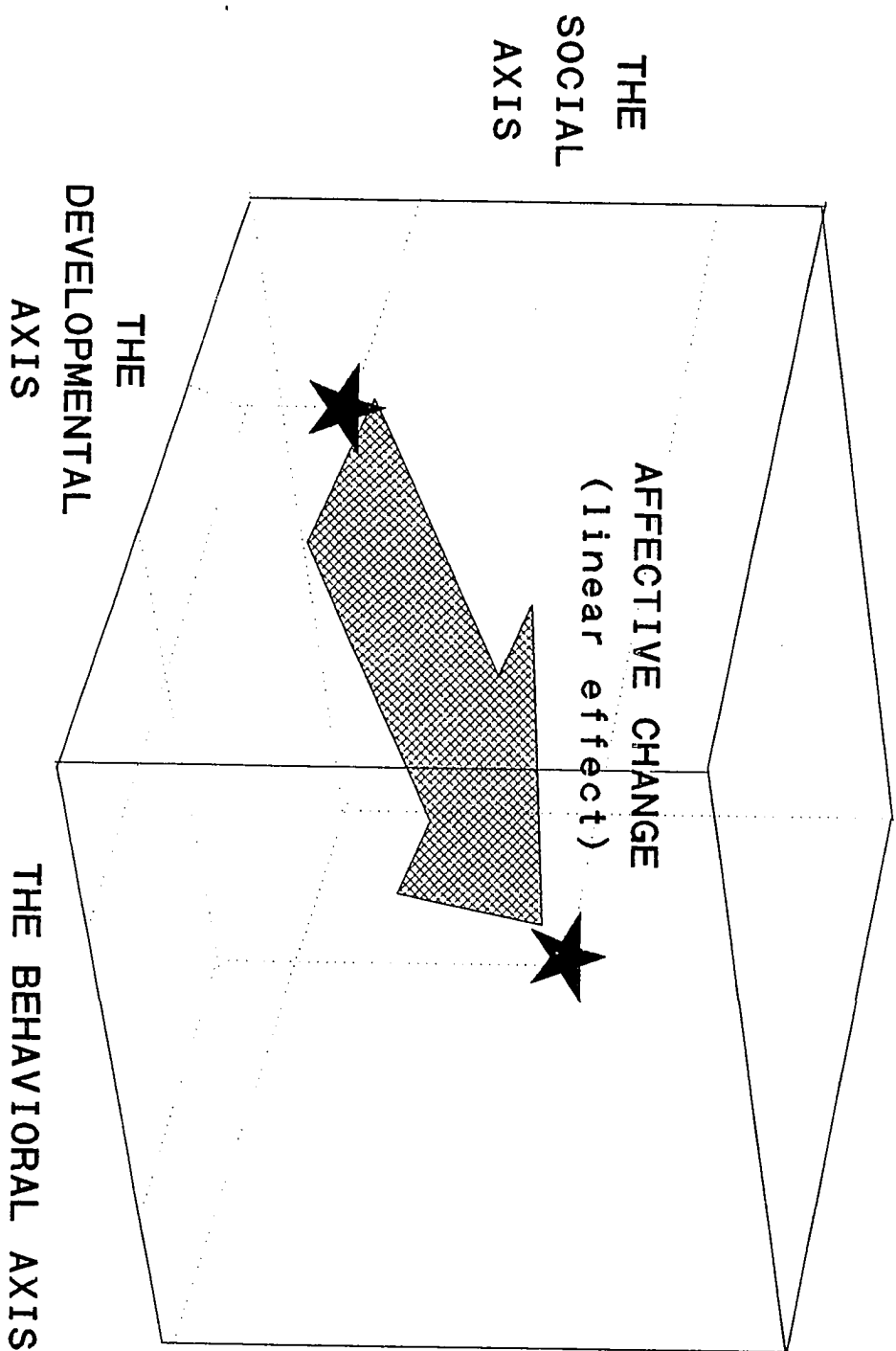


Fig. 2. Simplified Model of the Affective Change Process  
Harmon and Templin (1977, p.9)

(Sierra II program) can be expected to effectively impact the dependent variables measured in this study.

In essence, the model conceptually illustrates affective domain change as related manifestations within a predefined area of axial continuums.<sup>100</sup> Accordingly, the following terms are further operationalized as follows:

Cognitive Change - Change in behavior concerning the use of understanding or contrasted comprehension.

Affective Change - Change in behavior demonstrating attitudinal, valuation or moral assessment. This behavior can be overt or covert actions reflecting the individual's affective motivation, rationale or psychological state.

Psychomotor Change - Change related to the physical mastery of skills prerequisite to physical challenge mastery.

Developmental Element

This element of affective change is focused on the behavioral manifestation of ingrained genetic or latent general responses to some referenced stimulus. At intermittent stages of growth each individual is capable of specific intellectual processes, reasoning abilities, timely insights and situational generalizations. This growth continuum is one-directional, irreversible and is difficult to modify or force.<sup>101</sup>

Harmon and Templin<sup>102</sup> argue that inasmuch as the development element is invariant, simple subordinate intervention is possible. Subordinate intervention in this

element is primarily focused on those transition phases where emphasis on problem-solving skills help encourage subjects to expand and discover the affective and cognitive tools of the phase they are or should be entering next.

Piaget<sup>103</sup> has delineated four general phases in the developmental growth of children:

- (1) The Sensori-Motor Element
- (2) The Pre-Operational Thought Element
- (3) The Concrete Operations Element
- (4) The Formal Operations Element

The associated ages and distinguishing traits of these elements are summarized in Figure 3. This study will primarily be concerned with the transition from concrete operations to formal operations. The remaining two elements are important to research in this area, but the associated ages of average transition fall outside the average ages of the study population. A definition of the four phases is contained in Appendix G.

Piaget,<sup>104</sup> in his work with Swiss adolescents, maintained that transition from the concrete operations element to the formal operations element occurred between 11 and 15 years of age. More recent holistic research in this area<sup>105</sup> imply, rather convincingly, that this transition can occur in a longer time interval. McKinnon and Renner<sup>106</sup> found that within their study population (participant average age was 19 years old) 75% were partially or completely



BEHAVIOR (a mix of characteristics: each adult has a little bit of each period—but integrated)

PERIOD	AGE	CHARACTERISTICS OF PERIOD
IV. FORMAL OPERATIONS PERIOD	20 -	Development of implication, abstraction, propositional logic. Capable of mental hypothesis testing. Can deal with possible characteristics of hypothetical situations.
	15 -	Can develop abstract laws to cover multiple variables.
III. CONCRETE OPERATIONS PERIOD	11 -	Logical deduction starts—can manipulate concrete ideas. Less egocentric. Still limited to possible events. Concepts of conversation, reversibility and compensation are developed. Concrete classifications, hierarchies possible.
	7 -	Can't deal with two variables at the same time.
II. INTUITIVE PREOPERATIONAL THOUGHT PERIOD	5 -	Language development starts. Learns to activate sensori-motor schemata mentally—without actually performing actions. Limited to concrete actions primarily dealing with events of present.
	2 -	Poor conceptions of life and emotions.
I. SENSORI-MOTOR PERIOD	18 Mos -	Child begins with a few simple reflexes. Development of sensori-motor schemata (schemata of action).
	0 -	Development of object permanence.

Figure 3. Piaget: Periods of Cognitive Growth

concrete. Hence, this author would argue that Sierra II treatment process is providing developmental affective, cognitive and psychomotor training to subjects in either concrete or transitional formal operations.

The relationship between the developmental transition from concrete operation and formal operations and affective domain changes in attitude and value are of primary concern in this study. Extensive research by Kohlberg<sup>107</sup> links the three theoretical elements of Piaget's cognitive stages with a cognitive-development model for affective change instruction. The correlation, as illustrated in Figure 4, is a hierarchy of three levels and three cognitive modes of decision making. Similar to Piaget's intellectual phases of development, there is a structured growth path through Kohlberg's cognitive development model. Both Piaget's and Kohlberg's levels involve intellectual process rather than any specific affective (moral) content.

Further explanation and definition of Kohlberg's stages are noted in Appendix H.

Piaget's and Kohlberg's research indicate that both researchers saw the adolescent as always in the process of transition from one stage to the next. Kohlberg, like Piaget, maintained that transitional development is greatly enhanced through peer interaction. Kohlberg<sup>108</sup> clearly states that affective change or moral development past Phase 1 is a less internalization and more a reconstruction of

roles taken and conceptualize ideas of justice toward greater self-adequacy. These reconstructions occur as correlative affective and moral efforts between the individual and the social or cultural situation confronted. This hypothesis is the major philosophical ideology of the Sierra II process.

PIAGET'S COGNITIVE STATES		KOHLBERG'S COGNITIVE LEVELS
2 to 5-7 Years	Intuitive or Pre- operational period	Pre-conventional Level Stage 2: Satisfy Self
-----		
5-7 to 11 to 18+ Years orientation	<u>Concrete Operations</u>	<u>Conventional Level</u> Stage 3: Good boy/nice girl  Stage 4: Authority and social order/ doing one's duty
-----Transition-----		
11 to 18+ Years	<u>Formal Operations</u>	<u>Principled Level</u> Stage 5: Contractual duties/right of others Stage 6: Conscience or principles

Figure 4. Piaget and Kohlberg: Correlated  
Cognitive Development Levels

#### Behavioral Element

This element of the model, based on Bandura's social Learning Theory,<sup>109</sup> theorizes that affective domain change is a sub-set of behavioral change,<sup>110</sup> In general, this element of the model argues that affective domain characteristics (attitude, values and morals) are most effectively defined as

overt cognitive behavior or actions. In this manner, affective growth can be interpreted as changes in the rate of the particular behaviors that are of concern to the instructional environment. Harmon and Templin<sup>111</sup> argue convincingly that behavior is totally learned and that learning is controlled best through the use of stimulus control, response shaping and the structural implementation of contingencies for reinforcement. Harmon and Templin<sup>112</sup> in concert with Bandura<sup>113</sup> and other behaviorists postulate that cognitive behavioral change in an individual's manifested actions can be accomplished through the application of the following instructional techniques:

Stimulus Control - Individual reaction to specific stimuli relies upon the individual's recognition of such stimuli. In this technique, for example, the Sierra II process may continually highlight examples of interpersonal inconsideration, linked to environmental situations, until the subject recognized this stimuli without prompting.

Response Development - Acceptable responses within social, cultural or environmental situations are to be developed in a structured manner. This structured development should begin with less complex responses and build to full, complex responses. Bandura<sup>114</sup> argues that it is important that correct responses be efficiently modeled and that this correct modeling provides a sufficient environment for the development of responses by subjects.

Response Elimination - Unacceptable responses are eliminated from the response pool by not following them with positive consequences. This effectively removes punishment as a response elimination effect. Since punishment often results in undesirable side effects and should be utilized in only extreme or unique situations, the lack of encouragement and reinforcement offers a more effective technique.

Contingency Management - Cognitive behavior reinforced by positive consequences is frequently repeated by the subjects; cognitive behavior followed by more or less neutral consequences is most often eliminated from the subjects responses pool. Bandura's<sup>115</sup> vicarious conditioning exemplifies this technique applied in the Sierra II process: subjects internalize acceptable behavior patterns through visual examination of peer behavior and the associated consequences.

This study is primarily concerned with cognitive manifestations relative to affective change in these four areas. This author argues that the realistic application of this axis of the model hinges on the use of behavior modification techniques. Ideally this would indicate that the study program, to be effective, would have clearly defined and measurable behavior goals and objectives associated with these four areas of behavioral change. Consequent change along the behavioral axis of the Sierra II model would then manifest itself in constant, acceptable

behaviors, exhibited by individual subjects, predefined in the program's behavioral goals and objectives.

The Sierra II program's developed behavioral goals and objectives for subjects are defined in six categories, as follows:

- (1) Enhanced Self-image, Self-worth and Self-confidence
- (2) Enhanced Inter-Intrapersonal Communication Skills
- (3) Enhanced Group-Dynamics Skills
- (4) Improved Social and Problem-Solving Skills (as related to behavior in social, cultural and environmental situations)
- (5) Enhanced Self-awareness in spiritual, moral, ethical valuation and education areas
- (6) Enhanced Wilderness Awareness

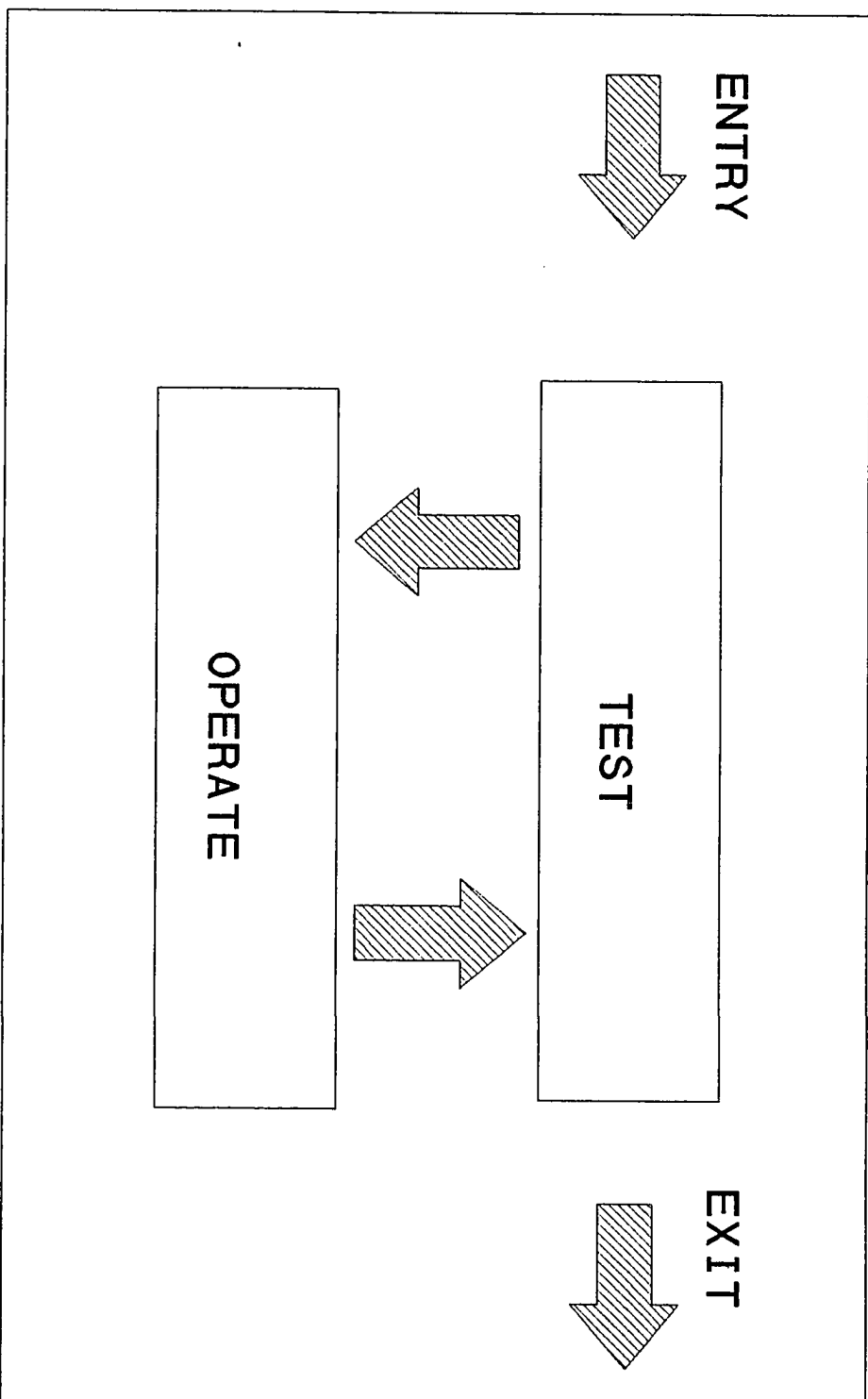
Subject change along this axis of the Sierra II model is assessed in terms of the cumulative number of manifested actions associated with any or all of the specific criterion behaviors. The Sierra II program does not prioritize these criterion behaviors and as such change along this axis is constant.

#### Social Element

This element of the model is focused on the manner in which the subject conceptualize reality and the world. This element is concerned with abstract reasoning and intellectual model-building as they relate to language skills and cultural actions.

Miller, Galanter and Pribram's<sup>116</sup> research in cybernetic hypotheses form the cornerstone of this axis of the model and is illustrated in Figure 5. They postulate that 1) subjects could actively respond to a wide range of stimuli without uniquely identifying or learning from the stimuli and 2) that subjects are not passively awaiting stimuli to initiate action, that subjects approach situations with set expectations and that as long as those expectations are achieved, subjects continue to respond based on that operant behavior. Miller, et al. (1960) defined this behavior as TEST-OPERANT-TEST-EXIT (TOTE) behavior. They postulated that 1) information flows in and is evaluated (TEST), 2) that evaluation demands an OPERANT/EXIT behavior, 3) if operant behavior is required and accomplished then another evaluation (TEST) of the situation occurs and 4) if no OPERANT behavior can be hierarchically delineated by a more complex arrangement of TOTE units. Such a hierarchy is illustrated in Figure 6.

Miller et al.,<sup>117</sup> having defined the TOTE as the most fundamental unit of social behavior, further concluded that, based on this fundamental understanding, operant behavior is planned. They concluded that the plan is designed from operant responses gained from image modeling. Subjects form sequenced plans for future situations by replicating visual descriptions, verbal descriptions or computational descriptions of acceptable behavior. These images or models



**Fig. 5. Simplified TOTE Unit**  
(Miller, Galanter, and Philbram, 1960)



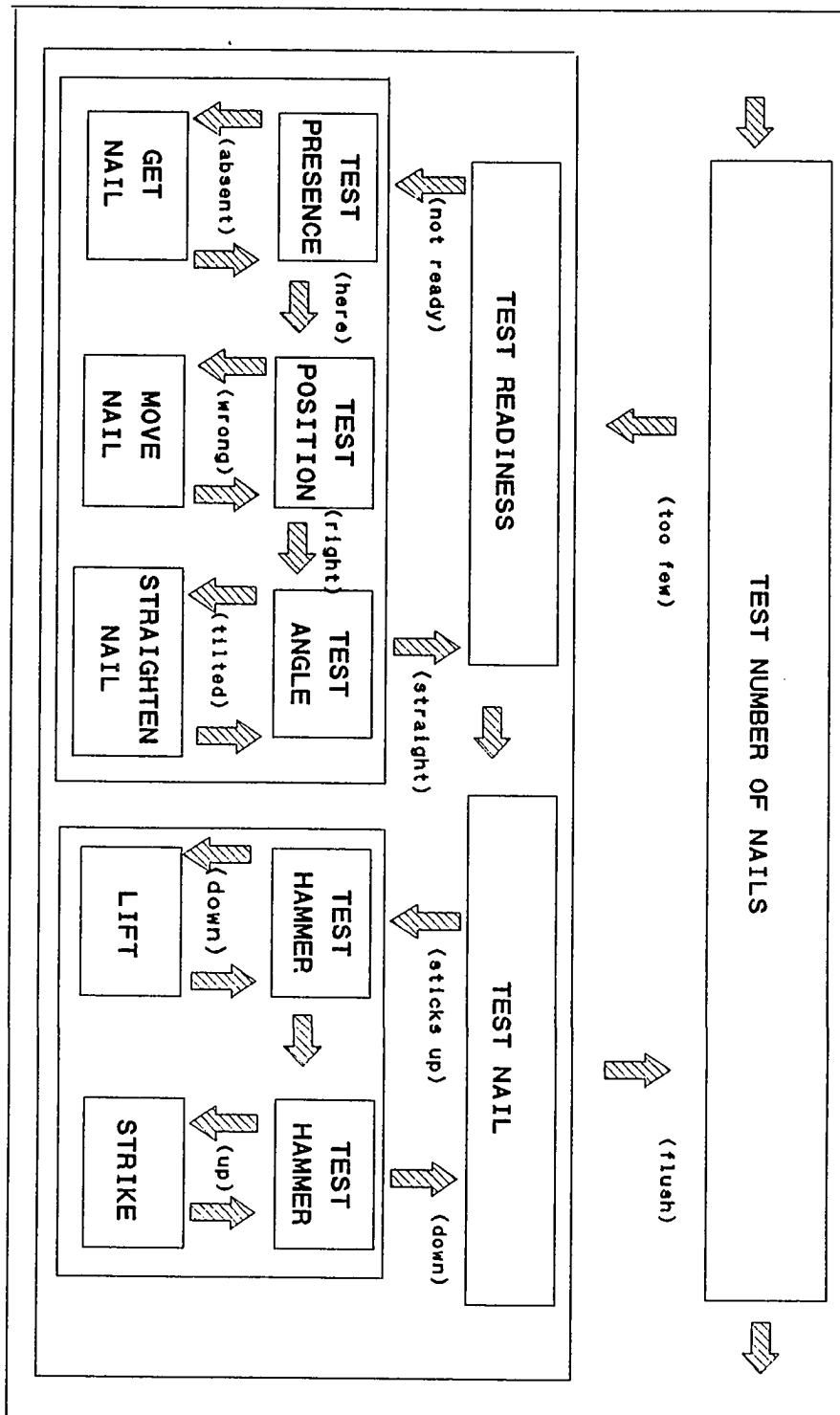


Fig. 6. A Hierarchy of TOTE Units

are stimuli responsible for internalization of values, attitude or morals. This affective imaging eventually manifests itself as cognitive behavior or actions.

Having defined this axis of the model, there now emerges the problem of effectively altering the subject's models of self, reality and acceptable behavior. This axis implies a rather symbolic or linguistic modeling approach. Therefore, any intervention must be focused on the symbolic and linguistic nature of the axes. Obviously in order to impact this environment both visual and verbal intervention should be provided. Indeed, this author maintains that the following techniques, all integral parts of the Sierra II process, could effectively and efficiently be utilized.

Value Clarification - This technique utilizes problematic situations designed to enhance subject self-assessment and verbal affirmation of his/her own beliefs. The primary focus of this technique is to encourage an individual to examine their values, consider alternatives and verbally (most often in public) affirm his/her beliefs.

Moral Reasoning Skills - Through the use of traditional instructional methodologies (lectures, readings, problem-solving simulations) the subjects are guided in the development of analytical processes from which they can respond in an acceptable manner to carefully analyzed and evaluated problematic situations.

Role Playing - Subjects are encouraged to role play where they can emulate the attitudes and values of others. Depending on the complexity of the situation, this technique forces subjective examination, by the acting subject, of innovative or radically different attitudes or values.

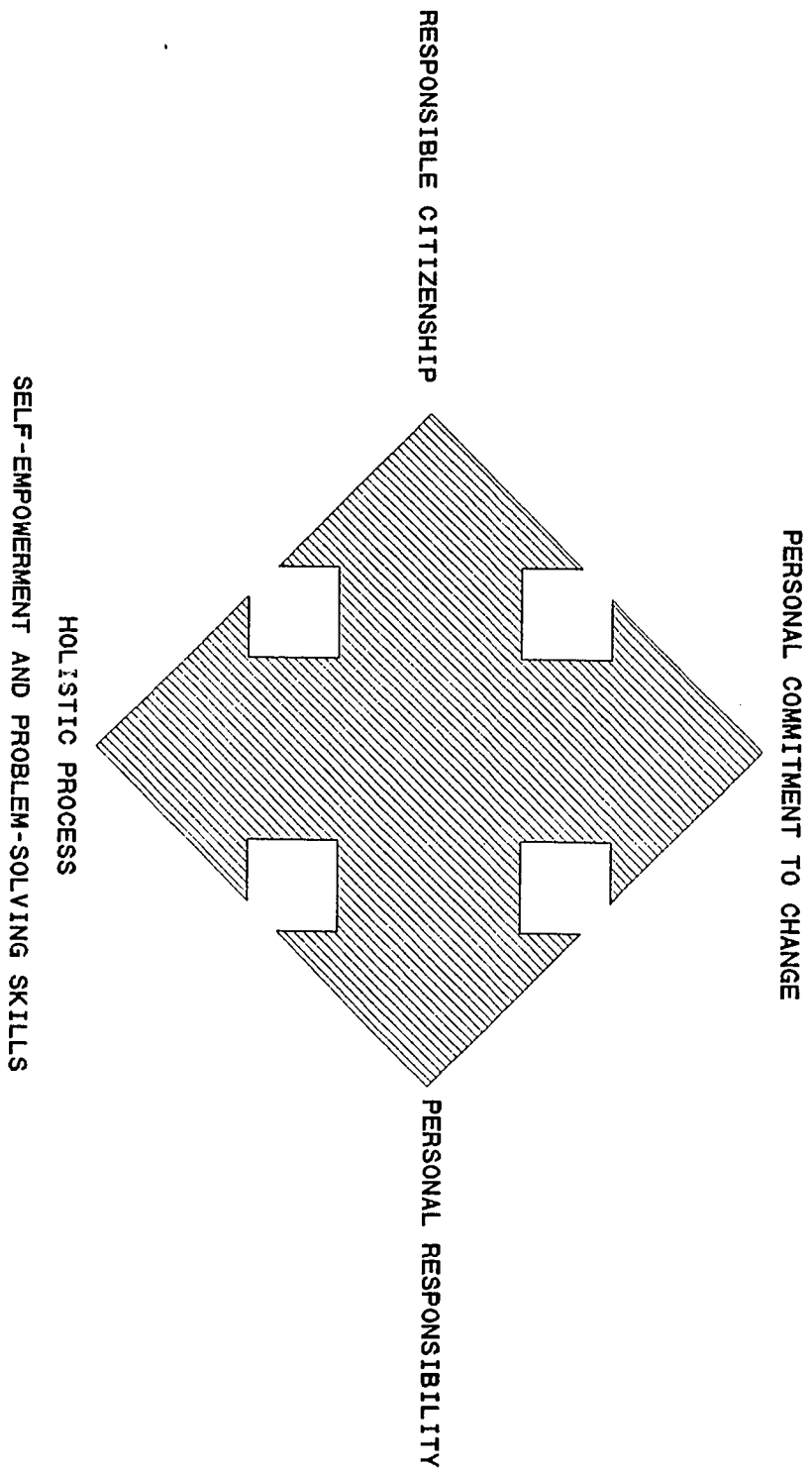
Role Advocacy - In this treatment, a group leader advocates a particular view, attitude or value and may directly or indirectly intimidate subjects in an attempt to keep them from contradicting it.

In essence, this axis of the model provides a means of intervening in the symbolic or linguistic affective development and change process. This assumption is based on a hierarchical structure of abstract reasoning and modeling whereby higher-level abstract constructs are predicated on lower-level internalization of less abstract constructs. This theory, operationalized in reality, presumes that verbal intervention is an effective means of transferring acceptable affective domain characteristics into cognitive manifestations.

Obviously, the Sierra II model axes cross-over within each other. This study will consider affective change as a process interrelated to change along any of the axes.

#### Sierra II: Therapeutic Model

The therapeutic nature of the Sierra II process is illustrated in Figure 7 and is designed to link the Sierra II process to the goals and objectives of the Sierra II program.



**Fig. 7. SIERRA II Therapeutic Model**

The primary goal of the study is to evaluate the Sierra II process and not the model. The utilization of this model in the study is intended to offer a rational departure point from which the investigator can examine the effect of the independent variable upon the dependent variables assessed in the study.

#### Personal Commitment to Change

Obviously, without a voluntary commitment to change by the study subjects, no change will occur. It is of primary concern that adjudicated youths involved in the program make the decision that change is necessary in their lifestyles and behavior. As illustrated in Figure 7, the Sierra II process provides an intense physical and guidance program designed to optimize the change process. Consequently, the more committed to change the individual is, the more change will occur.

It is just as obvious that participants in the program and personal commitment to change may be facilitated by many stimuli. Due to the varied nature of this motivation, it is important that individuals constantly reaffirm, both physically and verbally, their personal commitment to change and to the Sierra II program.

#### Personal Responsibility

The Director, paid staff and voluntary staff members of the Sierra II program are officers of the Virginia Beach Juvenile court and as such must clearly indicate to each

participant that behavior inconsistent with socially acceptable behavior or rules of probation will not be accepted. Indeed, infractions are dealt with swiftly in accordance with program or legal guidelines. Hence, participants are required to sign and adhere to both the Rules of Probation and the Sierra II contract. Participant guardian contracts are also required. These documents, attached as Appendix I, are written evidence of personal commitment to the program and constant reminders of minimal operant behavior.

These contracts are vehicles to assure that all participants clearly understand their personal responsibilities within the program. Irresponsible behavior only creates personal obstacles to participants in mastering the various challenges presented by Sierra II. Those participants, consistently demonstrating irresponsible behavior, often have difficulty in accepting responsibility for their own actions. The challenge then, for both staff and participant, is to maintain consistency in behavior and lifestyle in accordance with these contractual devices.

#### Holistic Process Responsibility

It is the responsibility of the Sierra II process to provide integrated learning opportunities from which responsible operant behavior can be modeled or developed. This optimization of the time-on-task is a primary concern of the Sierra II Affective Change Process. This change process

along with an explanation of the Sierra II Holistic Process are discussed in a prior and subsequent section respectively.

### Self-Empowerment

Self-empowerment, as defined earlier by this author, is clearly one of the most important behavioral constructs examined in this study. When the participants believe that they can accomplish desired outcomes through their behavior, then those participants will realize that what they do will make a difference. In this study, an internal locus-of-control<sup>118</sup> and self-efficacy<sup>119</sup> will theoretically define self-empowerment. In this way, this author argues that the participant will find reward dependent upon personal behavior (internal locus-of-control) and that reward can be obtained through personal behavior (self-efficacy). The Sierra II Holistic Process can be used to constantly reaffirm this relationship in both affective and cognitive domains.

### Problem-Solving

Participants are also in need of enhanced problem-solving skills that can be used in generalized environments. Indeed, research<sup>120</sup> has identified a structural framework from which these skills can be learned: 1) problem identification, 2) identification and evaluation of alternatives, 3) structured implementation plan, 4) integration effects on others, 5) implementation time-line and 6) implementation perspectives. These six conceptual

ideas can be linked to the goals and objectives of the Sierra II program as follows:

- (1) Awareness of inter/intrapersonal problems
- (2) Alternative thinking
- (3) Means-End problem-solving
- (4) Consequential thinking
- (5) Causal thinking
- (6) Perspective thinking

The acquisition of these skills enables the participant to apply them in virtually limitless situations. The Sierra II Holistic Process functions form a mastery-based model and can be utilized to provide equality of opportunity from which all participants can acquire these skills and learn how to apply them in varied situations.

#### Responsible Citizenship

An enhanced sense of self-efficacy, internal locus-of-control and means-end problem-solving abilities yields a more responsible citizen. This type of citizen, functioning from a success orientation, can and often does, make significant contributions to the society. Clearly, program participant will be confronted with complex life situations after program completion. By instilling or improving self-efficacy, self-image, and means-ends goal achievement motivation in program participants, confronting these situations in a socially acceptable well-adjusted manner is greatly enhanced.



### Sierra II: Holistic Process

The illustration in Figure 8, an expansion of Walsh and Golins'<sup>121</sup> model, provides further delineation of the separate elements in the Sierra II Holistic Process of master-based intervention. The Walsh and Golins model<sup>122</sup> is diagrammatically illustrated in Figure 9. This model has been altered in several important areas. These changes will be examined in the following section.

### Sierra II Environment

The major goal of the Sierra II Probation diversion program is to eliminate behavioral patterns that would place the juvenile in conflict with the legal system. The Sierra II program attempts to do this by intervention therapy designed to alter or enhance self-efficacy, self-image, locus-of-control, self-empowerment, personal problem-solving skills, and personal success orientation. This intervention is modeled along the Harman and Templin Three-Dimensional Affective Change Process<sup>123</sup> and is designed to encourage personal maturity and responsibility. The program initially provides direct counseling designed to enhance motivational awareness by the program participants. This awareness is transferred into physical readiness participants are immediately confronted with the realities of outdoor and social problems demanding solutions.

The Sierra II program is not designed to function directly as an individualized learning environment. The

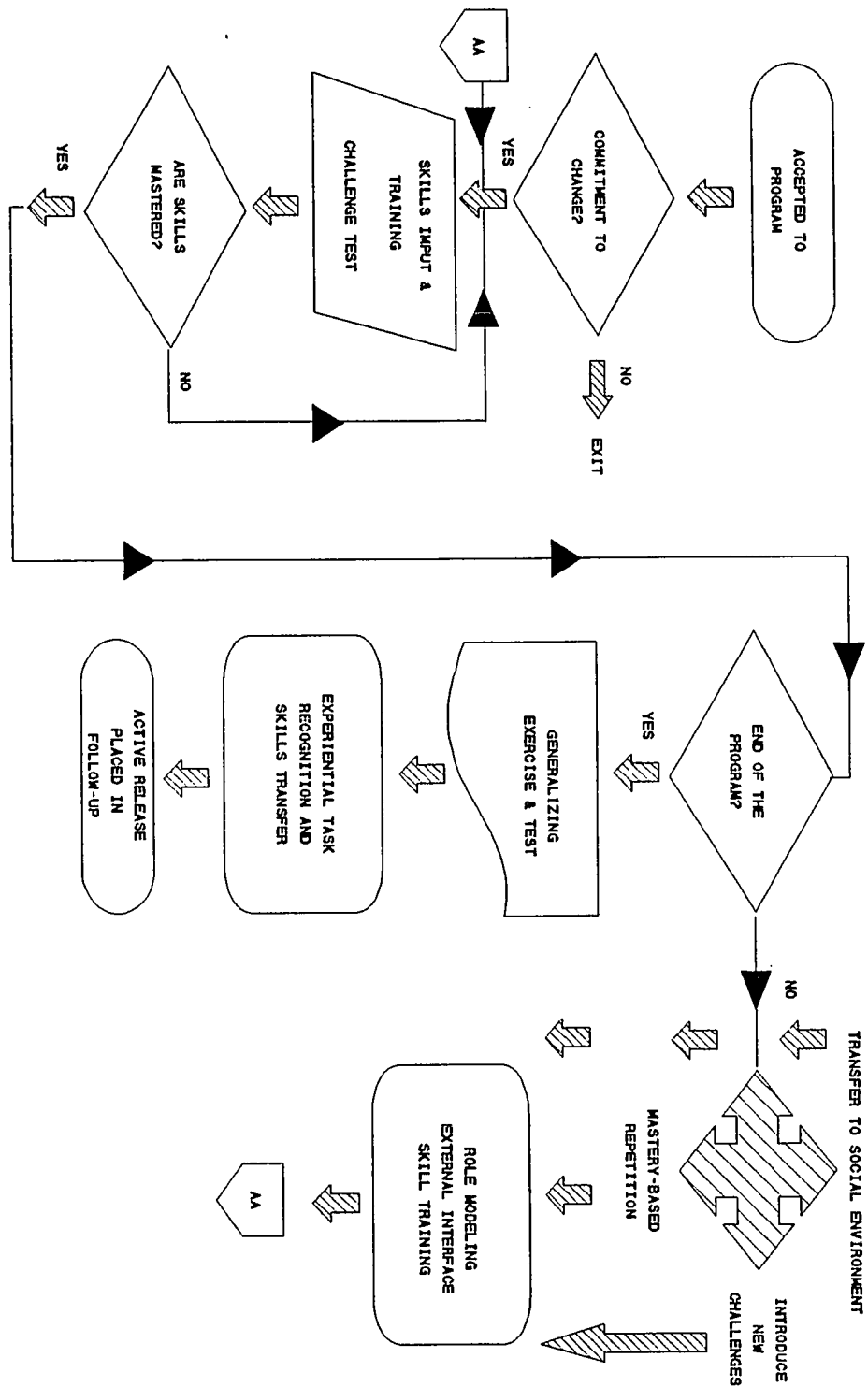


Fig. 8. SIERRA II Holistic Process/Flow Diagram

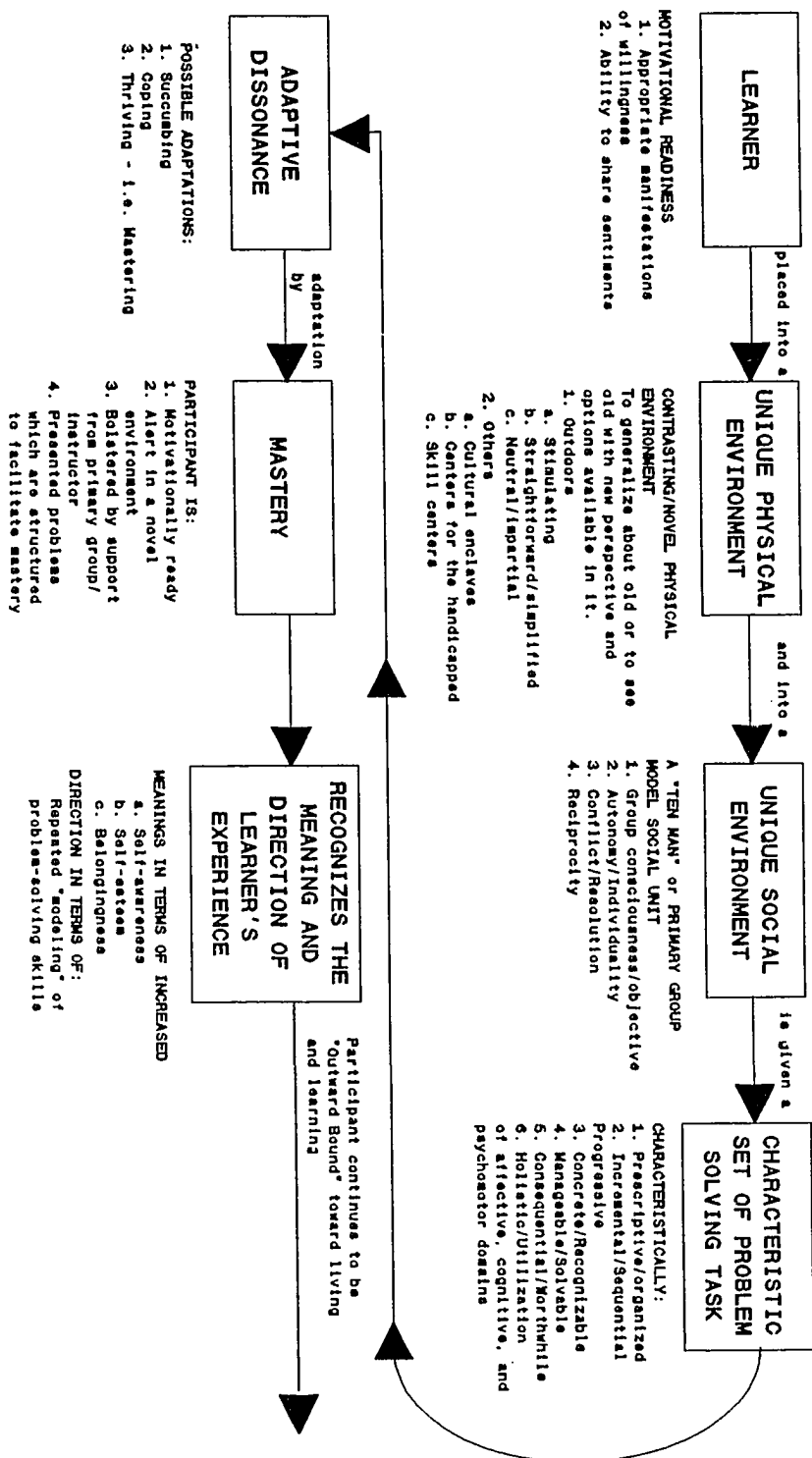


Fig. 9. Outward Bound Process Flow Diagram  
(Walsh and Golins, 1976)

program presents problems experienced in a group confrontation and group solution environment. The group is composed of 15-40 adjudicated youths functioning in an interpersonal environment of dynamically realistic expectations and relationships. Conflict between group members is inevitable and expected by the program staff. These confrontations are utilized to enhance the problem-solving skills of participants as they discover the interdependent nature of group members and task assignments. The interaction of group members create relationships which evolve into small networks of important sources of reinforcement for group and individual accomplishments. These networks reaffirm, in a physical and emotional sense, the success orientation of the Sierra II process.

The use of an outdoor environment by the program provides a naturally demanding and unforgiving reality that stimulates, excites and energizes program participants. Current research<sup>124</sup> has correlated the juvenile's desire for stimulation and excitement with delinquency. The Sierra II program, through the use of its five levels of outdoor skills, provides demanding activities that continue to satisfy these desires without the participants being in conflict with society.

The use of outdoor situations is also used to provide a real-time consequential environment for the group. This consequential environment, not imposed through artificial

means, provides direct and unbiased reinforcement that rewards responsible behavior and swiftly disciplines irresponsible behavior. A failure to accomplish a concrete task (proper care of personal clothing in a winter environment) can result in certain reinforcement (leaving the participant cold and uncomfortable). The concrete operant behavior requirements linked to the consequential reinforcement for participant behavior foster an invaluable instructional and intervention tool.

The novelty effect of the outdoor environment provides the participant with the opportunity to experiment with different operant behaviors. It is immediately clear that roles, expectations and behaviors relevant to urban living do not directly transfer to the new environment. This realization by the participants creates an ephemeral confusion in which the staff's behavior patterns are invaluable models for emulation by the participants.

#### Problem-Solving Needs

An important component of the Sierra II process is the enhancement or development of participant problem-solving skills. The challenge is how to not only teach the actual skill but to also impart a strategic structure for problem resolution.

Research in adapted Outward Bound processes by Walsh and Golins<sup>125</sup> have delineated six characteristics of problem-solving tasks within the process. This author links these

six characteristics to the Sierra II process, an adapted Outward Bound program. The six characteristics are designed to provide training in the systematic and structured process of means-end thinking. The first, and most important of the characteristics, is that the problematic confrontation must be organizationally designed or predefined by the program staff in correlation to both the program goals and the group's needs. It is important that the problem require incremental skills applied toward solution. The second characteristic realistically requires that skills be introduced and acquired in a graduated fashion and that problem difficulty be incremented in the same fashion. The third characteristic provides that all problems remain in the concrete range of operant behavior. This concrete nature allows for a clear identification of the problem and further application of the means-ends problem-solving procedure toward situation satisfaction. When the problem has been clearly defined, reinforcement can be clearly provided, catalogued and remembered. Characteristic four calls for the problem to be designed as a solvable and manageable situation that is clearly within the participant's arena of understanding. This manageability characteristic is the fourth element in this discussion. The fifth characteristic calls for consequential reinforcement, including instances of a real threat to life linked to participant identification and response to the problem. These inescapable consequences

enhance a sense of motivation and provide subjects with a clear delineation between success or failure. The sixth and final characteristic provides that problems be designed to require that participants combine affective, cognitive and psycho-motor domain skills to effectively master the challenging problem.

It is apparent that mastery of the problem-solving task requires intellectual skill and persistence from the participant. It is the goal of the Sierra II process to ensure that adequate skills have been imparted to each participant to master the task. It is important that the skill be imparted to the participants as directly as possible and exercised repeatedly in diverse situations. This repetition allows internalization of the skill and creates a success feeling toward addressing future problem-solving tasks.

Considering the importance of acquiring problem solving skills and a lack of this concern in Walsh and Golins<sup>126</sup> research, this author has altered their model to include the acquisition task.

Another important characteristic of the problem-solving tasks is the relative challenge posed by the situation. The problem must be designed to challenge the affective, cognitive and psycho-motor abilities of the group. Traditionally, juvenile delinquents have resisted committing any level of personal effort toward means-ends thinking or

problem-solving skills. Since this characteristic is apparent in the adjudicated juveniles in the program, the challenge of success and the degree of difficulty in the task must incrementally be added. Indeed, picturing the experiential effort required in complex problem-solving or critical means-ends thinking is a primary prerequisite toward comprehensive understanding of the problem-solving process.

#### Mastery-Based Experiences

During the problem-solving process, the juvenile is clearly cognizant of the bipolar nature of the expectant outcomes. The problem-solving process must terminate with either solution mastery or failure. White<sup>127</sup> in a simplified manner, links solution mastery with increased self-confidence. This increased self-confidence in one's ability to actually achieve an outcome is within Bandura's<sup>128</sup> definition of self-efficacy. Obviously, mastery of the situation is preferred to failure. But since both alternatives exist, it is equally obvious to this author that careful examination, preparation and instruction on how to interpret failure must be provided within the structure of the Sierra II process.

The directional nature of a delinquent's locus-of-control (internal-external) often tends to define the manner in which they perceive failure. Since failure at some task is inevitable during program contact, careful intervention therapy with this concept can effectively alter the



juvenile's locus-of-control. Typically a juvenile entering the program with a high external locus-of-control will interpret failure as a result of external forces. The utilization and manifestation of this behavior epitomizes the juvenile's unwillingness to accept personal responsibility for problem outcomes (low self-efficacy). This low self-efficacy is usually accompanied with low self-esteem and inadequate problem-solving skills. These inadequacies are often manifested through negative cognitive behaviors leading to inaccurate appraisals of problem solving tasks. The inadequate appraisal causes failure rather than success and hence the need to impart skills that can be utilized to correctly interpret this failure is important to program success.

#### Cognizance of Experience

It is apparent that in the discussion of master-based experiences, much emphasis was placed on the juvenile's interpretation of the problem-solving task. This retrospective examination of the experience, whether mastered or failed, provides an instructional impact that Dewey<sup>129</sup> links with one's abilities to model future behaviors. Dewey maintains that introspective as well as retrospective examination of past performances of problem-solving tasks allows one to extract the net relationships between behaviors and reinforcements. These net results are the building blocks upon which future behaviors are modeled. The

importance of introspection in handling problems in order to recall the meanings, experiences, physical achievement or emotional feelings cannot be over emphasized. The use of interpretive instruction or modeling in the acquisition of other problem-solving skills is indispensable.

The need to develop and internalize a systematic structured problem-solving process is enhanced through interpretive retrospection and memorization. It is difficult, at best, to manifest a cognitive behavior if one cannot affectively define that process.

It is a paramount concern, in the Sierra II program, that participants internalize success oriented cognitive behaviors that can be successfully transferred to related problem-solving situations. Recognizing both mastered and failed problem-solving task and then interpreting these outcomes enhances the participant's likelihood of developing and internalizing these behaviors.

#### Repeated Mastery of Challenge

Continued participation in the Sierra II program increases the juvenile's exposure to mastery of problem-solving tasks. This increased exposure to success enhances program and peer reinforcement of behavior. This reinforcement increases the participant's feelings of self-efficacy, self-esteem, and self-empowerment. These positive changes in participants' life-styles and behavior patterns are the primary goal of the Sierra II process.

### Affective Learning Transfer

As the program continues to increase incrementally the difficulty of the problems and tasks, the juvenile is challenged to continue mastery of the problem-solving process. Through continued success the juvenile becomes the master of this environment. At this time in the Sierra II process, the participant is guided in generalizing the problem-solving skills and systematic process to a larger, more diverse world environment. This task, calling on conceptual abstraction by the juvenile, is a difficult endeavor since most juveniles lack this affective domain characteristic. The Sierra II process does not assure therefore that this affective transfer of self-efficacy and self-empowerment occurs without assistance.

The Sierra II process places incremental emphasis on the use of transfer exercises designed to simulate the use of wilderness developed problem-solving skills in the urban environment. This special attention is an important part of the Sierra II process and is a part of the transformation of the Walsh and Golins<sup>130</sup> model.

The affective change process model described in this chapter would imply that the potential for change in the juvenile's self-orientation and problem-solving skills matrix does exist within the affective change process of the intervention program. The challenge (a series of incrementally demanding and motivational problem-solving

tasks) can contribute to a renewed sense of self-efficacy and self-empowerment. The facilitation of the process, in order to achieve program goals, is not a simple causal procedure. Staff personnel have the challenging responsibility of implementing the affective change model. The constraints of this study provide that this critical link be noted but that a full examination of that critical role be left for future study.

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### CHAPTER III

#### METHODS AND PROCEDURES

The purpose of this study was to assess the effects of Sierra II, an adapted Outward Bound program, on adjudicated juvenile delinquents. This chapter delineates the methods and procedures utilized in the study for program evaluation. Discussion of matters pertinent to this chapter are examined in the following order: a) Sierra II program description, b) Subject population, c) Evaluative instrumentation, d) Data collection techniques, e) Data analyses and f) Treatment of human subjects.

#### Sierra II Program Description

The program serving as the study project was the Sierra II probation diversion program of Virginia Beach, Virginia. Sierra II, founded in 1974, is an integrated part of the Virginia Beach Juvenile Court Service Unit. The program's major focus is to assist referred adjudicated juveniles and their families in the elimination of destructive behavior patterns. In this endeavor, the program provides concurrent physical and counseling activities to juveniles and parents through personal growth and education designed to improve internal and external environment and family situations.

Prospective subjects are referred to the program through probation officer recommendations (based on data extracted from initial subject interviews and family historical data compiled by the court services unit). In all cases, subjects have already been adjudicated as delinquent and are serving current supervised probation. After this initial referral, the Sierra II program staff conduct screening interviews with each prospective subject. The primary focus of this face-to-face interview centers on explanations of the program, illustration of the contractual requirement between the parties, subjective staff assessment of the subjects, and appropriateness for meeting the subjects' needs. Second, the screening session is focused on preparing the individual for acceptance by the program and advising the family that they will also be required to actively participate. The interview session occurs as soon after the initial referral as administratively possible.

There are six major (directly associated) goals represented in the Sierra II program literature. The Sierra II program staff are committed to enhancing participant

- 1) Self-reliance (self-efficacy)
- 2) Self-confidence (self-empowerment)
- 3) Self-awareness (self-esteem/image)
- 4) Problem-solving skills (academic/physical enhancement)
- 5) Leadership and trust (locus-of-control)



6) Behavioral change and comparison (recidivism)

The program is structured into five progressively demanding levels labeled as follows:

1. Introduction to nature and wilderness

Group process skills

Ropes and Initiative course

Camp craft skills

2. First aid and survival knowledge

Map and compass skills

Backpacking skills

Physical fitness and running

3. Introduction to rock climbing and mountaineering

Caving

Multipitch climbing

Tyrolean traverse

Mountain marathons

4. Whitewater canoeing

Canoeing

Trip planning and logistics

5. Advance Study

Program participants are required to meet at least twice per month as a group. These meetings are used for instruction in outdoor and wilderness skills, but the main focus of the meetings center around group discussion on inter-personal problems, policy, family and communications. In addition, monthly outings are planned and required for all

participants. Concurrent meetings are also held with parents. These meetings are held at least twice per month and provide a common arena for discussions concerning program goals, activities, philosophy, parenting skills and participant progress and problems. In summary, the Sierra wilderness experience is comprised of a series of physically, mentally, and emotionally demanding challenges and problems which participants must master. The program is approximately six months in duration and maintains a high level of participant and staff contact in scheduled activities, crisis situations and follow-up environments.

Upon program completion, participants are provided a graduation activity designed by the parent group. At this point, participant commitment to Sierra II ends and the follow-up phase begins. This phase, although neither a formal nor an official arm of the Sierra process, is designed to help Sierra II graduates transfer newly developed skills and capabilities to their personal environments. During this phase, program staff offer continued support and crisis intervention to past graduates.

This study will focus on all phases of the program.

### Subjects

The study population was composed of adjudicated juveniles from the Commonwealth of Virginia, City of Virginia Beach. All subjects in the experimental group were referred

individuals accepted into the Sierra II program. There was one combined experimental group: Group 0.

Group 0 consisted of Sierra II subjects participating in the program during the research period. This group was used to establish program effectiveness compared to stated goals, and was comprised of active Sierra II participants. This group was compared to a control group in order to assess the effectiveness and efficiency of the program as compared to traditional probation programs. There was one control group: Group C.

The subjects were given the opportunity to refuse participation in this study. In order to protect their rights as human subjects, the following was adhered to:

- 1) The Informed Consent form provided as Appendix A was used to explain study purpose, risks and benefits.
- 2) All individual data collected were coded to insure that data privacy was maintained.
- 3) Only aggregate data were used in data analysis and study findings.
- 4) Background demographic data collected on study participants were coded in accordance with the format of the Youth Data Form in Appendix B. These data were coded to ensure anonymity of an individual's identification.
- 5) Academic data collected were coded in accordance with the format of the Youth School Data Form in

Appendix C. These data were coded to ensure anonymity of an individual's identification.

The delinquent history of the subject was extracted through an examination of confidential juvenile court case files on each adjudicated delinquent. Data were collected to fulfill the requirements of the Youth Data and Youth Students Data Forms.

#### Evaluative Instrumentation

A battery of nationally validated instruments/tests was used to collect study data. These instruments and research concerning instrument/test validity are provided in this section.

##### Internal-External Scale

In research conducted by Hersch and Scheibe<sup>1</sup> on individual internal-external control dimensions (I-E) two characteristic considerations or generalized expectancies emerge concerning reinforcement. Individuals are conceived to vary along a "locus-of-control" dimension, with the end points labeled internal and external. Rotter's Internal-External Scale<sup>2</sup> (I-E Scale) is a validated instrument measuring the characteristic considerations or generalized expectancies of individuals along this continuum. The test is designed with 29 items in a forced subjective choice format in which the examinee is admonished to select the statements which most closely reflect a true statement about his/her beliefs. There are six filler/distractors included

in the 29 item test base. These six items are provided to enhance instrument ambiguity. The instrument is scored by computing cumulative external choices.

In research on the reliability and validity of the scale, Hersch and Scheibe<sup>3</sup> found that the test-retest reliability is consistent and acceptable with variance between .49 and .83 for varying samples and intervening time periods. Correlations with the Marlowe-Crowe Social Desirability scale varied with the range -.07 and -.35 with a mean correlation of -.22 representing the validation sample. Factor analyses of the I-E scale<sup>4</sup> yielded an unrotated factor accounting for 53% of the total scale variance. Loading of the individual items on this factor were uniformly low, with only six of them equal to or exceeding 1.30 (Mirels, 1970, p. 226). Item analysis utilizing biserial correlation methods found moderate but consistent correlations with the majority of items at .26 or higher.<sup>5</sup>

Weaknesses noted in the literature concerning the scale<sup>6</sup> focused on the areas of testing conditions and the known or suspected purpose or nature by the examinee. This lack of discriminate ability in homogeneous populations has been identified as ample reason for restrictive use of the scale to investigations of group differences rather than for individual predictive investigations.<sup>7</sup>

Considering the limitations, one may question the use of the instrument to measure self-empowerment dimensions in this

study. The literature clearly illustrates the multidimensionality of the I-E scale. The presence of the multiple factors within the scale accounts for its utilization in this study.

Research conducted by Gurin, Gurin, Lao and Beattie<sup>8</sup> acknowledged that Rotter's I-E scale was composed of individual items that focused in on an individual's personal beliefs in their life's outcome and for overall respondents in general. Indeed, Gurin, et al.,<sup>9</sup> isolated five individual items under the construct "personal control" (items 9, 13, 15, 25, 28). These items were seen as indications of the respondents belief that they can control external events in their life situation. Secondary factors identified and classified by Gurin et al. as "control ideology" were items 6, 7, 10, 11, 16, 18, 20, 23 and 25. These control items query responses from general, overall attitudes rather than responses related to an individual's personal perspective. This bi-directional delineation in the scale was followed by other studies that identified other directional delineations within Rotter's I-E scale.

Research in 1970<sup>10</sup> provided further evidence on directional differences between personal control and environmental controls. Mirels<sup>11</sup> identified items 5, 11, 15, 16, 18, 25 and 28 as personal control constructs.

There is overlapping research evidence between Mirel and Gurin et al.<sup>12</sup> on the construct of personal control.

Consequently, this author maintains that it is probable that a single factor measuring personal control is available within the scale. The Rotter Internal-External Scale is attached as Appendix D.

#### Generalized Expectancy for Success Scale

The Generalized Expectancy for Success Scale (GESS), as designed by Fibel and Hale,<sup>13</sup> is a construct that ascertains expectancies held by respondents that they will attain desired objectives and long-range goals. This measure, as defined by this author, may functionally provide a stimulus to the respondent initiating a single-minded course of action toward a desired goal. In light of this definition, this author observed an indirect worse-case and a direct best-case correlation between Fibel and Hale's research<sup>14</sup> and Bandura's research<sup>15</sup> concerning expected success and self efficacy. Due to this correlation, the GESS instrument will be utilized to assess the component of self-empowerment that reflects self-efficacy: one can perform prerequisite task necessary to obtain a desired objective or long-range goal.

The instrument is composed of 30 statements with a respondent Likert choice format. The syntax of several of the statements were altered in form, not in content. Alternatives were made in order to enhance the readability and comprehensibility by the study subjects. Items 5, 7, 14, and 22 were altered. In addition, the Likert scale syntax

was also altered to read highly likely to highly unlikely. The modified GESS is attached as Appendix E.

In their study, Fibel and Hale<sup>16</sup> provided a test-retest reliability coefficient of .83 for the study population. Research concerning instrument comparison validity provided negative correlations with the Beck Depression Scale, Zung Self-Rating Depression Scale and the Buck Hopelessness Scale. Respondent sense of general efficacy was defined as accounting for 63.95 of instrument variance. This value provides a strong argument for the lack of dimensionality within the scale.

#### Youth Data and School Forms

These forms, designed by this author, will be utilized to collect basic demographic data on age, sex, race, school enrollment, attendance, performance, referral source, program non-acceptance alternatives and offense history. Although data is being collected on offense history, no analysis will be conducted on this data to ascertain casual relationships of criminal or delinquent behavior. This type of analysis is beyond the scope of this study.

The primary resource base for collecting Youth Data and School Form facts will be the juvenile court records of each study subject. Although police records may represent a more true picture of subjects' offense history when compared with court records, prohibitive funding and personnel constraints as well as access restrictions to police records fostered



more dependence on juvenile court records. A secondary source of information will be the school records for each subject. Data collected from this source will be composed of academic performance scales, disciplinary facts and counselor notes regarding behavior, attendance and classroom demeanor.

#### Tennessee Self Concept Scale

The utilization of the Tennessee Self Concept Scale (TSCS), as designed by Fitts,<sup>17</sup> is proposed due to its wide and established use in delinquency self-concept research<sup>18</sup> and its wide spread use in analyses of other adapted Outward Bound programs. The scale is comprised of 100 self-descriptive items from which the respondent selects in order to portray themselves.

The scale, available in two forms, is a standardized instrument with clearly researched validity and reliability. The test-retest reliability coefficients for the total scale (either form) has been computed at .92 with the other eight major subscales utilized in this study having coefficient ranges from .80 to .90.<sup>19</sup>

This study will utilized the Counseling Form of the instrument. The major difference between this form and the Clinical and Research Form can be found in the scoring and respondent profiling subsystem. The Counseling Form was selected because it utilizes ten subscales to differentiate respondent aspects of self. This provides sufficient detail for analysis of study subjects' self-esteem for this study.

The TSCS Counseling Form and subscale explanations are available from the copyright owner.

Means-End Problem-Solving Procedure

The Means-Ends Problem-Solving Procedure (MEPS), developed by Platt and Spivack,<sup>20</sup> ascertains the level of means-ends affective domain performance exhibited by respondents confronted by a problematic situation. Means-ends thinking, as defined by this author, is a structured approach to problem documentation and problem solution. This affective domain characteristic is fundamentally manifested in cognitive behavior patterns.

The MEPS as designed by Platt and Spivack<sup>21</sup> is comprised of 10 hypothetical examples descriptive of some interpersonal problem. Two factors are provided to the respondent: 1) the beginning (narrative) of the story and 2) the ending (narrative) of the story. The respondent is then admonished to fill-in the gap between the two givens. No prompting or other information is provided. Responses are then evaluated on the number of means cataloged, number of obstacles foreseen, repetition of means, number of irrelevant means and acknowledgement of the time intervals between givens.

Test-retest data from Platt, Spivack, Altman, Altman and Pelzer<sup>22</sup> provide coefficients from .43 for an eight-month interval to .64 for a five-week interval. Coefficients for internal consistency were .80 or higher.

The MEPS will be administered in a modified form where only three of the instruments ten stories will be utilized. The MEPS pretest administered to the experimental group will consist of either Set 1 (with Stories 3, 6 and 9) or Set 2 (with Stories 2, 4 and 7). This assignment will be made randomly by a random number generator program designed by the author. At the posttest the subjects will be given the set not given at the pretest. The modified MEPS is attached as Appendix F.

#### Collection of Data

This study utilized an experimental research design. A single control group (Group C) was established in the same time frame as the experimental group. Assessment instruments were provided to both the control group and experimental group. The MEPS procedure was only given as pre-post instruments to the experimental group. Two pseudo-control groups (Group A and Group B) were constructed from prior treatment samples. The purpose of this analysis is to determine long-term variance between groups due to the Sierra II treatment. Data from Group A and Group B were extracted from the same pre and posttreatment instruments administered during their active involvement in the program.

#### Analysis of Data

A variety of statistical procedures were used to analyze the data. The primary procedure utilized was the analysis of

variance (ANOVA) to test for a difference between groups (Group C and Group O) at posttreatment administration.

A matched T-test procedure was used to determine variance between the pseudo-control groups (A and B) and Groups A and B compared to Group O. In addition, analysis of variance (ANOVA) was used to determine if other variable effects were due to treatment. If so, then further examination using more complete statistical procedures were undertaken.

#### Treatment of Human Subjects

In compliance with the requirements of the Department of Health, Education, and Welfare (under Public Law 93-348) and in accordance with the stated policy of the Old Dominion University Board of Visitors on the protection of Human Subjects the following provisions, restrictions, consents and confidentiality guidelines were strictly adhered to in the research study.

1. The use of Human Subjects in the study population is mandated due to the nature of the treatment and circumstances which foster initiation of and participation in the study program. The target population for the study program is focused on adjudicated juveniles and hence the need and rationale for their exclusive use in this study.

2. The risk factors associated with this study, its evaluative instrumentation, the findings and conclusive recommendations are minimal since no physical, emotional or psychological treatment is being administered in this research effort. This study will simply assess the current treatment. This treatment of the effectiveness and efficiency of this study program will yield benefits to the juvenile justice system in particular and to society in general that far outweigh any of the minimal risks.
3. Prior to active participation in this research study, and Informed Consent, signed by the subject and legal guardian (subjects are juveniles), will be obtained. This instrument is attached as Appendix A.
4. All data collected and uniquely associated with an individual will be coded to ensure anonymity of subject identification. These data, in aggregate form only, will be utilized to evaluate program effectiveness and efficiency. Further confidentiality of individual records will be assured since existing confidential court and school records will be the primary data base for this study.

#### ENDNOTES

<sup>1</sup>Paul Hersch and Karl E. Scheibe, Reliability and Validity of Internal-External Control as a Personality Dimension, Journal of Consulting Psychology, 1967, 31, 609-613.

<sup>2</sup>J.G. Rotter, Generalized Expectancies for Internal Versus External Control of Reinforcement, Psychological Monographs, 1966, 80, (1, Whole No. 609).

<sup>3</sup>Paul Hersch and Karl E. Scheibe, Reliability and Validity of Internal-External Control as a Personality Dimension.

<sup>4</sup>H.L. Mirels, Dimensions of Internal Versus External Control, Journal of Consulting and Clinical Psychology, 1970, 34, 226-228.

<sup>5</sup>J.G. Rotter, Generalized Expectancies for Internal Versus External Control of Reinforcement.

<sup>6</sup>H.L. Mirels, Dimensions of Internal Versus External Control.

<sup>7</sup>J.G. Rotter, Generalized Expectancies for Internal Versus External Control of Reinforcement, p. 16.

<sup>8</sup>P. Gurin, G. Gurin, R.C. Lao and M. Beattie, Internal-External Control in the Motivational Dynamics of Negro Youths, Journal of Social Issues, 1969, 25, 29-53.

<sup>9</sup>Ibid.

<sup>10</sup>H.L. Mirels, Dimensions of Internal Versus External Control.

<sup>11</sup>Ibid.

<sup>12</sup>P. Gurin, G. Gurin, R.C. Lao and M. Beattie, Internal-External Control in the Motivational Dynamics of Negro Youths.

<sup>13</sup>B. Fibel and W.D. Hale, The Generalized Expectancy for Success Scale - a New Measure, Journal of Consulting and Clinical Psychology, 1978, 46, 924-931.

<sup>14</sup>Ibid.

<sup>15</sup>A. Bandura, Self-efficacy: Toward a Unifying Theory of Behavior Change, Psychological Review, 1977, 84, 191-215.

<sup>16</sup>B. Fibel and W.D. Hale, The Generalized Expectancy for Success Scale - a New Measure, Journal of Consulting and Clinical Psychology, 1978, 46, 924-931.

<sup>17</sup>W.H. Fitts, Manual, Tennessee Self-Concept Scale, (Nashville: Counselor Recordings and Tests, 1965).

<sup>18</sup>W.H. Fitts and W.T. Hamner, The Self-Concept and Delinquency, (Nashville: Counselor Recordings and Tests, 1969).

<sup>19</sup>Ibid.

<sup>20</sup>J.J. Platt and G. Spivack, Manual for the Means-Ends Problem-Solving Procedure, (Philadelphia; Hahnemann Medical College and Hospital, 1975).

<sup>21</sup>Ibid, p. 18.

<sup>22</sup>J.J. Platt, G. Spivack, N. Altman, D. Altman, and S.B. Peizer, Adolescent Problem-Solving Thinking, Journal of Consulting and Clinical Psychology, 1974, 42, 787-793.

## CHAPTER IV

### RESULT OF THE DATA ANALYSIS

The objectives of this research study focused around the central idea of comparing the Sierra II alternative probation program to a control group of adjudicated juvenile's receiving a traditional probation treatment on the variables; self-esteem, self-empowerment, academic behavior and follow-on achievement factors, and problem-solving skills. An additional component, secondary to the main study hypotheses, involved an analysis of those intervention factors employed by the juvenile court services staff in the counseling and rehabilitation of adjudicated juveniles. This examination included two scales designed to assess the perceived importance of selected intervention techniques and the perceived impact of the same selected techniques.

This chapter presents the data in three sections. Section One presents descriptive statistics identifying the study population (juveniles and staff members). Section Two reports the results of the data analysis. This section is organized relative to the major study hypotheses listed in CHAPTER I. Section Three provides a discussion and summary of the study results.



### Study Descriptive Statistics

#### Adjudicated Juveniles

The pool of adjudicated juveniles for this research study was composed of subjects from the Virginia Beach Juvenile Court Services probation caseloads. The juvenile subject pool was separated into two basic groups: the Sierra II experimental group (n=35) and the traditional control group (n=35). The Sierra II group was composed of juveniles ranging in age from 13 to 17 years of age. The Sierra II subjects were referred to the program through the court, parental request and court services field units. Upon completion of the program, the Sierra II participants were released from Sierra II and were either released from active probation (n=10) or referred to the court field services field units. The control group was composed of juveniles ranging in age from 13 to 17 years of age.

The Sierra II group was composed of 32 male and 3 female subjects (91% male and 9% female); this group was 92% white and 8% black with no other known minority representation; the average grade completion was eighth grade; the median income level was \$25,000 annually with a range continuum of \$10,000 to \$65,000.

The control group was composed of 30 male and 5 female subjects (86% male and 14% female); this group was 73% white and 27% black with no other known minority representation; the average grade completion was seventh grade; the median

income level was \$16,000 with a range continuum of \$8,000 to \$20,000.

### Testing of Main Study Hypotheses

#### Differences Between Study Groups at Posttest

Study hypothesis one postulated that there would be a statistically significant difference in self-esteem, self-empowerment, problem-solving skills and academic behavior and follow-on achievement between the experimental group and the control group at the posttest. An analysis of variance with repeated measures was employed to provide a primary examination of statistical significance in these study variables.

#### Self-esteem

Self-esteem was measured in the study using the Tennessee Self Concept Scale (TSCS). The Counseling Form of the TSCS produces nine major scales. The Total P scale is "the most important single score on the Counseling Form. It reflects the respondents overall level of self-esteem."<sup>1</sup> A Sierra II group posttest mean as of 316.85 was compared to a control group mean of 294.54. Table 1 shows the amount of variance in Total P between the experimental group and the control group is significant beyond the .01 level of confidence with an F value of 4959.97.

An examination of the major subscales of the TSCS Counseling Form indicates that a distinct positive difference exists between the experimental group and the control group

at the posttest on every scale. Table 2 illustrates the subscale means for the study groups.

TABLE 1  
ANALYSIS OF VARIANCE WITH REPEATED MEASURES  
TOTAL P SCALE BY GROUP

Scale	Source	df	Ms	F	P
TOTAL P	Between Groups	1	8733.82	4959.97	.0005
	Within (error)	68	1.7609		

Further examination of the data (F values and probability distributions), summarized in Table 3, indicates that the variance between the experimental and control groups reached statistical significance for Total P and for all subscales. Clearly, the statistical significance noted between groups (on the TSCS subscales and in Total P) supports the hypothesis that the level of self-esteem for the experimental group was more positively affected by the treatment than the self-esteem of the control group.

#### Self-Empowerment

Self-empowerment was defined in CHAPTER I as a union of an individual's belief in accepting personal liability for outcomes (locus-of-control) and the individual's belief in one's proficiency to successfully execute a behavior

TABLE 2  
 POSTTEST MEANS OF TENNESSEE SELF CONCEPT SCALE  
 FOR EXPERIMENTAL AND CONTROL GROUPS

Scale Name	Experimental Group Means	Control Group Means
Total P	316.88	294.54
Identity	121.29	112.99
Self Satisfaction	98.59	91.26
Behavior	102.54	97.59
Physical Self	67.82	66.36
Moral-Ethical Self	59.05	56.31
Personal Self	64.51	58.07
Family Self	63.54	60.65
Social Self	66.49	60.55

resulting in a desired outcome (personal efficacy). This study used a modified Rotter's Internal-External Scale (I-E Scale) as the measure of locus-of-control. The Generalized Expectancy for Success Scale (GESS) was utilized in the measurement of self-efficacy.

The data analysis (summarized in Table 4) illuminates that amount of variance in the self-empowerment instruments between the experimental and control groups at the posttest.

TABLE 3

SUMMARY OF ANALYSIS OF VARIANCE WITH REPEATED MEASURES  
FOR TENNESSEE SELF CONCEPT SCALE BY GROUP

Scale	F	P
Total P	4959.97	.0005
Identity	246.13	.0005
Self Satisfaction	1386.89	.0005
Behavior	852.92	.0005
Physical Self	82.82	.0005
Moral-Ethical Self	134.88	.0005
Personal Self	861.65	.0005
Family Self	144.82	.0005
Social Self	599.36	.0005

TABLE 4

POSTTEST MEANS\* OF SELF-EMPOWERMENT MEASURES  
FOR EXPERIMENTAL AND CONTROL GROUP

Group	N	Means	
		GESS	I-E
Experimental	35	119.57	2.49
Control	35	113.62	3.87

\*means adjusted for pretest scores

The I-E Scale, normally scored in the direction of externality (the lower the score the more the external orientation), implies that the experimental group (Mean = 2.49) had a greater external orientation than the control group (Mean = 3.87). This can be translated into an individual's belief in his or her ability to control personal outcomes through active behaviors. The accompanying GESS measures (scored in the positive direction) at the posttest provide support for the hypothesis that the experimental group ( $x=119.57$ ) had a stronger belief in their abilities to execute the desired behaviors to achieve the outcomes than the control group ( $x=113.62$ ).

Although both the I-E Scale and the GESS show the theorized positive difference between groups at the posttest, only the I-E Scale reaches an acceptable statistical level of significance. As summarized in Table 5 (F value for the between groups test for the I-E Scale), the critical F value for the GESS is only 2.67 which yields a probability value of .11. Therefore, the expected significant difference between control group and experimental group in self-empowerment can only be partially supported.

#### Problem Solving Skills

The goal of the Sierra II process is most acutely apparent in problem solving skills manifested in cognitive behavior patterns. This study measured the affective attributes associated with enhanced problem solving skills.

The Means-Ends-Problem-Solving scale was used to measure this variable. The hypothesis postulates that the experimental group would acquire enhanced problem solving skills through participation in the process.

TABLE 5  
ANALYSIS OF COVARIANCE\* OF POSTTEST FOR  
SELF-EMPOWERMENT MEASURES BY GROUP

Scale	Source	df	Ms	F	P
I-E	Covariate	1	58.19	38.42	.001
Scale	Between Groups	1	33.327	6288.11	.0005
	Error	68	.0053		
GESS	Covariate	1	5572.80	45.56	.001
	Between Groups	1	619.54	443.07	.0005
	Error	68	1.3983		

\*means adjusted for pretest scores

Table 6 provides a summary of the data on the pre and post administration of the MEPS to the experimental group. An examination of these data supports the hypothesis that gains between pre and post treatment were statistically significant.

TABLE 6  
SUMMARY OF MEPS SCORES FOR THE EXPERIMENTAL GROUP

Source	PRE		POST		df	MS	F	P
	M	SD	M	SD				
Between	4.836	0.156	5.331	0.268	1	4.2879	88.98	.0005
Within					33	0.0482		

#### Academic Behavior and Follow-on Achievement

This variable was comprised of four major components (measured 1 academic year prior to adjudication, immediately after adjudication, six months, and one year following release from active probation): negative comments concerning the study subjects made by the academic staff, participants' grade point average, participants' absence/truancy, and discipline comments made by the academic staff.

#### Negative Comments

Table 7 provides a summary of the data related to this component. An analysis of the data, illustrated as Table 8, supports the hypothesis that a difference existed between the groups at the post treatment examination. Further review of Table 8 indicates that a statistically significant effect was present. In addition, a closer examination of Table 7 suggests that the experimental group had less negative



comments than the control group during the assessment periods.

TABLE 7  
NUMBER OF NEGATIVE COMMENTS; PRE, POST, SIX-MONTH  
FOLLOW-UP, AND ONE-YEAR FOLLOW-UP

Source	Pre		Post		Six Month		One Year	
	M	SD	M	SD	M	SD	M	SD
Experimental	2.11	1.32	1.72	1.18	1.28	1.36	1.25	1.31
Control	2.56	1.29	2.44	1.25	2.39	1.46	2.37	1.45
Combined	2.33	1.31	2.08	1.22	1.83	1.50	1.81	1.38

TABLE 8  
SUMMARY OF ANALYSIS OF VARIANCE WITH REPEATED MEASURES  
FOR ADMINISTRATIVE NEGATIVE COMMENTS

Source	SS	DF	MS	F
Mean	468.75	1	468.75	138.97
Group	15.56	1	15.56	4.61*
Error	114.69	68	3.37	
(Time)	4.50	2	2.25	2.49
Interaction	2.01	2	1.0	1.12
Error	61.48	137	0.9	

\*p < 0.05.

### Grade Point Average

Table 9 provides summative data related to the second component of academic behavior and follow-on achievement. An analysis of the data, provided in summative form as Table 10, indicates that although differences between groups at the post examination approach statistical significance the data never obtain the study's definition of statistical significance. Indeed, there was no significant difference noted in grade point average in any of the assessed periods. An examination of Table 10 indicates that a statistically significant interaction effect was observed.

TABLE 9  
GRADE POINT AVERAGE; PRE, POST, SIX-MONTH FOLLOW-UP,  
AND ONE-YEAR FOLLOW-UP

Source	Pre		Post		Six Month		One Year	
	M	SD	M	SD	M	SD	M	SD
Experimental	4.06	0.73	3.72	0.69	3.67	0.59	3.65	0.53
Control	4.16	0.70	4.11	0.68	3.89	1.02	3.87	1.03
Combined	4.11	0.71	3.92	0.69	3.78	0.83	3.76	1.28

TABLE 10  
SUMMARY OF ANALYSIS OF VARIANCE WITH REPEATED MEASURES  
FOR GRADE POINT AVERAGE

Source	SS	DF	MS	F
Mean	1672.45	1	1672.45	1537.62
Group	1.56	1	1.56	1.44
Error	36.98	68	1.09	
(Time)	2.02	2	1.0	3.50*
Interaction	0.35	2	0.17	0.61
Error	19.63	137	0.29	

\*p < 0.05.

#### Absences/Truancy

Table 11 summarizes data collected on the third component of the variable. An analysis of these data, provided as Table 12, implies that no statistically significant difference was noted between the groups following the treatment. As in grade point average, the differences noted across time did meet study significance. It is important to note that this interaction factor reached significance beyond the 0.01 level.

TABLE 11  
ABSENCES/TRUANCY; PRE, POST, SIX-MONTH FOLLOW-UP,  
AND ONE-YEAR FOLLOW-UP

Source	Pre		Post		Six Month		One Year	
	M	SD	M	SD	M	SD	M	SD
Experimental	12.44	9.80	8.17	5.63	9.78	7.11	9.33	6.83
Control	11.77	8.12	12.28	7.39	13.17	6.48	13.74	6.91
Combined	12.11	8.35	10.22	6.80	11.47	6.92	11.53	1.28

TABLE 12  
SUMMARY OF ANALYSIS OF VARIANCE WITH REPEATED MEASURES  
FOR NUMBER OF ABSENCES/TRUANCIES

Source	SS	DF	MS	F
Mean	13713.79	1	13713.79	102.27
Group	140.08	1	140.08	1.04
Error	4559.13	68	134.09	
(Time)	66.46	2	33.23	2.46
Interaction	119.39	2	59.69	4.42*
Error	918.15	137	13.50	

\*p < 0.05.

Discipline/Educational Comments

Table 13 summarizes data collected on the fourth component of the variable. An analysis of the data, provided as Table 14, implies that no statistically significant difference was noted due to the treatment. An interaction (across time) effect was noted and clearly satisfied the study's definition of statistical significance.

TABLE 13  
DISCIPLINE COMMENTS; PRE, POST, SIX-MONTH FOLLOW-UP,  
AND ONE-YEAR FOLLOW-UP

Source	Pre		Post		Six Month		One Year	
	M	SD	M	SD	M	SD	M	SD
Experimental	0.78	0.55	0.44	0.51	0.28	0.46	0.26	0.51
Control	0.56	0.70	0.33	0.59	0.22	0.43	0.24	0.45
Combined	0.67	0.63	0.39	0.55	0.25	0.44	0.25	0.48

The data reported in this section provides support for study hypothesis on the variables of self-esteem, self-empowerment and problem-solving skills. The variable of academic behavior and follow-on achievement can be partially supported in the area of behavior (negative comments), and only partially supported in the areas of achievement (grade

point average), discipline and absences/truancy. Consequently, hypothesis one can be accepted except for these limitations. It should be noted that across time all component variables obtained significance and supported the hypothesis.

TABLE 14  
SUMMARY OF ANALYSIS OF VARIANCE WITH REPEATED MEASURES  
FOR DISCIPLINE COMMENTS

Source	SS	DF	MS	F
Mean	20.88	1	20.88	31.2781
Group	0.31	1	0.31	0.46
Error	21.66	68	0.66	
(Time)	3.30	2	1.65	12.70*
Interaction	0.09	2	0.05	0.38
Error	8.57	137	0.13	

\*p < 0.001.

#### Differences Between Pre and Post Treatment Scores

Study hypothesis two postulated that there would be a statistically significant difference noted between the pre and post treatment data of the experimental group on the variables of self esteem, self-empowerment, problem-solving

skills and academic behavior and follow-on achievement. A matched T-test was utilized to test for this significance.

Table 15 summarizes the means, T-values and probability values computed by the analytical procedure for the experimental group for all major study variables. There is a high level of statistical significance noted on all of the major study variables. The results of the data analysis summarized in Table 15 provide partial support for hypothesis two. The variable academic behavior and follow-on achievement does not reach statistical significance.

TABLE 15  
MATCHED T-TEST FOR MAJOR STUDY VARIABLES  
FOR THE EXPERIMENTAL GROUP

Scale	Pretest	Posttest	t	p
	Mean	Mean		
TSCS Total P	313.6	316.88	-9.654	0.0005
GESS	117.26	119.57	-4.855	0.0005
I-E	4.6	2.49	5.6	0.001
Academic Behavior/				
Achievement	4.805	4.1525	1.072	0.283
MEPS	4.84	5.33	-9.444	0.005

Table 16 provides a summary of the matched T-test for the major study variables for the control group. The lack of statistical significance is consistent.

TABLE 16  
MATCHED T-TEST FOR MAJOR STUDY VARIABLES  
FOR THE CONTROL GROUP

Scale	Pretest	Posttest	t	p
	Mean	Mean		
TSCS Total P	294.54	294.71	-0.632	0.5294
GESS	113.17	113.62	-1.735	0.0783
I-E	3.76	3.87	-0.662	0.5102
Academic Behavior/ Achievement	3.72	3.81	-1.291	0.2119

#### Differences by Demographic Group

The third hypothesis stated that there would be no statistically significant differences noted in pre and post treatment gains for the separate demographic groups of sex, race and age within the experimental group. The expectation was that all members of the experimental group would attain the same relative gains in the major study area. Since gains in academic behavior and follow-on achievement failed to reach statistical significance across the experimental



group, that variable was not included in the analysis. Gain scores were derived from subtracting pretest scores from posttest scores and then computing a mean and standard deviation. An analysis of variance was then employed. Table 17 summarizes this analysis on the demographics of sex.

TABLE 17  
SUMMARY OF ANALYSIS OF VARIANCE OF KEY STUDY VARIABLE  
FOR DEMOGRAPHIC OF SEX\*

Scale	Gain				
	Mean	df	MS	F	P
<u>TSCS Total P</u>					
Between	3.22	1	0.0025	0.00	0.964
Within (error)	3.19	33	1.1997		
<u>GESS</u>					
Between	2.31	1	0.0011	0.22	0.639
Within (error)	2.24	33	0.0049		
<u>I-E</u>					
Between	1.03	1	0.0223	1.15	0.290
Within (error)	0.94	33	0.0193		

\*Since populations (n) have an unequal number of observations, an unweighted means analysis was performed.

The second demographic variable tested was race. The experimental group was divided into two categories:

Caucasian and all others (N=30 and 3 respectively). Table 18 summarizes the analysis performed on this variable.

TABLE 18  
SUMMARY OF ANALYSIS OF VARIANCE OF KEY STUDY VARIABLE  
FOR DEMOGRAPHIC OF RACE\*

	Gain				
Scale	Mean	df	MS	F	P
<hr/>					
<u>TSCS Total P</u>					
Between	3.13	1	0.0011	0.00	0.978
Within (error)	3.11	33	1.4261		
<u>GESS</u>					
Between	2.04	1	0.0702	0.06	0.805
Within (error)	2.2	33	1.1371		
<u>I-E</u>					
Between	0.97	1	0.0044	0.02	0.912
Within (error)	1.01	33	0.3560		

\*Since populations (n) have an unequal number of observations, an unweighted means analysis was performed.

The third demographic variable examined was that of age. The experimental group was divided into two subgroups. The subgroups were divided using Piaget's cognitive model (as explained in Appendix G). The first subgroup consisted of participants whose ages were between 11 and 15 years (n=15).

The second subgroup was comprised of participants above the age of 15 years (n=20). Table 19 summarizes the data analysis.

TABLE 19  
SUMMARY OF ANALYSIS OF VARIANCE OF KEY STUDY VARIABLE  
FOR DEMOGRAPHIC OF AGE\*

	Gain				
Scale	Mean	df	MS	F	P
<u>TSCS Total P</u>					
Between	3.19	1	0.0034	0.00	0.959
Within (error)	3.17	33	1.2804		
<u>GESS</u>					
Between	2.25	1	0.0214	0.03	0.872
Within (error)	2.22	33	0.8074		
<u>I-E</u>					
Between	1.02	1	0.0009	0.01	0.923
Within (error)	1.01	33	0.0900		

\*Since populations (n) have an unequal number of observations, an unweighted means analysis was performed.

As the data indicate, there were no statistically significant differences in gain scores between subgroups within the experimental group. Therefore, hypothesis three

can be supported with the exception noted in academic behavior and follow-on achievement.

### Testing of Secondary Hypothesis

#### Differences Between Intervention Methods/Effectiveness

The secondary hypothesis (intervention techniques and their perceived impacts) states that the active probationary juvenile court staffs would differ on those intervention techniques used most often and in their assessment of the impact these techniques would have on the probationer. Appendix J provides a summary of the ratings of each method and their perceived impact for both the study group (Sierra Staff) and the control group (TRAD. Staff).

An examination of the two scales clearly indicates a difference between the two groups. Where the Sierra Staff indicated a more focused emphasis on the use of basic intervention tools (interpersonal growth through association and participation in program activities), the traditional staff indicated an unfocused methodology related to program participation. Although the groups differed in their use of intervention technique, both groups generally indicated that (with few exception) intervention techniques (as isolated entities) only had a moderate impact on the juvenile. Table 20 provides summary data generated from a matched t-test procedure on both scales.

TABLE 20  
MATCHED T-TEST OF INTERVENTION SCALES FOR  
SIERRA AND TRADITIONAL STAFF

Scale	Mean	t	p
<u>Intervention Technique</u>			
Sierra	2.674	-0.986	0.3277
Traditional	2.283		
<u>Impact of Technique</u>			
Sierra	2.303	0.377	0.7071
Traditional	2.263		

As can be seen, no statistical significance existed between the staff's use and perceived impact of the intervention techniques as unique entities.

Comparison with Prior Sierra Participants

This secondary hypothesis stated that there would be no statistical significance noted between the current experimental group's performance on the key study variables and prior experimental group's performance on the same variables. Prior group data was obtained from archived records in the juvenile court services unit. The records contained data on the key study variables of self-esteem (Tennessee Self Concept Scale scores), locus-of-control (Generalized Expectance of Success scale), self-empowerment

(Rotter's Internal-External Scale scores), and academic behavior and follow-on achievement. A matched t-test was utilized to test for this significance.

Table 21 summarizes the means (post administration), t-values and probability values. The lack of significance provides support for this secondary hypothesis.

TABLE 21  
MATCHED T-TEST FOR KEY STUDY VARIABLES  
FOR STUDY AND PRIOR GROUPS

Scale	Current Mean	Prior Mean	t	p
TSCS Total P	316.88	315.73	2.044	0.0474
I-E	2.49	2.71	-0.578	0.5652
Academic Behavior/ Achievement	4.1525	4.42	-0.473	0.6380

### Discussion of Results

In this section, examination of the research data, additional comments and interpretation are presented. The results require additional comment or interpretation. An issue that continues to cloud a study such as this surrounds the definition or importance of obtaining a "significant difference" in a study variable. Every study variable except

academic behavior and follow-on achievement showed either a statistically significant difference between experimental group and control group or a noted difference between means. However, do the accompanying results of the data analysis also imply these findings to be important?

The use of the Tennessee Self Concept Scale, along with the availability of developed norms for the instrument, provides help in answering this important question. Figure 10 illustrates the posttest means for the study groups on the nine measurable scales of the Counseling Form. Group posttest means have been adjusted for initial difference at the pretest. Even though the scores continuum is below the 50th percentile, the displacement between the groups is sizable. An indication of this difference can be illustrated with the data on Total P. Note that the control group's score is placed at the 8th percentile while the experimental group places at the 20th percentile. Obviously, the difference is substantial and significant.

Fitts<sup>2</sup> lends support to this evidence that the norms on the scale provide a clear indication of differences. Fitts<sup>3</sup> maintains that self-concept is relatively consistent over time. But, that self-concept is not locked into this stability and that measurable factors affecting this self-concept can appreciably affect its placement on the TSCS Scale. He then concludes that this shift or change is understood to be of primary importance in behavioral change.



Fig. 10. Tennessee Self Concept Scale Posttest Summary



Unlike the TSCS, the I-E Scale and the GESS do not have established norms. It is, therefore, more difficult to interpret and correlate statistical significance noted in these measures.

In conjunction with this examination on the correlation between significance and instrument normality, there is the all-inclusive issue of whether the noted changes in the key study variables result in manifested behavioral changes.

As examined and documented in CHAPTER II, changes in the key study variables have been correlated to such behavioral manifestations. The general consensus among researchers<sup>4</sup> is that changes in the key study variables are directly related to manifested behavioral patterns. It has also been stated that changes are not limited to only the variables examined in this study.

Having established the correlation between variables affected by the treatment program and positive influences in manifested behavior patterns, it could be reasonable concluded that significances noted in the study variables would manifest themselves in positive behavior patterns. The displacement of dysfunctional behavior to social, family and academic stimuli in favor of functional behavior can then be directly linked to the treatment.

#### ENDNOTES

<sup>1</sup>W.H. Fitts, Manual, Tennessee Self-Concept Scale, (Nashville: Counselor Recordings and Tests, 1965, p. 2).

<sup>2</sup>W.H. Fitts and W.T. Hamner, The Self-Concept and Delinquency, (Nashville: Counselor Recordings and Tests, 1969, p. 28).

<sup>3</sup>Ibid.

<sup>4</sup>R. Wylie, The Self-Concept, (Revised Edition, Vol. III, Lincoln: University of Nebraska Press, 1979); W.H. Fitts, The Self-Concept and Delinquency, (Nashville: Counselor Recordings and Tests, 1969); H.M. Lefcourt, Locus-of-Control: Current Trends in Theory and Research, (Hillside, N.J.: Lawrence Erlbaum Associates, 1976).

## CHAPTER V

### DISCUSSION, SUMMARY, AND RECOMMENDATIONS

This chapter will examine the results of the study, the strengths and limitations of the Sierra II Probation Division Program, and make recommendations for future research. Specifically, the study measured the programs effect on self-esteem, self-empowerment, problem-solving skills and academic behavior and follow-on achievement. Study participants were assigned to either the experimental group (program) or control group (non-program group) by the juvenile court services unit referral system.

The Tennessee Self Concept Scale, modified Internal-External Scale, and Generalized Expectancy for Success Scale were administered as a pretest and posttest to both groups. The Means-Ends Problem-Solving Procedure was given to the experimental group at the pretest and posttest. A background information sheet was also completed on each participant recording simple demographic and academic data.

#### Descriptive Data

Several differences were noted between the experimental and the control groups before the hypotheses were tested: age at entry into the programs, race and income. Although

these differences were not statistically significant, they are important in examining the results of the study and their generalizability to the field of study and the decision making process.

The average age of the subjects in the Sierra II group was nearly 6 months older than those of the subjects in the control group. In addition, the racial composition of the Sierra II group was 92% white while the control group was composed of 73% white and 22% black. Thirdly, the experimental groups' annual family income was \$9,000 more per year than the income of the control group.

A component not statistically evaluated in this research, but clearly important in this discussion, was past psychiatric treatment in the study participants. Of the Sierra II group, 78% had a history of psychiatric assistance while 50% of the control group had some type of psychiatric assistance. It is apparent to this researcher that the higher medium income of the Sierra II group allow greater psychiatric integration. Indeed, the families of the Sierra II participants had a higher percentage of psychiatric care than the control group.

The noted differences between the Sierra II group and control group may have contributed to the group performances on the key study variables. These discrepancies must be examined when analyzing the results of this study. In

essence, one must answer the question: What correlation or relationship exists between these noted differences and the conclusions of this evaluation?

Unlike the traditional program, the Sierra II Program participants progressed through an adventure process which provided an opportunity for them to enhance both their physical, psychological and affective endurance.

Sierra II combines these and the components below to differentiate it from the traditional program:

- \*One-on-one counseling throughout the entire program period.
- \*Group counseling during program activities.
- \*Holistic parental and family involvement in the process (parents must attend at least two meetings per month with their children during the 6-month probation program).
- \*Program activities focused on high-risk objectives and basic life coping skills.

These differences indicate that there were apparent discrepancies between the experimental and the control group before they were tested on the key study variables.

These discrepancies must be considered when interpreting the results of this study. Clearly, the relationship between these differences and the results of this study must be examined.

### Summary of Results

The results of the data analysis can be summarized in answering two questions which encompass all of the study hypotheses. Primarily, did the program have the anticipated effect on the participant's self-esteem, self-empowerment, problem-solving skills, and academic behavior and follow-on achievement? Secondly, did the program affect some juveniles more positively than others?

The analysis clearly indicates that there existed a statistically significant difference between the experimental and control group in self-esteem ( $p < .05$ ), self-efficacy ( $p < .05$ ), locus-of-control/internality ( $p < .05$ ), and problem-solving skills ( $p < .05$ ) at the completion of the treatment phase. The analysis also provided partial support to the hypothesis concerning academic behavior and follow-on achievement. In addition, the experimental subjects were also shown to have demonstrated significant gains in self-esteem ( $p < .05$ ), self-efficacy ( $p < .05$ ), locus-of-control/internality ( $p < .05$ ) and problem-solving skills ( $p < .05$ ) between the beginning and completion of the treatment phase with the partial exception of academic behavior and follow-on achievement, the program was found to have the anticipated results.

The analysis also showed that neither the demographic variable of age, sex or race were strongly related to having a more positive experience in the treatment group.

#### Conclusion of the Study

The findings of this study provide additional support to the existing body of knowledge in regard to the relationship of Adventure Education Programs and reductions in participant beliefs of externally controlled outcomes.

Other conclusions of the study indicate that the program made a significant long-term impact on the participant's academic behavior and self-orientation (i.e. self-esteem, self-efficacy, and locus-of-control). In contrast to the noted positive program effects, the analysis illustrated that participants failed to show an immediate increase in academic achievement as a result of the treatment.

#### Implications of the Study

The primary implication of the study indicates that the Sierra II program offers a viable treatment alternative for improving juvenile delinquent's personal sense of self-esteem, their personal accord in accepting reasonable and acute responsibility for behaviors, their credence in a sense of personal capability, and their level of problem-solving cognitive skills.

A second implication is the need for the Sierra II program to directly address the goal of enhancing academic achievement. One of the primary assumptions about self-attitudes is that affective behavior and cognitive experiences either reinforce attitudes or alter attitudes. The foundation of the Sierra II model examined in CHAPTER II is that by providing the delinquents with experiences of mastery, the self-orientation can be altered. In a clear sense, affective behaviors or cognitive experiences provide information to authenticate an existing assumption about the self. Personal mastery of the skills in the wilderness course disconfirms the delinquent's dysfunctional orientation and allows for the gradual creation of a functional success orientation. The key question connecting these thoughts together is what happens to the participant's orientation when he or she returns to the school environment without enhanced academic skills. The logical expectation is that the participant will begin a quick reversal back to the dysfunctional orientation.

Assuming that the integrity at the Sierra II model is accepted and the importance of the academic skills within that model recognized, the Sierra II program needs to make strategic changes in its methodological design to impart these skills. Academic skills, unlike behavioral skills, cannot be acquired through osmosis nor affectively integrated



by observing role model academic skills. Researchers in academic skills have advocated training programs which provide criteria based mastery models for acquiring academic skills.

The Sierra II process provides a unique opportunity for participant development of two critical components which are necessary in leading a productive and successful life. Clearly, the realignment of a participant's self-image from a failure orientation towards greater self-efficiency and empowerment is one of these components. A second component, and in this ever increasing technologically complex environment, just as important is the acquisition of critical academic skills useful in deductive and other rational reasoning environments. If, as this study indicates, the process imparts just one component (that of the self) then the "holistic healing" of the participant is incomplete. Both the cognitive measures and manifestations of self-empowerment and the machinery of academic skills must be integrated into the process if the participant is to functionally participate in society and lead a responsible and successful life.

It is clear that in order to effectively impact the longer term requirements of program participants, the Sierra II program must provide an opportunity for each participant to transfer affective and cognitive skills into their normal

social, cultural, and academic environments. The data imply that this process is the weak link in the program and must be addressed if the holistic process is to be efficient and effective.

#### Recommendations for Further Study

Since this study concentrated on proximal goals, the most pressing recommendation for further study is to examine the distal goals with the process. Focused research on the long-term effects of the Sierra II process could begin at the implicitly postulated hypothesis in prior chapters.

Additionally, the Sierra II program required a significant time commitment by participants. It would be interesting to assess whether the positive results would have occurred without this significant factor. The process required this commitment from both the participant and the other contributory family members. Further research focusing on this time factor would enhance the ability to segregate and correlate the existing data to research findings.

An additional recommendation for further study is to evaluate the effectiveness of the Sierra II process in maintaining the enhanced academic behavior demonstrated by the participants. It would be important to ascertain if the lack of directly enhanced academic skills influences the direction of academic behavior in the long term. In this examination, the most apparent component deserving direct

attention would be recidivism connected to or caused by direct dysfunctional academic skills.

The directors of the Sierra II Program are making changes in their holistic process to address this study's conclusion that direct academic skills are not being developed. A future study should use the ABLE II Diagnostic procedure to test for academic gains under the revised process. The study has provided documentation of the proximal effects of the Sierra II program for delinquents. Further studies should be undertaken comparing the effectiveness of the Sierra II Program to other diversion programs available for the same population. Comparative program evaluation is difficult but certainly there is a primary need for the data.

Finally, this researcher recommends that further testing of the therapeutic model presented in this study and examined in CHAPTER II be undertaken. A study based on repeated observations and unobtrusive measures should be designed to test the premise that the holistic process of the treatment program indeed fits the model presented.

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**APPENDIX A**

**INFORMED CONSENT FORM**

INFORMED CONSENT FORM  
Old Dominion University

Title of Investigation: Sierra II Diversion Program Evaluation

Investigator(s): Ronald C. Callahan

Date:

This is to certify that I, \_\_\_\_\_, hereby (give permission to my child) agree to participate as a volunteer in a study as an authorized part of the education and research program of Old Dominion University under the supervision of Ronald C. Callahan.

The investigation and my (child's) part in the investigation have been defined and fully explained to me by \_\_\_\_\_ and I understand his/her explanation. The procedures of this investigation and their risks and discomforts are described on the back of this form and have been discussed in detail with me.

I have been given an opportunity to ask whatever questions I may have had and all such questions and inquiries have been answered to my satisfaction.

I understand that I am free to deny any answer to specific items or questions in interviews or questionnaires.

I understand that any data or answers will remain confidential with regard to my identify (the child's identity).

I FURTHER UNDERSTAND THAT I AM FREE TO WITHDRAW MY CONSENT AND TERMINATE MY (THE CHILD'S) PARTICIPATION AT ANY TIME.

Date	Date of Birth	Subject's Signature
------	---------------	---------------------

I hereby consent to the participation of \_\_\_\_\_, a minor, as a subject in the scientific investigation described.

Date	Signature of Minor Subject's Parent or Legal Guardian
------	---

I, the undersigned have defined and fully explained the investigation to the above subject.

Date	Investigator's Signature
------	--------------------------

## **APPENDIX B**

### **YOUTH DATA FORM**



YOUTH DATA FORM

BEFORE MARKING FORM, READ INSTRUCTIONS

1. Name of Youth: (Project Use Only)

\_\_\_\_\_

2. Project Code: \_\_\_\_\_

3. Youth Code: \_\_\_\_\_

4. Date of Birth: \_\_\_\_\_  
Month                  Date                  Year                  Date Unknown

5. Present Age: \_\_\_\_\_ Age Unknown: \_\_\_\_\_

6. Sex: Male: \_\_\_\_\_ Female: \_\_\_\_\_

7. Ethnic Group: (Check One)

Anglo-American	_____ 1
Asian-American	_____ 2
Black-American	_____ 3
Mexican-American	_____ 4
Native-American	_____ 5
Other (Specify)	_____ 6

(Leave Blank) \_\_\_\_\_

8. Enrolled or enrolled last day of last school session: (Check One Only)

Yes	_____ 1
Yes (Suspended)	_____ 2
No (Expelled)	_____ 3
No (Excluded)	_____ 4
No (Dropped Out)	_____ 5
No (Graduated)	_____ 6
Unknown	_____ 7

Youth Data Form (Cont'd)

	Yes	No	Unk
15. Any prior project contact with youth	___1	___2	___3
16. Youth previously accepted as client	___1	___2	___3
17. Youth previously rejected as client	___2	___2	___3
IF 16 or 17 is YES, give prior Youth Code	_____ Unk _____		

18. Youth accepted as Project Client on Current Referral:

	Mo.	Day	Yr.
Yes ___1	_____	_____	_____
No ___2	_____	_____	_____

18a. If not accepted as client, why not? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

19. The following are dispositions/decisions which may be made in relation to a youth. Check a box which best describes the next course of action you believe the referral source would have taken IF the youth had not been referred to the project ("self" and "parents" MAY be referral sources).

(Check One Only)

No Action	_____01
Release or counsel/reprimand and release	_____02
School discipline (suspension, etc.)	_____03
Refer to non-criminal justice agency	_____04
Refer to probation	_____05
Cite to probation/juvenile traffice	_____06
Deliver to/retain in local custody	_____07
Informal supervision (prior to court hearing)	_____08
File petition	_____09
Detention hearing	_____10
Refer to non-probation criminal justice agency	_____11

Youth Data Form (Cont'd)

Informal probation (by court (w/out wardship)	_____12
Non-custody placement	_____13
Deliver to non-local custody	_____14
Unknown	_____15
Other (Specify)	_____16

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## **APPENDIX C**

### **YOUTH SCHOOL DATA FORM**

# YOUTH SCHOOL DATA FORM

NAME: \_\_\_\_\_ (Project Use Only)

DATE: \_\_\_\_\_

YOUTH CODE: \_\_\_\_\_

<u>Performance</u>			<u>Behavior</u>
<u>Good</u>	<u>Average</u>	<u>Poor</u>	
( )	( )	( )	Interest
( )	( )	( )	Assigned Work
( )	( )	( )	Participation
( )	( )	( )	Tests
( )	( )	( )	Attention
( )	( )	( )	Note-Taking
( )	( )	( )	Neatness of Work
( )	( )	( )	Study Habits
( )	( )	( )	Extra Work Habits

Comments by School Personnel:

Note: If poor, please check appropriate items below:

( ) Frequently Interrupts

( ) Daydreams

( ) Disturbative Behavior

( ) Attitude Problems

( ) Attendance Problems

( ) Tardiness Problems

( ) Lacks Associated Material

( ) Does Not Prepare

( ) Inadequate Basic Skills

Attendance Previous Year:

# absences

Disciplinary Action Previous Year:

# detention

# ISS

# OSS

# Pupil Personnel

# Expulsion

Final Grades Previous Year:

Attendance While in Sierra II:

# absences

Disciplinary Action while in Sierra II:

# detention

# ISS

# OSS

# Pupil Personnel

# Expulsion

Grades while in Sierra II:

Attendance for Year of Program Involvement:

# absences

Disciplinary Action Year of Program Involvement:

# detention

# ISS

# OSS

# Pupil Personnel

# Expulsion

Final Grades Year of Program Involvement:

## RECIDIVISM

Offense/Probation

Recidivism at onset of involvement with Sierra II

Recidivism during 6 months involvement with Sierra II

Recidivism 6 months after Sierra II graduation

Recidivism 9 months after Sierra II graduation

Recidivism 12 months after Sierra II graduation

## APPENDIX D

### INTERNAL-EXTERNAL SCALE

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**These consist of pages:**

171-173 Appendix D

175-177 Appendix E

179-180 Appendix F

182-183 Appendix G

185 Appendix H

**U·M·I**

## APPENDIX E

### GENERALIZED EXPECTANCY FOR SUCCESS SCALE

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## APPENDIX F

### MEANS-END PROBLEM SOLVING

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## **APPENDIX G**

### **PIAGET'S MODEL DEFINITIONS**

## **APPENDIX H**

### **KOHLBERG'S MODEL DEFINITIONS**

**APPENDIX I**

**SIERRA II PARTICIPANT CONTRACT/JUVENILE  
COURT RULES OF PROBATION**



# City of Virginia Beach

COURT SERVICE UNIT  
JUVENILE AND DOMESTIC RELATIONS DISTRICT COURT  
MUNICIPAL CENTER  
VIRGINIA BEACH, VIRGINIA 23456-9002  
TELEPHONE: 427-4361

March 15, 1984

Mr. Ron Callahan  
Old Dominion University  
Norfolk, VA

Dear Ron:

This letter is authorization for you to study our Sierra II program. We appreciate your interest and effort to study clients and parents of this special program of the Juvenile Court Service Unit.

We also expect you to keep all confidential information private and to not use names of juveniles in your study. We also request that prior permission be obtained from us before any specific Court Service Unit forms or material are forwarded beyond the university sitting.

Sincerely,

Robert Callahan, Jr.  
Director, Sierra II

Truman I. Close, Jr.  
Supervisor

RC/vps



VIRGINIA BEACH  
JUVENILE AND DOMESTIC RELATIONS DISTRICT COURT  
COURT SERVICE UNIT - TELEPHONE 427-4361

RULES OF PROBATION

I, \_\_\_\_\_, having been placed on probation by the Virginia Beach Juvenile and Domestic Relations District Court for \_\_\_\_\_ period, do hereby agree to the following:

1. I will report to my Probation Counselor any time (s)he tells me to report. I understand it is my responsibility to contact my Probation Counselor and I am to leave a message if unable to make personal contact. Also, if I do not have a telephone where I can be reached, I understand that it is my responsibility to continue to call until I have made personal contact.
2. I will be in my house by \_\_\_\_\_ p.m. on Sunday through Thursday nights and by \_\_\_\_\_ p.m. on Friday and Saturday nights. I understand that I can only be out after this time if I am with my parent(s) or have my Probation Counselor's permission.
3. I will abide by the rules and discipline of my parent(s) or guardian. I will not go anywhere without permission from my parent(s) or guardian and if I am going to be late, I will call them to explain the situation.
4. If I am enrolled in school, I will go to school every day. I will be on time, and will attend all classes. I will do the assigned work and will abide by the rules of the school. If I am suspended I will notify my Probation Counselor within 24 hours. Also I will not make any changes in my school situation without permission from my Probation Counselor.
5. If I am not enrolled in school, I will get and keep a job. I will not quit my job without first talking to my Probation Counselor and if fired, I will inform my Probation Counselor within 24 hours.
6. I will not travel outside of the Tidewater area (Virginia Beach, Norfolk, Portsmouth, Chesapeake and Suffolk) without permission from my Probation Counselor unless I am with my parent(s).
7. I will not illegally use, possess, or distribute narcotics, dangerous drugs, controlled substances or related paraphernalia. I will not consume any illegal beverages as determined by my age.
8. I agree not to own, possess, use, sell, or have in my control any deadly weapon or firearm. If I have a hunting license, I will hunt only with a parent or guardian.
9. I will obey all city, county, state, and federal laws and ordinances. I will report any arrests or citations within 24 hours to my Probation Counselor.

Special Conditions of Probation:

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I understand and agree to the above rules of probation. I also understand that any violation of these rules may result in my being taken back to court for a violation of probation charge.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_

\_\_\_\_\_  
Probationer

\_\_\_\_\_  
Probation Counselor

\_\_\_\_\_  
Parent or Guardian



FREDERICK P. AUCAMP, JUDGE  
J. DAVIS REED, III, JUDGE  
JOHN K. MOORE, JUDGE  
TELEPHONE: 427-4391



BRUCE E. BRIGHT  
DIRECTOR  
JAMES M. WOOLF  
ASST. TO DIRECTOR  
TELEPHONE:  
427-4361

COURT SERVICE UNIT  
JUVENILE AND DOMESTIC RELATIONS DISTRICT COURT  
MUNICIPAL CENTER  
VIRGINIA BEACH, VIRGINIA 23456

SIERRA II PARENT GROUP CONTRACT

We \_\_\_\_\_ agree to attend the  
Sierra II Parent Group. We understand the purpose of this group  
is educational, and that attendance of 50% of the meetings is  
required by the court. If we miss a meeting and have not seen  
the Sierra II staff by the 20th of each month we understand  
that an individual appointment must be made during office hours  
before the month ends. We understand this is necessary so we  
can remain current with our child's progress in the Sierra II  
program. We understand that the purpose of this group is to;  
develop and enhance parenting skills, to receive feedback and  
information regarding our children, to present a unified  
"force" of caring and interest for our children and to render  
and receive support.

\_\_\_\_\_  
DATE

\_\_\_\_\_  
CHILD'S NAME

\_\_\_\_\_  
SIERRA II STAFF

\_\_\_\_\_  
PARENT

\_\_\_\_\_  
PARENT

SIERRA II CONTRACT

1. I understand what Sierra II is.

\_\_\_\_\_  
Student

\_\_\_\_\_  
Staff

2. Once I am accepted into the Sierra II program, I cannot quit.

\_\_\_\_\_  
Student

\_\_\_\_\_  
Staff

3. I understand that all activities in the Sierra II program are non-negotiable. I will attend everything.

\_\_\_\_\_  
Student

\_\_\_\_\_  
Staff

4. I understand that all Sierra II staff are officers of the Court and are held responsible to adhere to all rules and regulations of the Juvenile Court Service Unit.

\_\_\_\_\_  
Student

\_\_\_\_\_  
Staff

5. I understand that Sierra II primarily involves the group and that the group problems, process, and success at times takes priority over that of the individual.

\_\_\_\_\_  
Student

\_\_\_\_\_  
Staff

I understand that I am making a commitment to myself and the Sierra II staff to initiate the following changes in my own behavior. I further understand that Sierra II staff commit themselves to helping me to make these changes during my involvement in the program.

## **APPENDIX J**

### **PROBATION INTERVENTION TECHNIQUES SCALE SUMMARY**

EXTENT OF USAGE AND AMOUNT OF PERCEIVED  
IMPACT, FOR 35 METHODS AND AREAS OF FOCUS (SIERRA STAFF)

SCALE #	METHOD OR AREA OF FOCUS <sup>a</sup>	AVERAGE RATING <sup>b</sup>	
		EXTENT OF USAGE	AMT. OF IMPACT
1.	Modifying attitudes toward adults/ establishment	2.2	2.0
2.	Increasing interpersonal sensitivity	3.4	2.4
3.	Increasing self-awareness/self acceptance	3.6	2.6
4.	Teaching values and controls	3.4	2.2
5.	Enhancing/promoting a nondelinquent self- image	2.4	2.4
6.	Reducing apathy, indifference	3.4	2.4
7.	Expression of feelings	3.2	2.6
8.	Family/parental relationships	3.0	2.4
9.	Peer pressure	2.8	1.8
10.	Self-understanding	2.8	2.0
11.	Ego bolstering via success experiences	2.2	2.0
12.	Youth/worker relationship	2.6	2.6
13.	Practical emphasis	2.4	2.0
14.	"Programming"/rehearsing for specified life situations	2.6	2.6
15.	Recreation, socializing	2.2	1.8
16.	Frequency of contact	2.6	2.8
17.	Concreteness vs. abstractions	3.0	2.8
18.	Informality-lack of social distance	3.2	3.2

<sup>a</sup>Listed below are scale titles only. For further details see Appendix

<sup>b</sup>1=slight or none; 2=moderate; 3=much; 4=very much

<sup>c</sup>Or, in the case of girls, feminine adult model

SCALE #	METHOD OF AREA OF FOCUS <sup>a</sup>	AVERAGE RATING <sup>b</sup>	
		EXTEND OF USAGE	AMT. OF IMPACT
19.	Youth's commitment to the program	3.8	2.8
20.	Youth's participation in case planning and decision-making	2.8	2.2
21.	Gaining youth's confidence in worker as understanding/capable	3.4	2.6
22.	Expressing personal concern for/ acceptance of youth	3.2	3.2
23.	Expressing warmth, friendliness, affection	2.8	2.6
24.	Protecting, minimizing demands/pressures	1.6	1.8
25.	Using anxiety/distress as stimulus/ motivator	3.0	2.4
26.	Being unpredictable, doing the unexpected	1.6	2.0
27.	Being forceful, blunt	2.8	2.4
28.	Using power/authority	2.6	2.4
29.	Associating concern with control	3.4	3.0
30.	Exposure to masculine adult model <sup>c</sup>	2.0	1.6
31.	Involving youth in the community	1.6	1.6
32.	Being an advocate for youth	1.6	1.4
33.	Using positive peer influence	2.8	2.4
34.	Familiarizing youth with authority figures	1.2	1.2
35.	Being personally available during crises	2.4	2.4

<sup>a</sup>Listed below are scale titles only. For further details see Appendix

<sup>b</sup>1=slight or none; 2=moderate; 3=much; 4=very much

<sup>c</sup>Or, in the case of girls, feminine adult model

EXTENT OF USAGE AND AMOUNT OF PERCEIVED  
IMPACT, FOR 35 METHODS AND AREAS OF FOCUS (TRAD. STAFF)

SCALE #	METHOD OR AREA OF FOCUS <sup>a</sup>	AVERAGE RATING <sup>b</sup>	
		EXTENT OF USAGE	AMT. OF IMPACT
1.	Modifying attitudes toward adults/ establishment	2.8	2.6
2.	Increasing interpersonal sensitivity	2.4	1.8
3.	Increasing self-awareness/self acceptance	3.4	2.6
4.	Teaching values and controls	3.2	2.2
5.	Enhancing/promoting a nondelinquent self- image	3.6	2.6
6.	Reducing apathy, indifference	3.4	2.6
7.	Expression of feelings	3.8	3.2
8.	Family/parental relationships	2.6	1.8
9.	Peer pressure	3.0	2.2
10.	Self-understanding	2.0	2.0
11.	Ego bolstering via success experiences	3.8	2.8
12.	Youth/worker relationship	3.0	2.0
13.	Practical emphasis	3.0	2.4
14.	"Programming"/rehearsing for specified life situations	2.4	1.8
15.	Recreation, socializing	3.6	3.0
16.	Frequency of contact	2.8	2.8
17.	Concreteness vs. abstractions	2.4	2.2
18.	Informality-lack of social distance	2.4	2.2

<sup>a</sup>Listed below are scale titles only. For further details see Appendix

<sup>b</sup>1=slight or none; 2=moderate; 3=much; 4=very much

<sup>c</sup>Or, in the case of girls, feminine adult model

SCALE #	METHOD OF AREA OF FOCUS <sup>a</sup>	AVERAGE RATING <sup>b</sup>	
		EXTEND OF USAGE	AMT. OF IMPACT
19.	Youth's commitment to the program	3.4	2.4
20.	Youth's participation in case planning and decision-making	3.6	2.6
21.	Gaining youth's confidence in worker as understanding/capable	3.2	2.2
22.	Expressing personal concern for/ acceptance of youth	3.4	2.8
23.	Expressing warmth, friendliness, affection	3.0	2.4
24.	Protecting, minimizing demands/pressures	2.0	1.8
25.	Using anxiety/distress as stimulus/ motivator	3.8	2.6
26.	Being unpredictable, doing the unexpected	3.0	2.4
27.	Being forceful, blunt	2.2	1.8
28.	Using power/authority	2.0	2.0
29.	Associating concern with control	2.4	2.2
30.	Exposure to masculine adult model <sup>c</sup>	2.4	2.2
31.	Involving youth in the community	1.8	1.8
32.	Being an advocate for youth	1.8	1.8
33.	Using positive peer influence	2.8	2.0
34.	Familiarizing youth with authority figures	2.2	2.0
35.	Being personally available during crises	2.2	1.4

<sup>a</sup>Listed below are scale titles only. For further details see Appendix

<sup>b</sup>1=slight or none; 2=moderate; 3=much; 4=very much

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